

THE 2000 SEASON OF THE CROSS GROUP PROJECT AND A BRIEF REVIEW OF PREVIOUS WORK

This report on the third year of the Palenque Group of the Cross Archaeological Project begins with a brief review of the previous two years' work on Structures XIX and XX.

Structure XIX was constructed at the extreme southern end of Plaza C, the highest plaza of the Southern Acropolis of the Cross Group. Direct access from the level of the plaza up to the structure itself was provided by means of three flights of stairs. The hieroglyphic texts discovered to date lead us to believe that Structure XIX was almost certainly constructed prior to AD 734 and was probably the focal point of the construction program of K'inich Ahkal Mo' Nahb' III, a ruler of Palenque in the Late Classic period, for whom it served as a royal palace.

From the principal entrance there is an impressive vista of the majority of the structures of the Cross Group and Southern Acropolis. It evidently represents one of the last significant construction episodes at Palenque. In view of the building's dimensions and the scale of its interior space, it is rightly considered the grandest structure known to date at Palenque, measuring approximately 34 meters in length by 9 meters in width. The building sits on a basement of stepped levels. Its height is approximately 4.5 meters, with a little more than 40 meters in length and 24 meters in width.

The work carried out in Structure XIX, formally designated Operation 4, began in July 1998 and continued with several breaks until August 1999. At this point restoration was temporarily suspended and the building protected from the rains, which turned out to be especially intense. Despite the storms that season, the structure suffered not the slightest damage. The final season of work and restoration began on February 18, 2000, and finished on July 8.

The principal objectives of this operation consisted in acquiring a precise understanding of the architectural features and designs used in the construction of the building, liberating all of the structural remains still *in situ*, and beginning to define the fallen structural elements through analysis of the rubble. It is obvious that the collapse had grave consequences for the superstructure, which is to say the friezes, the roof and whatever decorative elements the building displayed in its moment of splendor. The structure had been converted into a great mound, and not even the smallest part of its roof remained in place.

A consequent objective, but no less important, was the collection of ceramics and artifacts of other materials such as stone and certain organic remains, their documentation and classification and especially laboratory analysis in a well-documented primary context, in order to obtain a better understanding of the history and chronology of the structure. This of course included the reading of the hieroglyphic texts which could be located in the course of our excavation and the interpretation of the iconography in relation to the architecture.

Eight special deposits were encountered during the excavations in 1999 and 2000. (Special deposits include all materials discovered in the rubble of a collapsed structure that are different in substance from their surroundings and might extend beyond the limits of a given excavation lot.) Six of these presented well-preserved iconography and hieroglyphic texts. Three further special deposits were discovered during the excavations for clearing and liberating the substructure or basement.

The excavation of Structure XIX began on July 3, 1998, with three 2x2-meter test pits, which were located at the foot of the basement at the east and west corners and on the center line. These test pits were intended to investigate the stratigraphic relationship between the structure, the plaza and bedrock. These pits also served as the northern termini for three trenches that crossed the entire mound, with the object of liberating what remained of the architecture in its final phase.

The subsequent excavations and consolidation of the entire interior of the building revealed that architecturally Structure XIX is exceptional and innovative in comparison to other structures at Palenque. The exterior dimensions are 34 x 8.8 meters, which is approximately ten meters longer and two meters wider than the Temple of the Inscriptions, the second-largest structure at Palenque. The walls and the interior pillars are amazingly slender, with a width of 86 cm. and at least 3.45 meters in height, judging from the height of the central support pillar. The principal entrance, in the center of the temple, measures 5.3 meters in width, and although we have no idea about its upper part, it is probable that it had a lintel of *chico zapote* wood, since one cannot imagine another material capable of spanning that opening. The second doorway, 1.25 meters wide, was in the east where we encountered vestiges of a destroyed staircase.

The majority of the buildings at Palenque have three to five entrances, and the average width of their central doorways is about 2.7 meters, about half as wide as the single central doorway of Structure XIX.

The roof, as mentioned previously, was totally collapsed, but nonetheless an analysis of the collapsed remains inclines us to believe that it was formed of parallel vaults the entire length of the front and rear galleries. The bulk of this double vault was supported on a line of pillars running the length of the structure down the center line. These rectangular pillars measured 1.4 meters by 86 centimeters.

In contrast to all of the other examples at Palenque, the pillars were not spaced equidistantly, nor were they centered with respect to the principal doorway of the building. One of these pillars was situated directly to the west of the center line of the building, and it was eminently visible from the doorway. It was precisely this pillar that was used to display, on its front (north) side a stone tablet sculptured in bas relief, and on its east side a panel of modeled stucco. The remaining pillars that have been examined to date, more than 90% of which have collapsed, do not have any decorative element and only show the remains of painting on top of a thick layer of stucco.

The general plan of Structure XIX is, from a certain point of view, exactly the opposite of other large buildings at Palenque. Normally the principal facade is constructed of a series of support columns which give place to various passageways, and the double vault is supported on strong walls, frequently thicker than the exterior walls. Various openings permit access to the interior room. These interior support walls are invariably centered on each side of the principal entrance, which generally has a cruciform vault.

The characteristics of the rubble inside the rooms of Structure XIX, notably the total absence of stones from the rear wall, at least in the central portion, plus the evident inclination of this wall towards the back, suggests that at the moment of collapse the rear wall fell outwards, together with the frieze. But at the same time it is evident that part of the rubble found in the interior was composed of a series of large stones aligned facing downward. This suggests to us that the upper part of the back wall fell inwards instead of outwards, as would be logical if it was the angled part of the southern half of the vault of the back room. All of this element fell directly on top of a thick layer of mortar whose characteristics and location indicate that it was the roof of the central part of the building.

The remains of the roof and the stucco of the vault in the rubble show that the vaults were oblique, constructed of large flat stones with irregular facings, with each course of stones jutting only a little further than the one beneath. The dimensions of the stucco on the stone of the vault spring found at the base of Column 4 indicate that the vaults were inclined at an angle of 70 degrees.

Some of the fragments of vault stucco found around the central entryway show remains of red, white or blue paint in horizontal lines. Obtuse angles and curved pieces of stucco from the vault in this same area indicate that possibly a tri-lobed vault connected the front gallery with the rear in the center of the structure. It is still unclear if the spaces between the central columns were vaulted or spanned by a wooden lintel. The vault stucco found in the excavations to the east of the entrance was not painted. The remains of stucco found both *in situ* and in the rubble indicate that the walls of the building were covered with stucco but were left unpainted.

The floor in the interior of the building was found in an excellent state of preservation. It was constructed of large rectangular *lajas* or slabs of limestone, carefully shaped, approximately 5 cm. in thickness and varying between 40 cm. and more than two meters in length. These rectangular stones were laid on a mortar of lime of between 5 and 10 cm. in thickness. This same material was used to seal the joints between the stones, which varied between 10 and 20 mm. in dimension. Moreover, there was apparently no covering of mortar applied to the surface of this stone floor.

The excavation of the final phases of the architecture of the exterior walls, the platform and the building began on June 15, 1999, with excavations to remove the rubble covering the facade of the southern or rear side of the structure. This excavation revealed a wall 33.5 meters in length, in a somewhat better state of preservation than the other walls. It rises to its greatest height in the extreme east, where it reaches 2.3 meters, compared to less than a meter in the center. It rises again to 1.7 meters approaching the west end of the building but is almost completely destroyed in the far southwestern corner.

This excavation of the rear of the interior was the final phase of the project. In an extension of our previous method, it was also carried out in 2x2-meter units, oriented parallel with the rear wall. The units were excavated by natural levels: humus, rubble, then contact with the final phases of the architecture. All artifacts encountered were marked for documentation and analysis in their proper context.

The rear wall, thus exposed, was documented with photographs taken with a digital camera. The joints in the stones were cleaned of dirt and the original mortar, which was light brown in color. A team of masons consolidated the wall using a mixture of nine parts sand with one part lime and one part white cement.

Simultaneous excavations took place at the northern end of the substructure, the platform on which the building sits and its front or north wall. We extended trenches 3, 4 and 5 to the east and west, with the goal of exposing the final phase of the architecture.

Now, with the excavation completed, we know that the lower level of the substructure is a stairway 35 meters wide, without ballustrades, with a depth of 3.84 meters and an elevation of 2.88 meters. The profile drawings indicate that it originally had 16 stairs with risers of between 17 and 18 cm. and treads of at most 20 cm. These dimensions are on average, since the masonry construction of the stairs utilizes highly irregular stones, producing irregular dimensions of risers and treads. The highest stairs were totally destroyed, and large sections of the stairway had slumped down and were inclined toward the north. However, around the center of the stairway and at the western end, the original base and some of the stairs were found in a stable condition, which permitted us to calculate the number and measurement of each stair.

The highest level of the substructure is 1.93 meters tall and was accessed by a central stairway 12.9 meters wide. The base of this stairway started in the middle of the landing, which is 2.6 meters wide. The depth of the stairway is virtually equivalent to its height of 1.93 meters. The remains of the two balustrades, each approximately one meter in width, are evident at the base of the stairway. There were originally 8 treads and 9 risers, each on average 24 cm.

The four highest stairs which give access to the building's platform were constructed in a manner virtually identical to the north stairway of Structure XXI. The risers and treads were covered with faceted limestone facings of 3 to 5 cm. in thickness, carefully cut and mortared with lime. This stairway was documented with standard and digital photographs, as well as drawings in plan and elevation. The stairway was then consolidated and restored.

The Second Season of the Third Year

This season began on February 18, 2000, and ended with the architectural restoration and pictorial documentation on July 22, 2000. The reasoning behind working in seasons with breaks in between is that the rainy season makes it almost impossible to work beginning with the month of September.

The goal of this season was to finish the liberation of the other half of Structure XIX in the west end and the final part of the east. With the help of architect Rudy Larios, we finished the topographical survey to establish where to position our lots in the unexcavated area. At the same time we drew various profiles of the structure to document the different characteristics of the architecture.

In the excavation of the interior portion of the southeast corner of the structure we located more fragments of the sculpture encountered just south of the altar. This was originally situated on the central interior pier of the structure, where initially we discovered only the feet of the sculptured characters. In this season we were able to recover the body and half of the face of the figure on the left side of the tablet. In total, we recovered approximately 65% of the stone tablet but were unable to locate the better part of the hieroglyphs in our excavations.

The stone tablet could only be partially restored due to its fragmented condition. But the technical opinion of the restoration specialists was that it originally measured 3.4 meters in height including its tenon. And therefore it was determined to restore it in the location where it would be permanently displayed. In consultation with the site director, LAE Juan Antonio Ferrer, it was decided to exhibit it together with the throne in a permanent installation in the site museum.

In the west end of the building we encountered a large quantity of polychrome and modeled stucco, tiny fragments of sculptured stone, shards of ceramic vessels and obsidian blades.

We completed the excavation of the interior of the throne, which had been looted in prehispanic times. At the bottom of a cavity of the "circular cyst" type we encountered three obsidian cores, a mirror of a material that seems to be pyrite and some bones that were part of a human hand. In this same place we found the remains of a vessel of .4 meters in height, other pieces of which we had encountered during the 1999 season amidst the fragments of the stone tablet deposited in front of the throne. This vessel was probably the container for the dedication offering of the throne.

To the south of the center of the throne we found a rectangular area where the stone floor was missing and three steps led down to the south. This appears to be a type of drain that enters on the

east side of the building and then passes under it, changing direction after the opening and turning to the south. Although we were not able to prove it, we suspect that it exits the exterior wall of the southern foundation of the building. In the interior of this drain were encountered various fragments of domestic ware with a thickness of .03 meters and approximately .35 meters in height. Another square opening without floorstones yielded more shards of ceramic like those found in the drain.

On the west side of the principal jamb we encountered a masonry bench with remains of stucco on its surface. At the western end of this small platform, the floorstones give way to a stucco floor in a very damaged condition, three centimeters lower than the stone floor.

This season's excavations also revealed a crude stone wall made of limestones like those of the ceiling vaults. This drystone wall, only 1.2 meters in height and completely unmortared, seems to have been added after the original occupation of the structure. We speculate that the stones used to construct the wall came from the vault of the extreme west of the building, which was the first to fall, and that the individuals who subsequently occupied the building made the wall to protect themselves from the elements to which the fall of the vault had exposed them.

The southwest corner of the building was not found in the excavations. Apparently it fell outwards, since its walls were not found within the interior of the building. The inclination of the stucco floor and its large cracks indicate that there was a settling in this corner, which probably initiated the collapse of the structure.

After finishing the excavation we came to the conclusion that the change of construction style, with the placement of pillars in the interior of the structure rather than along the front, caused the weight that is regularly carried by the central wall to be placed on the pillars. It is well known that the weight of the central vault is twice that of the front and rear of a building, and it seems that this greater burden on the central pillars produced vertical fractures in all of them.

In completing our work of excavation and liberation of Structure XIX, it should be noted that we were not able to completely uncover certain areas owing to the existence of trees within and closely bordering on the structure. Palenque is located in a biosphere reserve, so we have respected and maintained an area of protection for the roots of the trees. It is possible that the missing parts of the stone tablet and stucco panel repose in the unexcavated areas.

Special Deposit 99-5

The primary cultural deposits found in the drain in the eastern portion of the building consisted of large shards of earthenware of .03 meters in thickness and up to .35 in width, probably enough to form two large vessels. In the same deposit were a thin-walled ceramic vessel, a *candelero*, a miniature ceramic vessel, a stingray spine, an obsidian blade and a fragment of conch shell.

Special Deposits 99-6 and 99-7

In analyzing the rubble encountered in our excavations we discovered a number of very special fragments of modeled stucco, some of which had been mounted on stone rods with hook and eye attachments. Some of the fragments were scattered on top of the highest level of the substructure and on the building platform. Two concentrations of stucco were encountered on the base of the platform directly underneath the larger portion of the collapse of the roof.

These concentrations of modeled stucco and fragments of stone armatures measured 2-2.5 meters in length by one meter in width and were found scattered equidistantly on either side of the central

doorway. They were directly on top of another deposit, 20-30 cm. thick, of rubble from the wall and possibly stucco from the roof which had fallen on top of the stones of the floor.

The state of preservation of these concentrations was that of a great mound of disordered fragments, but at least it is clear that these fragments and their stone armatures had fallen either from the wall or from the roof of the building itself. The elements with designs were very broken, some had dissolved almost completely due to water leakage, and all had been compacted beneath tons of rubble, which made a conglomerate difficult to excavate. However, some good-sized fragments (20-30 cm.) and forty smaller fragments of modeled stucco were recovered owing to the intervention and care of our team of restoration specialists, who were constantly on site during the excavations.

Of these fragments, the best preserved was a jaguar head of modeled stucco with a stone tenon on its back. The tenon is characteristic of mosaic elements from a frieze on an upper facade, such that it is easy to believe that there were decorations at this level of Structure XIX. Other iconographic elements included fragments of modeled stucco feathers, part of a Venus glyph, pieces with interlaced designs that might correspond to the body of a serpent, and finally the remains of what might have been the coiffure of an individual.

Special Deposit 99-8

This deposit corresponds to the remains of various artifacts from an event or ceremony, probably of termination or cancellation. This was located directly on top of the base level of the cornice of the platform that supports the building, directly at the foot of the northwest corner of the cornice's facing. The deposit was discovered in August, 1999, in the course of stabilizing the northwest corner of the cornice. The deposit was about one meter wide and extended toward the south the length of the terrace an indeterminate distance. Approximately 2.5 meters of this special deposit were excavated, documented and recovered during August and September of 1999.

One part of the deposit (including fragments of sculptured stone discussed below) was encountered on top of stucco from the fallen wall and stone blocks that had probably fallen from the roof of the structure. This is evidence that when the events or ceremonies took place, the structure had already partially fallen or was in an advanced state of deterioration. Also, the termination offering which was found in front of the throne inside the building was placed on top of rubble and fallen stucco, clearly demonstrating that the events took place at a difficult time for the royal house and, logically, for the society which still inhabited the place.

The special deposit contained the partial remains of at least four broken ceramic vessels (which may have been smashed intentionally), three complete prismatic blades of obsidian and fragments of others, a small (2-3 cm.) plain piece of polished jade, and four fragments of a sculptured stone tablet. There were no visible evidences of organic remains or carbon. We took samples of the soil-contact matrices for future analysis in the lab.

The fragments of sculptured stone included portions of the upper border and the right side of the carved stone tablet originally mounted on the central support pier of the building. In the upper part there were the remains of a band of hieroglyphic text. Some of the glyphs were eroded and many of the missing fragments were not encountered.

A Palenque emblem glyph was discovered which probably pertains to this hieroglyphic inscription. The four complete glyph blocks and the two partial ones could be read, including a death statement associated with the name of the father of K'inich Ahkal Mo' Nahb' III and an incomplete distance number. Using these textual clues, together with portions of the same inscription found earlier,

Project epigrapher David Stuart has recovered the sense of the entire text.

The largest fragment, a piece from the right border of the tablet, showed a portion of the interior of the thigh of the left leg and an ornament of the loincloth of a standing person. The hieroglyphic name above the thigh identifies the personage as "K'inich Ahkal Mo' Nahb', Divine Lord of Palenque".

The two remaining fragments formed the upper part of a backpack in the form of a creature, seen from the front, with an open maw. The jaw of the creature shows three sharp teeth, and the prominent eyebrow appears to be flaming or feathered. It is decked with a headdress of knotted cords, with the ends of the cords protruding above.

Special Deposit 2000-1

This deposit was found in a section of the stone floor that had been excavated in prehispanic times. At a distance of 2-3 cm. below the floor level there began to appear large fragments of thick earthenware similar to that found in Special Deposit 99-5 and two fragments of obsidian blades. Those earthenware fragments found in the lower levels of the excavation appeared to have traces of burnt copal. The fill in this pit is different than that of the rest of the original construction, the earth being of a different type and color. It seems that there were three episodes here: the first was the construction of the building, the second was an excavation in prehispanic times in line with the drain that extends under the building but not coming into contact with it, and the third was when the last occupants used the remains of the looted vessels and offerings together with stones and dirt to fill and level the pit.

Special Deposit 2000-2

This cultural deposit, excavated at the end of the season at the southwest corner of Structure XIX, was composed of squared-off bars of modeled stucco, fragments of polychrome stucco figurines, fragments of obsidian blades, clusters of shards from different vessels, fragments of stone tablet, two fragments of jade beads, small fragments of conch and two fragments of grinding stones (*manos de metate*).

This deposit was found underneath the rubble in a lens of earth almost directly on top of the stucco floor, which inclines us to believe that it was deposited before the collapse of the structure. The fragments of grinding stones indicate that it was possibly a place for depositing cast-off artifacts and rubbish. Our theory is that this event was before the collapse of the vault, while the crude stone wall was constructed afterwards.

Special Deposit 2000-3

This deposit was found inside the sculptured stone throne discovered in our excavations in 1999, which is situated in the extreme northeast corner of the building. During the excavations of the 1998-1999 season we excavated the interior of the throne. This had been looted in prehispanic times, as revealed by the fact that the lid was found in a partly burned condition removed from its original location. The fragments of the lid appear to have been scattered in different locations in the building, some of them comprising the offering in front of the throne, on top of portions of the stone tablet from the central pier. Ceramic shards similar to those found on the floor were found mixed inside the throne.

In re-excavating the bottom of the interior of the throne we discovered that a cyst had been constructed lower than the level of the floor of the building. This was lined with horizontal stones

to form a semicircle which must have held the dedication offering. At the bottom of this space were found fragments of a cylindrical vase with orange slip, which has since been restored. This is .4 meters tall with a diameter of .24 meters. Together with the remains of this vase were found three obsidian cores, 4 phalanges of a human hand, a concave oval of a material that seems to be pyrite subject to laboratory analysis.

Protection of the Structure

One of the achievements of this season of work was to protect Structure XIX from the elements by means of a roof constructed of wood resistant to termites, microorganisms and humidity. This roof was covered with metal sheets of an aluminum-zinc alloy. In the north section of the roof, we alternated transparent sheets with the metal in order to permit the passage of light into the interior of the structure.

Inside the building we constructed a walkway of tropical hardwoods (*chico zapote*, *canchán* and *maca roja*), delimiting an area for foot traffic. This walkway is laid on a polyurethane tarp which protects the stone floor. On top of the plastic is a layer of sifted earth serving as an insulator and shock absorber between the walkway and the stone floor, spreading the weight evenly. Bordering the edge of the walkway is a line of posts supporting a nylon cord.

Leading up to the building, we constructed a stairway of tropical hardwoods, which passes on top of the original stairs, touching only in the points where no architecture remains. On the gradient leading down from the eastern entrance we constructed a stairway of large stone blocks arranged in a semi-curve so as not to be confused with the prehispanic architecture.

Inside the structure we installed a replica of the polychrome stucco panel in its original location. On the north side of the same pillar, we set a replica of the bottom of the stone tablet, just as we had found it originally. Both replicas were created by the sculptor Álvaro Pascual. The replica of the stucco was made using a mixture of white cement and marble powder in equal parts over an interior structure of Armex metal mesh. We gave both pieces the colors and patinas of the originals.

Of the bas reliefs on the sides of the throne, we finished the replica for the west side. It was very difficult to obtain large enough stones for the engraving of the south side, but that part is underway.

The debris from the excavation was moved to areas suggested by the archaeologist in charge of the site, Arnoldo González C., who is the INAH supervisor and representative for the project. Part of the material was used in reconstructing the walls of the aqueduct and part in refilling the excavation of Temple XVIIIa conducted by Cesar Sáenz in the 1950's.

Structure XIX, which at the beginning of our work appeared to be an enormous mound difficult to understand, has turned into a building of great importance, not only in its architectural plan but also in a very special way, in that it refers to the dynastic history of Palenque. The discovery of the altar-throne of a ruler, in the extreme east of Room One, was one of the most emotional moments of the project. And afterwards, to read the glyphs inscribed on it opened a much wider window into the past of this very special site.

STRUCTURE XX

The work on Structure XX can be categorized as very preliminary, with the principal object of

determining how much architecture remains and its state of preservation. The excavations to date have been minor but interesting. We have found that the principal stairway has been more than 85% destroyed.

As part of our laboratory work, we have analyzed the digital photos taken in 1999 of the murals in the tomb in Structure XX-Sub and adjusted them to correct the perspectives and dimensions of the figures represented. These figures were drawn by Dr. Merle Greene Robertson, producing five drawings of what we believe were a group of nine. We have assigned them numbers beginning with that in the extreme southwest, designated number one, and continuing clockwise. Of the five figures, four are easily identifiable, but the fifth was mostly destroyed and only part of the headdress could be documented. It must be born in mind that the digital photos were taken without opening the tomb, through an aperture ten centimeters square, holding the camera in one hand.

In the excavation designated Operation 6, Adrienne Tremblay investigated the basement of the Structure XX pyramid and located a small but significant part of the original stairs.