

CONTRIBUTIONS TO AMERICAN ANTHROPOLOGY AND HISTORY, NO. 43

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THE MERCADO  
CHICHEN ITZA, YUCATAN

KARL RUPPERT

*With thirty-five figures*

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# I

## INTRODUCTION

### Discussion

The south side of the Court of the Thousand Columns at Chichen Itza, Yucatan, is defined by the Mercado (Ruppert, 1935, fig. 350, Structure 3D11), which is the largest of the six structures of the gallery-patio type known at the site and the only one excavated. The earliest map of the city on which the Mercado appears was made by A. P. Maudslay (1895-1902, vol. III, pl. 2). His plan of the structure is essentially correct, although he suggests the gallery as two parallel ranges of four rooms. Such an error is understandable, for he attempted no excavation and the width of the mound more readily led to this supposition than to the fact of its being a single vaulted gallery. Columns were shown only at the east end.

Excavation at the Mercado was undertaken in 1932. The plan made by Mr. John P. O'Neill, with some slight changes, is shown in figure 1; and the drawings of the polychrome bas-relief dais, made by Mr. William L. Lincoln, appear on figures 23, 24, and 25. Minor diggings in 1934 uncovered the cache of carved jade in the masonry block beneath the floor of the sunken area of the patio.

The Mercado was selected for study primarily because it represented a type of structure not excavated before. The length of the single vaulted gallery was not exceeded by any at Chichen Itza and probably not by any in the Maya area, and its width proved to be the greatest so far reported. Although rectangular and round columns have often been noted, their alternate arrangement in a gallery is so far unique; and the patio was a distinctly new feature which it was most desirable to examine.

In the simplest form, structures of this type are identified by a gallery and patio. At the Mercado these features rise from a Tau-shaped platform averaging 2 m. in height, the arm of the Tau supporting a long gallery and the leg, a patio with sunken court.

The platform facing rose with a single slope. A broad flight of stairs on the north, and narrow ones at either end, ascended to the broad terrace in front of the gallery.

The lower zone of the gallery rose with a batter, on which rested an apron molding. The middle zone was plain and the upper was formed by a plain band and a series of elaborated moldings. Set in the roof, near the edge, was a row of roof frets or adornos. Along the north façade are alternating round and rectangular columns, the intercolumnar spaces forming 38 openings into the gallery. The columns were painted in broad bands of blue, yellow, red,



and black, and traces of red and blue were noted on the upper facade, The structure must have been spectacular in its original state.

The gallery has a length of 72.75 m. and the vault an average span of 4.62 m. This length is not exceeded by any known single vaulted gallery in the area and the span is the greatest so far reported for a vaulted chamber.

Built against the inner and end walls is a simple bench with a back rest. A polychrome bas-relief dais to the east of the single doorway leading to the patio was in a perfect state of preservation when discovered. The sculpture, in low relief and brilliantly painted, depicts a procession of elaborately costumed captives bound hand-to-hand, proceeding from either side toward a central pre-eminent figure. The bench and the interior walls of the gallery were as brilliantly painted as the dais. The walls retain traces of banding with added painting of large figures, apparently of writhing serpents.

The patio, entered by a single doorway from the gallery, is approximately 31 m. square. Its walls seemingly rose to the height of the gallery roof. The exterior facing is plain except for the battered lower zone, which is a continuation of that of the gallery. The center of the patio is a sunken court. The portion of the patio surrounding this area was covered with a thatch roof, supported by the patio walls and a row of tall slender columns rising from near the margins of the sunken area.

The Spanish word *mercado*, meaning market or market place and only recently applied to the structure, is a purely local one and probably has no significance. Excavations have not shown any features that would suggest the specific purpose for which it was used. The Court of the Thousand Columns, which the Mercado faces to the north, may, with certainty, be said to have been a large open market place. This is suggested by the presence of a great number of small platforms, flagged and stone-outlined areas, perhaps stalls, booths, or stands, extending in four great rows from north to south.

It is reasonable to suppose that the function of the market may have spread into the colonnades on the north, west, and east. In a like manner it may have extended into the Mercado, but this possibility does not preclude the Mercado's having been built for some other purpose; nor may it be said definitely whether this purpose was secular or ceremonial.

Could this and the five similar structures at Chichen Itza have been judicial courts for the fixing of prices or settling of disputes in the market, or were they for the sale of specific articles? However, these suggested uses seem less probable when we consider the close proximity of two such buildings in the relatively small Southwest Group. Furthermore, it has not been established that they were necessarily associated with market plazas. The use of columns, basal batter, and specialized vault stones places them in the Mexican Period. The wall paintings in the Mercado gallery are reminiscent of those in the Chac Mool Temple, and sculptured jambs and carved dais appear only in late buildings. The



carved dais at the Mercado is an addition, but the sculptured jambs are of the original construction.

Structures of this type appear at Chichen Itza only in centers of the Mexican Period, not in the Initial Series nor the Monjas-Akabtzib groups, both concentrations of early buildings. The Mercado rests on the red-painted floor of the Court of the Thousand Columns, indicating that it was erected after the court was finished.

So far the gallery-patio complex has been reported only at Chichen Itza, where it belongs to the period after the opening of the 12th century when Mexican tribes invaded Yucatan and Chichen Itza became their principal ceremonial center. Thus, unless this complex is a local development, we should look to Mexican sites for its prototype. The Hall of the Six Columns with the Quadrangle of the Greques at Mitla (Holmes, 1897, fig. 93) resembles the gallery-patio complex in plan. In the Mitla structure the periphery of the patio has four flat-roofed chambers instead of an open ambulatory.

The location of other examples of this type would be of considerable interest and importance. Mounds formed by their disintegration may not be suggestive in their size and shape so that some familiarity with the arrangement and the materials to be encountered is necessary for their identification.

#### Structure 2D6

The Structure 2D6 north of the Temple of the Mesas is shown on the Maudslay map. As there shown it differs little from the plan made by Mr. Paul N. Fontaine in 1936 (fig. 3e). The gallery is formed of four rows of columns, those along the front (west) having a diameter of 76 cm., the others of 62 cm. The larger columns seem to rise from a slightly lower level. The southern limit of the gallery is indeterminable as it is covered by debris fallen from the Temple of the Mesas. The north end has undergone some changes, indicated by walls built between columns. The asymmetry of the gallery suggests its construction prior to that of the Temple of the Mesas. If the gallery-patio structure had been later, sufficient space would have been allowed for the gallery to have been built as a symmetrical unit. A small amount of excavation would clear this point. The doorway to the patio is 2.35 m. wide between the pilasters of the jambs. The patio measures approximately 14.50 m. square and contains 20 columns arranged in two parallel rows within its enclosing walls. A new type of roof adorno (Ruppert, 1935, fig. 246) was found associated with the gallery (figs. 4b, 10a).



## Structure 5B19

There are two examples of the gallery-patio complex in the Southwest Group. One of these, 5B19 (fig. 3b) is the only example among the six of this type at Chichen Itza in which the gallery does not extend beyond the line of the patio and in which the end walls of the gallery surely turn inward toward the columns of the façade. In this structure the lower zone rises with a batter to an apron molding. The west end of the patio is covered with debris from Structure 5B18. It is much deeper than broad and so differs from all others, which are more nearly square. The depressed area is small with a single column at each corner. These columns are symmetrically placed but are not in line with the others in the patio. All columns have an average diameter of 44 cm. and the capitals vary from 63 by 45 by 24 cm. to 55 by 47 by 22 cm. Some of the capitals are sculptured; all are probably re-used rectangular column blocks trimmed to reduce their thickness.

## Structure 5B17

Only general observations can be made of the second complex in the Southwest Group, 5B17 (fig. 3d), as it is very much in ruin. No columns were seen in the debris along the front of the structure, which in all buildings of this type takes the form of a gallery. The failure to note them can be explained only by their being buried in the debris or having been removed. The depth of the debris at the north end indicates the former presence there of a small chamber.

In the middle of the east wall is a triple doorway, the lintels of which had been supported by two rectangular columns. A 16-cm. sculptured band, at the edge of either face of the jambs, and plaster marks indicate the former existence of pilasters. This doorway gave into a chamber having the same length as the patio and a width of 2.20 m. In the center of the east wall the debris is lower than at either side, suggesting a doorway to the patio. The patio measures approximately 23 by 17 m. and has a depressed area in the middle. Between the enclosing walls and the depressed area are a number of column drums, but there is no indication of their placement or of the number of columns.

In the east side of the patio is a second long room, similar to the one on the west, which probably was entered through a triple doorway suggested by two sculptured, rectangular columns still in position. Vault stones were seen in the debris at the north end of the chamber. In the east wall of this room is a doorway opening into the first of two small, parallel chambers each measuring approximately 2.30 by 6.25 m. A section of the exterior wall, where exposed, rises with a batter to a 17-cm. apron molding; above this point it rises vertically.



## Structure 6E3

The fifth structure of this type, 6E3, known as the Temple of the Hieroglyphic Jambs, is in the southeastern section of the city (fig. 3a). The frontal gallery may have been intentionally razed, for there is little debris -- one column drum and some vault stones. A section of the west end is exposed; the east end is not indicated.

A doorway in the south wall of the gallery has a width of 2.43 m. and the jambs are inscribed with hieroglyphs (see Beyer, 1937, pl. 1). The doorway had been blocked on the north side with rough masonry, which now stands to a height of 40 cm. Excavations disclosed remains of a bench built against either side of the wall east of the east jambs.

The patio is roughly 18 m. square. Many column drums are scattered through the debris; some on the south side seem to be in position and indicate that the columns were arranged in two rows around a central open area. A doorway in the east wall of the patio opens into a single, small, vaulted chamber.

## Structure at Chultun Group

In the Chultun Group east of Chichen Itza is the sixth structure of the gallery-patio type (fig. 3c). The gallery rises from a platform 1.70 m. high and is gained by a stairway 7 m. wide. The columns have a diameter of 40 cm. and were surmounted by rectangular capitals. The columns are encased in rectangular blocks of masonry; in some cases large, specialized jamb stones were used.

The patio is approximately 19 m. square. In the center is a depressed area surrounded by 16 columns, each 54 cm. in diameter. A doorway in the east wall opens into a small chamber or sanctuary.



## II

### DETAILED DESCRIPTION OF THE MERCADO (3D11)

#### The Platform

The platform (fig. 1) varies in height from 1.80 to 2.35 m., depending on the surface level of the terrace of the Court of the Thousand Columns, from which it rises. The portion of the platform which supports the gallery has a bearing, on its north face, of N. 82° W. (true). It is 80.90 m. long at its base and 15.10 m. wide at the west end. Exact measurements of the portion of the platform beneath the patio are not known as only a little more than half of the west side was excavated. However, it had an approximate east-west length of 39 m. and a width of 33 m. measured on the west. The entire platform seems to have been constructed as a unit. The only major alteration noted was at the east end of the section supporting the gallery.

The platform-facing rises at an average angle of 75°. The masonry is veneer-like. The stones are regular, even and worked with the same care as those in other Mexican Period pyramidal structures and terraces; their exposed faces vary from 22 by 35 cm. to 19 by 22 cm. (fig. 9b). They are laid in more or less regular courses; eight are used at the west end. In some places there remain several layers of untinted plaster. Stones of the topmost course average 14 cm. in height and their tenons are 35 cm. long. Such stones, found *in situ* in the corner formed by the junction of the gallery and the west side of the patio platforms (fig. 9c), did not overhang the battered facing. With their long tenons they served to secure and strengthen the upper edge. Exterior corners of the platform are formed of five to seven rounded blocks (fig. 9b).

The interior construction of the platform is best made clear by examination of figure 4a. As a backing for the facing stones and serving to retain the more or less open fill is a solid wall of rough, unworked stones laid with a great quantity of lime mortar. Where examined, east of the main stairway (in line with Column 6), this retaining wall, including the facing stones, is 1.05 m. thick at the base and 55 cm. at the top. The inner face is vertical.

Inward from this wall to the columns the fill is of large stones without mortar. The upper levels are destroyed but may have been similar to those within the colonnade, which are described later. Beneath the columns and for a distance of 24 cm. to the north and south the fill is of solidly packed stones and mortar. This reinforced section extends in a continuous east-west line beneath the round and rectangular columns and served as a solid foundation. Like the rest of the platform, it is built directly upon the floor of the terrace of the Court of the Thousand Columns.

The material south of the foundation supporting the columns continues, for the most part, as loose open fill to the back wall of the gallery. Beneath that wall there is again a section consolidated and strengthened with mortar (fig. 4a). The south retaining wall is of the same mortar-laid masonry, but a distinct vertical line indicates that it was constructed as a separate operation. Where the wall of the gallery forms that of the patio, the south side of the foundation is set outward 50 cm. from the line of the wall.

A pit for the study of the fill was opened in the gallery south of Column 6 (fig. 10b). At the top, two floor levels (fig. 4a,A), each of hard-packed lime mortar tinted red, curve upward against the column. Average combined thickness of the two is not over 2 cm. Below the floors lies (B) a 16-cm. stratum of lime mortar and sascab (limestone marl) with some small stones toward the bottom. The next level (C), 11 cm. deep, is of small stones without mortar. Below this is (D) 5 cm. of lime mortar with small stones. In turn beneath this is (E) a 2.18-m. layer; the upper 6-8 cm. are of small stones without mortar, followed by 15-20 cm. of medium-sized stones, and the remainder is of large, rough stones. The base of the first course of facing stones of the gallery's south (back) wall is about 12 cm. below the top of level E or about 40 cm. below the gallery floor. Level E rests upon a good red-tinted floor (F), which was noted in various trenches and seems to be the finished floor of the great terrace of the Court of the Thousand Columns. Beneath this is (G) a 9-cm. stratum of mortar without stone, and (H) a 30-cm. layer entirely lacking mortar but having in the upper part small stones which increase in size downward. The lower margin is defined by (I) a very soft lime mortar level tinted reddish brown or tan. As a base it has 5 cm. of lime and sascab. Below this is open fill (J), varying in depth from a few centimeters to more than a meter according to the irregularities of the bedrock (K) upon which it rests.

#### NORTH STAIRWAY

The main stairway rising to the platform is on the north side. Practically all stones of the first step, many of the second, and a few of the third were found *in situ*; the remainder had been thrust out of alignment or were entirely displaced (fig. 11b). They were generally cut with the vertical face the height of the riser and placed on the long tenon of the stone forming the tread of the step below. Those found at the base of the stairway, where they have been protected from weathering, still showed their original careful workmanship and finish (fig. 11).

Width 19.25 m., not including the facing-walls at either end, each of which is 82 cm. wide. Treads and risers average a little over 19 cm. Latter are vertical; individual stones vary in length from 22 to 48 cm.



The platform-facing does not extend behind the stairway proper and only about 10 cm. behind the walls which face the two ends of the stairway and form its balustrades. The balustrades were in poor preservation, with only the lower course of facing stones and the lowest stone of the sloping surface in position. Two large, square-cut stones sculptured in low relief were found, one slightly east of the base of the east balustrade, the other in the corner between the west balustrade and the platform. They are practically identical in size and decoration. The carving in each case represents the lower part of a personage in bird costume, carrying an atlatl and spears and standing upon a human figure stretched at length on his back along the lower margin (fig. 12a,b). The stones bearing the upper parts of the design were missing. Because of the positions in which the two recovered stones lay, and because each is of exactly the same width (82 cm.) as the balustrades, it is practically certain that they entered into the latter's construction. They might have formed parts of panels let into the sloping surface, but their thickness renders it more probable that they were the lower elements of sculptured blocks rising vertically at the tops of the two balustrades (so shown in the restoration, fig. 16). One of the stones in question had evidently been used in an earlier building, as its lower surface, which would not have been visible had it been set in the balustrade, also bears carving (fig. 12b). The design is incomplete; there can be made out a left hand, mosaic wrist ornament, arm, and bird-beak headdress.

#### WEST STAIRWAY

The small stairway at the west end of the platform had only a portion of the four lower risers in position. The component stones are similar to those of the north stairway. Plaster on the steps abutting the south balustrade bore traces of red pigment.

Five of the stones comprising the sloping surface of the north balustrade were found, the lower two approximately in their original positions. Seven stones remained on the south balustrade, the lower two *in situ* (fig. 13a). They had been cut with considerable care, were unsculptured, and were covered on the upper surface with several layers of white plaster. The lower side was not worked with a concavity as were those associated with the upper stairway of the Caracol (Ruppert, 1935). The manner of finishing the upper end of the balustrade was not indicated. The facing of the balustrade walls is of fairly well worked stones although they are not uniform in size. Some, on which the capping blocks rested, were cut with one sloping side (fig. 13b,A). The platform-facing extends 10-16 cm. behind the balustrade.

Stairway width 3 m., risers 19.5 cm., treads 22 cm. Balustrade width 67 cm.

Built against the south facing-wall and the west end of the platform is a bench covered with a heavy layer of red-tinted plaster (fig. 13b). The uncolored plaster of the platform-facing and of the balustrade facing-wall extends behind and under the bench.

Bench height 20 cm.; portion abutting platform 84 cm. wide, 2.55 m. long; portion abutting stairway 80 cm. wide, 1.68 m. long.

#### EAST STAIRWAY

The north side of the stairway at the east end of the platform is defined by a facing-wall 66 cm. wide. Now in a poor state of preservation, only the first course of facing stones and three of its capping blocks are in position (fig. 14b). The south side of the stairway abuts against the mass of faced masonry forming the west end of the Southeast Colonnade and the east side of the Mercado east passageway. The first step rises from the floor of the terrace of the Southeast Colonnade. The stones are carefully worked and retain considerable untinted plaster.

Stairway width 3.23 m.; risers 21-25 cm.

Buried within this stairway are the remains of an earlier one. Excavations were not completed so that it is not known where the early stairway terminated on the south or if capping blocks rested on the north facing-wall. The facing of the Mercado platform extends behind the side wall of the late stairway and continues a few centimeters behind the facing of the earlier one. Portions of only the first riser remain in position. This step rises from a floor 28 cm. below the one associated with the late stairway and is 82 cm. inward from the first riser of the late one.

#### SOUTH STAIRWAY

This stairway appears on the south side of the gallery platform and in line with the east passageway. For the most part it is constructed of re-used wall stones, is built against the facing of the platform, and although in poor preservation (fig. 15a), evidently consisted of seven steps. They rose vertically except for the uppermost which is formed by the platform-facing and consequently had a batter. The absence of side walls capped with large blocks and the fact that the stairway is built against the platform-facing are proof of its secondary construction. The passage at the east end of the gallery and the stairway are probably contemporaneous.

Stairway width 2.38 m.; risers 24 cm., treads 28 cm.



## Gallery

## SOUTH FAÇADE

A small section of the south façade of the gallery directly west of the patio was standing (fig. 16a). The lower zone, rising 2 m. at an angle of  $70^{\circ}$ , is the highest battered zone that has so far been reported as associated with a building. The details of the façade are shown in figure 4a. Of special interest is the band, 45 cm. high, of alternate raised metopes and spool panels. The former, about 1.55 m. long, overhang the zone below by 12 cm. In no place was a complete spool panel found *in situ*. However, they were unquestionably composed of five spools, as one panel with five was found on the surface of the north slope of the mound near the west end where it had fallen *en bloc* (figs. 15b and 17c). Other groups of five were encountered during the excavation of the gallery (fig. 17a). These panels had a length of approximately 1.50 m. Each spool measured 45 cm. in height and 23 cm. in diameter and was so set that it was half engaged, its base 3 cm. inward from the top of the battered element on which it rests. The depth of the stone is approximately equal to its height (fig. 17b). The spools were painted blue, and the metope panels and the zones above and below were painted red.

The raised metope in position (fig. 16a) is 4.62 m. from the west wall of the patio. This space allows for two spool panels separated by a raised metope. The band on this section of the façade had a total length of about 20.70 m. providing space for seven 1.50-m. spool panels, six 1.55-m. raised metopes, and a final 84-cm. raised metope at the corner. At the Upper Temple of the Jaguars the corners are formed of spool panels.

## WEST FAÇADE

The west façade was similar to that on the south. However, it was standing only to the height of the lower course of the first vertical zone, at which level it was 6.35 m. long. The band carrying the spool panels was about 6.20 m. long, thus providing space for a raised metope in the center with a spool panel and an 82-cm. metope at either side.

## NORTH FAÇADE

The batter of the lower zone turns the corner and appears on the antae of the end walls of the gallery. (At the South Temple of the Great Ball Court the batter of the lower zone does not appear on the antae of the end walls.) Between the antae there are 37 columns, of which 18 are round and 19 rectangular. (Some of the round columns of the gallery-patio-type building (2D6) north of the Temple of the Mesas have a diameter of 76 cm.; at the east end of the North Colonnade, 69 cm.; at the West Colonnade, 66 cm.) The 36 inter-columnar spaces and the spaces between the ends of the west and the east walls and the adjacent columns vary from 1.23 m. to 1.86 m. Only the round columns have capitals (fig. 12c).

Average height of columns 2.54 m. Round columns: diameter 73 cm., 4 to 6 drums, thickness 25-1.17 m. Capitals: diameter 84 cm., thickness 28 cm. Rectangular columns: 46 by 85 cm., 6 to 8 blocks with thickness varying from 15 cm. to 1.05 m.

Presumably all columns were plastered and painted. The 34 which were still colored when excavated had been painted in three horizontal zones, measuring about 98 cm. for the basal, 80 cm. for the medial, and 50 cm. for the upper. Often there were narrow bands of contrasting color dividing the zones. The rectangular columns did not have capitals but instead the upper 28 cm. were painted like the capitals of the round columns. Some columns retained traces of color in all three zones, others in but one or two, and many showed at least two layers of different color over the original. In most cases the sequence of color on any one column can be determined. The lowest layer probably represents the original color scheme. Beyond that it is difficult to correlate the sequences found on the different columns and to restore the subsequent color arrangement since the number of layers is variable.

The stages in the tinting of the 34 columns which show color are given in Table 1. The third stage, although definitely present, is fragmentary and was seen only on 20 of the 34 columns showing color.

The color recorded in the table for the bands is sometimes the same as that of an adjacent zone. In reality the zone extends to cover the area of the band which is missing in such cases.

The tinting of the capitals (Table 2) shows less change than that of the shafts. Only on ten of the round capitals and the corresponding upper portion of six of the rectangular columns was pigment noted and on only two are there three washes of different color (Rectangular Column 31 and a rectangular column of unknown number as it was not found in position).



The capitals were tinted in three bands. In the initial layer, the lower band in 11 cases is red, 3 black or gray, and 2 no color. All were finally tinted red. The middle band has yellow as the initial color in 14 cases, 1 red, and 1 not colored. The second tinting shows 8 red, 6 with the initial yellow, and 1 black. The black was later covered with red. The upper band

Table 1  
TINTING ON 34 COLUMNS

Area	Black	Yellow	Red	Blue	Perhaps Black, now Cream or Gray	No Color Remaining
<i>Initial Tinting</i>						
Basal zone ...	27	3	...	1	...	3
Lower band ...	...	3	...	21	...	10
Middle zone ..	10	9	...	...	7	8
Upper band ...	...	2	1	15	...	16
Upper zone ...	1	4	13	1	...	15
<i>Second Tinting</i>						
Basal zone ...	21	4	...	2	...	4
Lower band ...	2	...	...	22	...	10
Middle zone ..	9	7	1	...	9	8
Upper band ...	...	2	...	16	...	16
Upper zone ...	...	5	9	3	1	16
<i>Final Tinting</i>						
Basal zone ...	16	1	1	...	...	2
Lower band ...	9	...	6	2	...	3
Middle zone ..	2	1	16	...	...	1
Upper band ...	...	2	10	2	...	6
Upper zone ...	...	...	16	...	...	4

shows 13 blue as the initial color, 1 red, and 2 uncolored. The second tinting of the band shows 11 red, 2 blue (initial), and 1 black; the third shows 12 red and 2 with initial blue (Columns 2 and 22).

The wooden lintels which spanned the intercolumnar spaces had entirely disappeared. The plain area above the molding of the battered zone has an 88-cm. height which places its upper margin about 53 cm. above the top of the columns. If the beams were 28 cm. thick (at the Temple of the Jaguars the beam thickness is 28 and 32 cm.; at the Castillo it is 23 and 26 cm.), the masonry resting on them and completing the zone must have had a height of 25 cm.

The band of raised metopes and spool panels had a length of about 75 m. This space provides for 24 spool and 25 raised metope panels. A total of 120 spools would be required. During the excavation 138 were recovered, of which 119 were from the north side. Fifteen spools were turned over to the Mexican Government May 12, 1932, for their use in the repair of the Temple of the Jaguars.

Table 2  
TINTING ON CAPITALS

Area	Red	Yellow	Blue	Black or Gray	No color
<i>Initial Tinting</i>					
Top ...	1	...	13	...	2
Middle	1	14	...	...	1
Base ..	11	...	...	3	2
<i>Second Tinting</i>					
Top ...	11	...	2 (initial)	1	2
Middle	8	6 (initial)	...	1	1
Base ..	13	...	...	1	2
<i>Third Tinting</i>					
Top ...	12	...	2 (initial)	...	2
Middle	9	6 (initial)	...	...	1
Base ..	14	...	...	...	2

A row of ornamental stones (adornos) rose from near the edge of the roof of the gallery, except on the south side, where the patio projects. They resemble a capital G (Morris, Charlott, and Morris, 1931, 1:33; Ruppert, 1935, p. 196, fig. 246) in form and have an average width and height of 75 cm. (fig. 17d). During the excavation 69 were found. Some are more carefully worked than others but most show a narrow border around the edge of one face. This face was unquestionably exposed and consequently all stones were placed so that they were open on the observer's right. They show no trace of pigment, although many still retained several layers of white plaster. The number of these specialized stones used on the structure is not known. A series of 24 were found in the debris on the north side in a distance of 19.20 m. This great number suggests that they were set very close to each other or perhaps even touching to produce the effect of a continuous fret design, as shown in the restoration (fig. 1).



## GALLERY INTERIOR

The gallery has an interior length of 72.75 m. and a width varying from 4.26 m. to 4.52 m. A single doorway in the center of the south wall opens into the patio.

Doorway width 4.11 m., height 2.30 m., depth 1.30 m. Pilasters measure 48 cm. by 40 cm. by 2.30 m. high.

*Pilasters.* Built against each jamb is a pilaster, its face sculptured in low relief depicting mask panels and human figures. Some of the component stones are much weathered and portions are broken and chipped. The sculpture lacks uniformity; certain parts are carefully executed and others are portrayed by only incised lines. The faces of the pilasters are illustrated in figures 19 and 20.

The mask at the base of each panel has a large open mouth with teeth in the upper jaw and a protruding, downward-hanging bifurcated tongue. The nose, eyes, and eyebrows are clearly indicated and at either side of the face is a circular ear ornament. Above the head is a band or fillet with a rosette in the center. There is a plain unsculptured area between the mask and the human figure panels above.

## EAST PILASTER

*North side* (figs. 19a, 20a). Figure wears serpent headdress from which rises an elaborated plume or noseplug. Man's face appears in open jaws of serpent. Ornaments: ear disk, long bar-bead for nose, wristlets, and bead necklace. Serpent body or a long cape hangs down behind figure to level of feet. Body partially nude. Sandals, and possibly garters, indicated.

*West side* (figs. 19b, 20b). Chipped and broken along top and south edge. Type of headdress can not be made out. Ornaments: long bar-bead in nose, ear ornament is bar from which hangs pendant and two feathers. Body nude except for beaded breastplate, padded left arm, garters, and sandals. Atlatl in upraised right hand, curved stick in left hand.

*South side* (figs. 19c, 20c). Much destroyed. Left arm probably padded. Garters and sandals worn.

## WEST PILASTER

*South side* (figs. 19d, 20d). Figure wears serpent headdress ornamented with elaborated plume or noseplug. Serpent body draped down back. Ornaments: round earplug, bar-bead in nose. Save for headdress, disk breastplate, wristlets, and sandals, the figure is nude.

*East side* (figs. 19e, 20e). Figure wears turban-like headdress ornamented with a row of rosettes. Elaborate ear decoration, and nose pierced by long bar-bead. Figure is nude except for necklace or breastplate, wristlets, and sandals. A number of spear shafts and a curved stick held in right hand. An atlatl is probably held in the left hand.

*North side* (figs. 19f, 20f). Figure wears serpent headdress, from which rises a short plume, perhaps a noseplug. Serpent body or cape hanging down

the back. Bar-bead for nose ornament. Excluding a disk breastplate, sandals, and wristlets, the figure is nude. A curved stick is held in one hand.

The top stone of only the west pilaster was found. It bears masks like those at the bases of the pilasters.

*Masonry.* The masonry of the gallery walls is, for the most part, of carefully worked stones varying considerably in size and not laid in uniform courses.

Size of stones, from 23 by 24 cm. to 35 by 47 cm.; depth not over 16 cm.

*Vault.* The vault had collapsed except for small sections, not over three courses high, resting on the south wall, and for a single row of five courses which lean against the south side of the vertical facing-wall at the east end of the gallery (fig. 18c). Here the vault rises at an angle of  $60^{\circ}$ . It has an offset of 5-7 cm. at the spring line and there is a similar offset at this level on the east end wall. The stones of this east wall that are contiguous to the vault are trapezoidal (fig. 18c). The span of the vault, which varied as much as 26 cm., attained a maximum of 4.52 m. at the middle of the gallery (the central span of the inner chamber of the Temple of the Warriors measures 4.12 m.).

At the top of the vault was a 12-cm. vertical band on which rested the capstones. Although none of the band stones were found *in situ*, some, uncovered in the debris at the west end and in their original order, were associated with those of the vault. Excavation showed that the outer (north) half of the vault fell first. With the decay of the timbers spanning the intercolumnar spaces, the portion of the vault they supported fell into the gallery. Following this the south half collapsed upon the north (fig. 18b).

The capstones which rested on the band are all large slabs carefully worked and nicely finished on the under side. Those in line with Column 21 are shown as they fell with the collapse of the vault (fig. 24b). They were found in the debris 1.50 m. above the floor (fig. 18a).

Capstones measure from 60 cm. by 1.06 m. to 72 cm. by 1.08 m. and have depth of 20 cm. Plaster marks on stone at east end of gallery indicate a span of 53 cm.

A beam hole noted in the fallen south half of the vault in line with Column 24 had a diameter of 12 cm. and was 1.53 m. above the spring line.

*Bench.* A bench was built against the walls of the gallery, except for a section east of the doorway which was occupied by a sculptured dais. The bench was 1.30 m. wide and its face, averaging 60 cm. in height, is formed of a 50-cm. vertical zone and a 10-cm. band overhanging 5 cm. The stones of the band lack

uniformity and occasionally one is sculptured (fig. 21a). The latter are unquestionably here re-used. Rising from the top of the bench, its base set an average of 29 cm. from the wall against which it leans, is an inclined element 55 cm. in height (Morris, Charlot, and Morris, 1931, 1:55). The bench had been carefully plastered; its face tinted red, the band red and blue, the top red, and the inclined element black.

The graffito shown in figure 4c was incised in the plaster on top of the bench at the southeast corner of the gallery. This may have been used in a dice game similar to the one illustrated in the Magliabecchi Codex, XIII, 3, f. 60r, of which Caso says it "was played with beans marked in a certain way or with reeds cut lengthwise and marked on the concave side. The game was called Patolli and was dedicated to Macuilxochitl and Ometochtli" (Caso, 1937, p. 54 and fig. 39).

*Step.* Within the bench and built as a primary construction against the east, south, and west walls of the gallery was a masonry step. It had a height and width of 20 cm. and 50 cm., respectively, indicated by the plaster of the floor curving up to the riser and that of the tread curving up to the wall. The step was built of rubble and mortar and the finishing plaster was painted red and yellow-orange. Worked stones had not been used in its construction (fig. 21b).

As has been noted, two finished floors were found in the gallery. The upper or later one is associated with the bench; the earlier one, extending under the bench, is associated with the step.

The plaster on the gallery wall above the step had been painted in horizontal bands of green, yellow, black, red, and blue. As noted at different points on the wall there is some variation in the width of the bands as well as in the sequence of the colors. Other decoration remaining consisted of triangular forms in white outlined in black on a red background and may be the serrated border of a serpent body similar to those painted on the walls of the Temple of the Chac Mool. They appear in line with Columns 6 and 7 and have the lower point of the triangle 75 cm. above the inclined element of the bench (fig. 6b).

In the southeast corner are five pairs of ornaments (four on the south wall, one on the east wall) painted in orange and outlined in black (fig. 6a). These are similar to the elements described by Mrs. Morris as "yellow petals" (Morris, Charlot, and Morris, 1931, 1:364) terminating appendages that issue from the curves of the snake. Only the lower 12 cm. of these ornaments were in good condition as that portion was covered and protected by the inclined element of the bench. This would indicate that the wall decorations belonged to a period preceding the construction of the bench.



*Sculptured Dais.* To the east of the doorway leading into the patio is a sculptured dais. It is built against the gallery wall and is contemporaneous with the bench. The face of the dais rises with a batter to a vertical cornice. On the sides the cornice extends back across the bench to the wall. The cornice stone at the northeast corner had been dislodged and was found on the floor.

Dais height 62.5 cm.; top measures 2.23 by 3.02 m. Cornice height 25.5 cm., overhang 9 cm.

The three faces of the dais as well as the cornice are ornamented with polychrome bas-relief (fig. 22). The top was finished with hard-packed, red-tinted lime plaster like the floor of the gallery itself. A plain blue-tinted band extends around the sculpture of the sides and cornice.

The dais had been repainted from time to time and in the successive paintings different colors were used for the same surfaces. There can be no certainty that the colors in the reproduction, which has been photographed for figures 23, 24, and 25 and deposited in the Peabody Museum of Harvard University, are entirely of any one painting.

Some difference in detail is seen between the reproduction (figs. 23, 24, 25) made soon after the dais was uncovered and the photographs (fig. 22) taken several months later when most of the plaster with the color had peeled off.

The sculpture is superior to that on other altars at Chichen Itza. In depth and in clarity of definition it is comparable to the bas-relief of the lower Temple of the Jaguars and the North Temple of the Great Ball Court.

There is considerable variation in the work of the sculptor and that of the painter, the latter often showing complete disregard for the lines established by the former (similar differences in painting and the sculpture underneath the plaster were noted at the Temple of the Warriors). This is well illustrated in the human figure, Form 4, where the painter has not shown a nose ornament while the sculpture plainly indicates a long bar-bead.

No use seems to have been made of incrustations of shell for eyes.

The north face of the dais has as its central motif a human figure standing above two small semireclining figures. To the east and west are depicted four and five human figures, respectively. They unquestionably represent captives as they are bound together by a rope which encircles their wrists and extends from one to the other. (Cf. Gann, 1900, p. 666. Wall paintings at Santa Rita show seven figures, "which evidently represent a line of captives, as all their wrists are bound.") On both the east and west faces of the dais are four figures similarly bound. The figures have arbitrarily been numbered Forms 1-18 beginning with the southernmost on the east side, proceeding

toward the north, across the north face, and continuing to the southernmost on the west side. Above and in front of the headdress of each bound figure is a symbol which may be the name glyph of the man, his village, or his tribe.

Form 1 has a face that is not clear although the ear ornament is a disk and that for the nose a crescent. A turban-type headdress with a great tuft of feathers sweeping upward and down and a feather cloak complete the dress. The right arm extends forward and the wrists are bound with a cord. There is a scroll in front of the figure and to the right of the headdress is a much-weathered glyph (fig. 7a).

Form 2 wears a turban or cap from which rise short feathers and a tuft of long backward-sweeping plumes. A bird is probably represented on the front of the headdress. The right arm is brought forward and the wrist tied with the same rope that binds Form 1. Details of dress that can be made out include a long cape and short skirt. A round ear ornament is clearly depicted. The glyph, painted green, is shown in figure 7b.

Form 3 wears a cap, the forward part of which is a mosaic ornament. Behind is a pompon from which projects a tuft of long plumes. The individual seemingly wore a nose bar and ear disk, and around his neck a band with a bow at the back. The upper garment can not be identified but from the back of the figure springs a tuft of long feathers. A short skirt with back-flap, knee ornaments, and sandals are worn. The glyph is a hand holding an object (fig. 7c).

Form 4 wears a headdress similar to that of Form 3 in that a tuft of long feathers projects from a pompon at the back of the turban. The ear ornament is a disk and the septum of the nose is pierced by a bar-bead. The figure wears a beaded shoulder cape and loincloth. The rope binding the wrists comes from behind the body and extends to the north border of the panel. The glyph is shown in figure 7d.

Form 5, the easternmost in the north panel, and Forms 6, 7, and 8 face west. The headdress worn by Form 5 is a cap from which rises a crest of short, closely set feathers and five long pointed ones. The ear ornament is a disk, that of the nose is crescent-shaped and a feather cloak hangs to the knees. The rope that binds Form 4 continues into the north panel, passes behind Form 5, binds his wrists, and then continues on to Form 6. The glyph, the upper portion painted green and the lower yellow (fig. 7e), somewhat resembles the drawing in Sheet A83 of *Antigüedades Mexicanas*.

Form 6 has a headdress and ear and nose ornaments very similar to those just described. The individual probably wears a short skirt, for the legs are clearly indicated below the knees. An arrangement of feathers projecting at the shoulder level sweeps backward and down. The glyph is a house (fig. 7f).

Form 7 wears a headdress with a panache of long feathers. The nose ornament is crescent-shaped and the ear decoration is a disk and stem. The body is covered with a long feather cape, from which the bound wrists project. The glyph (fig. 7g) somewhat resembles the one shown by Peñafiel for Cuauhpiloyan on page 26 of his atlas of place names.

Form 8 has a turban headdress with long feathers hanging down the back. The ear ornament is a disk with a stem and the nose decoration is a bar-bead. We see a disk ornament on the chest, a long feathered cape covering the body, garters and sandals, and bound wrists. The glyph is an ornamented bar above three or four dots (fig. 7h).

Form 9, the central one on the north, wears a bird headdress and costume. The face is obscured by a break in the masonry. The type of nose ornament, probably a bar, is not definitely known, although a round ear ornament with stem is clearly depicted. A round breastplate is worn, the left arm is padded, and the hand at the side carries two spears. The right arm is upraised and the hand grasps an object which may be an atlatl. The right leg is slightly flexed while the left seems to be straight. The feet, in the form of bird claws, rest above two small human figures. These are squatting with the body thrown backward, resting their weight on the arms. Neither figure shows much detail of costume. The one to the east wears a round ear ornament and both have feather headdresses.

Rising behind and above the central figure is a serpent. Its head is to the east and from its open mouth protrudes a bifurcated tongue. The body, with excrescences like stone knives or barbs, writhes downward, terminating in a long tuft of feathers above the small semireclining figure to the east.

Form 10 is the first west of the center of the panel and like the other four in this group, faces east. The headdress is cap-like, supporting a rather high, orderly arrangement of feathers from which long, artificial, elaborated plumes rise and curve over the back. The ear and nose ornaments are a disk and pendant, respectively. A breastplate is suspended by a cord around the neck. The apron is decorated with ball fringe; a breech-cloth projecting from beneath the apron hangs to the knees and a back-flap extends to the ankles. Garters and sandals are worn. The wrists are tied and the rope continues backward to the next figure. The glyph is a starfish-like arrangement of four wavy arms (fig. 7i).

Form 11 wears a simple cap headdress with a crest of short feathers, from which spring several long sweeping plumes. The ear ornament is a disk and a long bar pierces the septum of the nose. A feathered skirt with back-flap, simple knee ornaments, and sandals complete the dress. The head is superimposed on a great disk, and possibly a basket is carried on the back. The glyph is perhaps a squirrel (fig. 7j).



Form 12 wears a diadem decorated in front with an ornament and in back with tufts of short feathers from which rise long downward-curving plumes. The nose is pierced by a pendant-bead and a composite decoration hangs from the square ear ornament. Articles of dress include a circular back-shield, short skirt, back-flaps, garters, and sandals. The head, as in Form 11, is superimposed on a raised area. The glyph is shown in figure 7k.

Form 13 is less clear than some of the others. The individual wears a cap with a triangular front and in back a group of plumes artificially elaborated. The ornament for the ear is a flap and disk, that for the nose a pendant-bead. The figure seems to wear a feather cape hanging to the knees and a collar tied with a large bow behind the neck. The cord binding the wrists passes in front of the figure. The glyph is a bird (fig. 7l).

Form 14 wears a skullcap surmounted by a mosaic band which surrounds the base of a tuft of long plumes. The ornament for the ear is a disk and that for the nose is a pendant-bead. The figure wears a skirt, long back-flaps, and a circular back-shield. The cord binding the wrists passes in front of the figure to the western edge of the panel. The glyph is badly weathered (fig. 7m).

Form 15, the northernmost on the west face, shows little detail of costume. The headdress is a cap with triangular front. Accoutrements include an ear-disk and a long nose-bead. The wrists are bound by the cord which extends from the north panel. The glyph is not clearly shown (fig. 7n).

Form 16 wears a skullcap, from which rises a high crest of feathers. Projecting from the center of the crest is a tuft of long sweeping plumes. The ear and nose ornaments are a disk and a pendant-bead, and a breastplate is fastened by a cord tied at the back of the neck. A short kilt, long back-flaps, a round back-shield, knee ornaments, and sandals complete the dress. The wrists are bound and the rope is seen in front of the figure. The glyph appears as a wreath or ring-like ornament with two streamers hanging from the top. Compare this glyph (fig. 7o) with the one associated with Form 7 (fig. 7g).

Form 17 wears a turban with two tiers of feathers: the first short, the second long and artificially ornamented. A pendant-bead decorates the nose and a disk the ear. A breastplate is fastened by a cord around the neck. The individual further wears a long feathered cape, probably a loincloth with back-flaps, knee ornaments, and sandals. The wrists are bound by the cord which passes in front of the figure. The animal-like glyph is shown in figure 7p.

Form 18 has a cap with a triangular front and a crest of feathers. There is an ear-flap and a round or crescentic ear ornament, and a pendant-bead hangs from the nose. A breast ornament, loincloth, back-shield with back-

flap, garters, and sandals complete the costume. The glyph (fig. 7q) is similar to one in photo 63 of the Borgia Codex.

The cornice is sculptured with four serpent figures, one each on the east and west sides and two on the north. - The dorsal scales were painted green, the ventral yellow. The bodies are arranged in the form of a simple meander with the resulting spaces occupied by a sky (Venus) sign. The cornice stones abutting the inclined element of the bench are cut with an angle, further indicating the contemporaneity of the dais and bench (fig. 26b).

Excavations in the sculptured dais revealed the remains of an earlier one. This one is indicated by the upward-curving plaster on the floor, a small section of its east face, and the absence of paint on the south wall of the gallery. Three stones of the east face now remain in position (fig. 26a). Two of them, forming the battered lower zone where the dais projects from the south wall of the gallery, have a combined length of 57 cm. and the face rises 13 cm. at an angle of  $69^{\circ}$ . On this lower zone and abutting the gallery wall rests a single 10-cm. band stone overhanging 4.5 cm. Plaster marks on the upper margin of this stone, 4.5 cm. in from its face, indicate the point from which the second zone rose. Lack of painted plaster on the section of south wall of the gallery where it was abutted by the early dais further substantiates this and indicates that the zone rose vertically 54 cm. and was finished with a band cornice. In the fill of the sculptured dais were ten 13-cm. band stones which, from plaster remaining on them, showed that they had an overhang of 4 cm. and that the upper surface formed the top of the dais or altar. The overhang was painted with two coats of red, the face with two of blue, and the top with two of red. The top seems to have further a final tinting of black, which readily washes off.

Inner dais: length 2.64 m., width 90 cm. indicated by upward-curving plaster of the floor.

On the east side, remnants of the low step which was built against the gallery wall extend under the late sculptured dais and abut the earlier one. Within the sculptured dais the plaster on the step is tinted red and orange-yellow and the wall is decorated with bands as in the southeast corner of the gallery. The upward-curving floor, associated with and indicating the margins of the step and dais, is yellowish red. A later or second floor was laid over the first. It is tinted red and curves upward against the former limits of the west and north side of the early dais and continues straight eastward 70 cm. beyond the eastern edge of the sculptured dais. This eastern extension of the floor seemingly indicates the former existence of a construction which covered a portion of the step.

The next unit of the step-dais complex was the present sculptured dais with the bench to the east and west. Just when the first dais was razed is not known. The section of the bench abutting on the west underwent some change. It has an east-west length of 1.24 m. but its width, as indicated by the edges of the early floor, has been increased 15 cm. at the west and 8 cm. at the east. With the construction of the sculptured dais and bench a new floor, yellowish red, was laid. Overlying this is a final floor tinted deep red.

*Fireboxes.* Between Columns 9 and 10, and 1.25 m. to the south of the latter is a masonry-lined firebox set in the floor. The sides, of flat stones set on edge, are vertical except that on the east which rises with a slight angle (fig. 26b). The depression was filled with ashes and the facing stones are calcined. Ashes were also found on the floor to the east of the depression. The floor north of the firebox and to within 12 cm. of the column is of flagstones.

Firebox: 90 cm. long, 68 cm. wide, 25 cm. deep.

Between Columns 28 and 29, and 1.25 m. south of them is a second firebox. The north, east, and south sides, of flat stones set on edge, rise vertically. The west face, of plaster, slopes gradually downward toward the east. Some faced stones 40 cm. south of the firebox possibly indicate an earlier facing wall. To the north and west of the depression the gallery floor is of flagstones (fig. 26c).

Firebox: 1.05 m. long, 70 cm. wide, 25 cm. deep.

#### East Passageway

On the platform and built against the east outer end of the gallery was a covered passageway. The east wall, resting on the Mercado platform, was formed by an extension of the masonry of the Southeast Colonnade. Its north façade rises vertically and the south has a batter similar to that of the lower zone of the gallery. When excavated, the south façade was standing to a height of 1 m. above the top of the platform. From the corner this section extends 1.20 m. eastward, where it joins the west façade of the Southeast Colonnade. Fill material placed on top of the platform at the base of the batter was faced with cut stones in line with the projected inner face of the passageway and with the batter of the platform (fig. 15a).

The west wall of the passageway is 30 cm. from the base of the gallery lower zone. The north and south ends rose with a batter similar to that of the gallery. At the time the west wall of the passageway was built the

facing stones of the gallery east batter were torn out except for the first and final course (fig. 27a). The floor associated with the platform (fig. 27b) is 2 cm. below the first course of stones of the west wall of the passageway and was traced 1 m. to the east. The first floor of the passageway, of hard-packed lime mortar, was tinted red. A later floor was black.

The east wall was tinted red to a height of 66 cm. Above this red dado, traces of green, red, yellow, white, and black were noted. Portions of the east vault soffit were in position. In the debris at either end of the passageway, vault stones were found with tenons 64 cm. long and faced on two sides: one where exposed in the vault and the other to form part of the façade. One of the capstones recovered in the debris showed, from plaster marks and color still remaining on it, a span of 55 cm. for the top of the vault. This stone, 34 cm. wide, had a blue band at either end. Inward from the blue band was one of orange, with black tracery, followed by one of red. The remainder of the stone retained remnants of red, black, and yellow.

The roof of the passageway was probably on the same level as that of the Southeast Colonnade. Since the north face of the east wall of the passage was standing to a height of 86 cm. and the projected line of the molding of the Southeast Colonnade was probably not over 1.15 m. above the platform, the molding of the colonnade may have terminated at the east side of the passage wall as suggested in figure 1. The cornice of the Southeast Colonnade, however, probably continued across the façade of the passageway.

Passageway: length 6.70 m., width 1.90 m., height of walls 1.90 m., 6-cm. offset at spring line, vault angle 65°.

#### Patio

The southern projection of the Mercado platform supporting the patio has the same height as, is similar in construction to, and is contemporaneous with the section supporting the gallery. Only a portion of the west side was excavated.

Approximate measurements at base: 33 m. east-west, 39 m. north-south.

In the corner formed by the junction of the west face of the platform and that supporting the gallery, a wedge of faced masonry had been built as a secondary construction (fig. 9c). When uncovered it was standing five courses high or to within 70 cm. of the top of the platform, and had a width at its base and at its upper margin of 58 cm. and 92 cm., respectively. The facing probably rose to the level of the platform as no floor was indicated at the top of the section in position. A number of flat stones, their surfaced side uppermost, had been placed on the floor of the platform in this same corner.



The exterior face of the patio wall rose with a batter similar to that of the gallery. On this rests a 20-cm. apron molding followed by a plain vertical zone; sections of the latter were found rising to a height of 2.30 m. (fig. 28b). Originally this zone probably measured 4.85 m., bringing the façade to the same height as that of the gallery (7.05 m.). It presumably was not finished with a cornice as no stones of this type were found in the debris when the west side was excavated.

The fill of the platform is of large unworked stones laid as dry masonry except beneath the patio wall, where it is very solidly packed and contains a great quantity of lime mortar. A pit in the northwest corner showed the foundation to project 50 cm. beyond the line of the wall (fig. 30a) and continuing downward 2.68 m. to a pink-tinted uneven level. The bedrock was encountered 48 cm. below this uneven level.

#### INTERIOR

Only the western half of the interior of the patio was excavated. Before work was begun small sections of the wall were visible above the debris (fig. 29). The inner facing is lined by unbroken vertical walls on its four sides, except on the north where entrance was gained through the single doorway from the gallery. A section of the interior south wall, east of the medial north-south axis of the patio and rising 4.20 m., was the highest bit of faced wall found in position (fig. 29b).

In the center of the patio is a sunken area roughly 15 m. square. Surrounding it and extending to the walls enclosing the patio is the ambulatory, which has an average width of 8.45 m. The floor of the latter is of lime plaster except for a flagstone path, averaging 2 m. wide, on the three sides examined. Giving off from the flagged walk were several paved lateral projections. All the flagstones were well worked, generally rectangular, but almost all are blackened, calcined, or broken as the result of fire (fig. 30b).

Interior measurements of patio: 31.80 m. north-south, 31.50 m. east-west.

Surrounding the sunken area and placed from 94 cm. to 1.06 m. from its edge are 25 columns, which rise from the floor of the ambulatory. Not including the column at each corner, there are five on the north, west, and south sides and six on the east. An average of 10 drums, which may vary as much as 10 cm. in diameter, composed a single column. The total height of each column, including the capital, is 4.75 m.

Intercolumnar spaces vary from 2.13 m. to 2.36 m. Corner columns average diam. 63 cm. Other columns average diam. 51 cm. Capitals average 73 by 56.5 by 32.5 cm. Capital of Column 13 in southwest corner measures 68 by 67 by 26 cm. and shows traces of sculpture on sides. The columns have arbitrarily been numbered 1 to 25 beginning with Column 1 in the northeast corner and proceeding counterclockwise.

At the time the investigation of the structure was undertaken all columns, with but two exceptions, had fallen into the sunken court, with the drums of the individual columns retaining their relative positions so that they could be reassembled without question (fig. 29a).

In the repair of the patio Columns 3—16 inclusive were re-erected. Those in the east side of the court were left as they had fallen. Before resetting each column, we examined the fill beneath the first drum. It is of very solidly packed lime mortar to an average depth of 40 cm. with a diameter only a few centimeters greater than that of the drum. In the intercolumnar spaces mortar is almost entirely lacking.

#### ROOF

The roof of the ambulatory having fallen, the debris on the floor was the only evidence remaining as to its construction. It is probably fair to suppose that half the material of the walls fell outward and half inward. The debris on the floor midway between the columns and the walls had an average depth of 10 cm., whence it slopes upward to a height of 1.30 m. against the walls. As seen in figure 28a some exterior facing and a great deal of the grouting above the batter is in position.

The possibility of the roof having been of vault construction is easily dispelled. In the excavation of the patio only eight vault stones were found and they came from the sunken area south of Columns 4 and 5. It has been suggested that the vault stones were removed after the collapse of the vault. The amount of digging necessary to retrieve the stones would have been tremendous, and it could not have been done without disturbing the alignment of the fallen columns. The width of the ambulatory on the north averages 6.80 m., and as the columns rose to a height of 4.75 m. they could not have withstood the outward thrust or kick of a vault. Moreover, a surface examination of the other structures of this type did not reveal vault stones in the patio.

The character of the debris would indicate that the roof was not of pole-and-rubble construction. Where this type of roof has been reported the debris is of spalls, irregular small stones, and much lime mortar (Lothrop, 1924, pp. 83-84; Martin, 1927). Further, the edge of the roof toward the open court would have been finished with plain, faced stones if not with a cornice of two or three members. With the collapse of the roof some of these

stones would have fallen into the court and possibly even have retained their relative position as did the drums of the columns. No such stones were found.

The only other possible roof material would seem to have been a thatch of grass or palm leaves, as the burning of either of these results in little residue and still produces heat intense enough to calcine building stones. The facing of the patio walls had fallen to within an average of 1.30 m. above the floor, although the grouting rises much higher (fig. 28a). The faced stones in the upper courses are burned, cracked, and calcined (fig. 31a) as are some of those in the first and second courses, as well as the flagstones in the walk (fig. 30b). No charcoal from burned timbers was noted in the debris.

In judging the type of thatch roof, we may first consider one with a single slope. Such a slope must have been from the enclosing walls to the columns since the wall defining the north side of the patio is a continuation of the south wall of the gallery and had a height of 7 m., whereas the columns have a height of 4.75 m. If this is true for the north side of the patio, the three outside walls must have been raised to the same height as on the north and the resulting roof angle would be one of  $18^{\circ}$  (Wauchope, 1938, p. 41, says that a non-Indian house at Zacapa has a roof angle of  $11^{\circ}$ ). Although this angle is not so practical as one having a steeper slope, it would suffice and obviate the necessity of adding a supporting superstructure on the gallery roof and increasing the height of the side walls.

The writer feels that the quantity of debris recovered, together with the amount of grouting in position, would be sufficient to carry the walls to the height of the gallery roof.

The wooden framework resting on the walls and columns must have been similar in principle, with slight adjustments and adaptations, to that used in the native houses. Horizontal beams may first have been placed on the walls and also from column to column. Transverse horizontal beams were next placed with one end resting on the column and the other end tenoned in the masonry of the wall. Rafters then extended from the column to the top of the wall. Additional support was probably given the rafters by vertical struts from the transverse beams. After the rafters, the purlins and common rafters were placed, and finally the roof rods, to which the thatch was fixed, were put in position.

In considering a roof with two slopes we see that the exterior wall might have been the same height as the top of the gallery, or lower. If the walls were uniform in height and the ridgepole was over the center of the ambulatory, the roof slopes must have risen at different angles. Two slopes have the same angle only when the ridgepole is moved to the center of the span; the main roof angle decreases as the ridgepole approaches the wall. Suggested roof constructions are shown in figure 2.

Had the north wall been higher than the other three, the outer slope on the north would have had a different angle than the others, and the difficulty of joining the gables becomes an argument for walls of uniform height and a roof with a single slope.

#### SUNKEN AREA

The sides rise vertically and show some variation in depth. In the northwest corner the facing-wall measures 32 cm., whence proceeding eastward, near Column 5, it increases to 47 cm. and then decreases to 42 cm. at Column 3, where excavations were terminated. On the west side the depth increases from the northwest and southwest corners toward Column 10, where it measures 70 cm.

The facing is of carefully laid masonry. On the north, one or, occasionally, two courses of wall stones are used. The west side and in places the south side show a slightly different treatment in that the lower course is of wall stones, the upper of banding stones faced on the two exposed sides, with the long tenon serving to strengthen the edge of the ambulatory (fig. 5b). In some cases a wall stone with its worked surface upward formed the top course.

The floor of the sunken area was of hard-packed lime plaster with three small areas of flagstones in the section excavated. Two of these paved areas, one each in the northwest and southwest corners, were perhaps substituted for plaster as the latter would soon wash away during heavy rains, with the force of the stream of water formed by the concentration of the runoff in the valley at the corner of the roof. The third flagged area measures 1.80 by 1.87 m. and is near the center of the sunken area (figs. 1, 31b). This section of pavement is 68 cm. lower than the stone walk of the ambulatory.

The slope of the floor of the sunken area, from the north and south toward the center and to the west, was definitely planned to provide for the runoff of water through a drain. The orifice of the drain, on the west side and 6.45 m. from the northwest corner, was somewhat destroyed by the roots of a tree (fig. 33a). The soffit of the lintel at the entrance seems to have been on the same level as the floor which here is 70 cm. below the flagged walk of the ambulatory. The drain, lined with carefully laid masonry, has a width of 31 cm. and height of 41 cm. To either side of the orifice the plaster floor sloped abruptly downward to the lower margin of the drain; in front of the orifice this slope is somewhat more gradual (fig. 33b). The drain extends under the ambulatory and opens at the base of the west facing of the patio platform (fig. 33c), where the orifice measures 44 cm. high by 33 cm. wide. The soffit of the final capping block is 33 cm. above the floor associated with the base of the platform; thus the drain slopes downward 1 m. in 12 m. From the base of the batter the drain continues 90 cm., with the same descent, as an open stone-lined canal. For a short distance beyond this point it is covered and finally terminates in the loose fill of the great terrace.



An exploratory trench in the sunken area between Columns 4 and 16 and east of the large stone-flagged area (fig. 34) showed the upper 10 cm. of the fill (fig. 5a,B) to be of small stones and mortar which served as the base for the floor (A). Below this is a 1.60-cm. stratum (C) of large irregular, clean, unweathered stones without mortar or small chips. In places below this is a 2- to 3-cm. layer of lime mortar (D) some of which has been finished as a floor surface and shows traces of pink coloring. The next stratum (F), 7 cm. deep and made up of mortar with small chips only in its lower margins, is finished by a well-troweled, red-painted, lime plaster floor (E, probably F in fig. 4a). It is 1.71 m. below the flagged area. Following this is open fill (G) extending downward to natural limestone (H), which at the point examined was 2.35 m. below the stone flags.

Extending diagonally across the trench with a bearing of N. 43.5° E. (mag.) and rising from the red floor (E) or layer of lime mortar (D), is a pathway 2.51 m. wide and 16-24 cm. high (fig. 34a). As it extends under the fill at either side of the trench, its length was not determined. The sections of the layer of lime plaster (D) that extend under the pathway are not smoothly finished or tinted, suggesting that they were laid down immediately before the construction of the pathway and thus only the uncovered portions could be surfaced. The pathway was built of rough masonry, its plastered surface tinted red.

#### MASONRY BOX

A further construction of interest revealed in the trench was a great masonry box. It rests partially on the red floor and partially on the pathway but seemingly was built without respect to the latter (figs. 5a, 34a). It is of unfaced stones firmly set in mortar; the sides were not carefully smoothed, although on top some red-tinted plaster was applied as a crude finishing. The inner sides rested directly on the red floor of the pathway, this floor serving as the inside bottom of the box. The upper portion of the four sides, set back an average of 16 cm., formed a ledge on which two stone slabs were placed as a lid (fig. 34b). Above the slabs was solidly packed stone and mortar. The box was lined with unfaced stones and had not been smoothly plastered. On the floor lay 10-15 cm. of earth in which, apparently placed without order or definite arrangement, were five pieces of worked jadeite and 113 shell beads.

Box measures 2.10 by 2.15 m. Height 1.08 m. above the pathway or 1.35 m. above the red floor (E). Top of box 36 cm. below flagstones at edge of trench. Lower 57 cm. of inside of box measures 59 by 75 cm.

A pendant (fig. 35,2) is irregular in shape: width 4.2 cm., length 4.6 cm., maximum thickness 0.7 cm. The cutting on reverse of stone was made from two edges; one section covering about a third of the surface is on a level 0.1 cm. lower than the other, producing a longitudinal seam of cleavage. The obverse is carved with a face, having a simple headdress, round ear ornaments, and a necklace of round beads. Much of the carving, as in the central part of the headdress, ear ornaments, part of the eyes, chin, and necklace, was done with a tubular drill. Two lateral perforations extend transversely through the specimen. Beneath each ear ornament and below the central bead of the necklace is a small hole from the edge of the stone to the reverse face. These may have been for the attachment of supplementary embellishments.

A head (1) of green stone lacks the translucency of 2, 3, 4, and 5; length 2.5 cm., width 1.6 cm., thickness 0.6 cm. The carving of the face, for the most part, was done with a tubular drill, and the contour of the head conforms to the irregular shape of the stone.

A bead (4), spherical with somewhat flattened sides, has diameter of 2.2 cm.

The disk (3) has diameter of 2.5 cm., thickness of 0.2 cm. It is pierced by three holes which are aligned: one in the center and one to either side near the periphery. Stone is bright green and highly polished.

A flat bead or button (5), dull green, is roughly circular; maximum length 2.3 cm., width 2 cm., thickness 0.2 cm. The center of one face has been worked with a tubular drill leaving a core 0.7 cm. in diameter, which is pierced. From the base of the core the stone has been worked to slope gradually upward to the outer edge.

The 113 beads (6), probably of *Spondylus* shell, have diameters varying from 0.5 cm. to 1.2 cm. and thickness varying from 0.1 cm. to 1.5 cm. The color ranges from pink to white.

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## ILLUSTRATIONS



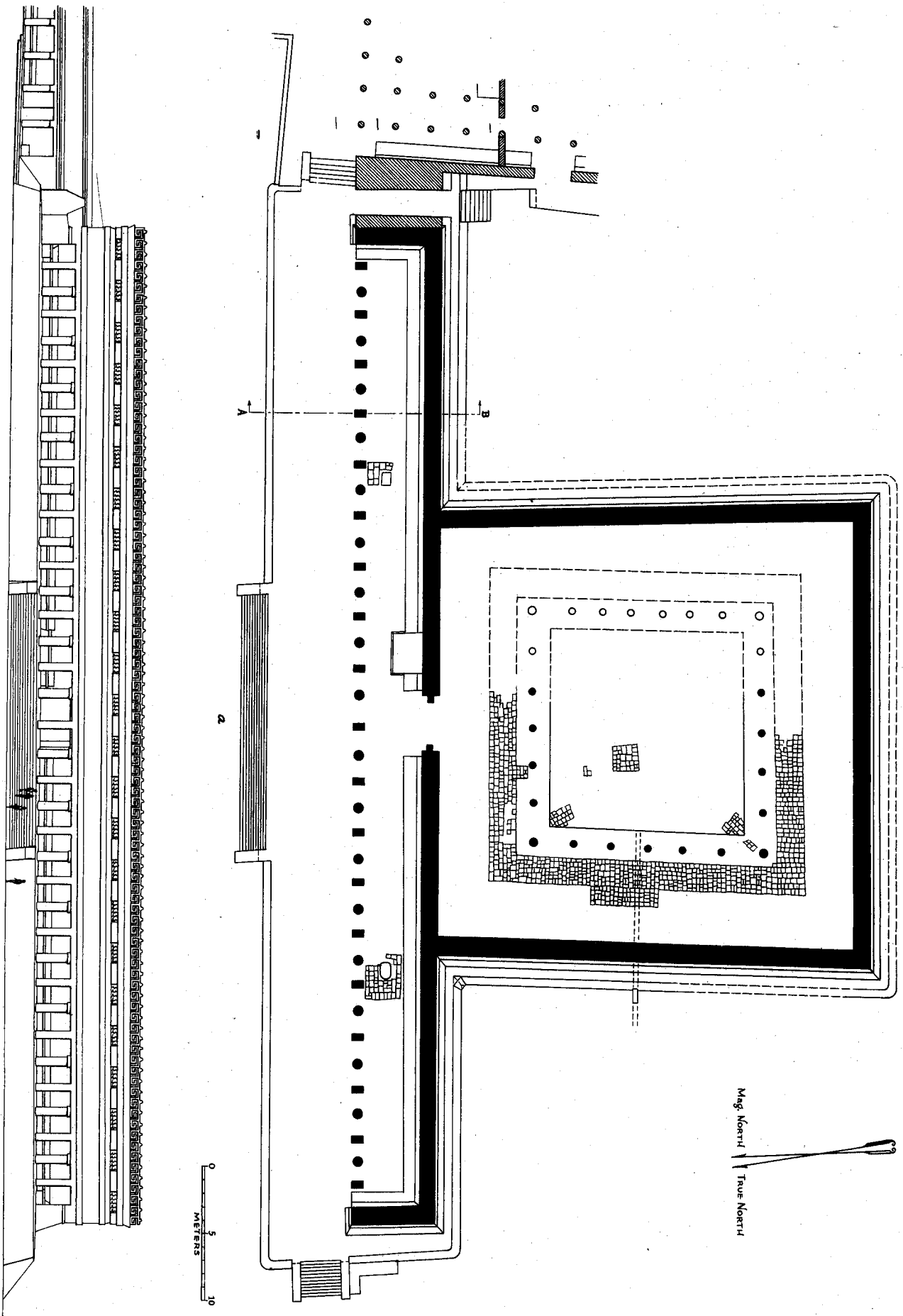


Fig. 1 --- MERCADO: PLAN AND ELEVATION  
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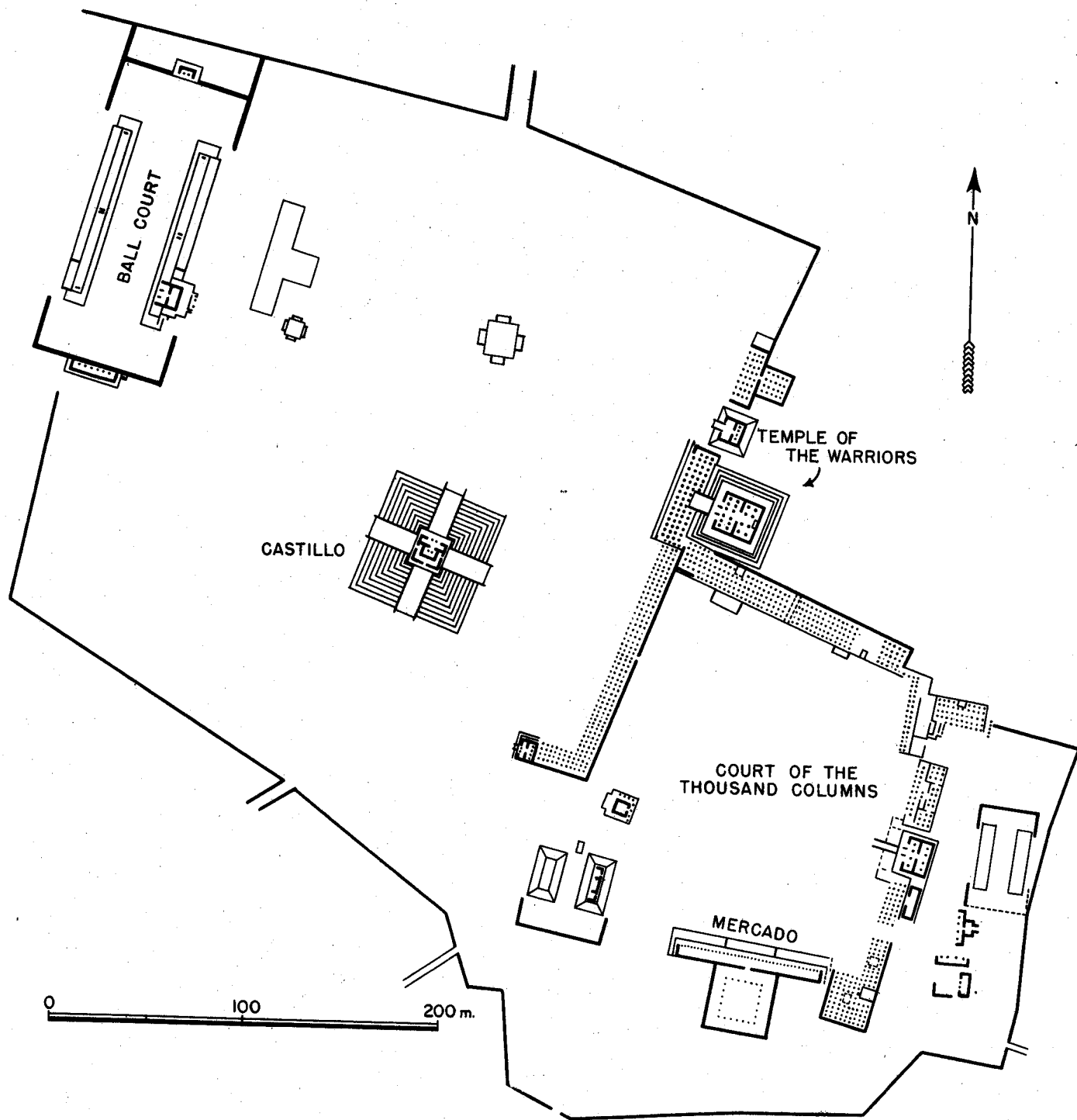
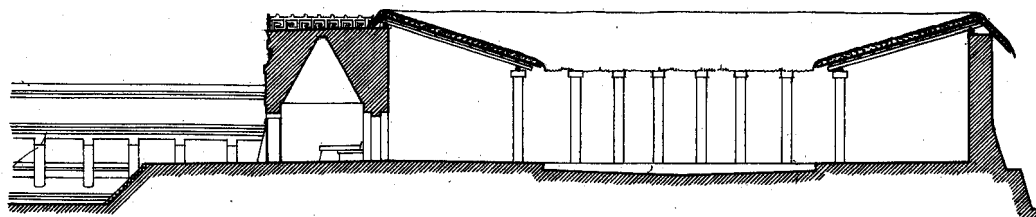
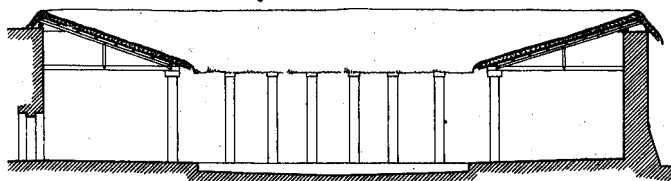


Fig. 1 -- MERCADO: PLAN AND ELEVATION  
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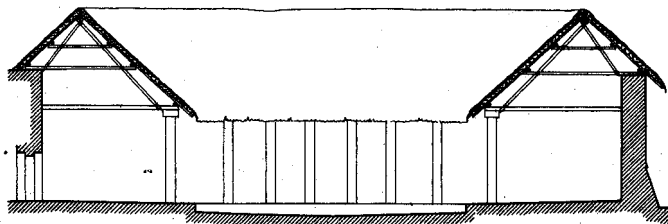


*a*

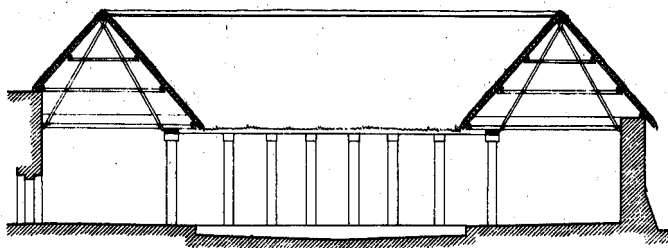
0 5 10 Meters



*b*



*c*



*d*

**Fig. 2 -- MERCADO: SECTION THROUGH GALLERY AND PATIO  
AND SUGGESTED METHODS OF ROOFING THE PATIO**

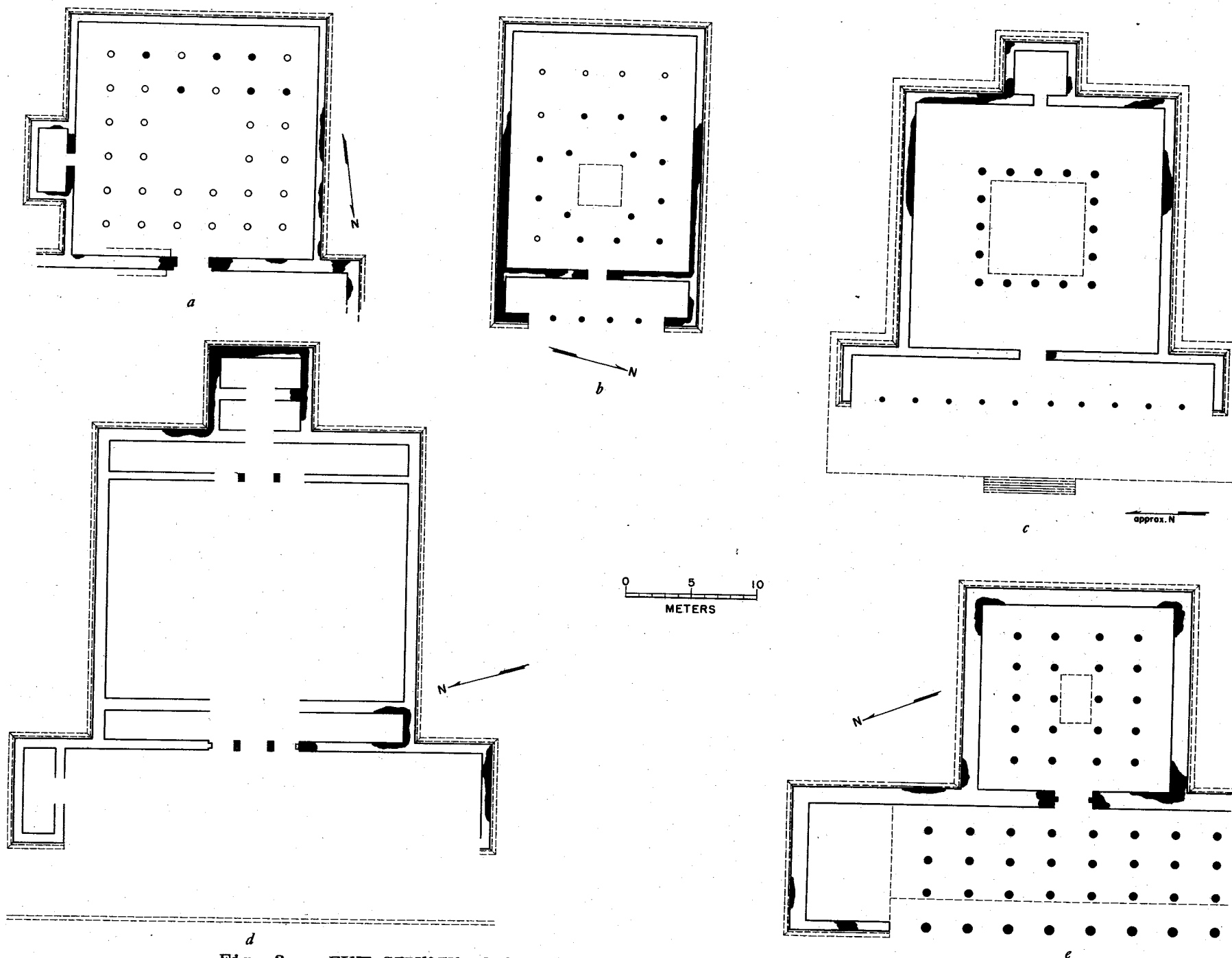
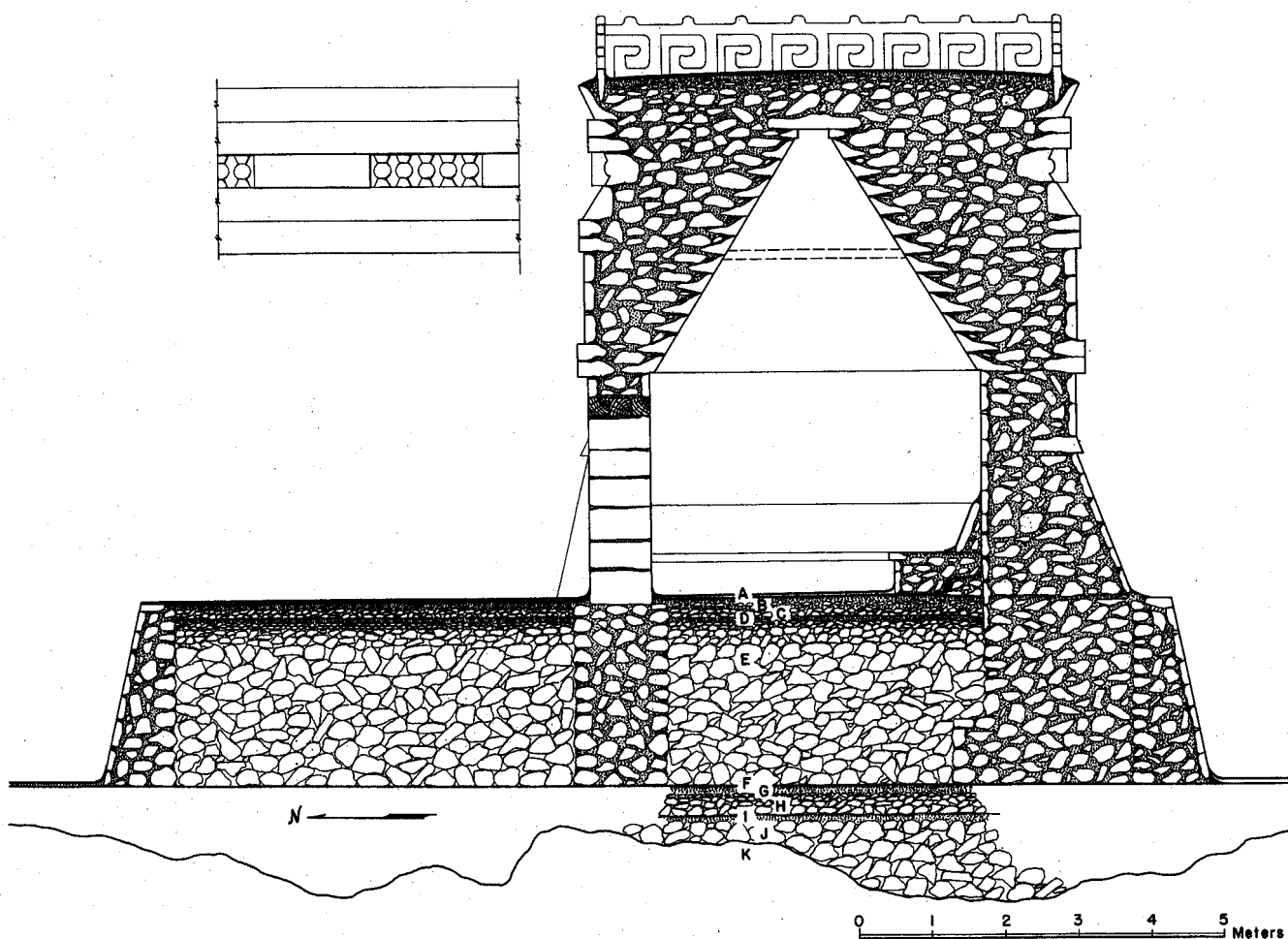


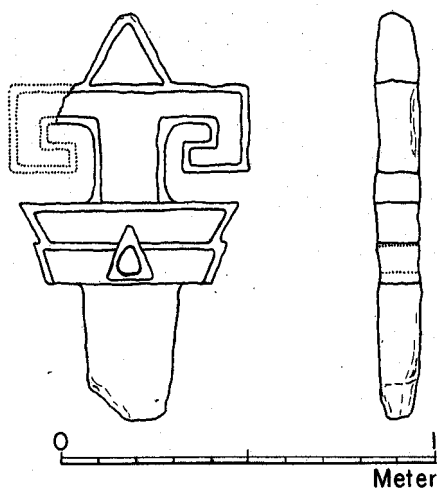
Fig. 3 -- FIVE STRUCTURES OF THE GALLERY-PATIO TYPE AT CHICHEN ITZA

a: Structure 6E3.

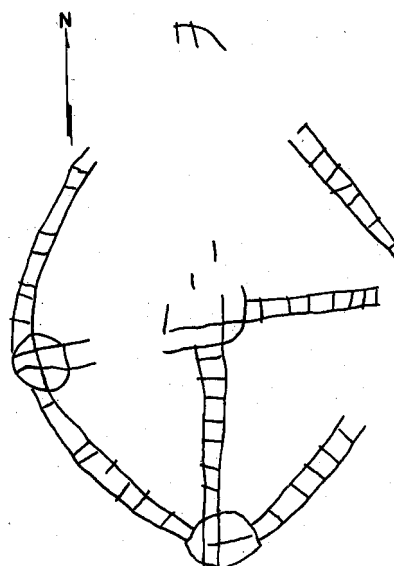
d: Structure 5B17.



a



b

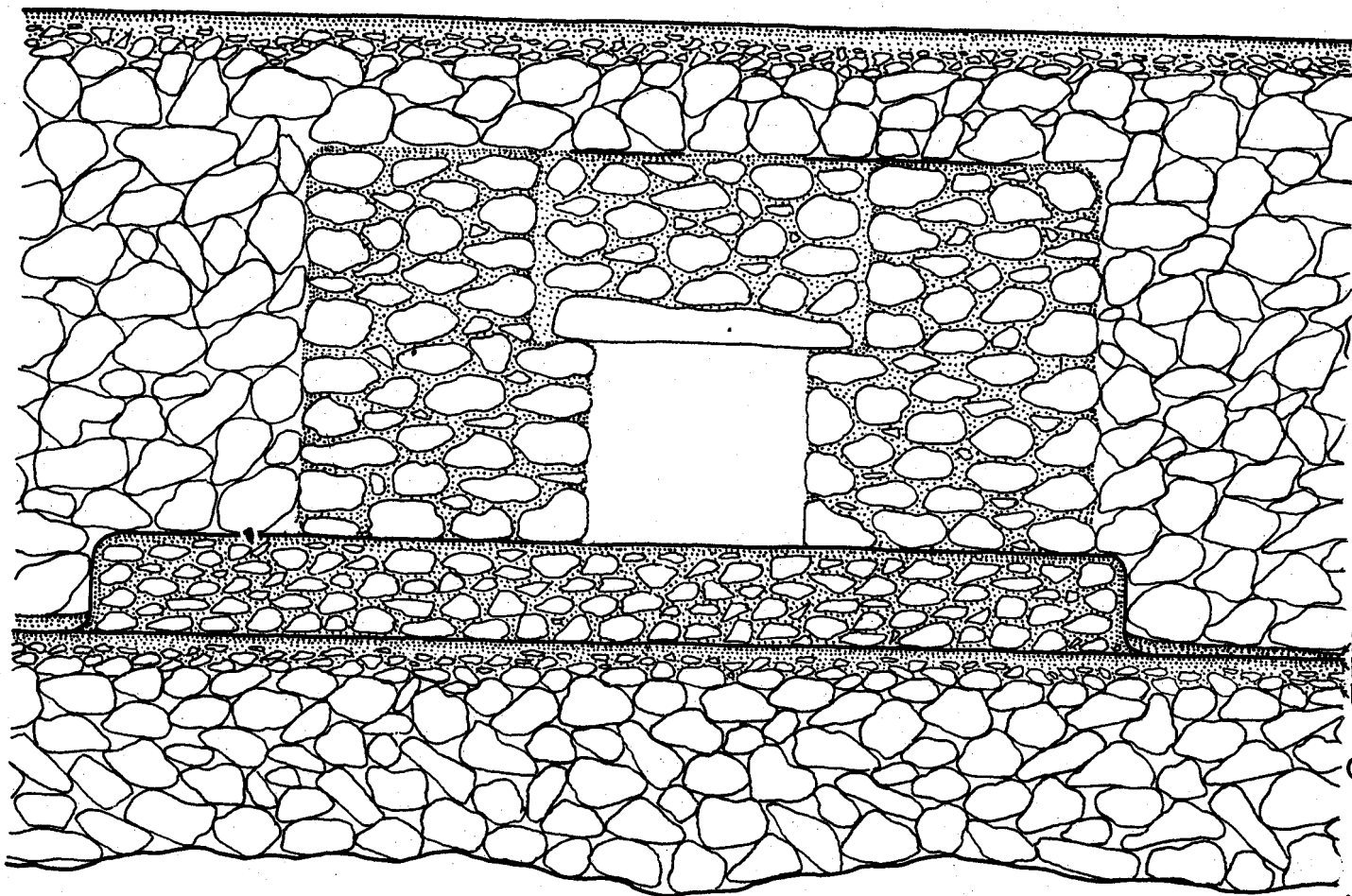


c

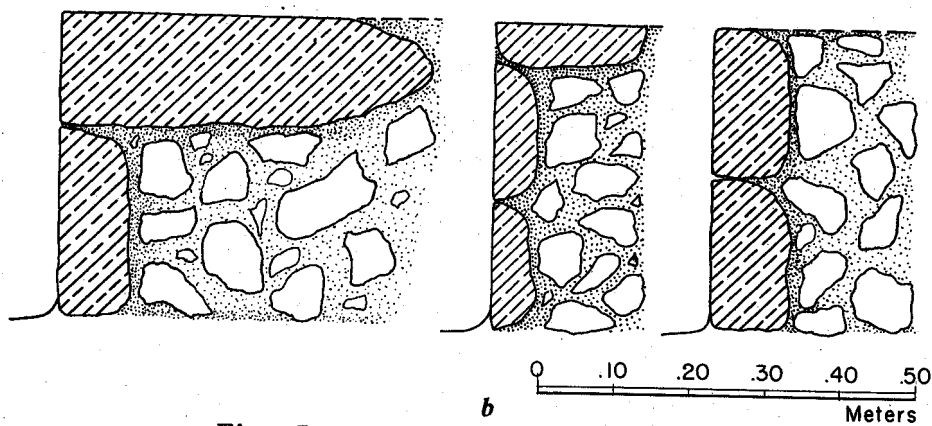
Fig. 4 -- MERCADO AND STRUCTURE 2D6

- a: Masonry section A-B through gallery of Mercado.
- b: Roof decoration from Structure 2D6.
- c: Graffito on gallery bench of Mercado  
(1/10 actual size).

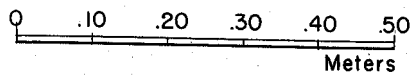




*a*



*b*



**Fig. 5 -- MASONRY BOX AND STEP**

- a:** Section of masonry box under patio floor.
- b:** Sections showing vertical facing of step from ambulatory to sunken area.

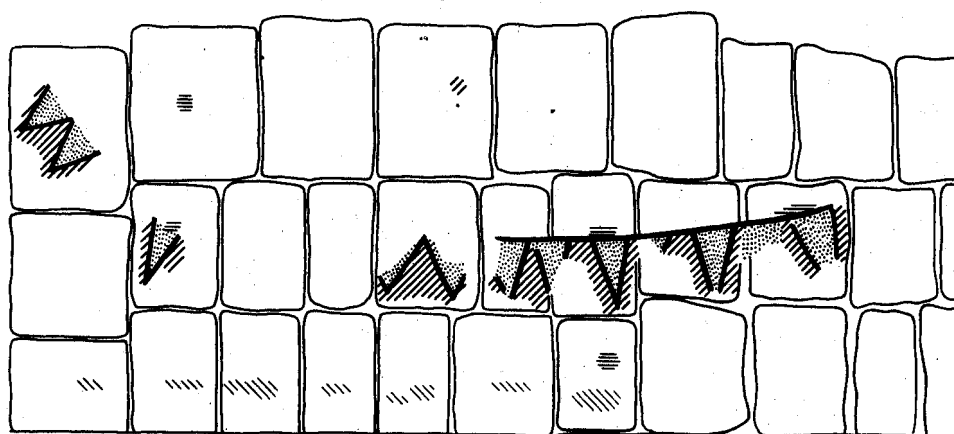
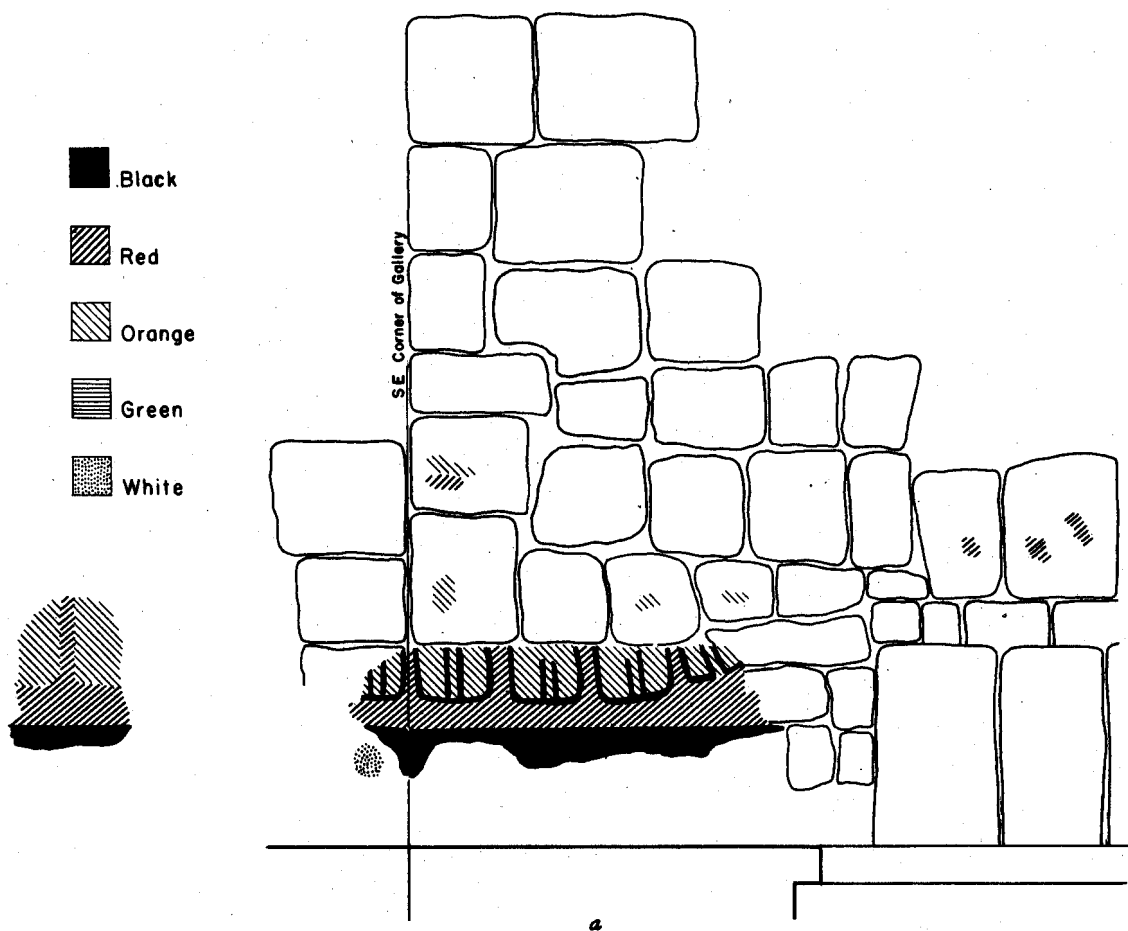


Fig. 6 -- PAINTED DECORATIONS ON WALL OF GALLERY

a: At southeast corner.

b: Behind Columns 6 and 7.

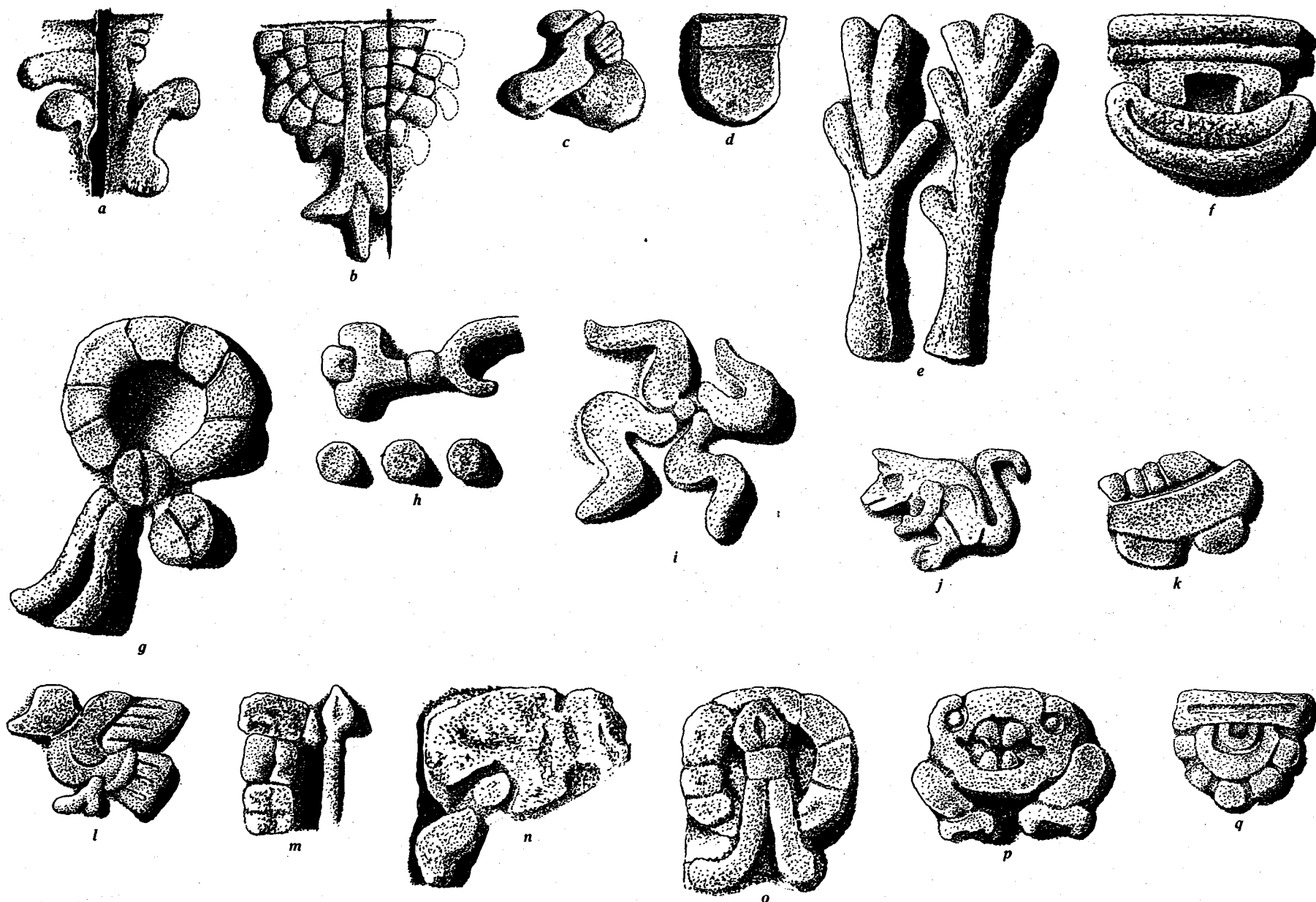


Fig. 7 -- GLYPHS APPEARING ABOVE AND IN FRONT OF BOUND FIGURES  
ON THE SCULPTURED DAIS (1/3 ACTUAL SIZE)

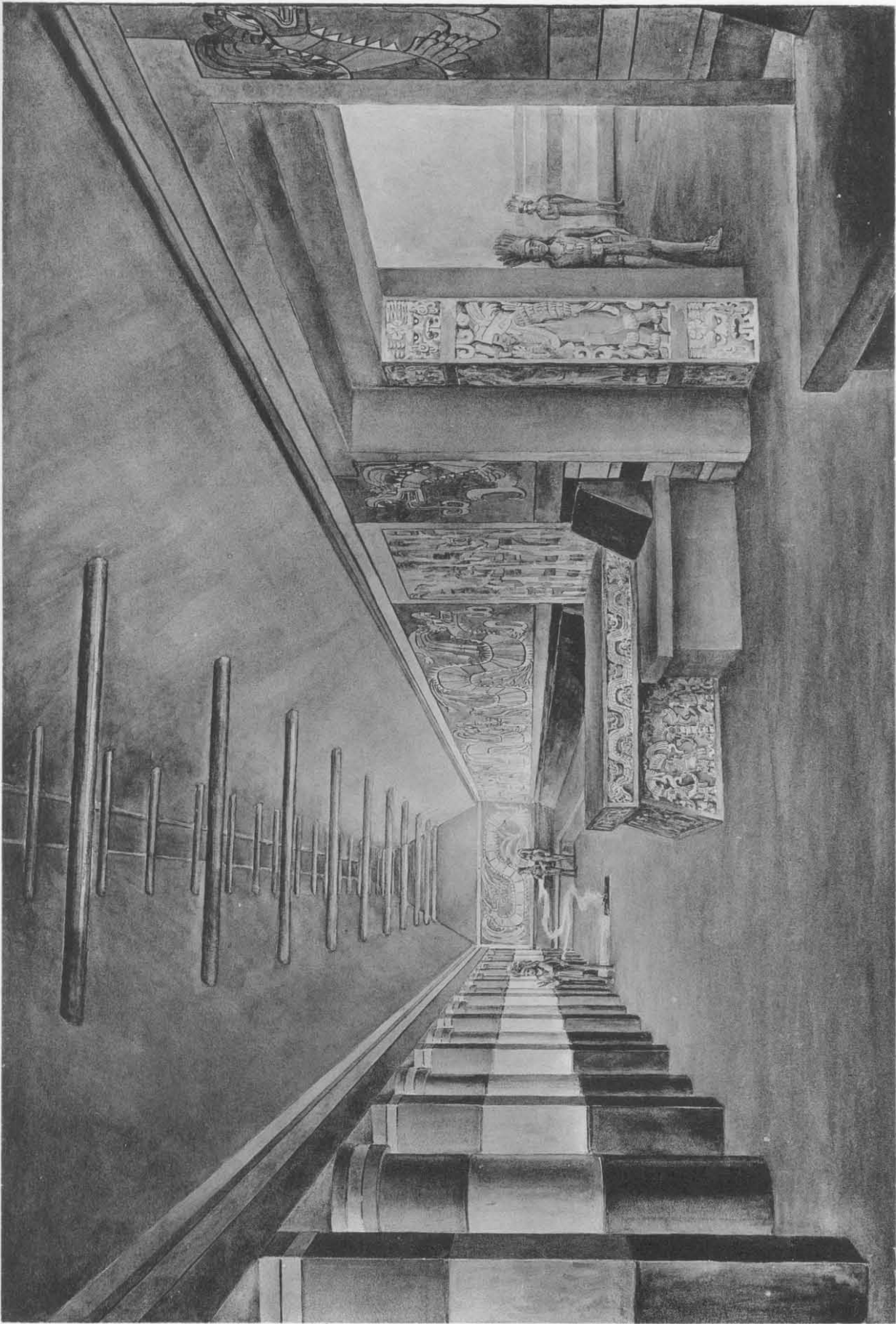


FIG. 8—RESTORATION OF GALLERY INTERIOR  
By Tatiana Proskouriakoff



*a*



*b*



*c*

FIG. 9—MERCADO: EXCAVATION AND REPAIR  
*a*: Before excavation, view from northwest.  
*b*: After repair, view from northwest.  
*c*: Corner formed at junction of gallery and west side of patio.





*a*



*b*

FIG. 10—STRUCTURE 2D6 AND MERCADO GALLERY

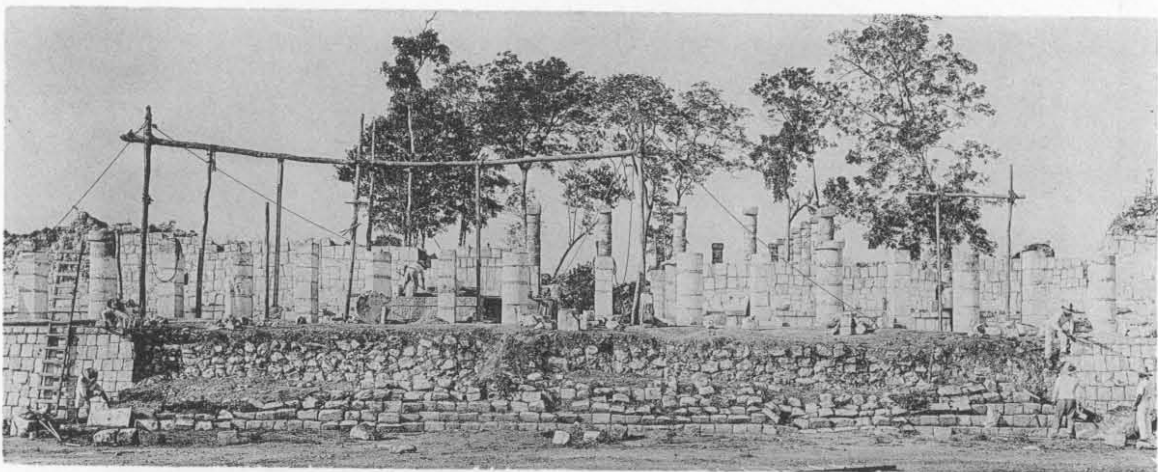
*a*: Roof ornament from Structure 2D6.

*b*: Mercado gallery. Trench in platform between Column 6 and back wall.

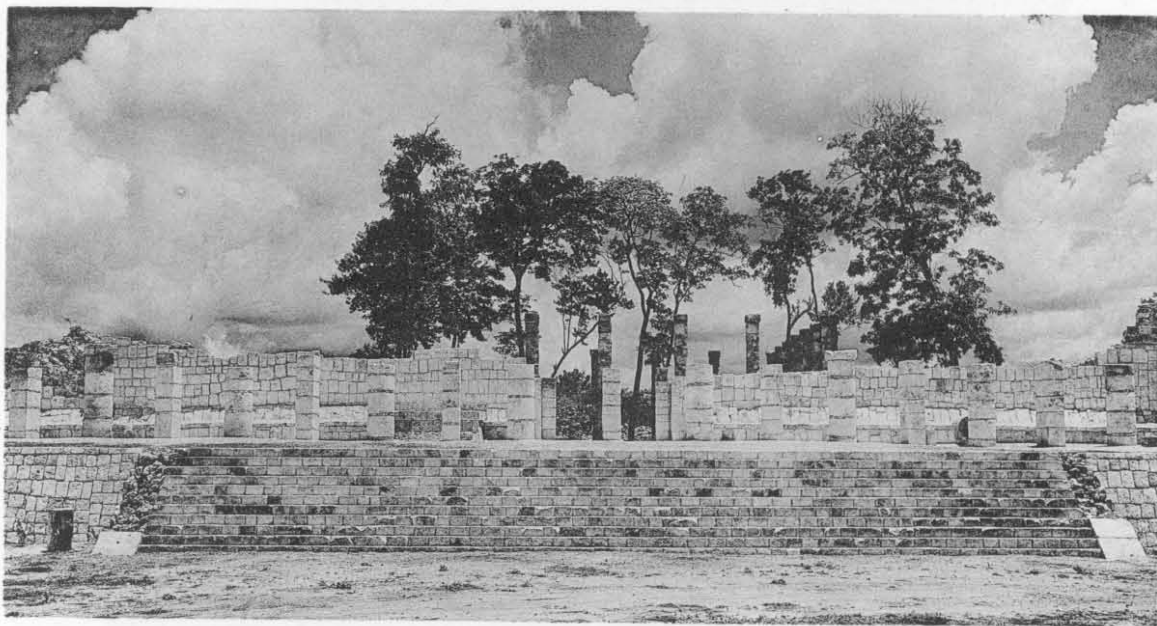




*a*



*b*



*c*

FIG. 11—NORTH STAIRWAY OF MERCADO

*a*: Under excavation.

*b*: Excavation completed.

*c*: Repair completed.

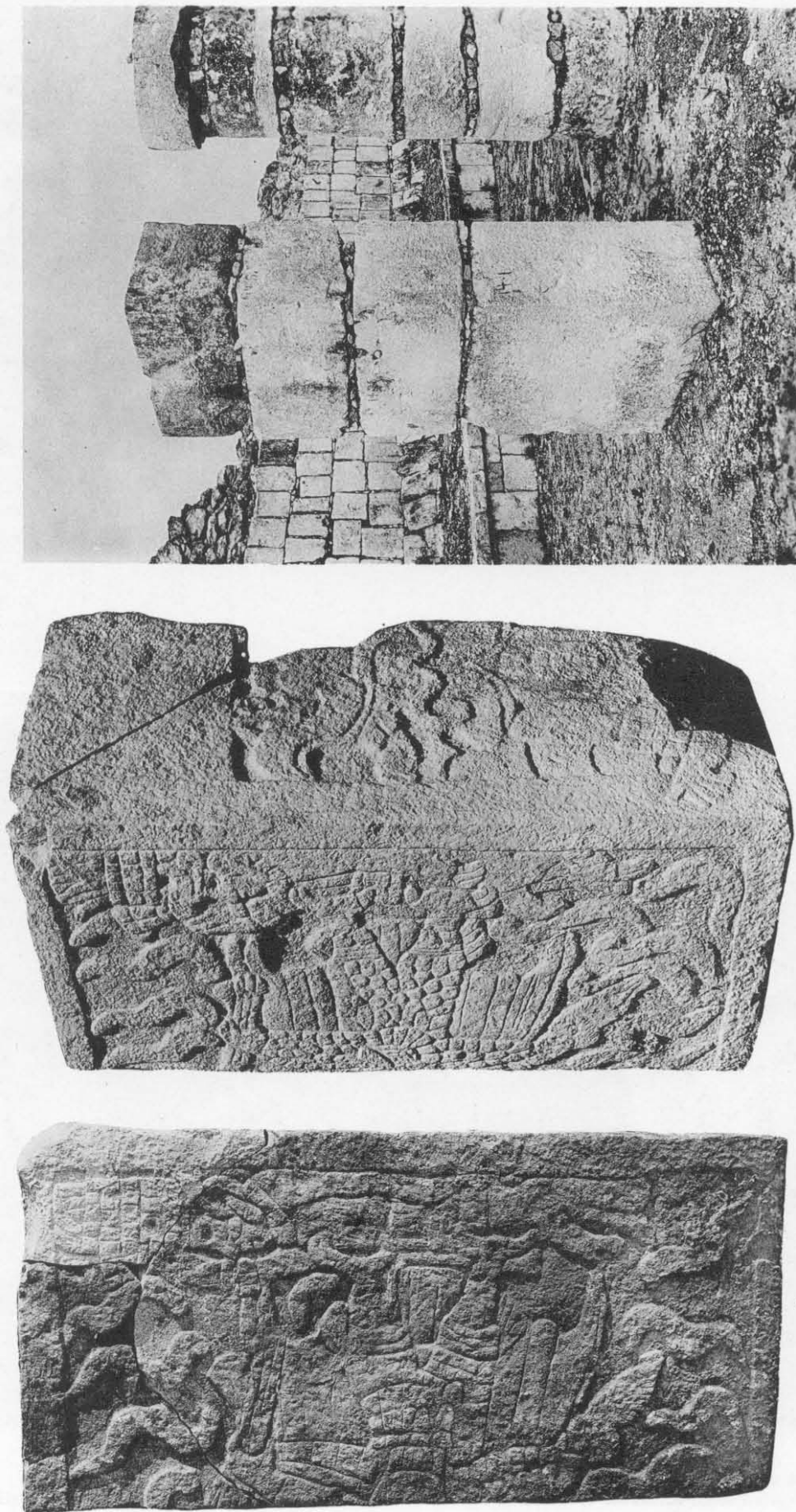
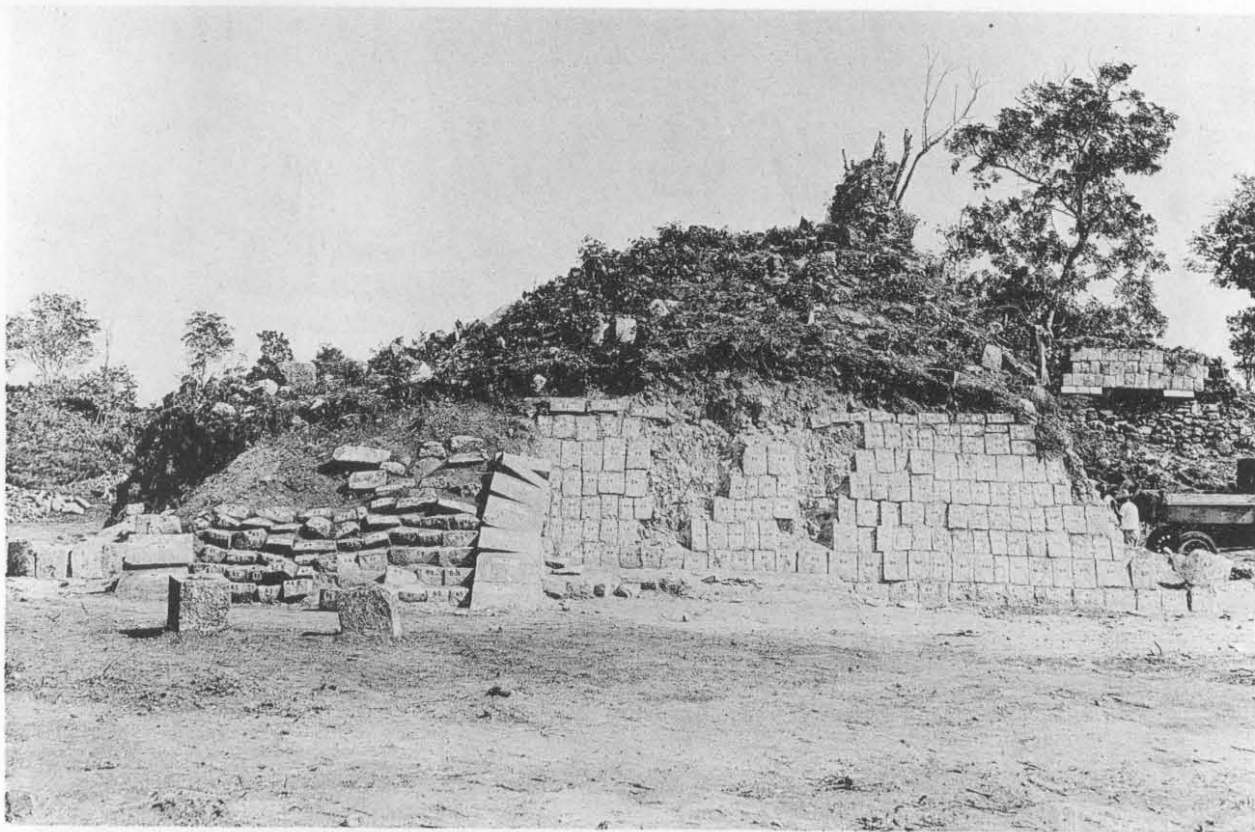
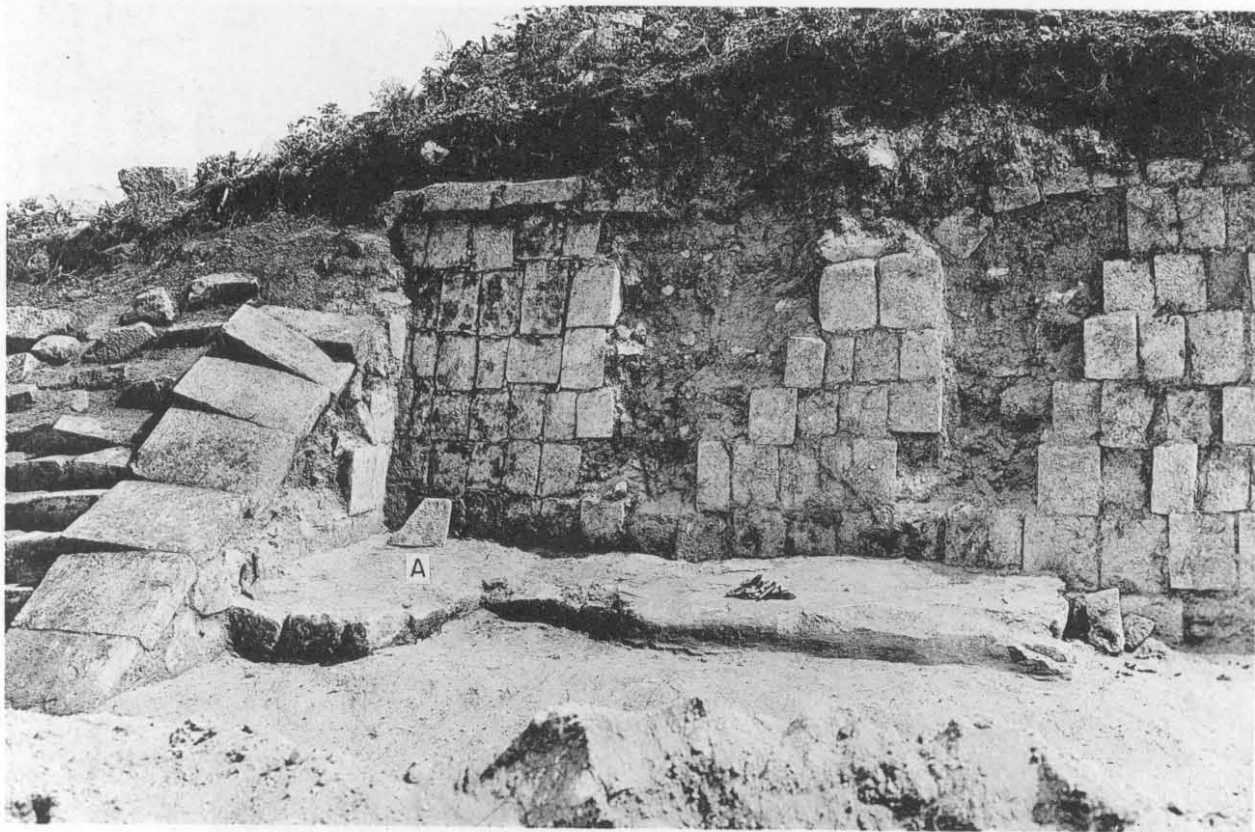


FIG. 12—SCULPTURED STONES, COLUMNS IN GALLERY  
*a, b*: Sculptured stones found at base of east and west balustrades of the stairway. In their original positions these stones were set horizontally.  
*c*: Square and round columns in gallery. Only the round columns have capitals.





*a*



*b*

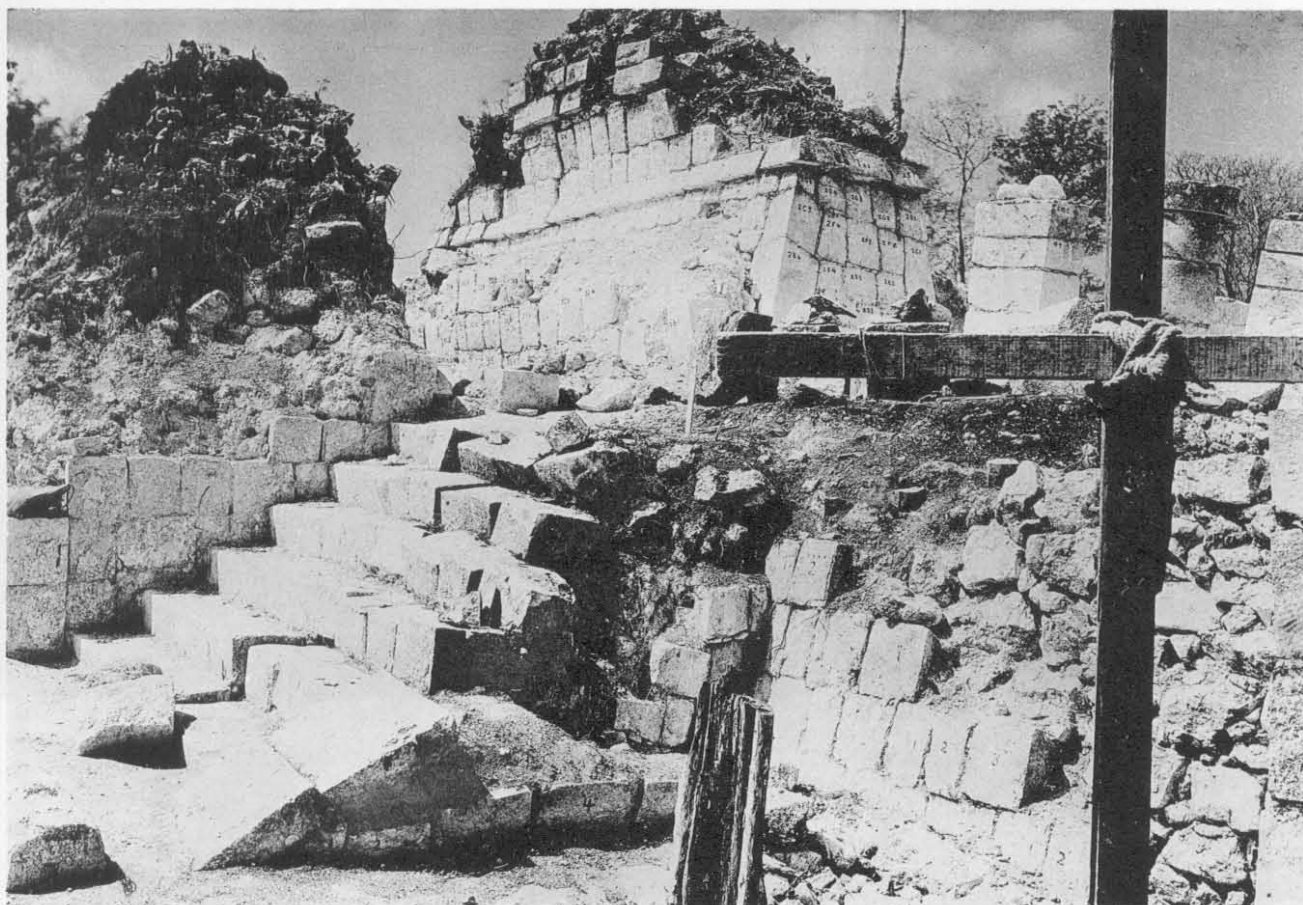
FIG. 13—PLATFORM

*a*: West end and west stairway after excavation.

*b*: Low bench built against south balustrade of west stairway and west end of gallery platform. A, one of the specialized stones of side facing-wall on which capping blocks rest.



*a*



*b*

FIG. 14—GALLERY PLATFORM

*a*: East end, view taken in 1932.

*b*: East end showing east stairway and east passageway.





a



b

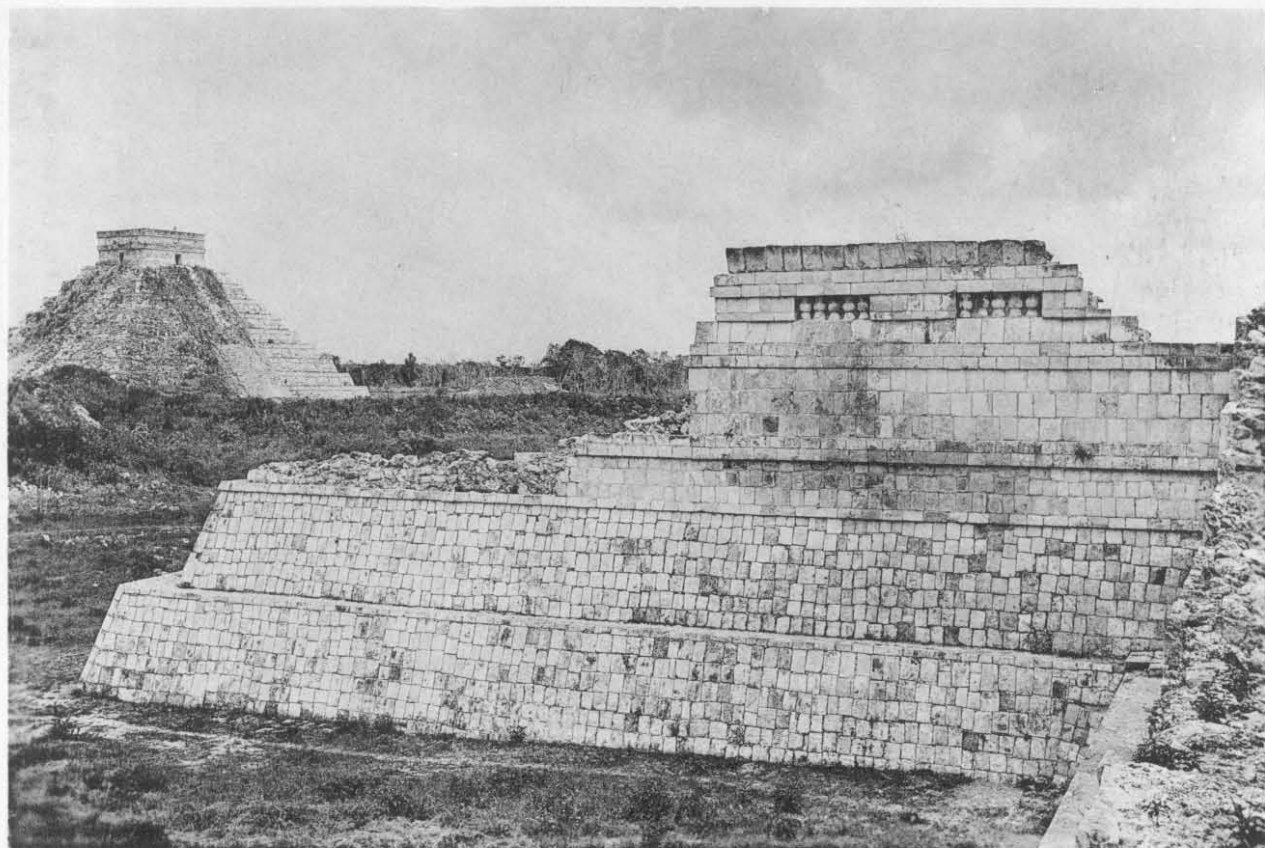
FIG. 15—SOUTH STAIRWAY, EAST PASSAGEWAY, AND WEST END OF GALLERY

a: South stairway and east passageway, view looking north.

b: West end of gallery, view looking south. Arrow indicates group of five spool-shaped stones from façade fallen *en bloc*.



*a*



*b*

FIG. 16—SOUTH FACADE OF GALLERY, WEST OF PATIO

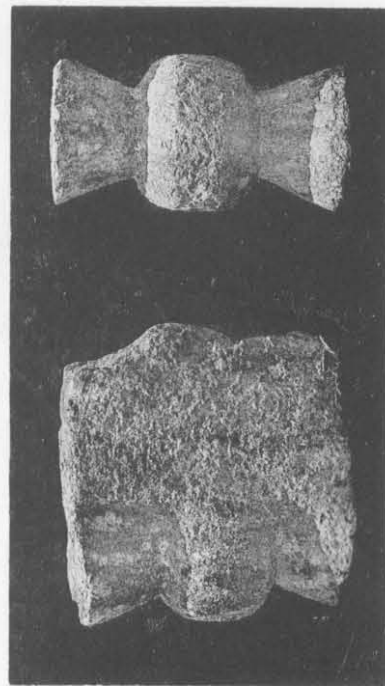
*a*: Before excavation.

*b*: After repair.





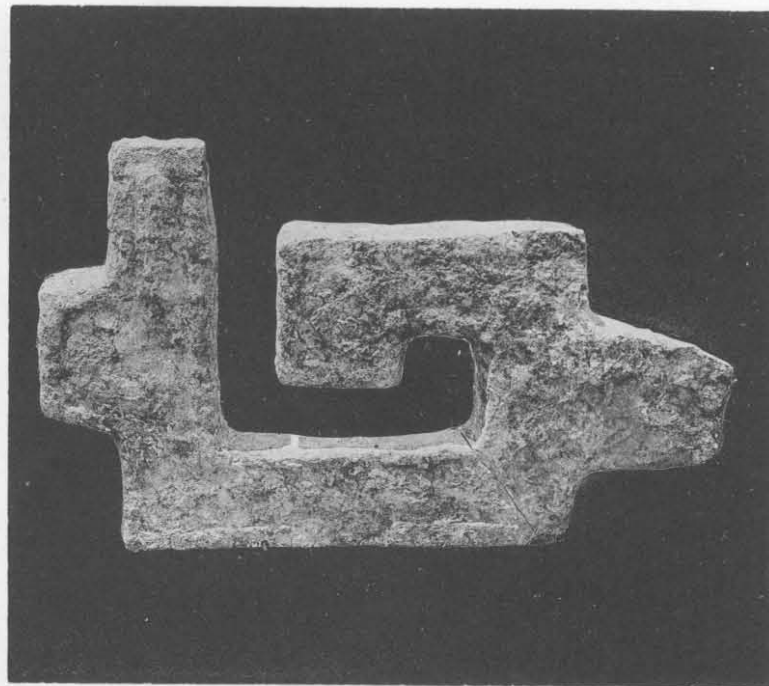
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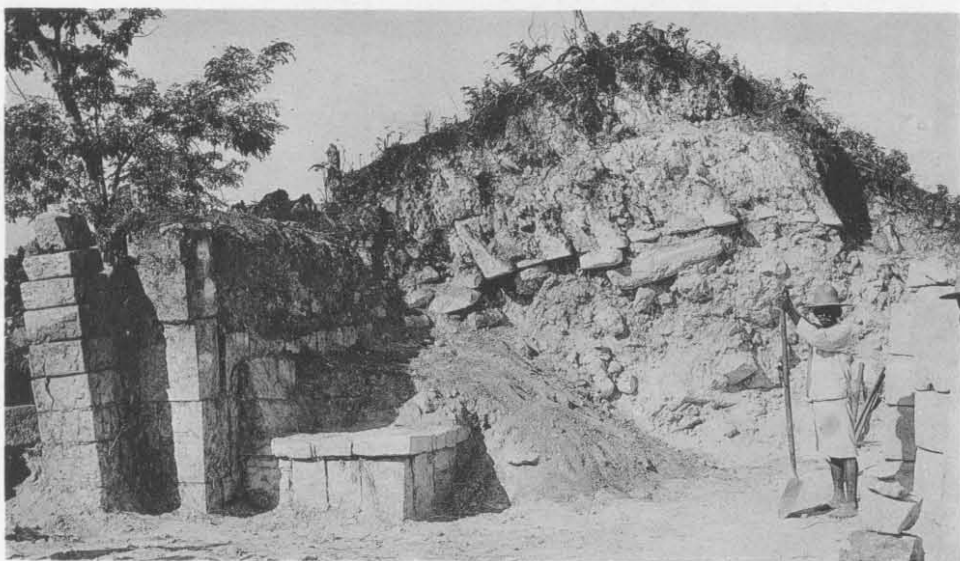
d

FIG. 17—SPOOLS AND ROOF ORNAMENT  
*a*: Group of five spools from gallery facade, found during excavation.  
*b*: Side and front views of a spool (height 45 cm.).  
*c*: Group of five spools found on surface where they had fallen with collapse of facade.  
*d*: Roof ornament from Mercado (height 75 cm.).

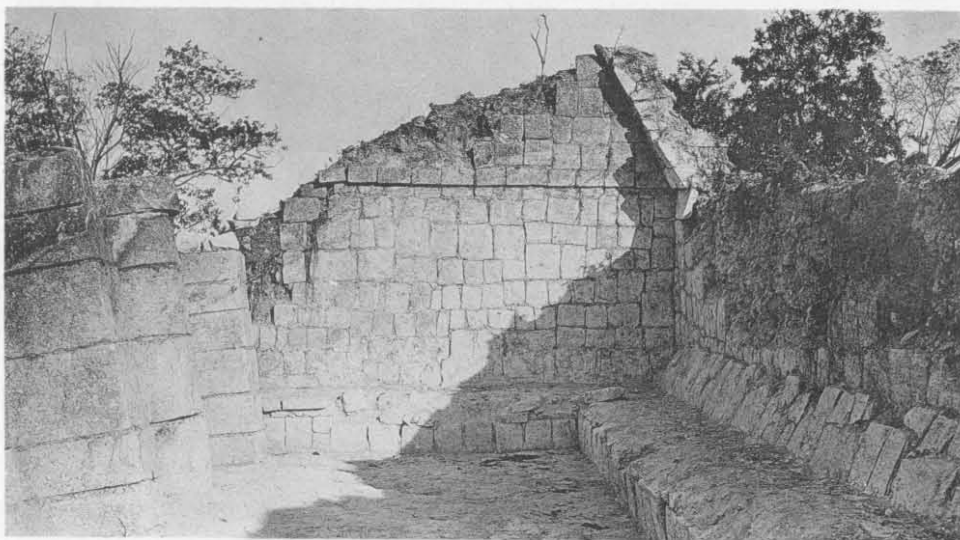




*a*



*b*



*c*

FIG. 18—GALLERY

- a*: West half of gallery showing capstones uncovered during excavations.  
*b*: West half of gallery showing sculptured pilaster, bench, and collapsed vault.  
*c*: Gallery interior, east end.

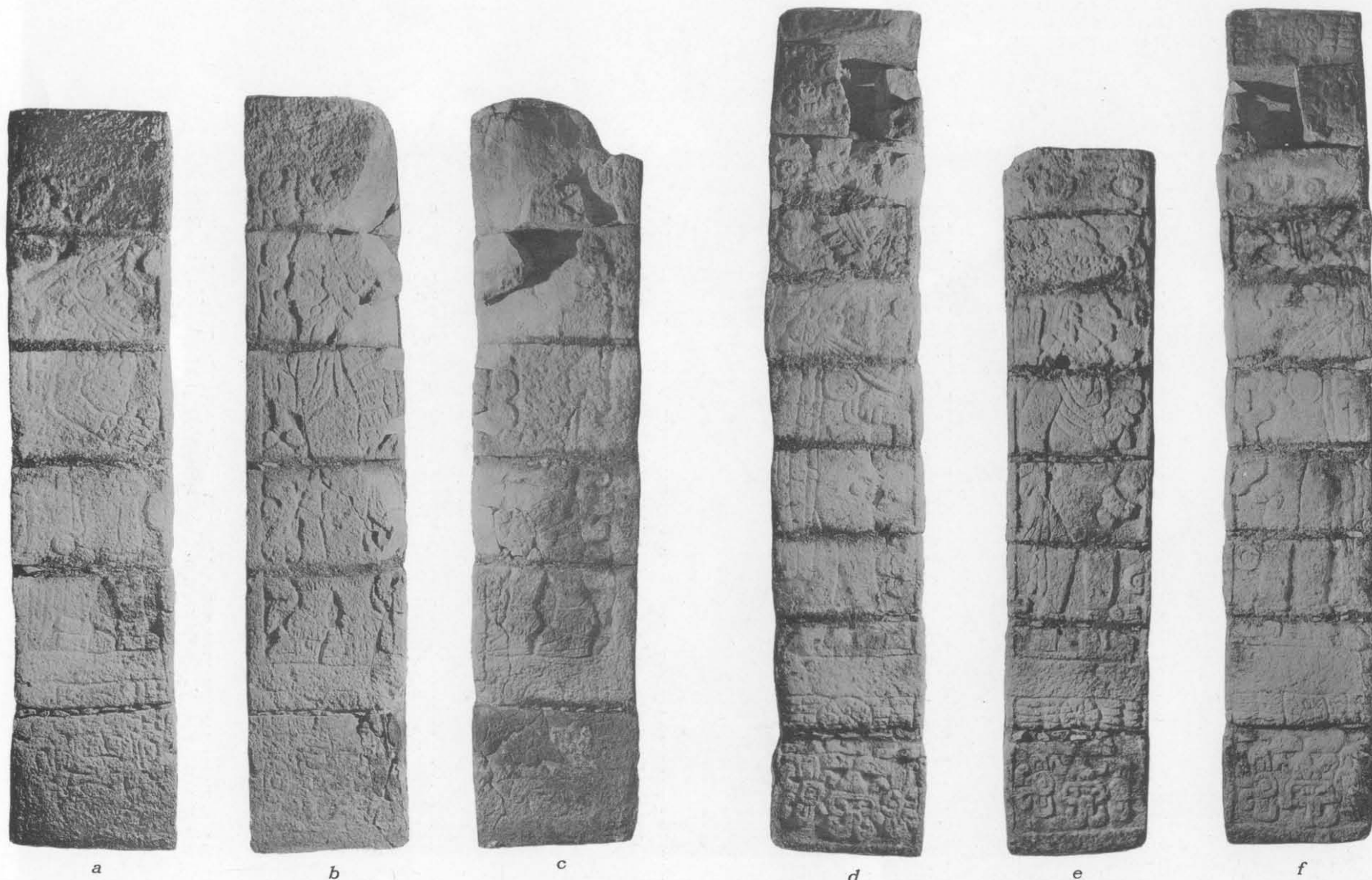


FIG. 19—SCULPTURED PILASTERS OF DOORWAY LEADING FROM GALLERY TO PATIO

*a-c:* North, west, and south faces of east pilaster.

*d-f:* South, east, and north faces of west pilaster.

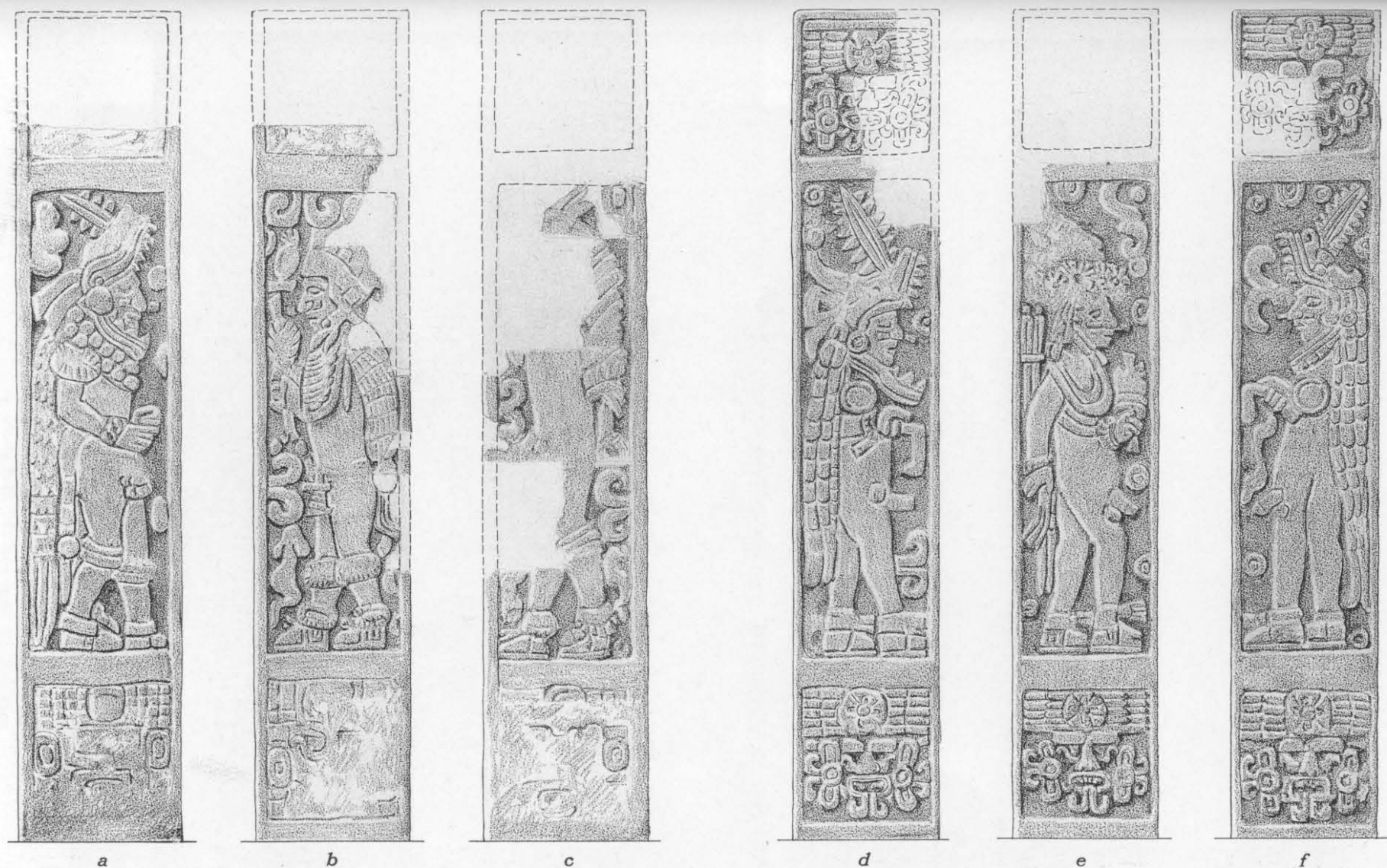


FIG. 20—DRAWING OF SCULPTURED PILASTERS OF DOORWAY  
LEADING FROM GALLERY TO PATIO  
*a-c*: North, west, and south faces of east pilaster.  
*d-f*: South, east, and north faces of west pilaster.





*a*



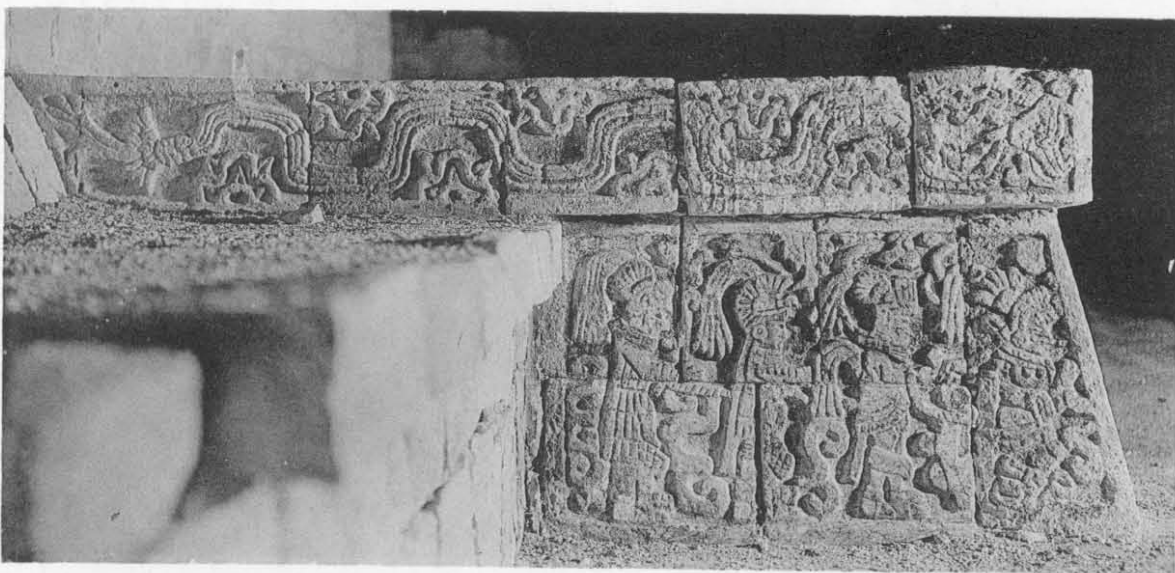
*b*

FIG. 21—SOUTH INTERIOR WALL AND CORNER OF GALLERY

*a*: South interior wall of gallery showing occasional sculptured stone used in cornice of bench.  
*b*: Southeast interior corner of gallery. Portion of step and painted bands on the wall.



*a*



*b*



*c*

FIG. 22—SCULPTURED DAIS IN GALLERY  
*a*: North face. *b*: East face. *c*: West face.

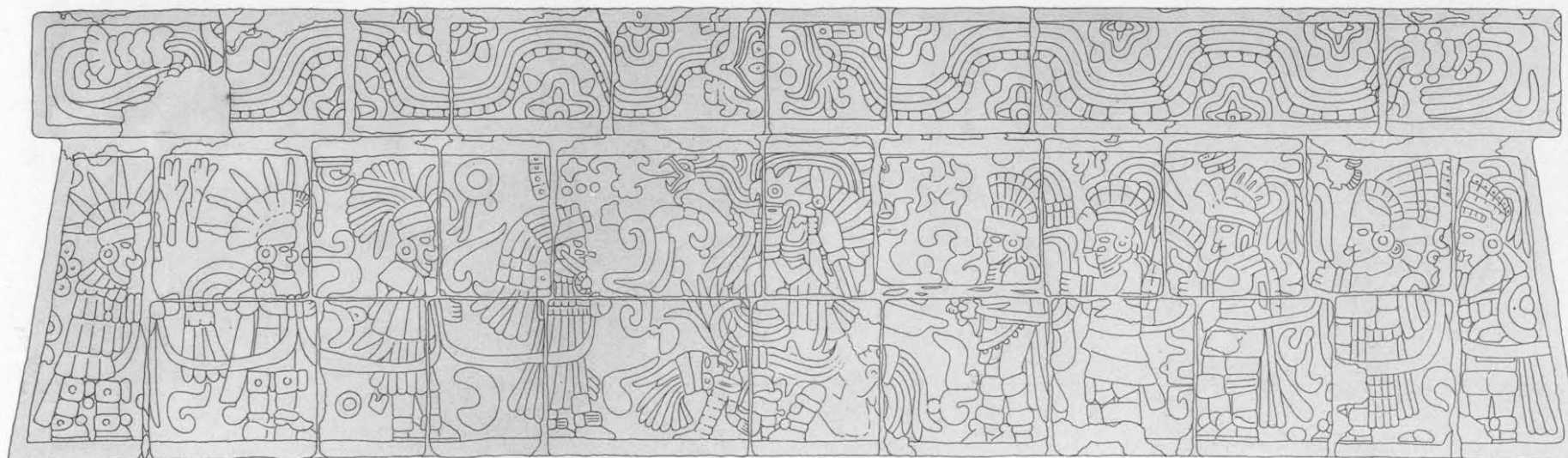


FIG. 23—NORTH FACE OF SCULPTURED DAIS IN MERCADO GALLERY  
By William L. Lincoln



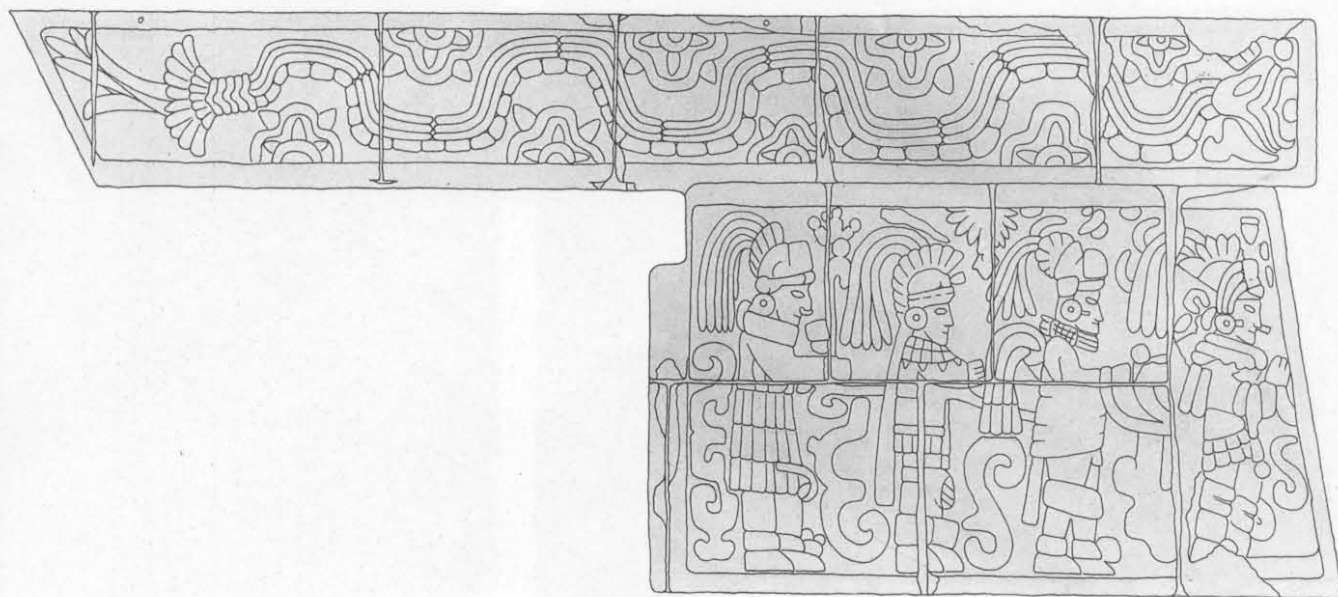


FIG. 24—EAST FACE OF SCULPTURED DAIS IN MERCADO GALLERY  
By William L. Lincoln



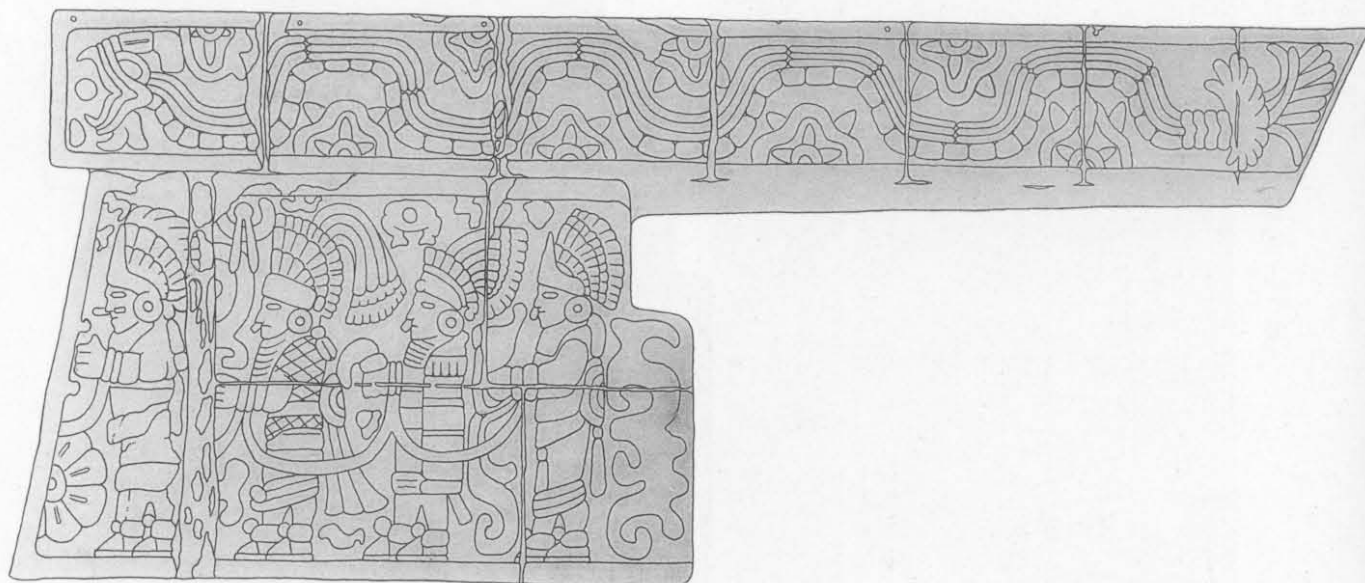
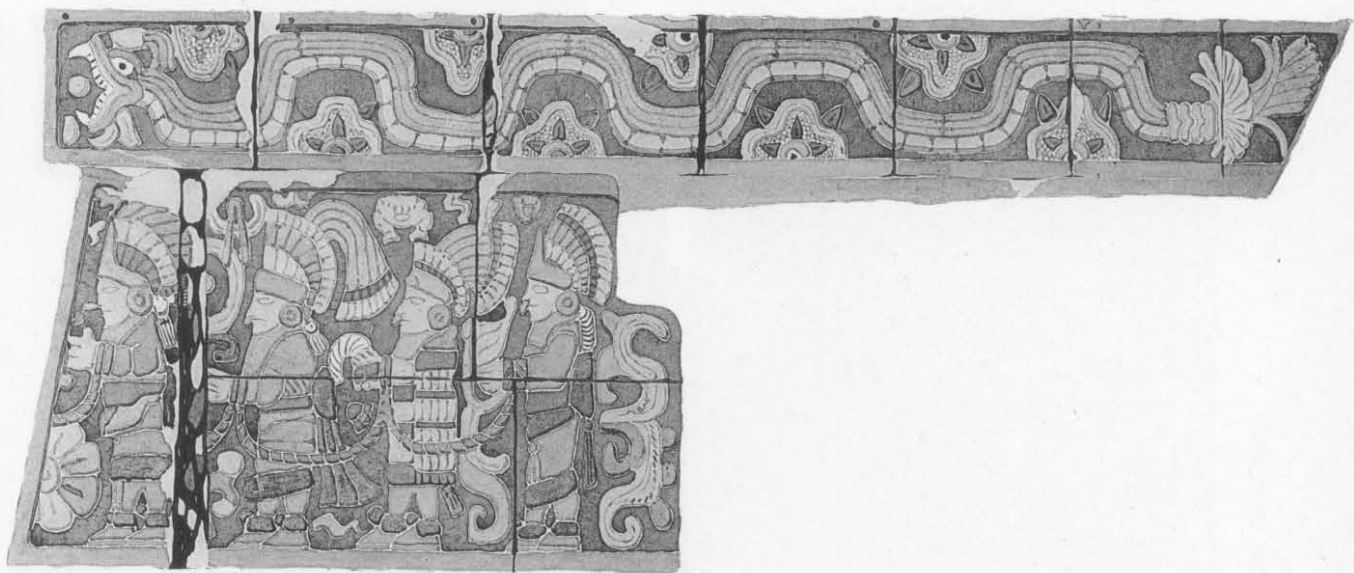
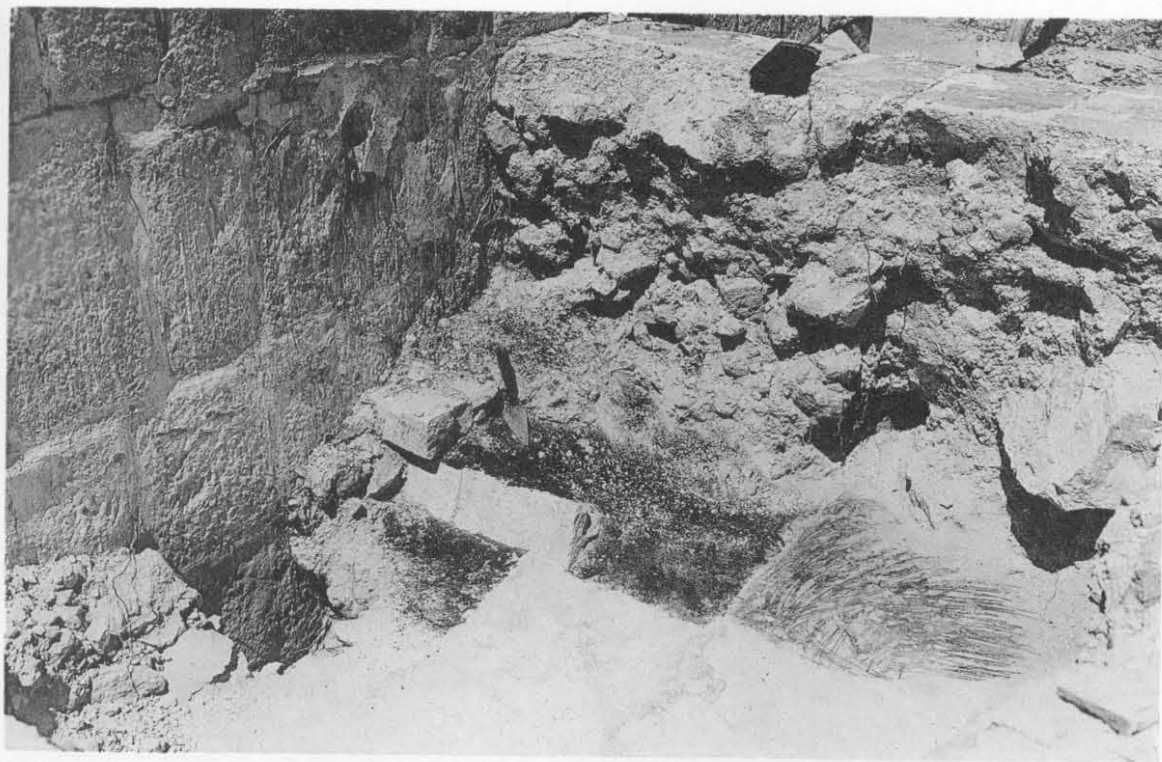


FIG. 25—WEST FACE OF SCULPTURED DAIS IN MERCADO GALLERY  
By William L. Lincoln



*a*



*b*

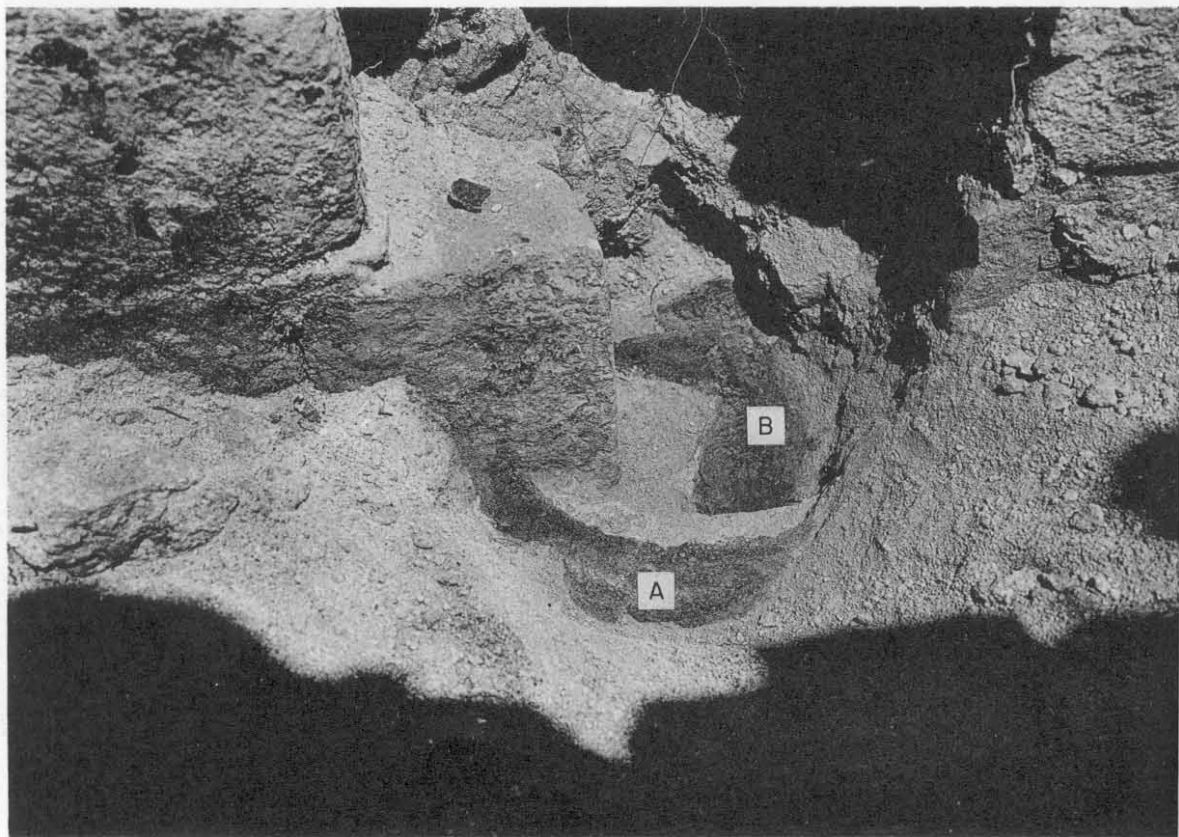


*c*

FIG. 26—SCULPTURED DAIS AND FIREBOX  
*a*: Portions of earlier dais found within sculptured one.  
*b*: Firebox in floor of gallery south of Columns 9 and 10.  
*c*: Firebox in floor of gallery south of Columns 28 and 29.



*a*



*b*

FIG. 27—WEST WALL AND FLOOR OF EAST PASSAGEWAY  
*a*: West wall of east passageway built against east end of gallery.  
*b*: West wall and floor (A) of east passageway. B, floor associated with gallery platform.



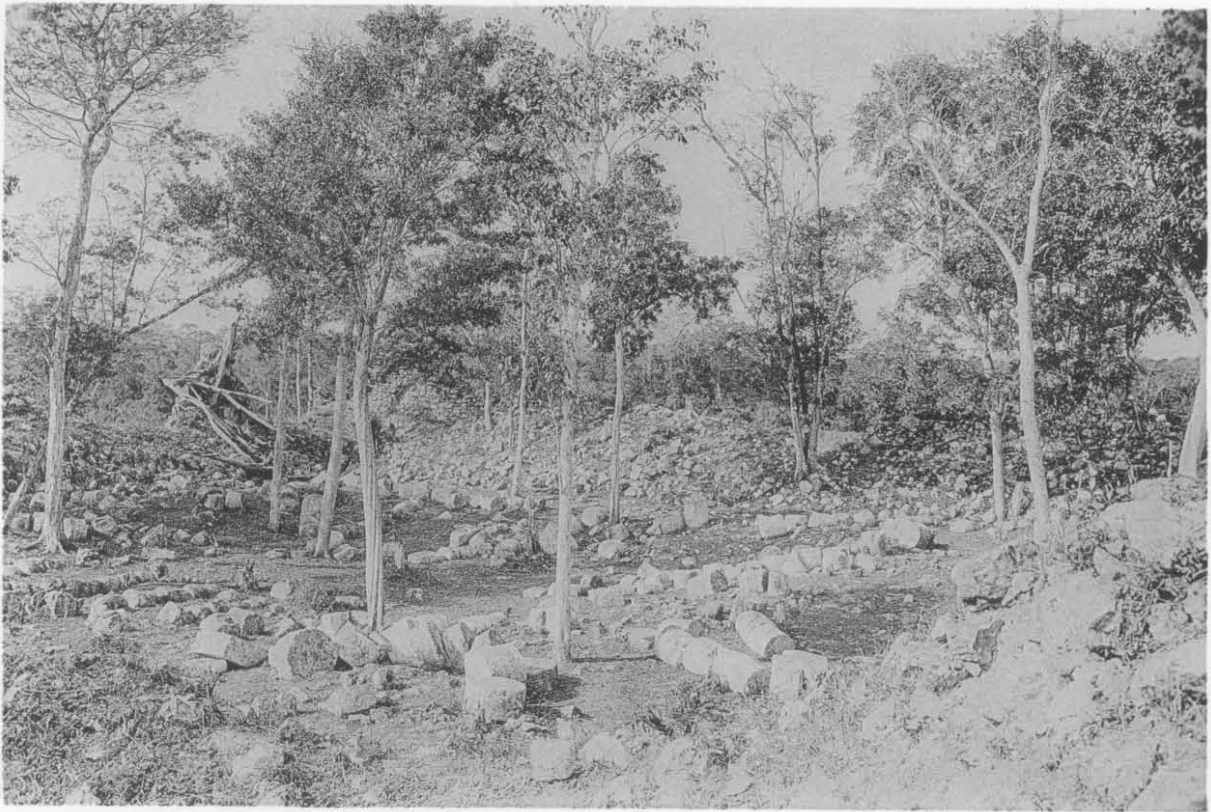


*a*



*b*

FIG. 28—PATIO EXTERIOR  
*a*: West exterior before excavation.  
*b*: South exterior.



*a*



*b*

FIG. 29—PATIO INTERIOR  
*a*: Before excavation, looking west.  
*b*: Before excavation, looking southeast.





*a*



*b*

FIG. 30—PATIO INTERIOR

*a*: Northwest corner. Pit to examine fill.

*b*: South side looking east. Flagstone path calcined and broken as result of fire.



*a*



*b*

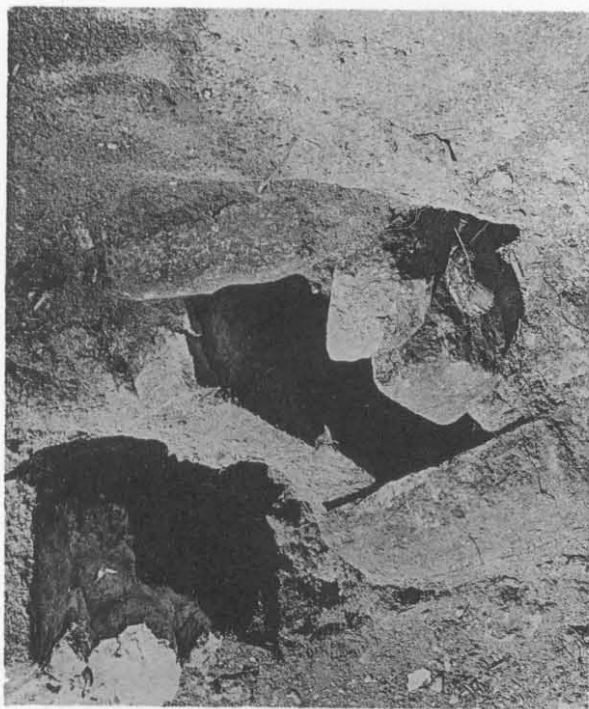
FIG. 31—PATIO INTERIOR

*a*: Northwest corner. Wall stones are calcined and broken as result of fire.  
*b*: Looking northwest. Columns re-erected.





FIG. 32—RESTORATION OF PATIO INTERIOR  
By Tatiana Proskouriakoff



*a*



*b*



*c*

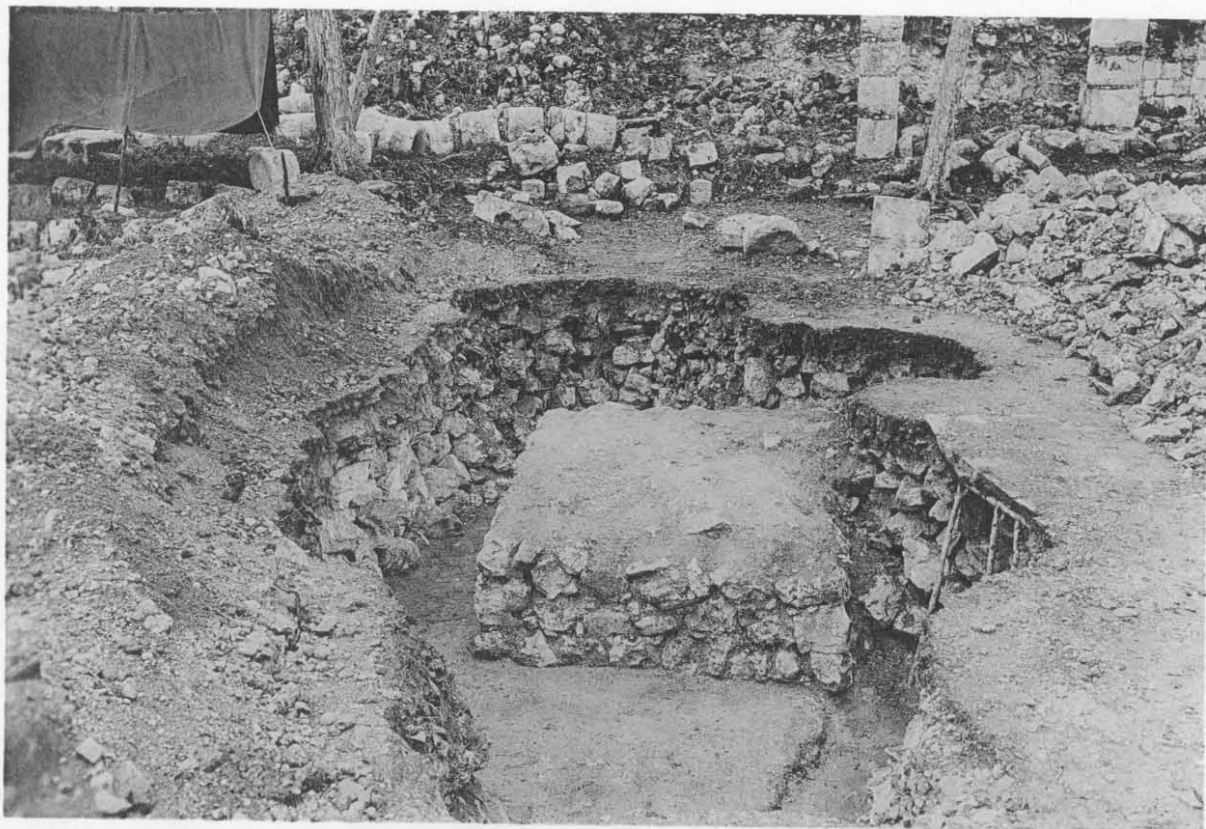
FIG. 33—PATIO DRAIN

*a*: Orifice of drain, west side of sunken area. Before repair.

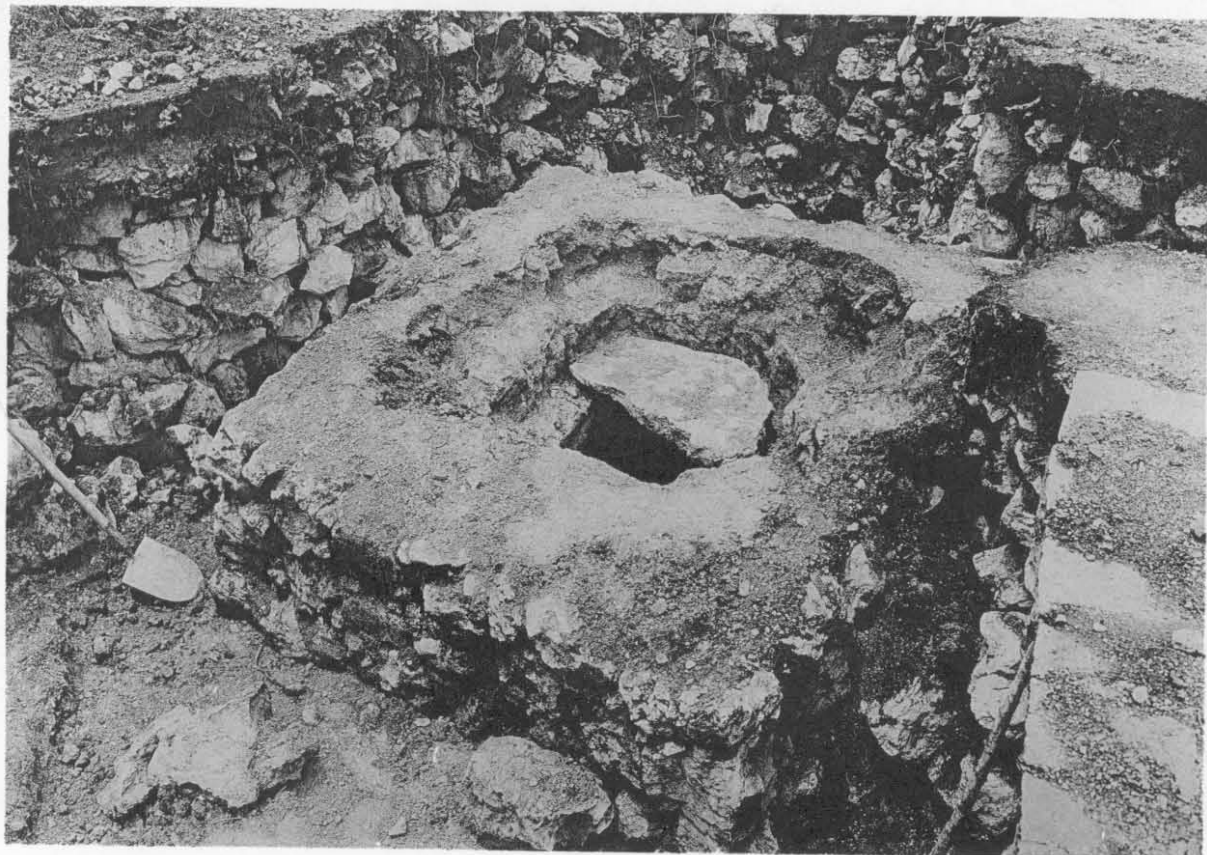
*b*: Orifice of drain, west side of sunken area. Repair completed.

*c*: Drain from sunken court extends under the ambulatory and opens at base of west facing of patio platform.





*a*



*b*

FIG. 34—MASONRY BOX UNDER FLOOR OF SUNKEN AREA OF PATIO  
*a*: View looking south.  
*b*: One of the two stones which formed the lid has been removed.

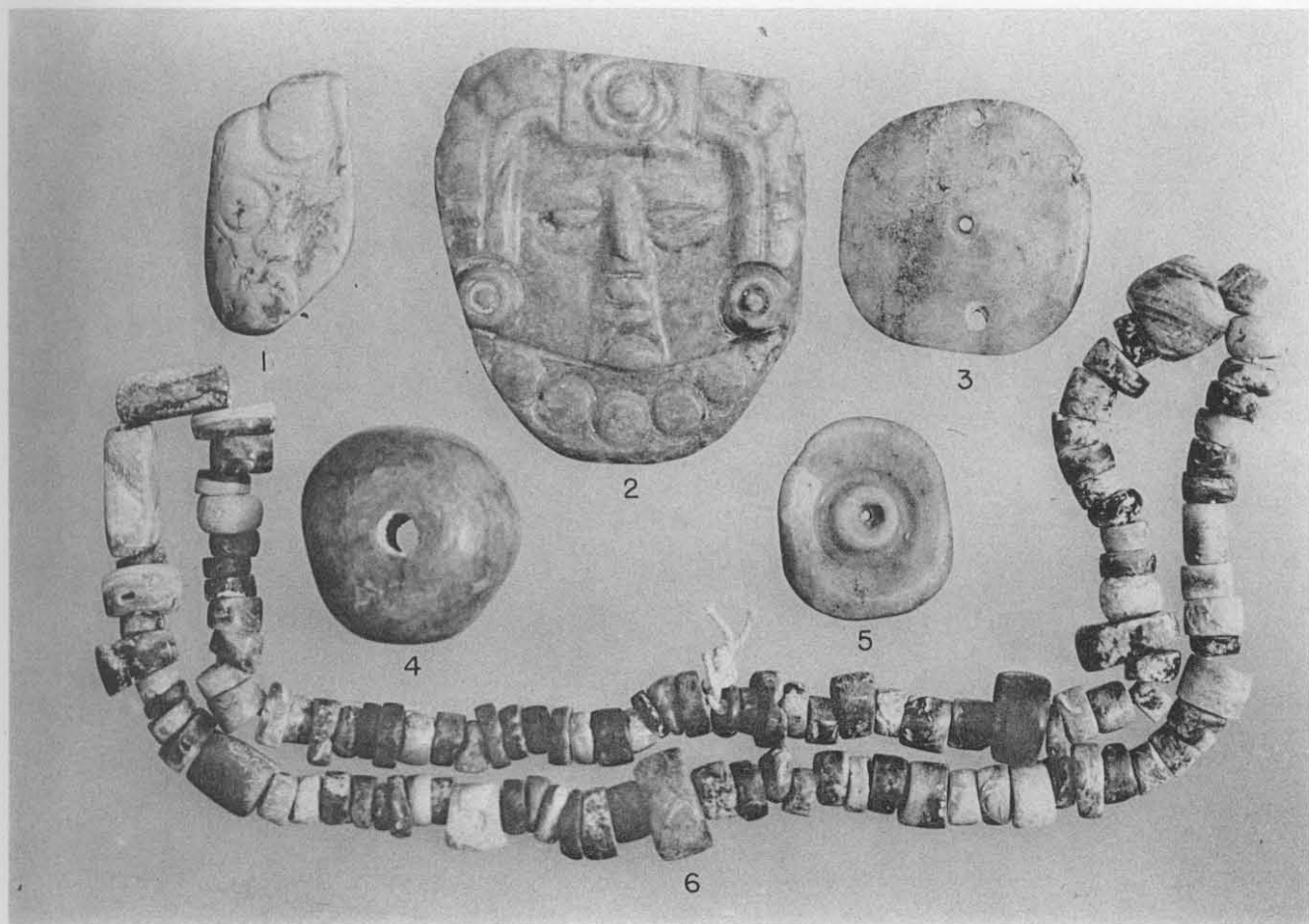


FIG. 35—MATERIAL FOUND IN MASONRY BOX

- 1: Piece of green stone.
- 2-5: Pieces of worked jadeite.
- 6: 113 shell beads.