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CERAMICS OF THE TEMPLE OF THE INSCRIPTIONS
PALENQUE, CHIAPAS, MEXICO

UNIVERSITY OF NEW MEXICO
ALBUQUERQUE

By

Barbara C. Rands

A Thesis

In partial fulfillment of the

Requirements for the Degree of

Master of Arts in Anthropology

The University of New Mexico
1954

This thesis, directed and approved by the candidate's committee, has been accepted by the Graduate Committee of the University of New Mexico in partial fulfillment of the requirements for the degree of

MASTER OF ARTS

E. H. Castetter

DEAN

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DATE

CERAMICS OF THE TEMPLE OF THE INSCRIPTIONS PALENQUE, CHIAPAS, MEXICO

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CHAPTER 1 — INTRODUCTION

Although Palenque, in northeastern Chiapas, is one of the most famous Maya sites, its ceramics have remained virtually unknown. A few scattered figurines and an even smaller number of pottery vessels have found their way into museums, but no systematic ceramic investigation has previously been attempted. On the other hand, Palenque's unusual architecture and its complicated hieroglyphs have been the subject of interest for nearly two centuries.

In 1949, the Mexican Government undertook an intensive program of architectural restoration at Palenque. Under the direction of Sr. Alberto Ruz Lhuillier, a group of Mexican archaeologists and artists have worked at the site for five summers, overseeing a large crew of Indian laborers. Although there was some interest in the ceramics which appeared during the course of this architectural work, little emphasis was placed upon the finds. Through a grant from the Wenner-Gren Foundation and the assistance of the Instituto Nacional de Antropologia e Historia and the Institute of Andean Research, my husband and I were able to conduct stratigraphic ceramic excavations at Palenque during the 1951 season. In addition, the Mexicans entrusted to us for study most of the pottery discovered during that summer's restoration work, as well as some material found previously.

This paper is concerned mainly with the portion of the ceramics which came from beside and within the pyramid of the Temple of the Inscriptions, one of the major structures in the central area of Palenque. It was inside this pyramid that a rich and unique tomb was found in 1952. The opening of the sealed tomb, which lay at the bottom of a long interior staircase, has since been described in several articles.[1]

Palenque has long been considered difficult to date with certainty, so ceramic evidence has been awaited with interest. Unlike the majority of Classic Maya sites, which erected stelae at the end of each katun (a period of approximately twenty years) or more often,[2] the ruins of Palenque have so far revealed only two stelae. Of these, one is without hieroglyphic inscriptions.[3] Palenque is not lacking in dated monuments, however. It presents a bewildering number of inscriptions on its sculptured wall panels and stucco piers. In spite of this, "decipherable dates are rare in proportion to the well-preserved sculptural material."[4]

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1. These include Anonymous, 1953; Marquina, 1952; Ruz Lhuillier, 1952a, b, d, 1953a, b, c.
2. Morley, 1946, p. 57.
3. Morley, 1937-38, Vol. IV, Table 107, p. 262.
4. Proskouriakoff, 1950, p. 3.

The Palenque inscriptions which are considered possibly contemporaneous with its occupation lie in the Late Classic Period. The dates are said to range from 9.8.16.15.13[5] to 9.17.15.0.0[6] (610 A.D. to 785 A.D., according to the Goodman-Martinez-Thompson correlation).[7] The stone wall tablets set into the inner walls of the Temple of the Inscriptions are devoted solely to hieroglyphs, recording a long series of dates. Morley believes the tablets in the temple to have been dedicated in 9.13.0.0.0 (692 A.D.).[8] Dating of the tablets is complicated by the fact that they include "long distance numbers"[9] which are said to record a calculation moving back almost 1,250,000 years in time.[10]

Spinden and, more recently, Proskouriskoff have tended to distrust the evidence of the dated inscriptions at Palenque. On the basis of architecture, Spinden would place the height of the city's brilliant period at about 10.0.0.0.0[11] (830 A.D.). He believes the architecture of Palenque to be all of one type and states that it shows many improvements in building techniques which must have

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5. Morley, 1937-38, Vol. IV, p. 300.
6. Proskouriakoff, 1950, p. 192.
7. All dates in the Christian Chronology used herein are based on Morley, 1937-38, Vol. IV, Appendix XIV, pp. 420-422.
8. Morley, 1937-38, Vol. IV, p. 277.
9. Spinden, 1913, p. 194.
10. Thompson, J. E., 1950, p. 314.
11. Spinden, 1913, p. 195.

developed from knowledge of those used at earlier sites.[12]

From a stylistic analysis of Palenque art, Proskouriakoff concludes that the city's monuments were sculptured between 9.12.0.0.0 (672 A.D.) and 9.16.0.0.0 (751 A.D.), and gives a date for the Temple of the Inscriptions of 9.14.0.0.0 (711 A.D.).[13] Proskouriakoff emphasizes the distinctiveness of Palenque's art style. It appears "to diverge from the Classic monumental style, and for this reason chronological sequences we attempt to construct... are not reliable."[14] Some of the artistic differences she believes may be due to Palenque's geographical position in the far west of the Maya area.[15]

The artistic divergence of Palenque is reflected in its ceramics. According to the suggested range of dates for the site, the pottery should equate in time with the Tepeu Period at Uaxactun, Guatemala, where the most complete sequence for the Maya area has been worked out. Several Mayanists who have seen the Palenque material agree, however, that it differs in a number of ways from better known ceramics of the Maya region. The Palenque pottery has been examined by Dr. A. V. Kidder and Mr. R. E. Smith of the Department of Archaeology of the Carnegie

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12. Spinden, 1913, p. 193.
13. Proskouriakoff, 1950, p. 192.
14. Ibid., p. 4.
15. Ibid., p. 149.

12. Bynum, 1818, p. 190.
13. Prosnourikoff, 1900, p. 144.
14. Ibid., p. 4.
15. Ibid., p. 189.

Institution of Washington, Dr. Philip Drucker and Dr. Matthew W. Stirling, of the Smithsonian Institution, Dr. Gordon Ekholm of the American Museum of Natural History, and Dr. George Brainerd of the Southwest Museum, Los Angeles. Their suggestions have been incorporated in the present classification. In addition, Dr. Linton Satterthwaite, University Museum, Philadelphia, provided much unpublished information regarding the pottery of Piedras Negras, Guatemala.

CHAPTER 2 — METHODOLOGICAL APPROACH

The ceramic material connected with the Temple of the Inscriptions constitutes less than one-fifth of the Palenque pottery which was shipped to the United States for study. The balance consists of collections from other structures, surface surveys, and a number of stratigraphic pits. A preliminary study of a portion of this material has already been made,[1] and a report on the entire body of Palenque ceramics will eventually be prepared.

The present classification is based upon rim sherds, with attention being paid also to decorated sherds, bases and foot forms. Due to restrictions by the Mexicans on the amount of material which could be shipped to the United States, as well as to the difficulty of securing boxes for shipment, it was necessary to discard at Palenque the majority of undecorated body sherds. No count of these by wares was attempted in the field. A similar situation was encountered by Thompson at San Jose, British Honduras,[2] and is not uncommon in the Maya area.

Classification was further complicated by the poor condition of the sherds, especially those from stratigraphic

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1. A summary of the major conclusions appears in Ruz Lhuillier, 1952c, pp. 60, 62-63.
2. Thompson, J. E., 1939, p. 65.

pits. The majority of the sherds are unusually small and badly weathered. Due to the small size of the fragments, it is often difficult to determine the vessel shape. Comparison with better preserved material from other structures at Palenque, especially the Palace, has been helpful in this regard. In many cases the surface finish of the sherds associated with the Temple of the Inscriptions has almost disappeared. Drucker found a comparable condition at Tres Zapotes, Veracruz, and states: "Sherd analyses are made difficult in the Tropics by climatic factors, such as the alternating saturation and drying of the ground in wet and dry seasons, and the heavy acid content of the soil, which reduce many sherds to pitted drab lumps of baked clay."[3] Needless to say, such weathering makes it difficult to determine the original surface color and treatment of the sherds. As a result, features of paste and temper assume especial importance. These tend to be stressed in Mayan ceramic studies, some wares such as Fine Orange being differentiated primarily by the color of the paste and its virtual absence of temper, rather than by surface color or decoration.[4]

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3. Drucker, 1943, p. 34.
4. Brainerd, 1941, pp. 176-179.

Identifications of the minerals used for temper were made by Dr. Robert H. Shaver, Chairman of the Department of Geology at the University of Mississippi. Dr. Shaver spent many hours examining sherds under a binocular microscope. He is also to be thanked for information regarding the size and amount of temper occuring in the various pottery types.

The color standard used in this study is the Munsell Soil Color Charts,[5] which "is replacing the other color guides in prehistoric ceramics."[6] Since many of the authorities on Middle American pottery have used Ridgway,[7] a copy was studied for comparative purposes.

Hardness of the pottery was determined according to the Mohs Scale.

Several refiring tests were run in an electric furnace, using carefully regulated temperatures.

The glossary of ceramic terms given in this study is based on that incorporated by Dr. Brainerd in his forthcoming report, for the Carnegie Institution of Washington, on the pottery of Yucatan.

In the course of classifying the pottery from the Temple of the Inscriptions, the literature on Middle American

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5. Anonymous, 1949.
6. Colton, 1953, p. 33.
7. Ridgway, 1912.

ceramics was searched for comparable material. Pottery collections were studied at the American Museum of Natural History, the Peabody Museum of Harvard University, the University Museum, Philadelphia, and the Southwest Museum, Los Angeles. In addition, the photographic files at the Carnegie Institution were checked, and unpublished photographs were obtained from the Middle American Research Institute of Tulane University. This extensive research revealed surprisingly few examples of pottery which compare closely with the material from Palenque.

Pottery associated with the Temple of the Inscriptions is overwhelmingly monochrome. Few sherds occur of polychrome ware, which has served in other parts of the Maya area to establish spatial and temporal relationships. Because of the scarcity of comparable material, it has proved necessary to study the ceramics of the Temple of the Inscriptions as a separate entity, developing a classification from the sherds themselves.

Mayan ceramic studies have so far not tended to follow any formal system of classification. The bi-nominal system of nomenclature, for example, has almost never been used in reports on Maya pottery. As more sites are excavated, overall patterns will surely develop, making classification more standardized. At present, however, no one authority or ceramic report is a guide for handling new material from the Maya area. Certainly the problem of classification

would have been far less difficult if pottery from the Temple of the Inscriptions, and Palenque as a whole, had shown more points of relationship with some previously established typology.

Following the system of classification seen in a number of reports on Maya ceramics, wares associated with the Temple of the Inscriptions have been designated mainly on the basis of surface color. An exception to this is Utility Ware, which tends to have a drab surface and is not usually sub-divided by color in the reports. Where more than one type within a ware is described in the following classification, the distinguishing features of surface, paste, temper, etc. have been set forth.

The pottery under discussion is the first body of ceramic material from Palenque to be classified. While the pottery is associated with a single structure, it is anticipated that this classification will serve as a framework for the study of Palenque ceramics as a whole.

CHAPTER 3 — FIELD WORK

Palenque, Chiapas, lies in the far western portion of the Maya area (Fig. 1). The site is located in the foothills of the Sierra de las Naranjas, about twenty-five miles west of the Usumacinta River, that great artery which forms the eastern boundary of modern Chiapas and stretches some three hundred miles to its source in Guatemala. Palenque has no direct connection with the Usumacinta, but a small tributary, the Chacama, flows south and east of the ruins not far away.[1]

The major buildings of Palenque, situated upon artificial mounds, are grouped on a small plateau which has been refashioned by man to give the impression of a level area in the hills (Fig. 2). The Temple of the Inscriptions (Fig. 3) stands on a pyramid some sixty feet high, directly in front of a steep mountain slope. Stripped of its former covering of trees and fallen debris, the terraced pyramid has a pleasing symmetry. On the northeast, its base nearly joins the southwest corner of the Palace mound, which supports an imposing assemblage of at least twelve structures. Farther to the east, across the small stream of the Otolum, which can turn into a formidable torrent during the rainy season, are a celebrate trio of temples. On three sides of a raised plaza, stand the Temples of the Sun, the Cross, and the Foliated

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1. Holmes, 1895-1897, Fig. 42, p. 153.

Cross, each atop its own pyramid. To the north lie a small ball court, the temple called El Conde, several small unexcavated mounds, and the North Temples. Immediately beyond this latter group is a steep cliff, below which a series of descending terraces supports numerous small structures. From the edge of the cliff, one looks upon the plains of Tabasco, reaching seventy miles or more to the sea. To the south of the main temple area rise the Sierras, their slopes and some of the peaks containing the remains of other temples. And in all directions are to be found lesser architectural remains of the large site--tomb groups, bridges, retaining walls.

The Temple of the Inscriptions and its high pyramid were the scene of intensive restoration work by the Mexican government during the 1951 season. The Temple is the largest in the central area of Palenque. It is a rectangular building with a mansard roof which formerly supported a roof-comb. The front piers and lower roof slope were once richly decorated with stucco figures, which are now badly eroded. Within the Temple of the Inscriptions "are two great vaults, nearly 70 feet long and a little less than 7 feet wide. The front vault--the corridor of the temple--is entered by five wide doorways...and the three rear apartments, into which the back vault is divided, are entered by one doorway each."[2]

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2. Holmes, 1895-1897, p. 187.

Within the Temple of the Inscriptions are the famous hieroglyphic wall tablets which gave the structure its name. Two of the tablets are set into the wall of the front chamber, at either side of the door to the central back chamber. On the rear wall of this inner sanctuary is the third and largest of the hieroglyphic tablets.

The temple floor in the rear room consists of great stone slabs. In 1923, Blom remarked upon the rows of holes in the floor slab to the left of the wall tablet, saying, "I cannot imagine what these holes were intended for."[3] During the course of their architectural restoration in 1950, the Mexicans removed this perforated slab. Beneath it, buried in earth, they discovered the top steps of a vaulted stairway leading down toward the west into the depths of the pyramid (Fig. 4). It is possible that the holes in the slab which covered this stairway were for the attachment of ropes to facilitate raising the heavy stone, or ventilation of the stairway may have been helped by the holes, which were provided with large stone stoppers.

Before the close of the 1950 season, the stairway had been cleared of fill for over 30 feet, necessitating many man-hours of heavy work. At this depth, the series of descending vaults ended in a narrow corridor with corbelled arch leading away to the north. On the west, slightly north of the bottom

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3. Blom and LaFarge, 1926-1927, p. 178.

step, another corridor was found blocked with large stones and earth. This was the situation at the beginning of work in 1951, and excavation continued where it had ceased the summer before.

It soon developed that there were not one but two western corridors leading off the central passageway toward the side of the pyramid. Beyond the second of these, the central corridor continued northward another yard or so before making a sharp turn to the east. In this direction, the corridor shortly gave way to another flight of steps leading still deeper into the heart of the pyramid, where two years later the sealed tomb was finally discovered (Fig. 4).

Sr. Ruz, who was in direct charge of the restoration of the Temple of the Inscriptions, hypothecated in 1951 that the western corridors might prove to be tunnels from the pyramid which led under a small raised plaza to a ruined structure west of the Temple of the Inscriptions. It was thought that the tunnels, if they did exist, might have been used by priests to go unobtrusively from one temple to the other. Sr. Ruz, therefore, decided to sink a pit in the West Plaza to search for evidence of passageways, while at the same time continuing the work within the pyramid. When this exploratory pit in the plaza produced potsherds in quantity, I was called in to guide the excavation, designated for ceramic purposes as Pit 1 (Fig. 4).

The pit had been started about 12½ feet out from the wall of the pyramid, at approximately the middle of the plaza in a north-south line and well away from the small structure on the western side of the plaza. The first section, about six by 12 feet, had been dug by the laborers without supervision and the pottery separated into only two lots: (1) Surface to five inches, and (2) Below five inches. Much of the material seems to have been discarded, for the number of sherds saved was far less than appeared later from comparable adjoining cuts. Afterwards, the digging was done insofar as possible by levels. The main emphasis continued to be architectural, putting a premium on rapid work, but the workmen were cooperative about keeping to the established levels.

Some time prior to the excavation, the earthen surface of the plaza had been cleared of debris and burned over to remove the vegetation. No pottery, if any occurred, was saved at that time, and no evidence of a stone or plaster floor on the surface of the plaza was reported. The earth for the upper five inches of Pit 1 was very dark in color, perhaps due partly to the burning over of the surface, and many of the sherds found in this level were blackened. At the five inch level, an uneven layer of large stones was found. These were thought probably to form a rough floor. Layers of similar stones were found in the fill, consisting of earth, stones and broken pottery, down to the six foot level. There were no appreciable changes in earth color between the five inch and

the 75 inch depths. Provisional levels were therefore established at the successive layers of stones, some of the levels later being combined. As the second cut, a 55 inch southward extension of Cut 1, deepened, it became evident that the plaza fill covered a flight of stone steps, leading down to the north. For the most part, the layers of large stones corresponded with these successive steps.

At Sr. Ruz' direction, the excavation was extended another 22 inches to the south to include the top of the discovered stairway, and at the same time carried east to the debris-covered pyramid wall. Later a fourth cut was made to square off the pit. All parts of the excavation were carried down to the bottom of the sixth step, approximately two yards, at which point there was thought by Sr. Ruz to be a stone floor. In all the cuts, pottery was abundant to the 17 inch level. From 17 to 36 inches, the sherds fell off steadily in number. At 36 inches, a distinct deposit of stucco fragments, mixed with a few sherds, was encountered. Below 44 inches, the fill contained almost no pottery. Figurines occurred at varying depths, but were few in number and badly broken. A handful of obsidian blade fragments were found in the levels above 17 inches. Other artifacts were extremely rare, consisting only of three broken manos, ranging in location from five inches to 65 inches.

As the third and fourth cuts of the pit were excavated, the pyramid was revealed as sloping sharply westward below

the surface of the plaza, thus narrowing the inside dimension of the lower levels in the pit. The slope of the pyramid wall below the ground level was considerably more marked than was the case higher up on the pyramid. The newly uncovered wall was found to have its stones firmly in place, and a coat of plaster still adhered to them. No terraces, such as had recently been uncovered on the north and east faces of the pyramid, were apparent. Rather, the sloping surface gave the appearance of an addition to the original pyramid, perhaps a retaining wall.

The plaza excavation had so far produced no evidence of the postulated tunnels. Further exploration was temporarily postponed by Sr. Ruz. As a result, I began a ceramic excavation behind the Temple of the Inscriptions. This stratigraphic work was well under way when Sr. Ruz decided to resume explorations in the West Plaza. In order to save time, he had the workmen dispense with levels when digging. All pottery was supposed to be saved, but records are incomplete because only part of the final work was done under my supervision. When digging was resumed at Pit 1, the "floor" at the 75 inch level was broken through, in approximately the area where the original cut had been made. It developed that the supposed floor consisted of a seventh step and the layer of stones on a level with it. Whether this actually represented a floor remains uncertain. Under the stones lay Step 8. Below this step the slanting pyramid

wall jutted out slightly, forming a ridge about four inches wide. The vertical excavation ceased, by Sr. Ruz' direction, below the bottom of Step 8, approximately the 100 inch level, at what was again called a floor. It is quite possible that a continuation of the stairway, and further ceramic material, could be found below this level.

While the work in the West Plaza was going on, the interior passageways leading toward the west side of the pyramid were still being cleared of debris. According to the calculations of Sr. Ruz, the plaza excavation had now reached below the level of the interior corridors, and he began a series of tappings from the inside of the pyramid. In this way, it was discovered that the floor of the northern corridor was approximately on a level with a narrow ridge on the pyramid below Step 8, close to the northern edge of the pit. Without delay, a hole was broken through the side of the pyramid to reveal the passageway. Similar soundings indicated that the southern corridor lay partly behind the plaza stairway, so portions of steps 4 to 8 were removed where they joined the pyramid wall. Some interesting sherds were recovered from under and behind these steps. The second passageway was then opened. Later the West Plaza excavation was stabilized and the stairway reconstructed, but no further ceramic material was reported.

The excavation behind the Temple of the Inscriptions, Pit 6 (Fig. 4), was quite a different matter from work on

Pit 1, as it was entirely separate from the program of architectural restoration. A short gully sloping downhill from west to east, lies at approximately the same height above the main plateau as does the West Plaza. The south face of the pyramid, except at the southeast corner, reaches less than half of the distance to the plateau. Instead, the wall of the pyramid, which is still covered with debris, slants gradually to the narrow gully, across which rises a steep mountain slope. The slope here is faced with a straight retaining wall of carefully laid stones, said to be one of several such walls in connection with a series of terraces on the mountainside. No structures are known to exist on these terraces.

An area of the gully directly behind the center of the temple was selected for excavation, in the expectation that this secluded spot might contain temple refuse. Before digging could begin, it was necessary to clear from the surface of the gully a number of large stones which had apparently tumbled from the pyramid, as well as to cut a usable trail up from the plateau. No ceramic material was found during the process of clearing the area of fallen stones. It would appear, therefore, that the ceramics later excavated from Pit 6 must have been deposited before the pyramid began to disintegrate, and that once the stones had started to fall no more pottery was discarded in that part of the gully.

Pit 6 was planned in three sections. Section A, ten feet square, reached from the retaining wall to the middle of the gully. Section B, of approximately equal dimensions, continued to the south wall of the pyramid. Later, Section C, adjoining A and B on its western edge, was excavated. This section, slightly smaller in size, was planned to check on interesting points which had arisen during the previous work.

Excavation of Section A was started beside the middle of the retaining wall. The ground surface of the gully sloped downward here from south to north as well as from west to east. At first it was thought that the contours might be the result of erosion, but excavation proved that the surface slope was reflected to a considerable degree by the lower earth layers. Section A consisted of only two sherd bearing levels, separated according to color of the soil. The upper layer of earth was very dark gray, similar to that in the West Plaza, in some places almost black. The earth was soft and light in weight, containing much leaf mold due to overhanging trees which stand behind the retaining wall. There was a heavy deposit of sherds and figurines in this dark earth, which varied in depth from 12 inches beside the center of the retaining wall to 22 inches at the southwest corner of the pit. Also found were many fragments of obsidian blades. In addition, several manos and one broken metate were encountered.

Level 2 consisted of grayish brown earth mixed with many small white stones. The sherd deposit was lighter here. This

level was five inches thick at the center of the retaining wall. The layer below this was sterile, consisting of some eight inches of yellow earth with small stones, ending in bed rock. The retaining wall stops about three inches below the top of the yellow soil layer.

Section B extended to the side of the pyramid, which proved to reach farther into the gully than first realized, thus cutting the north-south dimension of the second section to some 8½ feet. Clearing away of the overlying debris revealed that the face of the pyramid here was built of stones to form an upright wall, similar to the walls of terraces on the pyramid's north and east faces. The top layer of dark earth was thinner, on the average, in Section B than in the first section, not exceeding 16 inches at any point. On the west, the dark earth gave way rapidly to a thin lens of brown earth. At the southwest and northwest corners of Section B, outcroppings of bedrock reached almost to the surface.

At the 16 inch level, a rough layer of large stones was discovered. The stones abutted the pyramid and, except in the western portion of the excavation, covered most of the section. It was thought at first that these stones might prove to be a tomb or cache, but later it was decided that they formed a rough floor or pathway beside the pyramid. Below the stones was brown earth in a thin deposit, overlying yellow soil. The pyramid wall was found to extend some two feet below the original ground level, ending in the sterile yellow soil.

It was decided in excavating Section C, to the east of the previous work, to include within its dimensions an area in line with the layer of large stones which had been found in Section B. The stones were found to continue throughout Section C, occuring at an average depth of 13 inches. The dark earth overlying the stones was again found rich in potsherds and figurines, as in both Sections A and B.

The stone "floor" was found to be in line with the outcroppings of bedrock in Section B, extending toward the side of the pyramid and covering approximately the same area as in the previously excavated section. The rocks give every indication of having been laid down purposely, to cover the bottom of the gully as it runs downhill parallel to the pyramid. It is possible that this rough layer may have been intended in part to build up the level of the gully above the bottom of the pyramid wall so that the latter would not be undermined during the rainy season.

In an attempt to learn whether there was any time difference between the ceramic deposits above the stone layer and below, the soil was carefully scraped from the stones before any were removed. The stones were then taken out, and sherds which appeared from among or below them were kept separate. Due to one of the accidents which can arise with untrained labor, this careful work was negated when a workman sacking the material combined both groups of sherds. It was possible later to excavate a few sherds of the level below the floor

from a small area which had not yet been dug, but no statistical evaluation of the two levels can be made from this sample of material.

Under the stone layer in Section C, the usual brown earth was found. At the deepest point, this reached a depth of 21 inches below the original ground level before sterile soil was encountered. More large stones occurred in this level, but they were not placed with any regularity. One point of interest is that the brown earth deposit in the eastern part of Section C reaches 11 inches deeper before giving way to sterile yellow earth than is the case on the western edge of the excavation. There the brown earth layer was very thin. It seems possible that at the time the layer of stones was laid down in the eastern portion of Section C, some of the yellow soil may have been removed and replaced by brown earth. If that is the case, the ceramic material from below the stones in Section C may correspond in time with that of the brown earth (Level 2) elsewhere in pit C. On the other hand, the uneven depth of the earth layers may be a natural phenomenon, since this area is decidedly irregular in contour.

Pit 7, on the main plaza or plateau, proved to be most disappointing. It was laid out as close to the southeast corner of the Temple of the Inscriptions pyramid as the fallen debris would permit. Section A paralleled the pyramid wall, the terraces of which were revealed during the clearing of the area. A pit 12 feet North-South by 5 feet East-West was begun.

Almost no sherds were encountered in the very shallow black layer overlying sterile yellow soil similar to that encountered in Pit 6.

Section B extended Pit 7 an additional 13 feet to the east. A four-inch layer of black soil was sherd bearing, but the material was extremely small and blackened. The edges of the sherds are unusually smooth, with few rough breaks being found and almost no matching pieces. It is hard to identify shapes, and the surface of many is so blackened that wares are not easily defined.

It would appear that the present level of the plateau beside the east wall of the Temple of the Inscriptions is at approximately its original level, with little or no additional fill. The ceramic material, therefore, is likely to be debris from the temple, in spite of its worn condition. Some may be water borne, however, as the plateau is said to be flooded occasionally in the rainy season.

The collection of pottery associated with the Temple of the Inscriptions is rounded out by two groups of sherds turned over to me by the Indian laborers. When the passage-ways within the pyramid were opened to the West Plaza excavation, the workmen inside the pyramid became interested in the ceramic material. Up until that time, no pottery from the interior stairway and passageways had been saved. Subsequently the laborers turned over to me the potsherds encountered in their reconstruction work (Fig. 4). This

pottery unfortunately contained few examples of rim sherds. It is discussed and tabulated under the heading "Within Pyramid."

A somewhat larger body of material was collected by laborers working on the north terraces of the pyramid (Fig. 4). They encountered several scattered deposits of sherds, including some from behind a retaining wall which was found beside the outer stairway of the pyramid. None of this pottery was excavated under supervision and its exact provenience was often difficult to determine. As a result, it has been lumped together for the purpose of classification under the designation "North Face of Pyramid."

The three stratigraphic pits beside the pyramid were dug, as already described, according to levels which were indicated by the nature of the fill. Permanent levels for these pits were later determined in accordance with the significant features of the excavations.

There appear to have been at least five building stages in the area where the pyramid wall adjoins the West Plaza. (1) First came the wall of the pyramid, with its two passageways. (2) Later this face of the pyramid was covered by a sloping wall. It is not known whether the passageways were closed up at that time or openings left overlooking the plaza. In any event, the sloping wall with its narrow ridge was at some time plastered over, with no evidence of the passageways remaining. (3) After the plaster was applied,

the West Plaza stairway was constructed. (4) If the layer of stones covering steps 7 and 8 is considered to be a floor, the plaza must later have been built up to this level. (5) Finally, the remainder of the plaza stairs were covered with fill and a stone floor laid above them.

Conforming to these structural stages, the ceramics from Pit 1 have been devided into four levels, as indicated in Fig. 5. Level 1: surface to the upper stone floor of the plaza, 0 to 5 inches; Level 2: fill between the floor and the floor over steps 7 and 8, 5 to 75 inches; Level 3: fill under this floor, 75 to 100 inches; Level 4: fill behind steps 4 to 8 next to the sloping pyramid wall. A fifth category, "Miscellaneous," includes material which was not dug stratigraphically from Pit 1.

At Pit 6, structural features appeared less significant for a ceramic study than the variations in soil color and composition. The pottery from this excavation has therefore been placed in three groups, Level 1: black earth; Level 2: brown earth mixed with small stones; and Miscellaneous: material mixed at the time of excavation or not excavated under supervision.

In Pit 7, no architectural features were noted. Since only one type of soil, black earth, was encountered, all the sherds from this pit have been combined.

CHAPTER 4 — CLASSIFICATION OF WARES AND TYPES

Classifications of Maya ceramics have for the most part been worked out for whole vessels, reasonably well preserved sherd material, or pottery which could be equated with that of one or more previously established sequences. The collection from the Temple of the Inscriptions did not meet any of these conditions and was, therefore, more than usually difficult to handle. Whole vessels were not found, nor were there many partially restorable examples. Surface finish of the pottery had weathered away to the point where it was often impossible to determine whether specific sherds had a slipped or painted surface. Features of paste color and composition thus became unusually important for purposes of classification. Undoubtedly, further refinement of the wares will be possible when the entire body of ceramic material from Palenque has been studied. It is believed, however, that the wares and ware types herein discussed will prove to be generally valid for the site as a whole.

Six wares have been recognized in the pottery associated with the Temple of the Inscriptions. Five are monochrome wares: Brown, Black, Fine Gray, Fine Orange, and Utility. Polychrome ware has been treated separately, in accordance with the usual practice in reports on Maya ceramics. Where more than one type is present within a ware, a full description of each type follows the general discussion of the ware.

BROWN WARE

Brown ware includes by far the largest proportion of rim forms of all pottery associated with the Temple of the Inscriptions. The surface, almost invariably self slipped, is predominantly dark reddish brown. The slip is usually badly weathered and has entirely disappeared from some sherds. The color ranges by imperceptible degrees to a warm buff. According to the Munsell color standard, brown ware includes the following hues: Red (2.5YR 4/6, 2.5YR 4/8, 2.5YR 6/6, 2.5YR 5/8); Yellow Red (5YR 5/6); Brown (10YR 5/3); Light Yellowish Brown (10YR 6/4); Pale Brown (10YR 6/3); Light Brown (7.5YR 6/4).

Paste color in most cases is of a shade similar to the surface color. Thus a reddish brown sherd will show a dark orange paste, while a sherd in the buff range will have a buff paste. Dark unoxidized cores occur, especially in Type 2.

Temper is predominantly quartz, ground to an average medium size, according to the standards of temper size set forth by Anna Shepard.[1] The temper is well distributed throughout the paste. Dolomite temper of fine to medium size occurs in a small number of sherds which appear under

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1. Kidder and Shepard, 1936, p. 410.

Type 3. Dolomite temper is rare in the material under consideration. In a few sherds, small calcite particles appear, but these inclusions are so unusual in brown ware as to seem fortuitous.

Although most of the brown ware sherds, especially the thicker examples, are plain, several varieties of plastic decoration are found. Painting is seldom used as decoration on this ware. The occurrence of the decorative techniques will be discussed further in relation to brown ware types.

Vessel forms in brown ware seem to include no storage jars. A few large open bowls occur at the Temple of the Inscriptions, but the majority of the sherds appear to come from low bowls, basal ridge bowls, beakers, cylinders and incensarios. Vessel walls vary in thickness from one-eighth to one-half inch, averaging one-quarter inch (Fig. 6).

Brown ware is known all over Middle America, but comparative material for wares is often difficult to recognize in works on Mayan ceramics. Descriptive standards vary considerably from report to report, which is especially true of color groupings. Thus pottery with a reddish brown surface may be included under red ware in one report,[2] or orange ware in another.[3]

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2. Thompson, J. E., 1939, p. 75.
3. Vaillant, 1927, p. 108.

Brown ware such as occurs at the Temple of the Inscriptions is not represented in the carefully worked out pottery sequence of Uaxactun, Guatemala,[4] where no quartz temper is reported.[5] According to Kidder, the ware has little or no correspondence with material from Kaminaljuyu,[6] and it varies decidedly from the ceramics at another Highland Maya site, Atitlan, where brown pottery is described as "dark chocolate brown to gray brown."[7]

Material from the Temple of the Inscriptions is included in the color range of red ware from San Jose[8] and Benque Viejo,[9] British Honduras. At these sites, however, quartz temper is again a rarity.[10]

The first important correspondences with brown ware from Palenque are found at Piedras Negras, a site on the Usumacinta River some fifty miles to the southwest. Butler mentions red brown ware here.[11] Whole vessels from Piedras Negras consisting of low bowls with tripod feet[12] (Fig. 6b) are rather similar in color and form to sherds from the present collection. Although the temper of these Piedras

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4. Smith, personal observation.
5. Smith, 1940, pp. 244-245.
6. Kidder, personal observation.
7. Lothrop, 1933, p. 32.
8. Thompson, J. E., 1939, p. 75.
9. Thompson, J. E., 1942, p. 6.
10. Thompson, J. E., 1939, p. 259; 1942, p. 24.
11. Butler, 1935a, p. 22.
12. Pottery collection, University Museum, Philadelphia.

Negras bowls is not known to the writer, quartz temper is present at the site.[13]

At the non-Mayan site of Xochicalco, Morelos, Noguera discusses a number of low tripod bowls with a basal ridge (Fig. 6a). Some of these bowls are described as orange, while two are dark brown.[14] This site might seem to be too distant to have any close ceramic relationship with Palenque, but Noguera has compared his material with pottery from Campeche and elsewhere in the Maya area, especially in regard to basal ridge vessels.[15]

A few brown ware sherds from Jonuta, Tabasco, on the Usumacinta River 45 miles northeast of Palenque, resemble the Palenque and Piedras Negras low bowls.[16] Also from Jonuta or nearby Chable, two ladle type incensarios are pictured in the literature.[17] Three brown ware ladle handles from this type of incensario were found at the Temple of the Inscriptions. They also occur in brown ware at Centla, Tabasco,[18] and in unslipped ware at Piedras Negras.[19] Lothrop mentions what may be the same general incensario

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13. Butler, 1935a, p. 1.
14. Noguera, 1945, Figs. 14, e, g; 15, e, f.
15. Ibid., pp. 148-149.
16. University Museum, Philadelphia.
17. Rickards, 1910, op. p. 78.
18. Pottery collection, Peabody Museum, Harvard University.
19. Butler, 1935a, p. 15.

form from Atitlan and Copan, stressing its wide distribution in Middle America.[20] Andrews reported sherds of reddish brown incensarios from several sites in southwestern Campeche, but the ware seems to have been coarser than at Palenque.[21]

Incensarios at the Temple of the Inscriptions include several different forms, all of brown ware. One of the most common has flaring sides and pedestal base. Flanged incensarios appear to be present. These large pottery tubes, some two feet high, each decorated with a grotesque modelled face, are known from elsewhere at Palenque. They resemble examples from Zopo Cave, Tabasco. Flanges do not appear on the illustrated vessels, and ware is not mentioned.[22] At least three sherds in the material from the Temple of the Inscriptions seem to be from this form of incensario.

Turning to the area nearer Palenque, material comparable to brown ware from Palenque is found at Yoxiha, 11 miles due south. Here Blom and LaFarge removed several whole vessels from two superimposed tombs. Two brown ware cylinders (Fig. 6,c), almost identical in color to sherds of this ware at the Temple of the Inscriptions, were found in the upper tomb. One is undecorated and has a flat base[23]

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20. Lothrop, 1933, p. 97.
21. Andrews, 1941, passim.
22. Blom and LaFarge, 1926-27, Figs. 122-124.
23. Ibid., p, 228, Fig. 188.

(Fig. 19:6), a form often duplicated in the present material. The second vessel has an incised figure design[24] (Fig. 19:7). While no such elaborate decoration has been found at the Temple of the Inscriptions, a cylindrical vessel from the Palace bears a comparable design.

A very small vessel form occurring at the Temple of the Inscriptions has been termed "paint pot." These shallow, saucer-like forms are three inches in diameter. Several whole vessels occur at the Palace, some containing what appears to be dried pigment from which the name is derived. Three of these little brown ware pots were found as part of an offering in the tomb beneath the Temple of the Inscriptions.[25] This form seems to be widespread. Similar vessels are believed to have been used at Teotihuacan to contain grave offerings.[26] Such a pot was found at Baking Pot, British Honduras,[27] and a comparable form is seen from Chumul, Yucatan.[28]

Another well represented vessel form in brown ware at the Temple of the Inscriptions is the beaker. No comparable material for brown ware beakers has been found in the literature, although they are mentioned in other wares.

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24. Blom and LaFarge, 1926-27, pp. 228-229, Pl. III.
25. Ruz Lhuillier, 1952b, Fig. 5.
26. Museum display, Museo Nacional, Mexico City.
27. Ricketson, 1931, Pl. 16, h.
28. Mercer, 1896, Fig. 29.

The basal break bowl has so far not been recognized in brown ware in the collection from the Temple of the Inscriptions.

A detailed descriptive outline of the three types of brown ware is presented in the following pages.

BROWN WARE TYPE 1 (Quartz Tempered)

Surface

Thin slip usual on interior and exterior. Slip same color as paste. Badly weathered on most sherds. Scattered flecks of mica occur. Color typically dark reddish brown, but includes all variations mentioned for brown ware. Surface even and smooth on rare well-preserved examples. Luster dull. Abrasion common. Firing clouds present but not common. Hardness: averages slightly less than 3.

Paste

Color corresponds to surface color. Dark cores rare; medium gray when present; average one third of vessel width; wider in some very thick sherds. Texture granular and friable; very soft when excavated. Fracture irregular. Hardness: averages 2.5.

Temper

Quartz, colorless to milky. Angular. Size fine to coarse, typically medium. (0.25-0.50 mm.). Amount is moderate to heavy. Inclusions of white mica and hematite, sparse but more evident than in other wares at the Temple of the Inscriptions.

Refiring Tests

800° C., oxidizing atmosphere, 20 minutes. Surface and paste acquired more orange tones but changed little.

Vessel Forms

Low bowls and low bowls with basal ridge typical. Cylinders and beakers common. Plates occur only in brown ware, Type 1. Also true of incensarios, and miniature vessels. Open bowls with rounded sides frequent; not present in other types of brown ware. Thickness of vessel walls varies widely according to vessel forms. Range 3/16" to 1/2", the thicker sherds being from incensarios or open bowls. Vessels tend to be larger than in other wares, except utility ware.

Rims

Profiles of typical rim forms shown in Figs. 7, 8, a-f.

Bases

Usually flat or flat with basal ridge. Pedestal bases occur, probably from incensarios. Three examples of ring base.

Foot Forms

All types present. Large cascabel feet occur. Truncated and conical forms common. Round forms rare, comprising only examples in collection. Single slab foot known is present in Type 1.

Decoration

Rare, but includes all types of plastic decoration except punctation. Incision and grooving most common. A single rim sherd with painted decoration occurs.

Vessel Form

Bins

Bases

Foot Forms

Decoration

Remarks

Brown ware, Type 1, forms the most varied body of pottery at the Temple of the Inscriptions, including most varieties of vessel form and decoration. In spite of this diversity, and the range of surface color, the paste composition of this type is quite homogeneous. Points of difference with other brown ware types are given under the appropriate type, below.

BROWN WARE TYPE 2 (Chert Bearing)

Surface

Thin slip occurs on interior and exterior. Does not contrast with color of paste. Fair preservation. Typical color light reddish brown. Surface of better preserved sherds is smooth. Some examples are gritty. Luster generally dull, occasionally lustrous. Abrasion common. Some crazing, penetrating body of sherd. Firing clouds absent. Hardness averages 3, ranging to 4 in some exceptionally well preserved sherds.

Paste

Color corresponds to surface color. Very regular black cores typical, averaging two-thirds to three-quarters of sherd width. Present in rim, body and base sherds. Texture consistently dense and laminated. Fracture straight, smooth, and at right angles to surface. Hardness ranges from 3 to 6.

Temper

Quartz, colorless to milky, sub-angular to sub-rounded, medium size sparse, well mixed. Always present, very fine bluish white chert (.05-.10 mm.). Mica occurs very rarely.

Refiring Tests

Little change in surface; black cores completely oxidized.

Vessel Forms

Forms are usually beakers or cylinders. Some low bowls also occur. Vessel walls are thick, 1/8" to 1/4", averaging 3/16".

Rims

Rim profiles are illustrated in Figure 8, g-k.

Bases

Typically flat. Basal ridge rare.

Foot Forms

Rare. Only cascabel present.

Decoration

Plastic decoration common, especially incision. Vertical grooving, vertical and horizontal fluting, punctation (possibly rouletting) all occur. No painted sherds known.

Remarks

Varies from Type 1 in typically lighter color, presence of chert, laminated texture, hardness, dark cores, limitation of vessel forms, thinner vessel walls, larger percentage of decorated sherds. The typical range of Type 2 surface color is to be found on 10YR of the Munsell color scale; Type 1 differs in that it is concentrated on 2.5YR. The presence of bluish white chert in Type 2 does not necessarily reflect the use of an additional tempering material. The particles are very fine and angular, and could well be present in

particular deposits of clay in the region of Palenque. Perhaps the extremely low occurrence of mica in Type 2, as opposed to Type 1, supports this possibility. Sherds containing chert have paste which consistently shows the features noted above. These contrast markedly with characteristics of non chert-bearing paste of Type 1. Type 2 is further differentiated by features of form and decoration. Hardness varies, also, the paste of Type 2 brown ware being distinctly harder than the paste of Type 1 sherds.

BROWN WARE TYPE 3 (Dolomite and Quartz Tempered)

Surface

Well preserved slip, some examples on both exterior and interior. Color light yellowish brown. Texture smooth and even. Luster dull. Possible polishing streaks are present. Crazing occurs. No firing clouds. Hardness averages 2.5 or less; even an unweathered surface has been scratched easily by selenite.

Paste

Color light yellowish brown verging on pink. No dark cores. Texture laminated but markedly friable. Fracture rough and at oblique angle to surface. Hardness averages 2.5.

Temper

Typically dolomite, angular or powdery. Heavy temper of fine to medium size white grains, well sorted. Tested with cold acid, the grains do not effervesce. Quartz inclusions are present, consisting of a few multicolored grains, fine to medium size. Grains tend to be rounded.

Refiring Tests

None.

Vessel Forms

Cylinder or beaker. Thickness of vessel walls averages 3/16".

Rims

Resembles Fig. 9, f.

Bases

Unknown.

Foot Forms

Unknown.

Decoration

Simple horizontal groove below rim on exterior of vessel. Other decorative techniques are absent.

Remarks

Sherds with dolomite temper have a distinctive look. Temper can be recognized with the naked eye by its regular size and even distribution. It must have been carefully prepared. Sherds are few in the present material, but they seem too divergent to be grouped in with either larger group of brown ware. They show the softest surface and paste of the three types.

BLACK WARE

Some of the most attractive pottery from Palenque is made of black ware. The occurrence of this ware, however, is numerically small at the Temple of the Inscriptions, where it is limited to Pits 1, 6, and 7.

It may be assumed that the black ware was intentionally smudged in a reducing atmosphere. Smudging has been a widely used method of producing black pottery over time and space. Smudged vessels, for example, are known from ancient Egypt and India,[29] several parts of South America,[30] and prehistoric and modern Indian Pueblos of the Southwest.[31] Linne states that some Neolithic European pottery was made black by the addition of carbon to the clay but adds that he is not aware of this technique in America.[32] Firing clouds may also blacken pottery, but in that case the black surface usually occurs on only part of the vessel. Further evidence that the black ware is smudged is revealed by refiring tests. Held at 800° C. in an oxidizing atmosphere for 20 minutes, all the black sherds from the Temple of the Inscriptions had their surface completely oxidized.

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29. Linne, 1925, p. 119.
30. Ibid., pp. 116-118.
31. Guthe, 1925, p. 74; Kidder, 1916, p. 254; Wormington and Neal, 1951, p. 37.
32. Linne, 1925, p. 118.

The surface of the black ware sherds at the Temple of the Inscriptions is apparently slipped, as the blackened layer is very thin and seldom penetrates the paste for any appreciable distance. Most of the sherds are badly weathered, so that the black surface has all but disappeared, revealing the buff or orange paste. A few well preserved sherds are lustrous, but most examples of black ware have been dulled by weathering. Surface colors include the following hues: Very Dark Gray Brown (2.5Y 3/2); Very Dark Gray (2.5Y 3/0, 5Y 3/1, 10YR 3/1); Dark Gray (2.5Y 4/0, 5Y 4/1); Grayish Brown (10YR 5/2); Very Dark Grayish Brown (10YR); Brown (10YR 5/3). As can be seen, there is considerable variation in black ware surface colors, at least in their present weathered condition. These colors grade into one another but differ to some degree in the three types of black ware.

Paste is finely made. Quartz is the tempering material; of fine to medium size and well mixed. An occasional coarse grain is evident. Neither calcite nor dolomite temper is known in the black ware. Paste color varies considerably, seeming like the surface color to vary according to the type of black ware. Colors present are: Strong Brown (7.5YR 5/6); Light Yellowish Brown (10YR 6/4); Reddish Yellow (5YR 6/6, 5YR 7/6); Very Pale Brown (10YR 7/4); Yellow (10YR 7/6). A core is often present, varying from black to gray.

Black ware forms from the Temple of the Inscriptions material consist of low bowls with basal ridge and tripod feet, beakers and cylinders, and basal break bowls. No large open bowls, incensarios, or jar forms have been found. In some vessel shapes, black ware shows a general resemblance to brown ware examples, but black ware vessels were apparently of smaller size and the sherds are thinner. The thickness of vessel walls varies from one-eighth to one-quarter inch.

Black ware is often decorated, incising, punctation and grooving being common. A rare example of what may be stamping occurs in black ware (Fig. 17).

It has been difficult to find in the literature or museum collections any examples of black pottery which clearly equate with the collections from the Temple of the Inscriptions. Smith has suggested possible ties between a few examples of black ware at Palenque and pottery of the Alta Verapaz, Guatemala, but he does not know of a similar ware at Uaxactun.[33] Likewise, Kidder saw no resemblances to the large group of black vessels at Kaminaljuyu.[34] Black ware is somewhat rare at San Jose, occurring usually with tuff or dolomite temper.[35] Another interesting difference between the black pottery at this

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33. Smith, personal observation.
34. Kidder, personal observation.
35. Shepard (in Thompson, 1939), p. 266.

site and Palenque is that a number of black ware sherds from San Jose did not lose their black surface when refired at 800° C. for 20 minutes or more. Shepard suggests that some black ware vessels were covered with an organic material after smudging, which fluxed on refiring and formed a coating that protected the black surface.[36] No such process seems to have been used at Palenque.

Black ware from the Temple of the Inscriptions does not include examples of plumbate,[37] lacking plumbate's hardness and luster,[38] although the orange paste with black core of some sherds may resemble that of several plumate sherds described from Chichen Itza, Yucatan.[39] Shapes also are seldom in the plumbate range.[40]

Longyear describes black pottery from Copan which may resemble the Palenque material. "The slip is glossy black, or rarely dull in finish. In a few examples the color has faded or otherwise altered to dark greyish or brown.... [Paste] medium to fine grained. The majority are black in color, but some are dark grey or brown, the latter usually with a dark grey core."[41] By "black

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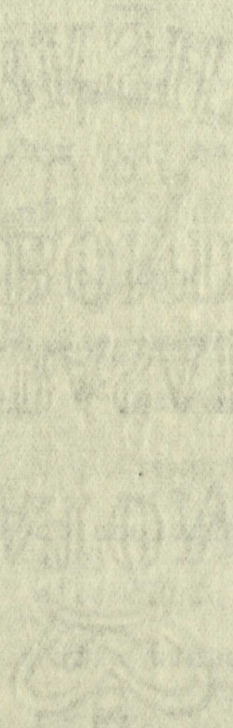
36. Shepard (in Thompson, 1939), p. 267.
37. Brainerd and Drucker, personal observations.
38. Dutton and Hobbs, 1943, p. 67.
39. Shepard, 1948, p. 91.
40. Dutton and Hobbs, 1943, p. 68; Shepard, 1948, Figs. 1-23.
41. Longyear, 1940, p. 71.



paste," Longyear actually may be describing a very wide black core, such as occurs in Type 2 examples of black ware at Palenque. He illustrates in black ware, from the Acropolis B Period, a low bowl with basal ridge,[42] resembling sherds from the Temple of the Inscriptions. Also from the same site is a black ware beaker with flaring sides.[43] This form, sometimes possibly with small feet, is common at the Temple of the Inscriptions (Fig. 6, f,g).

Black pottery from Piedras Negras might be expected to relate to sherds from Palenque, but Butler mentions black ware at the Usumacinta River site as being tempered with mixed calcite and quartz, while the vessel walls are described as "thick and heavy."[44]

Comparisons exist to the upper tomb at Yoxiha. Several low bowls with tripod cascabel feet are described as being "made of cream-coloured clay tempered with fine sand. On the surface they have a fine black polish"[45] (Fig. 19:1,5,8). This form and paste would seem to fit into the range of Palenque black ware; however, at the Temple of the Inscriptions black sherds with pale brown paste usually have a dark core.

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42. Longyear, 1940, Fig. 13, f.
43. Ibid., Fig. 20, a.
44. Butler, 1935a, p. 14.
45. Blom and LaFarge, 1926-27, p. 227.

Another correspondence with Yoxiha lies in the basal break bowls (Fig. 6,e), although examples in the upper tomb are of gray ware[46] (Figs. 18, 19:9,10). No monkey-like figures such as are incised on these vessels have been identified in the pottery from the Temple of the Inscriptions. Punctation similar to what appears in the background of the designs is present, however, and a number of incised sherds decorated with monkeys were found at the Palace. The relationship of Yoxiha with black pottery from Palenque is possibly strengthened by the occurrence in the Museo Arqueologico de Merida, Yucatan,[47] of a black ware vase which corresponds closely with the two incised basal break bowls from Yoxiha. Apparently this vessel form and decorative technique were present in both black ware and gray ware in the Maya area.

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46. Blom and LaFarge, 1926-27, p. 229.
47. Ojeda, 1945, p. 281.

BLACK WARE TYPE 1 (Quartz Tempered)

Surface

Probably slipped before smudging on exterior and interior. Color typically faded to dark gray. Occasional flakes of mica apparent. Texture smooth. Luster dull. Abrasion common. Hardness averages 3.

Paste

Typically orange, usually without dark cores. Texture granular and friable. Fracture irregular and rough. Hardness averages 3.

Temper

Quartz colorless to milky, varies from sub-rounded to angular. Size fine to medium. Moderate amount of temper. Flakes of mica present.

Refiring Tests

Held at 650° C. oxidizing atmosphere, 20 minutes, smudged surface oxidized only partially. When sherds were tested at 800° C., the surface oxidized. Color after refiring: Surface, light orange; Paste, dark orange.

Vessel Forms

Cylinders, beakers and basal break bowls. Few low bowls. Vessel walls average slightly below 1/4".

Rim Forms

Figure 9, c.

Bases

Rare. Typically flat. Basal ridge absent. One

example of disk base.

Foot Forms

Extremely rare. Cascabel, conical and nubbin occur.

Decoration

Rare. Examples occur of incision, grooving, fluting and applique.

Remarks

The granular and friable paste contrasts sharply with Type 2, correlating with an absence of chert inclusions, considerably more mica, and some differences in vessel shapes and decoration. It holds much the relationship to Black 2 that Brown Type 1 holds to Brown 2.

BLACK WARE TYPE 2 (Chert Bearing)

Surface

Probably slipped before smudging. Color similar to Type 1 but well-preserved sherds have more brown tones. Texture smooth. Lustrous when well preserved. Abrasion typical, many sherds having lost much of their surface. Smudged surface may have leached out due to soil action. Crazing. Hardness averages 3, sherds with well preserved surfaces occasionally having a hardness of 4.

Paste

Typically buff with wide black cores. Cores often so wide that paste looks black except immediately below surface. Texture dense and laminated. Fracture straight and smooth, at right angles to surface. Hardness averages 4.

Temper

Quartz, colorless to milky, sub-rounded to sub angular. Medium size with occasional coarse grains. Sparse. Very fine chert consistently present.

Refiring Tests

Held at 650° C., oxidizing atmosphere, 20 minutes, smudged surface oxidized. Color after firing: pale orange.

Vessel Forms

Same as Type 1, but low bowls with basal ridge are

common. Vessel walls average slightly over 1/8". Decorated sherds as thin as 2/32".

Rim Forms

Figure 9, a b.

Bases

Flat or flat with basal ridge (rare).

Foot Forms

Extremely rare. Cascabel and nubbin occur.

Decoration

Well represented. Includes incision, grooving, fluting, punctation (possibly rouletting), stamping.

Remarks

Type 2 differs from Type 1 in typically weathered surface, fine lamination, presence of wide black core, presence of chert, oxidization of surface at lower refiring temperature, greater hardness, larger percentage of low bowls with basal ridge, thinner vessel walls, larger percentage of decorated sherds. In features of paste ennumerated above, it rather closely resembles Brown Type 2, but tends to have even finer lamination, a more wide and even core, etc.

BLACK WARE TYPE 3 (Sparsely Tempered)

Surface

Thinly slipped before smudging, except on under side of base. Color has weathered to grayish brown. Texture tends to be rough. Luster dull. Hardness averages 3.

Paste

Always light yellowish brown. Dark cores absent. Texture granular. Fracture sharp and oblique. Sherds shatter like glass when broken for testing purposes. Hardness averages 3.

Temper

Quartz inclusions. Mostly clear to milky but include several colors. Usually very fine but ranges to coarse. Sparse. Some sherds have almost no visible inclusions except for occasional grains of coarse, rounded quartz that could be accidental. Hardness averages 3.

Refiring Tests

Keld at 650° C., oxidizing atmosphere, for 20 minutes, smudged surface oxidized but paste color remained unchanged. At 800° C. paste color changed very little.

Vessel Forms

Few and poorly known. Open bowl. Possibly cylinders or beakers. Thickness of vessel walls varies from 1/4" for bowls to 1/8" for cylinders or beakers.

Rim Forms

Figure 9, d.

Bases

Rare. Flat.

Foot Forms

Unknown.

Decoration

Rare. Incision and grooving present.

Remarks

This type differs from Types 1 and 2 in being lightly smudged. Paste color, fracture, and sparseness of temper are all divergent. Quartz grains often of colors unusual at Palenque. Forms also differ.

FINE GRAY WARE

Gray pottery in the collection from the Temple of the Inscriptions has been identified by Brainerd as fine gray ware.[48] The ware is not yet well known in the Maya area, having only recently been definitely established as a result of Brainerd's ceramic work in Yucatan. Some examples of fine gray ware were previously called Fine Slate Ware by Vaillant. "Fine Slate Ware is composed of a fine-grained paste of which the tempering particles are minute. The slip color varies extraordinarily, extending even to pink and blue shades."[49]

The range of surface color for fine gray sherds from the Temple of the Inscriptions cannot be accurately determined. Examples are few, small and badly worn. The surface finish has weathered away completely from the majority of the sherds. Similarly, it is not known for certain whether all of the gray pottery was slipped, although this is probably the case. Surface color tends to be light gray with a pale brown cast: Light Gray (2.5Y 7/2, 5Y 7/1, 5Y 7/2). A few examples may possibly have been lightly smudged, but there is no way of knowing whether this was intentional.

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48. Brainerd, personal observation.
49. Vaillant, 1927, p. 83.

The paste of fine gray ware is diagnostic. Untempered or virtually so, it is full of colorless, silt size quartz particles. Larger inclusions are apparently lacking, at least in significant amounts. Paste color is usually in the same range as the surface: Light Gray (2.5Y 7/2, 5Y 7/1, 5Y 7/2). Sherds typically show a light bluish gray core: Gray (2.5Y 7/0). Occasionally the colors are reversed, with the core a lighter hue than the paste. Such a pattern, the core being lighter than the paste, is very unusual at Palenque. Some sherds are of bluish gray paste throughout: Light Gray (2.5Y 7/0), while rare examples have a dark core: Very Dark Gray (2.5Y 3/0). Light gray paste, especially with a bluish cast, is highly unusual in the ceramics of Palenque. Fine gray ware is consistently dense in its composition. Fracture tends to be along straight lines.

After refiring at 800° C. for twenty minutes, surface and paste of fine gray ware examples changed to Very Pale Brown (10 YR 8/3, 10YR 8/4), not turning orange as does much of the brown ware and black ware. In fact, fine gray ware differs strongly from all other wares from the Temple of the Inscriptions tested by refiring. This ware is likewise distinguished by the softness of its paste and surface. Hardness of these, at least in the present weathered condition of the sherds, averages only 2.5 on the Mohs' scale.

Vessel forms of fine gray ware are for the most part problematical because of the few restorable sherds. Identifiable forms are low bowls with basal ridge, beakers or cylinders, and basal break bowls. Only a single foot form, the hollow cascabel, is known. Rim profiles have not been attempted for this ware because most examples are too worn to be used as models. Generally the rim forms seem to resemble those of black ware, especially the chert-bearing Type 2 (Fig. 9,b). Labial molding occurs (Figs. 18, 19:9,10). In thinness of vessel walls, black ware of Type 2 is also comparable to fine gray ware, which shows a range of from one-eighth to three-sixteenths of an inch.

Decoration consists of simple incision, horizontal grooving, and punctation. The latter is usually combined with incision. Brainerd believes that broken lines, usually termed punctation, which appear on several sherds from the Temple of the Inscriptions, were actually formed with a rouletting tool. He considers this to be especially true of decoration on the fine gray ware. A similar design technique is seen on gray ware vessels from the upper tomb at Yoxiha (Figs. 18,19;9,10) and on fine gray pottery from sites in the Puuc area in Yucatan.[50]

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50. Brainerd, personal observation.

The Puuc examples date from around 9.14.0.0.0. corresponding in time with the middle Tepeu phase at Uaxactun.[51]

In form as well as decoration, fine gray ware from the Temple of the Inscriptions compares with the gray Yoxiha vessels, which are basal break bowls. These are described as being made of "gray clay."[52] According to Brainerd, their form and design are so closely duplicated in fine gray ware vessels from Yucatan that the Yoxiha specimens are almost surely of the same ware.[53] Exact comparison was impossible, however, since all the pottery from Yoxiha was left behind at a nearby finca by Blom and LaFarge.[54] Vaillant illustrates such a bowl from Sotuta, Yucatan.[55]

The present material also contains sherds of beakers or cylinders in fine gray ware. Vaillant illustrates a beaker from the island of Jaina, Campeche, which he calls slate ware.[56] This may be an example of fine gray. Correspondence with Palenque is not particularly close, however, as the illustrated vessel looks to have quite thick walls and base. Also, the rim appears to be scalloped, a type unfamiliar at Palenque. From Jaina comes another vessel

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51. Brainerd, personal observation.
52. Blom and LaFarge, 1926-27, p. 229.
53. Brainerd, personal observation.
54. Blom and LaFarge, 1926-27, p. 233.
55. Vaillant, 1927, Fig. 287.
56. Ibid., Fig. 323.

of fine gray ware, undecorated but resembling in a general way the basal break bowls previously discussed.[57]

Gray pottery with a fine gray paste has been described from La Venta, Tabasco, and Tres Zapotes, Veracruz, by Drucker.[58] In a recent report, Berlin mentions the presence at other Tabasco sites closer to the Maya area of pottery having fine gray paste.[59]

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57. Vaillaint, 1927, Fig. 324.
48. Drucker, 1952, pp. 98-104.
59. Berlin, 1953, p. 104.

FINE ORANGE WARE

Fine orange ware, noted for its fine paste texture and apparent absence of temper, is widely distributed throughout the Maya area. Two types, X and Z fine orange, have been most thoroughly studied. They range in date from late Classic times into the Mexican Period of Chichen Itza.[60]

The ware is not limited to these types, however. Divergent examples of fine orange pottery are reported from San Jose, British Honduras,[61] to Tabasco.[62] Likewise, the small number of sherds of fine orange ware excavated at the Temple of the Inscriptions are apparently neither Type X nor Z. Several fine orange vessels from Palenque have long been known from museum collections and published material (Figs. 23-26). These decorated vessels, all of which differ from sherds from the Temple of the Inscriptions, have been identified by Brainerd as X fine orange.

The present collection includes only a few examples of fine orange ware. The sherds are small and weathered. They are slipped on exterior and interior surfaces, and show the following range of hues: Reddish Yellow (7.5YR

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60. Brainerd, 1941, pp. 178-182.
61. Thompson, J. E., 1939, pp. 150-151.
62. Berlin, 1953, p. 104.

6/6 7.5YR 7/6), Light Reddish Brown (5YR 6/4), Reddish Brown (5YR 5/4), Brown (7.5YR 5/4).

The paste is filled with silt size quartz particles, .05 to .10 mm. in diameter. Except for an occasional stray inclusion, all are in the very fine range. Chert, of the angular, bluish white variety noted in other wares, varies in abundance. Always sparse, it ranges from a few grains to an amount that is above average for the chert-bearing types of Palenque pottery. Lamination is often present. Color banding, due to streaks of hematite, is noted with some frequency. The paste is dense and compact, a drop of water failing to soak into it readily. It differs from other Palenque pottery, including fine gray, in this respect. Likewise distinctive is the pronounced tendency for fracture to take place at an oblique angle to the surface of the vessel. This feature is, however, shared with the sparsely tempered Black 3 type.

Paste color is generally orange: Reddish Yellow (5YR 6/8, 7.5YR 6/6), Light Reddish Brown (5YR 6/4), Light Yellowish Brown (10YR 6/4). Dark cores are comparatively rare and show color variation from Brown (10YR 5/3) to Gray (2.5Y 6/0) and Dark Gray (7.5YR 4/0). Only occasionally do the cores represent up to one-half of the paste thickness.

The sherds tested for hardness average 3 for surface and 2 for paste. Upon refiring, the sherds show little

change in surface or paste color after being heated for twenty minutes at 800° C. The dark cores are oxidized at that temperature, sometimes changing to a lighter shade of orange than the paste. The small degree of change upon refiring may suggest that fine orange ware was fired at a higher temperature than was the case with some of the other ceramic material at Palenque.

Vessel shapes cannot be definitely determined from the fragamentary material. One example of slightly incurved rim (Fig. 9,e) may come from a small vase with curving sides, a form not seen in other wares at the Temple of Inscriptions. Cylinders or beakers may be present, with rim form reminiscent of a Type 2 black ware form (Fig. 9,b). Bases are flat and foot forms nubbin. Vessel walls are thin, averaging 3/16 of an inch in width.

Decoration is absent.

In the composition of the paste, fine gray ware and fine orange ware resemble one another. Berlin's use of the term "Fine Paste Ware"[63] seems possibly to include pottery similar to material from the Temple of the Inscriptions. Drucker discusses both orange and gray pottery from Tres Zapotes and La Venta which he calls "Fine Paste Wares."[64]

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63. Berlin, 1953, p. 104.
64. Drucker, 1952, pp. 98-104.

Present material differs in its lack of decoration from usual examples of fine orange ware. Vessels of X fine orange are typically decorated with incision (Figs. 23-25), modelling (Fig. 26) or painting, while Z fine orange, in addition, shows painting with stucco,[65] sometimes called in fresco decoration.[66] No specific correspondences with the small body of fine orange ware from the Temple of the Inscriptions have been found. Judging from the whole fine orange vessels said to come from Palenque, further excavation at the site should reveal more examples of fine orange ware.

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65. Brainerd, 1941, Pl. II.
66. Ibid., Pl. III.

UTILITY WARE

Utility ware from the Temple of the Inscriptions consists mostly of sherds from storage jars and large bowls. Rims are distinct from those of wares previously described and are relatively thick and heavy. Compared to brown ware, the occurrence of utility ware is low in this collection.

Vessel necks of utility forms seem often to have been slipped at Palenque, while body sherds tend to lack slip. Without restorable vessels, it has proved impossible to judge whether a number of the utility forms were slipped all over and should therefore be set apart for the purposes of classification.

Surface color of utility ware shows considerable diversity, but the material grades by slow stages from one color to another. Some sherds appear to have been heavily smudged, but it is not known whether this was intentional. The following colors are present: Reddish Brown (5YR 4/4), Grayish Brown (10YR 5/2), Very Dark Gray (2.5Y 3/0), Light Yellowish Brown (10YR 6/4), Very Pale Brown (10YR 7/3), Light Gray (5Y 7/2). Sherds, especially when not well slipped, have a drab or grayed look. They are often rough to the touch, as inclusions are present on the surface, but a number of well preserved sherds, especially of Type 2, are smooth.

Paste composition is usually coarse and heavily tempered. While quartz temper is typical in utility ware, calcite is the main tempering material in a considerable number of sherds, and dolomite also occurs. There seems to have been little attention paid to the size of tempering particles, which may range from fine to very coarse in one sherd. Occasional inclusions of "pebbles" up to one-quarter inch in diameter are to be noted, again indicating the lack of care used in preparing the clay of storage vessels. Paste color is typically between Light Yellowish Brown (10YR 6/4) and Reddish Yellow (7.5YR 6/6), but also shows the color range mentioned for the surface. In a few rare examples, paste approaches White (2.5Y 9/2). Utility ware sherds often show color contrast between slip and paste, differing from other Palenque wares in this respect. Cores are often present, varying from Dark Gray (5Y 4/1) to Black (2.5Y 2/0).

Vessel forms of utility ware from the Temple of the Inscriptions are problematical and have not been illustrated. Although a large number of utility ware body sherds were excavated along with the rims, the edges of the sherds were usually too smooth to allow restoration. The forms probably consist of storage jars with long and short necks, open bowls, and bowls with restricted orifices. Most of the vessels seem to have been large. Few bases are found. The majority may have been rounded, in contrast to the usual

flat bases at Palenque, since sherds of utility ware which show the juncture of the wall with a flat base are absent. A few disk, or concave, bases are known as well as rare ring bases. Foot forms do not occur, with the possible exception of a large unidentified fragment of Type 1 utility ware from within the pyramid. This is bulbous and hollow, varying from all other foot forms, and may be a cover handle. Jar handles do not occur in utility ware from the Temple of the Inscriptions. Thickness of the utility ware vessel walls shows considerable range. Some examples are thin, only three-sixteenths of an inch, in spite of having heavy rims. Typical sherds average from one-quarter to three-eighths of an inch, the thickest examples known in utility ware being one-half inch.

The utility ware vessels were typically undecorated. A few examples occur with an appliqued molding on the lip below the rim. This may be notched. Indentation is seen on two sherds, but incision and other decorative techniques are absent.

Considerable differences in rim form exist in the utility ware. Type 1 (quartz tempered) jars are typically short necked, the vessel wall passing almost horizontally to the shoulders (Fig. 10, a,b). On the other hand, the calcite-tempered Type 2 jars have long sloping walls that recurve slightly at the rim (Fig. 11, c,d). Bowls tend to be open in Type 1 (Fig. 10, h-j) but have slightly

restricted orifices in Type 2 (Fig. 11, a,b). Generalized comparisons to the sloping walled jar forms exist at Uaxactun, where they date from the Tzakol Period.[67] At the same site, however, incurved bowls are a diagnostic of Tepeu.[68]

A wavering quality to the neck is sometimes to be seen in Type 1 and, more rarely, Type 2 jars (Fig. 10, c-e, Fig. 11, c). This is occasionally met in pottery from Yucatan where, it has been suggested, it reflects the use of the kabal, or foot-turned native potter's "wheel."[69] Both Kidder[70] and Brainerd,[71] on seeing such specimens from the Temple of the Inscriptions, suggested that they were made on the kabal, although its use outside of Yucatan has not been reported.

Comparative material for utility ware from the Temple of the Inscriptions is largely confined to rim forms. The composition of the utility ware in this collection lacks distinguishing features which would facilitate comparison with published descriptions of utility ware from the Maya area. The paucity of base forms and decorated sherds, as well as the absence of handles, adds to the difficulty of

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67. Smith, 1936b, Fig. Tzakol, 1.
68. Smith, 1940, p. 245.
69. Mercer, 1897; Brainerd, 1946.
70. Kidder, personal observation.
71. Brainerd, personal observation.

linking the Palenque utility ware with that of previously reported sites. It should be mentioned in this regard that available sherd collections examined were usually low in examples of utility ware, the emphasis being on the finer and more decorative material. When the balance of pottery from Palenque is studied, it may be that larger and better preserved examples of utility ware will increase the possibility of establishing cross ties.

UTILITY WARE TYPE 1 (Quartz Tempered)

Surface

Thinly slipped on neck but probably not on body. Color varies widely but is typically drab. Interior sometimes smudged, rarely exterior. Texture granular. Luster dull. Abrasion common. Many firing clouds in comparison to other material from the Temple of the Inscriptions.

Paste

Typically dull orange. Dark gray to black cores common. Sometimes constitute almost entire width of sherd, but variation in this respect is great.

Temper

Quartz of usual colorless to milky variety. Fine to coarse, often in one sherd. Abundant. In addition, small amounts of the fine bluish-white chert sometimes are present.

Refiring Tests

Held at 800° C., oxidizing atmosphere, for twenty minutes. Surface and paste change to a light orange, verging on pink. Dark cores oxidized. A few sherds with light tan paste turn white on refiring.

Vessel Forms

No restorable vessels occur. Probably storage jars with high and low necks and various large bowl forms. Thickness of vessel walls 1/4" to 1/2".

Rim Forms

Profiles illustrated in Figure 10.

Bases

Rare in proportion to number of sherds. Only forms recognized are disk bases and a few sherds of flat bases. Bases may have been rounded and thus indistinguishable from body sherds.

Decoration

Extremely rare. Consists of appliqued sub-labial ridges on jar necks, notching of rims, and one example of simple incision.

Remarks

Type 1 of utility ware differs from Type 2 in being quartz rather than calcite-quartz tempered, having thinner slip, and refiring to a lighter color. Rim forms also differ. Type 1 varies from Type 3 in having quartz rather than dolomite temper and in lacking the exceptionally soft paste and surface of the latter.

UTILITY WARE TYPE 2 (Calcite and Quartz Tempered)

Surface

Thickly slipped on exterior and interior of neck and perhaps body. Typical buff slip is definitely lighter than paste color. Texture often gritty, but in well preserved examples the temper almost never protrudes through the slip. Luster dull. Abrasion common. Often pitted where calcite has leached out. Hardness averages 3.

Paste

Usually orange. Cores vary widely when present, from light gray to black. Texture friable. Fracture irregular and granular. Hardness averages 3.

Temper

Calcite, both cleavable and cryptocrystalline, sometimes in same sherd. Size varies from fine to very coarse even in one sherd. Sparse to, typically, heavy. Quartz usually present, clear to milky, sub-rounded. Amount varies from sparse to medium and may partially consist of accidental inclusions. A few sherds have pockets of what is identified as gray clay, possibly indicating use of sherd temper.

Refiring Tests

Clay inclusions do not oxidize, remain gray. If sherd temper, they must come from vessels of different clay

than the usual Palenque material. Paste color changes to bright orange.

Vessel Forms

Storage jars and bowls.

Rim Forms

Profiles illustrated in Figure 11.

Bases

Very rare. Only ring bases identified. Possibly bases were rounded and not differentiated from body sherds.

Foot Forms

None.

Decoration

Absent, except for two examples of appliqued "coffee-bean" bosses, and one instance of triangular indentation.

Remarks

Type 2 differs from Type 1 mainly in tempering material. Calcite predominates; chert is absent. Surface may have been slipped all over, as body sherds show traces of slip. Slip varies from that of other types in being typically of a different color than paste. Paste of Type 2 refires dark orange while that of Type 1 is lighter in color, tending toward pink. Slope of vessel walls is less rounded than in Type 1. Rim forms are divergent, tending to incurve.

UTILITY WARE TYPE 3 (Dolomite Tempered)

Surface

Unslipped or very thinly slipped. Reddish brown to dark gray, sometime on same sherd. Neck and interior probably smudged of some examples. Texture smooth. Luster dull. Abrasions. Firing clouds. Hardness averages 2.5.

Paste

Color same as surface. Texture highly friable and laminated. Deep cracks occur in paste. Fracture irregular, oblique and rough. Hardness averages 2.5.

Temper

Well prepared dolomite, white, angular or powdery. Size fine to medium. Heavy and well distributed. Quartz also present, multicolored, fine to medium, sparse.

Refiring Tests

Refires to light orange.

Vessel Forms

Probably jars, bowls.

Rims

None illustrated.

Bases

Rounded.

Foot Forms

None.

Decoration

None.

Remarks

Temper distinctive, being of dolomite and unusually well distributed throughout paste. Quartz inclusions sometimes multicolored, differing from the clear to milky variety common in pottery of Palenque.

POLYCHROME WARE

Polychrome sherds occur very rarely in association with the Temple of the Inscriptions. The few examples which are present appear to come from several different vessels, varying in color, as well as features of paste and temper. Vessel forms are typically flat based cylinders or beakers, so far as is known without tripod feet. Rim forms are illustrated in Figure 9,f,g. No plastic decoration occurs on the polychrome sherds. With the exception of one rim sherd from Pit 6, all examples of polychrome ware come from the lower levels of Pit 1. No refiring tests were made.

Four types of polychrome ware may be recognized in the material under discussion. Other probable polychrome sherds are too weathered for classification. Paste inclusions of polychrome sherds tend to differ from those in monochrome wares. Type 1 contains sulphate, not otherwise reported. Type 2 is tempered with finely ground calcite containing none of the large grains found in utility ware having calcite temper.

POLYCHROME WARE TYPE 1 (Black-Red-White-on-Buff)

Surface

Buff slip, polished on exterior; color Light Brown (7.5YR 6/4). Painted decoration consists of Very Dark Gray (2.5Y 3/0), Weak Red (7.5R 4/4), and White (10YR 8/2). Designs show a red band on exterior rim and base, black vertical lines at intervals, and large, irregular white circles. Texture smooth, especially on exterior. Lustrous on exterior, dull on interior. Slight amount of crazing. Hardness averages 2.

Paste

Paste color is buff: Reddish Yellow (7.5YR 7/6). Narrow black core. Granular. Fracture fairly regular. Hardness averages 3.

Temper

Quartz, fine to medium, is abundant. Sparse amount of white cleavable sulphate also present.

Vessel Forms

Cylinders. Thickness of vessel wall averages 3/16".

Rim Form

Figure 9,g.

Bases

Flat.

Foot Forms

Unknown.

Decoration

None in addition to simple geometric design in three colors.

POLYCHROME WARE TYPE 2 (Brown-and-Red-on-Gray)

Surface

Gray slip, polished on exterior and interior; color: Light Gray (2.5Y 7/2). Painted decoration is Reddish Brown (2.5Y 4/4) and Reddish Yellow (7.5Y 6/6). Design consists of a red band covering the vessel rim on exterior and interior, vertical bands of light brown, and vertical rows of small red dots. Texture smooth. Luster rather dull. Hardness is 3.

Paste

Paste color is Gray (10YR 5/1). Granular, friable. Hardness is 2.

Temper

Quartz, fine, rounded, small amount.

Vessel Form

Probably cylinder. Thickness of vessel walls averages 3/16".

Rim Form

Not illustrated. Similar to Fig. 9,g.

Bases

Not known.

Foot Form

Not known.

Decoration

None in addition to simple polychrome design.

Remarks

Differs from Type 1 in surface color, color of decoration, fine temper, absence of sulphate inclusions in paste.

POLYCHROME WARE TYPE 3 (Orange-and-White-on-Buff)

Surface

Buff surface, slipped but not polished: color: Very Pale Brown (10YR 7/3). Painted decoration is Red (2.5YR 5/8) and White (5Y 9/2). Design uncertain. Texture gritty. Luster dull. Hardness averages 3.

Paste

Color same as surface slip. Uneven black core. Fracture highly friable. Hardness averages 2.

Temper

Quartz, colorless except for one pink grain. Size fine to coarse, poorly sorted. Large grains may be accidental inclusions.

Vessel Form

Beaker. Thickness of vessel walls averages 1/8".

Rim Form

Not illustrated.

Bases

Flat.

Foot Form

Not known.

Decoration

None in addition to polychrome design.

Remarks

Differs from Types 1 and 2 in thinness of vessel walls,

absence of sulphate inclusions in the paste, and apparent lack of geometric design. Colors vary in hue. Interior surface of Type 3 example is slipped and painted, even at base of vessel.

POLYCHROME WARE TYPE 4 (Black-and-Red-on-Pink)

Surface

Pinkish buff slip on exterior and interior, color: Pink (7.5YR 7/4). Traces of red paint below lip on exterior, and of black paint below lip on interior. Design uncertain. Texture smooth. Luster dull. Hardness is 3.

Paste

Color is Light Reddish Brown (5YR 6/4), without dark core. Granular, friable. Fracture irregular. Hardness is 2.

Temper

Calcite, fine and of even size. Very abundant and well distributed. Scattered inclusions of hematite.

Vessel Form

Probably cylinder. Wall thickness is about 3/16".

Rim Form

Not illustrated.

Base

Not known.

Foot Form

Not known.

Decoration

None in addition to polychrome design.

Remarks

Differs from Types 1-3 in having calcite temper, as well as in pink cast to surface color.

Surface

Paste

Temper

Vessel Form

Rim Form

Base

Foot Form

Decoration

Remarks

CHAPTER 5 — VESSEL FORM AND DECORATION

Form and decoration of the pottery from the Temple of the Inscriptions have been referred to in the chapter on wares. These features are more fully described in the following pages, with comparative material being discussed briefly.

VESSEL FORMS

The pottery associated with the Temple of the Inscriptions, as has been mentioned, is with few exceptions extremely fragmentary, and it has been impossible to reconstruct whole vessels. Shape, therefore, is often difficult to determine. Portions of several vessels have been sufficiently restored to reveal shape, and it has further been possible to recognize form from sherds by comparison with well-preserved material from the Palace. No numerical tabulation of shapes has been attempted. A description of positively identified vessel forms follows.

(1) LOW BOWLS. Low bowls with flaring sides, flat bases, and probably tripod feet are common in the present collection (Fig. 6,b,c.). They occur especially in brown ware. Associated rim forms are shown in Figure 8,a-d. The wide everted rims (Fig. 8,a,b) are present usually on larger examples of this form (Fig. 6,c), which sometimes are shallow enough to be termed plates. Vessel walls tend to be thick.

Bases are flat. Judging from the Palenque examples and comparative material, such low bowls usually have tripod feet, which may be either cascabel or solid. Decoration is extremely rare. An unusually small example of this vessel shape (Fig. 8,d) has an appliqued basal molding in the form of scallops.

This vessel form, with or without tripod feet, is widespread in the Maya area, dating at Uaxactun from Chicanel times onward into the Tepeu Period.[1] It occurs in X fine orange ware at Chichen Itza, Yucatan.[2] More specific comparisons to examples of low bowls from the Temple of the Inscriptions seem largely restricted to such Late Classic periods as Benque Viejo IV[3] and San Jose V.[4] Comparable forms with solid feet occurring at Piedras Negras[5] are perhaps equivalent in time. Also late are low bowls with large cascabel feet (Fig. 19:1,5,8) from the upper tomb at Yoxiha.[6]

(2) LOW BOWL WITH BASAL RIDGE. This form is related to the low bowl but has a small ridge projecting laterally from the juncture of the vessel wall with the base (Figs. 6,a,12).

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1. Smith, 1936b, Figs. Chicanel, 13, Tzakol, 25, 26, Tepeu, 18.
2. Brainerd, 1941, Pl. III, b.
3. Thompson, J. E., 1942, Fig. 47.
4. Thompson, J. E., 1939, Fig. 80.
5. Cresson, 1937, Figs. 24-31.
6. Blom and LaFarge, 1926-27, p. 227, Fig. 186.

Brown ware examples are numerous, while the form is also present in black ware and probably in fine gray ware. Probable rim forms are shown in Figure 7, i, Figure 8, e,f,g, and Figure 9,a. Thickness of vessel walls is variable. Flat bases are always found. Tripod feet, typically cascabel, are believed consistently to accompany this vessel form. No decoration is known in the material from the Temple of the Inscriptions, except for single examples of incision and notching on the basal ridge.

The bowl with basal ridge does not seem to be common in the Maya area. The form is approached in British Honduras in San Jose V[7] and Benque Viejo IV,[8] but at these sites the basal ridge is elaborately notched. The bowl with basal ridge has been illustrated from Copan[9] but is rare. This form appears at Piedras Negras,[10] where it is said to come from late levels.[11] A similar form is reported from the earliest period at Xochicalco, Morelos,[12] said to be equivalent in time to the Mamom-Chicanel and other Archaic horizons.[13] The vessel form has been equated by Noguera with material from the Motagua Valley, Guatemala,[14]

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7. Thompson, J. E., 1939, Fig. 80,c.
8. Thompson, J. E., 1942, Fig. 48,a,b,i,j.
9. Longyear, 1940, Fig. 13, f.
10. Cresson, 1937, Figs. 24-3I.
11. Satterthwaite, personal observation.
12. Noguera, 1945, pp. 146-147; 1947, Fig. 1:1-3.
13. Noguera, 1945, p. 152.
14. Ibid., p. 147.

where they are believed to be relatively early.[15] The latter vessels, however, have rounded bases, often with tetrapod feet.[16] The vessel form with basal ridge may possibly have some relation to basal flanged bowls so common in the Tzakol Period of Uaxactun, but these typically have a rounded bottom and ring base.

(3) CYLINDERS. Cylindrical vessels with straight or slightly outcurved walls are quite numerous in the pottery from the Temple of the Inscriptions (Fig. 6,d). They occur in brown, black, fine gray and fine orange, as well as polychrome ware, where they represent the typical shape. When sherds are small, it is difficult to ascertain whether they come from cylinders or from beakers. Typical rim forms are shown in Figure 9,f,g. Vessel walls are thin. Flat bases always occur, with or without small solid tripod feet. Decoration, usually incision, is often present.

The cylinder occurs widely in Maya ceramic material, having several variations in size and foot form. Cylinders of the Tzakol Period at Uaxactun[17] and the Esperanza Phase at Kaminaljuyu[18] typically have slab tripod feet. Only one slab foot was present at the Temple of the Inscriptions,

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15. Smith and Kidder, 1943, p. 158.
16. Ibid., Figs. 24, c, 30, a, 31, a-c, 38, a, c.
17. Smith, 1936a, Fig. 6:4,6; 1936b, Fig. Tzakol, 30.
18. Kidder, Jennings and Shook, 1946, Fig. 67.

and this is not associated with any vessel form. Cylinders resembling those from Palenque are apparently late, being known from the Tepeu Period at Uaxactun,[19] the Holmul V Period at Tzimin Kax,[20] the upper tomb at Yoxiha[21] (Fig. 19:6,7), and Chama, in the Alta Vera Paz region of Guatemala.[22]

(4) BASAL BREAK BOWLS. This distinctive form of vessel has a composite silhouette (Fig. 6,e). The upper portion resembles a beaker, but near the base there is a pronounced bulge in the vessel wall, which, in examples from the present collection, rounds into a small flat base supported by offset tripod feet. These bowls are known to occur at Palenque only in black ware and fine gray ware. Rim profiles are shown in Figure 9,b,c. All examples have rather thin walls. Bases are flat. Feet are believed to be cascabel of small size. Decoration is horizontal grooving. Punctation (or rouletting) occurs on basal break bowls at other sites. This is assumed also to be the case with the material from the Temple of the Inscriptions, since black ware and fine gray ware sherds with similar designs are found there.

Basal break bowls from the Puuc region of Yucatan are said to show specific correspondences with the present

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19. Smith, 1936a, Fig. 15:8; 1936b, Fig. Tepeu, 21, 22.
20. Thompson, J. E., 1931, Fig. 13,c.
21. Blom and La Farge, 1926-27, pp. 228-229, Pl. III, Fig. 188.
22. Dieseldorff, 1926-33, Vol. I, Figs. 97, 99.

material, dating from the Dzibilchaltun Period, equivalent to middle Tepeu at Uaxactun.[23] Perhaps of the same period and nearer Palenque, are the basal break bowls (Figs. 18, 19:9,10) from the upper tomb at Yoxiba.[24] A bowl of this form from Piedras Negras[25] shows the flat base seen in examples from the Temple of the Inscriptions. Basal break bowls are said to be late at this site.[26] A somewhat variant form, lower and with rounded base, is of post-Classic occurrence in Yucatan, being present in fine orange ware.[27]

(5) BEAKERS. Small bowls with outcurved or flaring sides (Fig. 6,f,g) are well represented in the material from the Temple of the Inscriptions. This form occurs especially in brown ware and black ware. Probable rim forms are illustrated in Figure 7,a and Figure 8,i,j,k. Walls of beakers at Palenque are always thin. Bases are flat, apparently without feet. Decoration often consists of simple horizontal incised lines circling the vessel near the rim and base. Vertical grooving (Fig. 20,d) is present.

Beakers seem to be of limited occurrence in the Maya area. They are present mostly during the Late Classic,

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23. Brainerd, personal observation.
24. Blom and LaFarge, 1926-27, Fig. 189.
25. Cresson, 1937, Fig. 1.
26. Satterthwaite, personal observation.
27. Brainerd, 1941, p. 167, Pl. II,c.

appearing, however, in Tzakol times at Uaxactun.[28] They are present in Period IV at San Jose,[29] lasting into Holmul Period V at Tzimin Kax.[30] A beaker from Jaina, Campeche,[31] is the only example in Vaillant's study of Maya ceramics which resembles the present collection. Judging from illustrated material, the form was absent at Copan[32] and Kaminaljuyu.[33] Thin walled beakers, such as are typical in the ceramics from the Temple of the Inscriptions, have not been noted in the museum collections studied.

(6) "PAINT POTS." This unusually small vessel form is not common in the collection from the Temple of the Inscriptions, being known only in brown ware (6,h). A rim profile is shown in Figure 7,e. No base sherds were identified, but examples from the Palace are round on the bottom. Feet do not occur, nor does decoration. The small amount of comparative material has already been mentioned in the discussion of brown ware.

(7) INCENSARIOS. Numerous sherds of brown ware incensarios were found associated with the Temple of the Inscriptions. All are fragmentary, but it is possible to recognize three forms, ladle type, pedestal base, and

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28. Smith, 1936a, Figs. 3-4.
29. Thompson, J. E., 1939, Fig. 73, m,n.
30. Thompson, J. E., 1931, Fig. 13,p.
31. Vaillant, 1927, Fig. 323.
32. Longyear, 1952, Passim.
33. Kidder, Jennings and Shook, 1946, Passim.

flanged. The former are known only from sherds of handles, which are hollow and several inches long. Sherds of flat handles may probably also be assigned to this type. Pedestal base incensarios consist of bowls with outcurved or flaring walls set on a high pedestal. Rim profiles of these two variation are shown in Figure 7, j and k. Sherds of flanged incensarios rarely occur in this material. Walls of incensarios are typically thick. Decoration on incensarios includes incision, applique, and painting with heavy stucco paint. Comparative material was discussed in the section on brown ware.

(8) BOWLS. Bowl forms with both open and restricted orifices, usually having rounded sides, are common at the Temple of the Inscriptions. These are found mostly in brown ware and utility ware. Probable rim forms of open bowls are shown in Figure 7,b,c,d,f,g and Figure 10,h,i,j. Rim profiles of restricted orifice bowls are illustrated in Figure 10,g and 11,a,b. Vessel walls show considerable variation in thickness. Disk bases seem to be associated with this form, and rounded bottoms probably occurred. Decoration is not known to be present. The bowl form is so widespread in Maya ceramic material better preserved examples would be necessary in order to make valid comparisons.

(9) JARS. Jar forms in the pottery from the Temple of the Inscriptions are restricted to utility ware. Rim sherds reveal considerable variety in length of neck and slope of

shoulder. Examples of rim profiles are shown in Figure 10,a-f and Figure 11,c-e. Thickness of vessel walls also shows a wide range. Disk bases occur, but the base forms were probably rounded. Decoration is rare. An appliqued sub-labial ridge is seen in Figure 10,f. Comparative material has been discussed in the section on utility ware.

(10) MINIATURE VESSELS. Three broken miniature vessels, all different, occur in brown ware from the present collection. One, a thick walled bowl of ovoid shape, reveals two tiny lugs or handles. Such a vessel form is not otherwise known from the Temple of the Inscriptions. Another represents a storage jar, while the third appears to be from a miniature pedestal base incensario. No strictly comparable miniature forms have been found in the literature.

RIM FORMS

Rim profiles of representative sherds are illustrated in Figures 7 through 11 and have been discussed in the chapter on wares. Tables 1 through 3 show rim sherd count by pits.

BASE FORMS

Bases have been tabulated numerically according to form and ware type in Table 5. Base forms need little in the way of description, since the names are self-explanatory.

(1) FLAT BASE. The flat base on all but utility ware vessels is diagnostic of ceramic material associated with the Temple of the Inscriptions. Such bases, which occur with

and without tripod feet, have been included in the tabulation only when the sherd showed the juncture of base and vessel wall. In the emphasis upon flat bases, Palenque pottery differs markedly from that of most better known Maya sites, where a large percentage of the vessel forms have rounded bases. Basal break bowls, for example, already described, are round on the bottom at Yoxiha,[34] Jaina, Campeche,[35] and Sotuta,[36] Yucatan; in examples at Palenque and Piedras Negras,[37] a small portion of the base is flat.

(2). BASAL RIDGE. This is a variation of the flat base, occurring on low bowls with basal ridge. This type of base has been discussed under the vessel form.

(3). PEDESTAL BASE. A high support, averaging three inches, which slopes outward from the junction with the vessel wall. This base form in the material from the Temple of the Inscriptions is associated only with incensarios. A pedestal base is illustrated (Fig. 26) on a different vessel form, said to come from Palenque and now in a museum in Paris.[38] Pedestal bases occur over a large part of Middle America and have a long time span,[39] thus lessening their chronological importance for comparative purposes.

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34. Blom and LaFarge, 1926-27, Fig. 189.
35. Vaillant, 1927, Fig. 287.
36. Ibid., Fig. 324.
37. Cresson, 1937, Fig. 1.
38. Hamy, 1897, p. 48; Lehmann, 1935, p. 351.
39. Merwin and Vaillant, 1932, pp. 62-64.

(4) DISK BASE. The disk base viewed from the bottom forms a concave area averaging three-and-one-half inches in diameter. It is usually found in quartz tempered utility ware, so may be associated with bowl or jar forms. Disk bases are apparently uncommon in the Maya area. A somewhat reminiscent form called a "recessed floor" occurs in an early horizon at Kaminaljuyu, being present on shallow bowls.[40] The most closely comparable material is found at Piedras Negras, where disk bases are known on bowl forms in the third period.[41]

(5) RING BASE. A narrow ring of clay, about one-quarter inch high, was applied to the bottom of the vessel to serve as a support. This base form is rare in the present collection, occurring in brown ware and utility ware. Comparable material suggests that the ring base may be comparatively early at Palenque. At Yoxiha, ring bases occurred on vessels from the lower tomb, preceding forms with flat bases and tripod feet.[42] At Piedras Negras, this type of base is said to be present in the earliest period, while tripod vessels did not appear until the third period.[43] Polychrome vessels with ring bases are numerous in the

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40. Shook and Kidder, 1952, Fig. 19.
41. Butler, 1935a, p. 22.
42. Blom and LaFarge, 1926-27, p. 233, Fig. 191.
43. Butler, 1935a, p. 22.

Tzakol Period at Uaxactun, dropping out in Tepeu.[44] In British Honduras, ring bases "seem to have been most common and to have persisted longest...."[45] There they appear in Period II at San Jose,[46] lasting until Period V at that site[47] and into Holmul Period V at Tzimin Kax.[48]

FOOT FORMS

Several different foot forms are represented in the ceramic material from the Temple of the Inscriptions, although the number of vessel feet is low in relation to rim sherds. Foot forms occur most often in brown ware. Table 6 indicates the number of each type of foot form according to ware type. Feet are probably all from tripod vessels, since tetrapod vessels, which were found in great quantities at Holmul, Guatemala, are not known from Palenque. Foot forms which occur are described below.

(1) CASCABEL. Few whole cascabel feet were found at the Temple of the Inscriptions. These are hollow, have one or more round or slit openings in the side, and contain pellets of clay which make a rattling sound when the vessel is moved. Size ranges from one inch to three inches or more in length, and shapes are variable. In the present

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44. Smith, 1936a, Figs. 5-7; 10-15.
45. Kidder, Jennings and Shook, 1946, p. 177.
46. Thompson, J. E., 1939, Fig. 21,c.
47. Ibid., Fig. 78,a.
48. Thompson, J. E., 1931, Fig. 13,f-j.

collection, cascabel feet usually occur broken. The numerical tabulation often includes several sherds from the same foot, making definite comparison with the presence of other forms difficult.

(2) CONICAL. Solid cone shaped feet are common at the Temple of the Inscriptions (Fig. 13,d) These vary in length from one-half inch to an inch-and-a-half, usually being quite pointed on the end.

(3) TRUNCATED. Truncated solid feet, of a generalized cone shape but with intentionally flattened bottom, are usually large (Fig. 13,a). Their shape sometimes verges on cylindrical.

(4) NUBBIN. This group consists of very small solid feet, conical to rounded. Under one-half inch in height (Fig. 13,c).

(5) ELONGATED. Long, thin foot, somewhat conical in shape (Fig. 13,b). In the material from the Temple of the Inscriptions this foot type is always solid and is sometimes over two inches long. Unless this foot form retains a portion of the vessel base, it is difficult to distinguish from the feet of large figurines. No reconstructable vessel with elongated feet exists in the present collection, but the form is reported on tripod plates (Fig. 6,c) from the tomb within the Temple of the Inscriptions.[49]

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49. Ruz Llhuillier, 1952b, Fig. 17,a.

(6) ROUND. Round, solid feet are rare in this material. They are bulbous and rounded on the bottom (Fig. 13,e).

(7) SLAB. One slab foot occurs. This is hollow, roughly rectangular but narrowing towards the base. A round hole is present in one side.

Foot forms present in ceramic material from the Temple of the Inscriptions are comparable to those from Piedras Negras. Cascabel feet at the latter site[50] tend to diverge in shape from those at Palenque, but correspondences are close with the solid forms.[51] No chronological data is given in Cresson's paper on the Piedras Negras forms. In the Peten region a nubbin foot occurs as early as San Jose II,[52] but solid forms are found more often in San Jose III-IV.[53] Although cascabel feet are found on Period I tetrapod vessels at Holmul,[54] tripod cascabel forms are generally late, occuring in Benque Viejo IV,[55] San Jose V,[56] and the Tepeu Period at Uaxactun.[57] They also occur in the upper tomb at Yoxiha, Chiapas.[58] Slab feet have an earlier date, being typical of the Tzakol Period.[59] Elongated solid feet are seldom illustrated from the Maya area.

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50. Cresson, 1937, pp. 39-41.
51. Ibid., p. 43.
52. Thompson, J. E., 1939, Fig. 42.
53. Ibid., Figs. 57, 62.
54. Merwin and Vaillant, 1932, p. 62, pl. 18.
55. Thompson, J. E., 1942, Fig. 47.
56. Thompson, J. E., 1939, Fig. 80.
57. Smith, 1936a, Figs. 13, 14.
58. Blom and LaFarge, 1926-27, p. 227.
59. Smith, 1936b, Fig. Tzakol, 30, 34.

An example is known from Piedras Negras,[60] although the majority of elongated feet at the site are hollow.[61]

PLASTIC DECORATION

Plastic decoration of any type is comparatively rare on the pottery associated with the Temple of the Inscriptions. The inhabitants of Palenque apparently specialized in stone sculpture, stucco work and figurine design, leaving their pottery for the most part severely plain. A number of plastic techniques were used by the potters, especially on brown ware and black ware. Where plastic treatment does occur, it usually consists of a wide band encircling the pot, rims and bases tending to be plain. The occurrence of the various decorative techniques according to ware type is shown in Table 7.

Incision is the best represented form of decoration in the present collection, with grooving or fluting being next most common. Relief work, such as carving or stamping, seldom occurs. A preference for incised decoration is found also on pottery from the Palace, where elaborate designs are more often seen.

In almost every case, the sherds showing plastic decoration are thin walled and finely finished. Perhaps because

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60. Cresson, 1937, Fig. 40.
61. Ibid., Figs. 11-15.

of the thinness of the vessel walls, which are sometimes less than one-eighth of an inch thick, decorated sherds tend to be fragmentary. Since the upper portion of the rim seldom bears any decoration, the number of decorated rim sherds is small and consists mostly of restored pieces. Pot sherds from thicker walled vessels seldom show decoration of any type, although sporadic examples of various techniques can be found.

At the Temple of the Inscriptions, plastic decoration was almost universally completed before the vessel was slipped. No examples occur where incision or carving goes through the slip to reveal the paste below it.

(1) INCISING. The most common form of plastic decoration on the pottery associated with the Temple of the Inscriptions is incision (Figs. 14,a,b,15). This may consist of horizontal lines, cursive designs, or geometric patterns. Figures of humans and animals are represented rarely, if at all. The smallness of the sherds would make such designs difficult to recognize if present. Incision also occurs in connection with other decoration, such as grooving and punctation (or rouletting).

Incised decoration in its simpler forms is not a time diagnostic in the Maya area, occurring widely during most periods. Elaborate incised designs came into prominence

during the Tzakol phase at Uaxactun.[62] They apparently followed polychrome figure painting at some other sites, such as Piedras Negras[63] and Yoxiha.[64] This may well be the case at Palenque.

(2) GROOVING. Parallel lines, usually vertical, are cut into the exterior wall of the vessel, forming narrow grooves (Fig. 20,d). Especially fine examples are found in black ware. In a few scattered sherds, the grooves are so narrow as to resemble striation.[65] Grooving occurs on San Jose IV black ware but is usually horizontal at that site.[66] It is present at Uaxactun in the Tepeu Period, where the grooves are often diagonal.[67]

(3) FLUTING. Similar to grooving, but the indentations are broader, up to three-fourths inch, and more shallow. Fluting may be horizontal or vertical. When horizontal fluting appears it is usually the only decorative technique used on the vessel (Fig. 20,c). On cylinders, however, it may occur as a medial band to separate two zones of incision, as is known on a vessel from the Palace. Vertical fluting occasionally is present as decoration on the base of cylin-

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62. Smith, 1936a, Fig. 5:3, 7.
63. Butler, 1935a, p. 24.
64. Blom and LaFarge, 1926-27, p. 227.
65. Smith, 1936a, Fig. 10:1, 2.
66. Thompson, J. E., 1939, p. 134.
67. Smith, 1936a, Fig. 1.

drical vessels in the material from the Temple of the Inscriptions.

Fluting occurs in the Tzakol Period at Uaxactun[68] and at San Jose in Transition III-IV as well as in San Jose IV.[69] Vertical fluting is present on a Holmul V Period Vessel at Tzimin Kax, British Honduras.[70]

(4) APPLIQUE. Clay is added to the vessel to form a decorative element. This sometimes consists of a simple band of molding applied to the rim or base of a vessel. Basal molding often takes the form of scallops. More elaborate designs in applique are also present at the Temple of the Inscriptions. The best examples occur on two sherds of a brown ware incensario, showing what may be a serpent design. In other examples of applique, the design is too broken to be distinguished. Appliqued decoration of any type is rare in the present material. A black vessel with modelled applique, now in a museum collection, is said to have come from Palenque (Fig. 21). This type of decoration becomes common during the Tzakol phase at Uaxactun, continuing into Tepeu.[71]

(5) PUNCTATION (or Rouletting). Decorative lines of dashed or dotted indentations have been identified by

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68. Smith, 1936a, Fig. 6.
69. Thompson, J. E., 1939, p. 137.
70. Thompson, J. E., 1931, Fig. 15, b.
71. Smith, 1936a, Figs. 4, 10.

Brainerd as probably being made by a rouletting tool.[72] This technique has not been generally recognized in the Maya area. Examples from the Temple of the Inscriptions occur as a background design or in the form of crosses. Comparison with better preserved material from the Palace indicates that the indentations were typically arranged in diagonal parallel lines and were used in connection with the incision of such figures as monkeys. Highly specific correspondences to this motif and treatment on vessels from Yoxiha, Chiapas, and Sotuta, Yucatan, are discussed in connection with fine gray ware. An allied type of decoration, rocker stamping, appears on the background of a black cylindrical vase from Tzimin Kax, British Honduras.[73] The stamping serves to outline an incised monkey. The design treatment of this vessel is compared to that on the basal break bowls from the upper tomb at Yoxiha by Thompson, who equates the Yoxiha and Tzimin Kax material with the Holmul V period.[74]

(6) CARVING. Only two examples of possible carving exist in the pottery from the Temple of the Inscriptions. Both are brown ware. One rim sherd bears a simple geometric motif. The second example (Fig. 39) is more elaborate

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72. Brainerd, personal observation.
73. Thompson, J. E., 1931, Pl. XLVIII.
74. Ibid., p. 318.

and may be part of a figurine. Crude carving is found in the Tzakol phase at Uaxactun, later the technique is more developed in Tepeu.[75] A carved vase said to be from Palenque (Fig. 22,a,b) is now in a Paris Museum.[76] This example, called "Engraved Red Ware" by Vaillant, is assigned a late date.[77] It is far more elaborate than the two carved sherds from the present collection. The fragments from the Temple of the Inscriptions also show no close correspondence with published material.

(7) STAMPING. Stamped decoration is found on two examples of pottery from the Temple of the Inscriptions. An unusual fragment of brown ware bears a simple raised design (Fig. 16). This object somewhat resembles round medallions on late funeral urns of Teotihuacan, in the Valley of Mexico.[78] Its use is unknown. Another probable stamped design appears on a small black ware rim sherd (Fig. 17). The design was apparently tooled further with a sharp instrument after being stamped. Examples of stamped decoration are uncommon in Maya ceramic material.

(8) MISCELLANEOUS. Three other very simple decorative techniques which were rarely present in the material from the Temple of the Inscriptions have been grouped under this

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75. Smith, 1936a, Fig. 5; Fig. 12.
76. Lehmann, 1935, pp. 350-352.
77. Vaillant, 1927, p. 372.
78. Tozzer, 1921, Fig. 8, Pl. 14.

heading. Notching is occasionally seen on the lips of vessels. Finger Impressing has apparently been used to give a roughly scalloped effect to the rim on a few incesario sherds. Indentation is seen on two sherds of utility ware which show a roughly triangular design that seems to have been pressed into the clay with a pointed instrument.

CHAPTER 6 — FIGURINES

The figurines from Palenque have long been known for their fine workmanship. The carefully delineated heads are often in the tradition of the sites elaborate stucco decoration, while figurine bodies show many details of dress and accoutrements. It is regretable that excavation has disclosed so few whole figurines.

Associated with the Temple of the Inscriptions were hundreds of figurine fragments. These were recovered from the three stratigraphic pits, being concentrated overwhelmingly in Pit 6 behind the pyramid. Nearly 600 fragments were excavated there, compared with 48 from Pit 1 in the West Plaza and 7 from Pit 7 on the plateau. At the present time, large deposits of figurines are known to have occurred in only three other excavations at Palenque. Figurines have proved to be comparatively rare at the Palace, except for one small cache of warrior figures. It seems possible, then, that there may exist a relationship between figurines and certain buildings, implying ceremonial connotations.

The study of the figurines found in association with the Temple of the Inscriptions in preliminary. A number of definite types can be classified and described, but no statistical breakdown will be attempted.

In archaeological reports, figurines have tended to be classified as modelled or moldmade, but such a dichotomy does not exist at Palenque. Here one finds a very few modelled figurines so well made as to appear sculptured, a number of moldmade figurines which often are whistles with a mouthpiece at the base, and a great variety of what will be called "composite figurines" combining the two techniques. Still another type consists of platform based figurines, sometimes with multiple figures. Fragmentary examples of all these types probably occur in ceramic material from the Temple of the Inscriptions. Specimens are illustrated where possible, along with better preserved figurines from published sources.

Modelled figurines, resembling sculpture in the round, are known from Palenque (Fig. 27). These are solid, with arms and legs shown realistically. The type may be present in the present collection but has not been positively identified.

Moldmade figurines occur widely at Palenque. Arms and legs are fashioned in one piece with the hollow body, while feet are rudimentary and often resemble conical or elongated vessel feet. This form commonly has an undecorated back, with a whistle mouthpiece at the base (Figs. 28-31). Animal figures also occur as whistles, in which case the back is more realistically finished. Moldmade figurines are found throughout the Maya area. "They range

in time from the Old Empire through the Puuc-Labna period, and in space from Copan in the south to Labna in the north."[1] Molds for the manufacture of such figurines occur in the collection from the Temple of the Inscriptions, indicating that they were made at Palenque.

Composite figurines at the Temple of the Inscriptions show much variety. Heads are usually well-formed with distinctive features, which in some cases amount almost to portraiture. Sometimes heads bear tenons for fastening to the body. Bodies, hollow or solid, are finished in the round (Figs. 32, 33), while limbs, which often look most naturalistic (Fig. 34), and decorative details, are fashioned separately for later attachment. Smith states that somewhat similar figurines found at Uaxactun were apparently made on a mass production basis, since duplicate heads appear on a number of different bodies.[2] This does not seem to be the case at Palenque, where no two heads just alike have been found. Perhaps the solid heads, the torsos or both, were moldmade for later assembly, but much of the technique must have consisted of modelling. Two comparable figures are illustrated, one from Palenque (Fig. 35) found years ago by E. H. Thompson and Holmes,[3]

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1. Butler, 1935b, pp. 636-637.
2. Smith, personal observation.
3. Thompson, E. H., 1895, p. 4.

the other said to be from Yucatan[4] but resembling Jaina examples (Fig. 36).

Platform based figurines are comparatively rare. In these the figure, or series of figures, stands on a plain rectangular platform. No whole figurines of this type and no large fragments with platform bases were found at the Temple of the Inscriptions. The large figurines illustrated (Figs. 37, 38) were found elsewhere at Palenque in previous years. In the Inscriptions material, however, there occur pottery fragments with squared corners which probably came from such figurine bases. Also present is a carved brown ware sherd (Fig. 39), similar in motif to part of the large figurine shown in Figure 38. Platform based figurines appear to be uncommon in the Maya area.

A further breakdown of figurines can best be approached on the basis of headform. Heads, being solid, tend often to be better preserved than figurine bodies, and shape can usually be determined even if the features are badly worn. Butler, in 1935, classified a number of Maya figurines, including a few from Palenque.[5] Head types she suggested are useful, but the classification will probably need expansion if it is to fit the large number of figurines found at Palenque during the 1951 season. Several varieties

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4. Hamy, 1897, p. 51.
5. Butler, 1935b, pp. 663-669.

of head forms from the Temple of the Inscriptions are illustrated in Figures 40 through 45.

It is often difficult to determine from what type of figurine a head came. Heads with tenoned necks are thought to be from composite figurines (Fig. 40). Heads with necks broken off short may be from any of the figurine types being discussed. If, however, the head is finished in the round, it probably came from a modelled or composite figurine, (Figs. 40, 45); heads flat in the back, roughly finished, or with a tenon on the back are perhaps always moldmade. Some figurines of those latter head types may have been set into walls or niches where the back would not show. An elaborate headdress, which appears to be a representation of gods' heads set one above the other and usually surrounded by feathers, occurs on several figurine types from Palenque (Figs. 37, 47, 38). A similar design is found on stelae from Tonina, Chiapas[6] and Quirigua, Guatemala.[7]

Facial decoration is indicated in several ways. One of the most common is the extension of the nose onto the forehead (Figs. 31, 35, 36, 49). This is often found at the Temple of the Inscriptions. A variation of this head

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6. Blom and LaFarge, 1926-27, Fig. 250.
7. Mandslay, 1889-1902, Vol. II, Pls. 22, 27, 36.

form from the present collection shows the extension as a series of dots (Fig. 40). The "high nose" is also present at Tecolpa,[8] Jonuta or Chable[9] and other sites in the Usumacinta area. It may represent an ornament rather than a physical characteristic. What may be tatooing is present on the checks of one figurine from the Temple of the Inscriptions (Fig. 45) and is also found in Yucatan[10] (Fig. 46).

Heads of anthropomorphic beings (Fig. 43) and animals (Fig. 44) are also present at the Temple of the Inscriptions. Monkeys are often represented, and birds, usually owls, are to be recognized. Judging from the Palace material, the anthropomorphic figurines may represent warriors with grotesque heads.

It is obvious from even a limited comparative study of the Palenque figurines that they lie in a tradition outside of the usual Maya pattern. Moldmade figurines from Lubaantun, British Honduras, show relatively few correspondences,[11] Uaxactun resemblances are rare,[12] and reports on Copan illustrate few figurines.[13] It would appear that

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8. Museum display, American Museum of Natural History.
9. Rickards, 1910, Fig. op. p. 78.
10. Hamy, Pl. XXVI, No. 78.
11. Joyce, 1933, passim; Gann, 1926, pp. 226-229.
12. Smith, personal observation.
13. Longyear, 1940, passim; 1953, Figs. 86, 87.

the Usumacinta River area forms a zone with a definite figurine tradition of its own. Figurines similar to those at the Temple of the Inscriptions occur from Piedras Negras[14] in the south to Jonuta[15] in the north. The island of Jaina, off the coast of Campeche, seems to share some of the same traits, but has distinctive characteristics of its own.[16]

Undoubtedly the figurine types of the Temple of the Inscriptions, as well as Palenque as a whole, have important chronological implications. As was to be expected, no crude, slit eyed figurines which might suggest the archaic have been found at Palenque. Instead most of the figurines are finely made. Moldmade whistle types, considered late by Smith,[17] are present in some numbers. They may be associated with late levels of occupation at Palenque. Present knowledge does not make it possible to draw definite conclusions about chronology from the figurines at the Temple of the Inscriptions. With the comparatively large body of material at hand, however, the future possibilities of isolating valid time markers seem most inviting.

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14. Butler, 1935b, Figs. 1,a, 3,e, 4g.
15. Ibid., Fig. 4,e; Rickards, 1910, Fig. op. p. 78.
16. Museum collections, American Museum of Natural History; Museo Nacional, Mexico City.
17. Smith, personal observation.

CHAPTER 7 — CONCLUSIONS

The pottery excavated in 1951 in association with the Temple of the Inscriptions seems to form a body of closely related material. For the most part, similar wares, shapes and decorative techniques occurred in the three stratigraphic pits, from the north face of the pyramid, and from within the pyramid. Differences which suggest time levels are present, but there is no evidence of any abrupt or decisive changes in the pottery. This might indicate a short occupation for the Temple of the Inscriptions or a period of considerable stability in ceramic tradition at Palenque.

Brown ware constitutes the dominant body of pottery in the collection. Quartz tempered Type 1 brown ware, alone, accounts for 52 percent of the total rim sherds. The same high incidence can be noted from every location. Quartz tempered utility ware is second in numerical importance, with brown ware Type 2 (chert bearing) being third. This order holds true everywhere except on the north face of the pyramid, where Type 2 brown ware is absent.

Suggestions of chronological change are not marked in the material, but in a few instances the percentage occurrences shift in a consistent fashion. Brown ware Type 1 shows a steady decline in percentage both in Pit 1 and Pit 6 (Tables 1, 2). The only exception to this is in

Level 4 of Pit 1, which is represented by very few sherds (Table 4). An unusually high percentage of Brown 1 within the pyramid and on its north face bears out this trend (Tables 3, 4), for, on architectural evidence, these are surely among the oldest ceramic deposits associated with the Temple of the Inscriptions. It would appear, then, that Brown 1, always the best represented type, was declining slightly during the occupation of the Temple of the Inscriptions.

At the same time, quartz tempered utility ware (Type 1) appears to have been increasing slightly. A steady rise in percentage occurs, as one moves from early to late levels, in both Pits 1 and 6 (Tables 1, 2).

When the remainder of the pottery from the Temple of the Inscriptions is considered, Type 2 utility ware (calcite-and-quartz tempered) seems important chronologically. In Pit 1 there is an unusually high percentage of this type in Level 4, a total absence in Level 3, and then a steady dropping off in the two upper levels. This would seem to indicate a decline of the type in popularity. Pit 6 does not conform to this picture, the rare examples of calcite-and-quartz tempered utility ware being confined to the upper level. At other locations, however, the general findings from Pit 1 are repeated. Body sherds of this type are relatively abundant from within the pyramid and notably so in the collections from the north face of the pyramid.

All in all, it appears that calcite-and-quartz tempered utility ware was considerably more popular early in the occupation of the Temple of the Inscriptions than in later times.

Other wares are present in such small numbers that it is dangerous to draw conclusions from their occurrence. It is interesting to note, however, that black ware, fine gray and fine orange are to be found mainly in Pit 6 and Pit 1, in the latter appearing only in the upper levels. These wares are absent from the north face of the pyramid, and neither fine orange nor fine gray sherds were found in pottery obtained from within the pyramid. Tentatively, it would seem that they may be rather late.

The percentage of polychrome ware associated with the Temple of the Inscriptions, while unsatisfactorily small, seems also to have time connotations. It is known largely from the lower levels of Pit 1, decreasing progressively toward the surface. Although its presence within the pyramid and from the north face is not tabulated, several weathered sherds from these locations show faint traces of what appear to be multicolored paint. Only one rim sherd of polychrome was found at Pit 6, from the upper level. Elsewhere at Palenque, polychrome sherds have been found imbedded in the masonry of buildings, which would tend to uphold the suggestions from Pit 1 material that polychrome ware was early at the site.

General trends indicated for wares in the pottery associated with the Temple of the Inscriptions seem to be followed to some extent in vessel form and decoration. Low bowls are present in all locations. Jar forms and large bowls are also common. Beakers and basal break bowls tend to concentrate in Pits 1 and 6, the wares in which these usually occur being rare or absent in Pit 7, from within the pyramid, and from its north face. More interestingly, low bowls with basal ridge are known only from Pits 1 and 6.

The typical flat base is present everywhere, but the other base types vary in location. As mentioned above, the basal ridge does not occur aside from Pits 1 and 6. Pedestal bases are to be noted in Pit 1. Disk bases appear more often from Pit 6 and within the pyramid. Ring bases, possibly early, are found there as well as from the north face of the pyramid. Presence of bases appears in Table 5.

Scattered indications exist that features of base and foot form may have undergone change. Slab feet are relatively early within the Classic sequence. It is of special interest, therefore, that the single example of this form recovered was from the deposit at the base of the north face of the pyramid, under presumedly early architectural conditions. It may also be noteworthy that fifty percent of the truncated feet come from the same location (Table 6).

Plastic decoration seems to increase slightly from lower to upper levels, conciding with the presence of Type 2 brown ware, black ware and fine gray, which tend often to be decorated. The percentage of decorated material is slightly larger in Pit 1 than Pit 6, low elsewhere (Table 7).

According to architectural evidence from the Temple of the Inscriptions, ceramics from within the pyramid may well be the earliest material in the present collection. Pottery from the north face of the pyramid, all found covered with earth beside terraced walls of the inner pyramid, is perhaps contemporaneous or slightly later. Earliest material from Pit 1 shows some relationships in pottery wares with this group of sherds. Later deposits in Pit 1 show more resemblance to the bulk of the material from Pit 6. Evidence from shallow Pit 7 is not clearcut. The small group of sherds seems to conform to the general body of material but is lacking in chronological implications.

Time difference is perhaps slightly better indicated in Pit 1 than elsewhere at the Temple of the Inscriptions. There utility ware with calcite-and-quartz temper (Type 1) and polychrome ware appear to be early. Black ware, fine gray and fine orange typically occur later, as do the few figurine fragments. Chronology is less clearly indicated at Pit 6, where pottery in the two levels shows more homogeneity. A ceremonial function for this pit, is indicated

by the presence, especially in Level 1, of many figurines[1] and fragments of obsidian blades. Evidence that some culinary activities were also carried on at the Temple of the Inscriptions is found in the occurrence of one metate and several manos in Pits 1 and 6.

The relationship to Palenque, as a whole, of the ceramics associated with the Temple of the Inscriptions can only be suggested at this time. The present collection apparently is representative of neither the earliest nor the latest pottery at the site. Evidence from lower levels of other stratigraphic pits dug during 1951 indicates a former emphasis on the use of calcite temper. Likewise, as previously mentioned, polychrome sherds occur imbedded in masonry at the Palace but are not evident in late deposits there. On the other hand, a number of museum pieces reported to be from Palenque have been identified as belonging to late Classic or post-Classic horizons. No sherds similar to several X fine orange vessels[2] (Figs. 23-26) or to one "engraved red ware" vase[3] (Fig. 22) have been found associated with the Temple of the Inscriptions.

In an attempt to correlate the present collection with Middle American pottery sequences, the writer has reviewed published ceramic reports, ranging from the Huastec area[4]

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1. Butler, 1935b, p. 641.
2. Brainerd, 1941, p. 180.
3. Vaillant, 1927, p. 24, Fig. 306; Hamy, 1897, p. 53.
4. Ekholm, 1944, Passim.

of northeastern Mexico to Costa Rica.[5] No specifically comparable body of material has been found. This apparent failure of Palenque pottery to fit into established sequences has been substantiated by the opinions of several authorities on the Maya area.

The chronological sequence at Uaxactun, Guatemala, worked out by Smith, has been a standard for comparisons of Classic Maya pottery. Although pottery from the Temple of the Inscriptions shows general relationships with this sequence in some details of vessel shape and decoration, especially in the Tepeu Period, wares differ and there are no over-all correspondences.

A similar situation is revealed when the present collection is compared to ceramics of British Honduras. The most specific correspondences are with San Jose, but these are sporadic and have a wide time spread. Benque Viejo and Tzimin Kax also have scattered elements of similarity. The latter site is perhaps related to Palenque through its suggested ties with Yoxiha, Chiapas. Considering this area as a whole, pottery from the Temple of the Inscriptions shows most resemblance to that of the late Classic periods.

The Puuc region of Yucatan is specifically linked to the present material through the occurrence of fine gray

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5. Lothrop, 1926, Passim.

ware, often appearing in basal break bowls decorated with punctation or rouletting. This material dates from a horizon equivalent to middle Tepeu, perhaps slightly earlier than some of the more generalized comparative material mentioned above. Fine orange ware from the Temple of the Inscriptions is of a different type from the large body of X and Z fine orange found in Yucatan. It is possible that the Palenque examples will eventually prove to equate with ceramics recently reported by Berlin from coastal Tabasco.[6] In any event, the fine orange and fine gray pottery of the Temple of the Inscriptions fits clearly into the tradition of fine paste wares which extends along the Gulf Coast from Yucatan into Veracruz.

This same tradition is evidenced at Yoxiha by the presence of fine gray basal break bowls known closely to resemble examples from Yucatan and Palenque. At Yoxiha these vessels, along with others clearly similar to ceramics from the Temple of the Inscriptions (Figs. 18,19), occurred in the upper of two superimposed tombs. This pottery overlay a very different group of ceramic material. The Yoxiha lower tomb revealed a number of polychrome vessels which in form and design relate unquestionably to the Tzakol Period of Uaxactun. This material is very different from the present collection, even taking into

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6. Berlin, 1953, Passim.

consideration the rare examples of polychrome pottery and scarce fragments of ring bases found at the Temple of the Inscriptions.

It is to be regretted that so few sites in the general region of Palenque have been investigated. Sherds and figurines from Jonuta, and perhaps Chable, indicate that the pottery of these sites has definite relationships with that from Palenque. Ceramics from the island of Jaina off the coast of Campeche, are more diverse but suggest some connections with the present collection, especially in the matter of figurines.

Figurines also serve to link Palenque with Piedras Negras, where a number show close similarity to examples from the Temple of the Inscriptions. Important relationships likewise exist with pottery vessels from Piedras Negras. At the latter site, however, the ceramics show more variety than has up to now been revealed by material from Palenque. Polychrome vessels of forms not found at the Temple of the Inscriptions are present, for example, in the early levels at Piedras Negras, and strong ties are numerous with the Uaxactun ceramic sequence.

Additional sites within the Maya area have been mentioned in previous chapters regarding ceramic features possibly comparable to those of pottery from the Temple of the Inscriptions. The few relationships which exist, however, are usually isolated and tenuous.

Outside of the Maya region, few examples have been found of pottery which resembles the collections from the Temple of the Inscriptions. Veracruz ceramics seem to have some general relationships, such as a frequent tendency toward quartz-tempered monochrome wares, and the presence of fine paste. Drucker, however, sees no decisive similarities between the present material and pottery which he has excavated in the Veracruz-Tabasco area. Xochicalco, considerably farther away from Palenque, shows some intriguing resemblances. Low bowls with basal ridge are definitely comparable to the same form at the Temple of the Inscriptions, having flaring walls, everted rims, flat bases and cascabel feet. Ware may also be somewhat similar. Walls of the Xochicalco vessels appear to be rather thin, again resembling examples from the present collection. Noguera, however, has stated that the vessels with basal ridge occur on an archaic horizon, equating with Mamom-Chicanel at Uaxactun. If this dating is correct, the Xochicalco vessels would be far earlier in time than corresponding forms from the Temple of the Inscriptions.

The present study has indicated that ceramic material collected in 1951 from the Temple of the Inscriptions, and from Palenque as a whole, belong to a different tradition than does previously classified Maya pottery. While relationships, direct and indirect, can be recognized, the ceramics

of Palenque are surprisingly divergent. Characteristic features are: (1) Monochrome wares with self-color slip, (2) Preponderance of quartz temper, (3) Thinness of vessel walls throughout all wares, (4) Typically flat bases, (5) Emphasis on certain forms, such as beakers and low bowls with basal ridge, (6) Relative absence of decoration, and (7) Variety and abundance of elaborate figurines.

It is not yet possible to assign a definite date to the ceramics associated with the Temple of the Inscriptions. Comparative material would seem to indicate a time equating with the Middle or Late Tepeu sequence in the Peten. On the other hand, the occurrence of certain possibly earlier ceramic forms raises questions which cannot be answered until the entire collection of pottery from Palenque has been studied. It may be noted, however, that there is nothing in the ceramic evidence which conflicts with the suggested dating of the Temple of the Inscriptions as previously worked out on hieroglyphic and artistic grounds.

APPENDIX 1 — HISTORY OF PALENQUE

The ancient city of Palenque was apparently not known to the Spaniards until the mid Eighteenth Century, although the pueblo of Santo Domingo del Palenque, which lies on the plain some six miles from the ruins, was of early importance. The pueblo, consisting now of only a few Indian houses, once "stood on the main road of communication between the Gulf of Mexico and Guatemala...."[1] Cortes is believed to have passed close by[2] on his march to Honduras of 1924-1525, and there was a Dominican missionary stationed in the pueblo as early as 1573.[3]

According to a story upheld by old Spanish documents, the ruins were first discovered in 1746 by the young nephews of a Spanish padre, who lived for several months in Santo Domingo del Palenque. The young men are said to have come across the ruined city during a walk in the forest.[4] They planned to explore the ruins, but before that could be done the padre died and his relatives left the area. Palenque might well have been forgotten again, except that one of its discoverers told a young cousin, don Ramon de Ordonez, about the ruins.[5]

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1. Maudslay, 1889-1902, vol. IV, pp. 2-3.
2. Scholes and Roys, 1948, p. 469.
3. Ibid., p. 25.
4. Brasseur de Bourbourg, 1866, pp. 3-4.
5. Ibid., p. 4.

Many years later, in 1773, Ordonez prevailed upon his brother to lead a party to explore Palenque. The stimulating reports of expedition members led Ordonez in 1784 to send a relacion regarding the ruins to the president of the royal audiencia in Guatemala. As a result, that same year the president commissioned don Jose Antonio Calderon, an inhabitant of Santo Domingo del Palenque, to visit the ruins and report to him. This was done, and Calderon submitted a detailed description of many of the structures at Palenque.[6]

In 1785, Calderon's survey "was continued by the architech Antonio Bernasconi.... In 1786, the work of exploration was continued by Antonio del Rio...."[7] Del Rio seems to have been the first explorer to recover any pottery from the site. In the course of searching for "medals, inscriptions, or monuments,"[8] inside or near the Temples of the Sun, Cross, and Foliated Cross, he found several pottery vessels.[9] This material appears to have been sent to the Governor of Guatemala, under whose direction Del Rio had gone to Palenque at the behest of Charles IV of Spain.[10] Whether any of the vessels, which are neither pictured nor clearly described, remains in existence today is unknown. Del Rio described the

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6. Brasseur de Bourbourg, 1866, pp. 4-6.
7. Saville, 1928, p. 120.
8. Del Rio (in Cabrera, 1822, p. 3).
9. Ibid., pp. 17-19.
10. Brasseur de Bourbourg, 1866, p. 6.

Temple of the Inscriptions but made no mention of having excavated either the temple or its pyramid.[11]

From that time on, the number of expeditions to the ruins of Palenque rapidly increased. Explorations, mainly architectural in focus, were carried on by a succession of people. These workers included "Dupaix, Castaneda, Waldeck, Stephens, Catherwood, Cody, Charnay, Maudslay, Holmes, Maler and Blom."[12] The site was mapped, detailed plans were drawn of many structures, and examples of the elaborate stone and stucco designs were reproduced.

During this period, there were comparatively few ceramic finds from Palenque which appeared in print or were forwarded to museums. Desire de Charnay is credited with sending at least one whole vessel to Paris, where it is now in the Musee d'Ethnographic du Trocadero.[13] A. P. Maudslay illustrated three pottery vessels and one figurine but gave no exact provenience.[14] E. H. Thompson, who visited Palenque with William H. Holmes in 1895, described the excavation of several small tombs near the Temple of the Cross. Ceramic material included four vessels, a spindle whorl and a figurine.[15] One other expedition at about this same time, led by Marshall Saville and sponsored by the Duc de Loubat, should have

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11. Del Rio (in Cabrera, 1822, p. 16).
12. Saville, 1928, p. 120.
13. Hamy, 1897, p. 48.
14. Maudslay, 1889-1902, Vol. IV, p. 19.
15. Thompson, E. H., 1895, pp. 3-5.

recovered ceramic material. Hindered, however, by Leopoldo Batres, the Mexican representative, the expedition is said to have found it difficult even to hire laborers and stopped work after six rainy weeks with virtually nothing accomplished.[16]

The early work of the Twentieth Century at Palenque was comparatively minor. Frans Blom spent considerable time at the ruins in 1923 and, with Oliver LaFarge, revisited them in 1925. Blom described several burials in which pottery was found,[17] but his descriptions were brief and no photographs appeared. Of the several Mexican archaeologists who worked at the site prior to 1949, Miguel Angel Fernandez perhaps did the most persistent excavating. In his search for offerings, he had pits dug within the temples and below plaza floors. Little has been published regarding his work, but his excavation in the Temple of the Sun revealed two small cylindrical vessels,[18] and he also illustrated an unusual figurine from Palenque.[19] The excavations made under the direction of Angel Fernandez were filled up and the ground made smooth, with no complete record being kept of where the digging had been done.

During the successive seasons of architectural restoration directed by Alberto Ruz for the Mexican Government (1949-1953), a small amount of ceramic material was preserved.

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16. Saville, 1928, pp. 155-156.
17. Blom and LaFarge, 1926-27, Vol. 1, pp. 177-188.
18. Angel Fernandez, 1943, p. 55.
19. Ibid., p. 57.

Most of the potsherds found during this work, however, were discarded at the time. The exigencies of the architectural emphasis and the short working season have usually left little time for the careful excavation of ceramics. An exception is the work in 1950 of Sr. Lauro Zavala at Tomb Group II, where two restorable decorated vessels and a large number of figurines were discovered, as well as many sherds. Unfortunately, there has been no publication of this material.

The architectural restoration of the ruins was much facillitated by the extension of the Mexican railway system to link Yucatan and Mexico City. The railroad now passes within four miles of Santo Domingo del Palenque. Before the line was completed in 1950, visitors to the ruins had to travel overland from Monte Cristo on the Usumacinta River. Now a paved road has been constructed from the railway to the pueblo and the ruins.

The discovery in 1952 of the sealed tomb beneath the Temple of the Inscriptions has multiplied the interest of the Mexican Government in Palenque and all of its antiquities. There may soon be more visitors to the site each year than viewed its ruins during the two centuries since Palenque was finally rediscovered.

APPENDIX 2 — GLOSSARY OF TERMS

BASAL BREAK - Abrupt change of direction at or near the junction of the bottom and side.

BASAL BREAK BOWL - Bowl showing basal break.

BASAL RIDGE - A projection of the bottom at the basal break of not more than 8 mm. (Also termed "Z-angle,"[1] or "basal angle."[2])

BEAKER - A more or less cylindrical vessel whose height is close to its diameter. Walls vary from vertical to slightly outcurved or flared.

BOTTOM - The underpart of a vessel, the underside of the underpart.

BREAK - An abrupt change in curvature; may be angular or sub angular. Example: basal break bowl.

CASCABEL FOOT - Hollow, containing a pellet.

DEPOSIT - The cultural material coming from a single mass of earth, either mixed or stratified.

FLANGE - An ornamental projection of as much as 2 cm. forming an obtuse angle with the side or base of a vessel.

FLARED - Straight walled, increasing in diameter to the lip.

FLUTING - Grooves, whose profile forms a concave segment of a circle, so spaced as to leave thin ridges between them. Vertical unless otherwise specified in the description.

MINIATURE VESSEL - A vessel measuring well below the extent of the intergrading range size of accompanying vessels of the same ware and similar form.

MOLDING - A raised band of clay horizontally encircling the pot.

WEATHERING - General term including abrasion, flaking, etc.

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1. Smith, personal observation.
2. Noguera, 1947, Fig. 4, c.

TABLE 1. RIM SHERDS BY LEVEL, PIT 1

WARE TYPE	LEVEL 1		LEVEL 2		LEVEL 3		LEVEL 4		MISCEL-LANEOUS	TOTAL
	No.	Per.	No.	Per.	No.	Per.	No.	Per.		
Brown 1	114	48.5	116	55.2	18	75.0	-	0.0	22	270
Brown 2	19	8.2	21	10.0	-	0.0	-	0.0	2	42
Brown 3	-	0.0	2	1.0	-	0.0	-	0.0	-	2
Black 1	6	2.6	8	3.8	-	0.0	-	0.0	-	14
Black 2	10	4.3	8	3.8	-	0.0	-	0.0	2	20
Black 3	1	0.4	-	0.0	-	0.0	-	0.0	-	1
Fine Orange	2	0.9	2	1.0	1	4.2	-	0.0	-	5
Fine Gray	4	1.7	-	0.0	-	0.0	-	0.0	-	4
Utility 1	69	29.9	37	17.6	3	14.2	-	0.0	14	123
Utility 2	6	2.5	9	4.3	-	0.0	1	33.3	-	16
Utility 3	-	0.0	-	0.0	-	0.0	-	0.0	-	-
Polychrome	-	0.0	7	3.3	2	8.3	2	66.7	1	12
TOTALS	231		210		24		3		41	509

TABLE 2. RIM SHERDS BY LEVEL, PIT 6

WARE TYPE	LEVEL 1		LEVEL 2		MISCEL-LANEOUS	TOTAL
	Number	Percent	Number	Percent	Number	
Brown 1	393	46.8	93	52.8	103	589
Brown 2	98	11.7	20	11.4	14	132
Brown 3	-	0.0	-	0.0	-	-
Black 1	18	2.1	4	2.3	4	26
Black 2	65	7.7	11	6.25	3	79
Black 3	27	3.2	11	6.25	1	39
Fine Gray	11	1.3	2	1.1	2	15
Fine Orange	21	2.5	2	1.1	2	25
Utility 1	190	22.6	33	18.75	22	245
Utility 2	14	1.7	-	0.0	-	14
Utility 3	1	0.1	-	0.0	1	2
Polychrome	1	0.1	-	0.0	-	1
TOTALS	839		176		152	1167

TABLE 3. RIM SHERDS BY LEVEL, OTHER

WARE TYPE	PIT 7		WITHIN PYRAMID		NORTH FACE OF PYRAMID	
	Number	Percent	Number	Percent	Number	Percent
Brown 1	49	59.0	9	64.3	59	73.75
Brown 2	4	4.8	2	14.3	-	0.0
Brown 3	-	0.0	-	0.0	2	2.5
Black 1	3	3.6	-	0.0	-	0.0
Black 2	2	2.4	-	0.0	-	0.0
Black 3	1	1.2	-	0.0	1	1.25
Fine Gray	-	0.0	-	0.0	-	0.0
Fine Orange	-	0.0	-	0.0	-	0.0
Utility 1	19	22.9	2	14.3	-	0.0
Utility 2	5	6.0	-	0.0	18	22.5
Utility 3	-	0.0	1	7.1	-	0.0
Polychrome	-	0.0	-	0.0	-	0.0
TOTALS	83		14		80	

TABLE 4. ADDENDUM TO TABLES 1 AND 3

PIT 1. UNDER AND BEHIND STEPS 4-8

WARE TYPE	RIM SHERDS	BODY SHERDS	TOTAL SHERDS	PERCENT
Brown 1	-	5	5	26.3
Utility 1	-	2	2	10.5
Utility 2	1	6	7	36.8
Polychrome	2	3	5	26.3
TOTALS	3	14	19	

WITHIN PYRAMID

WARE TYPE	RIM SHERDS	BODY SHERDS	TOTAL SHERDS	PERCENT
Brown 1	9	36	45	51.7
Brown 2	2	2	3	3.4
Black 2	-	3	4	4.6
Utility 1	2	14	16	18.0
Utility 2	-	6	6	6.9
Utility 3	1	12	13	14.9
TOTALS	14	73	87	

TABLE 5. BASES

FORM AND WARE TYPE	PIT 1	PIT 6	PIT 7	WITHIN PYRAMID	NORTH FACE OF PYRAMID	TOTAL
FLAT BASE						
Brown 1	25	55	1	-	27	108
Brown 2	22	29	1	1	1	54
Black 1	7	4	-	-	-	11
Black 2	5	23	6	-	-	34
Black 3	-	14	-	-	-	14
Fine Gray	-	17	-	-	-	17
Fine Orange	6	-	-	-	-	6
Utility 1	4	1	-	-	-	5
Polychrome	10	-	-	-	-	10
Total	79	143	8	1	28	259
BASAL RIDGE						
Brown 1	16	38	-	-	-	54
Brown 2	4	2	-	-	-	6
Black 2	4	-	-	-	-	4
Total	24	40	-	-	-	64
PEDESTAL BASE						
Brown 1	20	1	1	-	4	26
Total	20	1	1	-	4	26
DISK BASE						
Black 1	-	1	-	-	-	1
Utility 1	1	7	-	3	-	11
Total	1	8	-	3	-	12
RING BASE						
Brown 1	-	1	1	1	-	3
Brown 2	-	1	-	-	-	1
Utility 2	-	-	-	-	3	3
Total	-	2	1	1	3	7
TOTALS	124	194	10	5	35	368

TABLE 6. FOOT FORMS

FORM AND WARE TYPE	PIT 1	PIT 6	PIT 7	WITHIN PYRAMID	NORTH FACE OF PYRAMID	TOTAL
CASCABEL FEET						
Brown 1	16	42	2	-	3	63
Brown 2	7	4	-	-	-	11
Black 1	-	2	-	-	-	2
Black 2	1	3	-	-	-	3
Fine Orange	1	-	-	-	-	1
Fine Gray	-	1	-	-	-	1
Total	25	52	2	-	3	82
CONICAL FEET						
Brown 1	3	20	-	-	3	26
Black 1	-	-	2	-	-	2
Total	3	20	2	-	3	28
TRUNCATED FEET						
Brown 1	3	4	-	-	7	14
Total	3	4	-	-	7	14
NUBBIN FEET						
Brown 1	2	11	-	-	-	13
Black 1	-	1	-	-	-	1
Black 2	-	3	-	-	-	3
Total	2	15	-	-	-	17
ELONGATED FEET						
Brown 1	4	6	-	-	-	10
Utility 1	-	1	-	-	-	1
Total	4	7	-	-	-	11
ROUND FEET						
Brown 1	2	1	-	-	-	3
Total	2	1	-	-	-	3
SLAB FEET						
Brown 1	-	-	-	-	1	1
Total	-	-	-	-	1	1
TOTALS	39	99	4	-	14	156

TABLE 7. PLASTIC DECORATION

TECHNIQUE AND WARE TYPE	PIT 1		PIT 6		PIT 7		WITHIN PYRAMID		NORTH FACE OF PYRAMID		TOTAL
	Rims	All	Rims	All	Rims	All	Rims	All	Rims	All	
INCISION											
Brown 1	2	16	12	33	-	-	-	-	-	-	49
Brown 2	10	31	20	67	-	2	-	-	-	-	100
Black 1	-	2	6	9	-	-	-	-	-	-	11
Black 2	-	2	-	4	-	-	-	-	-	-	6
Black 3	-	-	4	5	-	-	-	-	-	-	5
Fine Gray	-	3	-	10	-	-	-	-	-	-	13
Utility 1	-	-	-	1	-	-	-	-	-	-	1
Total	12	54	42	129	-	2	-	-	-	-	185
GROOVING											
Brown 1	-	17	1	35	-	3	-	-	-	-	55
Brown 2	-	12	1	2	-	2	-	-	-	-	16
Brown 3	-	6	-	-	-	-	-	-	2	2	8
Black 1	-	1	-	1	-	-	-	-	-	-	2
Black 2	-	1	-	-	-	-	-	-	-	-	1
Black 3	-	-	1	1	-	1	-	-	-	-	2
Fine Gray	-	-	-	5	-	-	-	-	-	-	5
Total	-	38	3	44	-	6	-	-	2	2	90
FLUTING											
Brown 1	-	3	1	6	-	-	-	-	-	-	9
Brown 2	-	18	-	21	-	1	-	-	-	-	40
Black 1	-	-	-	2	-	-	-	-	-	-	2
Black 2	2	10	1	15	-	-	-	-	-	-	25
Total	2	31	2	44	-	1	-	-	-	-	76

TABLE 7. PLASTIC DECORATION
(Continued)

TECHNIQUE AND WARE TYPE	PIT 1		PIT 6		PIT 7		WITHIN PYRAMID		NORTH FACE OF PYRAMID		TOTAL
	Rims	All	Rims	All	Rims	All	Rims	All	Rims	All	
APPLIQUE											
Brown 1	-	-	1	4	-	-	-	-	-	-	4
Brown 2	-	8	1	2	-	-	-	-	-	-	10
Black 1	1	1	-	-	-	-	-	-	-	-	1
Fine Gray	-	-	3	4	-	-	-	-	-	-	4
Utility 1	4	4	-	-	-	-	-	-	-	-	4
Utility 2	-	-	-	-	-	1	-	-	-	1	2
Total	5	13	5	10	-	1	-	-	-	1	25
PUNCTATION											
Brown 2	-	2	-	1	-	-	-	-	-	-	3
Black 2	-	5	-	-	-	-	-	-	-	-	5
Fine Gray	-	-	-	4	-	-	-	-	-	-	4
Total	-	7	-	5	-	-	-	-	-	-	12
CARVING											
Brown 1	-	-	1	1	-	-	-	-	-	-	1
Total	-	-	1	1	-	-	-	-	-	-	1
STAMPING											
Brown 1	-	-	-	1	-	-	-	-	-	-	1
Black 2	-	-	1	1	-	-	-	-	-	-	1
Total	-	-	1	2	-	-	-	-	-	-	2

TABLE 7. PLASTIC DECORATION
(Continued)

TECHNIQUE AND WARE TYPE	PIT 1		PIT 6		PIT 7		WITHIN PYRAMID		NORTH FACE OF PYRAMID		TOTAL
	Rims	All	Rims	All	Rims	All	Rims	All	Rims	All	
MISCELLANEOUS											
Brown 1	2	2	1	1	-	-	-	-	-	-	3
Brown 2	-	-	2	2	-	-	-	-	-	-	2
Utility 1	-	-	2	2	1	1	-	-	-	-	3
Utility 2	-	-	-	-	-	-	-	-	1	1	1
Total	2	2	5	5	1	1	-	-	1	1	9
TOTALS	21	145	59	240	1	11	0	0	3	4	400

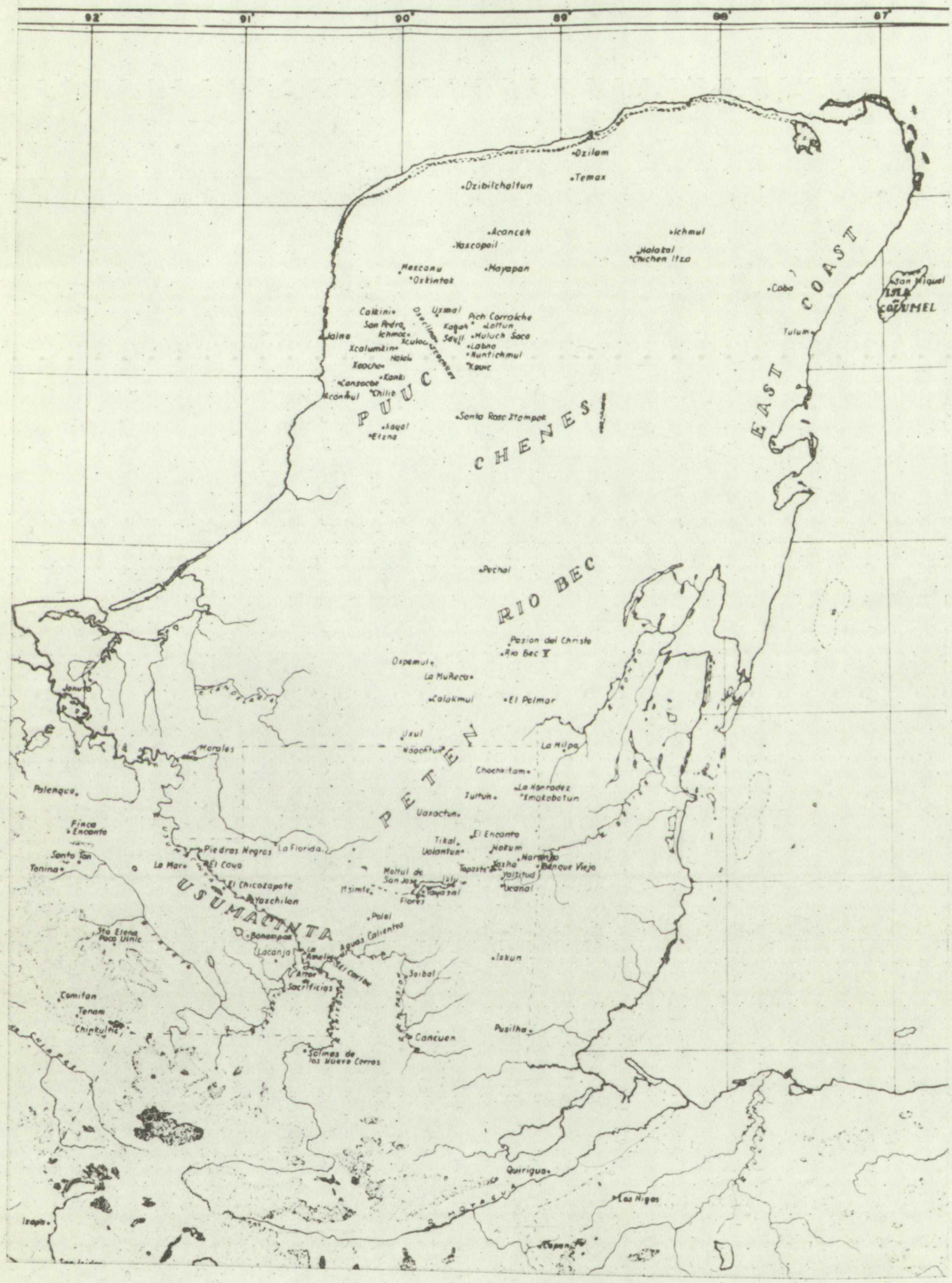

92°
91°
90°
89°
88°
87°
EAST COAST
ISLA COZUMEL
San Miguel
Coba
Tulum
Dzilam
Temax
Dzibilchaltun
Acanceh
Yaxcopoil
Mayapan
Mexcanu
Oxtintok
Ichmul
Halatal
Chichen Itza
Uzmal
Pich Carrolche
Lottun
Muluch Saco
Labna
Kuntichmul
Kayal
Calcini
San Pedro
Ichmac
Xculoc
Xcalumkin
Xkanki
Xcanchen
Chilo
Santa Rosa Xtampak
Sayil
Etzna
PUUC
CHENES
Pechal
RIO BEC
Pasion del Christo
Rio Bec I
Dzibanche
La Muñeca
Calakmul
El Palmar
Uaxactun
Tikal
Yaxha
Naranjo
Nakum
Topoxte
Melchor
Yaxjitud
Xcanal
Chocha'tam
La Honradez
Xmakobatun
Tuitun
La Milpa
PETEN
Ixkun
Saibal
Pusilha
Caracol
Maltul de San Jose
Itsimte
Isly
Flores
Tayasal
Polol
Aguas Calientes
Lacanja
Bonampak
Piedras Negras
La Florida
El Cayo
La Mar
El Chicozapote
Ptaschilan
USUMACINTA
Jonuta
Morales
Palenque
Finca Encanto
Santa Ton
Tonina
Sta Elena Poco Uinic
Comitan
Tenam
Chiptulic
Salines de los Nuevos Cerros
Izapa
Quirigua
Los Higos
Copan

FIGURE 1

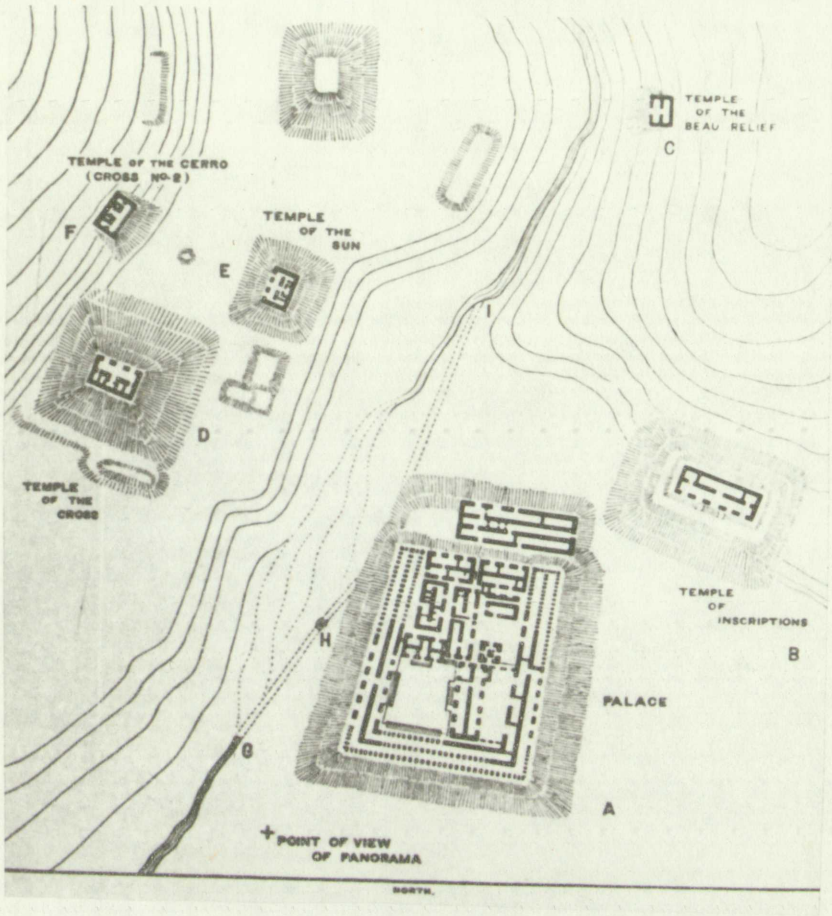
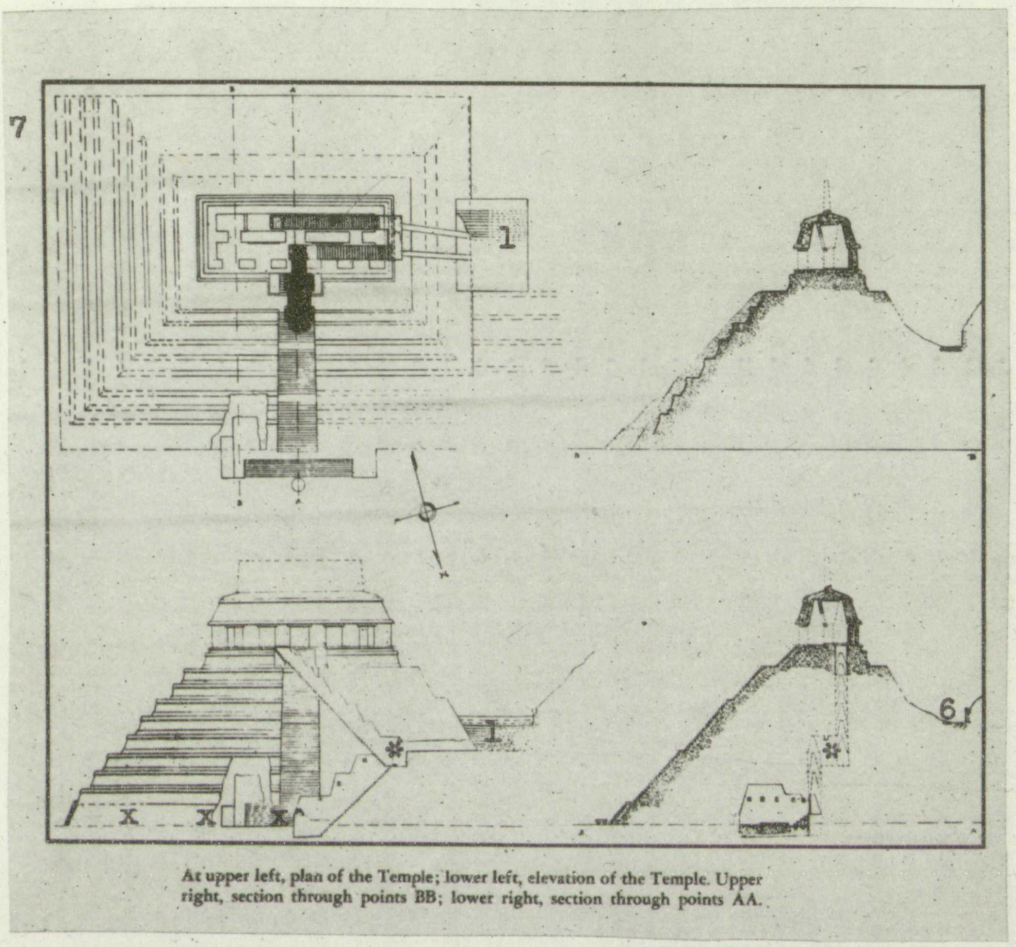


FIGURE 2

FIGURE 3



At upper left, plan of the Temple; lower left, elevation of the Temple. Upper right, section through points BB; lower right, section through points AA.

FIGURE 4

(1) Pit 1

(6) Pit 6

(7) Pit 7

(*) Within pyramid

(x) North face of pyramid

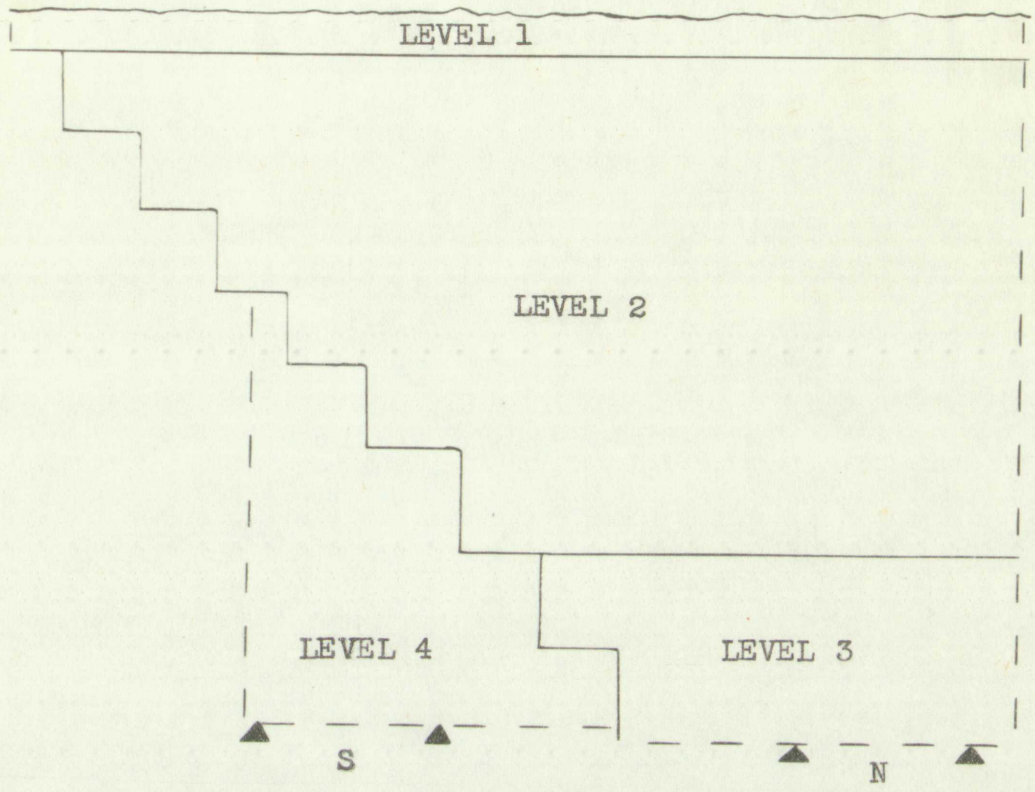


FIGURE 5

(Level 1) Surface (0-5 inches)

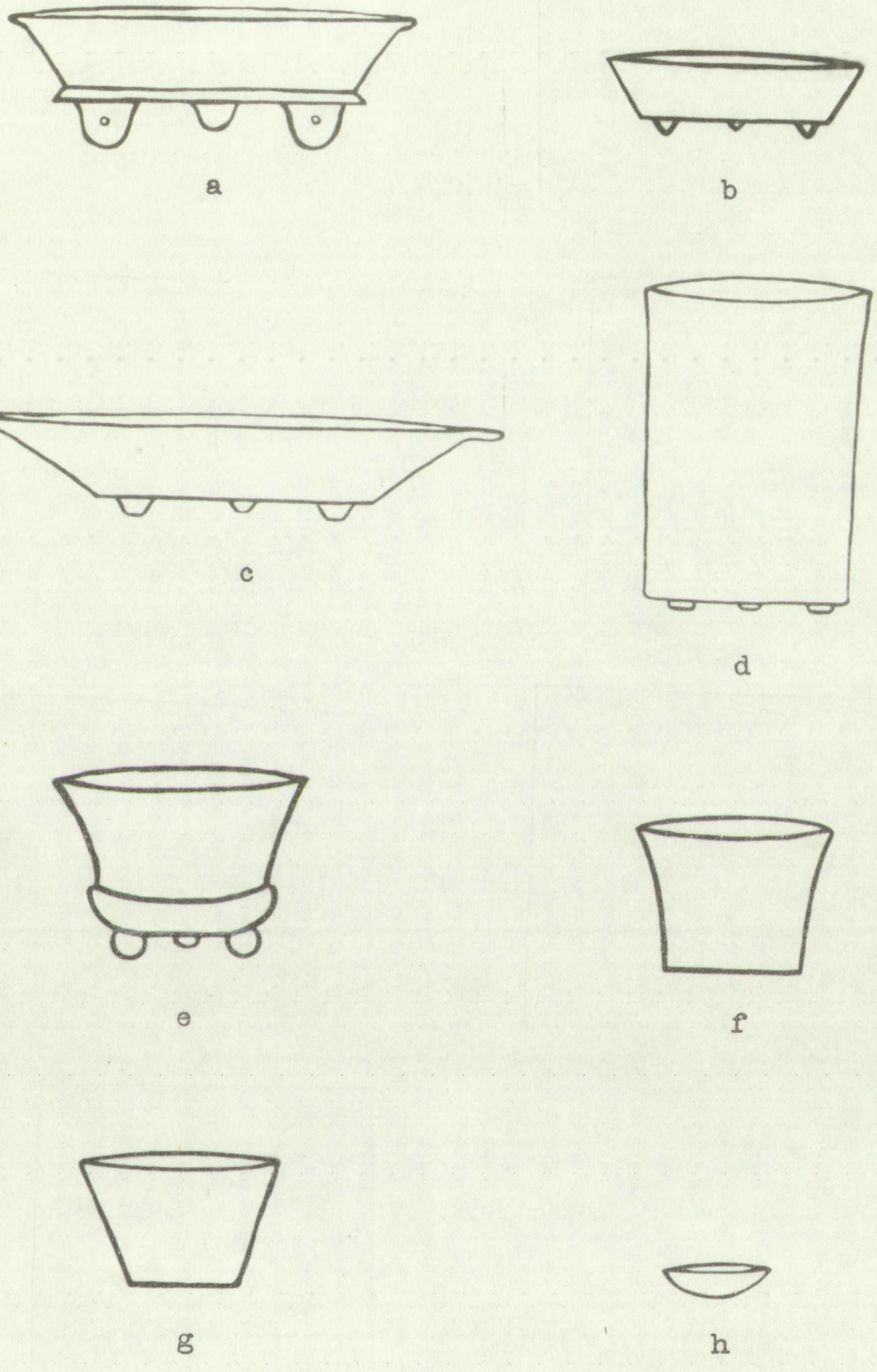
(Level 2) Fill over stairway and earlier floor, building up level of plaza (5-75 inches)

(Level 3) Fill under stone layer identified as floor (75-100 inches)

(Level 4) Under and behind portions of steps 4-8, removed in exposing south tunnel

(S) Opening of south tunnel onto plaza

(N) Opening of north tunnel onto plaza



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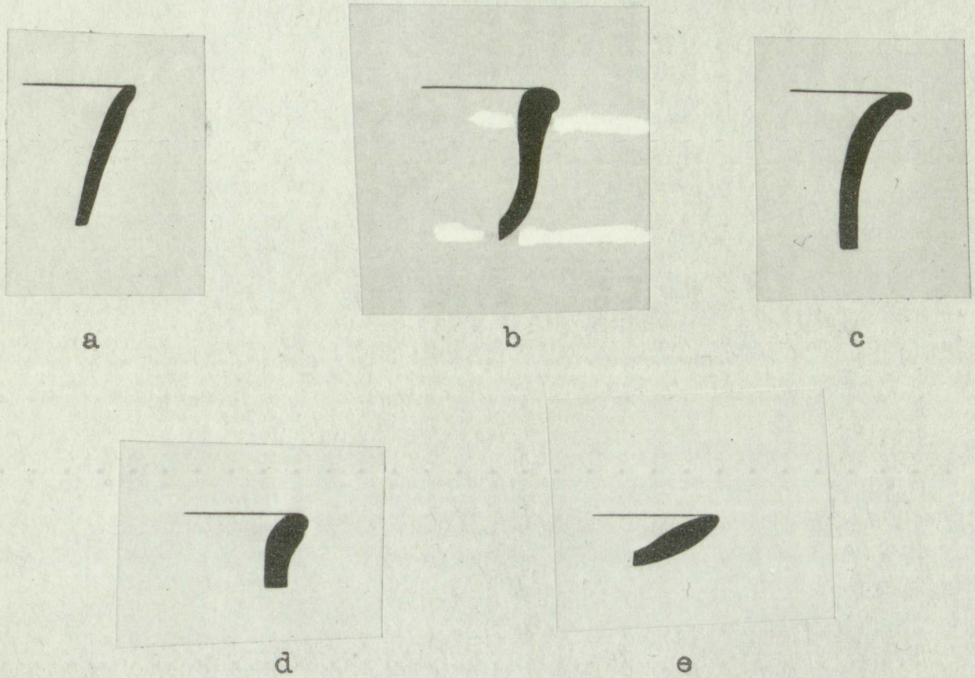
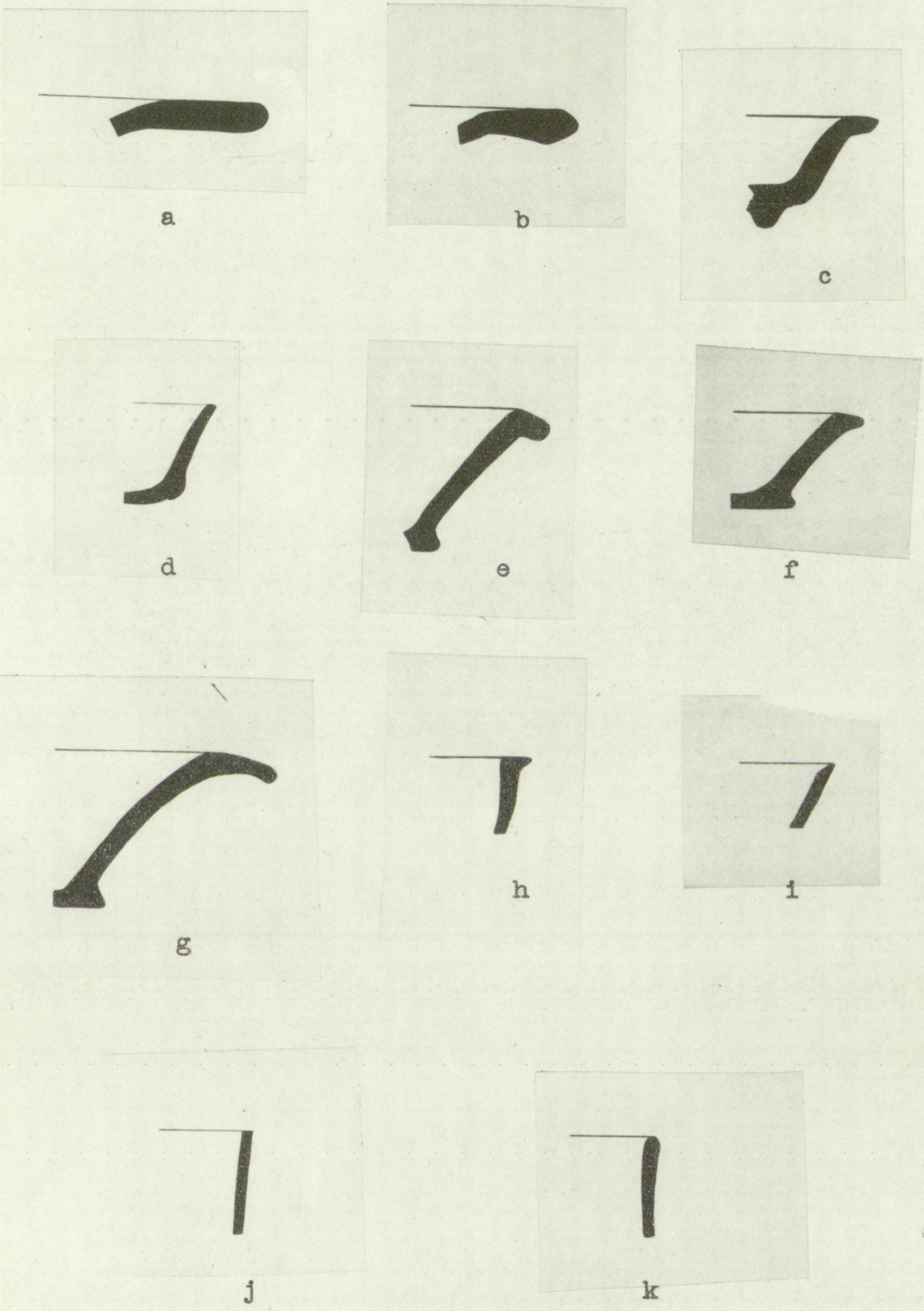


FIGURE 7



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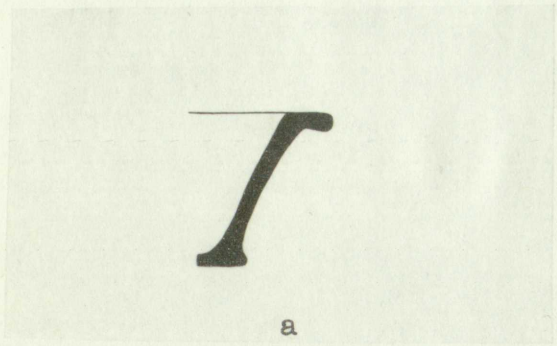

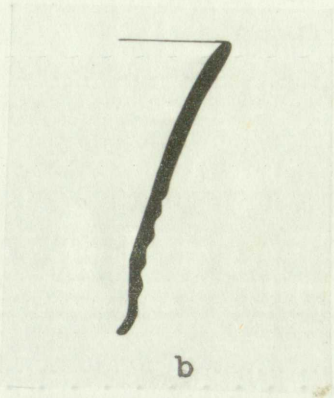

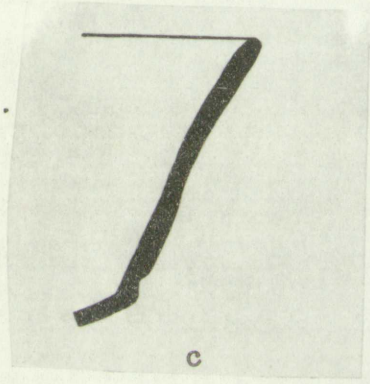

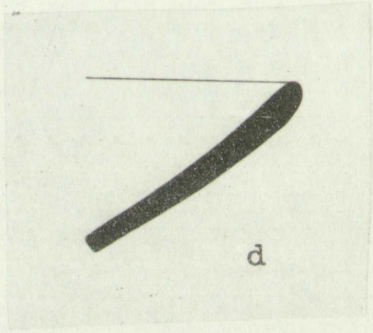

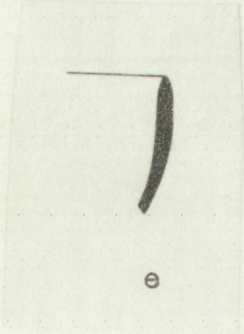

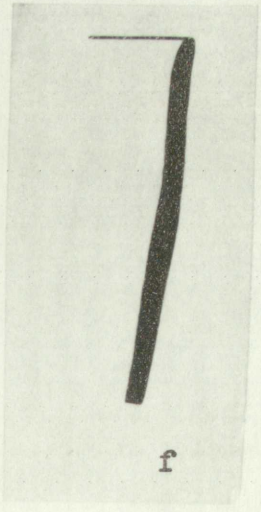

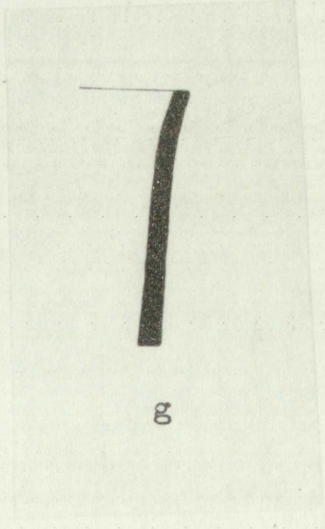

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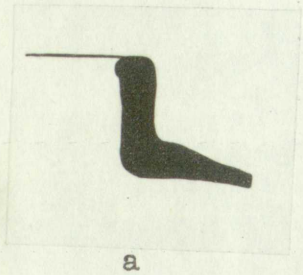

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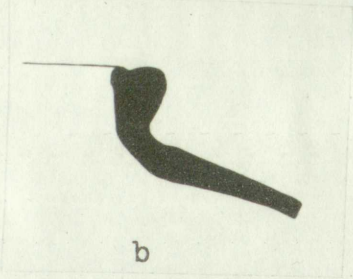

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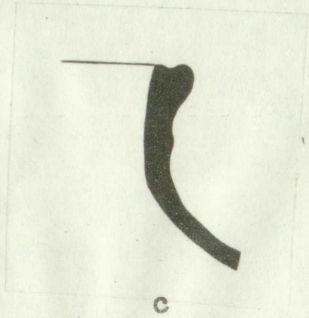

c

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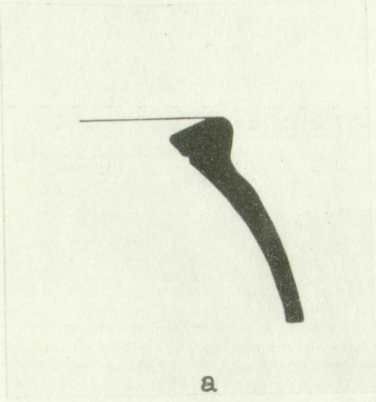
FIGURE 10



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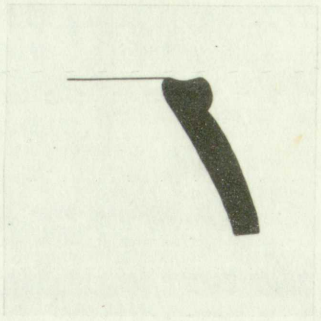

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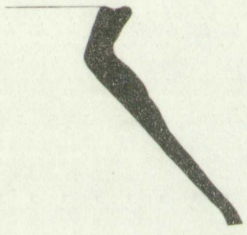

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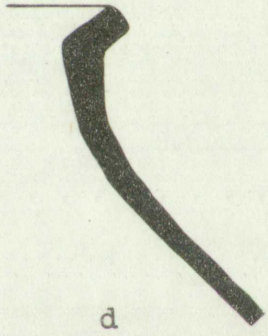

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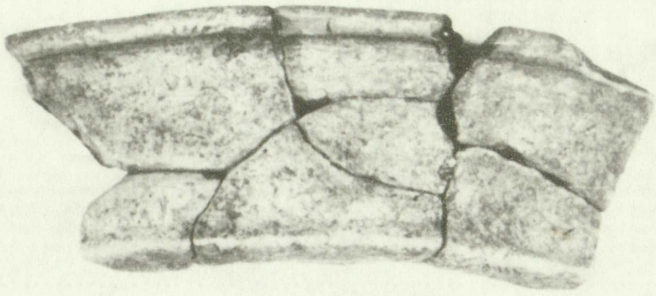

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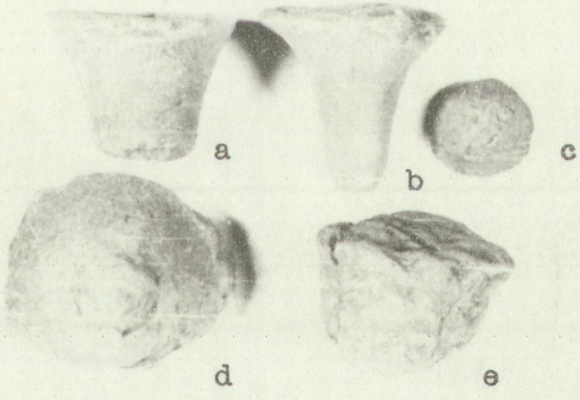

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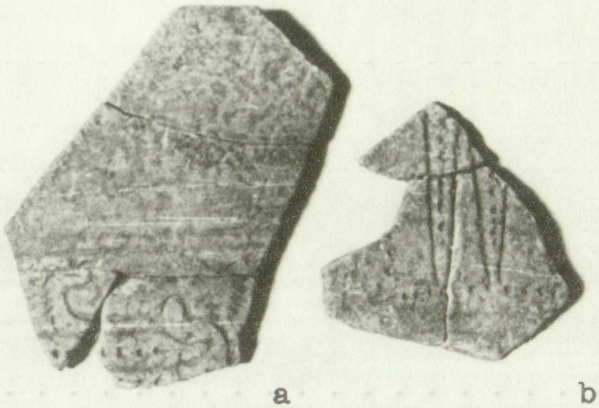

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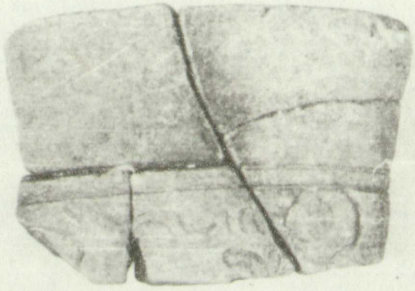

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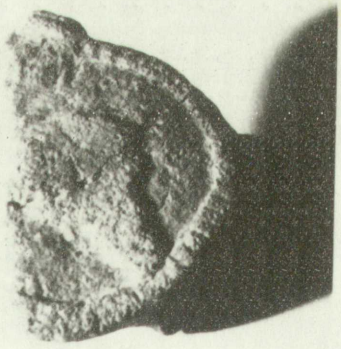

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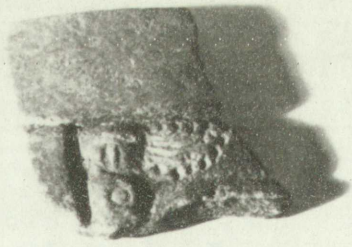

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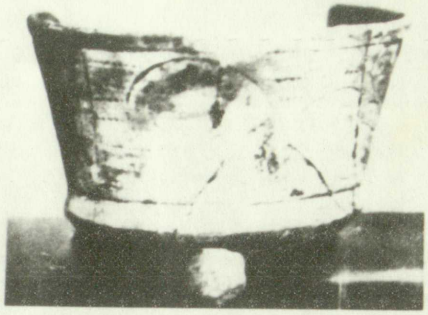

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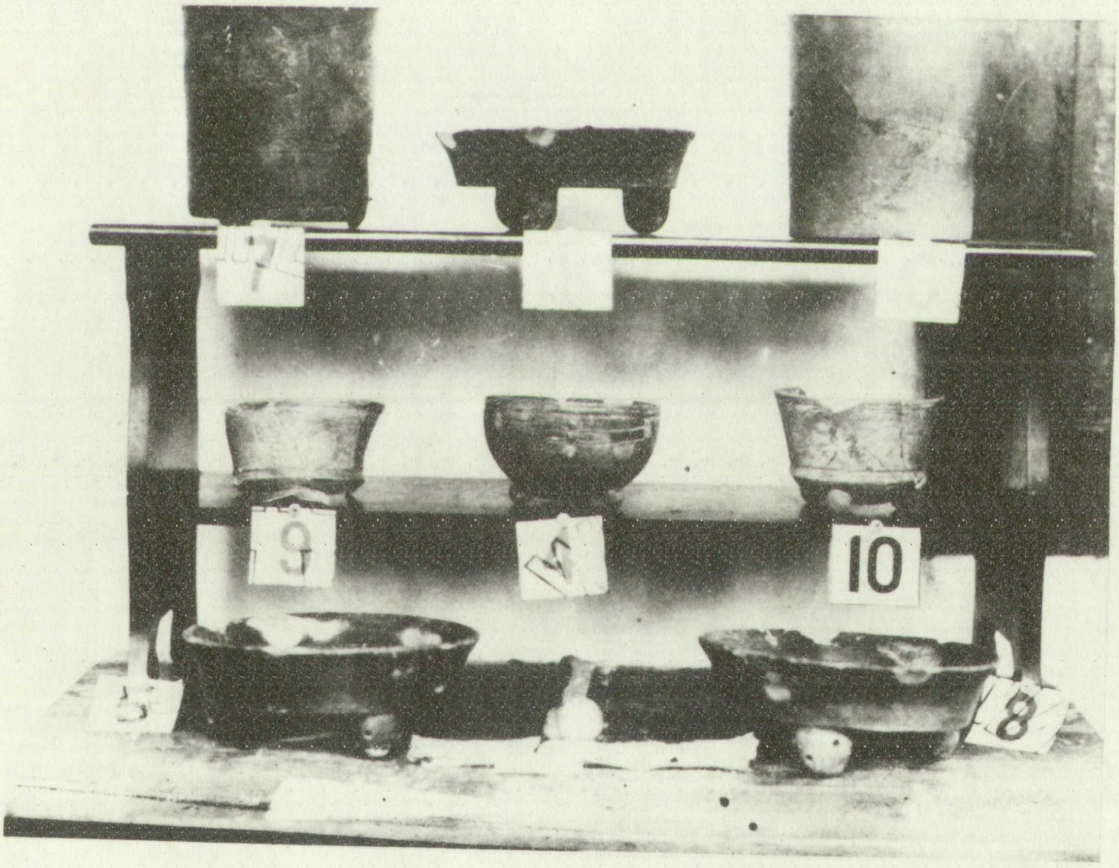

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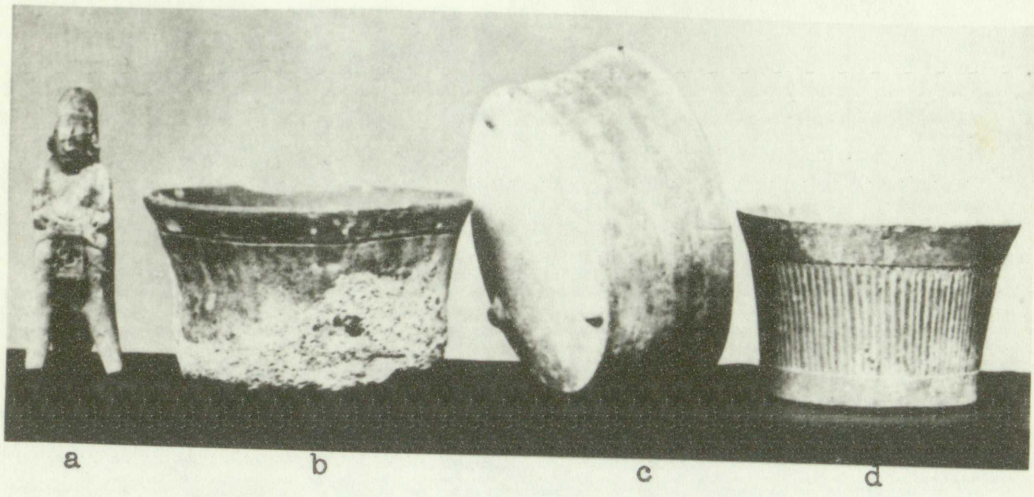

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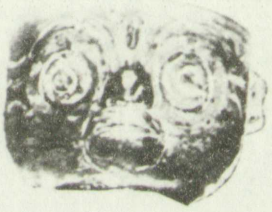


FIGURE 21

FIGURE 22

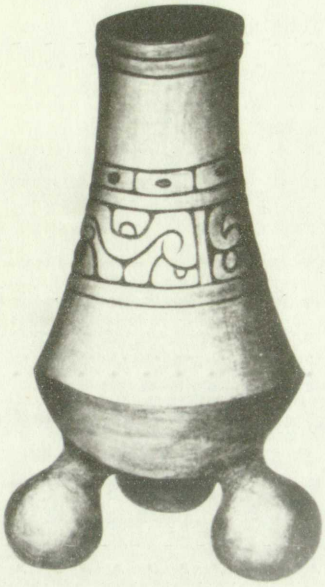


FIGURE 23

FIGURE 24

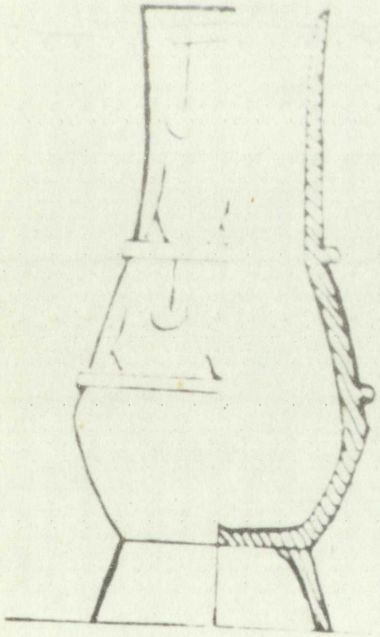


FIGURE 25

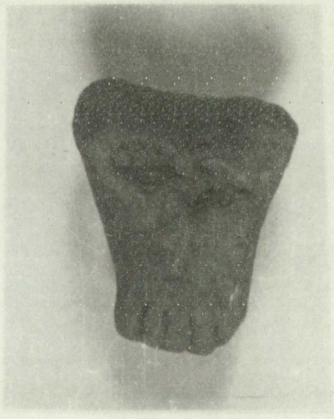
FIGURE 26

FIGURE 27

FIGURE 28

FIGURE 29

FIGURE 30



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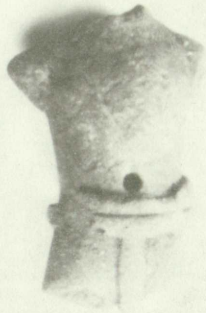

FIGURE 32

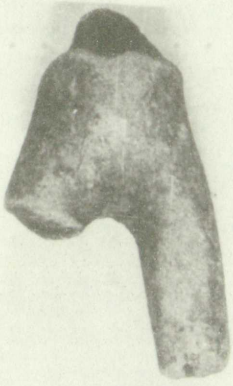

FIGURE 33

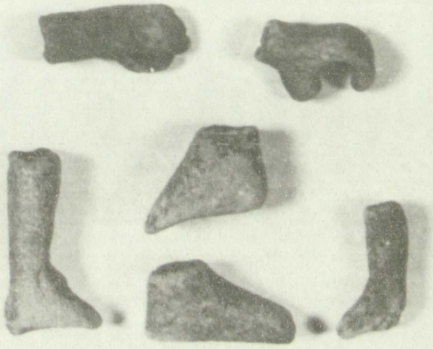

FIGURE 34

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FIGURE 48

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