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**The Archaeology of Early Formative Chalcatzingo, Morelos, México,
1995**



Research Year: 1995

Culture: Olmec

Chronology: Early Pre-Classic

Location: Morelos, México

Site: Chalcatzingo

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Abstract

This research project reports on the earliest monumental constructions at the site of Chalcatzingo, Morelos. The site of Chalcatzingo, located 120 kilometers southeast of México City in the state of Morelos, is situated at the base of two large hills on the only good expanse of agricultural land for many miles.

Resumen

Este proyecto de investigación informa sobre las construcciones monumentales más tempranas en el sitio de Chalcatzingo, Morelos. El sitio de Chalcatzingo, ubicado a 120 kilómetros al sureste de la Ciudad de México en el estado de Morelos, está situado en la base de dos colinas grandes en la única extensión de tierra agrícola buena por muchas millas.

Submitted 12/01/1997 by:

Maria Aviles

Introduction

Monumental architecture, consisting of earthen platform mounds sometimes faced with stone, began appearing in Mesoamerica around 1300 B.C. during the Early Formative Period (1500-900 B.C.). Monumental architecture has been identified at several sites, but rarely in Central México, a region which later saw the first development of urbanism and the largest pyramids in México. This research project reports on the earliest monumental constructions at the site of Chalcatzingo, Morelos. The site of Chalcatzingo, located 120 kilometers southeast of México City in the state of Morelos, is situated at the base of two large hills on the only good expanse of agricultural land for many miles ([Figure 1](#)). Chalcatzingo provides a unique opportunity to investigate the form and function of monumental architecture since it is the only known Central Mexican site with evidence of monumentality in the Early Formative Period (Grove, 1984; 1987; Grove et al., 1976).

Previous research at the site of Chalcatzingo was carried out from 1972-1976 (Grove, 1984; 1987; Grove *et al.*, 1976). Emphasis was placed on uncovering the Middle Formative Period (900-500 B.C.). Numerous platform mounds, houses, burials, carved stone monuments, ceramics, and figurines were discovered by this project. Investigations of Chalcatzingo's settlement pattern, environment, agricultural practices, trading patterns, and social organization were also conducted. Additionally, clues to the preceding Early Formative Period (1500-900 B.C.) were also uncovered. Two Early

Formative platform mounds were discovered in test trenches, but not excavated due to a lack of time.

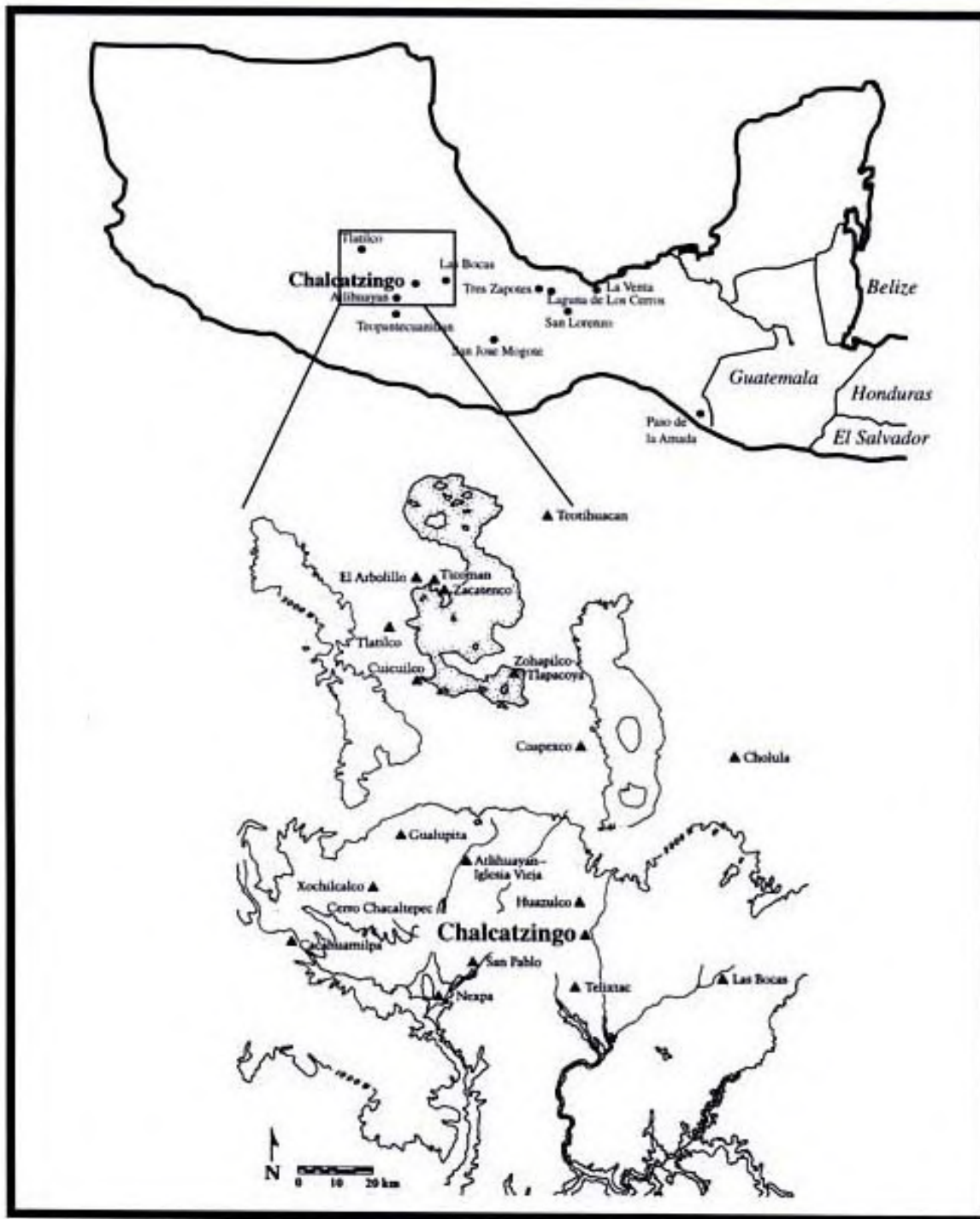


Figure 1. Map of Mesoamerica indicating the location of Chalcatzingo (Grove 1987:5).

The research objectives of the 1995 project were to uncover one of these Early Formative platform mounds at Chalcatzingo along with its associated structures, artifacts, and features. The excavations provided data on the Early Formative occupation of Chalcatzingo, and yielded information on the nature and role of monumental architecture at the site: Did the platform mounds serve as substructures for chiefly residences or public buildings? What are the types of activities associated with these platform mounds? How did these platform mounds change over time? The data yielded by the excavation of the platform mound was also used to examine theories of the rise of sociopolitical complexity at Chalcatzingo.

Results of Field Investigations

In the summer of 1995, investigations were carried out on Terrace 6 ([Figure 2](#)) for a period of two months. The Early Formative platform mound was excavated in order to collect data on its size, construction technology, occupational history, and other details. Additionally, other areas of Terrace 6 were chosen for testing in order to identify zones of Early Formative activity which may be associated with the platform mound, or which may represent discrete occupations. Three separate areas were explored and a total of 11 units was excavated - nine around the platform mound and two test pits ([Figure 3](#)). A total of 38.42 m³ of dirt was excavated during the 1995 season of fieldwork ([Table 1](#)).

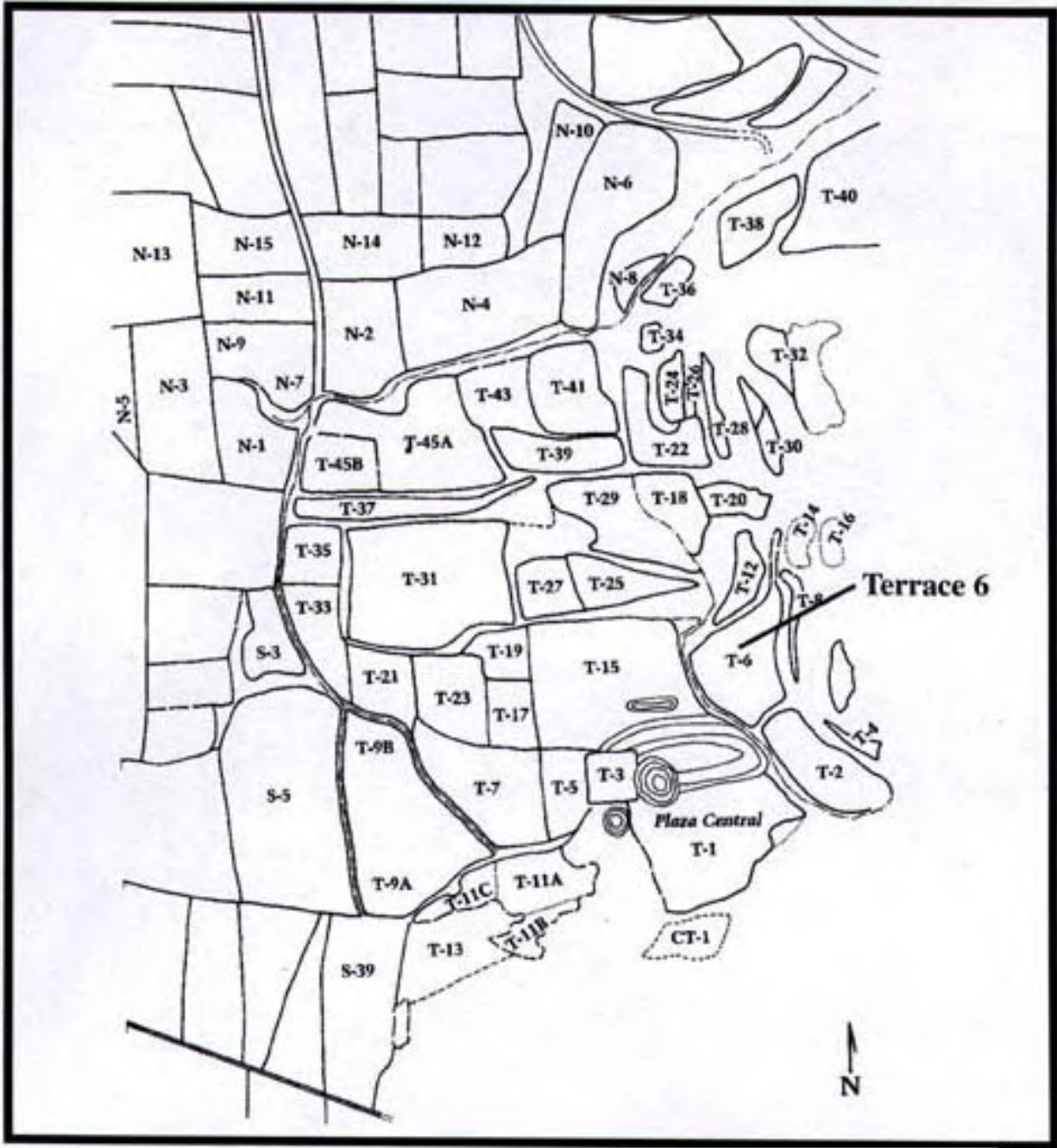


Figure 2. Map indicating the location of terraces at Chalcatzingo, and specifically Terrace 6 (Grove 1987:23).

Table 1 Total Volume of Dirt Excavated during the 1995 Field Season

Area of Terrace 6	Unit	Dimensions (m)	Level	Depth (cm)	Total Volume (m ³)
Test Pit #1	2	1 x 3	1	0-80	3.60
			2	80-120	
Test Pit #2	3	1 x 3	1	0-51	7.53
			2	51-71	
			3	71-131	
			4	131-214	
			5	214-219	
			6	219-251	
Platform Mound	5	1 x 2	1-2	0-99	4.00
			3	99-218	
			4-5	140-164	
			6	164-220	
			7	180-200	
	6	1 x 2	1-2	0-83	3.54
			3	83-130	
			4-5	130-170	
			6	151-173	
			7	170-177	
	7	1 x 2	1-2	0-105	6.10
			3	105-125	
			4-5	110-145	
			7	115-165	

			6-6A	165-185	
			6	185-205	
			6A-8	205-225	
			6A-9	225-245	
			10	245-250	
			11	245-265	
			12	265-305	
	8	1 x 1	1-2	0-70	1.40
			3	70-100	
			5	100-120	
			7	97-140	
	9	1 x 1	1-2	0-80	1.66
			3	80-110	
			5	115-135	
			6	135-164	
			7	154-166	
	10	1 x 1	1-2	0-75	2.01
			3	75-164	
			5	164-184	
			7	164-201	
	11	1 x 2	1-2	0-70	3.60
			3	70-85	
			5	85-175	
			6	148-180	
	12	1 x 1	1-2	0-64	1.52
			3	64-104	

			5	104-155	
			7	132-152	
	13	1 x 2	1-2	0-85	3.46
			3	85-170	
			5	125-141	
			7	139-173	
Total Volume					38.42

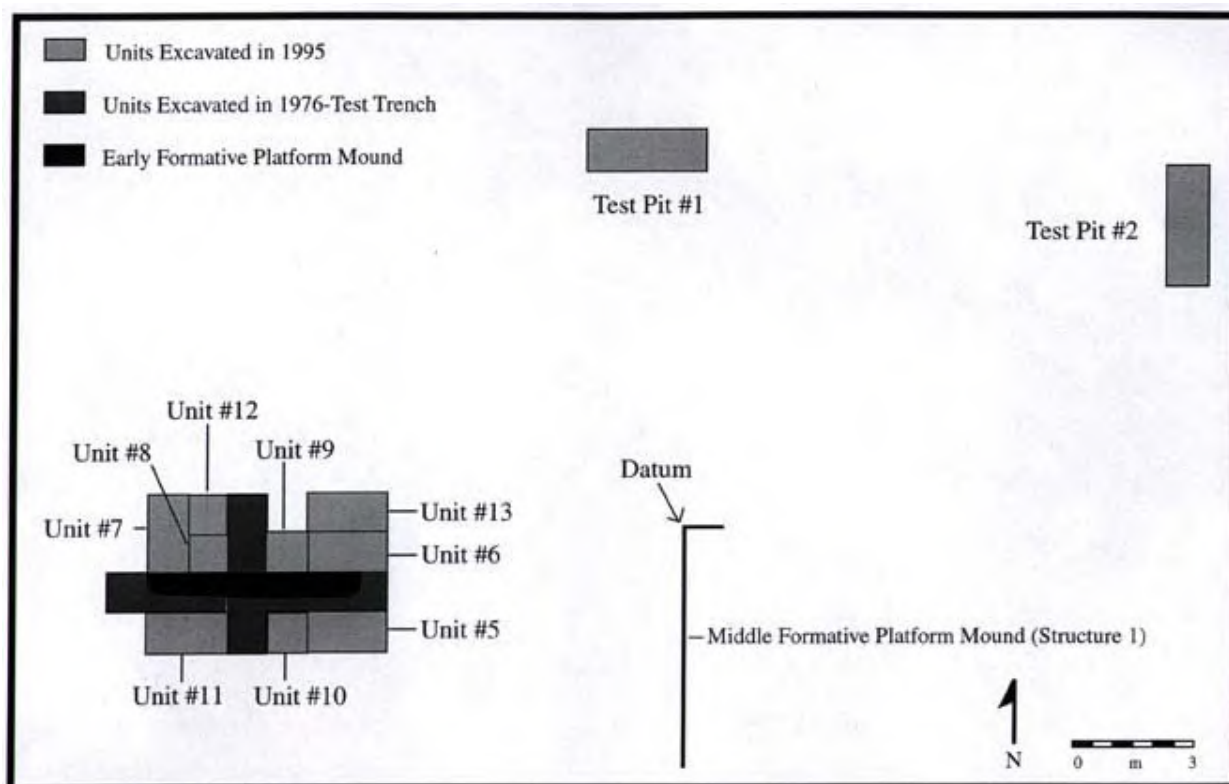


Figure 3. Location of the excavation units & test pits on Terrace 6.

Excavations of the Platform Mound

In order to investigate the platform mound, the test trench that was excavated on Terrace 6 by the previous Chalcatzingo project in 1976 was first re-opened. Next, a series of 1 x 1 meter and 1 x 2 meter units was placed alongside the trench to expand

the horizontal area. The position of these pits was determined by following the outline of the platform mound around its perimeter in order to completely expose the structure. A total of 13 stratigraphic levels were uncovered in this area ([Figure 4](#)).

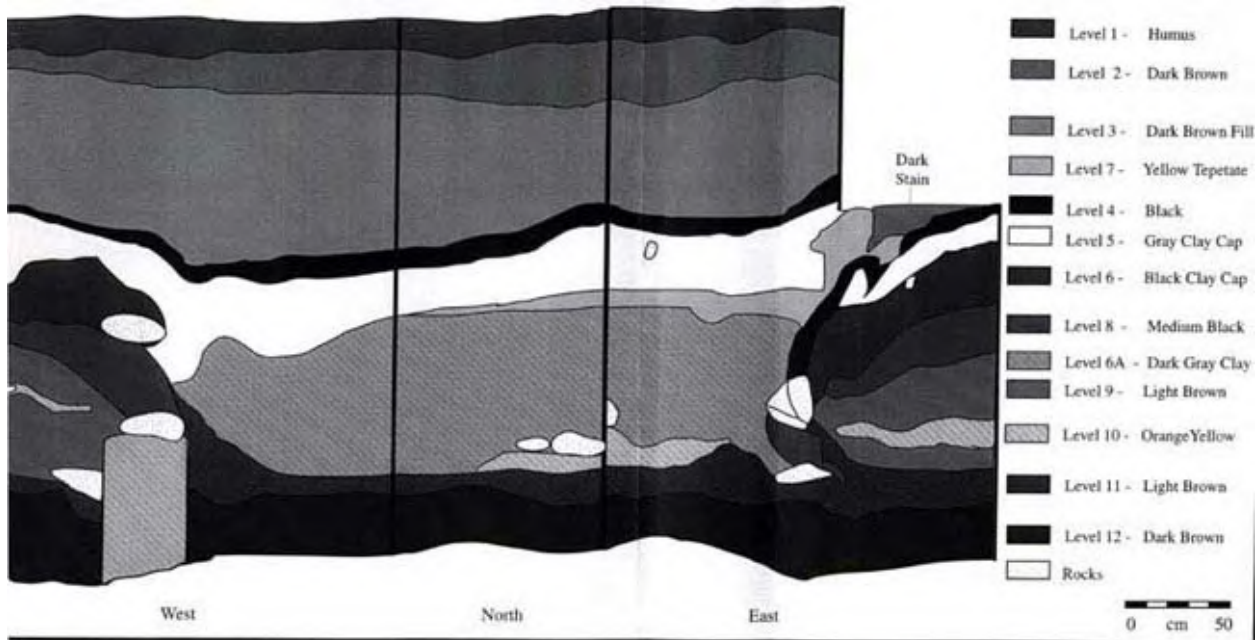


Figure 4. Profile drawings of Unit #7 indicating the stratigraphic profile of the platform mound excavation area.

The excavations revealed that the platform mound was composed of an earthen core and faced with stones, some of which were worked and some of which were rough river cobbles ([Figure 5](#)). These were held together using a mud mortar, but there did not appear to be any plastering or facing on the stones.



Figure 5. Photograph of Terrace 6, Structure 3, a stone-faced Early Formative platform mound.

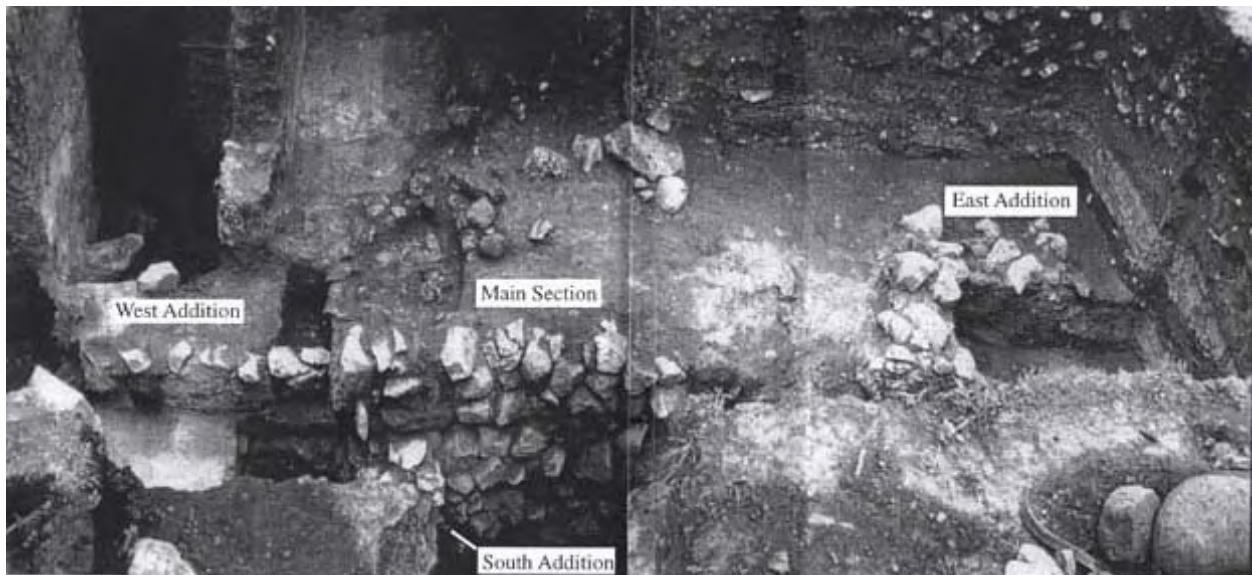


Figure 6. Photograph of Early Formative platform mound on Terrace 6.

Presently, the main section of the platform mound measures 3.5 m long and 2.5 m wide, and the stone wall measures 1 m in height. However, excavations revealed that the

platform mound had a complex construction sequence marked by several additions and expansions to the original structure (Figure 6). Three lower stages were added to the main section on its east, west, and north sides, bringing the total length of the platform to 5.5 m. These additions were not as substantial as the main section of the platform as they were only composed of a single layer of stones. Presently, it is not known whether these expansions were contemporary with the main section, or whether they represent later additions. However, they indicate the platform mound was a multi-stage structure.



Figure 7. Photograph of colored clay caps.

Excavations also revealed that the platform mound had been capped by several layers of different colored clays including black, gray, yellow, and dark brown (Figure 7). These clay levels functioned to cap the surface of the mound and cover the stone-facing. In addition, they most likely served as floors or surfaces of the platform. Most importantly, several features were found in the uppermost gray clay cap (Figure 8). Several postholes, wall trenches, and pits in the clay represented the remains of a building(s) which had been erected on the summit of the platform. Unfortunately, a clear pattern could not be discerned in the features because a large portion of the surface of the platform had been removed during previous excavations. However, they indicate that a structure had once been erected on the platform mound which may have functioned as the residence of a chief or other high-ranking elite; alternatively, it may have been a temple, men's house, or other public structure.

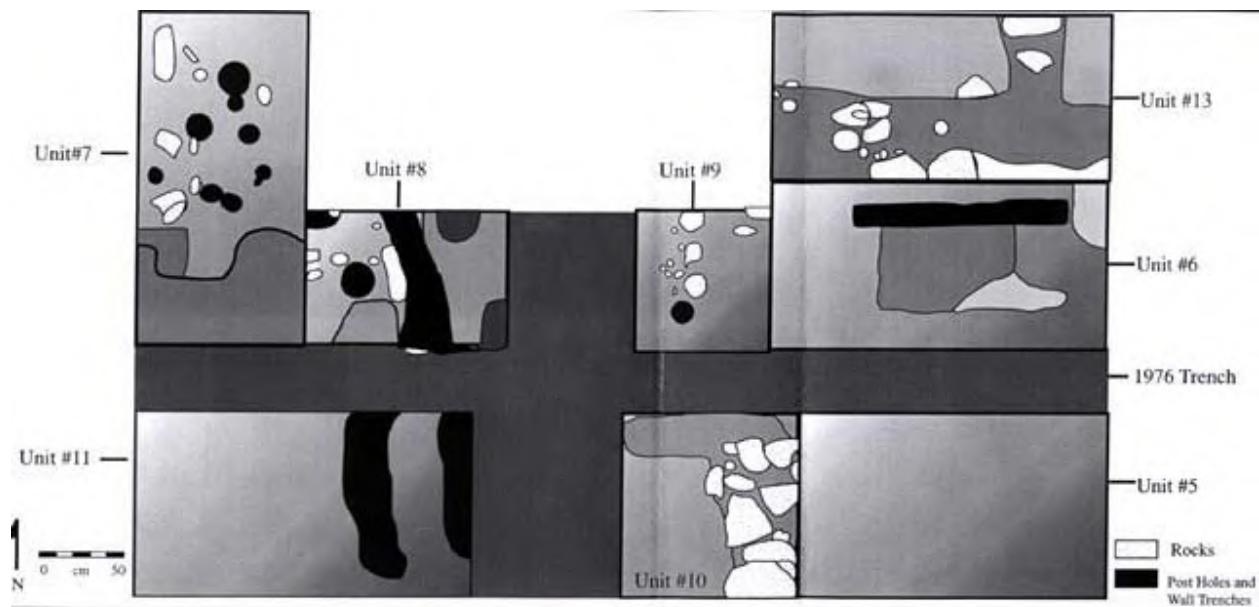


Figure 8. Features of platform mound which represent a building.

Excavation of the Test Units

In addition to the excavations of the platform mound, test pits were placed in the nearby vicinity to locate other areas of Early Formative activity.

Test Pit #1 was placed nine-ten meters to the north, and .5 m east to 2.5 m west of the datum. The pit measured 1 x 3 meters and was only excavated to a depth of 120 cm, with two natural levels observed in the stratigraphy (Figure 9). A small amount of very eroded ceramics were recovered from this unit. However, several concentrations of rocks were discovered, some of which formed parallel lines of stone, and other

distinctive groupings ([Figure 10](#)). Due to the large size of the stones, evidence of worked edges, and their layout, they were classified as the foundations for the walls of a structure. However, since all of the material recovered from this unit dated to a much later period of time than the one which was the focus of this research project, the unit was closed to preserve the features for future research.

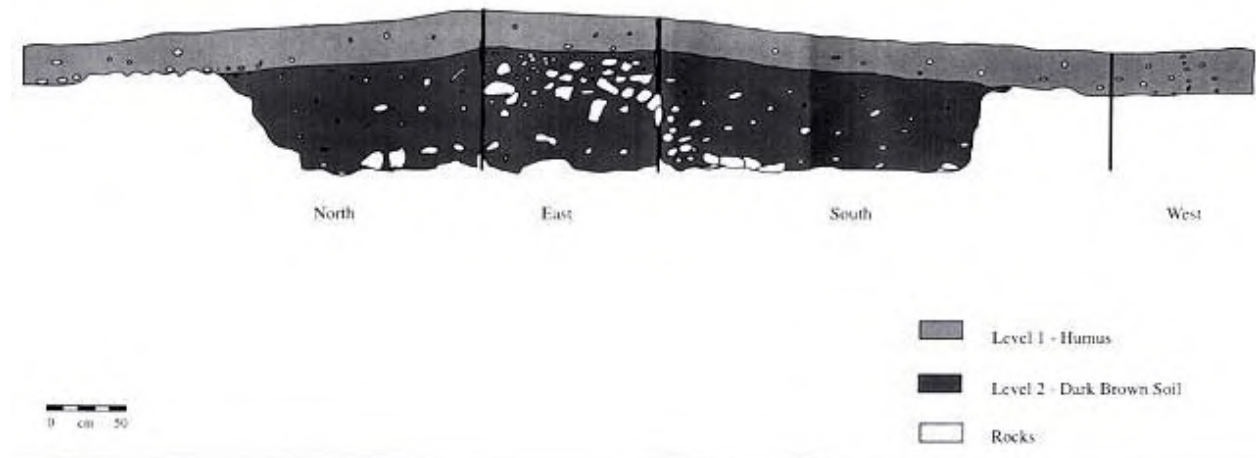


Figure 9. Profile drawings of Test Pit #1.

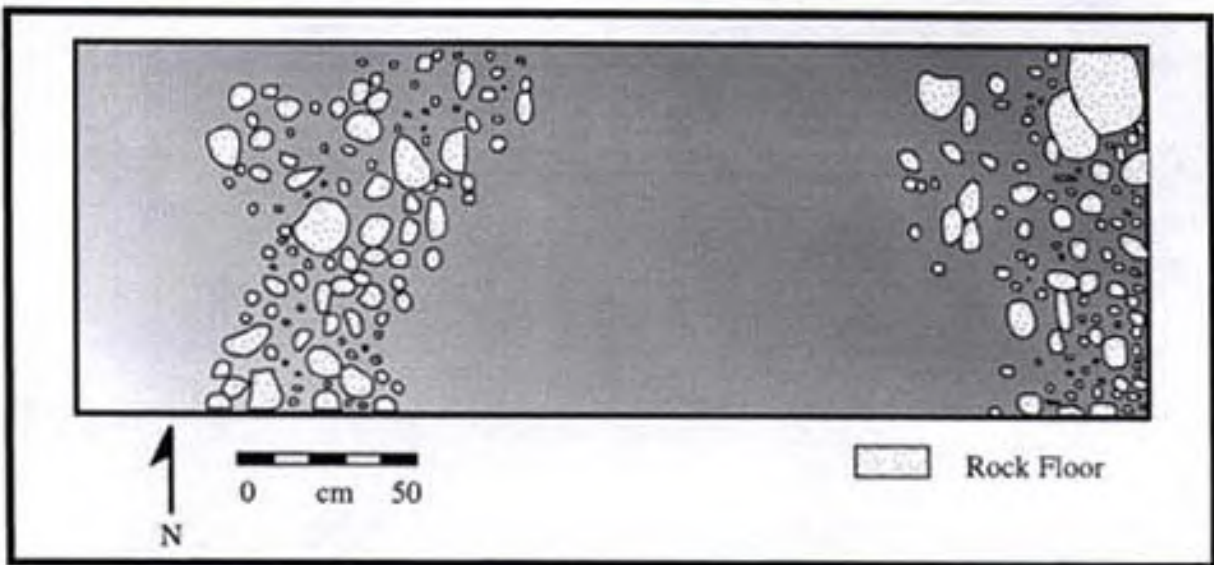


Figure 10. Test Pit #1, Level 1, 0-80 cm. Parallel lines of stone possibly representing a house foundation.

Test Pit #2 was placed six to nine meters to the north, and twelve to thirteen meters to the east of the datum, placing it approximately 22 m to the east of the platform mound. The unit measured 1 x 3 meters, and reached a depth of 251 cm. There were a total of six stratigraphic levels uncovered in this pit ([Figure 11](#)). The artifacts recovered from this unit were very rich and varied. For example, some of the items which were recovered include small spheres of clay which may have been pellets used in blowguns used during hunting, or perhaps they were rattles in musical instruments; pieces of red cinnabar used to make red pigment; a small, rectangular fragment of a polished iron-ore plaque which was used as a mirror; fragments of human and animal bone; and two pieces of greenstone. The large quantity of bones and the rich, organic quality of the soil indicate Test Pit #2 is located in a midden.

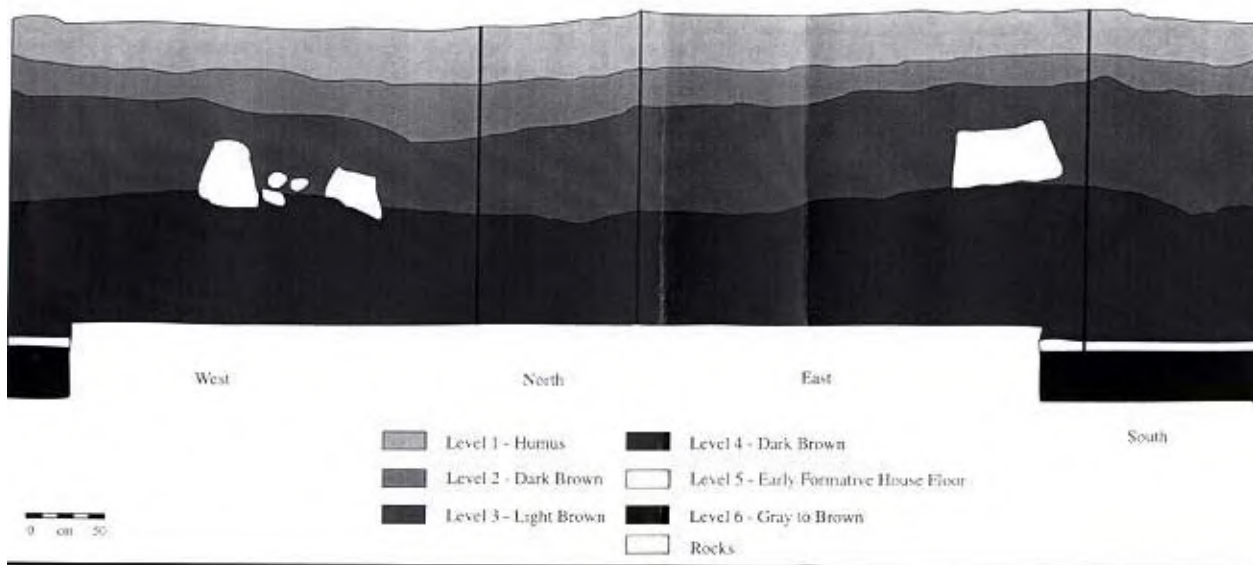


Figure 11. Profile drawings of Test Pit #2.

One of the most exciting finds of the field season, a possible house, was made at a depth of 214 cm in Level 5 of this unit. A layer of 4-5 cm of grayish-white, silty, compact soil was observed ([Figure 12](#)). Resting on this surface were many ceramic sherds and charcoal fragments. This layer was interpreted as a house floor due to the compact nature of the soil, the significant break in stratigraphy from levels above and below, and the cultural material that was found on its surface. Based on the analysis of the ceramics and figurines discovered in this unit, it is believed the house also dates to the Early Formative Period. Due to the presence of exotic goods such as greenstones and a mirror fragment, this structure may be an elite house.



Figure 12. Early Formative house floor discovered in Test Pit #2.

Excavation of New Monument

The presence of a stone with carved lines was brought to the attention of the archaeologists by one of the local villagers. Excavations were conducted in this area and a new monument was discovered ([Figure 13](#)). The monument measures 192 cm long, 50 cm at the top, and widens to 80 cm at the bottom. Unfortunately, it was broken into several large pieces and was highly eroded. Nevertheless, the rough outline of a standing figure can be discerned ([Figure 14](#)). The person is facing towards his right, with the left arm lowered and right arm raised above the head. The hands are touching a column or other object whose exact form is difficult to determine. The personage is elaborately dressed in a tunic, long flowing cape, belt, and towering headdress.



Figure 13. Photograph of Monument 32.

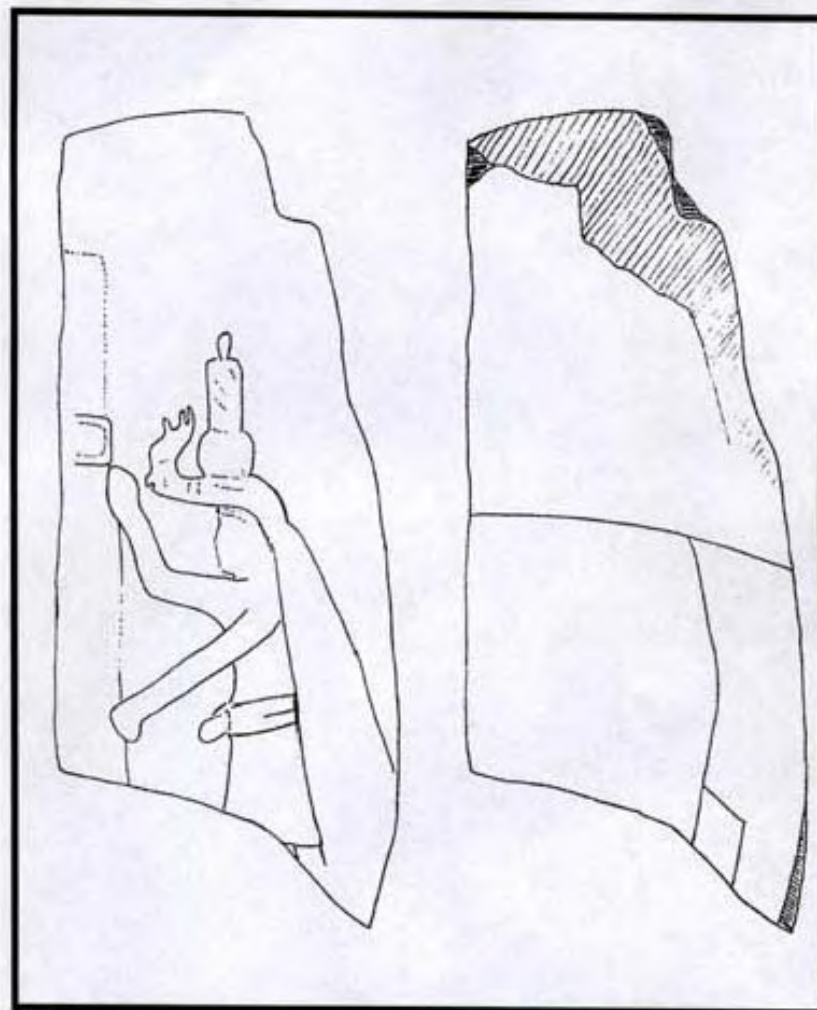


Figure 14. Drawing of Monument 32 (Drawing by Dr. Susan Gillespie).

The newly discovered carving was designated as Monument 32 in Chalcatzingo's catalog of monuments. Interestingly, it is very similar to Monument 21 which depicts a woman wearing elaborate clothing, holding her hands in a similar pose, and standing in front of a column. The two monuments appear to be mirror images of one another, perhaps representing a male and female who were related in some way (Figure 15). Cyphers Guillen (1984:115) has indicated the portrayal of a woman on Monument 21 commemorates a marriage alliance between the elite of Chalcatzingo and a nearby area, while Grove (1989) has identified this site as Teopantecuanitlán, Guerrero. The male personage on Monument 32 may be her marriage partner, and may also come from this locale.

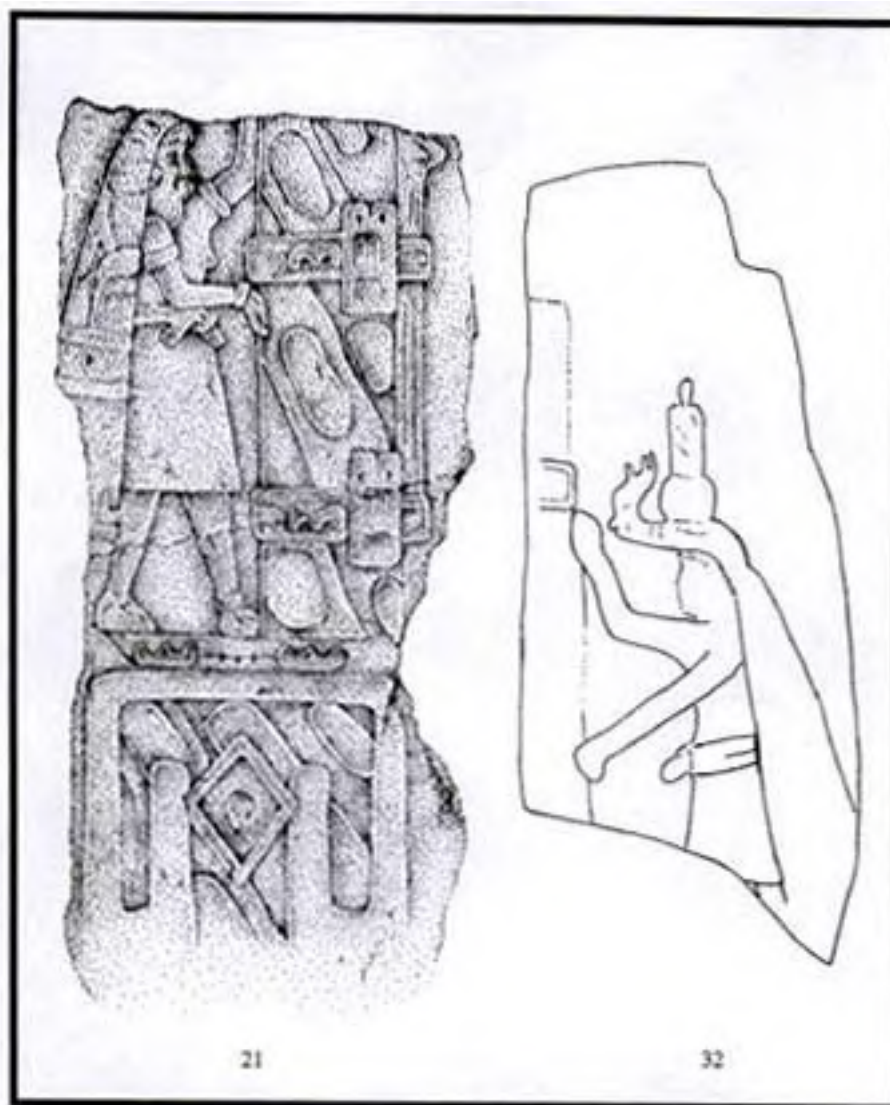


Figure 15. Monuments 21 & 32 from Chalcatzingo (Grove 1984:60 and Gillespie).

Results of Laboratory Investigations

During the course of the field investigations, the excavated materials were subjected to preliminary processing. All of the artifacts were washed, cataloged, and stored. At the completion of the field research, analysis of the recovered materials was conducted for a period of two months following the typology established by the previous Chalcatzingo project (Cyphers Guillen, 1987a; 1992). Due to the large quantity of materials recovered from the excavations, (approximately 30,000 sherds), it was decided to analyze a sample of the total number of ceramics to construct a ceramic typology and to become familiar with the material. The ceramics from Unit #7 were chosen for analysis because this was the only pit excavated to bedrock, it yielded the greatest quantity of sherds, and this was the only pit to have all of the stratigraphic levels represented. Consequently, it yielded the best example of ceramics from all of the time periods, especially the Early Formative levels.

The total number of sherds analyzed was 10,200 ([Table 2](#)). Each sherd was first placed in its appropriate typological category, and then tabulated according to its stratigraphic level. Although there were 28 different types, the vast majority pertained to the Early Formative Period, confirming an early date for the platform mound. Additionally, the rim sherds were also tabulated and typed ([Table 3](#)). Once again, most of the rim sherds were dated to the Early Formative. The same procedure was followed for the vessel bases, decorated sherds, and exotically shaped sherds.

Analysis of the ceramics found with the platform has confirmed an Early Formative date for the structure, however, this remains tentative pending the processing of radiocarbon dates. Interestingly, three separate occupations for the platform mound were uncovered. The first occupation (Level 10-12), which dated to the Early Formative Period, took place directly over the bedrock of the site and represents the initial occupation of the terrace before the erection of the platform. The second occupation (Levels 4-9) represents the construction phase and life history of the platform mound. The final occupation (Levels 1-3), which corresponds to the Middle Formative Period, postdates the platform mound and represents later building activity in this same location. Significantly, this final occupation somewhat disturbed the platform mound by removing portions of the clay caps and other stratigraphic levels.

Table 2. Frequency of Ceramic Types by Level

	Level 12	Level 11	Level 10	Level 6A-9	Level 6A-8	Level 6	Level 6-6A	Level 7	Levels 4-5	Level 3	Levels 1-2	Total
	265- 305	245- 265	245- 250	225- 245	205- 225	185- 205	165- 185	115- 165	110- 145	105- 125	0- 105	
Unslipped/Eroded	1779	600	6	140	43	26	5	29	28	513	497	3666
Cuautla Brown	1701	671	3	127	71	28	24	17	31	22	0	2695
Too Small	953	585	0	38	64	23	6	16	33	223	0	1941
Cuautla Red	509	258	3	35	10	4	4	1	5	24	3	856
Coarseware	121	71	1	17	0	0	0	0	1	11	0	222
Peralta Orange	0	0	0	1	0	0	0	1	0	114	66	182
Tenango Brown	97	43	0	7	1	0	0	2	2	0	0	152
Atotonilco Black	46	17	0	12	2	6	0	3	0	3	0	89
Cuautla Black Core	56	26	0	0	3	0	0	1	0	0	0	86
Buff	37	37	1	0	0	0	0	0	0	1	0	76
White Rim Black	17	8	1	5	0	0	0	0	0	2	1	34
Amatzinac White	0	0	0	3	0	0	0	1	2	21	4	31
Brickware	15	11	0	0	0	0	0	0	0	2	0	28
Cream	22	4	0	0	0	0	0	0	0	0	0	26
Unknown	10	4	0	1	0	0	0	1	0	3	2	21
Cuautla Brown Core	0	20	0	0	0	0	0	0	0	0	0	20
Buff and Black	6	10	0	2	0	0	0	0	0	0	0	18
Pavon Fine Gray	3	0	0	0	0	0	0	0	1	1	5	10
Laca	2	1	0	1	0	0	1	1	1	3	0	10
Early White	9	0	0	0	0	0	0	0	0	0	0	9
Brown	0	0	0	0	0	0	0	0	0	6	2	8
Sparkly Temper	3	0	0	0	2	0	0	0	0	0	0	5
Carrales Coarse Gray	0	0	0	0	0	1	0	0	0	4	0	5
Black	0	0	0	0	0	0	0	0	0	4	0	4
Kaolin	2	1	0	0	0	0	0	0	0	0	0	3
Carved Gray	0	1	0	0	0	0	0	0	0	0	0	1

Mingo Fine Brown	0	0	0	0	1	0	0	0	0	0	0	1
Cement	0	0	0	0	0	0	0	0	0	1	0	1
Total	5388	2368	15	389	197	88	40	73	104	958	580	10200

Table 3. Frequency of Rim Sherds by Type and by Level

	Level 12	Level 11	Level 10	Level 6A-9	Level 6A-8	Level 6	Level 6-6A	Level 7	Levels 4-5	Level 3	Levels 1-2	Total
	265-305	245-265	245-250	225-245	205-225	185-205	165-185	115-165	110-145	105-125	0-105	
Unslipped/Eroded	125	50	0	13	1	1	1	1	3	46	23	264
Cuautla Brown	102	43	1	7	4	0	0	0	2	0	0	159
Cuautla Red	41	24	0	5	6	0	1	0	1	5	1	84
Tenango Brown	21	2	0	5	0	0	0	1	0	0	0	29
Peralta Orange	0	0	0	1	0	0	0	0	0	10	4	15
Coarseware	6	2	1	3	0	0	0	0	0	0	0	12
White Rim Black	4	0	1	2	0	0	0	0	0	2	1	10
Cuautla Black Core	6	2	0	0	0	0	0	1	0	0	0	9
Atotonilco Black	2	3	0	2	0	0	0	0	0	0	0	7
Amatzinac White	0	0	0	0	0	0	0	0	0	3	1	4
Laca	0	0	0	0	0	0	0	1	1	1	0	3
Cream	0	1	0	1	0	0	0	0	0	0	0	2
Buff and Black	1	1	0	0	0	0	0	0	0	0	0	2
Carved Gray	0	1	0	0	0	0	0	0	0	0	0	1
Brickware	1	0	0	0	0	0	0	0	0	0	0	1
Pavon Fine Gray	0	0	0	0	0	0	0	0	0	0	1	1
Cuautla Brown Core	0	1	0	0	0	0	0	0	0	0	0	1
Carrales Coarse Gray	0	0	0	0	0	0	0	0	0	1	0	1
Black	0	0	0	0	0	0	0	0	0	1	0	1
Total	309	130	3	39	11	1	2	4	7	69	31	606

Conclusion: Significance of Research and Future Plans

Excavations conducted in 1995 were successful in accomplishing the research objective of uncovering the platform mound. Investigations reveal that the platform mound on Terrace 6 at Chalcatzingo was a complicated structure with a long history of use and occupation. To date, the excavation data indicate that the platform measures at least 5.5 m long, 3 m wide, and 1.5 m in height. It was constructed during several building episodes which added lower stages and additions to the main structure. Analysis of the stratigraphic sequence and the ceramics indicate an Early Formative date for the platform. However, they have also revealed a long sequence of occupation of this area which both preceded and postdated the platform mound.

Whether it was built through voluntary communal effort or under the direction of a particular individual, the platform mound indicates the existence of a centralized authority who could amass the necessary materials and coordinate the labor of numerous individuals. Thus, the platform points to the emergence of complex society during the Early Formative Period at Chalcatzingo. Analysis of the ceramics, figurines, and other artifacts associated with the platform demonstrates close correspondence with similar materials from other sites in the Valley of México during this period of time (Vaillant, 1930; 1931; 1935). This indicates autochthonous development of sociopolitical complexity at Chalcatzingo and contradicts previous theories which postulated that cultural development at this site was the result of contact with the Olmec culture of the Gulf Coast (Bernal, 1969; Coe, 1965; Pina Chan, 1955).

Most importantly to this research project, the remains of buildings were detected on the summit of this platform mound. Although no definitive shape for the building was found to date, it nevertheless indicates that important structures had once been erected on the platform mound. This observation has accomplished the objective of determining the nature and role of monumental architecture at Chalcatzingo. It was determined that the purpose of platform mounds was to serve as substructures for the erection of important structures. This structure may have functioned as a public building due to the scarcity of artifacts, the inability to locate middens, trash pits, or other domestic refuse, and the lack of subfloor burials within or near its confines. However, at this early date, structures were most probably multiple-purpose facilities which served as both temples and chiefly residences. Thus, further research is necessary to clarify this issue.

The identification of monumental architecture and important buildings on their summits is significant to the understanding of sociopolitical development during the Early Formative of Mesoamerica. These structures have been excavated and analyzed in many regions of Mesoamerica such as Paso de la Amada, Chiapas (Blake, 1991; Lesure, 1997); San José Mogote, Oaxaca (Flannery and Marcus, 1976; 1983; 1994); San Lorenzo, Veracruz (Coe and Diehl, 1980; Cyphers Guillen, 1994); Teopantecuanitlán (Martinez Donjuan, 1985; 1986; 1994); and possibly at Tlatilco (Porter, 1953). Scholars have indicated that some of the buildings on the platforms served as chiefly domiciles while others functioned as public buildings such as men's

houses. There is no clear dichotomy of function for these structures, however, they indicate the appearance of an inegalitarian social organization which marked its status and power through monumental constructions.

Additional excavations on Terrace 6 have fulfilled the research objective of understanding the nature of Early Formative life at Chalcatzingo. Most notably, a house floor was discovered and partially excavated. This find is significant because it will provide much information on the domestic life of the ancient inhabitants of Chalcatzingo. Investigations of the house will provide insights concerning the domestic architecture, subsistence practices, food-preparation techniques, refuse disposal patterns, level of technology, economic practices, craft production, and other aspects of daily life. This will serve as an excellent contrast to the types of activities that were occurring on the platform mound which presumably concern administrative and elite matters.

The discovery of the house structure is also significant since only a handful of Early Formative houses from Central México have been excavated to date at sites such as Nexpa, Morelos (Grove, 1974), Zohapilco, México (Niederberger, 1976; 1987), and Coapexco, México (Tolstoy, 1989; Tolstoy and Fish, 1975). The data from this Chalcatzingo project will contribute to a better understanding of the nature of household level organization during the Early Formative. This data can then be compared to other regions of Mesoamerica where household data for this period of time already exist.

Future investigations at Chalcatzingo will focus on completing the research that was begun in this project. First, excavations of the platform mound on Terrace 6 will concentrate on exposing the complete surface of the platform mound, as well as gathering additional data on its associated building, features, and artifacts. Second, excavations of the house floor will also be completed. This structure was discovered during the final week of field work. Consequently, only a small portion was excavated for testing. Additional data will be gathered on its size, construction technology, occupational history, and any associated artifacts and features. Third, other areas of Terrace 6 will be explored to locate other zones of Early Formative activity. Finally, another Early Formative platform mound at Chalcatzingo will be excavated to provide comparative data to the one on Terrace 6 that was explored by this research project.

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