

## EXCAVATIONS OF AZTEC URBAN HOUSES AT YAUTEPEC, MEXICO

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*Our recent excavations at the site of Yau-tepec in the Mexican state of Morelos have uncovered a large set of residential structures from an Aztec city. We excavated seven houses with associated middens, as well as several middens without architecture. In this paper, we briefly review the excavations, describe each house, and summarize the nature of construction materials and methods employed. We compare the Yau-tepec houses with other known Aztec houses and make some preliminary inferences on the relationship between house size and wealth at the site.*

*En nuestras excavaciones recientes en el sitio de Yau-tepec en el estado mexicano de Morelos, encontramos un grupo grande de casas habitacionales en una ciudad azteca. Excavamos siete casas con sus basureros, tanto como otros basureros sin arquitectura. En este artículo revisamos las excavaciones, describimos cada casa y discutimos los patrones de materiales y métodos de construcción. Hacemos comparaciones entre las casas de Yau-tepec y otras casas aztecas, y presentamos algunas conclusiones preliminares sobre la relación entre el tamaño de las casas y la riqueza.*

Most Aztec urban sites today lie buried under modern towns, and, of those that still exist as intact archaeological sites, most have been heavily plowed, causing the destruction or heavy disturbance of residential structures (Smith 1996). Intensive surface collections can provide important information about social and economic patterns at these plowed sites (e.g., Brumfiel 1996; Charlton et al. 1991), but they lack the contextual and chronological control of excavations. Almost all prior knowledge of Aztec houses has been derived from excavations at rural sites such as Cihuatecpan in the Basin of Mexico (Evans 1988) and Capilco and Cuexcomate in Morelos (Smith 1992, 1993), although limited information about houses can be found in documentary sources (e.g., Calnek 1974) and other, smaller-scale excavations (see below). In 1993 we excavated seven Late Postclassic (Aztec-period) houses at the urban site of Yau-tepec, Morelos. These structures, among the first excavated Aztec urban houses to be described, provide new insights into social and economic patterns at a major provincial Aztec city.

## Yau-tepec

*Social and Economic Context*

Yau-tepec was the capital of a powerful city-state, and its king ruled over several subject city-states in the Yau-tepec River Valley of central Morelos (Smith 1994). This area, separated from the Valley of Mexico to the north by the Ajusco Mountains (Figure 1), was conquered by the Aztec Empire around A.D. 1440. Yau-tepec and its subject states were included in the Aztec tributary province of Huaxtepec (Berdan and Anawalt 1992:f24v–25r), although Yau-tepec was not subject to Huaxtepec in a political sense (see Berdan et al. 1996 on patterns of territorial organization in the Aztec provinces). The Yau-tepec area, at an elevation of 1,200 m, has a semitropical climate, with 1,000 mm of rainfall annually. Irrigation agriculture was widespread in Late Postclassic Morelos (Maldonado 1990), and large portions of alluvium along the Yau-tepec River were probably irrigated. Intensive agriculture was necessary to feed the dense populations of the Yau-tepec area and to support the elite class and the city-state administration. Smith's (1994) demographic reconstruction suggests an over-

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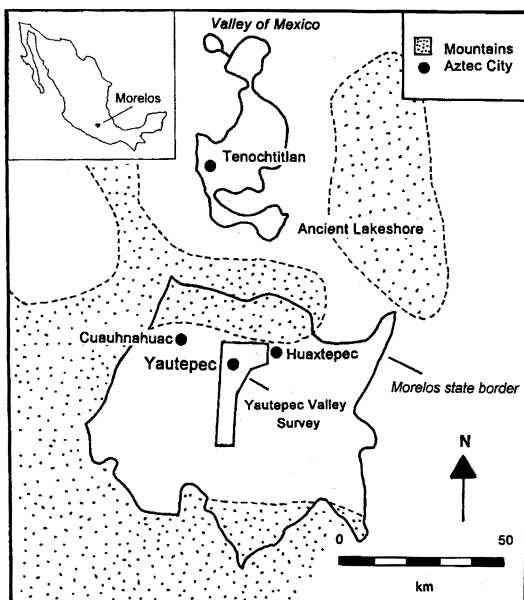


Figure 1. The location of Yauhtepec in Aztec central Mexico.

all zonal population density of around 140 persons per sq km for the area of Morelos. Markets were common in Late Postclassic Morelos, and sources from nearby Tepoztlan note an active trade involving cotton from Yauhtepec (Smith 1994). In summary, the

Yauhtepec area was characterized by dense populations, intensive agriculture, active trade, and expanding states, and these processes affected conditions in the city.

### *The Yauhtepec Palace*

Our fieldwork was preceded by excavations at the Yauhtepec royal palace by Hortensia de Vega Nova of the Centro INAH (Instituto Nacional de Antropología e Historia) en Morelos. This study focused on a large mound in a residential district of the modern town of Yauhtepec, just outside the downtown area. To date, about 40 percent of the outer perimeter and about 25 percent of the upper surface of the mound have been cleared. The structure is a large, low platform, approximately 65 by 95 m in extent and 4 to 6 m high. The cleared portions of the top are covered with rooms and passages that exhibit high-quality construction methods and materials (Figure 2). Floors are made of several layers of lime plaster, and walls are built of stone covered with lime plaster that had been painted with elaborate polychrome murals (only fragments of the murals survive). The top of the platform is reached by a single stairway on the west side (de Vega 1996; de Vega and Mayer 1991).

There are historical references to this structure,



Figure 2. Rooms in the Yauhtepec royal palace, looking north.

and interpretations of its function are based on the results of the excavations. The structure does not resemble known Aztec temples in the proportions of the platform, the layout and contents of the rooms on top, or the nature of refuse and burials found along the outer walls. The large size of the building and high quality of the architecture support the hypothesis that it served as a palace (Evans 1991 and Smith 1992:315–319 discuss Aztec palaces). The building dwarfs other known Aztec palaces in size; the Yau-tepec palace is larger than the combined areas of the five palaces illustrated in Smith and Berdan (1992:Figure 1). The excavation of this structure has not been completed, and many of the artifacts and features have yet to be studied, so a full functional analysis cannot be conducted at this time.

### The Albany Project

During the first season of the palace excavations in 1989, we were invited to work in Yau-tepec by de Vega Nova and other archaeologists of the Centro INAH Morelos. Our plan was to study the Aztec urban center as a whole and to locate and excavate residential structures apart from the palace. In addition to the benefits of having two projects at the same site, Yau-tepec offered several advantages. Unlike most central Mexican towns, where the Aztec town center is buried under that of the modern town, the center of colonial and modern Yau-tepec lies to the north of the center of the Aztec city, leaving a major portion of the archaeological site only partially damaged (Smith et al. 1994). In 1989, we noted the existence of dense surface artifact deposits from the Aztec period in large open fields in front of the palace. These surface artifacts suggested the presence of buried houses in what was probably the central, “downtown,” area of ancient Yau-tepec.

#### *The Survey Projects*

In our first season at Yau-tepec (summer 1992) we conducted an intensive surface survey in and around the modern town. The goal of this urban survey was to define the borders of the Late Postclassic settlement, and that goal was met successfully (Smith et al. 1994). We took several hundred collections of surface artifacts, and the compositions of these collections are currently being analyzed with spatial and statistical methods. This article describes the work of the second field season, during 1993. Subsequently, in 1994 and 1996, Smith, Montiel, and Tim-

othy S. Hare conducted a full-coverage survey of the entire Yau-tepec Valley, resulting in the discovery of several hundred sites. We took several types of surface artifact collections (including “grab-bag” samples, 2 x 2 m collections, and several hundred 5 x 5 m collections), conducted stratigraphic test pits at several sites, and carried out an “off-site survey” of the valley (Cascio et al. 1995; Hare 1998; Montiel 1998).

#### *The 1993 Excavations*

The 1993 season (February through August 1993) was devoted to the excavation of houses and other domestic contexts in Yau-tepec. Archaeologists in Mesoamerica and elsewhere have found that residential excavations provide rich information on ancient social conditions (e.g., Santley and Hirth 1993). Our previous excavations of houses and their associated middens at the Aztec sites of Cuexcomate and Capilco in western Morelos allowed for a fine-grained reconstruction of changing activities and social conditions at these rural sites (Smith 1992, 1993; Smith and Heath-Smith 1994). One goal of the Yau-tepec project was to generate a comparative dataset from an urban site. We originally had planned to focus a major part of our efforts on the fields immediately west of the royal palace, which are contained within the INAH Yau-tepec archaeological zone. The 1992 survey showed these fields to have very dense surface artifact concentrations, and the remains of several stone structure foundations were visible on the surface. Owing to a sudden, but well-planned, invasion of the Yau-tepec archaeological zone by squatters in fall 1992, we were unable to excavate in this area (Smith 1997). Nevertheless, we obtained permission to dig in a number of open lots and fields scattered throughout the Late Postclassic site. The results of these excavations are summarized below.

#### *Chronology*

The Aztec period, from the twelfth through sixteenth centuries A.D., is divided into three ceramic phases at Yau-tepec. These phases, established through stratigraphic analysis and quantitative ceramic seriation methods, are dated through radiocarbon dating and ceramic cross-ties (Hare and Smith 1996). Yau-tepec was founded in the Pochtla phase (A.D. 1100–1300), which corresponds to the Middle Postclassic period. Its founders were members of the Tlahuica ethnic

group (Durán 1967, v.2:23), one of the Nahuatl-speaking Aztec groups that migrated to central Mexico in Postclassic times from an unknown homeland area to the north (Smith 1996:38–41). The inhabitants of Pochtla-phase Yautepec established commercial relations with other peoples throughout central Mexico. Our excavations uncovered imported ceramics from many areas and obsidian from most of the central Mexican source areas.

The Late Postclassic period at Yautepec began with the Atlán phase (A.D. 1300–1440). The city expanded in size (concurrent with a major population expansion in the Yautepec Valley), imported ceramics increased in frequency, and rare, exotic imports such as bronze tools and greenstone jewelry appeared for the first time. The transition to the Molotla phase (A.D. 1440–1520) coincided with the conquest of Yautepec and the rest of Morelos by the expanding Aztec Empire. The city continued to grow during this phase, and commercial and stylistic contacts with other areas persisted with little change. The Santiago phase (ca. A.D. 1520–1650) marked the transition to Spanish colonial society after the conquest of 1519.

### House Excavations

#### Methods

For the most part, surface evidence for the locations of individual Postclassic structures at Yautepec is absent. Because the site is situated in a modern town, we used contemporary land parcels (lots and fields) with surface artifacts as sampling frames in our search for houses; these parcels are termed excavation areas. We excavated a total of 17 units or operations within 11 excavation areas. The locations of the excavation areas in relation to the borders of the site are shown in Figure 3. With two exceptions, all excavations were aligned and recorded with reference to the UTM coordinate system as depicted on Mexican government maps of Yautepec; in the two churchyards, we used separate grid systems aligned with the sixteenth-century buildings.

Except in the few cases where the locations of buried structures were obvious or strongly suggested by visible surface architecture or mounds, we sampled the excavation areas with grids of test pits. Most test pits were excavated to bedrock, which consists of basalt flows in the western portion of the site and tepetate hardpan in the remainder (tepetate, a rede-

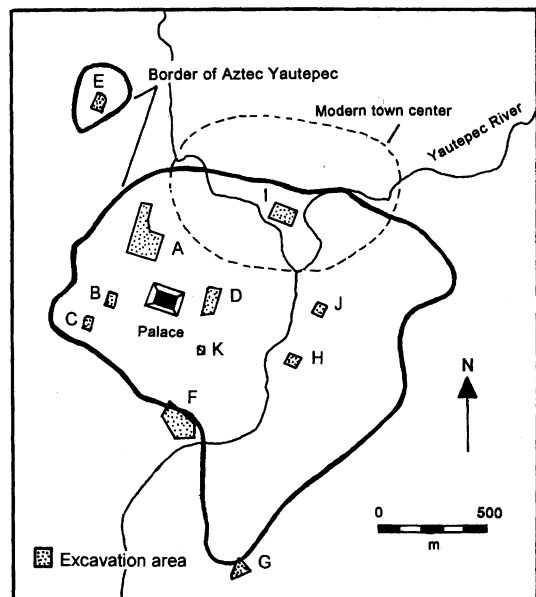


Figure 3. Location of excavation areas at Yautepec.

posited volcanic ash cemented with silicates and carbonates, forms the C horizon in many parts of central Mexico). Natural soil zones were followed as much as possible; thick zones or deposits with unclear stratigraphy were excavated in 10 cm levels. Sediments from most deposits were screened with 1/4" wire mesh; some plow-zone deposits and a few sterile contexts were not screened.

We located seven houses. The architectural remains were cleared, and exterior midden areas were excavated adjacent to all structures. Walls and floors were broken through in key areas to examine architectural history and fill deposits. In addition to the seven houses, each with at least one excavated midden, we found seven dense domestic midden deposits, several architectural features not obviously part of houses, nineteen burials, and three deposits of deep alluvial sediments that date to sometime between the Epiclassic and Late Postclassic periods. Overall the excavations yielded dense artifact deposits (the mean ceramic density was above 3,000 sherds per m<sup>3</sup>—we recovered over 1.2 million sherds). The artifacts are still undergoing analysis in our facility in modern Yautepec.

#### Excavation Areas

Area A is a large walled property that houses the Escuela Secundaria Federal Ignacio Manuel Altamirano (see Figure 3 for the locations of the excavation areas). We began the field season there, excavating

six units in various parts of the lot. In Unit 501, we tested a low wall segment and uncovered a small house, Structure 4, that was partially damaged by plowing (see discussion of architecture below). Several burials were found next to the house on three sides. In Unit 502, begun as a trench to test heavy surface artifacts in the north end of the schoolyard, we came down on a rock pavement that covered Burial 3. This burial, dated to the Molotla phase, contained two individuals, one of whom had an obsidian projectile point embedded in the vertebral column. Unit 503 consisted of three trenches, also in the north end of the schoolyard. There we encountered a very dense midden with stratified deposits from all three Aztec phases. In Unit 504, we tested an artificial slope break on a gentle hill and found a stone terrace wall, a midden, and a series of poorly preserved infant burials. In Unit 505, a test of a small, low mound adjacent to a school building, we uncovered a poorly preserved plaster floor and an associated plaster-lined, tublike feature from the Atlán phase. Below these features was a dense midden from the Pochtla phase. In Unit 512 we excavated a series of trenches in a low mound with exposed plaster floors. This excavation uncovered a large structure that probably was an elite residence (Structure 6).

*Area B (Unit 506)* is a walled lot, adjacent to the archaeological zone, whose owner was preparing to construct homes on it. Using a series of 2 x 4-m test pits, we discovered the partial remains of Structure 5, a low platform that may have been an elite residence. This area also contained dense middens, two burials, and an unusual pit feature.

*Area C (Unit 507)* is a nearby walled lot where construction of an athletic court had begun. Most of the deposits encountered in our test pits consisted of a plow-zone stratum that rested directly on basalt bedrock, although patches of an Atlán midden were uncovered in two areas.

*Area D (Units 508 and 509)* consists of two adjacent modern lots, in one of which new housing was under construction. In Unit 509, test pits led to the discovery of a patio group with three houses (Structures 1, 2, and 3) as well as middens, two burials, and other features. In Unit 508, test pits revealed mostly plow-zone deposits. An unusual crushed tepetate floor, not obviously part of a house, was located in the southwest corner of the lot, in association with a midden from the Atlán phase.

*Area E (Unit 510)* is located in the southern end

of the yard of Escuela Primaria Federal Nicolás Bravo. This is the only excavation in one of the small settlements that ringed the main site of Yautepec (Figure 3). In all four of the scattered test pits, we encountered shallow erosional deposits with heavy Molotla-phase artifacts on top of basalt.

*Area F (Unit 511)* is a large irrigated cornfield on the floodplain adjacent to the Yautepec River. This area is immediately outside the site boundary we defined in 1992. The excavation was conducted to test the boundary and to look for evidence of Postclassic irrigation. We discovered a light Postclassic deposit that could be the remains of cultivated fields under about 40 cm of alluvium, but found no evidence of Postclassic irrigation canals.

*Area G (Unit 513)*, a cornfield immediately south of the southern tip of the site, also was excavated to test the site boundary. Very few artifacts were recovered there.

*Area H (Unit 514)* is the yard of the sixteenth-century barrio chapel of San Juan. We dug four test pits, both adjacent to the church and at some distance from it, but failed to find evidence of Postclassic structures under or near the church. We did encounter a deposit from the Epiclassic period (A.D. 700–900) covered by 2 m of alluvium.

*Area I (Unit 515)* is the yard of the sixteenth-century church and convent, the Iglesia de la Asunción de Nuestra Señora de Yautepec. Test pits were excavated adjacent to the main church, in front of and inside of the open chapel (the earliest Spanish building), and at a distance from the buildings but in the churchyard. As in the case of Unit 514, we failed to find evidence for Postclassic buildings under or near the church. We did encounter two walls and several burials from the Colonial period and at least one refuse deposit from the Molotla phase.

*Area J (Unit 516)* is a private lot where we tested for occupation on the east bank of the Yautepec River. A small amount of Postclassic refuse was encountered above a deep alluvial deposit that contained small amounts of Formative and Classic-period ceramics. This east bank alluvium within the Yautepec site may have been an area of cultivation during Postclassic times.

*Area K (Unit 517)* is a portion of a street where a municipal work crew uncovered a plaster floor while grading the road. We were approached to settle an argument over whether this surface was an ancient plaster floor or a modern cement pavement.

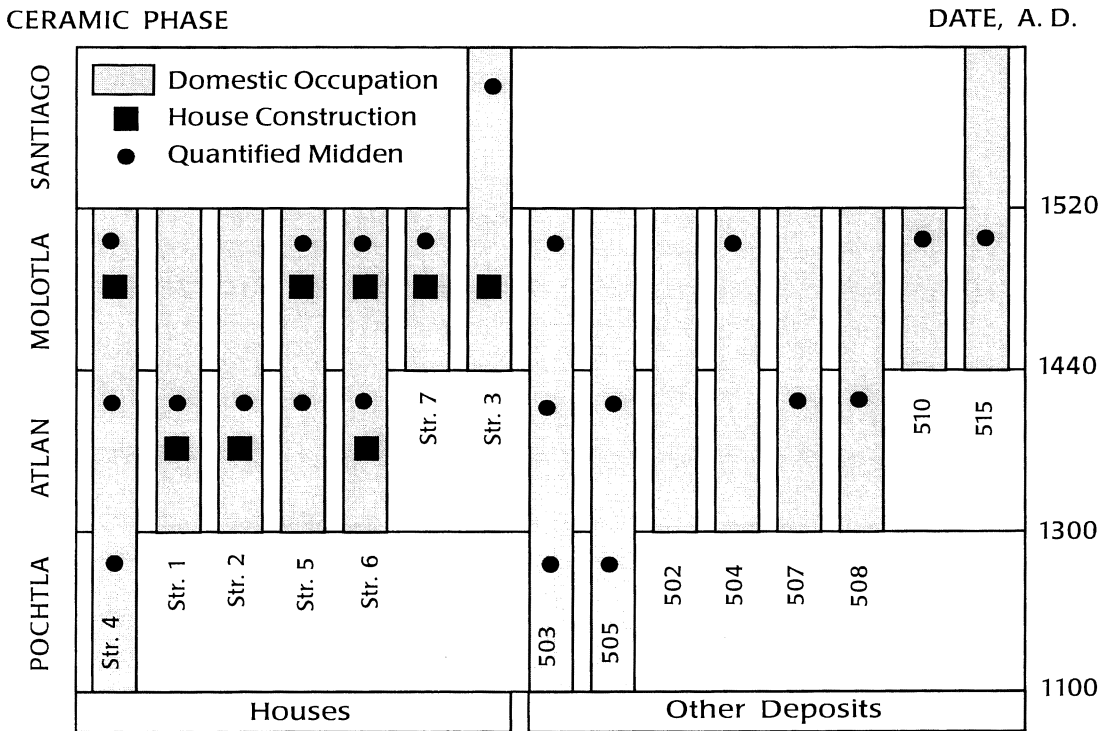


Figure 4. Phases of occupation for structures and other deposits.

We cleared the floor (which was indeed ancient), traced the outlines of Structure 7, and excavated some exterior refuse deposits.

#### *Descriptions of Individual Houses*

Figure 4 presents the dates of occupation for the houses and other deposits at Yau-tepec; this graphic updates and supersedes a similar illustration published as Figure 6 of Hare and Smith (1996). The term "quantified middens" denotes unmixed deposits with abundant artifacts that are being quantified and analyzed in detail for comparisons among houses and between phases.

*Structure 1 (Unit 509; Area D).* This structure, a ground-level construction with several rooms, formed part of a patio group with Structures 2 and 3 (Figure 5). The walls on the north and east sides were disturbed by plowing and consequently are not well defined. Structure 1 underwent several stages of modification. In the Atlán phase, a large central room and a smaller east room were built. At some point, in either the late Atlán or early Molotla phase, the northern walls were dismantled, leaving only the lowest courses of stones in the ground. A small addition to the west was added at this time. These activ-

ities may have been related to the construction of Structure 3 in the Molotla phase. There may have been another room northeast of the others; we were prevented from following some poorly preserved walls by a modern house located next to the excavation. South of Structure 1, we found an exterior patio area with a badly eroded plaster floor. Just north of the central room, we found a midden.

*Structure 2 (Unit 509; Area D).* This structure, immediately west of Structure 1, was a low plaster-covered platform built in Atlán times (Figure 5). The platform was constructed of cut stone walls, a single course high, and filled with rocks and soil. The plaster floor was not preserved in all areas, but it apparently had covered the cut stones completely. A small plastered step on the eastern wall led down to an exterior plaster floor between Structures 1 and 2. The exterior floor predated the western addition to Structure 1. We found no evidence for walls of any type on top of the platform, but since the structure was located at the base of the plow zone, any walls probably had been destroyed. A poorly defined stone wall between Structures 2 and 3 predated both constructions, but its purpose and relationship to other construction are unclear. Structure 2 has a midden

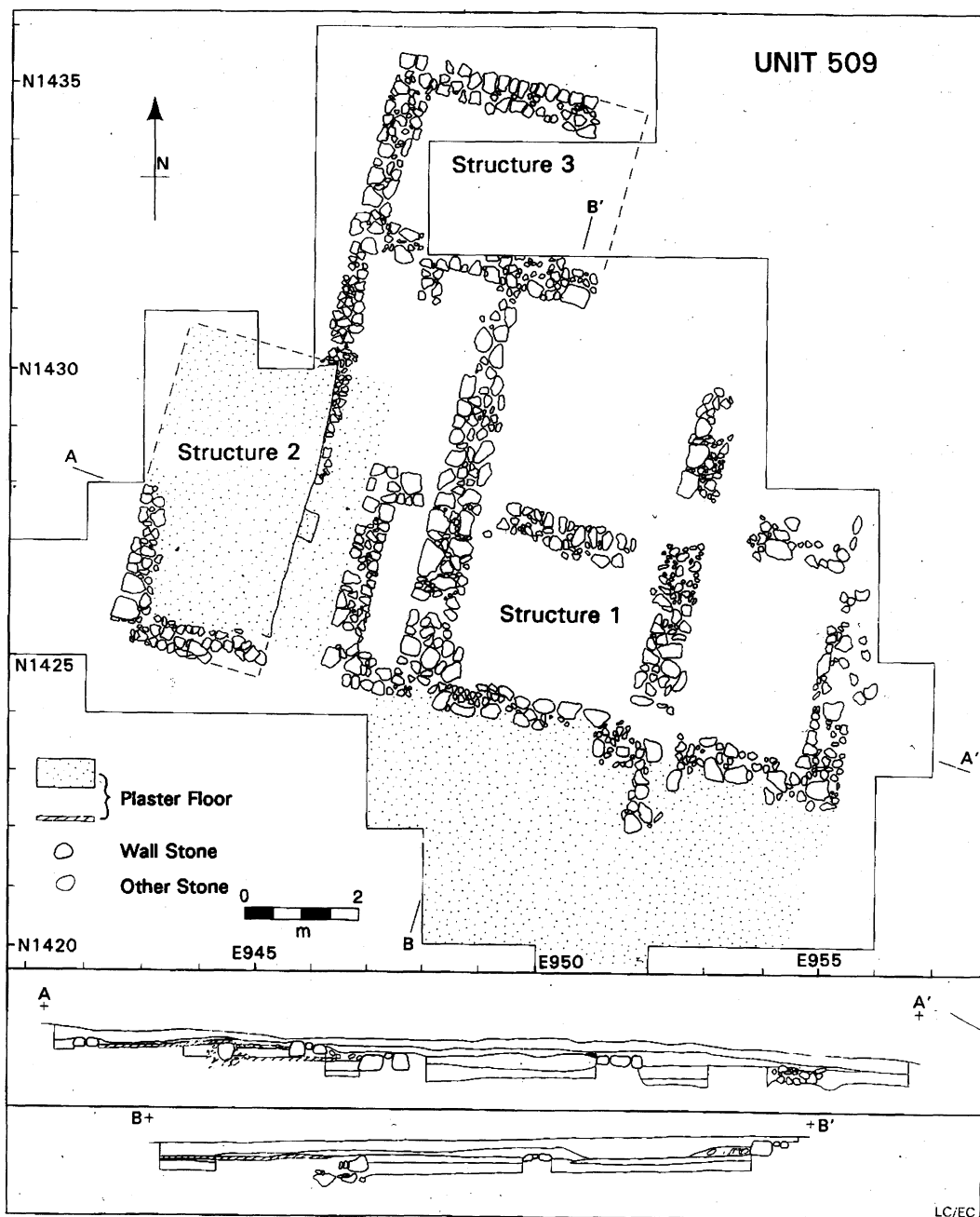


Figure 5. Plan of Structures 1, 2, and 3 (Unit 509, Area D).

off its southwest corner.

*Structure 3 (Unit 509; Area D).* This structure, located on the north side of the Unit 509 compound, was a ground-level structure with typical double-row stone foundation walls. The east wall is missing, probably destroyed by plowing. Structure 3 was built at a slightly higher elevation than Structures 1 and 2. The stone walls that run north from Structures

1 and 2 (Figure 5) precede the construction of Structure 3 and are not associated with it. The structure was built in the Molotla phase. There is a Molotla-phase midden just south of the house. Occupation continued into the Santiago phase, with a dense midden west of the structure.

*Structure 4 (Unit 501; Area A).* This structure was a low platform whose west side had been destroyed

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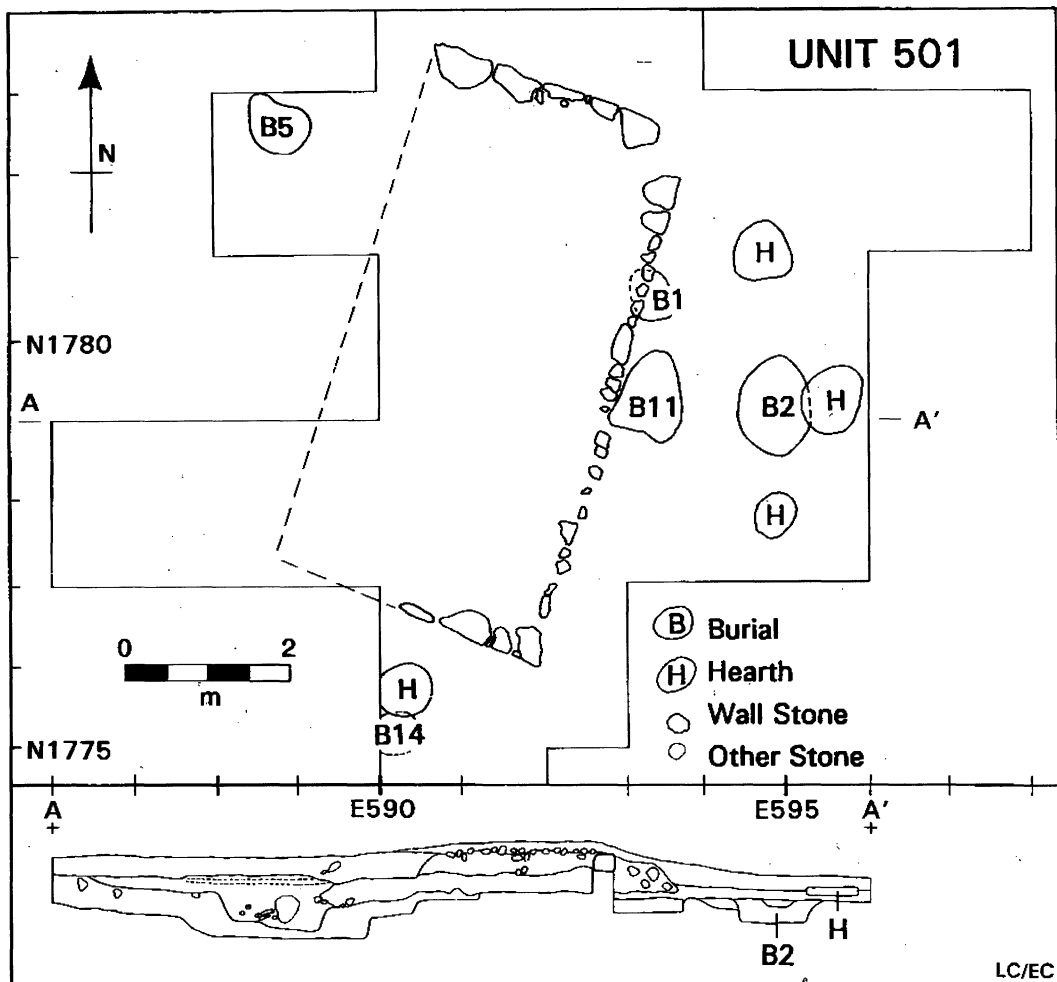


Figure 6. Plan of Structure 4 (Unit 501, Area A).

by plowing (Figure 6). The structure was not buried very deeply. The east portion was preserved because a north-south stone field wall covered it until the 1970s when a secondary school was built. The entire remains of the structure lie within the walled schoolyard (Area A), and recent destruction has been minimal. Like Structure 2, Structure 4 lacks wall remains on top of the platform. Unit 501 is one of three deposits in which all three Postclassic phases are present (Figure 4). The Pochtla phase is represented by a midden in a wide pit on the west side of the unit; there is no architecture associated with this occupation. The Atlán phase is represented by a midden on the north side of the structure and several burials, one of which (Burial 1) predates the construction of the platform.

A trench through the structure encountered construction debris (stones and heavy concentrations of

plaster floor fragments) under the structure and in the fill of the platform, along with mixed artifacts from the Atlán and Molotla phases. The construction debris is probably from an earlier structure destroyed or dismantled prior to construction of Structure 4. Structure 4 itself was built in the Molotla phase. The platform was edged with a single row of large, irregular stones that were faced on one side. Traces of lime plaster on stones suggest that this platform may have been plastered like Structure 2. Four areas of burned earth and carbon were found in the middens on the east and south sides of the structure. No stones were associated with these features, which may represent the remains of temporary fires rather than regularly used hearths. These features pertain to the Molotla phase on the basis of stratigraphy and radiocarbon dates (Hare and Smith 1996:288–289). A multiple burial (Burial 2) also was



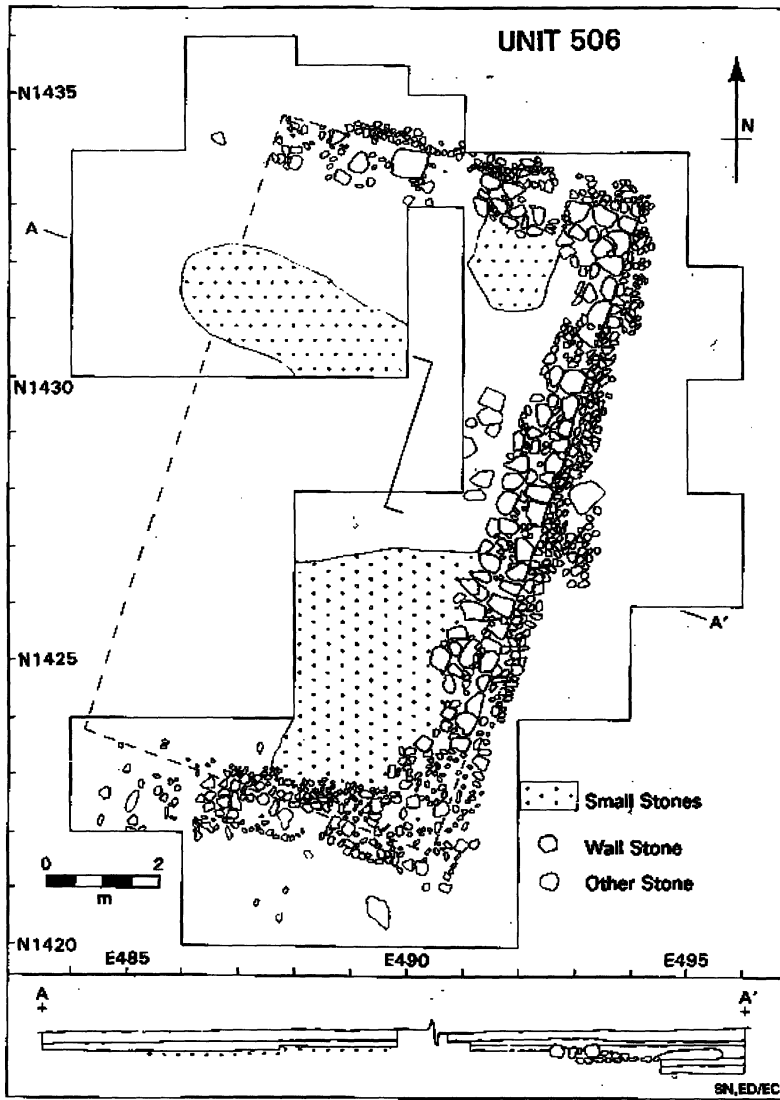


Figure 7. Plan of Structure 5 (Unit 506, Area B).

associated with the burnt features.

*Structure 5 (Unit 506; Area B).* This structure, another low platform destroyed on the western edge, was the second largest structure we excavated. The preserved portion of the structure (Figure 7) was only slightly below the plow zone, and plowing was responsible for the destruction of part of the building. The platform, one course high, was edged with a wall of finely cut stones covered with plaster. This wall was built over a narrow stone pavement (ca. 1.5 m wide) that served as a base or foundation for the wall. Sometime after the construction of the platform wall, a second layer of paving stones was placed over the original pavement adjacent to the platform

wall on its exterior side (Figure 7). The placement of platform walls over a narrow pavement is an unusual technique that we have not seen used elsewhere.

The top of the platform had been heavily disturbed, and no intact floor was present. The platform fill consisted of clay embedded with many small stones (ca. 5 to 10 cm in diameter). This fill probably served as a preparation layer for a plaster floor (numerous fragments of broken plaster were recovered in the plow zone above and around the structure). A dense midden deposit east of the structure contained a layer with many stones that appeared to be construction collapse. If this identification is cor-

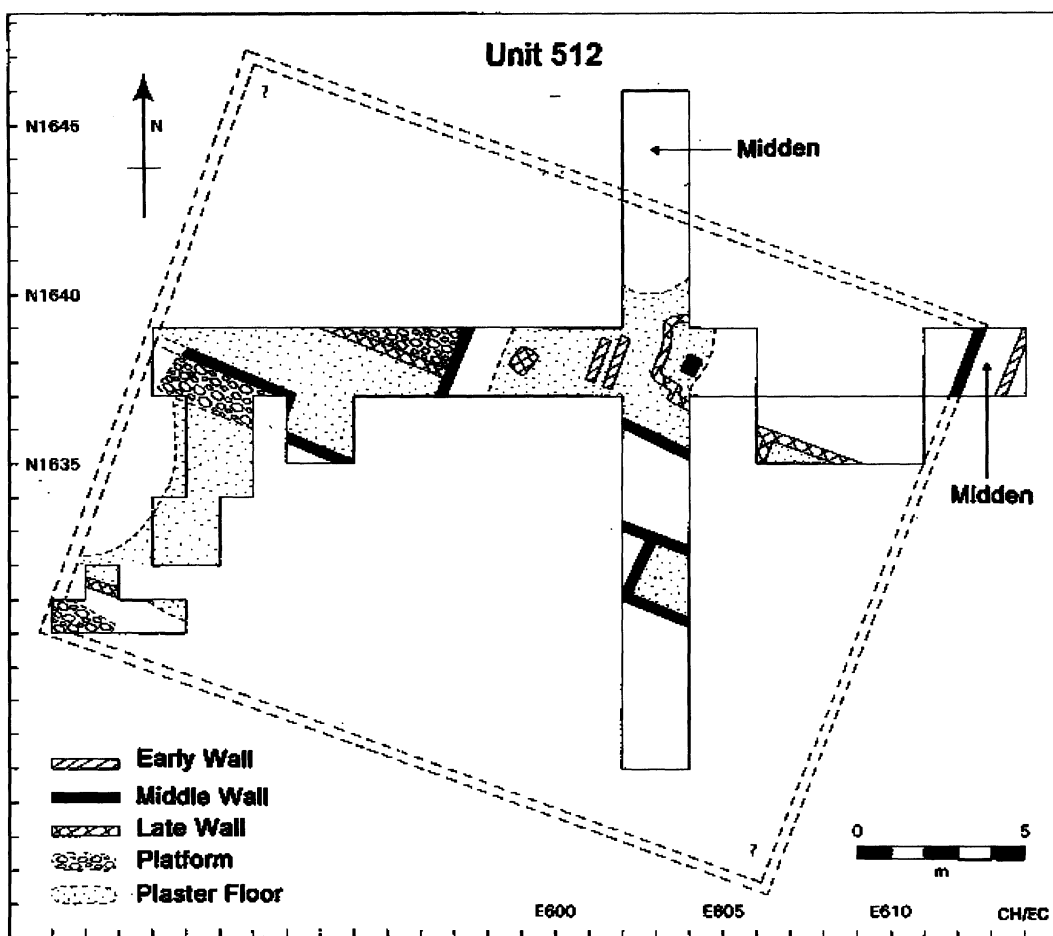


Figure 8. Plan of Albany excavations of Structure 6 (Unit 512, Area A).

rect, the structure was rebuilt or modified, perhaps after destruction or dismantling, at some point midway through its history; Molotla-phase midden deposits had accumulated both below and above this stone layer. A small midden from the Atlan phase was encountered at the base of excavations on the east side of the structure, but the architecture and all other deposits date to the Molotla phase.

*Structure 6 (Unit 512; Area A).* This structure was a large, low mound in the yard of the secondary school (Figure 8). Prior to excavation, two plaster floors were visible where the mound had been cut into during construction of a basketball court. Because of its large size and the complexity of its architecture, we only were able to excavate a portion of Structure 6. We dug two long intersecting trenches across the mound that uncovered numerous floors and walls. At the north end of the north-south trench and at the east end of the east-west trench, we

encountered dense, stratified midden deposits. In one area, we excavated through the floors of the structure down to sterile soil. After the termination of our field season, Francisca Rosas Sánchez (1996) from the Centro INAH Morelos took over the operation and cleared much of the structure (Figure 9).

The outer walls of Structure 6 were destroyed long before our excavations. This area had been cultivated in recent years, before the construction of the school, and plowing was probably responsible for the destruction. The erection of boundary walls around the schoolyard and the construction of the basketball court also may have contributed to the destruction of the south and west walls respectively. We reconstructed the locations of the north and east walls from the presence of middens that were almost certainly on the exterior of the structure.

Structure 6 was by far the largest and most complex structure we excavated, with numerous episodes



**Figure 9.** Photo of rooms in Structure 6 excavated by Francesca Rosas Sánchez, looking west.

of construction and remodeling. On the basis of stratigraphic and ceramic data from our excavations, we organized the construction history of Structure 6 into three major stages. Rosas (1996) independently defined four construction stages from the architecture that she cleared. The early and late stages of the two sequences correspond, whereas Rosas divides our middle stage into two. The earliest construction stage is represented by two deeply buried walls found at the east end of our east-west trench. These walls are associated with ceramics that date to the Atlán and/or Pochtla phases. The size and nature of the structure in the early stage are unknown. These walls were buried by later midden deposits.

The Late Postclassic period witnessed two construction stages. The middle construction stage was characterized by high-quality architecture. Lime-plaster floors were well made, with carefully laid sub-floors consisting of small stones overlaid by several thin layers of plaster, often painted red. Walls were built with closely fitted, faced stones. Many minor episodes of remodeling took place during this stage. The late construction stage, on the other hand, was characterized by sloppy methods. For example,

rough piles of stone rubble and soil were plastered over with lime to form crude, uneven walls and platforms. From their stratigraphy, the midden deposits on the north and east sides of the structure appear to correspond to the middle and late architectural stages. Each deposit has a dense midden from the Atlán period. This midden is followed by a layer of rocks and construction debris that contains a mixture of Atlán and Molotla materials. Finally, a dense Molotla midden capped each deposit. Few of the individual walls and floors can be assigned with confidence to a ceramic phase, but an association between the two Late Postclassic ceramic phases and the two Late Postclassic construction stages seems reasonable.

Atlán-phase ceramics were widely distributed in the lowest fill levels, suggesting that the structure was of similar size in both Atlán and Molotla times. Based on our reconstruction of wall locations, we estimate that the area of the structure was about 425 m<sup>2</sup> for both phases. Stratigraphy in the north midden suggests that the floor of the structure was built 50 to 100 cm above the level of the ground. This elevated construction was probably responsible for the nearly complete destruction of the outer structure walls. We

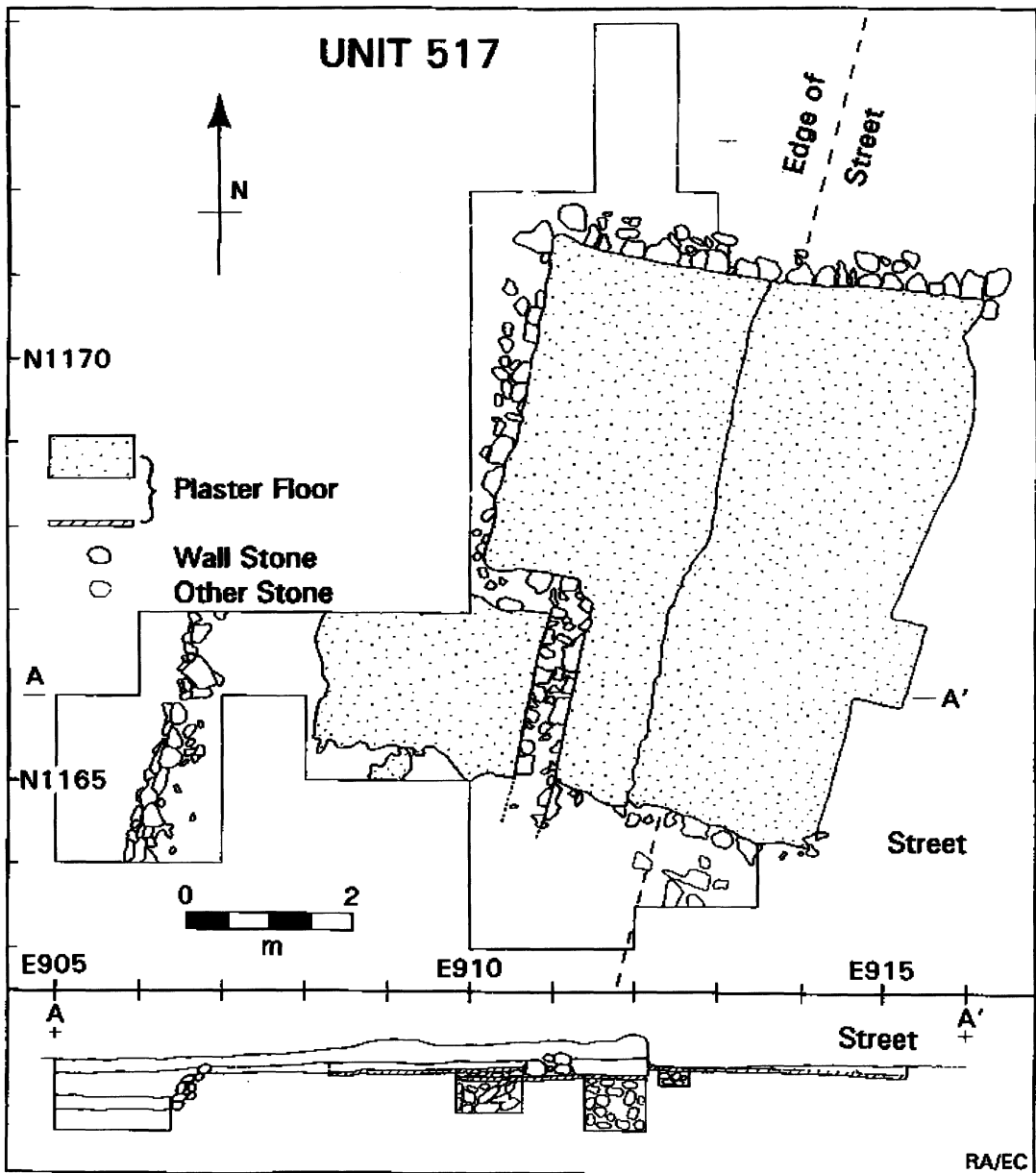


Figure 10. Plan of Structure 7 (Unit 517, Area K).

hypothesize that the walls and floors were built on plaster-covered platforms similar to those employed in the elite residence (Patio Group 6) at Cuexcomate in western Morelos (Smith 1992).

*Structure 7 (Unit 517; Area K).* This was a house discovered by municipal workers while grading a street (Figure 10). We cleared a large area of plaster floor in the street and followed out floors and walls to define the western portion of the structure. The

easternmost wall was destroyed, either by construction of the street or by plowing. (This street is less than 15 years old; the site was formerly cultivated.) We did locate a lip in the floor indicating the former placement of a wall at the eastern edge of the floor. There is evidence for at least two stages of construction, both in the Molotla phase. Refuse deposits west and north of the structure were far less dense than most of the other middens excavated.

Table 1. Architectural Data on Excavated Houses at Yautepec.

House No.	Unit	Excav.		Size (m <sup>2</sup> )	Orientation	Type	Architectural Traits:					Function
		Area	Phases				A	B	C	D	E	
1	509	D	A	58	14	1	–	x	–	–	x	commoner house
1	509	D	M	40	14	1	–	x	–	–	x	commoner house
2	509	D	A, M	16	14	2	x	x	x	x	–	commoner house
3	509	D	M, S	16	14	1	–	x	–	–	–	commoner house
4	501	A	M	23	18	2	(x)	–	x	x	x	commoner house
5	506	B	M	77	18	2	(x)	x	x	x	–	possible elite house
6	512	A	A, M	425	21	3	x	x	–	x	x	elite house
7	517	K	M	35	13	1	x	–	–	–	x	commoner house
Palace	–	–	M	6,175	21	3	x	?	?	x	x	royal palace

Phase: A = Atlán, M = Molotla, S = Santiago.

Type: 1 = Ground-level house with double-row foundation walls; 2 = Low-platform house; 3 = Palace

Architectural traits: A = Plaster floors (parentheses indicate evidence for destroyed floors); B = Adobe brick fragments recovered; C = Burnt daub fragments recovered; D = Extensive use of cut and faced stone; E = More than one stage of construction.

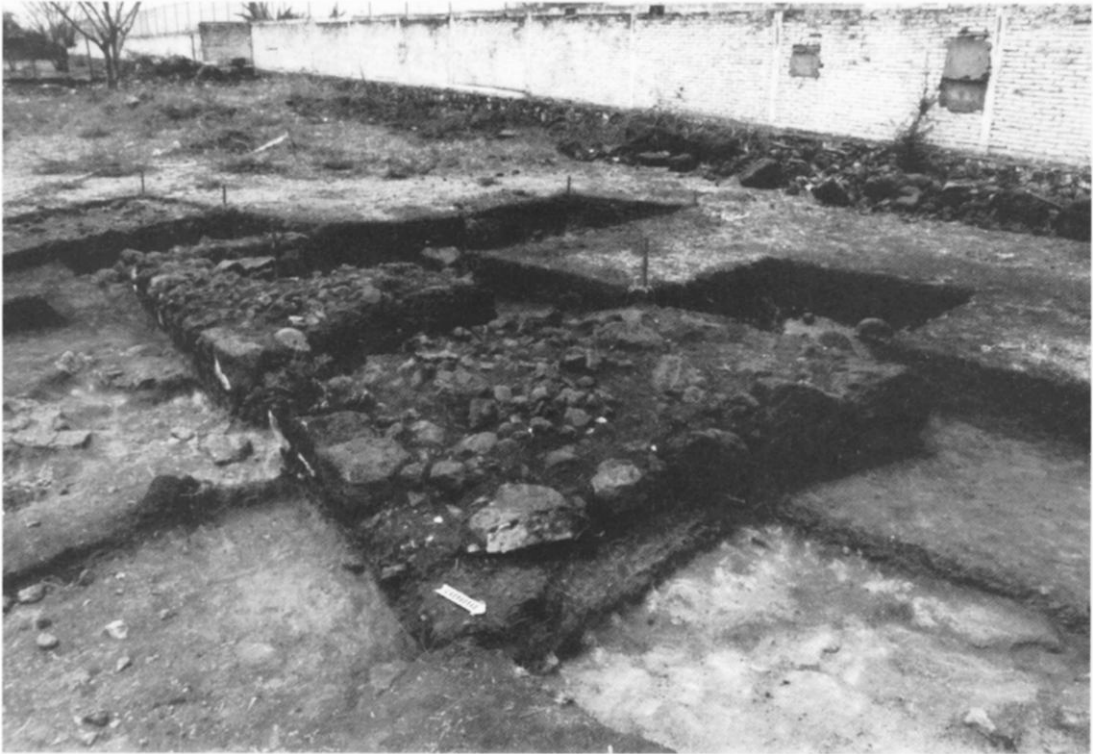
*Construction Materials and Methods*

The excavated houses can be divided into three architectural types: ground-level houses with double-row foundation walls, low-platform houses, and palaces (Table 1). The stone foundation walls of the ground-level houses have two rows of stones and an average width of 60 cm (Figure 11). In most cases only one or two courses of stones have survived. We recovered partially dissolved adobe bricks adjacent to the stone walls at two of these houses (Structures 1 and

3). This type of wall is identical to the walls of ground-level houses at the rural sites of Cuexcomate and Capilco in western Morelos (Smith 1992), where adobe fragments also were recovered. The double-row stone foundation wall is still used in rural Morelos today for the construction of houses of adobe bricks. The two rows of stone provide a flat base for the adobes, which today are made in wooden molds. The major difference between the modern and Aztec house walls is that the modern examples are somewhat thinner, with a mean width of 25 cm (Smith et



Figure 11. Photo of ground-level houses, Structures 1 (top), 2 (right), and 3 (front), looking south.



**Figure 12. Photo of Structure 4 (Unit 501), a low-platform house, looking southwest.**

al. 1992). Drawing an analogy with the modern peasant houses, Smith (1992) argues that the foundation walls at Cuexcomate and Capilco were bases for adobe brick walls. The same argument can be applied to the Yautepec houses.

One of the Yautepec ground-level houses (Structure 7) had lime-plaster floors. The other two ground-level houses had no clearly defined floors. We suspect that the floors of these houses were of packed earth. If they had been constructed of plaster or stone, we should have found broken plaster fragments or extensive deposits of stone cobbles. These patterns contrast with the houses at Cuexcomate and Capilco, most of which had floors of sandy soil spread over stone river cobbles. At the rural sites, only the elite residence had floors of lime plaster.

The structures we are calling low-platform houses consisted of low stone platforms that averaged 40 cm in height (Figure 12). All three of these houses (Structures 2, 4, and 5) were encountered at the base of the plow zone, and any traces of walls or other features on top of the platforms had been destroyed; furthermore, portions of Structures 4 and 5 also had been destroyed by plowing. This poor preservation ham-

pers our understanding of the nature of these structures. We interpret them as houses because they resemble the ground-level houses in size, and each is associated with dense domestic midden deposits comparable to those encountered in the other excavations.

Structure 2 had a plaster floor. The back (west) wall of the structure, only partially preserved, was a double-row stone wall (Figure 5). The low platform on the east side, with a plastered step in the center, served to level the floor of this structure given the slope of the ground to the east. Structure 4 had several large, faced stones along its edge, some of which showed traces of lime plaster (Figure 12). A layer of small stones on top of this platform probably served as the preparation layer for a plaster floor, fragments of which were recovered in the plow zone around the house. Structure 5 was larger than the other ground-level and low-platform houses. The best-preserved wall, on the east side, was a double-row stone wall of a single course built over a narrow pavement of medium-sized stones (Figure 7). At the level of the top of the large wall stones, we encountered a layer of small stones similar to those in Structure 4.

This excavation also yielded considerable broken plaster fragments in the plow-zone deposits.

The floors in the low-platform houses were built about 40 cm above the level of the ground. Several of these structures had one or more double-row stone walls that may have supported adobe bricks as in the ground-level houses (adobe fragments were recovered at two structures). The walls of these houses also could have been wattle-and-daub construction. The three low-platform houses were the only ones where we recovered fragments of burnt daub (Table 1). We did not observe any postholes on top of the platforms, but plowing could have obliterated such traces. Only one low-platform house was found at Capilco. Cuexcomate had several houses built on platforms, but the platforms were higher than those at Yautepec and probably represented a different kind of structure (Smith 1992).

The royal palace and the elite residence that we excavated are described briefly above. They stand out relative to the ground-level and low-platform houses in overall size, size of rooms, amount of lime plaster on floors and walls, and the general quality of the stone construction methods and materials.

### Socioeconomic Context

#### *Comparisons with Other Aztec Houses*

The number of documented Aztec houses is not large, but a brief review of the corpus helps put the Yautepec houses in perspective. Written records contain three types of contemporary descriptions of Aztec houses. First, some of the early Spanish chroniclers provide generalized accounts of housing. Friar Bernardino de Sahagún (1950–1982, bk.12: 269–275), for example, lists 23 kinds of commoner houses. These include both adobe and wattle-and-daub structures. Flat pole-and-beam roofs and peaked straw roofs are both mentioned. Sahagún's account suggests that, although most commoner houses were small, simple structures, there was considerable architectural variation.

Spanish regional administrative documents provide a second type of information on housing. They describe architecture in specific, named towns, although they often were written several decades after the Spanish conquest of 1521. For example, the *Relación geográfica* from Totolapan (from A.D. 1579), a town in Morelos near Yautepec, states that “The houses are built of adobe bricks, covered with

straw roofs. Some have flat roofs. [In this area] there are construction materials: stone, wood, sand; and lime is brought in from Huaxtepec” (Acuña 1984–1987, vol. 8:164; authors' translation). The *Relaciones geográficas* from central Mexico describe such small adobe houses as the norm for a large area south and west of the Basin of Mexico including Morelos (see data presentation and discussion in Smith 1992:303–309).

Maps and descriptions of houses from early colonial lawsuits are yet a third ethnohistoric source for Aztec housing. Calnek (1974) has published several examples from Tenochtitlan (Mexico City), and he is currently working on a larger corpus of such documents (Edward Calnek, personal communication 1997). Most of the commoner houses in Tenochtitlan were small structures arranged in walled compounds. Each structure housed a nuclear family or a joint family, and the members of compounds were often related through kinship (see also Cline 1986).

Most commoner houses at Yautepec, Cuexcomate, and Capilco were small, single-room structures. Comparisons with Nahuatl-language census documents from Morelos (e.g., Cline 1993; Hinz et al. 1983) indicate that individual houses were home to either nuclear or joint families (Smith 1993). Many of the houses at Cuexcomate and Capilco were part of patio groups in which each structure would have contained a separate household (i.e., patio groups did not have functionally specialized structures used by a single household unit; see Smith 1992, 1993).

Aztec commoner houses in the Basin of Mexico outside Tenochtitlan were much larger than the small houses in Morelos and Tenochtitlan. The best-documented group, six houses excavated by Evans (1988, 1993) at Cihuateopan in the Teotihuacan Valley, averaged 88 m<sup>2</sup>. Houses mapped by Blanton (1972:180–181, 257–267) at Ixtapaluca Viejo were quite large, with “average residences” over 100 m<sup>2</sup> in size, and many “large residences” over 300 m<sup>2</sup>. Other Aztec houses in the Basin of Mexico are described in Charlton (1972), Otis Charlton et al. (1993), and various archaeological survey reports.

The ethnohistoric and archaeological data on Aztec commoner houses summarized above suggest three distinct spatial zones.

(1) In Morelos and adjacent areas of central Mexico outside of the Basin of Mexico, houses were small, single rooms with adobe or wattle-and-daub construction. Plaster floors were very rare in rural

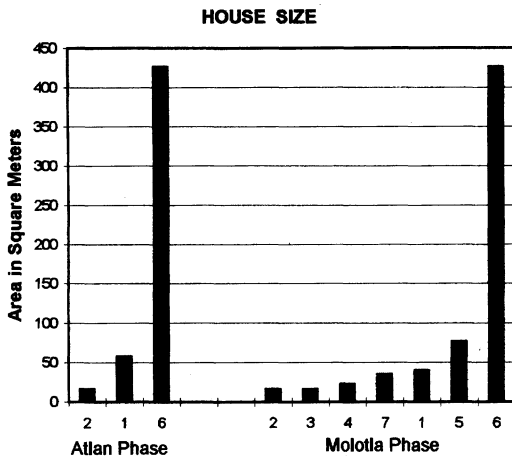


Figure 13. Graph of house size at Yauhtepec.

commoner houses and more frequent in urban commoner houses at Yauhtepec.

(2) In the Basin of Mexico, houses were large, multiroom adobe structures with plaster floors.

(3) In the imperial capital Tenochtitlan, houses were small, like those in Morelos, probably owing to the effects of crowding and limited land in the island city. Compared with commoner houses, far fewer palaces and other elite residences are known

from Aztec central Mexico; for preliminary discussions, see Evans (1988, 1991), Smith (1992: 187–218), and Elson (1999).

#### *House Size and Wealth*

Most Mesoamerican cities exhibited significant variations in wealth, power, and status among their inhabitants, and Yauhtepec was no exception to this pattern. Using the size and quality of residential structures as measures of wealth and power (e.g., Abrams 1994; Blanton 1994), the size distribution of the excavated structures points to the existence of three ranked social categories at Yauhtepec (Figure 13, Table 2). Structure 6 clearly stands out among the excavated houses in both phases. Its area of approximately 425 m<sup>2</sup> is an order of magnitude larger than that of the other houses, with the exception of Structure 5. Its size and the high quality of its architecture (at least in the middle stage) suggest that Structure 6 was an elite residence. By comparison, an elite residence at the town site of Cuexcomate in western Morelos had an area of 540 m<sup>2</sup> (Smith 1992). Moreover, Structure 6 is the only one of the seven structures we excavated whose compass orientation (21 degrees east of true north) corresponds with that of the royal palace. The Yauhtepec royal palace (6,175 m<sup>2</sup>) is in turn an

Table 2. Sizes of Aztec Houses.

Site	Period <sup>a</sup>	No. of Houses	Mean Area	Standard Deviation	Coefficient of Variation
<i>1. Nonelite houses</i>					
Yauhtepec	LPC-A	2	37.0	29.7	.80
Yauhtepec	LPC-B	6	34.5	23.0	.67
Yauhtepec, excluding str. 5	LPC-B	5	26.0	11.0	.42
Cuexcomate	LPC-A	4	18.5	2.0	.11
"	LPC-B	25	23.8	7.6	.32
Capilco	LPC-A	6	19.6	4.1	.21
"	LPC-B	9	21.9	5.0	.23
Cihuatecpan	LPC	6	88.1	29.2	.33
<i>2. Elite house compounds</i>					
Yauhtepec, royal palace	LPC-B	1	6,175	—	—
Yauhtepec, Structure 6	LPC-A,B	1	425	—	—
Cuexcomate, Group 6	LPC-A	1	536	—	—
Cuexcomate, Group 7 <sup>b</sup>	LPC-B	5	39.5	17.7	.45
Cihuatecpan, Structure 6	LPC	1	363	—	—
Chiconautla palace	LPC	1	444	—	—

Sources:

Yauhtepec: Yauhtepec project notes; Cuexcomate and Capilco: Smith (1992); Cihuatecpan: Evans (1993); Chiconautla: Elson (1999).

<sup>a</sup> Key to Period: LPC = Late Postclassic, A.D. 1350–1520; LPC-A = Late Postclassic A, A.D. 1300/1350–1440 (Atlan phase at Yauhtepec, Early Cuauhnaahuac phase at Cuexcomate and Capilco); LPC-B = Late Postclassic B, A.D. 1440–1520 (Molotla phase at Yauhtepec, Late Cuauhnaahuac phase at Cuexcomate and Capilco)

<sup>b</sup> Group 7 at Cuexcomate was composed of five separate small platform houses arranged around two patios, unlike other Aztec elite residences, which were single integrated constructions. The total area of the five platforms of group 7 is 198 m<sup>2</sup>.



order of magnitude larger than Structure 6. This size distribution suggests to us the existence of a commoner class plus at least two grades of elite at Yau-tepec: the ruler and royal family who inhabited the royal palace, and a lower elite group who would have inhabited buildings such as Structure 6.

The social significance of the size variation among the other six excavated structures is not yet clear. Taken as a group, these six houses exhibit more variability than do the commoner houses at the rural sites of Cuexcomate, Capilco, or Cihuateopan (Table 2). Among the six apparently nonelite houses at Yau-tepec, Structure 5 (77 m<sup>2</sup>) is far larger than the others. If Structure 5 is removed from consideration, the remaining five structures are all quite small. Their mean size (26 m<sup>2</sup>) is not much larger than the means at the rural sites, although they still exhibit more variability in size than the rural houses. These data suggest that there may have been greater wealth variation within the commoner class at Yau-tepec than at known Aztec rural sites, a hypothesis that will be tested in the future with data on domestic artifact assemblages.

### Conclusions

The excavations of residential structures at Yau-tepec provide new data on Aztec architecture from which we make some inferences about the nature of social organization at this urban center. The quantitative patterns of house size and quality support the hypothesis of a strong differentiation between the elite and commoner classes, a feature of Aztec society known from ethnohistoric sources. The architectural evidence for two grades of elite at Yau-tepec also fits general models of Aztec society (e.g., Smith 1996:153–161). Our suggestion of wealth variation within the commoner class, based upon the house size data, moves the analysis into an area poorly documented in the ethnohistoric record: the activities and social conditions of the Aztec commoner class. Other members of the Yau-tepec project are pursuing this topic through distributional and statistical analyses of the artifacts recovered in association with these houses. When completed, these studies will expand our understanding of life in ancient Yau-tepec greatly. Even without the artifactual data, however, quantitative studies of residential architecture can contribute important new information on Aztec society. Our brief comparative discussion of Aztec housing patterns is only a start, and there is a need for a com-

prehensive analysis of archaeological and documentary data on Aztec houses. This article initiates such a task by presenting a new body of urban houses from a provincial Aztec city.

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