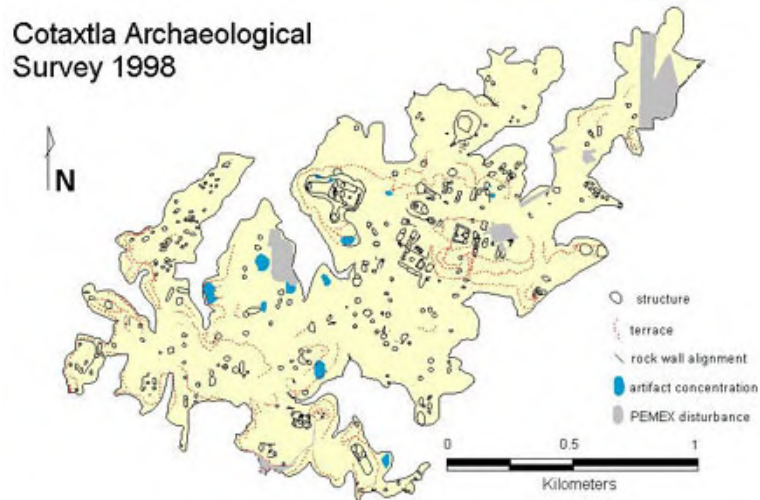


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The Cotaxtla Archaeological Survey: Results of the 1998 Field Season



Research Year: 1998

Culture: Azteca

Chronology: Post Classic

Location: Veracruz, México

Site: Cotaxtla

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Introduction

The Cotaxtla Archaeological Survey was undertaken to investigate aspects of social and economic organization at the Postclassic period (A.D. 900-1200) center of Cotaxtla, Veracruz, México, a Gulf lowland provincial capital conquered by the Aztec empire.

Previous research has shown that dramatic cultural and economic changes mark the transition from the Classic (A.D. 300-900) to the Postclassic periods in south-central Veracruz (Curet *et al.* 1994; Daneels 1997). The growth of trade and marketing in Mesoamerica and Aztec imperial expansion into the Gulf lowlands may have been among the factors involved.

Field research at Cotaxtla was geared to collect data pertaining to three key issues: the site's settlement patterns (i.e., its internal organization), its economic roles, and the material remains associated with Aztec imperialism. Prior research in the region suggests that Postclassic settlement was more nucleated than during the Classic period (e.g., Brüggemann *et al.* 1991; Curet *et al.* 1994). Verifying this trend at Cotaxtla was one project goal. Settlement nucleation can involve related aspects of social differentiation associated with increasing urbanism, and documenting Cotaxtla's internal organization and settlement pattern was crucial to understanding social organization at this center.

The project also was designed to evaluate evidence for craft specialization, which was expected as a result of broader Postclassic economic changes, including increased trade and marketing throughout Mesoamerica (Berdan 1996; Blanton *et al.* 1981), and also as a result of Cotaxtla's nucleated setting, where consumer demand could support specialization. The economic data recovered could also help clarify recent models of local economic organization, which have struggled between horizontally or vertically integrated characterizations (Heller and Stark 1999; Stark 1992).

A final goal of the project was to document material remains associated with Aztec conquest and administration, and assess these data to better understand Aztec strategies of provincial control. The Aztec empire has traditionally been regarded as an hegemonic empire, employing mainly indirect means of provincial administration (Hassig 1984; 1985). In recent efforts to better understand Aztec imperial strategies, Berdan *et al.* (1996) classified the outer provinces as either tributary or strategic in nature, which helped clarify aspects of imperial interests in provincial areas and identify some of the variability in provincial organization. Because of the lack of research in provincial areas of the Aztec empire, however, many important questions remain concerning imperial methods of provincial governance or control (i.e., integration). Research in other imperial contexts suggests that imperial administration may be more "mosaic-like," with considerable spatial and temporal variation in degrees of direct/indirect administration (e.g., Schreiber 1992). Ethnohistoric accounts indicate that Cotaxtla housed Aztec officials, a garrison of Aztec soldiers, and possibly additional colonists (e.g., Durán 1967, 2:182-183; Torquemada 1969, 1:162; Umberger 1996). Thus, there exists a good potential for documenting and interpreting Aztec presence in the archaeological record, which previously has been done systematically for only a few outer provincial locations (Smith 1992; Smith and Berdan 1992; Smith and Heath-Smith 1994; Stark 1990; Voorhies 1989). Because of its moderately rich ethnohistoric documentation, its status as a capital town, and a rich archaeological record attested to by Medellín (1949), Cotaxtla provided a strategic location to investigate these social and economic issues.

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Field Research and Results

A program of field and laboratory work was undertaken between February-August 1998. Fieldwork involved intensive survey, mapping, and systematic surface artifact collection. The archaeological site of Cotaxtla sits atop a large, 1.8 sq km mesa top alongside the Río Cotaxtla, approximately 45 km southwest of modern Veracruz city ([Figure 1](#)). The mesa top edges were used as an arbitrary boundary to delimit an area for survey. The mesa top was systematically surveyed using pedestrian transects spaced 50 m apart. Over 400 features were recorded and mapped, including structural remains, terraces, and artifact concentrations ([Figure 2](#)). A sample of 16 different feature areas was surface collected for more intensive analysis ([Figure 3](#)); areas that appeared to capture a range of variation in social differentiation and activity patterning were selected ([Table 1](#)). Surface collected areas were systematically sampled with 3 x 3 m collection units placed every 42 m over each area. A total of 275 systematic surface collections were made in this fashion, along with an additional 192 judgmental collections made on key features and in areas of the site not systematically sampled. In the laboratory, artifacts were classified and pertinent information regarding each artifact category was recorded. In the fall of 1998, a final map of the site, including collection locations, was reproduced from field maps at a scale of 1:1,000 and was digitized for computer analysis. Artifact data from surface collections was entered into a computer database and incorporated along with the site map into a GIS database to permit spatial analysis of the data.

Settlement Patterns (refer to [Figure 2](#) and [Figure 3](#))

Fieldwork revealed dense archaeological remains dispersed over almost all parts of the site, including several formal, mound complexes and abundant residential remains. Ceramics recovered date almost exclusively to the Middle and Late Postclassic periods. Some areas of the site differ considerably with respect to the style and quantity of architecture as well as the types and quantities of artifacts, suggesting some degree of spatial differentiation within the site. The central area of the site (on [Figure 3](#), in the vicinity of areas A, B, C, D, F, G, and H) appears to represent a large civic-ceremonial zone, containing at least 3 formal mound complexes. Many of the larger structures observed on the site were encountered in this central zone, some located on platforms or modified terraces, and many of which incorporate cut architectural stone coated with

stucco. Some of the features in this central zone likely represent temple and palace complexes, or administrative buildings. There are additional features in the central area that appear to represent residential remains—low mounds and concentration of artifacts containing domestic ceramics, obsidian, and ground stone.

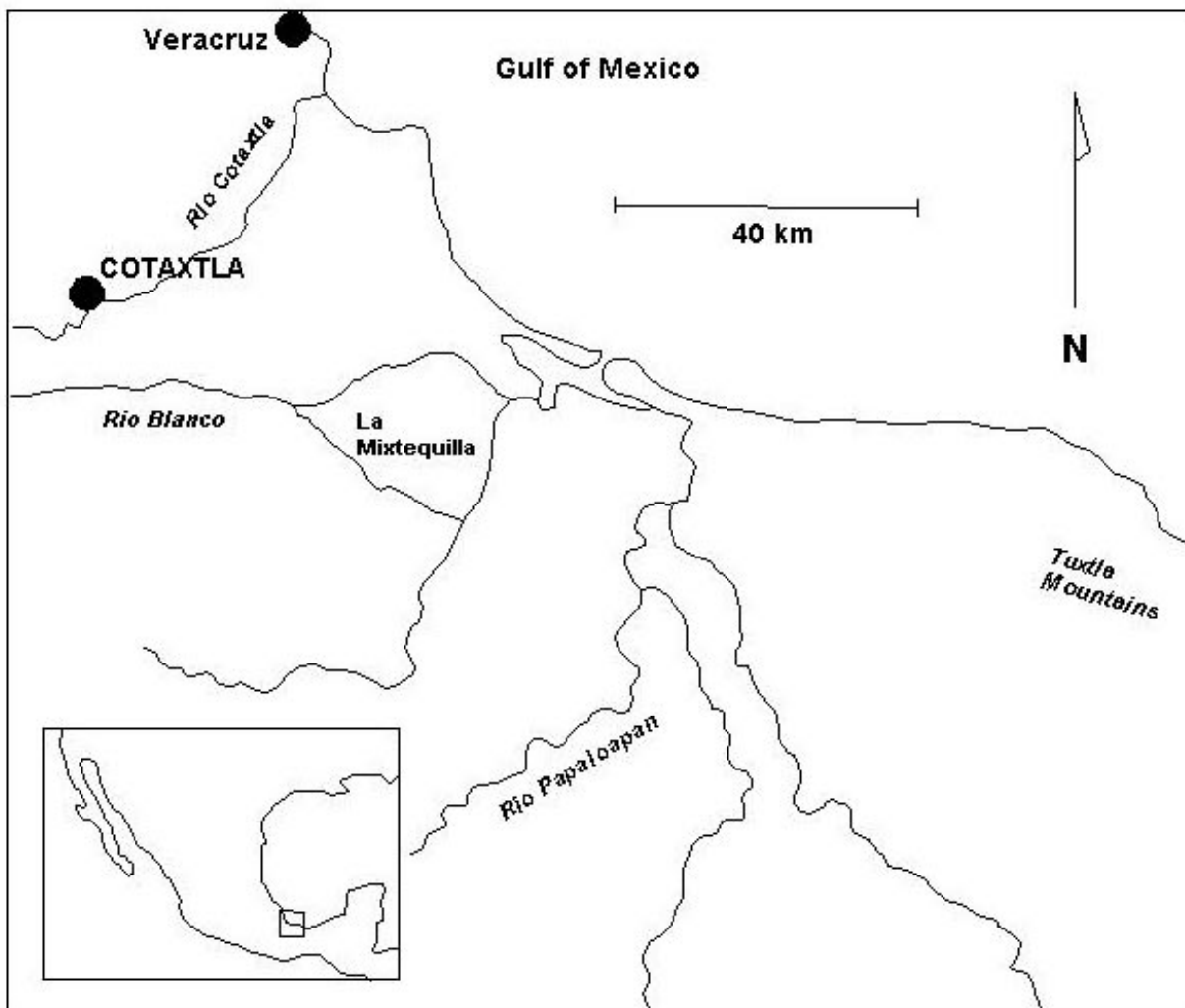


Figure 1. Map of southern Veracruz, showing the location of Cotaxtla. Inset map shows location within Mesoamerica.

Cotaxtla Archaeological Survey 1998

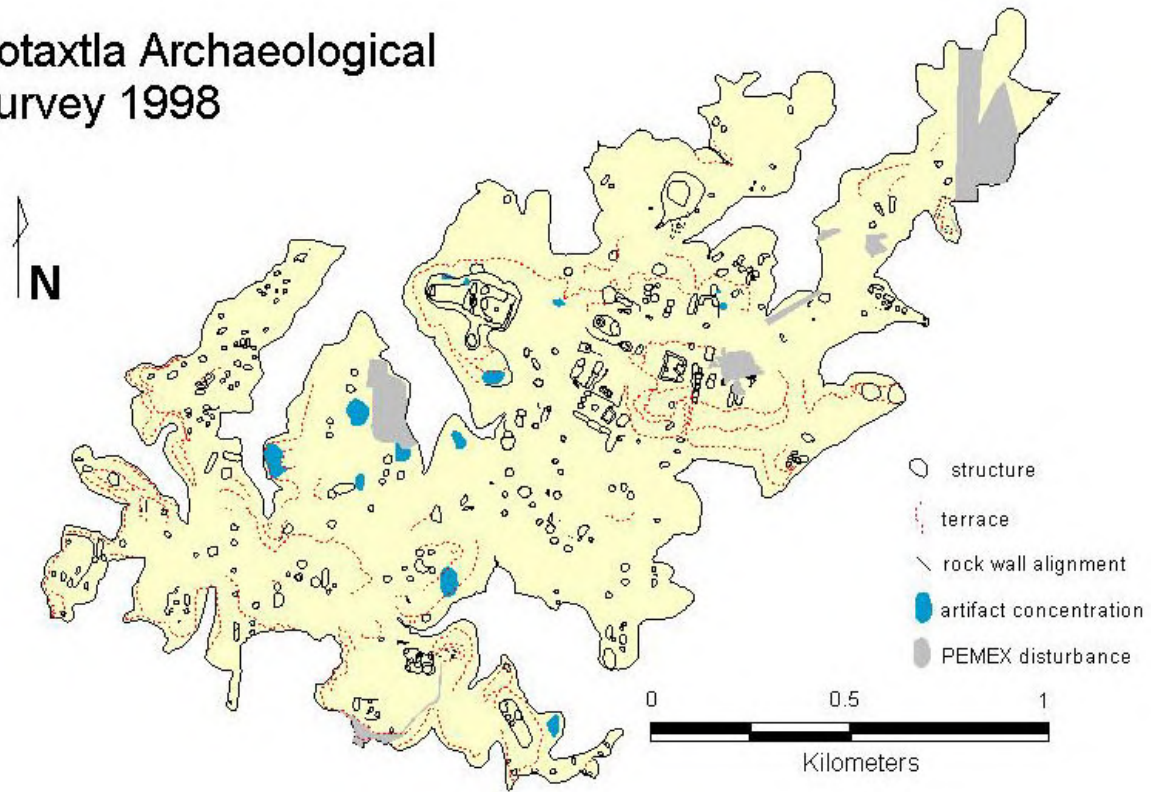


Figure 2. Map of the Cotaxtla mesa top, showing archaeological feature limits.

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Surface Collection Areas

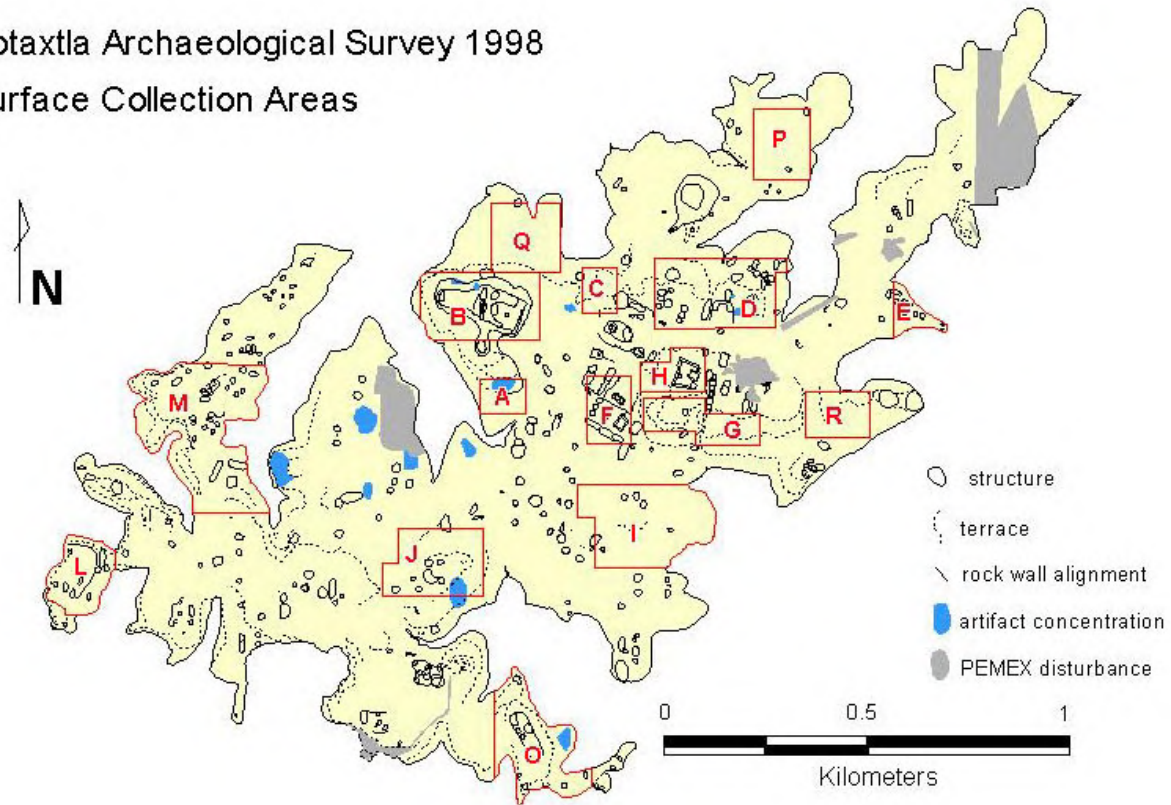


Figure 3. Systematic surface collection areas at Cotaxtla. See Table 1 for area descriptions.

Areas of the site surrounding the central zone contain mostly residential remains in the form of low mounds or concentrations of domestic artifacts. Generally, these structures utilized unworked cobble foundations. Occasionally a small complex of taller mounds or a single large mound, differentiated by the use of cut architectural stone, is found near residential features. These groupings of residential and formal features may help define possible barrios, but future excavation is needed to verify structure functions.

Around the borders of nearly the entire mesa are natural terraces of soft sandstone bedrock, many of which were modified with small stones, perhaps to level them. Frequently, these terraces contain dense scatters of domestic pottery, obsidian, and ground stone, suggesting a residential function. Settlement patterns at Cotaxtla, therefore, suggest a densely populated, differentiated and urban center. This nucleated pattern is in keeping with a broader Postclassic trend for the Gulf lowlands that differed from Classic period centers, which had more dispersed populations.

Craft Production

With respect to the issue of craft production, data pertaining to three industries were evaluated: pottery production, obsidian blade production, and the textile industry.

Survey and analysis of collections detected evidence for production in all three of these industries, for example as pottery molds and production tools, debris associated with obsidian tool production, and ceramic spindle whorls used to spin cotton thread. This material was found dispersed over the site, suggesting a general picture of relatively low intensity, probably household level production in many locations. 107 spindle whorls for spinning cotton were recovered, but were well distributed and did not show any spatial concentrations. Two areas of the site, however, (areas A and I on [Figure 3](#)) have evidence of more intensive obsidian blade production, while three areas of the site (areas C, E, and I) have evidence of more intensive pottery production than other areas (including figurine molds and fondo sellado pottery molds). The spatial patterning and association of craft activities with what are apparently residential structures in at least two of these areas suggests that corporate economic pursuits may have been one basis of differentiation among residents of the site.

The Cotaxtla evidence contrasts sharply with evidence from earlier, Classic period sites in the region, which show little evidence of specialization, and a marked absence of specialization within centers (Curet 1993; Heller and Stark 1999; Stark 1992). Even compared to nearby Postclassic sites, Cotaxtla produced a surprising amount of evidence for craft production. The high amount of craft activity may be related to several factors, including the site's dense population, which could support specialization, tribute demands from Aztecs and local rulers, and the capital town's better access to local economic networks, a factor related to regional growth in trade and marketing.

Regarding local economic organization, preliminary analysis of the data pertaining to pottery and obsidian industries from Cotaxtla are consistent with those from the Mixtequilla, in which pottery production shows characteristics of horizontally integrated economic organization, with most production on a relatively small scale. Obsidian shows a more vertically-integrated organization, with more intensive, concentrated production that might have served outside consumers (Heller and Stark 1999; Stark 1992). It is suggested that the reason for the discrepancy between the two products lies in the nature and availability of the raw materials and transport costs of the finished goods, which led to distinct but overlapping economic spheres.

Aztec Imperial Presence

A final aspect of the investigation is the issue of Aztec presence at Cotaxtla. A few pieces of Aztec style sculpture were recovered long ago from Cotaxtla (Medellín 1949). Additional Aztec related material was recovered during our fieldwork, including Aztec style figurines, pottery and architecture. Clay figurines from Cotaxtla included four fragments of Aztec style temple models, and several female representations similar to examples from Postclassic sites in the Basin of México (Millian 1981; Parsons 1972). Aztec style pottery includes Aztec III Black-on-Orange slab support bowls and Texcoco Molded censers. These pottery types occur infrequently, making up less than 2% of the total pottery assemblage. They are observed in low quantities in scattered locations of the site, but a few areas show concentrations ([Figure 4](#)). A large concentration was

observed on the Grand Platform contained by Area B (Figure 3), a large mound-platform complex centrally located on the site. This concentration occurs with high proportions of domestic ceramics and may represent cooking and serving ware of an elite household—perhaps the Aztec governor’s palace, or, alternatively, feasting-related debris associated with a temple. Most of the Aztec-style pottery from Cotaxtla appears to have been locally produced, rather than imported, although it was clearly not produced in large amounts. Interestingly, two mold fragments for making Texcoco Molded censers—a rare type—were recovered, which is significant in that it represents efforts to reproduce Aztec ritual practices at the site, which might have been used in state sponsored or domestic rituals.

Cotaxtla Archaeological Survey 1998
 Aztec Style Pottery Distribution
 (Aztec III B/O and Texcoco Molded)

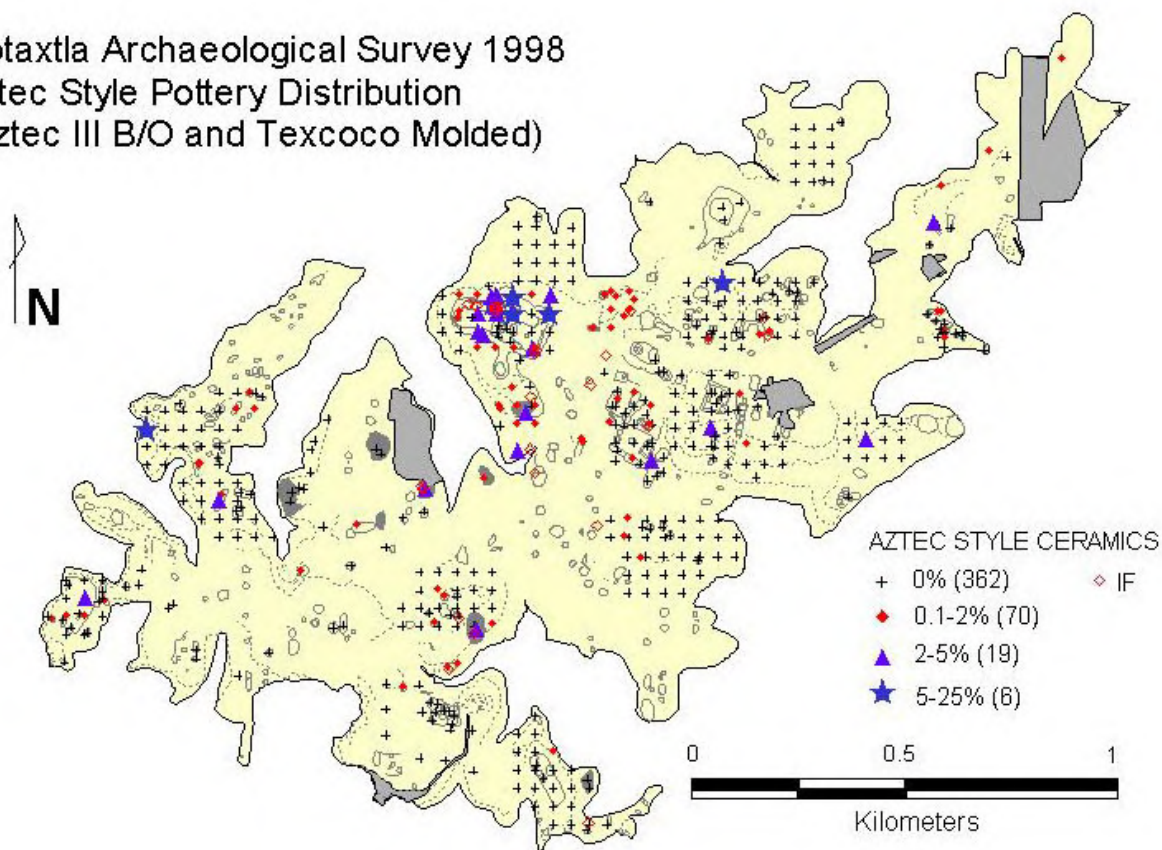


Figure 4. Percentage of Aztec style pottery in systematic and judgemental collections.

Cotaxtla Archaeological Survey 1998

Distribution of stone tenons

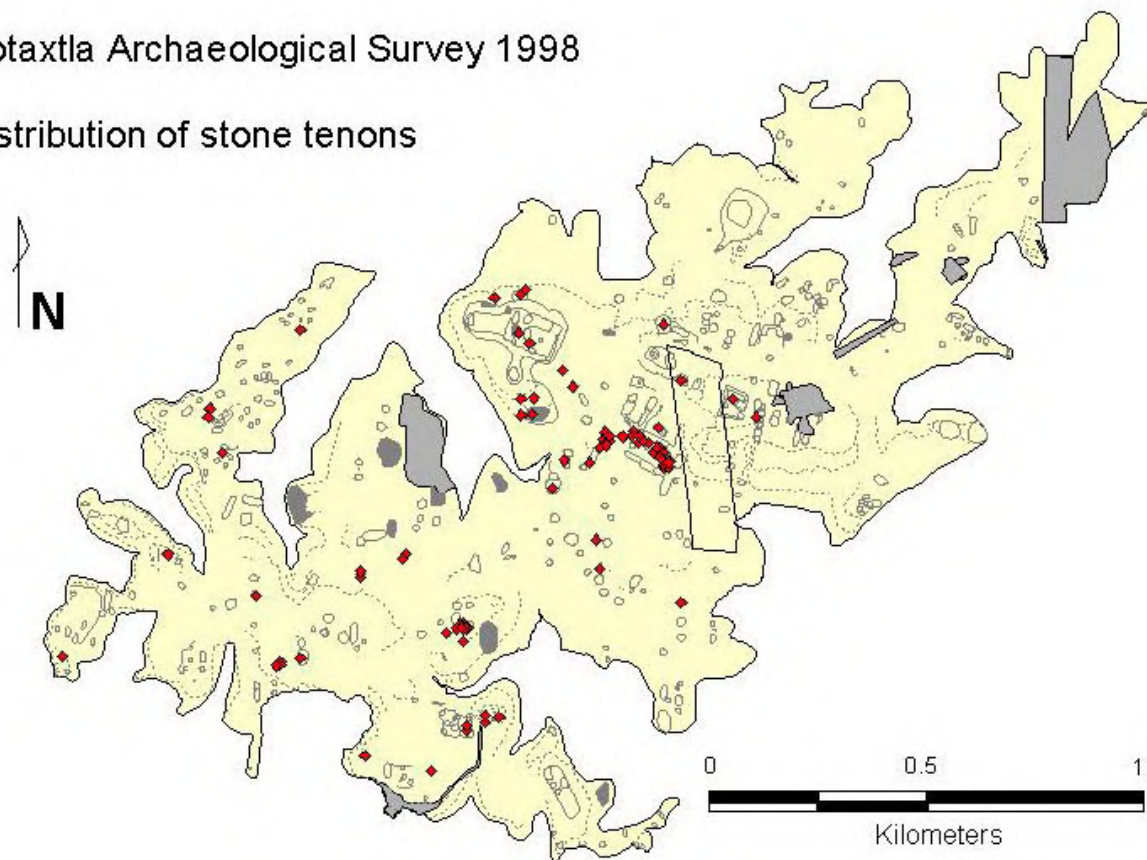


Figure 5. Distribution of architectural stone tenons at Cotaxtla. Eight additional tenons were noted in fields defined by the black box in the center of the site.

Aztec style pottery at Cotaxtla presents some interpretive difficulties because alternative explanations may account for its presence: the use of imperial style by Aztec administrative personnel, the presence of foreign residents using items in domestic contexts, or simply the emulation of foreign/imperial styles by local elites or residents. Further, ceramics are portable objects and some may have been acquired independently of imperial activity, through trade or markets. The overall low frequency of Aztec style ceramics does not necessarily indicate a minimal Aztec presence at Cotaxtla. Durán (1967, 2:238) describes how Aztec colonists sent to Oaxaca were supplied with local style pottery and housing. If Cotaxtla or other parts of Veracruz received Aztec residents, it is possible that they used mainly local pottery styles, which may account for low frequencies of Aztec styles in general from the Gulf lowlands. An alternate explanation is that imperial styles were consciously not adopted—perhaps a form of resistance to overbearing imperial rule. However, if Aztec styles at Cotaxtla were used actively as imperial symbols, differential production and distribution might help account for overall low frequencies, as items were produced and used in specific contexts or by select individuals. Because of the spatial differentiation they show, the Cotaxtla data may support this latter interpretation.

Architecture provides additional information. One element of Aztec architecture in central México is the use of stone tenons, often arranged in the facades of temples or elite residences, but also observed archaeologically in association with non-elite housing (Evans 1991; Sahagún 1950-82:Bk. 11, figs. 888-890). In the Gulf lowlands, similar tenons have been reported only from the Aztec style pyramid at Quauhtochco, another provincial capital near Cotaxtla, also under Aztec domain (Medellín 1952). During field survey at Cotaxtla, a considerable number of tenons were observed and recorded from dispersed areas of the site ([Figure 5](#)). Many are associated with large structures in the central core of the site (possibly temples or palaces), but others are infrequent and well scattered, often associated with low, unremarkable mounds.

Until excavation can verify the nature and function of structures at Cotaxtla using tenons, the meaning of their presence remains speculative. Architectural styles, however, like style on other objects, can send political messages. In the Andean highlands, Roman Greece, and at Vijayanagara, for example, ruling states invested in imperial style temple architecture in provinces as a form of legitimization (Sinopoli 1994). Perhaps because of Cotaxtla's rebellious nature, the Aztecs needed to maintain a strong visible political presence, and did this by imposing state architecture, and possible associated state ritual, throughout the site. The use of tenons on larger structures in the site's center suggests a form of public proclamation—a clearly imperial style on what was likely highly visible architecture. Smaller outlying structures may have had special state functions as well, or may have been domestic in function, indicating a widespread adoption of imperial styles or a well integrated—at least well distributed—Aztec population using homeland styles. Nonetheless, the architecture, along with Aztec style sculpture, represent substantial investments in imperial ideology at Cotaxtla, in contrast to previously held ideas about imperial investments in the outer provinces (Smith and Berdan 1992; Umberger 1996). Taken together with the presence of Aztec style pottery and figurines, the Cotaxtla data argue for an Aztec imperial presence at the site that is greater than previously thought, and we now have a better idea about the distribution of Aztec-style remains on the site. While some remains may be associated with reported garrison activity, they may also indicate a more widespread imposition of imperial presence, possibly through state-sponsored ceremony or the presence of colonists. Cotaxtla had a history of repeated rebellion (Berdan *et al.* 1996:286), which did not make it a good candidate for cooperative, indirect administration and the data suggest imperial investments indicative of more direct forms of administration.

More generally, the results suggest a need to reconsider current models of Aztec political administration in the outer provinces. Although cost-effective, indirect administration may have been desired, the Aztec empire may have had to contend with difficult relations in certain provinces, possibly resulting in province-specific administrative changes over time. Such a scenario echoes the structural and temporal dynamics alluded to earlier in Schreiber's (1992) mosaic model of imperial organization.

Conclusions

In sum, site mapping and analysis of surface artifacts revealed new information pertaining to the internal organization of a historically documented Postclassic center. Cotaxtla had an urban character with spatial differentiation in settlement and social and economic activities. Spatial analysis reveals dispersed household-level production in cotton spinning, pottery production, and obsidian blade production. In addition, more intensive pottery and obsidian blade production characterize several areas of the site, indicating some specialization among residents. Increased settlement nucleation and craft production at Cotaxtla are in keeping with broader processes affecting the Gulf lowlands during the Postclassic. Further, the project brings together a suite of new data on Aztec material remains at a conquered provincial center. The new information provided by sculpture, architecture, pottery, and figurines suggest a substantial imperial presence at Cotaxtla, and imply that Aztec provincial administration in general may have been much more fluid and dynamic than has been considered previously.

Acknowledgements

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Table 1
Description of areas selected for systematic surface artifact collection,
for comparison to Figure 3.
(Not all letters are represented).

Area	Description of Area
A	Area A was a very high density obsidian concentration, located on the terraces west of the Grand Platform. This area was thought to be a possible production area or a dump for workshop debris.
B	Area B surrounds and includes the Grand Platform, the largest formal complex in central zone. Surveyors also noticed a concentration of Aztec style ceramics associated with this platform.
C	Area C was one of a couple of areas where multiple pottery molds were located. The area was thought to represent a location of more intensive pottery production.
D	Area D was an eclectic area with mounds of various sizes, located near the civic-ceremonial core. Surveyors observed higher frequencies of decorated, possibly imported ceramics in this area. It was thought to represent a high status residential area, although it may contain other special function structures.
E	Area E was one of several areas of the site where low, probably residential mounds were clustered. Possible barrio?
F	Area F enclosed a large, formal complex in the central zone of the site, consisting of mounds and platforms arranged around a central plaza.
G	Area G covered a large terraced area associated with central zone. The terraces had a moderate density of artifacts and were thought to be residential. Their location adjacent to the central zoned suggested that they might contain higher status residents.
H	Area H enclosed another formal complex in central zone, consisting of a large mound and two adjacent small mounds in a walled enclosure, which sat atop a natural topographic rise. The collection area included some adjacent structures immediately to the west.
I	Area I was thought to be a residential area. Although it contained only a few visible, low mounds, a medium density of artifacts was scattered throughout the field. Several similar areas occur on the site, which were thought to represent areas where low mounds had been destroyed by modern plowing.
J	Area J was a cluster of small mounds. Some Aztec style sherds and possibly Aztec style architectural elements (tenons) were observed here. Possible Aztec barrio?

L	Area L was a group of low (residential?) mounds associated with a single large structure. Possible barrio?
M	Area M was a group of low (residential?) mounds associated with a single large structure. The area was similar to Area L, but located elsewhere on the mesa. Possible barrio?
O	Area O enclosed one of a few formal complexes away from central zone. The collection area includes the surrounding area.
P	Area P was an area of heavy pasture, with almost no visibility. A couple of small mounds were noted in the vicinity but artifact density was recorded as low or none. Collection was made to determine whether or not the area had traces of settlement or other activity (i.e., artifacts below the pasture).
Q	Area Q was an area of heavy pasture, with almost no visibility, located just north of the Grand Platform. Only one small mound was observed at the northern end of this field, and artifact density was recorded as low or none. Collection was made to determine whether or not the area had traces of settlement or other activity.
R	Area R was an area with a sparse covering of pasture, poor to moderate visibility, but with very low artifact density noted. Collection was made to determine whether or not the area had traces of settlement or other activity.

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