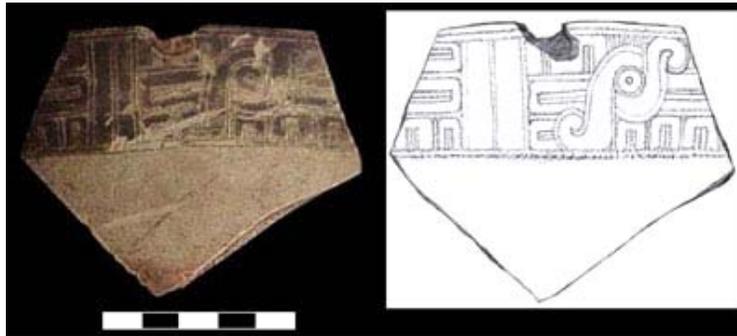


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**Isla Agaltepec: Postclassic Occupation in the Tuxtla Mountains,
Veracruz, México**



Research Year: 2002

Culture: Veracruz

Chronology: Post Classic

Location: Lake Catemaco, Sierra de los Tuxtlas, Veracruz, México

Site: Isla Agaltepec

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Abstract

Preliminary archaeological fieldwork at Isla Agaltepec provides the first unambiguous evidence for Postclassic (A.D. 1000-1521) occupation within the Sierra de los Tuxtlas, Veracruz, México. The nature of this occupation has been the subject of some debate, especially given recent reconsiderations of the political geography of the Tochtepec

province of the Triple Alliance (e.g., Esquivias 2002; Smith and Berdan 2003). Our research at Isla Agaltepec, located in Lake Catemaco, includes systematic surface survey and profiling of looters' trenches. This fieldwork reveals two probable periods of Postclassic occupation. The first, and earlier, presence is associated with an architectural complex (the Valenzuela Complex) whose configuration suggests a fortification. The latter use of the site is associated with a more humble residential occupation that apparently dates to the second half of the Postclassic Period.

Resumen

El trabajo de campo arqueológico preliminar de la Isla Agaltepec proporciona la primera evidencia inequívoca sobre la ocupación del Período Posclásico (1000-1521 d.C.) en la Sierra de los Tuxtlas, Veracruz, México. La naturaleza de dicha ocupación ha sido el tema de mucha discusión, principalmente dadas las reconsideraciones recientes de la geografía política de la provincia de Tochtepec de la Triple Alianza (por ejemplo, Esquivias 2002; Smith y Berdan 2003). Nuestros estudios en la Isla Agaltepec, ubicada en el Lago Catemaco, incluyen un estudio sistemático de la superficie y descripción de trincheras de saqueo. Este trabajo de campo revela dos probables fases de ocupación Posclásica. La primera, y más temprana presencia, está asociada con un complejo arquitectónico (el Complejo de Valenzuela) cuya configuración sugiere una fortificación. El último uso del sitio está asociado con ocupaciones residenciales más humildes y que aparentemente datan de la segunda mitad del Período Posclásico.

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Overview

During June and July of 2002 archaeological fieldwork was initiated at Isla Agaltepec, located in Lake Catemaco in the Sierra de los Tuxtlas, Veracruz, México ([Figure 1](#)). This research, authorized by the Consejo de Arqueología of the Instituto Nacional de Antropología e Historia (INAH), explores the character of Postclassic occupation in the Tuxtla Mountains, particularly in light of recent reconfigurations of the Tochtepec province of the Postclassic Triple Alliance (e.g., Berdan 1996; Carrasco 1999; Smith and Berdan 2003). Moreover, this fieldwork seeks to clarify the intensity of regional occupation throughout the Postclassic, given recent archaeological difficulties in identifying this presence during previous surveys in and around the Tuxtlas (e.g., Esquivias 2002; Santley and Arnold 1996; Urcid and Killion 1999).

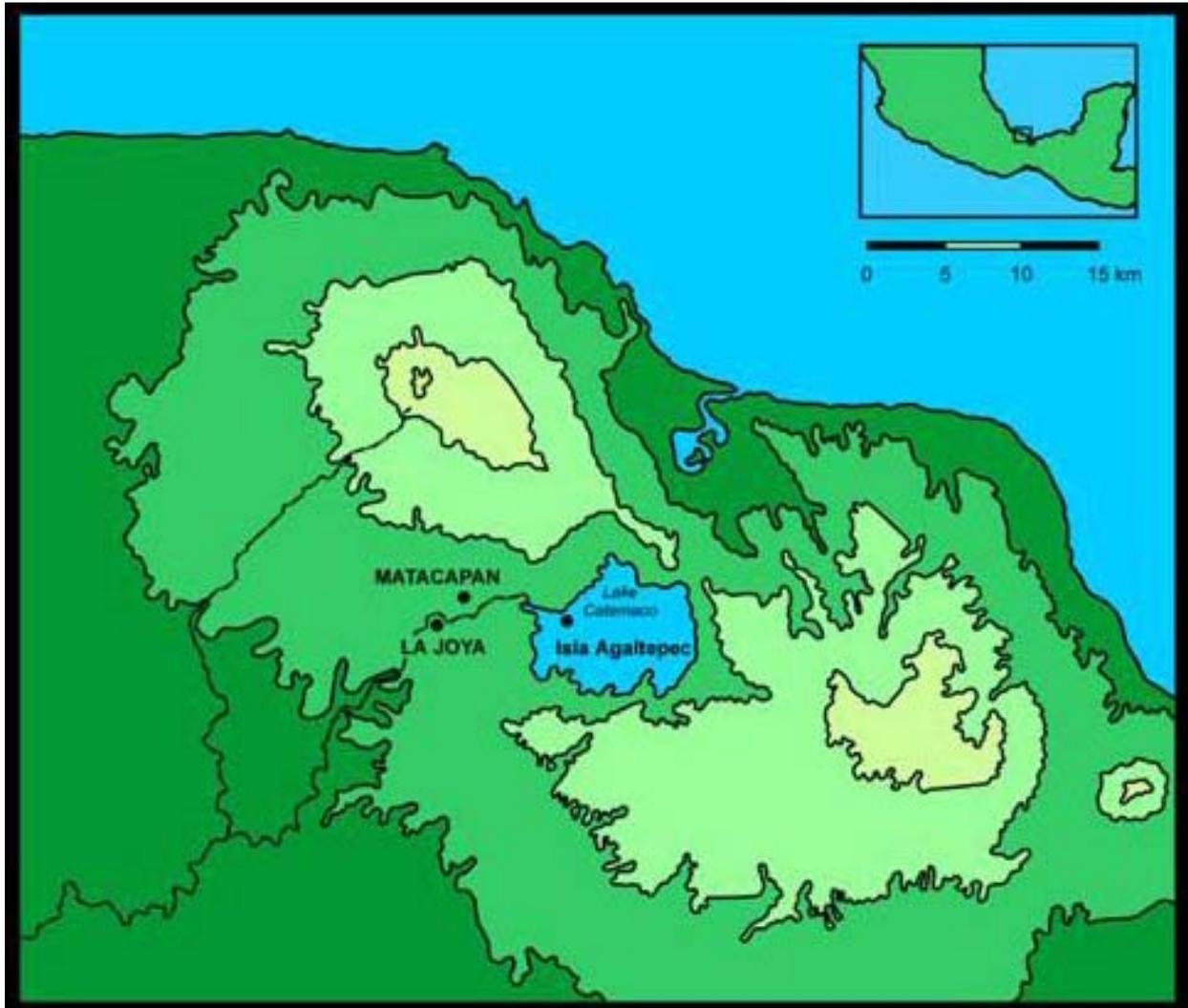


Figure 1. Location of Isla Agaltepec in the Tuxtla Mountains, Veracruz, México.

Isla Agaltepec was first noted by Blom and LaFarge (1926:22-25), was tested in 1937 by Valenzuela (1937; 1945) and was summarized by Coe (1965). The focus of the 2002 season's activities was twofold: (a) undertake a systematic survey of the island, including the recovery of surface artifacts from controlled collection units; and (b) document architectural construction on the site by shaving back a selection of looter's pits to generate architectural profiles. These activities were somewhat complicated by Isla Agaltepec's current status as a biological preserve and the sensitive ongoing studies of free-ranging howler monkeys that populate the island (<http://www.neuroetologia.net/parque/index.htm>). Concerns about our fieldwork's impact on those primates resulted in several compromises regarding the size of archaeological work groups and the field methods that could be employed. Our project benefited from the cooperation of the Instituto de Neuroetología (IN) at the Universidad Veracruzana,

Xalapa, which oversees the biological preserve. We would like to specifically thank Dr. Domingo Canales Espinosa, Director of the IN for his support of our research efforts and Blgas. Guadalupe Medel Palacios and Edith Carrera Sánchez for their assistance and collegiality while working on Isla Agaltepec.

Our fieldwork recovered 244 systematic surface collections that produced over four thousand ceramic and chipped-stone artifacts. Preliminary analysis of these materials supports a Postclassic (A.D. 1000-1521) date for Isla Agaltepec's primary occupation; several radiocarbon samples, obtained during profiling activities, are also being assayed.

The spatial distribution of surface artifacts leads us to suspect that different occupational episodes are reflected across the island. The largest architectural complex (Area C) apparently associates with an earlier portion of the Postclassic, while a smaller pyramid-plaza complex (Area A) suggests a later Postclassic presence. A linear series of mounds (Area B) appears to be residential in nature; ceramic artifact patterns from Area B also indicate a later Postclassic date.

Fieldwork on Isla Agaltepec

Isla Agaltepec is situated in Lake Catemaco, approximately 400 m offshore and east of the modern day village of Catemaco, Veracruz ([Figure 2](#)). The island has a slight crescent shape and covers approximately 8.5 ha; it measures about 750 m SW to NE and is about 150 m at its widest, central point. A high, steep ridge (approximately 30 m high) marks the center of the island; this ridge declines and flattens out on both ends of the island.

Per the conditions of our fieldwork permit, the total number of archaeologists working on any portion of Isla Agaltepec was limited to a maximum of four. As a result, and based on our initial reconnaissance of the island, we established three different work zones or areas ([Figure 3](#)). In this way the entire crew could be positioned within the field without threatening the island's delicate ecology or interfering with ongoing biological field studies.

Area "A" comprises the W-SW portion of the island and includes a modest mound-and-patio group. This group consists of three low mounds (ca. 1 m) situated along the north, west, and south sides of the patio with a larger mound (ca. 4 m) that dominates the patio's northeastern edge. This larger mound (Structure A-1) was apparently constructed by modifying the steep slope that leads upwards to the island's central ridge and Area B. The interior patio created by these four structures measures about 25 m east-to-west and 20 m north-to-south. The island is approximately 35 meters wide at this southwestern end and remnants of artificial retaining walls are visible along both shorelines (e.g., Coe 1965).



Figure 2. Aerial view of Isla Agaltepec relative to modern community of Catemaco.

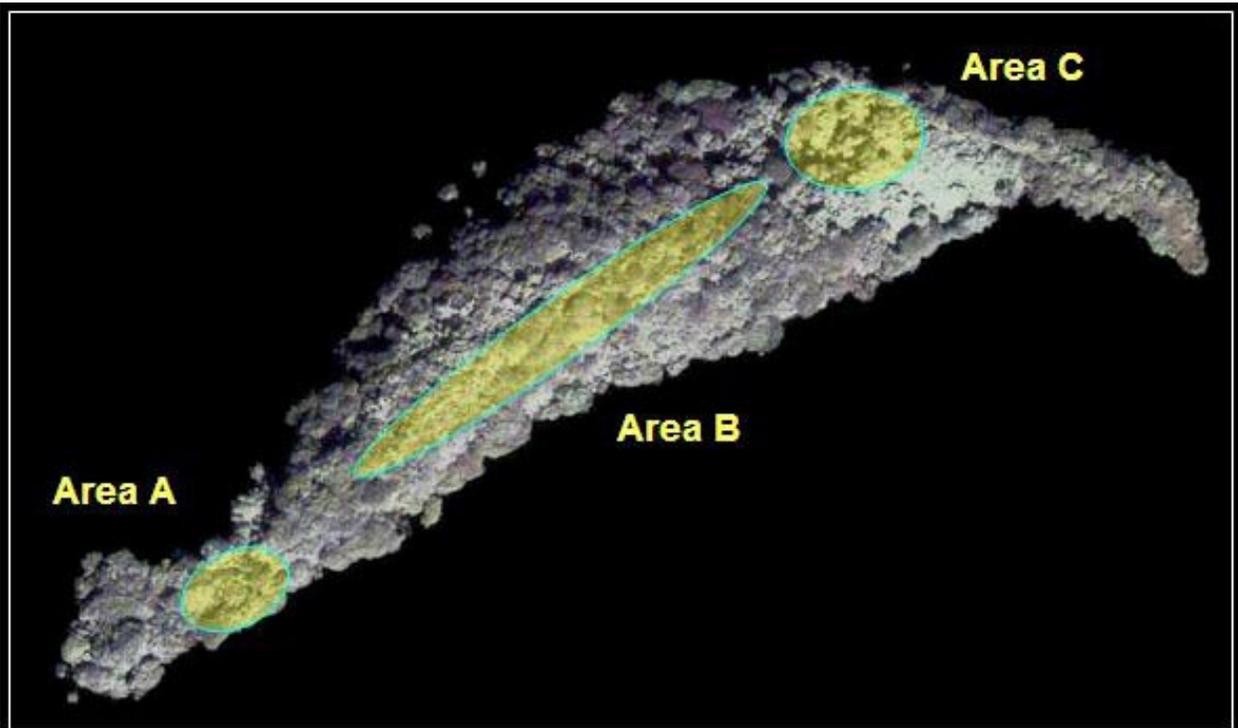


Figure 3. Loci of prehispanic occupation designated as Areas "A," "B," and "C" on Isla Agaltepec.

The central ridge or spine of the island is identified as Area "B." Although the ridge was originally a natural feature, it was subsequently modified to create a series of narrow artificial terraces ranging between 15 to 25 m wide. A series of low mounds (ca. 1.5-2 m) extends along the upper portion of Area B.

The three low mounds within Area B may have functioned as residential platforms. These platforms are positioned in a linear fashion along the ridge top, spaced between 17 and 20 m apart. Area B also exhibits several circular and rectangular arrangements of stone that may have served as foundations for wattle-and-daub or other perishable structures. These features were located both adjacent to mounds as well as isolated on lower terraces. There was no evidence for additional courses of stone associated with these features although, if originally present, wall fall may have been pilfered for other construction activities.

Area "C", or the Valenzuela Complex, is located within the northeastern section of Isla Agaltepec and contains the island's largest architecture (Valenzuela 1937; 1945) ([Figure 4](#)). The layout of this complex suggests fortification; it consists of a rectangular series of long range mounds that enclose an interior area of approximately 4000 sq m. A large pyramid (C-1) marks the eastern side of the complex and rises to a height of approximately 9 m.

Several of the range mounds lie along the edge of the island, creating a steep drop of 20-25 m to the water below. Finally, the architectural layout of Area C reveals only two ground-level access points into the enclosure; these openings occur on opposite sides of the compound. The northwestern opening leads down to the shore of the island, where a series of terraces and a staircase indicates an embarkation point. The other opening leads towards the east, but we were unable to identify any clear endpoint associated with this access point.

All three areas were subject to systematic surface survey and a more opportunistic profiling of looters' pits. Systematic survey included placing 3 × 3 m collection units spaced 5 m apart. We originally planned to space these collections every 10 m, but the dense growth and "no-cut" restrictions of our fieldwork permit conspired against that survey design. All artifacts encountered within the survey squares were collected, counted, and weighed. This research design helps to insure comparability with other survey activities undertaken within the Tuxtlas region (Santley and Arnold 1996; Santley *et al.* 1987).

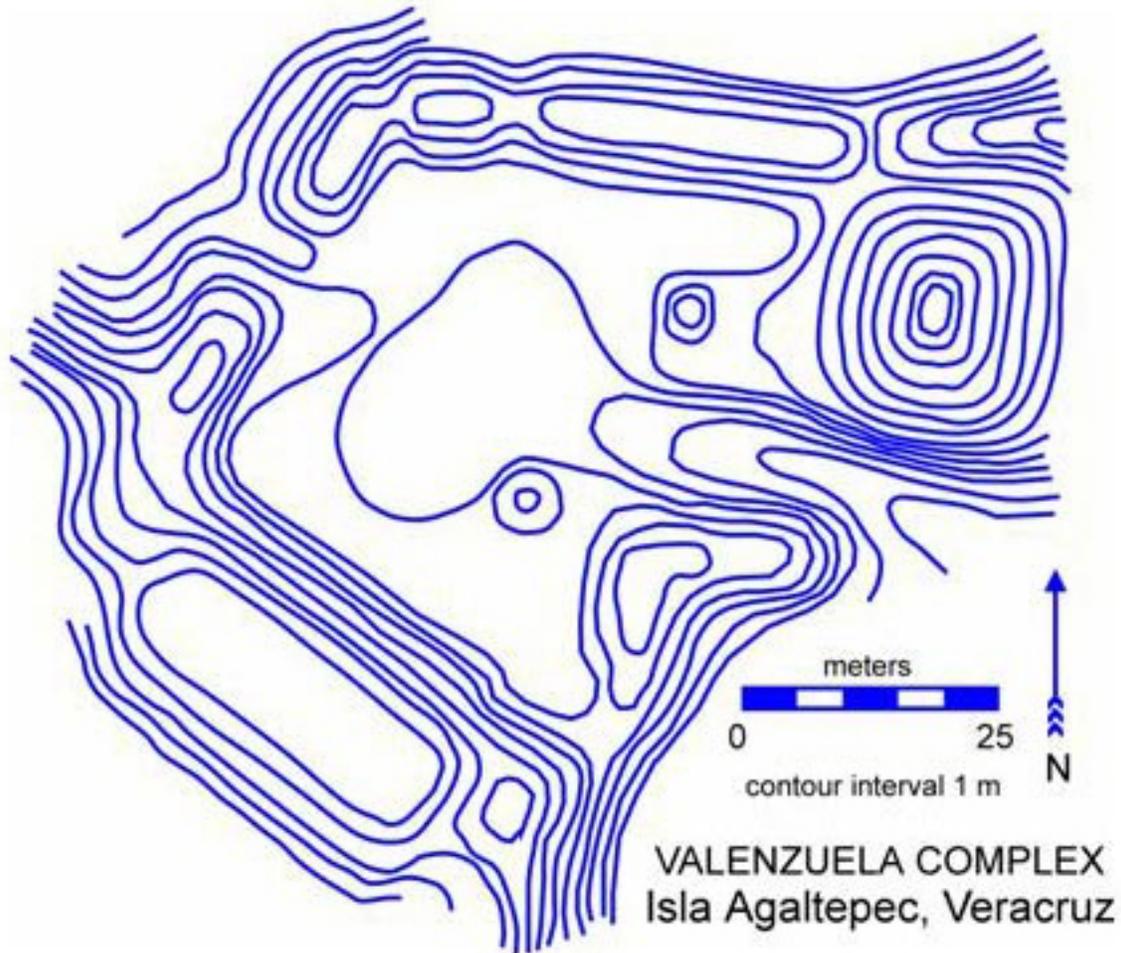


Figure 4. Valenzuela Complex (Area "C") at Isla Agaltepec (after Valenzuela 1945).

The three looters' pits selected for profiling were chosen primarily based on the opportunity to investigate standing architecture. Two factors informed our selections. First, of primary importance was the recovery of information relative to sequential building episodes, specifically with the hope of acquiring radiocarbon samples. Second, we hoped that the fill of these buildings might provide diagnostic ceramics that could complement our analysis of surface artifacts and our estimates for the island's occupational history.

Surface Survey and Artifact Analysis

In-depth analysis of the Isla Agaltepec material is ongoing. Nonetheless, several general observations can be made here. The available data suggest a Postclassic (A.D. 1000-1521) occupation of the island. Moreover, these preliminary findings indicate that different portions of the island may reflect different occupational episodes, perhaps

earlier and later phases of the Postclassic. Finally, patterning in the spatial data can be used to infer functional differences among the three areas investigated.

Two-hundred and forty-four systematic collections were obtained across the island, generating a total of 4321 artifacts that weighed almost 23 kilograms. Pottery is by far the single largest contributor to these figures ([Table 1](#)), with chipped-stone artifacts a minor component ([Table 2](#), [Table 3](#)).

Table 1. Ceramic data from survey areas on Isla Agaltepec.

Area	Total Sherds	Sherd Weight in Grams	Avg. Grams per Sherd	Collections per Area	Collections with Sherds	% Collections with Sherds	Sherds per Collection
A	1250	6636.5	5.3	56	48	85.7	22.3
B	594	3660.4	6.2	106	60	56.6	5.6
C	2385	12613.0	5.2	82	66	80.5	29.1
Total	4229	22909.9	5.4	244	174	71.3	17.3

Table 2. Obsidian by color from survey areas on Isla Agaltepec.

Area	Clear/Grey		Green		Black		Total
	N	%	N	%	N	%	
A	17	62.96	3	11.10	7	25.93	27
B	4	40.00	2	20.00	4	40.00	10
C	33	61.11	1	1.85	20	37.04	54
Total	54	59.34	6	6.59	31	34.07	91

Table 3. Obsidian by blade portion from survey areas on Isla Agaltepec.

Area	Distal	Medial	Platform		Unidentified	Total
			Polished	Unpolished		
A	4	16	7	0	0	27
B	0	6	0	0	4	10
C	5	24	11	2	12	54
Total	9	46	18	2	16	91

All chipped-stone artifacts were made from obsidian. Ninety-one blade fragments were recovered; we also located a single projectile point. Although the Tuxtlas is a volcanic region, no local obsidian deposits have been identified; thus, all of this raw material was imported. Instrumental neutron activation analysis of obsidian blades along the Gulf Lowlands posits a strong correspondence between the color and source of raw material: clear/light gray–Pico de Orizaba; green–Pachuca; and black–Zaragoza (Heller and Stark 1998; Santley *et al.* 2001; Stark *et al.* 1992).

Blade production technology also provides a temporal index. Research suggests that platform grinding is associated with Postclassic Period obsidian production along the Gulf Lowlands (Heller 2001:164; Heller and Stark 1998; cf. Santley *et al.* 1986). Moreover, the association of ground platforms on clear (Orizaba) obsidian blades may be particularly linked to the latter half of the Postclassic period (e.g., Heller and Stark 1998:122; Stark *et al.* 1992:226).

The survey also recovered two metate fragments. In contrast to obsidian, basalt is locally abundant and both groundstone artifacts were apparently made from this local material.

Area A Artifacts:

Over 1250 artifacts were recovered from Area A. The overall distribution of this material reveals a central zone relatively free of debris with an increase in artifact density towards the southwestern edge of the complex ([Figure 5](#)). This concentration lies on the exterior edge of the patio complex and probably reflects maintenance of the interior plaza space with dumping along the outside perimeter.

Our initial assessment of the artifacts suggests that Area A was occupied during the latter portions of the Postclassic. For example, 27 obsidian blade fragments were recovered from the surface and 63% of these blade fragments are clear or light gray ([Table 2](#)). Moreover, 100% (7/7) of the blade platforms from Area A exhibit grinding ([Table 3](#)). By way of contrast, platform grinding was rarely present on the obsidian blades recovered during the Tuxtlas Regional Survey (e.g., Santley and Arnold 1996).

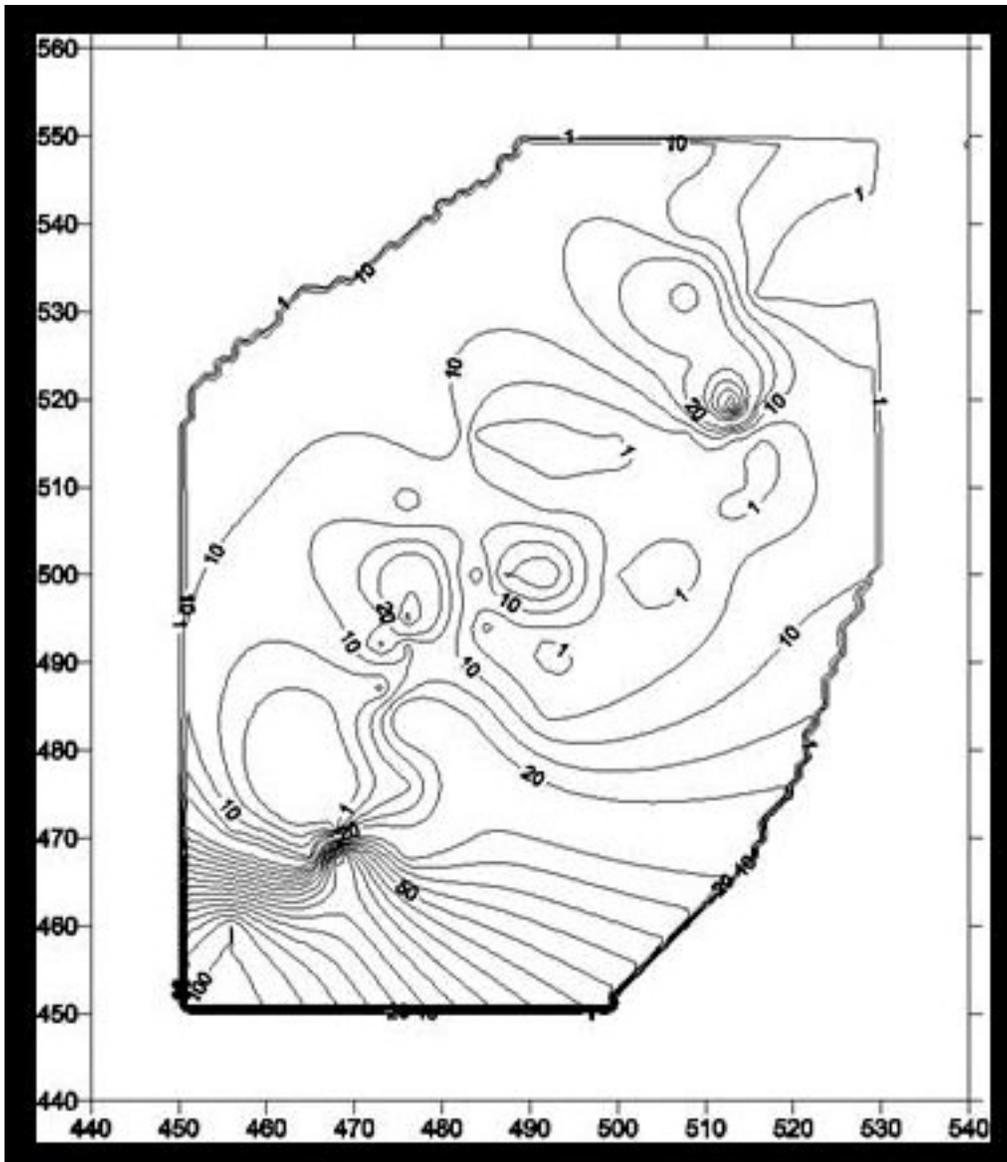


Figure 5. Area "A" surface ceramic distribution (scale in meters).



Figure 6. Surface ceramic from Area "A" (scale in cm).

The ceramics from Area A were also distinct from types previously identified in the Tuxtlas region (e.g., Pool 1995). Ceramic motifs include avian and geometric step-fret designs incised on the exteriors of orange or gray paste pottery, often with a brown slip or wash ([Figure 6](#) and [Figure 7](#)). The paste of these pieces suggests local manufacture. Other decorations include incised circles on vessel interiors, covered with a red slip ([Figure 8](#)). Vessel forms consist of open bowls and restricted orifice jars. One sherd of Texcoco Molded, a Middle-to-Late Postclassic diagnostic, was also recovered (also see Area B Artifacts).

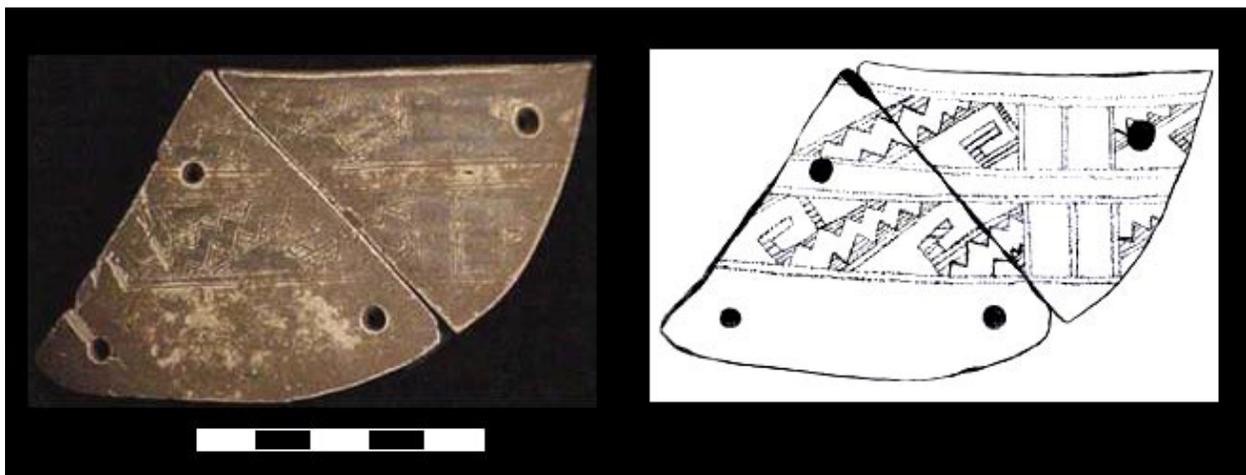


Figure 7. Ceramic from profile of Area "A" (scale in cm).



Figure 8. Surface ceramic from Area "A" (scale in cm).

Area B Artifacts:

In total, 106 collections were made from Area B. Despite having the most collections of the three areas, overall surface artifact densities are low in comparison to the rest of Isla Agaltepec ([Figure 9](#)). For example, only 56.6% of the collections from Area B contained ceramics, in comparison to values of 85.7% and 80.5% for Areas A and C, respectively ([Table 1](#)). Moreover, the Area B collections averaged only 5.6 sherds per unit (spu), compared to averages of 22.3 spu and 29.0 spu for Areas A and C, respectively.

There are some indications, however, that the comparatively lower densities within Area B are not necessarily representative of subsurface deposits. For example, collections made in the area of a tree fall in the northern zone of Area B generated some of the highest surface artifact densities encountered in the collections (17 sherds/sq m), indicating healthy pockets of sub-surface material. It would appear that, at least in some cases, the low surface artifact densities within Area B may be a function of ground cover, visibility, and terrain modifications.

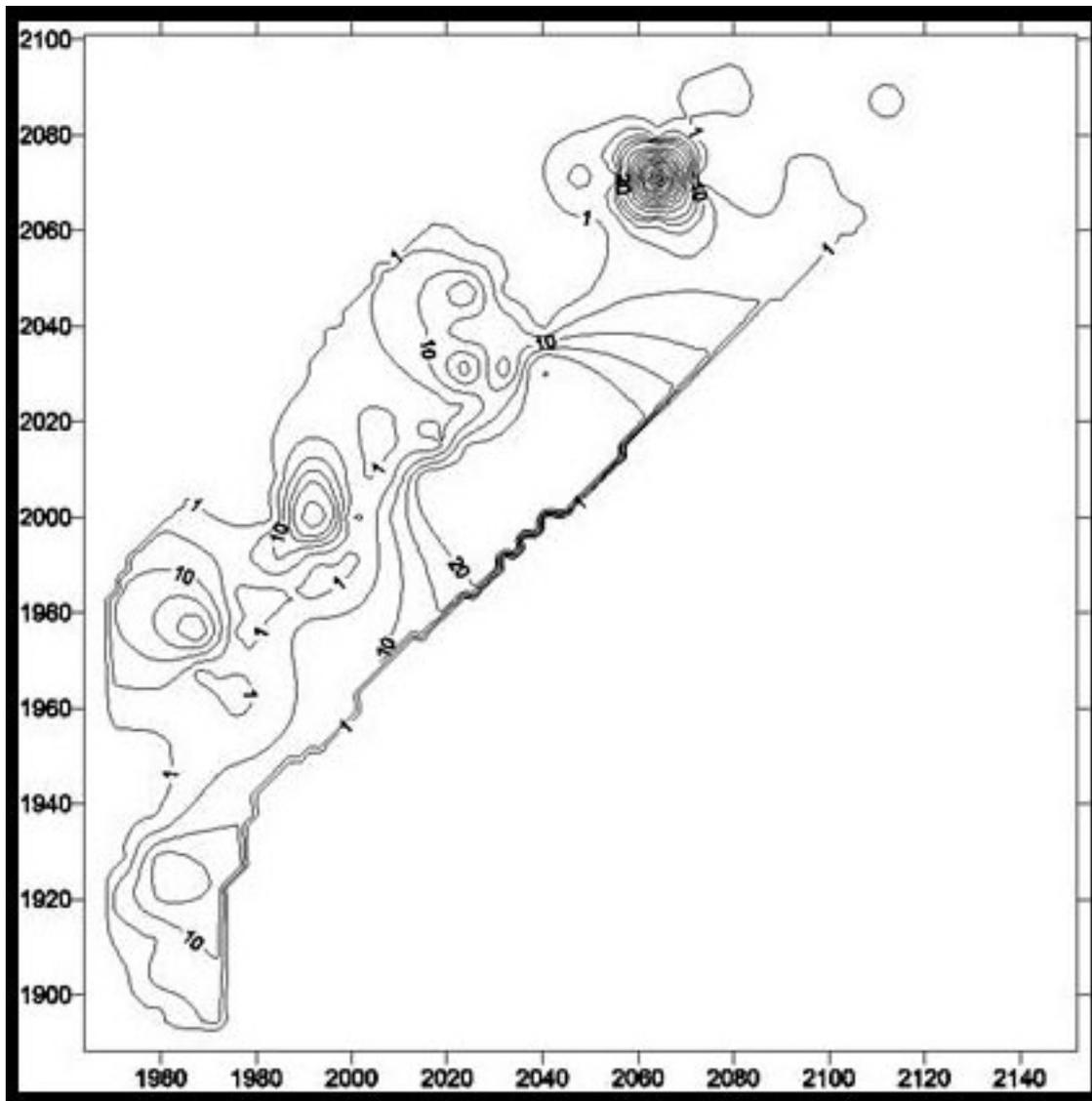


Figure 9. Area "B" surface ceramic distribution (scale in meters).

Artifacts from Area B, more than any other portion of Isla Agaltepec, suggest a residential context. For example, both a metate fragment and undecorated spindle whorl were recovered from this area. Noteworthy is the fact that surface sherds in Area B are generally larger than those in the other two areas: Area B ceramics average 6.2 gr/sherd while ceramics from Areas A and C each average 5.3 gr/sherd ([Table 1](#)). This difference is on the order of 20% and suggests that artifacts in Area B may have been exposed to different formation processes in comparison to other portions of the island.



Figure 10. Surface ceramics from Area "B" (scale in cm).

Although relatively sparse, the ceramic artifacts from Area B also suggest a later Postclassic occupation. In addition to a second Texcoco Molded sherd, pottery continues to exhibit the pattern of avian motifs on an orange or grey paste covered with a brown slip ([Figure 10](#) and [Figure 11](#)). It is tempting, therefore, to associate the Area B occupation with the construction and use of the plaza complex in Area A.

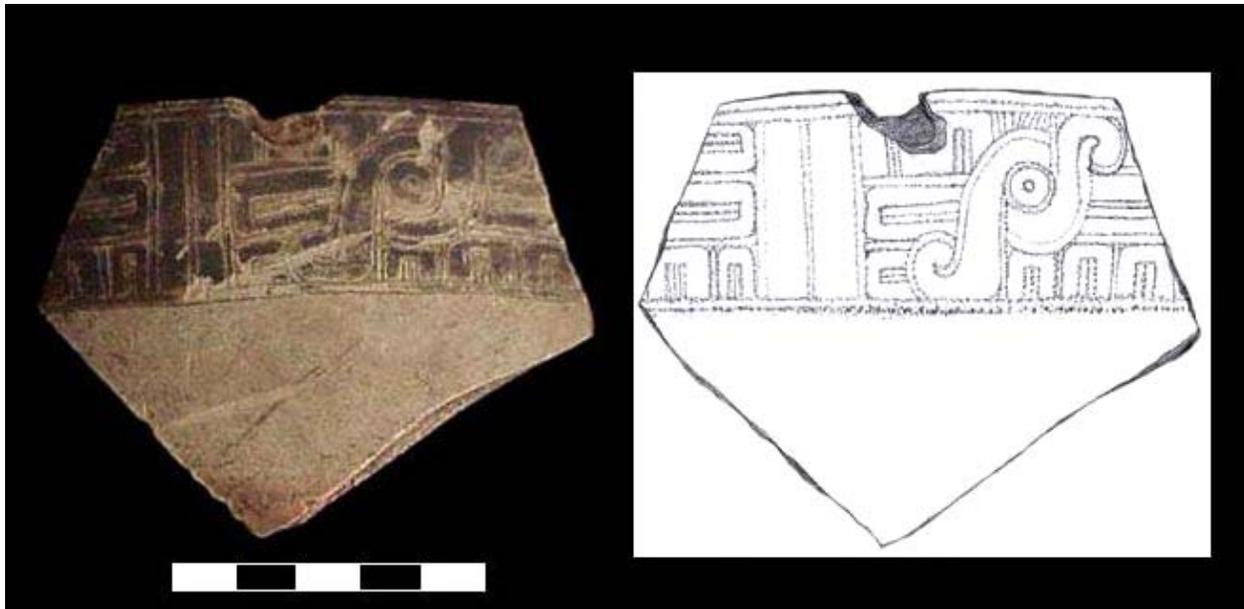


Figure 11. Surface ceramic from Area "B" (scale in cm).

Ten obsidian blade fragments were recovered from Area B ([Table 2](#)). This number is noteworthy, given that almost twice as many collections were made in Area B compared to Area A, yet only one-third of the number of chipped stone artifacts were recovered. Unfortunately, comparative statistics are not particularly meaningful with counts this low. Interestingly, none of the obsidian blade fragments from Area B include platforms, while around 25% of the obsidian from the Area A and C collections exhibit platforms ([Table 3](#)). Whether this difference reflects simple sampling vagaries or supports a functional difference for Area B remains to be seen.

Area C Artifacts:

A total of 82 systematic surface collections were obtained from Area C; as noted above, just over 80% of these collections recovered pottery. Surface sherds were distributed across the entire Valenzuela Complex with highest densities occurring in two areas ([Figure 12](#)). First, frequencies that exceeded 100 spu were encountered on the east side of the enclosure, associated with the large C-1 pyramid. Comparable concentrations of materials were also recovered to the west, but in this case the collections came from just outside the complex.

Surface ceramics generally differed from those recovered in the two other areas of the island. For example, a large fragment of a red painted coarse orange jar was recovered ([Figure 13](#)). Comparable jars have been documented for Late Classic occupation in the region; in fact one example currently in the Tuxtla Museum in Santiago, Tuxtla reportedly contained a burial. Valenzuela (1937, 1945) reported several burials in his explorations of Area C, but none of these were recovered from large jars.

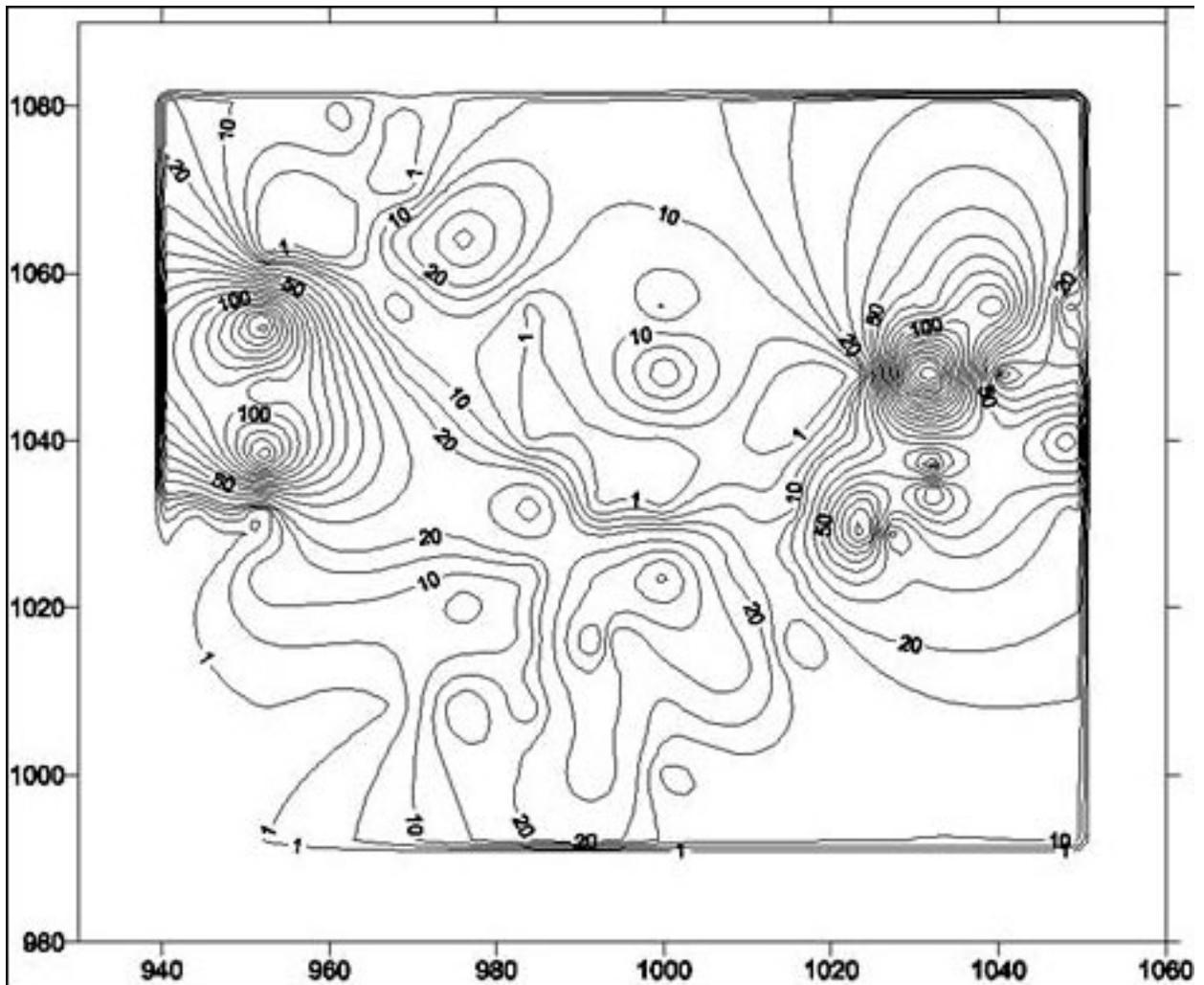


Figure 12. Area "C" surface ceramic distribution (scale in meters).

Other examples of surface ceramics include an incised sherd made from a medium grey paste and a burnished jar, with a brown slip over an orange paste ([Figure 14](#)). Again, these sherds would fall comfortably within the known Late Classic ceramic repertoire recovered elsewhere in the Tuxtlas. They are currently attributed to the Postclassic based on the associated obsidian assemblage.



Figure 13. Surface ceramic from Area "C" (scale in cm).



Figure 14. Surface ceramics from Area "C" (scale in cm).

Fifty-five chipped-stone artifacts were recovered from Area C; a single obsidian projectile point and 54 obsidian blade fragments. Of these blade fragments, Area C contains comparable proportions of clear/gray material with Area A (61% vs. 63%), but the presence of green and black obsidian differs ([Table 2](#)). Area C has much less green obsidian compared to Area A (2% vs. 11%) and more black obsidian (37% vs. 26%). Moreover, just under 85% (11/13) of the platforms from Area C exhibit grinding, compared to the 100% value from Area A ([Table 3](#)). The lower amounts of green obsidian, the higher proportion of black obsidian, and the lower occurrence of platform grinding suggests that the Valenzuela Complex dates to an earlier portion of the Postclassic than Area A.

Previous fieldwork in the Tuxtlas encountered difficulty in identifying Postclassic, particularly Early Postclassic, remains (Santley and Arnold 1996). If the assessment of the Isla Agaltepec chronology is correct, then there might have been considerable carry over in the regional ceramic tradition from the Late Classic to the initial portions of the

Postclassic. Thus, obsidian technology may provide a more temporally sensitive index than pottery, per se. Future research will help clarify this possibility.

Evidence from Looters' Trenches

Unfortunately, looting activities, first reported over 60 years ago by Valenzuela (1937, 1945) continue to impact Isla Agaltepec. Permission was obtained from INAH to shave back and map the profiles represented in a sample of looters' trenches. One such trench was selected for each of the three survey areas; all involve illicit pits dug into mounded architecture. Radiocarbon samples were recovered from each of these profiling operations and are awaiting assay.

Our profiling activities in Area A focused on a pit dug into the base of Structure A-1, the single pyramid within the mound group. The looter's pit was shaved back approximately 80 cm and a profile of 200 cm long was created ([Figure 15](#)).



Figure 15. Mound A-1 profile cut (facing N/NW).

The profile revealed three soil strata. Several concentrations of rock were encountered within the lower two stratigraphic deposits; explorations around the lower rock concentration also produced a piece of historic glass. Although originally thought to be an in situ alignment, the presence of glass suggests that looting has impacted the arrangement of these rocks.

Artifacts noted during our profiling activities included clear/gray obsidian blade fragments (with polished platforms) along with ceramics that were stylistically similar to those found during the surface survey. The material from the Structure A-1 profile suggests that Area A represents a single, probably brief, occupation of this portion

Our Area B profile was placed along the west side of the middle residential platform. Looting activity in this area was not as extensive as that documented elsewhere on the island; the hole we chose to clear was comparatively small and generated a profile that was 150 cm long.

The soil within this cut revealed two strata ([Figure 16](#)). Both layers consisted of earthen fill without the rubble material noted in the cross sections cleared in Areas A and C. In addition, we encountered a small pit feature in the northern corner of the profile. This feature contained a bowl fragment, as well as a piece of metate. Unfortunately, few additional diagnostic artifacts were recovered from this profile.



Figure 16. Mound B-2 profile cut (facing S/SE). A metate fragment is visible in the bottom corner of the unit.

In Area C we selected a hole that was dug into the SW base of the large C-1 pyramid. After clearing and cleaning, the profile section measured 240 cm long and was cut back approximately 30 cm.

This profile revealed two distinct construction episodes ([Figure 17](#)). Remnants of an outer layer of dressed stone covered with stucco characterized the later construction. Cleaning this profile also exposed a human mandible fragment and molar, suggesting the presence of a burial. As noted above, Valenzuela (1937, 1945) reported finding human remains associated with mounded architecture in Area C.

A second, interior structure was identified during the C-1 profiling. This interior structure was also capped with dressed stone, in this case over an earthen fill. Artifacts from this fill represented a wide array of time periods, ranging from Formative Period white-rimmed blackware to what may be imitation plumbate (Postclassic). As we recovered no other evidence of Formative occupation on the site, it is possible that some of this fill was brought onto Isla Agaltepec from deposits around Catemaco.



Figure 17. Mound C-1 profile cut (facing E/NE). Stones in situ indicate an earlier structure.

Summary and Significance

Our preliminary fieldwork at Isla Agaltepec provides important new data on the Postclassic occupation within the Sierra de los Tuxtlas. Previous archaeological research in this area has not been able to identify a clear, distinct Postclassic component, despite ethnohistoric evidence for occupation at the time of contact (e.g., Esquivias 2002; Scholes and Warren 1965; Stark 1978). Identifying this occupation becomes all the more crucial as models of Mexican Postclassic regional geographies continue to be revisited (Barlow 1949; Carrasco 1999; Smith and Berdan 2003).

Our Agaltepec investigations provide the first conclusive archaeological evidence for a strong Postclassic presence in the Tuxtlas. Moreover, this research suggests that the island may have been initially occupied during the early portion of the Postclassic. This occupation would coincide with the apparent fortified construction of the Valenzuela Complex. It is tempting to relate the need for fortification to the general political context of Early Postclassic México (e.g., Diehl and Berlo 1989), but we currently lack sufficient data to make such a case. Nonetheless, given the apparent continuity in ceramics from the Classic Period, it would seem reasonable to suggest that the fortification was occupied by long-time residents of the area, rather than newcomers. Additional fieldwork would clarify this context considerably.

A later Postclassic occupation is implicated by the artifact patterning in Areas A and B. Nonetheless, the scale of this presence is much smaller than that noted for Area C. It may well be that, by the time the Triple Alliance became interested in the Tuxtla region the function of Isla Agaltepec had undergone a fundamental transition. For example, Area B appears to represent a residential occupation. The architectural data do not suggest a long-term presence, nor do the surface data from Area B indicate a particularly intensive occupation. However, it is clear that surface patterns within some portions of Area B may not accurately reflect sub-surface material densities.

In sum, Isla Agaltepec offers a unique archaeological resource in the Tuxtla Mountains. To date, it remains the only site with an intensive, unambiguous Postclassic presence; furthermore, the scale of architectural construction rivals that from other sites in the area. The use of the island for such large-scale construction efforts is intriguing and suggests a serious desire for protection in the face of heightened regional competition.

The island's current status as a biological preserve is both a boon and a bane in terms of protecting this archaeological resource. Restrictions on using the island ([Figure 18](#)) help to minimize the large scale destruction that has sadly impacted other sites in the region. Nonetheless, looters are not dissuaded by such restrictions; clandestine operations remain an on-going threat and such activities have not been systematically reported to INAH officials. Our continued cooperative efforts with the Universidad Veracruzana will help protect the site while permitting additional archaeological research on this crucial precolumbian resource in the Tuxtla Mountains.



Figure 18. Prohibitions regarding the use of Isla Agaltepec.

Acknowledgments

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important feedback regarding the identification of Postclassic ceramics. Thanks to Shannon Fie for her help with the graphics.

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