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The Agave Landscape and its Archaeological Context in the Tequila Volcano Area

Translation of the Spanish by Eduardo Williams

Ver este informe en Español.

Research Year: 2007
Culture: Teuchitlán Tradition
Chronology: Formative, Classic and Postclassic
Location: Jalisco, Mexico
Sites: Central valleys of Jalisco, north of the Tequila Volcano

Table of Contents

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Abstract

The following report presents the results of a regional survey north of the Tequila Volcano, in an area recently declared a World Heritage Site by UNESCO. The project is the first systematic, full-coverage survey in the central valleys of Jalisco. The area is best known for the Teuchitlán Tradition, one of Mesomerica's earliest complex societies. The survey has covered to date 29.3 km^2 and registered 57 sites of various time periods. The following is a report on the results obtained to date.

Introduction

The central valleys of Jalisco, Mexico (Figure 1) have been studied for several decades, but West Mexico is still among the least studied regions of Mesoamerica. In the last 30 years great strides have been made to know the societies that lived here, besides contributing to a better understanding of the nature of social complexity in this region.

Several survey and exploration projects have been undertaken, as well as excavations (Beekman 2000; Weigand 1993, 1996b). However, no systematic survey of total area coverage had been undertaken until now, although this kind of study is critical for any region. Among the goals of this project is to produce information about the settlement patterns and the use of the landscape through time. The ultimate aim is to explain the origin and functioning of complex societies that rose in the study area. Besides, it is of foremost importance to integrate the area to the repertoire of regional surveys in Mesoamerica.

Most research conducted in the core area of the Teuchitlán tradition (e.g. Beekman and Weigand 1998, 2000; Weigand 2004) has focused on the peak period during the Terminal Formative to Early Classic, pertaining to the following archaeological phases: Arenal, Ahualulco and Teuchitlán I (Table 1). The regional survey intends to focus our attention away from this time period, to observe the area from a broader perspective in terms of time and space. Thus, our research goals are to explore the rise, decline and consequences of the state that arose in the area. When and how did the state arise, and which were the origins of the Teuchitlán tradition? How were the settlements organized on a regional level, and how did the settlement patterns change through time? What was the relationship between the abundant obsidian mines and the rise of social complexity? How were settlements organized around this all-important and precious natural resource? Was there an unequal access to this resource? And lastly, did the local population participate in the same Mesoamerican world system to which Oaxaca and the Basin of Mexico

belonged? The technique for answering these questions is the systematic survey with total area coverage.

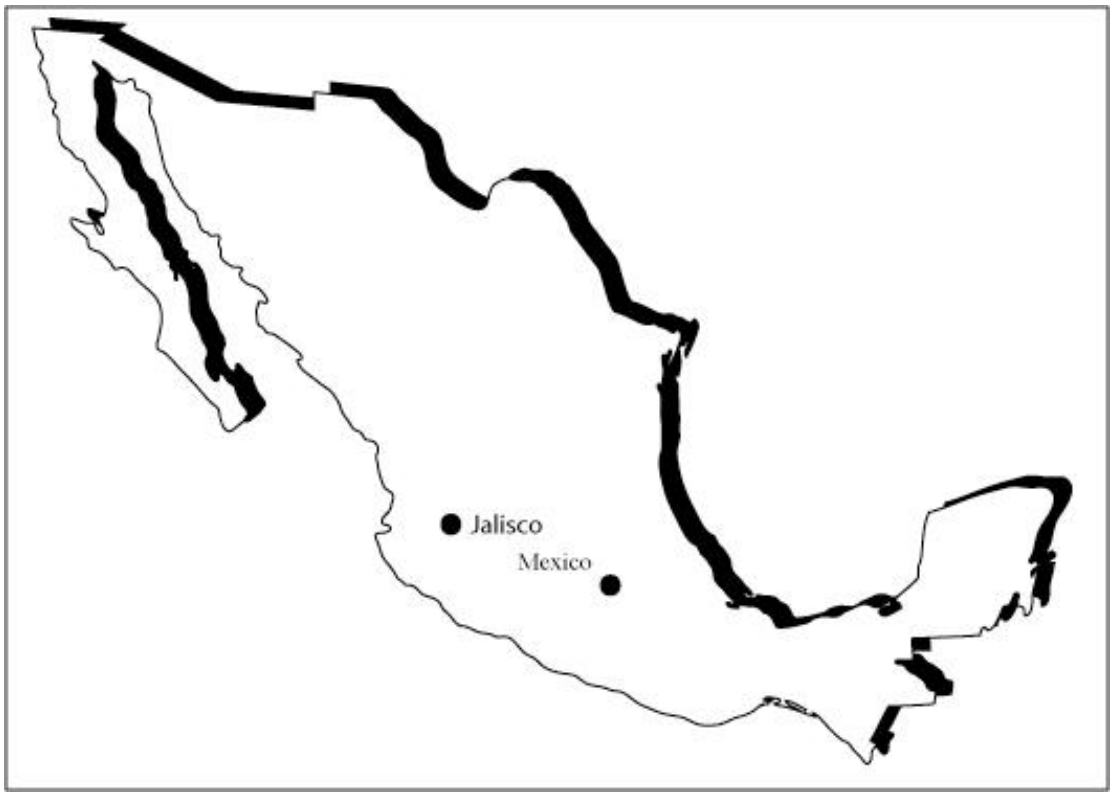

Figure 1. Localization of the state of Jalisco, Mexico.

Fechas	PERIODOS		JALISCO				
			Sayula (Liot et, al, 2006)	Chapala (Meighan y Foote, 1968)	V. Atemajac (Galván, 1991)	Ameca (Weigand, 1993)*	Tuxcacuesco (Kelly, 1945)
1532	POSTCLÁSICO	Tardío	AMACUECA Tardía		TONALÁ	ETZATLÁN	TOLIMÁN
1400							
1300		Medio	AMACUECA Temprana		ATEMAJAC		
1200				TIZAPÁN		HUIXTLA	
1100		Temprano					
1000			SAYULA II	COJUMATLÁN			CORALILLO
900	CLÁSICO	Tardío					
800				CHAPALA	GRILLO	TEUCHITLÁN II	
700			SAYULA I				
600		Medio				TEUCHITLÁN I	
500					TABACHINES		TUXCACUESCO (Tumba de Tiro)
400		Temprano	VERDÍA II				
300						AHUALULCO	
200	PRECLÁSICO		VERDÍA I Tardía (Tumba de Tiro)				
100						ARENAL	
0		Tardío	USMAJAC Temprana		(Tumba de Tiro)		
-100							
-200							
-300						SAN FELIPE	
-400							
-500		Medio	ATOTONILCO				
-600							
-700							
-800							
-900							
-1000		Temprano	TEPEHUAJE				
-1100							
-1200							

* Cronología en proceso de actualización.

Table 1. Jalisco chronology.

Field and Lab Techniques

The systematic, total area coverage regional survey is a well-established technique with no substitute. In other words, it answers different kinds of questions of several scales as compared with other techniques. This project utilized the techniques developed since the 70s by several projects (Balkansky *et al.* 2000; Kowalewski *et al.* 1989; Sanders *et al.* 1979), which have been improved through the decades. This report deals with the survey accomplished so far, covering 29.3 km^2. However, it should be pointed out that the project is still on-going.

A group of six archaeologists started the survey in the agave area in November of 2007. Between five and six people worked during November and December;

usually two groups were formed, each one working in adjacent areas, therefore avoiding leaving blank, unsurveyed areas. We had aerial photos of the area taken in 1994, which served each group as guide to survey the designated area every day. Although the photos were taken more than a decade ago, most of the fields cultivated with agave then are still being used for the same agricultural activity. The small changes we could detect almost always had to do with the expansion of this crop.

With the photo (scale 1:10,000) we guided ourselves in order to cover a portion of the designated terrain daily. Although we identified some sites in the lab with a stereoscope and these were verified in the field, most of the settlements we found (roughly 95%) are not visible in the photo. Therefore, a survey like this can not be substituted by any other method.

Each survey group was told the area to be covered the previous night, or that same morning before heading out to the field. Field techniques have been the same in almost all the surveyed terrain up to now, since most of the fields are covered with agave. In these fields the furrows gave us an almost exact measure of the distance between one transect and the other. Generally a distance of 20-30 m was covered in each transect (between seven and 10 furrows in the agave fields, Figure 2). In some plots visibility is excellent, while others are not well kept and have grass growing between the furrows. A group of three archaeologists can cover an area of .84 km^2 on average in one day. In this way we combed most of the area covered so far.

Figure 2. Surveying the transects.

We have also surveyed some hills and mountains (Figure 3), but had to modify the techniques. In zones with hills and mountains we usually did not use transects, but we separated from each other and covered the slopes and peaks. In areas of abrupt or broken terrain the flatter areas are covered.

Figure 3. Surveying the mountains.

We used an arbitrary standard of 100 m without material between one settlement and another to isolate sites. In sites without artifacts, as is common during the Formative and Early Classic, we used the same standard but with architecture as indicator.

In most of the sites we found we picked up all of the surface material, with the primary aim of establishing a chronology. In other areas of Mesoamerica typologies are more precise, having been worked for decades. In our research area the typology is still in an incipient stage, and there have been few publications about undecorated types and domestic pottery (but see Blanco 2006; Herrejón and Smith 2004).

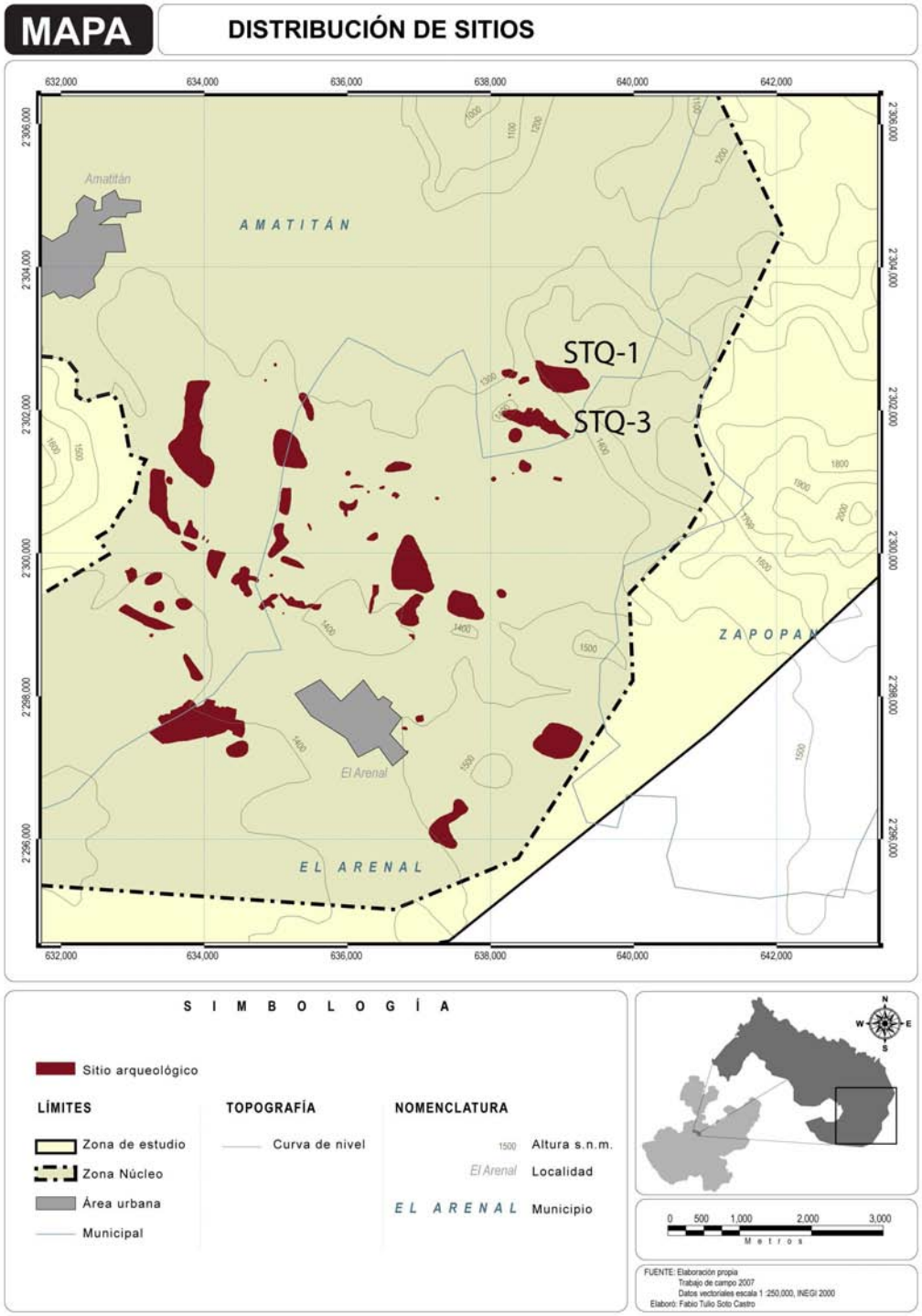

Figure 4. Map indicating site distribution.

Results

Although still preliminary, research results are significant. They show the nature of the societies that lived in this part of Mesoamerica. We are faced with a landscape rich in material culture and an impressive density of settlements from several time periods. In contrast with other areas of Mesoamerica, obsidian makes up 50% or more of surface material. In some settlements pottery is absent, and only architecture and lithics are visible.

In an area of almost 30 km^2 we have recorded 57 settlements of various sizes and periods (Figure 4). Sizes range from .04 up to 77 hectares. In 56% of the settlements mounds and/or the remains of domestic or civic-ceremonial architecture are still present (Figure 5 and Figure 6). The remaining sites consist of thick and dispersed concentrations of material. Because of the intensive cultivation of agave using heavy machinery, it is surprising that this ancient architecture is still present in these so thoroughly utilized fields.

Figure 5. The foundations of an isolated house.

Figure 6. A mound in an agave field.

The Formative Period

We recorded 36 sites with occupation pertaining to the Formative period, that is to say contemporaneous with the Teuchitlán tradition (Table 1, Arenal, Ahualulco, Teuchitlán I and II phases). Out of these 36 sites, 17 have important or dominant occupations from the Formative period. Among the associated architecture are the well-known *guachimontones*, as well as terraces, platforms, ball courts, mound clusters and small mounds that may have had a residential function. These settlements are mainly identified by the presence of architecture, because artifacts are usually scarce. The architecture found here consists of circular altars surrounded by a round patio and between four and eight platforms forming a third circle (Weigand 1996a).

The most monumental site is known as Santa Quiteria, which really consists of two extensive settlements (STQ 1 and STQ 3, Figure 4). Partial drawings of the two settlements were published in the 70s (Weigand 1993), which are also known as the Santa Quiteria or Rancho Nuevo Complex (STQ 3) and Mesa Alta (STQ 1) (Figure 4). During this field season we made more complete site maps of both settlements.

Santa Quiteria and Mesa Alta cover roughly 56.2 ha, consisting almost entirely of monumental architecture. In Mesa Alta (STQ 1) we made drawings of 12 mound clusters, four of which were found on a terrace north of the monumental civic-ceremonial precinct. These clusters consist of four mounds around a patio, as well as *guachimontones* of as many as eight platforms and other isolated mounds. This site also has a ball court and some residential platforms, as well as terraces with structures. The most monumental zone has two circles with eight platforms each, apart from another circle with four platforms. The entire monumental area is planted with agave, and many of the structures show looting and destruction.

The site STQ-3, also known as Santa Quiteria (Figure 4), still had six circles with eight or maybe as many as 10 platforms during the 70s. It also had a monumental ball court of greater size than the one in Los Guachimontones de Teuchitlán. Last year we were able to see the level of destruction suffered by this settlement, as well as to identify some new elements. STQ 3 is located on the hill slopes to the south of Mesa Alta, where STQ 1 is located. The same pattern has been seen in the area south of the volcano, in Guachimontones itself. This pattern consists of two monumental settlements, one on a hill and another one on the slopes or plain. Some of the circles recorded by Weigand (1993) have totally disappeared. The only evidence of their former existence is Weigand's record and the aerial photo in which one can see white spots. Although STQ 3 is not under cultivation, it has suffered the greatest damage. Whole architectural complexes have been razed, as they are more accessible. On the other hand, STQ 1 --although it is under agave cultivation and has been looted-- still has the mounds seen in the photo and recorded by Weigand (1993). In STQ 3 we were able to identify structures not previously identified. During our survey we could make sketch maps of a total of

five architectonic clusters, as well as isolated mounds, and a ball court. We also were able to have a more precise delimitation of the settlement.

Although the period to which each settlement belongs has only been determined in a tentative way, over 50% of the settlements with a Formative period occupation were reutilized during later periods, mainly the Postclassic (Table 1).

The Classic Period

In this report I will not discuss in detail the transition between the Formative and Classic periods (for a good discussion see Weigand 1996b). It's enough to point out here that there were major transformations indicating economic, political, and social readjustments. The relationship between these changes and the rest of Mesoamerica is a subject for future discussion (cf. Smith 2003). Likewise, the data obtained so far would not be enough to talk about these macro-regional processes. One thing is clear from the perspective of the survey conducted in the present project: the absence or slight presence of Classic-period occupation. Thirty of the 57 settlements have evidence of occupation during the Classic period. Of these only two have a dominant Classic-period occupation, while two other have dominant occupation of both the Postclassic and the Formative. The smallest potsherd samples are those from the Classic, with the amount of potsherds ranging between one and 28. The settlements we can say with certainty that belong to the Classic are relatively small, and usually are not associated with architecture. These data seem to confirm an evident transformation and a change in settlement patterns. The settlements identified in the north area of the volcano represent small populations and non-monumental settlements in comparison with the previous period.

The Postclassic Period

Sixty-eight percent of sites found in the survey show extensive and small Postclassic occupations. In general, Postclassic sites are easier to identify, since they have dense concentrations of artifacts. This is important, because in sites from the Formative and Classic periods ceramic and lithic materials are scarce. One could also say that domestic structures from the Postclassic period were more widely distributed, or were less ephemeral that those from preceding phases. Postclassic settlements are likewise the most extensive ones; the largest one so far recorded measured 77 hectares.

The Artifacts

The analysis of ceramic materials from the sites identified in 2007 is completed, but the whole lithic material is yet to be analyzed. The classification of surface ceramic material was made on the basis of work conducted primarily in an excavation

project in the site of Los Guachimontones de Teuchitlán. The materials found in this site pertain to the Terminal Formative, Early Classic, and Postclassic. Beekman and Weigand (2000) have studied the fine or decorated ceramics from the Teuchitlán tradition. The classification of the artifacts from the Classic period was carried out with help from other works in neighboring areas which have better studied typologies (Galván 1991). Postclassic ceramics have been studied by Herrejón and Smith (2004).

Although lithic artifacts have not been classified or analyzed, herewith is presented a summary of the impressions we had in the field. In almost all sites, regardless of the time frame, we see lithics --by this I refer solely to obsidian, since throughout the survey we saw silex only twice. Likewise, in virtually all settlements there is evidence of knapping. We have not identified any workshop or deposit; the technology seems to have relied on "expedient" or improvised tools. Scrapers are very common (Figure 7) and we have examples of some points, but most of the lithics found and collected so far are flakes that were used as tools. Many of these flakes show evidence of retouching on one or both edges.

Figure 7. Examples of some tools found during survey.

Conclusions

Although this research is still underway, up to now we have been able to cover 29.3 km^2 during the process of fieldwork. We have identified a total of 57 sites of all

periods (Formative, Classic, and Postclassic). There is a high density of settlements, and although the study area is constantly under cultivation --mainly with agave-- there are architectural remains that could be preserved for future investigations. I would like to emphasize that the survey is still underway, and that the information presented herewith is the result of two months of fieldwork. The questions guiding the research are still waiting to be answered, once the survey has covered the proposed 330 km^2.

Acknowledgments

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List of Tables

List of Figures

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