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LATE FORMATIVE ARCHAEOLOGY IN THE SAYULA BASIN OF SOUTHERN JALISCO

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Abstract

A regional study of the settlement patterns in the Sayula Basin (Jalisco) has recently found Late Formative sites with related Shaft Tomb Period funerary evidence. This article presents the habitation and mortuary deposits of two sites, and it discusses the possible subsistence patterns that combined agriculture with the seasonal exploitation of salt deposits in the region as a basis of daily interaction in a developing rank society.

For many years, the Late Formative Period of West Mexico has been associated almost exclusively with the so-called Shaft Tomb Tradition. Unfortunately, the lack of systematic research in this part of Mesoamerica has hampered the proper evaluation of the archaeological objects that have been continuously extracted from the funerary contexts of this period. The great appetite of collectors for the remarkable figurines that characterize the pre-Columbian art of West Mexico has fostered the looting of hundreds of archaeological deposits that were never studied or described. In fact, very few tombs have been scientifically identified, and most of those that were identified were reported after their original context had been destroyed. Traditionally the term Shaft Tomb Tradition has been used to designate an awkward body of ceramic and stone materials of doubtful provenance, supposed to be grave goods. As such, they are considered as ritual offerings in a generalized "cult of the dead" concept. The most renowned are figurines, house models, or special vessels. The importance of the funerary architecture has been overemphasized, and little interpretation has been made of the social meaning of the objects themselves. As can be expected, the common vessels or the instruments that were made and used in the daily lives of the Shaft Tomb people have not attracted the attention of art historians or museum curators. Thus, the weak knowledge of this culture rests on the basis of the funerary architecture and the remarkable objects that came out of the looting expeditions.

The basic information on chronology and major regional ceramic (figurine) styles was assembled during the 1960s and 1970s. Speculation on the significance of the art and ancestor cult was the main concern of the period. Another issue was the apparent lack of Mesoamerican traits in the scant archaeological record of West Mexico. Diffusionist ideas pointed to influences from South America to account for the region's parallel cultural development. In addition, West Mexico was classified as marginal to the Mesoamerican high culture scheme, with a predominantly rural and peripheral conception of this ancient society. Thus, the basic questions of subsistence, social organization, and sociocultural evolution were neglected.

In the early 1970s, Phil Weigand began to survey the highlands of Jalisco and Nayarit. He used the principles of landscape archaeology to recognize the impressive architectural evidence of a previously ignored culture. Its characteristic feature was an elaborate combination of several round pyramidal structures assembled in a circular pattern (the *guachimonton* concept). The intricacy of the layout and the apparent extent of this culture provided the data necessary to propose a complex society theory that would indicate the cultural importance of West Mexico (Weigand and Mountjoy 1974). A change of paradigm was beginning to take place; the social context was gradually supplanting the art historical approach, although the main assumptions were based only on the complex architectural features. As a result, new data was amassed, and many inferences were drawn from the landscape evidence. The theory was generalized to include the whole territory of this Mesoamerican sub-area. The general principles of World Systems Theory sustained the assumptions about the interaction between different territories. Control of scarce resources, such as obsidian, salt, and copper ore pigments, was the backbone of the new complex society, now labeled the Teuchitlan Tradition. Large-scale agriculture was posed as the subsistence base of a large population centered around the Ahualulco-Tala core area. Nevertheless, little factual evidence was provided to sustain the hypothesis, and most of the information was gathered from devastated sites, and often

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the plunderers became the informants. In the absence of regional surveys and stratigraphic excavations it is evident that there was little control of the ceramic stylistic parameters or the chronological framework that held the overall proposal. Fortunately this situation is now changing and many propositions are being revised, while others are proving to be correct. Of course, the principal weakness remains the lack of information on the life ways of the base of the social system: the commoners. In this sense the models derived from World Systems Theory are inefficient and say little about smaller-scale regional patterns.

As can be seen from this brief review of the attitude changes in West Mexican archaeology, the concentration on the tomb objects *per se* has gradually shifted to the larger social context in which they developed. Although the main social features are still poorly known, much progress has been made in recent years. This article discusses evidence recently acquired in the Sayula Basin of southern Jalisco. This area is considered to be a critical link between Colima and the highland Ameca-Magdalena basins of central Jalisco. At the same time, it has long been exploited as a source of inland salt and a fertile valley of alluvial soils.

In the last few years, a joint team of Mexican and French archaeologists has carried out a systematic survey of the basin, identifying over 170 sites inhabited at different cultural periods. Special attention has been given to the settlement patterns and the cultural evolution of the pre-Hispanic society that occupied the region (Valdez et al. 1996; Valdez et al. 2005). The general objective of the project was to identify the lifeways that characterized each of three different cultural phases that were established. The main concern was to recognize the different adaptation strategies adopted during those phases in order to carry out the appropriation and exploitation of the natural resources of the study area. This process could provide information about the gradual development of a rank society.

At this time, we can present evidence of the habitation deposits and the funerary evidence of two sites dating from the Late Formative period. We also discuss the possible subsistence patterns that combined agriculture with seasonal activities in the natural salt deposits and examine the bases of daily interaction that could be the base of a developing rank society. We do not detail the salt-extraction process or their implications in the Late Formative, since these themes have been treated in other works by Catherine Liot (1995, 1998a, 1998b).

THE ENVIRONMENTAL SETTING

The basin is located in the southern part of the state of Jalisco (lat 19°50′–20°11′ N; long 103°20′–103°40′ W). The Sayula region is part of a larger geomorphological unit known as the Tepic-Chapala Graben, which encompasses various tectonic depressions. In the course of several glaciation episodes, abundant rainfall submerged the various landforms and gave origin to a massive lake. Eventually the land-locked water found its way to the sea and formed the Lerma-Santiago drainage system. Some depressions were not interconnected and retained their waters, gradually drying off and forming smaller basins. Such was the case of the Zacoalco-Sayula region, which in this process received an abundant precipitation of mineral salts suspended in the water that formed rich evaporite deposits (Estrada Faudon 1993a:135). The Sayula Basin is now composed of a flat lake bed, approximately 35 km long, enclosed by two mountain ranges (Figure 1). The lake is not fed by any major water source, other than the heavy rains that pour from June to October. During this period precipitation swells the water table and a seasonal lake is formed, covering approximately 200 km^2. The surrounding mountains hinder natural drainage, and the water evaporates slowly during the dry months (November to May). The northern portion of the basin is then transformed into a huge saltern, and the southern portion becomes swampy. The marshes that surrounded the modern town of Sayula clearly justified the Nahuatl name of that location, which literally means "the place of mosquitoes."

The shores of the lake are edged by terraces and mild slopes that gradually meet the flanks of the Sierra del Tigre (on the east) and Sierra de Tapalpa (to the west). Altitudes vary from 1,335 m on the lake bed, to about 2,700 m above sea level on the summits of the Sierra de Tapalpa. The vegetation cover is typical of the low mountain, dry forest regions. Annual rainfall fluctuates between 580 and 680 mm, and the mean annual temperature is 22°C (Estrada Faudon 1993b: 63). As in the greater part of highland Mexico, the arid conditions limit terrace agriculture to seasonal, well-demarcated periods. Nevertheless, in the southern portion of the basin, year-round agriculture can be practiced in various locations, where permanent springs and brooks naturally irrigate the soil. Another important feature of the lake environment is the cyclical presence of an abundance of water fowl, that includes over 120 local species, as well as several migratory birds, such as geese, ducks, swans, pelicans, and herons, among others (Delgadillo Vazquez 1993:70–74). The sharp contrast, noted in the general moisture and the topographic features of the two sectors has determined the settlement patterns and the scope of all subsistence-related activities. Salt extraction stations abound in the north, whereas agriculture seems the dominant activity in the south (Liot 1998b).

The Sayula region also presents a geographic feature of cultural relevance. It is part of a natural corridor that joins the coastal plains to the highlands of Jalisco and Michoacan. The upper boundary of the basin has two natural alleys that open the way to the rich valleys of central Jalisco and to the western fringes of the lake Chapala regions of Michoacan. The southern end of the basin constitutes a strategic pass through the lower flanks of the Sierra Madre Occidental, to the Zapotlan lake area, the Colima lowlands, and the Pacific Coast. Archaeological evidence of ancient transit along this thoroughfare region has frequently been reported (Kelly 1941–1944; Schöndube et al. 1992).

THE SAYULA CULTURAL CHRONOLOGY

The earliest occupation levels yet excavated come from the Cerro del Agua Escondida site. It is located in the central part of the west bank of the basin. As is discussed in detail, these middens date to a Late Formative Period phase, recently identified and named Usmajac.

The Sayula cultural sequence was originally established by Isabel Kelly as the result of a detailed surface survey she completed in the early 1940s. Kelly collected a huge sample of ceramic materials throughout the basin and divided the lot into three principal groups that she recognized as ceramic phases. At the time, Kelly did not excavate in the Sayula region, so her sequence was not based on stratigraphic profiles; yet her division has now been proven to chronologically correspond to stratigraphic excavations.

The latest phase, called Amacueca, was believed to be coeval with the Spanish conquest period. An intermediate phase was named

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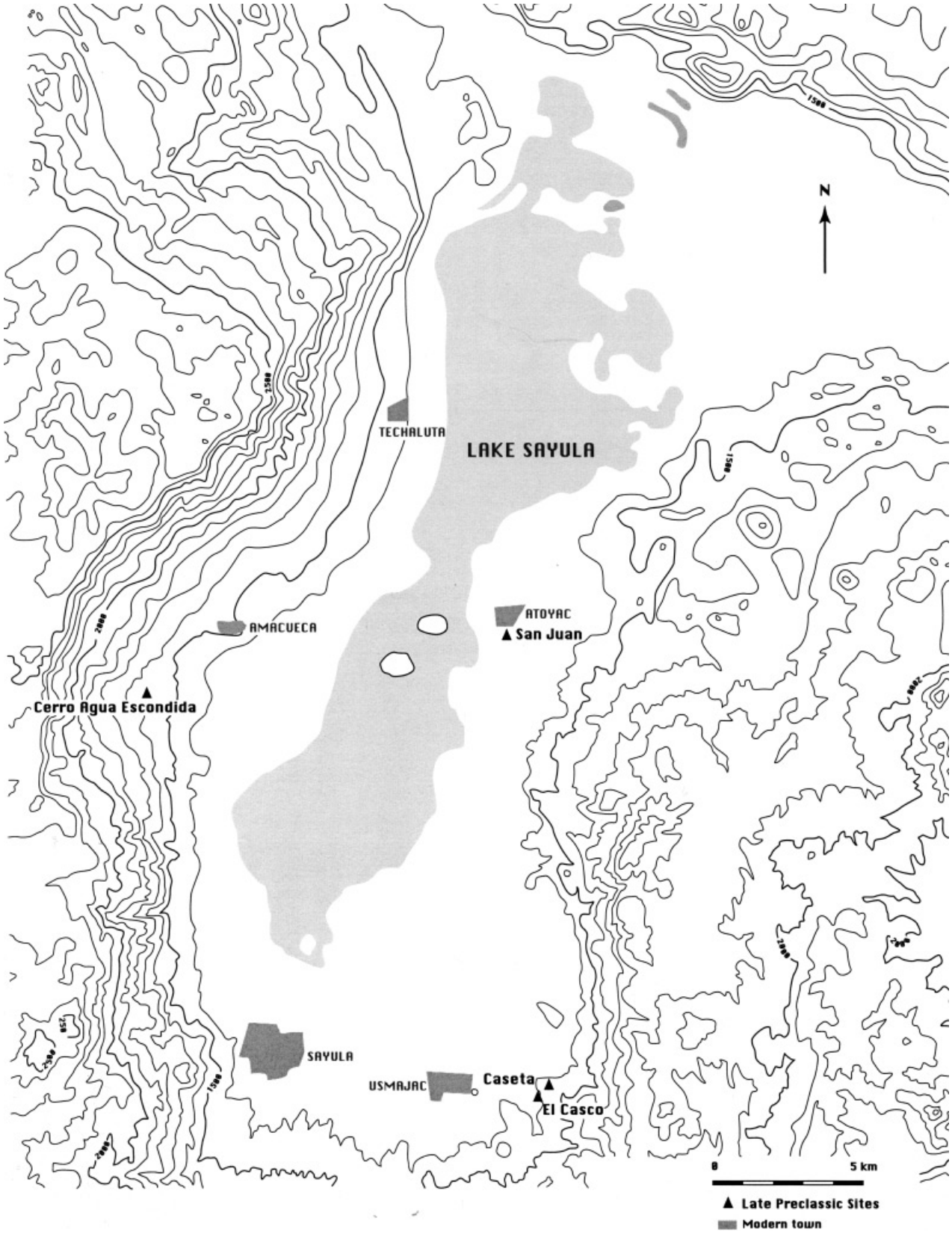

Figure 1. Map showing the location of the most important sites from the Sayula Basin.

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Sayula, and the earliest component of the group was called Verdía. Kelly made no claim for the precise chronology of each phase, but she felt that Verdía was probably prior to or coeval with the central Mexican Teotihuacan III phase, and that Sayula followed some time after that stylistic marker (Kelly 1948:63, 65–67).

Our data from several excavated sites have now settled the chronological limits for each phase and have allowed the identification of an earlier occupation, associated with the Shaft Tomb Tradition—the Usmajac phase. Verdía seems to be a *facies* or a sub-phase that characterizes the last part of Usmajac. The revised Sayula sequence is summarized in Table 1.

Throughout this article we discuss the Late Formative evidence that can be roughly ascribed to the last three centuries before the Christian era and the transition to the early Classic, which occurs during the first four centuries A.D.

In the first stage of our systematic survey of the basin, the Verdía phase occupations and the Shaft Tomb Period evidence were thought to be one and the same. Salvage excavations in the Usmajac district clarified the differences, and Verdía was then identified as a later sub-phase. The regional distribution of Verdía materials seems narrower than that of the Usmajac phase materials, but we do not know yet if this distinction is purely chronological or if there is a functional factor involved. There is now clear evidence of Verdía salt-work–related stations; whereas the early Usmajac materials are less common throughout the lake flats. The funerary evidence of the Verdía phase, although scant (two burials were encountered in the San Juan site) suggests a transition between the Shaft Tomb Period and the Sayula phase (200 B.C. and A.D. 300). At those burial sites, the position of the bodies, one extended, one semi-flexed, in rectangular shallow pits, and the quality of the grave goods share the traits of both the shaft tomb burials (extended bodies with elaborate offerings) and the Sayula phase (semi-flexed bodies in shallow pits). Nevertheless, such traits are not conclusive because, as discussed later, not all Shaft Tomb Period interments were in shaft tombs.

Table 1. The Sayula Basin chronological sequence

Dates	Sayula (Kelly-1948) (SAP-96)	Periods
1528/32	Late	Conquest
1400	|	Postclassic
1300	Amacueca	
1200	|	Late
1100	Early	
1000	Late	
900	|	Early
800	|	
700	|	Late
600	Sayula	
500	Early	Classic
400	|	
300	|	Early
200	|	
100	Verdía	Formative
0	|	
100	|	Late
200	|	
300	Usmajac	
|		
|		
1500		

The Usmajac phase for the moment has three C-14 dates that place part of its duration between 2060 ± 60 and 1690 ± 60 B.P. The C-14 dates for the Verdía sub phase range from 1915 ± 105 to 1700 ± 60 B.P. As our knowledge of this period increases, we hope to be able to clarify the apparent discrepancy in these dates and the duration of each subphase. Our assumption of a necessary chronological subdivision lies in the stylistic comparison of several hundred sherds from different provenances. A more solid argument is provided by the study of stratigraphic profiles, where Verdía materials are definitely found beneath early Sayula horizons (Guffroy 1996:38–42) and Usmajac materials are altogether absent. In other sites, such as San Juan de Atoyac, Usmajac materials were found in deeper strata than the Verdía burials we excavated (Emphoux 1996:184; Noyola 1994:58–61; Valdez 1994a: 31; Valdez et al. 2005). For the moment we feel that, without further research on undisturbed Verdía contexts, little can be said about the exact duration of each facies. Evidently much still remains to be learned from future fieldwork.

THE CASETA SITE

At the southeastern end of the basin, a hillside setting just above the ancient lake plain provided the first relevant Formative contexts. The Caseta site (lat 19°52′37″ N; long 103°31′03″ W) lies near the modern-day village of Usmajac, at an altitude of 1,380 m above sea level. Agriculture is practiced on the site, and the earth is turned regularly to plant corn, beans, or sorghum. Along the sides of the plowed ridges there is abundant ceramic evidence of two different occupations. Both share a clear domestic character: well-used wares, broken metate fragments, and countless obsidian flakes and blades. The most common cultural materials belong to the Postclassic Amacueca phase (A.D. 1100–1532). Diagnostic plain red or brown wares are scattered throughout the site. Nonetheless, a careful inspection of the surface reveals a finer type of pottery, and small solid figurine fragments representative of the Usmajac phase.

Some years ago a farmer working his field stumbled on the entrance of a shaft tomb. Needless to say the grave was looted and its contents were sold to local dealers. The shaft was left unsealed and the tomb was soon forgotten. During the general survey of this area, a farmer signaled a *cueva* (crypt) on a hill and helped the team locate the tomb. The structure was cleaned, its contents were sifted, and profiles of the tomb were drawn. This work proved fruitful, since among the debris of the tomb, many broken human remains were found, along with stone and seashell ornaments. The promising results of this work justified the conduct of a more detailed survey. After our initial work on the site, the local farmers covered the shaft and continued with their seasonal agricultural activities.

Several authors have proposed the hypothesis that shaft tombs often appear concentrated in a given area, forming a sort of cemetery within the limits of a larger habitation site (Bell 1971; Kelly 1978; Schöndube and Galván 1978; Weigand 1989). An electrical resistivity survey was conducted on a large part of the hillside in the hope of revealing untouched funerary structures. A detailed plan of the underground topography with various areas of possible human disturbance was drawn and used in connection with test pits. The results proved that the site had a shallow soil deposit mixed with remains of two ancient occupations. The strata were well defined: an organic layer of soil covered the ground to a

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maximum depth of 50 cm, and it was immediately followed by the solid bedrock made up of hardened volcanic tuff, locally known as *tepetate*. Near the surface, Postclassic materials were common, but the presence of an earlier ceramic component was also recognized. Over the years, tilling has thoroughly stirred the contents of the subsoil, destroying most of the original contexts; nevertheless in some areas, just over the bedrock a thin layer of the original midden pertaining to the Shaft Tomb Tradition complex can still be found (Valdez 1994b; Valdez et al. 2005).

The resistivity charts from our survey showed an area of marked subsoil anomalies; the initial strategy was to open a large unit (45 by 30 m) over the supposed disturbed area. Large-scale excavation techniques were preferred to localized test pits, so as to reveal a portion of the ancient habitation space that could be studied in detail. The first season we concentrated on the upper portion (southern end) of the unit and excavated the shallow deposits down to the bedrock, clearing an area of over 450 m^2. This process revealed a large cemetery dating to the Amacueca phase, as well as three earlier shaft tombs, one of which was the one found previously by the local farmers. Most of the Postclassic graves were small pits excavated on the ground, barely penetrating the bedrock (average depth: 40–60 cm). In contrast, the shaft tombs were dug deep into the *tepetate*, and one descended to a depth of almost 3 m.

Some structural evidence of dwelling features appeared around the limits of the cemetery; these were mostly post holes, aligned sets of stones, and small hearths. On the northern end of the excavation area a curious long and narrow trench was revealed. Inside the trench several small post holes were plotted in groups of pairs. The excavation unit was enlarged to a final extension of 1,350 m^2 (Figure 2). The new area revealed a number of new residential features and a smaller concentration of Amacueca phase graves. Several new funerary deposits of the Shaft Tomb Tradition were also unearthed, adding variety to the repertoire of mortuary structures of the early occupation.

The Habitation Deposits

The main architectural feature of the site was a large semi-ellipsoidal structure, outlined by the narrow trench previously described. It probably represents a thatch-and-daub building (30 m long by 5 m wide), at the center of a hamlet. Unfortunately the shallow primary ground level of the structure had disappeared, and a clear-cut phase attribution is still uncertain. The materials found in the interior were mixed by the recurrent plowing of the soil. In front of this structure was a large open activity area, where the use of small hearths and semi-interred kilns had left a great amount of combustion residue on the bedrock. Associated with the fire pits were a series of small post holes that could imply some sort of light structure. To the southeastern side of the ellipsoidal foundation, four or five smaller huts once stood around a possible domestic space.

The extent of the early occupation is difficult to evaluate. Most of the remains from this period are mixed with the Amacueca phase materials that predominate at the site. The Formative habitation was recognized throughout the worked unit by the presence of small portions of the early middens. The first clue was given by some uncommon ceramic types that had an air of the Verdía ma-

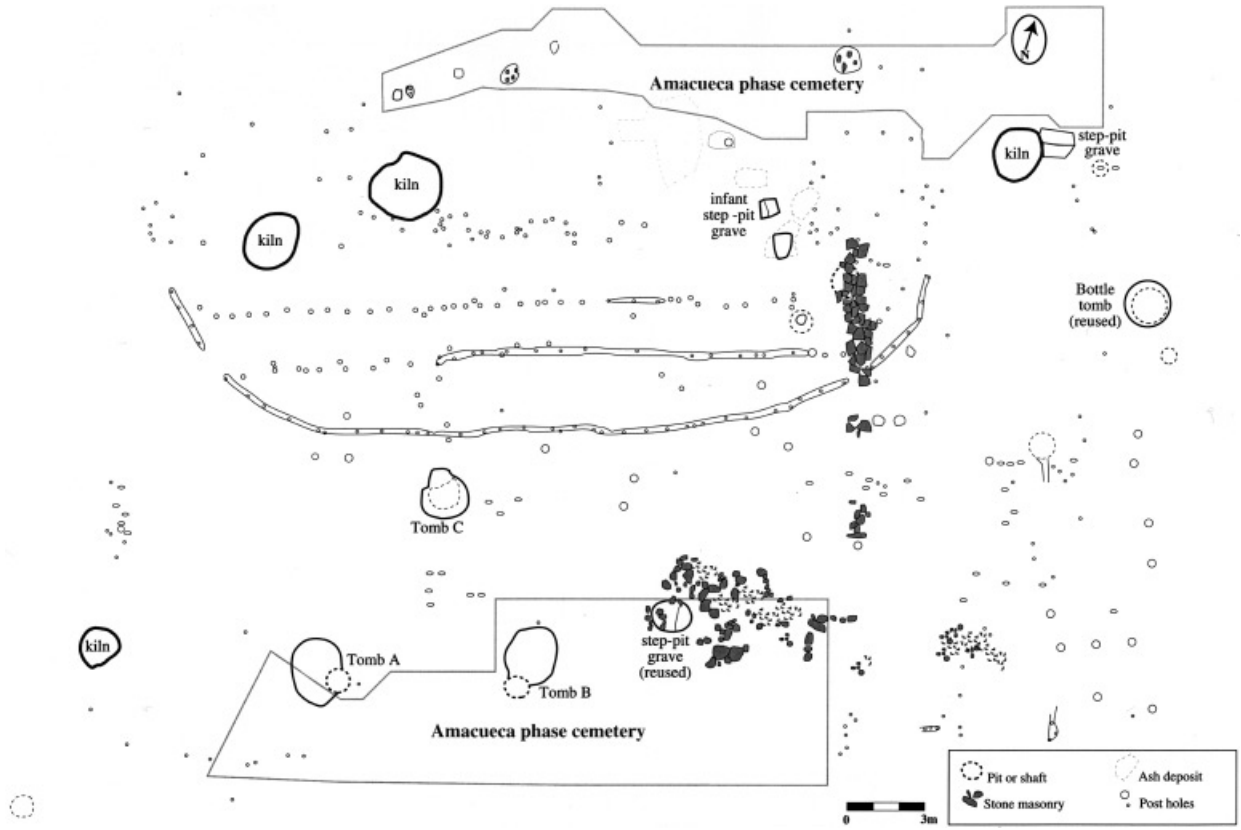

Figure 2. Plan of the site of Caseta.

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terials described by Kelly. Unfortunately, most of the ceramics were badly eroded, and their most salient feature was the thin and well worked paste. Some of the sherds had a smooth surface finish that suggested a well-polished buff or cream surface. Straight or wavy red lines seemed to be the usual decorations, but we had no hint of the possible design combinations. A few fine-lined incised gray monochrome sherds were also found. This pointed to a different tradition from the general Verdía variety. The main lead came from the abundant figurine fragments of a type labeled as "Tuxcacuesco-Ortices," assigned to the Tuxcacuesco horizon by Isabel Kelly (1949:115–119). However, the stylistic association could not be confirmed by C-14 determinations, because reliable organic samples were lacking. Following Kelly's guess, we placed the early occupation at around 100 B.C. Other domestic features found on the excavated area were small cylindrical pits dug in the bedrock (possible storage spaces), these contained mixed ceramic materials. *Metate* fragments and *manos* were also numerous, but again their phase affiliation is uncertain.

The Funerary Evidence

The main features of the Caseta site have been described in previous works (Acosta et al. 1996; Valdez 1994b; Valdez et al. 1996; Valdez et al. 2005), so we now discuss only the mortuary data relevant to the Formative period. The excavations revealed different forms of funerary structures dispersed on a relatively small area. These include two typical shaft tombs, a large "false shaft" and chamber tomb, a conical or "bottle type" tomb, and three "stepped" rectangular pit graves.

The shaft tombs were designated with letters (A, B, C), and the other structures were given simple feature numbers. An interesting detail about this hillside site is the fact that the same funerary space was used at two very different points in time. The two shaft tombs and a pit grave appeared under the Postclassic cemetery mentioned above; the pit grave was cleared and reused during the Amacueca phase (Figure 2). It is impossible to explain the reason for such an unlikely event, but we feel that this may not be just a simple coincidence.

Tomb A. As mentioned, the first tomb was looted some years ago; the offerings were removed and the human remains were badly disturbed in the process. When we cleaned and sifted the debris, a few bones were collected, as well as some body ornaments not spotted by the intruders. Unfortunately there were no clues as to the original contents of the chamber. Some informants assured us that four ceramic figurines were sold to a dealer, but no details were given as to the nature of these monos. According to a preliminary study of the secured bones, at least six individuals were present (Acosta 1997:7). Although the remains were very fragmented, the consistency of the bones was hard and the bone structure was fairly well preserved. Some of the bones showed evidence of ancient exposure to fire, but little more can be said about them at this time. Possible cremation prior to interment of the body in a shaft tomb has been suggested for the coast of Jalisco (see Mountjoy and Sandford, this issue).

The shape of the tomb conforms to the common "boot" type catalogued as C in the Disselhoff typology for the Colima Tombs (1932:528, Figure 1); it can also be placed in the type IIIa2 category of the Long classification (1967:8, Table 1). The structure was cut into the *tepetate* bedrock, with a cylindrical shaft (diameter 80 cm) that descends 162 cm to the entrance of the funerary chamber. At the end of the shaft, a large stone was placed to reinforce and accentuate a step that marks the entry. The chamber has an oval shape, flat floor, concave walls, and a spherical roof. The longest axis is oriented at 249° to the west of magnetic north, giving the chamber a more or less general north–south orientation. The chamber is 240 cm long, 197 cm wide, and has a maximum height of 106 cm (Figure 3). The white *tepetate* of the floor and walls is partially stained by the marks left by the level of earth that was introduced after the tomb was looted. The walls of the structure also show the marks of the tool used to cut the bedrock when the tomb was first prepared. These bear the shape of a sharp pointed object—probably a digging stick or a stone peak—with a wedge between 2 and 4 cm.

Tomb B. A second tomb was found seven meters to the east of the one just described. The shafts were aligned but the orientation of the chambers differed in their axis. This tomb was found intact, it first appeared as a moist round spot on the ground (diameter 23 cm), but the entrance only became clearly visible once the bedrock was reached at 53 cm below the surface. A large stone slab partially covered the orifice on the *tepetate*. Over this stone lay a secondary interment, deposited among other burials during the Postclassic occupation of the site. The shaft was filled with a mixture of large stones and some loose dirt. A few human bones were also found in the upper levels of the fill, but these belong to the secondary burial, they were probably displaced by burrowing rodents. Close to the bottom of the shaft, five large slabs appeared covering the entrance to the chamber. At the end of the shaft, three flat stones led into the funerary space. The shaft has an average diameter of 90 cm and descends 287 cm from the surface.

The chamber, like Tomb A, is oval-shaped, with the main axis oriented 35° east of magnetic north. It measures 225 × 250 cm and has a maximum height of 105 cm. Also as in the case of Tomb A, this structure has a flat floor, concave walls, and a semi-spherical roof (Figure 3). The *tepetate* walls again show clear marks of the digging tool. When the tomb was first opened, the contents were covered by a thick layer of damp earth that had gradually slipped through the slabs that sealed the entry. The original deposit had thus been altered by the succeeding flow of muddy water and other debris that passed through the small openings between the slabs. The mechanic action of these elements had affected mostly the central part of the chamber, displacing the mortuary materials to the northeastern end of the tomb. Once the earth was cleared, we mapped the chamber and studied its contents.

The remains of four individuals were found extended along an east–west axis. Secondary deposits, arranged into packages of long bone, had been placed at the feet of the first two bodies. A fifth individual was placed in a flexed position, leaning against the northeastern wall. Along this end of the tomb lay a chaotic deposit of several other human remains (Figure 4). Some of the bones were part of the four principal skeletons, but most belonged to different adults and infants. At least 16 individuals were present in the chamber (Acosta 1997:22).

In spite of the general disturbance of the deposit, some patterns were discernible after careful study of the bones and their final deposition. The chamber apparently had been reopened at different times. The taphonomic evidence suggests various episodes of reuse of the funerary space, with cyclical interment of new bodies and redeposition of the decomposed remains. The four skeletons that occupy the central part of the chamber were apparently not placed at the same time. It seems fairly clear that the individual lying close to the entrance was the last body to be placed in the chamber. The corpse to his left could have been deposited

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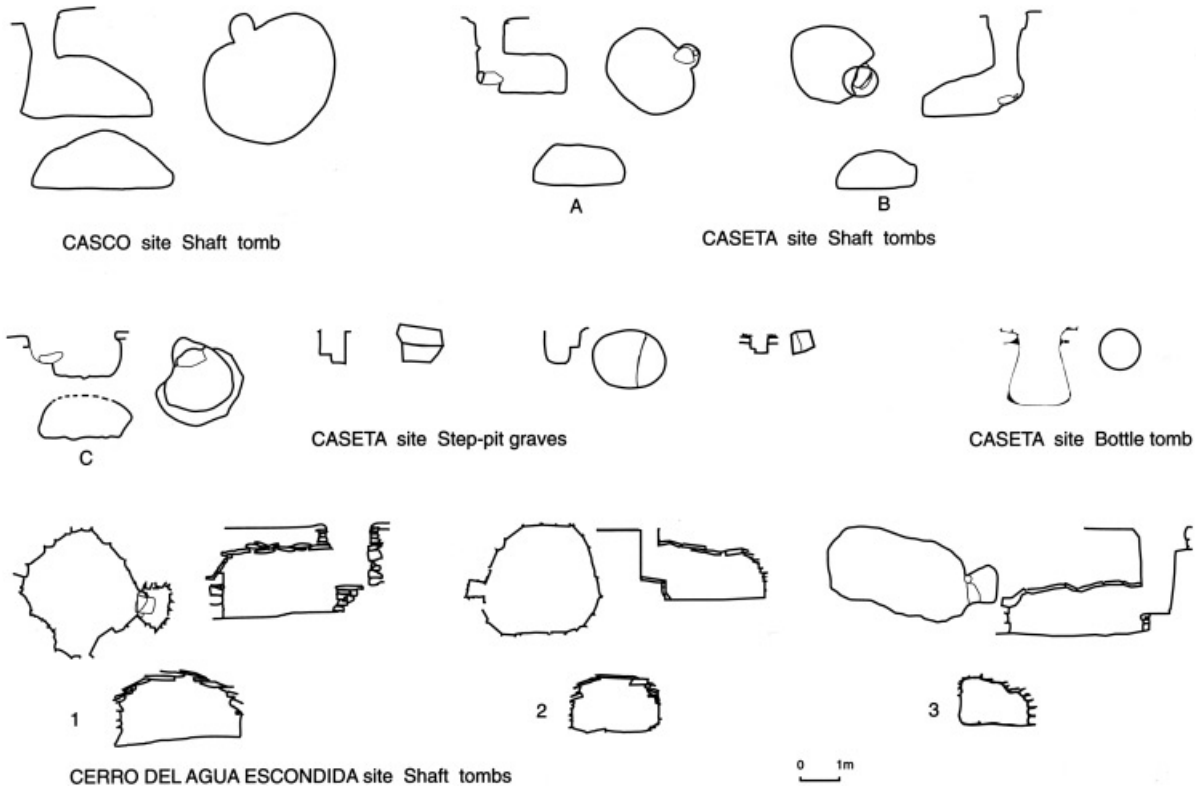

Figure 3. Plans and sections of the different excavated tombs from the Sayula Basin.

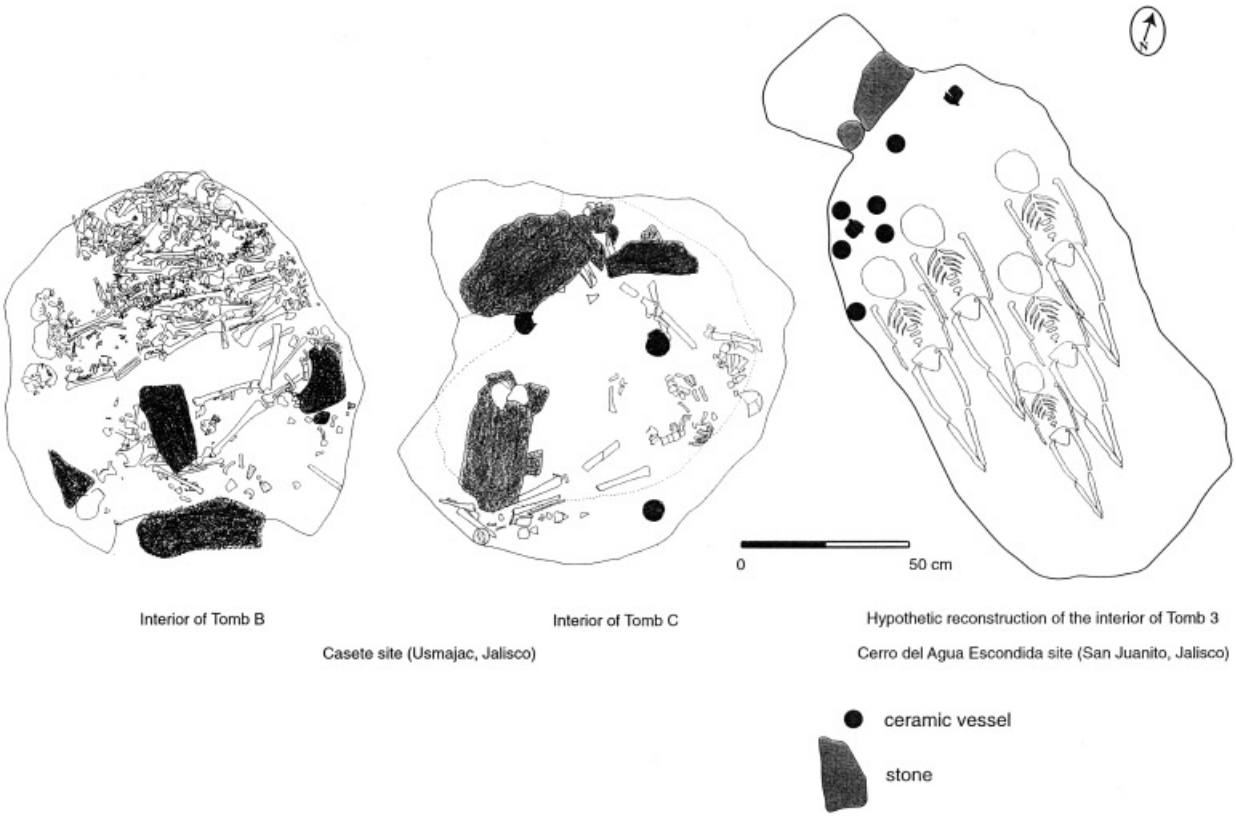

Figure 4. Arrangement of bodies in the tombs.

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simultaneously, but the order of the rest of the sequence is less certain. The remains of the two bodies closest to the north wall show clear signs of having been pushed over to make place for the second individual. The fifth recognizable skeleton was found flexed, showing a forced unnatural position that implies that some of the soft tissues were partially decayed when the body was re-accommodated. As mentioned, some long bones were neatly stacked at the feet of two of the extended corpses; others were deposited over the limbs of one of them.

It would be logical to infer that all the corpses were placed in the chamber to decompose, but nothing excludes the possibility that some of the bones could have been introduced from the surface and placed as secondary burials in the tomb. The fact is that, anatomically, too many bones are absent to account for the total number of individuals represented in the chamber, but of course, there is no formal way of confirming the possible redeposition of bones brought in from the exterior.

Keeping with the presumed order of interment, we now present some of the characteristics of these individuals. The first skeleton was a male, originally placed in a supine extended position, the hands possibly placed over the pelvic region. Three large stones were placed under the body, serving perhaps as supports for a wrapped bundle. A triangular stone served as headrest, a large broken *metate* was placed under the waist area, and another *metate* fragment was laid under the feet. These fragments did not correspond to the same object, both had the characteristic concave side facing the ground and neither one had basal supports. Two green stone *atlatl* rings were found at the right side of this individual, suggesting the presence of a spearthrower near the right arm. Other paraphernalia included a gray slate belt or girdle—over 140 rectangular elements—found around the waist area. A bracelet, or a small necklace, made of polished cylindrical shell and bone beads was also present.

The other three individuals were also extended, but the second body had been placed on its chest; apparently it was an adult female. The hands seem to have been placed in the area of the waist. All three were less adorned than the first, with only some bone and shell cylindrical beads around the neck area of each. A pair of small ceramic, bi-conical ear spools were found scattered among the large bone deposit found next to the north wall. It is therefore impossible to determine its original owner. It is likely that the bodies were wrapped loosely or placed on some sort of a *petate*, as several vegetable fibers were found around, or adhered to, some bones.

A curious detail characterized the four extended individuals: all had obsidian flakes inside the buccal cavity. The flakes were between 2 and 4 cm long, none had retouched edges or showed any other culturally relevant mark. Another interesting feature was the total absence of ceramic or stone offerings associated with the deceased. This seems particularly bizarre when one considers the possibility of multiple sequential interments of a specific sector of the population. A rather large empty space, between the first and the second individual, might have held organic offerings, but it is impossible to pursue this possibility any further. It seems strange, however, that such a large funerary deposit was not accompanied by the usual ceramic wares. This may be indicative of the status, or even to the nature of the buried individuals. The ornaments associated with some of the corpses were not particularly rich symbols of prestige related to any specific standing or special status.

The information on sex and age is relevant for the discussion of the mortuary patterns. Although the overall conservation of the bones was poor, some general remarks can be made about the age and the sex of some of the individuals. The total count of adults was 12, but sex determination was only possible in five cases. The study of the pelvic bones and comparison of the relative size of certain long bones indicate that there were at least three males and two females. A sub-adult, probably a female, was recognized as the fourth extended individual. Among the probable secondary deposits, some infant bones were identified and associated with three different children. Two age groups were distinguished : one individual was approximately 9 years old and two were babies between 1 and 2 years of age (Acosta 1997:18). For a complete description and discussion of this tomb, see Acosta 2003.

Tomb C. This funerary deposit is located some 9 m to the north of the preceding structures. Although the general concept is the same, the form of the third tomb differs. It may be described as a pit grave, but its principal features resemble the shaft tomb model. The bodies of two individuals were placed in a large oval chamber, accessed from a cylindrical side-step, that goes down 80 cm from the surface. At the base of this "false shaft," a large flat stone was placed, probably to emphasize or fortify the functional purpose of this feature. The chamber does not have a ceiling, but the general concave form of the walls suggests the possibility that an original vault could have collapsed during the construction of the tomb (Figure 3). The chamber is 210 cm long by 185 cm wide; its base is 120 cm below the present surface. The tomb was sealed with earth and some large stones that could have originally played a part in the burial rituals. They were placed on the east and west extremes of the chamber. Since the time of the interment, the soft dirt fill has been repeatedly disturbed by animals that made their burrows and built numerous underground galleries throughout the interior of the chamber. The obvious result was the partial destruction and the continued alteration of most of the human remains and the grave furnishings. The original context was seriously modified, but the unchanged presence of a number of bones allows reconstruction of the initial plan.

Tomb C contained two individuals and three ceramic vessel offerings. One of the corpses was extended in the supine position, oriented to the east, following the main axis of the chamber (Figure 4). The position of the second individual is uncertain, but it would appear that he also had been extended. Part of the skull of this body was found over a large rock, with two small obsidian flakes near the teeth. Although, this may be coincidental, it undoubtedly bears a resemblance to the context of the 4 individuals in Tomb B. The offerings seem to have been moved from their original setting; one was found standing upright to the right of the first individual. The vessels were not elaborate in form or decoration; all three showed signs of normal wear. Their functional form is domestic in nature, two jars and a tripod bowl with small solid conical supports. One of the jars and the bowl are buff wares, with red linear designs. The second jar is a pinkish-red monochrome ware. Few ornaments were found in the mixed earth fill; these included seven circular beads and a small zoomorphic figure worked into a fine yellowish-green stone. Two small obsidian figures were uncovered among the debris; such objects have often been reported for the Shaft Tomb Tradition, but few have ever been found in a primary deposit. The figures present an anthropomorphic silhouette and bear a small orifice on the upper portion.

The bottle–type tomb. This structure has a conical profile with a maximum diameter of 166 cm near the bottom. It is 189 cm deep; the diameter of the mouth is approximately 115 cm, and the base

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fluctuates between 156 and 161 cm in width (Figure 3). The interior contained only loose earth fill, mixed with rocks and a good sample of all the pre-Hispanic ceramic debris. The size and the function of this feature have no antecedents in the Postclassic occupation traits of West Mexico, so this can safely be assumed to have been a Formative burial structure. In fact, it can be cataloged as a type B tomb in Disselhoff's classification (1932:528, Figure 1); type Via1 in Long's variety chart (1967:8 Table 1) or as the "bottle type" in Galván typology (1991:120–122, 224, Figure 1). We believe that the structure was discovered, emptied, and reused during the last part of the pre-Columbian period. In the end, the feature was simply refilled with nearby rubbish and lost its initial mortuary function. As stated, the deposit contained cultural materials belonging to the three ceramic phases recognized in the basin, including a fragment of a diagnostic Tarascan pipe, which was found on the bottom of the pit.

The pit graves. As has been mentioned by other authors, the shaft tomb was not the only burial modality of this period. Several possibilities have been reported at locations such as Atitlan Las Cuevas or Hacienda de Sta. Maria, Jalisco (Weigand 1993: Figures 2,3; 2,9). The Caseta site had three shallow pit graves dug into the *tepetate*. A characteristic trait differentiates the early structures from the numerous pits found in the adjacent Postclassic cemetery. As in Tomb C, these features have the shaft entrance marked by a first depression dug to one side of the principal cavity. This depression is not always very deep, but its base is relatively flat and at least large enough to stand on (Figure 3). Other characteristics that distinguish these pits from the later phase graves are their overall dimensions, the depth to which they descend, and the care applied to the carving of the walls and floor. In contrast, the adjacent Postclassic cemetery showed dozens of smaller shallow pits just barely fashioned into the bedrock.

The largest of the three pit graves was located about 8 m to the northeast of Tomb B, and it was also presumably reused during the Amacueca phase (Figure 2). It contained the flexed human remains of three individuals—two on the side step and one in the deeper pit—accompanied by Postclassic grave goods. As in the case of the bottle-type tomb, the earth fill contained numerous Formative sherds but none of the possible original bones or offerings. The first depression extended 45 cm below the surface. The pit had a rectangular form, and it measured 193 cm long by 147 cm wide and 96 cm deep.

The smallest grave was located about 19 m north of the last described feature, it contained the poorly conserved remains of an infant, a spherical shell pendant, and 7 pyrite beads. The pit measured roughly 61 cm per side and had a depth of 70 cm. The step was only 25 cm deep. The last grave was rectangular, it was located some 15 m to the east of the infant tomb. The step feature covered the long side of the rectangle and was 57 cm deep. The base of the pit extended 22 cm further down. This grave contained only a badly preserved long bone, extended parallel to the wall, so the extended position of the body seems certain. The rest of the skeleton had disappeared; ornaments and offerings were absent.

THE CASCO SITE SHAFT TOMB

A large looted shaft tomb was detected in the middle section of a small hill about a kilometer away from the Caseta site. This location, called the Casco site, is part of the first lacustral terrace of the Usmajac district. Its altitude is 1,360 m above sea level (lat 19°52′16″ N; long 103°30′51″ W). The overall dimensions of this tomb are greater than those of the tombs of the Caseta site; unfortunately no information was available as to the possible contents of the chamber. The cleaning and sifting of the debris found at the time of our work in the area was not very productive. Only a few bone fragments (some of them burnt), some heavily eroded sherds, and a small number of ornaments were recovered. Among the ornaments were five shell pendants; a single round, flat, perforated green stone button; and two fragments of a black clay ear spool.

The tomb belongs to the Long I a2 type (1967:8, Table 1).The shaft is oriented 307 degrees to the west of magnetic North; its base is 316 cm below the surface. The chamber has an oval form that measures 403 cm in the longer axis and 384 cm maximum width. The base of the chamber is 320 cm deep and the maximum height of the ceiling reaches 167 cm (Figure 3).

An electric resistivity survey performed on the area surrounding the tomb was not successful in locating other features, so it can safely be stated that this was an isolated tomb. On the surface of the site, ceramic materials from the three cultural phases were abundant. The Usmajac component was well represented in utilitarian forms and solid figurine fragments of the Tuxcacuesco-Ortices type.

THE CERRO DEL AGUA ESCONDIDA SITE

Recent work on the central part of the west bank of the basin has shed light on the Usmajac phase life ways. The detailed survey around the Amacueca-San Juanito led to the identification of 25 new habitation sites of the Late Formative period. Most are located along the first lacustral terraces and the lower flanks of the Tapalpa range; the average altitude of most of the sites does not exceed 1,600 m above sea level. Dispersed settlement appears to be the dominant pattern, with few concentrated households. Some hamlets are scattered around the alluvial fans or near the marshy floodplains (Figure 1). In some areas the landscape presents enough evidence to suggest the existence of well-established villages. Such is the case of the zone known as Cerro del Agua Escondida, which occupies a sloped extension of over a square kilometer (lat 19°58′ N; long 103°37′ W). As in the case of the Caseta site, it is located just over the plain next to the lakeshore, with different sectors of the site ranging in altitude from 1,380 to 1,500 m. At least two permanent water springs were found nearby. Several seasonal streams and brooks flow from the upper slopes to irrigate the subsoil, which is rich in alluvial deposits. Agriculture can thus be easily practiced throughout the various sectors of the site.

One of the features that most attracted our attention was the artificial transformation of the natural landscape through terracing and leveling of the inclined terrain. Another feature was the presence of three shaft tombs built in different sectors of the site. Each tomb was separated from the others by a distance of about 300–400 m. The three tombs had been looted during the last few years, with the latest episode occurring only recently. Through the school teachers of Amacueca, we had access to some of the grave goods found in the smallest of the tombs. The stylistic characteristics of some of the ceramic vessels drew our attention to this area. A small salvage program was carried out on one of the sectors of the site, where a tomb had been accidentally discovered when it caved in as a truck drove through a corn field. The tomb had already been partially looted, but we thought there was a good possibility of finding part of the original context still intact under the rubble of the collapsed structure.

As at the other sites, our work began by sifting the fill of two of the looted tombs and drafting the plans and profiles of the structures. In Sector 3, a resistivity survey was performed over a large

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part of the area surrounding the collapsed tomb. Test pits were opened at the spots where anomalies were detected in the subsoil. This led to the discovery of two large kilns and a stone alignment that suggested the foundations of some kind of an enclosure. The ceramic materials recovered belonged to a Late Formative occupation, obviously related to the tomb. The evidence of undisturbed habitation middens justified the detailed excavation of a portion of this sector while the tomb was being explored.

The Habitation Deposits

The excavated surface covered 160 m^2 on the central part of a terrace situated at 1,430 m above sea level. The occupational deposits began to appear at 25 cm below the surface. The exposed features showed a well-planned layout that included domestic spaces and activity areas centered on a presumably public square (Figure 5). This small plaza was delimited by a semi-oval enclosure aligned with stone foundations of up to four superimposed rows. On the central part of the square, a shaft tomb had been built and covered. The entrance to the shaft descended from the eastern edge of the retaining wall of the enclosure. It appears that this patio probably had a sacred nature. A small offering had been buried on the northeastern corner of the square, under a well-prepared floor. A charcoal sample taken from the area surrounding this feature gave a date of 1690 ± 60 BP. The leveled ground of the interior of the patio had apparently been maintained clean of debris. In contrast, the surrounding areas presented a more domestic character; behind the enclosure the middens reflected activity areas with residues of utilitarian ceramic vessels and chipped stone debris. The foundations of habitation structures are suggested by simple stone alignments; other features include small stone circles that could have been used as ground supports for large vessels or for other unknown materials. Behind the northern part of the enclosure, a long walkway had been fashioned with several rows of aligned rocks. This rectangular stone base leads to three large kilns that delimit the eastern end of the square. The ovens were dug into the earth matrix and were lined with large rocks. The interior contained a large quantity of medium-sized stones, ash, and some charcoal residue at the base. The compact fill also included some Formative ceramic sherds. The cross sections show conical structures with an upper circular opening (diameter 90–150 cm) that gradually narrows to an average width of 60 cm, at a depth of about a meter. The three structures were surrounded by heaps of smaller stones that could have been used and reused in the combustion process. One of the kilns was covered by a large stone slab; the other two were simply filled to the brim with large rocks. Two charcoal samples taken from each kiln were dated at 1990 ± 60 BP and 2060 ± 70 BP (calibrated dates: 1998 ± 72 and

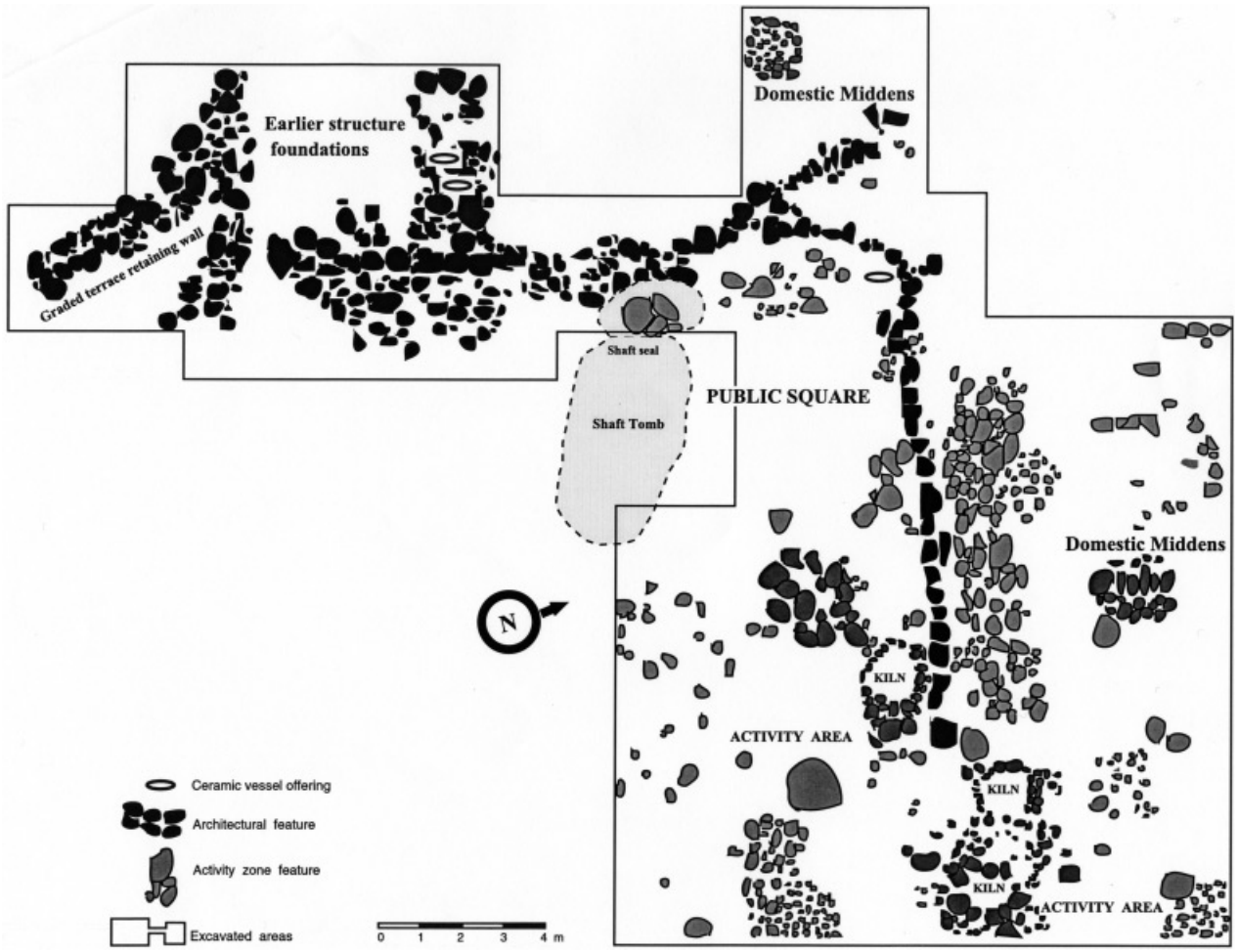

Figure 5. Plan of the site of Cerro del Agua Escondida.

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2054 ± 81). The ground on this section had been artificially leveled with various layers of piled stones covered over with a light soil mantle.

Other areas of the excavated site also showed partially graded floors, some with low, solid retaining walls. Judging from the foundations of some earlier structures, the site once had several large constructions on the western end of the excavated surface. We found three intersecting stone wall alignments that were cut and probably dismantled at the time the tomb and the square were built. Under these foundations, two ceramic bowls had been placed as offerings. Some badly preserved infant bones were also found mixed with this rubble, but the offerings did not seem to be associated with these remains, as there was a good distance between them. The original context of this interment was probably lost at the time the foundations were dismantled. Other than these scattered bones and the shaft tomb, there was no other mortuary evidence throughout the excavated area.

Despite the fact that the San Juanito region had an important Postclassic occupation, this sector showed only a few well-localized Amacueca phase deposits. The Sayula component was even more meager on the surface of the entire area; so there is little chance of confusing the chronological affiliation of the described features. Residue ceramic materials were abundant on the excavated contexts; these were almost entirely diagnostic of the Formative Usmajac phase. The minimal presence of later phase materials was always reduced to the superficial levels of the site. Our ceramic classification for the Usmajac phase distinguishes the following characteristic wares:

- Monochrome vessels of three basic surface colors, red, buff, and a dark brown to black tinged ware. The usual forms are pots, jars, bowls, and shallow dishes. The monochrome wares generally include all the utilitarian containers used in cooking, serving, or storing liquid or dry staples. The surface finish is generally smooth and sometimes has a polished glow.
- Incised or engraved dark monochrome wares, frequently decorated only on the upper half of the vessel. The designs are mostly geometric combinations of parallel lines, often forming sets of alternating inverted triangles or panels with cross-hatched decoration. These wares generally include the same utilitarian forms of the tinged pottery; but some show handsome composite silhouettes.
- Bichromes or polychromes: red-on-cream or red-on-buff are the most popular, but sometimes white and/or black elements are added to the basic red decorations. In the first case the surface of the vessel has a light cream slip that may vary in tone from white to a pale gray. In the latter instance, the red decoration has been applied directly over the tan-colored wall surface. In both cases the vessels have a polished or burnished finish that may be indicative of a special ware.

The forms are usually bowls and medium- to small-sized jars; some present composite contours. Judging from the great number of residue sherds, one can assume that this ware formed part of the everyday serving and eating utensils. However, most of the offerings and grave goods also belong to this category. The decorative motifs are often linear, combining straight and wavy traits with dots, small semi-circles, and checker-board motifs. Stylized human or animal figures are sometimes present, but most carry only geometric designs. On the exterior face of most bowls, the decorated zone is divided into quarters, each of which depicts an identical combination of lines, chevrons, or other standardized figures. These patterns must have a symbolic meaning that surpasses the limits of our present state of iconographic knowledge (Valdez et al. 2005).

The Ortices-Tuxcacuesco style figurines are also well represented in the Usmajac phase contexts. These small, solid, hand-modeled figurines with elongated heads, decorated with ribbons or turbans are a diagnostic trait of the Late Formative. Statuette fragments are always found on the household middens of this period, so their usage was apparently not restricted to votive offerings or funerary rituals. Information on looted shaft tomb hollow figurines suggests that the Ameca Brown type was the common style of this region.

The Funerary Evidence

The three tombs found in the Cerro del Agua Escondida site have a particularity that differentiates them from other shaft tombs so far reported in West Mexico. The underground structures were erected in stone masonry, with a vaulted ceiling made of intercrossed stone slabs, that closed the chamber reaching the shaft entry (Figure 3). This type of construction implies that the building process took place in a large open-air cavity that, once the crypt was finished, was carefully sealed and buried. The shaft was built on a side, and care was taken to mark a stepped entrance to the chamber. The interior ground was leveled with a fine white *tepetate* gravel and then covered with a layer of packed brown earth brought in from the exterior. As in the house floors, the prepared base floor of the chamber contained domestic refuse materials mixed in with the earth. We have little information on what was found in the looted tombs, but our work on the collapsed structure gave us a general idea of the burial patterns.

The tombs located in different sectors of the site were numbered according to the sector in which they are located. The sector 1 tomb was found on the lowest terrace of the site, near the slope that reaches the alluvial plain above the lake. The surrounding ground did not show any particular features on the surface. About 300 m to the north of the emplacement the ground seems to have been artificially leveled. The tomb is accessed through a 90-cm-diameter oval-shaped shaft that descends 130 cm to the entry of the chamber. The general form of the chamber is ovoid; from the stepped base of the shaft the structure is 270 cm long and 310 cm wide. The average height of the ceiling is 150, cm and the distance from the base of the floor to the surface is about 200 cm (Figure 3). According to the information gathered, this tomb contained at least three extended individuals and more than 70 ceramic vessels, mostly bowls, dishes, and jars. A large stone tripod *metate* was also included among the grave goods. The corpses were adorned with shell and stone bead necklaces and bracelets. Apparently there were no figurines, but of course the information maybe questionable.

The sector 2 tomb had been looted many years before our study, and the sifting of the debris yielded scant cultural materials. The structure was built on the side of a slope that overlooks a large leveled surface (70 m by 35 m). This plaza is situated on the middle part of an inclined terrace. Throughout this sector of the site are several small platforms that could easily have served as supports for a normal dwelling structure. The funerary chamber is rectangular, 270 cm long by 240 cm wide. The height of the ceiling is 140 cm, and the depth of the base from the surface is 190 cm. Several large rocks were found inside the tomb, but they could have fallen from the exterior since the time of the discovery. The shaft is perfectly square (50 cm wide) and descends 135 cm to the entry of the chamber (Figure 3).

The sector 3 tomb was the feature we cleared and excavated, thus it gave a great deal of information regarding the construction

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techniques and the interment patterns. Although part of the structure had been destroyed when the vault collapsed, its original form and dimensions were still clearly visible. The shape of the chamber was roughly rectangular, 340 cm long by 170 cm wide; the maximum height of the ceiling was 120 cm. The base of the chamber was 270 cm below the present surface level. The shaft was semicircular in form and descended 160 cm from the lower level of the retaining wall that enclosed the square, but its base was 220 cm below the upper ground level (Figure 3). It is possible that part of the north wall did not have masonry, since the corbels that held some vault slabs were resting directly on the bedrock embankment. The collapsed part of the ceiling only affected a small sector of the tomb near the entrance of the chamber. The remaining portion stood intact, in spite of the great shock and weight that the structure received when a 3-ton truck drove over it. Apparently the greatest damage was caused by the individuals who entered the tomb after the truck was removed, which speaks to the quality of the masonry techniques employed by the ancient builders.

The original tomb floor and its contents were covered by a thick fill of earth and stones that poured into the cavity with each rainy season. When this well-decanted layer was removed, we began to find the context left by the looters. The excavation of this level was rather disappointing because most of the human remains were badly broken and had been removed from their original locations. Nevertheless, large numbers of easily identifiable bone fragments gave us clues to the general orientation of the deposits. The southwestern corner of the chamber received several large slab segments that were covered with earth and small rocks when the ceiling collapsed. In this zone the original context was fairly well preserved, even though some of the bones and vessels had been crushed. When this information was added to the excavation maps, a general layout of the funerary arrangement became evident. The bodies of at least five individuals had been laid along the major axis of the chamber. The skulls were oriented to the entrance, and most of the grave goods were placed around the space between the shaft and the heads of the individuals (Figure 4). Sex and age determinations have not been made yet, but apparently there was at least one infant present.

The corpses were apparently well adorned with shell and stone nose rings, necklaces, and arm and ankle bracelets. Polished green stone beads and buttons were also well represented. A particularly fine specimen is a small anthropomorphic figurine pendant, sculpted in a soft greenish sandstone. It was probably part of a set of similar items that hung on a necklace; shell figurine pendants of similar style have been reported in the Zacoalco area, some 30 km to the north of Amacueca (von Winning 1996: 425–429, Figure 312). A new type of obsidian ornament was registered for the first time; the object resembles a small flaked round scraper about 2.5 cm in diameter, and the active edges have been dulled to obliterate its cutting surface. Over a hundred identical specimens were collected in the upper mid-body area of the individuals. These objects have no perforations, so they must have been encrusted, tied, or sown to some sort of support.

The few ceramic offerings recovered included three small jars and four bowls. Other fragmented vessels sherds suggest the possibility of small dishes and other jars and bowls. We will never know how many objects were actually present at the time the looters went in for the first time, but we can assume that there were many, because they "forgot" two fragmented bowls hidden in a nearby bush, on the surface. Fragments of these vessels were later found inside the chamber, confirming their original location. An arm fragment of a large hollow figurine was also found in the exterior excavation unit; but we cannot be certain that it had originally been inside the tomb. Our work in the funerary contexts showed no other evidence of any type of figurines. The unquestionable fact is that intruders took most of the objects from the chamber and left the broken bits and bones exposed to the elements.

DISCUSSION

Settlements and Habitation Site Evidence

The most important question that arises from the analysis of the new data is obviously: What kind of society is reflected by the evidence here presented? The lifeways depicted correspond to fairly well organized village groups that settled on both margins of the lake basin. The extensive survey has not revealed any type of monumental architecture related either to the Usmajac phase or the Verdía sub-phase. Although these people had the knowledge and the potential to transform their landscape, they apparently did not engage in creating massive earthworks. A legitimate question might be: Why would they have the need to do so? Also, if they did have such a need, we can ask: Where are the monumental structures? There may be a more logical question: Were these communities organized into regional political entities? If they were, we have yet to discover the manifestations of their political centers. It would be convenient to assume that they all formed part of a larger, exterior power group, but without supporting evidence, we must review the basis for any such assumptions.

We have sketched the basis of a burgeoning rank society in the fairly simple context of small village settlements. Let us now briefly review our data to see how this can be inferred from the empirical facts we have described. The spatial distribution of the environmental characteristics of the Sayula Basin has fostered various forms of sociocultural interaction between different sectors of this ample region. The initial links were probably based on the seasonal availability of diverse resources present at different altitudes. The study of the landscape and the settlement patterns suggests that, throughout the Late Formative, various parts of the basin were densely occupied by small village groups that alternated between the inclined terraces and the lake shores to provide for their subsistence needs. The habitation middens of the two sites described above are fairly typical of the early sites found on our regional survey. These have been defined either as household settings or as village domestic unit concentrations. The differentiating criterion is the extension of surface vestiges and the different possible landform transformations. Most sites correspond to a few households units; large aggregates are an exception. The location of most sites reflects the agricultural mode of subsistence that prevailed at the time. Evidence of salt extraction has been noted for the later part of the Usmajac phase, and it seems safe to assume that salt was being exploited from the initial part of the sequence. The saline efflorescences that appear cyclically on the playa surface probably attracted the attention of the first inhabitants of the basin, and it is possible that salt has been collected ever since (Liot 1998b; Valdez et al. 2005). In that respect, it is reasonable to suppose that salt, an important and rare resource, was a prime motor in the development and integration of the burgeoning basin communities. During the drought months, people from different locations descended to the dry playa and harvested the salty crusts.

The seasonal production of salt nurtured the interaction between different altitudinal niches. In the same manner, agriculture was not necessarily limited to the rainy months, as certain marshy

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alluvial plains could produce staples all year round. Numerous Formative habitation sites have been detected in the vicinity of such environments. Caseta and Cerro del Agua Escondida are only two of many such sites.

Village size is often set by the predominant mode of subsistence, and it is normal that the larger villages grew as a result of interaction between different communities. The village space grew as the place attracted more people to trade and eventually to settle and establish permanent quarters. The seasonal movement of people may also have influenced the growing capacity of a settlement, and the diversification of activities and food resources that are pooled into such locations would have attracted different segments of the population of a given region. These people may have gathered cyclically, or some may even have established residence within the limits of the original locus. Several hamlet sites found on the elevated lake terraces may well correspond to these basic dynamics.

In both of the studied cases, the village layout has a communal activity area where similar structures have been identified. The large stone-filled ovens are suggestive of the kilns that are still used today to roast the core of the agave or mescal plant. An ethnographic description made by Henry Bruman in the early 1930s is particularly helpful to understand the nature of these structures:

> To bake mescal was a simple process. In a pit of variable size—usually roughly circular, from three to ten feet across and from one to four feet deep—a fire was made of brush or wood, and stones the size of cobbles were thrown in. When the fire had died down, the hot stones were straightened out somewhat, and mescal heads were piled on top into a dome-like heap whose thickness depended on the depth and diameter of the pit. Over the mescal was usually placed a compact layer of fresh grass or moistened hay (zacate), and the whole mound was tightly sealed with a layer of earth. . . . (Bruman 1935:15)

In recent articles, Nelson (1992:359–382) and Parsons and Darling (2001) have discussed the utilization and the nutritional importance of agave (maguey) in pre-Columbian Mesoamerica, stressing the place it still has among the peasant communities of northwestern Mexico. Given the fact that wild agave is abundant throughout the basin, the interpretation of these combustion features as mescal ovens does not seem farfetched. The roasting process of several heads is a communal practice, normally exercised within the village or the household area (Di Peso 1974, 1983: 122). The consumption of the plant was also a collective habit and often part of the feasting ceremonies. The presence of kilns near a public space can thus be seen as normal. Some shaft tomb locations in Nayarit also show underground ovens near the funerary structures (Gabriela Zepeda, personal communication 1996). The presence of ovens in a public space where funerary structures are a dominant feature can be taken as a clue for ancestor cult rituals where extensive meals and beverages were served among the living as they communed with the dead.

Feasting was a very important part of the community life in West Mexico; the cyclical public events provided the occasion for social, ritual, and political interchange. In different scales it was also a "mechanism for the redistribution, reciprocation, or circulation of wealth and food surplus" (Butterwick 1998:90). As such, it has been often cited as one of the indicators of the emergence of rank societies and chiefdoms (Blitz 1993). The shaft tomb crypts found in different parts of the Sayula Basin can be taken as evidence of predominant groups or lineages that were rooted in a particular territory, exercising their influence, and eventually power, over the inhabitants of their region. In time, the burgeoning elites could evolve to higher levels of sociopolitical organization and regulation in a rank society. The cyclical nature of the appearance of the basin's main resources (salt, fishing, fowl hunting, and agriculture) gave the communities the occasion for public reunion and the leaders the opportunity to sponsor feasts and to promote themselves.

The organization of the internal site space shows that there was a planning mind that conceived and structured the general layout of each of the studied settlements. But can we assume that a larger scale organizing force existed in the Sayula Basin at the time? We could imagine, for instance, that the whole region shared common ideological principles and participated in cyclical events, where the social cohesion of the group was enhanced through communal activities. One such activity could have been the seasonal harvest of the nitrate minerals used in the production of salt. Other instances could be related to community-led ceremonies such as age passage rituals, wedding feasts and, of course, funeral services. The scant surface evidence of such activities should not discourage the proposition of hypotheses. Only intensive fieldwork can unveil the different modalities of the system that prevailed, but we must guide our research strategies to the identification of these traits. The firsthand information recently gathered in different locations of Jalisco and Colima finally allows the composition of a proper database to which one can refer to compare facts and test hypotheses.

The marked contrast noted in the survey between some of the sites of this period suggests that there was probably a hierarchy among them. The great majority seem to be simple household units where people lived and worked for their subsistence needs. Others, such as Cerro del Agua Escondida, show an internal arrangement that connotes a certain capacity to rally a labor force that executed planned actions. This is an essential attribute of the rank society, where the line between power and authority cannot yet be truly distinguished (Fried 1967:13). The question of leadership is thus raised, and that brings us to the crucial matter of distinguishing a chief from the archaeological evidence.

Funerary Evidence

Shaft tombs have traditionally been taken to denote status differences in a given population. Normally, rich tombs are considered of high rank, whereas pit graves are synonymous with common folk. Various individuals occupying a shaft tomb are usually taken to be members of a single lineage group, just as several tombs clustered in a single location are viewed as indicative of larger clans. Funerary distinctions among the individuals may indeed reveal the most important member of the group.

The evidence presented in this article has implications for the general discussion of these assumptions. The Caseta site is a good example of tomb hierarchy, with simple pit graves and more complicated shaft tombs. The obvious problem is the lack of a rich tomb that could be assigned to the paramount individual of the lot. The looted tomb A seems like a good option, but because we did not have direct access to any of the grave materials, we can only infer their probable existence on the basis of second-hand information. Tomb B presents the characteristics of a lineage mortuary deposit. Second-level ranked individuals seemed to have been interred here without any major status attributes, other than their inclusion in the vault. The ornaments, although not spectacular, may have been enough to mark their group affiliation. The unusual lack of grave goods in Tomb B could have seemed normal, or even as comple-

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mentary, to the importance of Tomb A. The general shape of the structures may have a differentiating function, but unfortunately, our bottle-type tomb did not yield any relevant information, and its pre-Hispanic reuse inhibits any arguments. Tomb C is an interesting variation. As mentioned, its general form fits the shaft tomb concept, but it is really a pit grave. Its importance lies in the presence of modest grave goods (household items) and individuals with body ornaments. The deceased could have been members of a different lineage, less ranked than the individuals in tombs A and B.

The infant in the small pit grave is also an intriguing case. The ornaments this child carried—a center-perforated concave shell disc (diameter 8 cm) and a string of pyrite circular beads—were not seen on any of the other shaft tomb individuals. These objects are by no means common in the Sayula archaeological record; pyrite has only been found in a Verdía burial in Atoyac. Two semi-circular shell pendants, of a similar size, accompanied the most important individual in the Sayula phase cemetery excavated in Atoyac, but complete shell discs have not been reported elsewhere in the basin. The fact that an infant carries such ornamentation could also be indicative of the way status was transmitted in the society, but the fact that the child was relegated to a small, isolated grave is also worth noting.

In Cerro del Agua Escondida, the remarkable feature is the relative proximity of three apparently rich tombs over a rather reduced area. As stated, the three sectors with shaft tombs were considered part of a single large site. The shared traits of the landscape transformation and the similarity of the surface materials spoke of a certain spatial unity. Each sector could have been the quarters of a separate group of interrelated folk, and each might have had its proper crypt designated for the prominent members of the lineage. The burial grounds of the other members of the group have not been found, but apparently they were not situated within the limits of each communal area. This may be the case of the Casco site shaft tomb as well.

Although the tombs here described belong to different types, they can all be included in Weigand's third category of mortuary features (Weigand 1989:43). These tombs do not have a direct relationship to any type of surface round architectural feature; neither do they have special grave goods that could be related to a regional hierarchical group. These tombs seem to represent different possibilities of interment for different lineages in a rank society. Some of the pit graves could even belong to the common folk who may have been associated with the higher-ranking individuals.

The evidence here discussed suggests the existence of a rank society that was well established in the Sayula Basin, a society that had close affinities with the groups that inhabited the Colima highland region. A common link is witnessed in the Sayula tombs materials and the prevailing ceramic materials of the Colima traditions. The apparent absence of Teuchitlan traits in the basin is marked by the fact that there is no significant evidence of monumental architecture in the Guachimontón style. Because the ceramic materials of this tradition are not well known, we cannot trace any ideological influence on the cultural materials found throughout the basin. In preference to the other Jalisco (Ameca, Magdalena, Tequila) tomb traits, the Colima "Manchón, Ortices" styles (Kelly 1978) are closer in concept to the Sayula evidence. Recent studies suggest that the Colima Late Formative materials are somewhat earlier than their highland Jalisco counterparts (see Mountjoy and Sandford, this issue). The Sayula materials are apparently linked to the transition between the Late Capacha/Colima shaft tomb horizon, which does not seem related to the Teuchitlan Tradition shaft tomb complex. It must be stressed that these are hypothetical interpretations of the data recently obtained, and further study of the contexts is needed before final conclusions can be sustained. The research projects being undertaken by archaeologists of the University of Guadalajara are certainly another important step in that direction.

RESUMEN

Un estudio regional de los patrones de asentamiento en la cuenca de Sayula, Jalisco, encontró sitios del formativo tardío relacionados con evidencia del período de tumbas de tiro. Este artículo describe los depósitos habitacionales y funerarios de dos sitios, y discute los posibles patrones de subsistencia que combinan la agricultura con la explotación temporal de los depósitos de sal de la región, como la base de interacción cotidiana para el desarrollo de una sociedad estratificada.

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