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# THE CHRONOLOGICAL CONTEXT OF THE CENTRAL JALISCO SHAFT TOMBS

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## Abstract

The shaft tomb mortuary tradition is an archaeological construct that encompasses a diverse array of burial practices, many of which now seem to reflect local variations in specific treatments of the dead. Distinctive characteristics of shaft tombs in the Tequila valleys of central Jalisco include the high degree of labor invested in tomb construction, the wealth of offerings found within the tombs, and the occasional association of the tombs with the circular public architecture known as the Teuchitlan tradition. These characteristics have led some researchers to see the Tequila valleys as the “core” of the shaft tomb tradition, in which mortuary practices were most dramatically employed to demonstrate social distinctions. Weigand’s survey beginning at the end of the 1960s was designed to understand the settlement system associated with the burial tradition. Various constraints led to the use of surface materials and materials found in looters’ pits to associate ceramics with tombs and public architecture. This article discusses ongoing research on the ceramic chronology of the eastern Tequila valleys and specifically those phases that span the use of shaft tombs as a high-ranking form of burial. We can discern three phases across the period of the Late Formative through the Middle Classic.

Recent archaeological research in western Mexico has been characterized by vastly increased fieldwork and a greater emphasis on theoretical issues. Yet research has been hampered by our dependence upon the original three-phase pre-Columbian sequences developed since the 1930s by Kelly (1945, 1949), Lister (1949), and others. Such gross breakdowns of ceramic evolution are not an indication that there was no change, but rather they expose the preliminary nature of most chronological research that has been done in western Mexico. Unfortunately, these methodological questions regularly intrude upon our archaeological interpretations as well. The enormous periods of apparent stasis created by these sequences have often been taken as indicators of a lack of social change. This is particularly true for what has been called the “Shaft Tomb Complex” (Schöndube 1980).

The shaft tomb mortuary tradition is an archaeological construct that encompasses a diverse array of burial practices, many of which now seem to reflect local variations in specific treatments of the dead (compare the contributions to this issue). Distinctive characteristics of shaft tombs in the Tequila valleys of central Jalisco include the high degree of labor invested in tomb construction, the wealth of offerings found within the tombs, and the occasional association of the tombs with the circular public architecture known as the Teuchitlan tradition (Weigand 1985). These characteristics have led some researchers to see the Tequila valleys as the “core” of the shaft tomb tradition, where mortuary practices were most strategically employed to demonstrate social distinctions (Beekman 2000; Weigand 1985).

In this article, I discuss ongoing research into the chronology of this phenomenon, specifically its manifestation in the Tequila valleys of central Jalisco, although this burial complex is, of course, distributed across a much wider area. I will discuss current research on the ceramic chronology, including comparisons between materials from the Atemajac valley to the east and types defined in the Tequila valleys themselves. Second, there will be an evaluation of the evidence for an absolute chronology. I will concentrate on the shaft tombs from the Late Formative and Classic period, and not the El Opeño style tombs (Oliveros 1974, 1992) known from this area beginning in the Middle or perhaps Early Formative (Weigand 1985). I do not discuss these earlier tombs because of the lack of ceramic data, not because of any perceived lack of connection to the shaft and chamber tombs.

## CENTRAL JALISCO

One of Phil Weigand’s most far-reaching and influential projects has been to document the settlement pattern associated with the shaft tomb mortuary tradition in central Jalisco (Weigand and Beekman 1998). This has resulted in the identification of not only residential settlement but also the concentric circular public architecture referred to as the Teuchitlan tradition (first discussed in Weigand 1979). Constraints forced most of this research to focus on surface survey, with little stratigraphic excavation to develop an adequate ceramic sequence. Weigand’s creative solution was to develop an architectural sequence, based on changes in basic morphology of the architecture (Table 1). This sequence now appears to be invalidated by recent findings, and the phase names are retained only for the new sequence being developed at Guachim-

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Table I. Chronological table for central Jalisco.

Date	Architectural Phases (based on Weigand 1979)	Ceramic Phases (based on Galvan 1991, Beekman 1996a, b)
900		
800	Teuchitlan II	El Grillo
700		
600		
500	Teuchitlan I	Late Tabachines
400		
300	Ahualulco	
200		
A.D. 100		Middle Tabachines
0	El Arenal	
100 B.C.		Early Tabachines
200		

ontón (see discussion in Beekman and Weigand 2006). Even while the sequence was in use, however, it posed special problems, as a sequence based on public architecture cannot be used in rural sites where such buildings do not occur.

Some of these issues were addressed in the field through the incorporation of ceramic diagnostics found in a range of contexts. Surface materials provided an initial understanding of ceramic types present in association with tombs or villages, but Weigand was also able to examine ceramics looted from tombs or within the profiles of the numerous looters' pits that mar the public architecture. His aim has been to rescue these data before artifacts disappear into the black market or before exposed tombs erode into nothingness. Using these sources of information, he was able to associate certain distinctive ceramic markers with the shaft tombs and the surface settlements (Weigand 1992:Figure 9).

The most commonly employed diagnostics for the period of the shaft tombs and the Teuchitlan tradition architecture are three different bichromes: *Ahualulco Red on Cream* was believed to

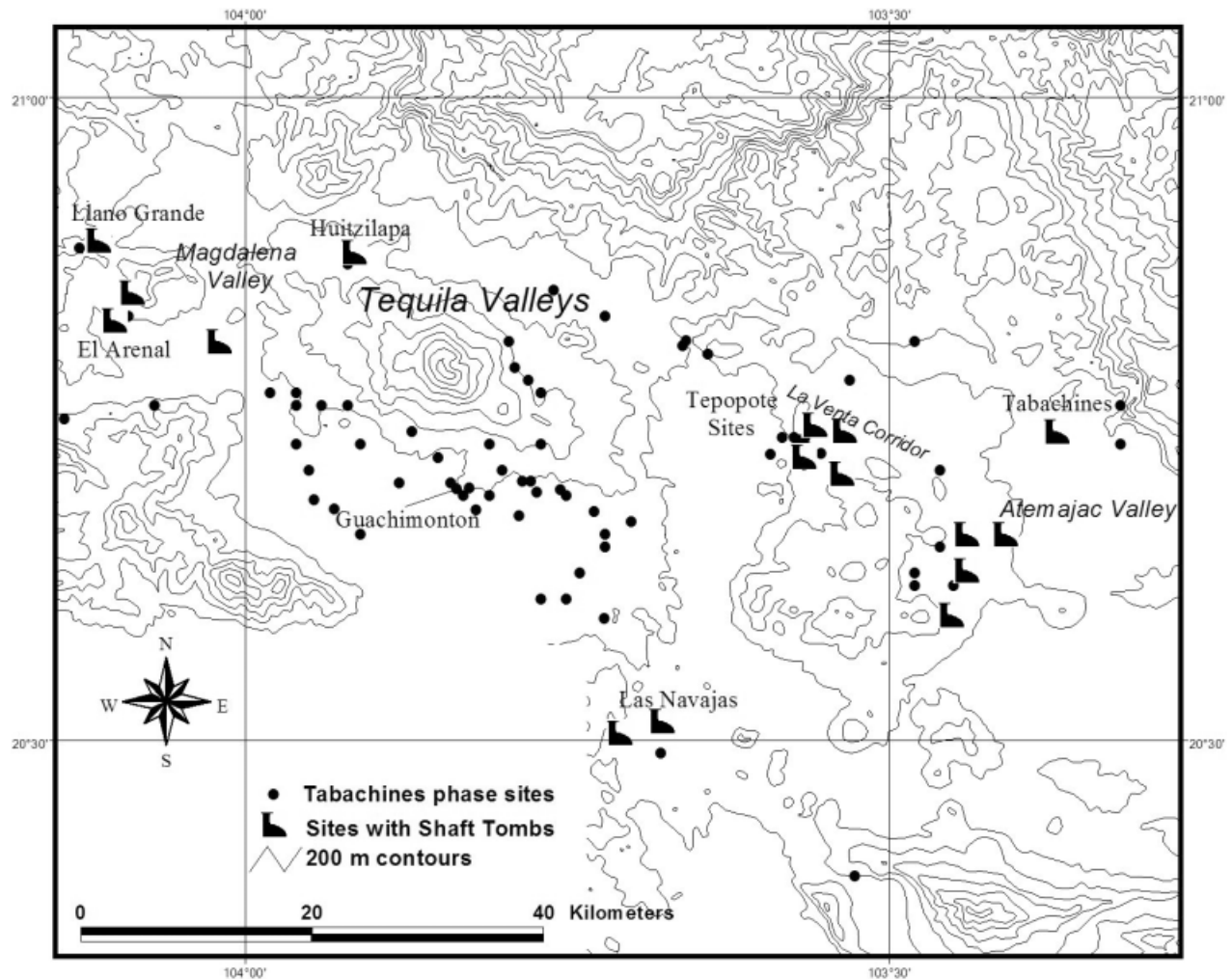


Figure I. Map of the Tequila and Atemajac valley systems. The reporting bias towards sites with public architecture and cemeteries, and the discontinuous nature of survey are both evident in this figure.

extend across nearly the entire span of tombs and public architecture (Beekman 1996a:518–537; Beekman and Weigand 2000:45–50) (Figures 2–4), but the type is now recognized to encompass too much variation. Both delicately lined examples with fine-grained pastes, and more utilitarian pieces with rough and broad-lined decoration over coarse-grained pastes, have been placed in this category. *Oconahua Red on White* is a thin and polished ware with occasionally fine-lined designs; it is believed to span the earliest part of the period of tombs and architecture (Beekman 1996a:455–481; Beekman and Weigand 2000:26–32) (Figures 5–7). The paste of *Oconahua Red on White* is essentially the same as *Ameca Grey*, a paste partially described by both Isabel Kelly (1948) and Stanley Long (1966) during their own studies in this region, and shared by the *Ameca-Etztatlan* style hollow figures that are often found as offerings in the shaft tombs. Later, possibly developing out of *Oconahua*, comes *Teuchitlan Red on Cream*, which is more unevenly fired, with a matte finish, thicker walls, different paste characteristics distinguishable by visual and petrographic analysis, and with slight iconographic details that, to my eye, sug-

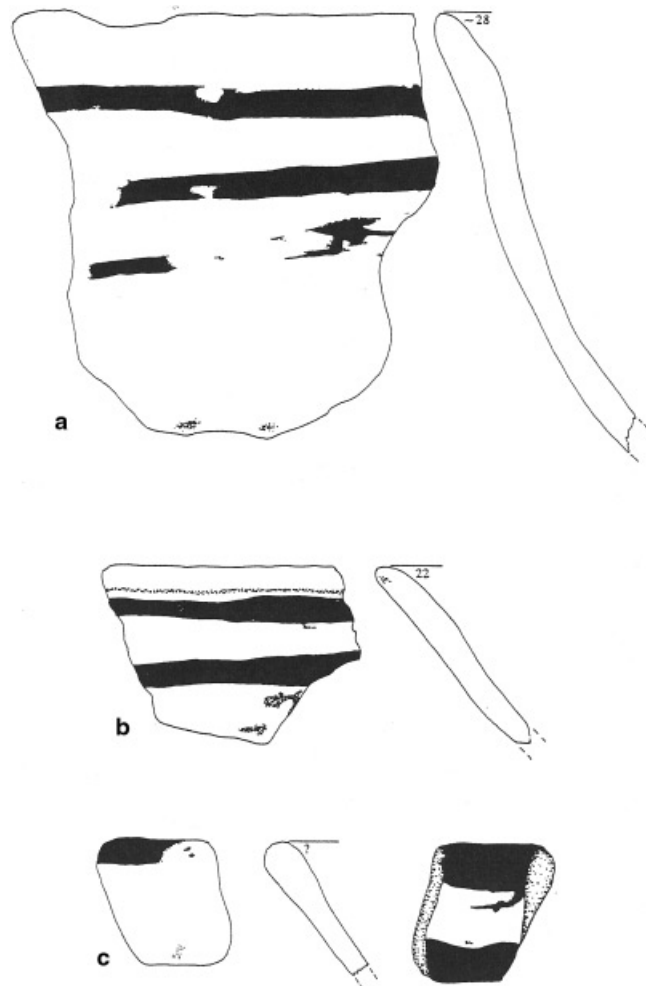


Figure 2. La Venta Corridor collections. Colorines Red on Buff: (a) 7\U.I.15; (b) 21\GS.107; (c) 36\GS.143. Formerly referred to as Ahualulco Red on Cream.

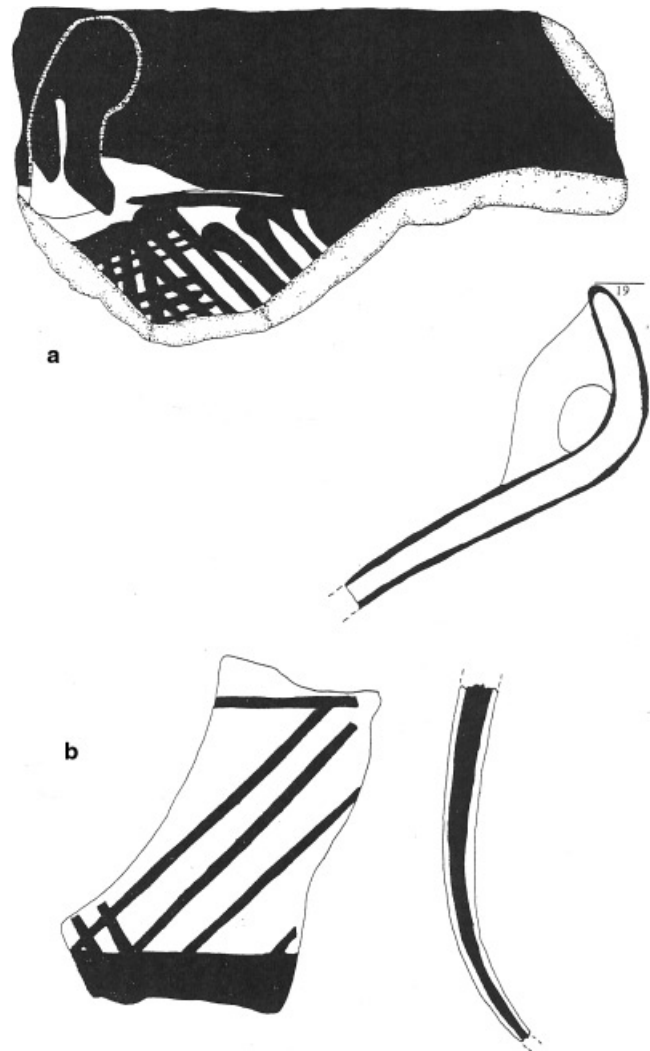


Figure 3. Colorines Red on Buff: (a) 33\GS.152; (b) 58\GS.260. Formerly referred to as Ahualulco Red on Cream.

gest the designs that occur with much greater prominence in later phases (Beekman 1996a:497–510; Beekman and Weigand 2000:38–41) (Figures 8–10). On the basis of the surface observations and distinctive contexts described above, the *Teuchitlan* type has been used to indicate the latest part of the sequence, overlapping partly with *Oconahua Red on White* and extending until the more sweeping changes of the Epiclassic.

These diagnostics, initially defined by Weigand (Weigand 1992: Figure 9) and later described in more detail based on mutually agreed upon parallels in the collection from the La Venta Corridor (see Beekman and Galván, this issue), were then published accompanied by drawings based on photographs taken by Weigand of materials in private hands (Beekman and Weigand 2000). Each of these types is, of course, only one among many that share the same paste, firing pattern, and surface finish. There are a variety of plain, reduce-fired, red-slipped, or other types in each of these wares, best described in Galván (1991:Chapter 4) and Beekman and Weigand (2000).

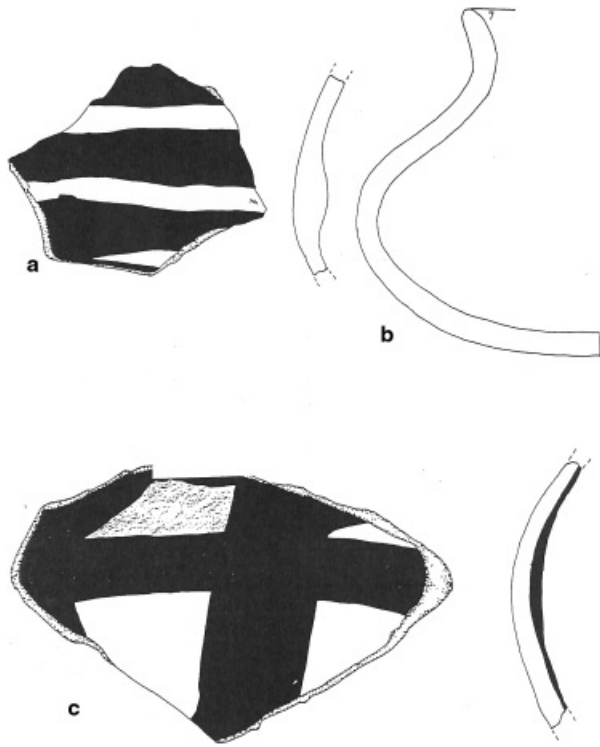


Figure 4. Colorines Red on Buff: (a) 33\CU.203; (b) PP\GS.159; (c) 33\GS.324. Formerly referred to as Ahualulco Red on Cream.

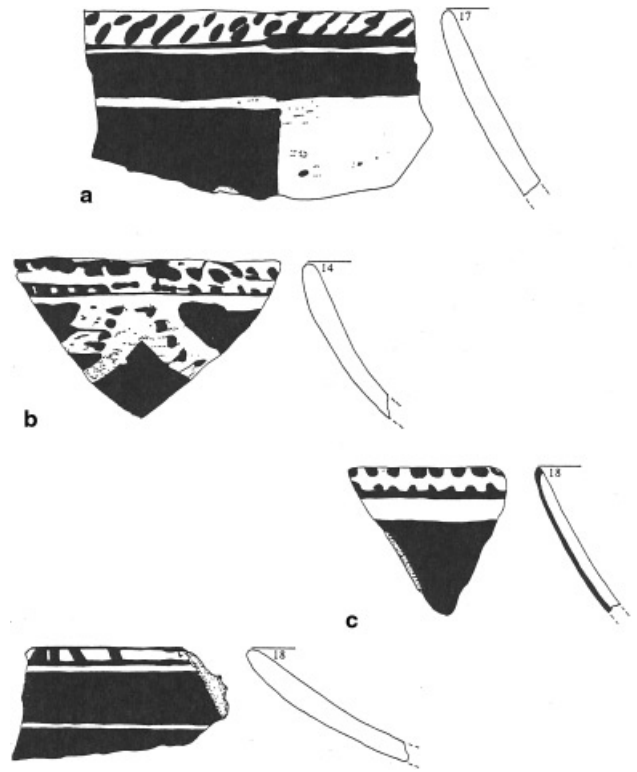


Figure 6. Oconahua Red on White: (a) 33\GS.321; (b) 33\GS.314; (c) 33\GS.315; (d) 33\GS.324.

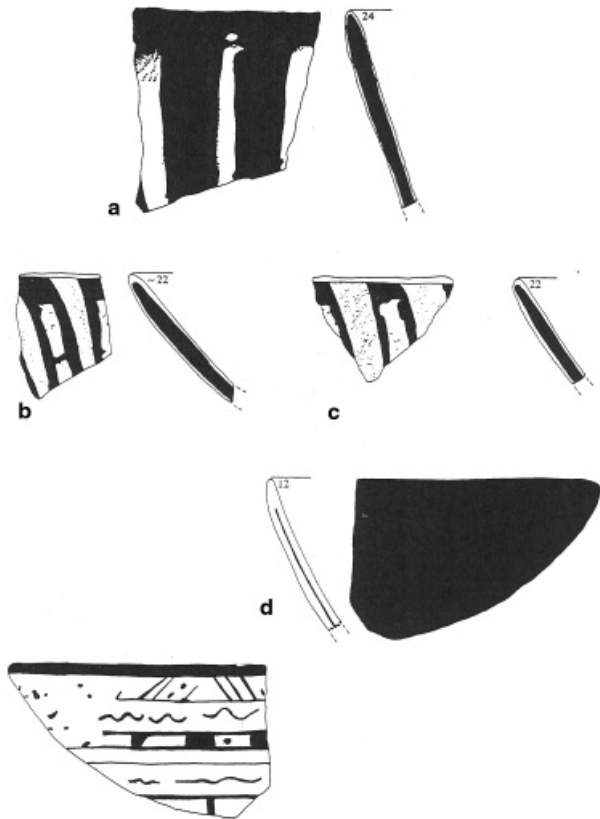


Figure 5. Oconahua Red on White: (a) 33\GS.152; (b,c) 33\GS.324; (d) 48\U.5.4.

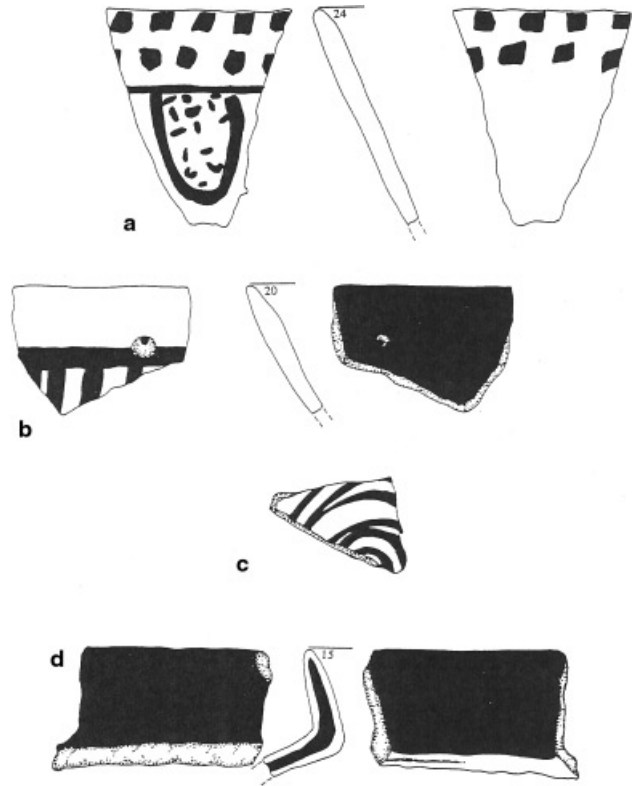


Figure 7. Oconahua Red on White: (a) 33\GS.309; (b) 33\GS.325; (c) 33\GS.310; (d) 33\GS.324.

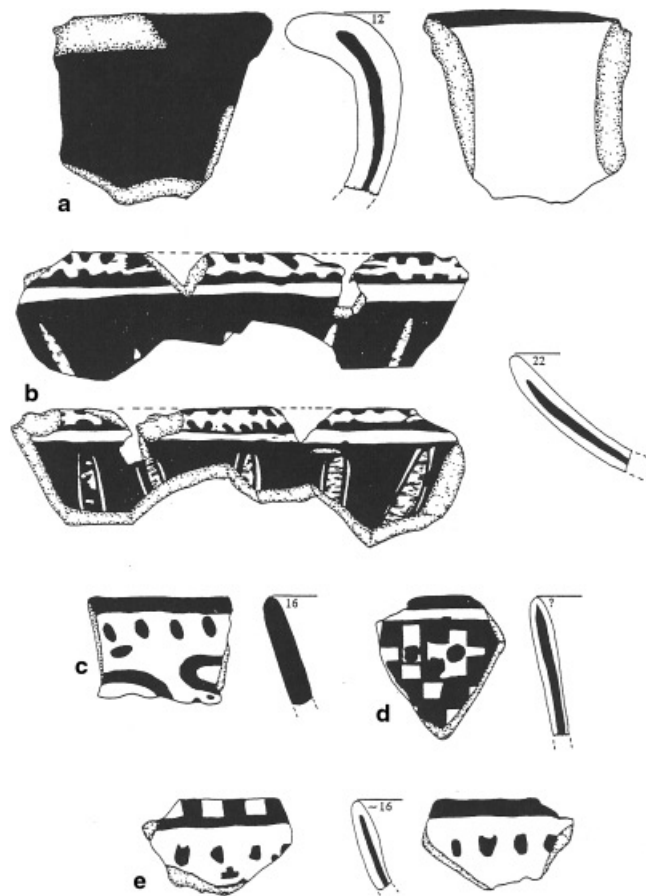


Figure 8. Teuchitlan Red on Cream: (a) 25\GS.109; (b) 33\GS.324; (c) 33\CU.344; (d) 33\U.7.5; (e) 33\CU.428.

Corrections and refinements continue to be made to the types, and the Beekman-Weigand volume is best described as a work in progress. Weigand has described all three bichrome types as sometimes including fugitive black and white decoration in addition to red on the base paste color (Beekman and Weigand 2000:27, 28, 39, 46). Vessels in the Museo del Municipio de Tala (about 16 km north of Navajas) cited as examples of fugitive paint (e.g. Beekman and Weigand 2000: 28, Figure 48) have turned out upon closer examination to be examples of *resist* decoration (Figures 11, 12). Stanley Long's observation that many of the looted vessels that he had examined were decorated using the resist technique (Long 1966:Figures 57, 58, 140a, 190) seems to be supported. Within the Tequila valleys, this particular decorative variation thus occurs from Tala to the northeastern edge of the Magdalena basin, nearly opposing ends of the Tequila valleys, but not in the La Venta Corridor, Llano Grande, or Navajas, where I have worked directly (refer to Figure 1). The vessels described as *Oconahua Polychrome* or *Ahualulco Polychrome* in the shaft tomb at Huitzilapa (Ramos and López 1996) are probably of this sort. Resist wares go through a period of extensive experimentation elsewhere in western Mexico (e.g. Loma Alta phase [Carot 2001]) and across Mesoamerica (e.g. Usulután [Sharer 1978]) in the Late to Terminal Formative period, and a clearer recognition of this decoration in central Jalisco helps to understand the region's participation in wider trends.

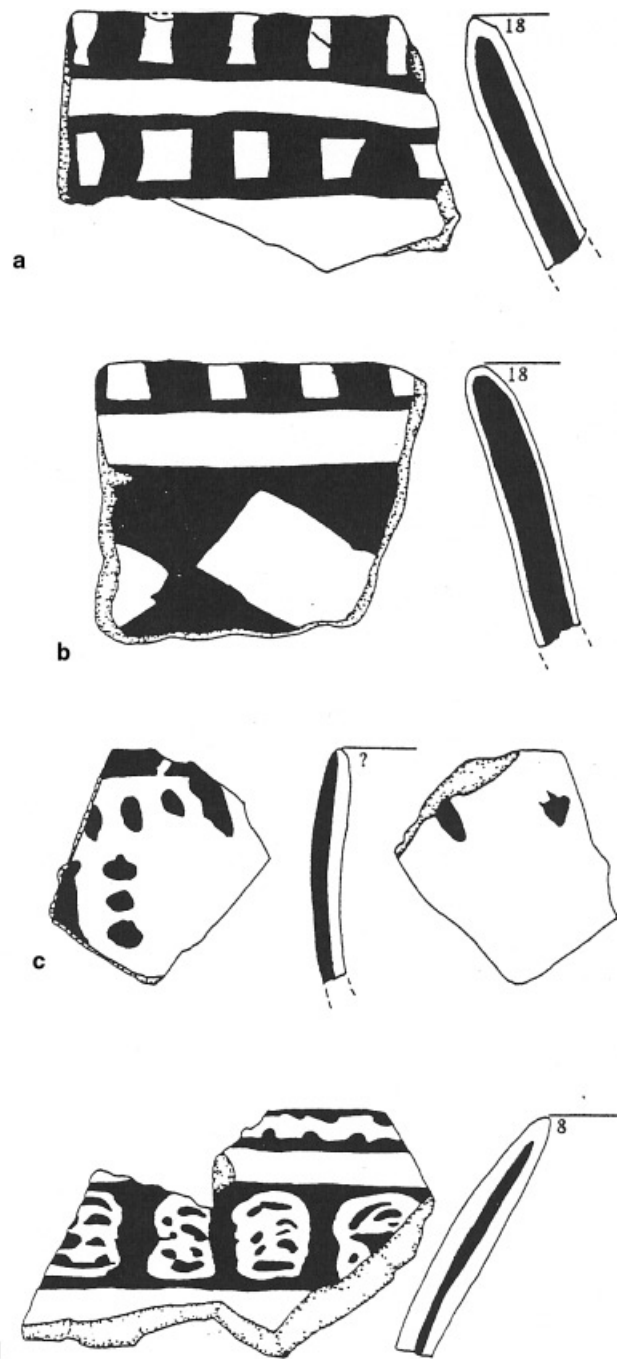


Figure 9. Teuchitlan Red on Cream: (a) 33\CU.393; (b) 33\GS.152; (c) 33\CU.468; (d) 33\GS.324.

The Ahualulco Red on Cream type is more problematic; it incorporates too much variation in its long temporal span. Weigand's definition of the diagnostic incorporated coarse paste vessels with rough finishes and sloppy paint application (these formed the sample described in Beekman and Weigand 2000) but also very finely made vessels barely distinguishable from Oconahua Red on White. The complete vessels of Ahualulco Red on Cream in the Museo del Municipio de Tala (e.g. illustrated in Beekman and Weigand 2000:Figure 72) differ from examples of Oconahua Red on White

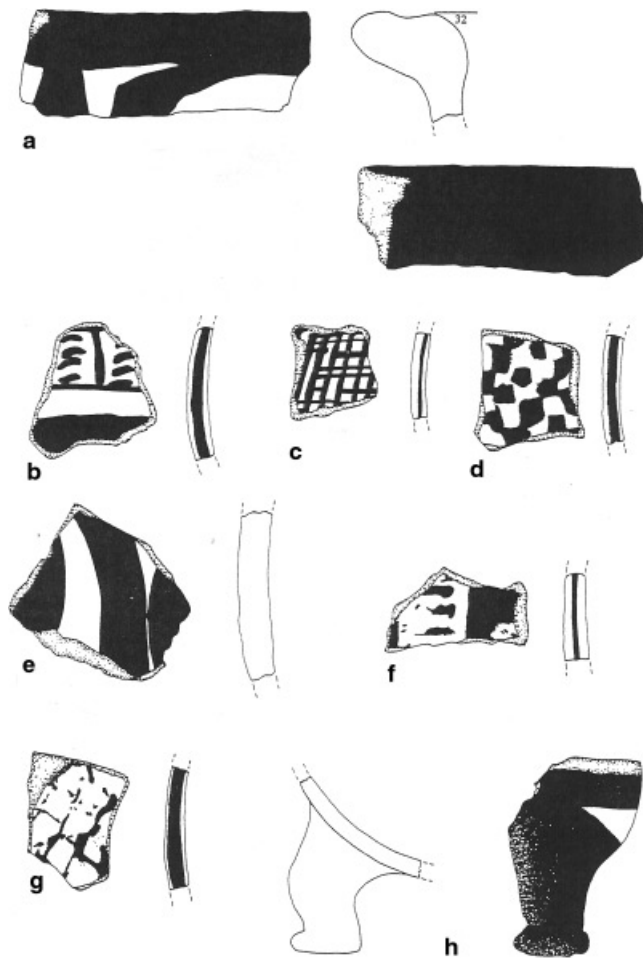


Figure 10. Teuchitlan Red on Cream: (a) 48\GS.201; (b) 33\CU.460; (c) 33\CU.354; (d) 33\CU.517; (e) 43\CU.677; (f,g) 33\GS.152; (h) 33\GS.312.



Figure 11. Teuchitlan Red on Cream vessel in the Museo del Municipio de Tala. The main cross design is in red, but the thin dark lines are a black-brown resist. Also depicted in Beekman and Weigand 2000: Figure 48. Photograph by Gregory Tyndall.



Figure 12. Oconahua Red on White vessel in the Museo del Municipio de Tala. The thick lined decoration is in red, but it is outlined in resist. A faint resist depiction of a common "maize" or even "guachimontón" motif is in the center of the photo. Also depicted in Beekman and Weigand 2000: Figure 66 as an Ahualulco Red on Cream, although the illustrator did not notice the resist decoration. Photograph by Gregory Tyndall.

(illustrated in Beekman and Weigand 2000: Figures 10–12) in their slightly greater thickness and slightly less even firing. The surface color and finish (and what could be seen of the paste through recent breaks) appeared identical to Oconahua Red on White, and nothing like the more "coarse" versions of Ahualulco. For these reasons, I suspect that Ahualulco Red on Cream no longer serves as a type, either in its fine manifestation, which should be incorporated into Oconahua Red on White, or its coarse forms, which are more diverse and better described by Galván's (1991) *Colorines* types. Only more detailed analysis in those locations where it occurs will resolve the problem.

#### Relative Chronology

It is clear that the diagnostics discussed for the Tequila region are as a whole contemporaneous with those of the Tabachines phase in the adjacent Atemajac valley (discussed in Beekman and Galván, this issue). Galván (1991) defined the Tabachines phase after Instituto Nacional de Antropología e Historia (INAH) excavations of 21 shaft tombs at the site of the same name. He divided the period into Early and Late subphases based on different distributions of the three wares identified there—*Colorines*, *Tabachines*, and *Arroyo Seco*. Distributed between these subphases were different red on base paste types that, after personal observation, I feel can be compared to the Tequila valley types. *Colorines Lineas Multiples* and *Rojo sobre Café Ollas* (Galván 1991:48–63) correspond very well to the more coarse vessels to which the term Ahualulco Red on Cream has been applied. *Tabachines Rojo sobre Crema* is a clear parallel to Oconahua Red on White and the finer vessels that have been called Ahualulco (Galván 1991:67–70). The Atemajac valley types *Arroyo Seco Rojo Amplio* and *Borde Rojo* have some sort of relationship to Teuchitlan Red on Cream (Galván 1991:73–75), although with much simpler red decoration. Certain olla and deep bowl forms also appear distinct, but are better represented among Teuchitlan Red on Cream's plain

counterparts in the same ware. A new Estolanos ware was defined to encompass Teuchitlan Red on Cream and the plain wares with the same paste and finish in the La Venta Corridor (Beekman and Weigand 2000:36–44), but there were notable parallels to the Arroyo Seco ware and types. Gregory Tyndall's (Beekman et al. 2007) analysis of ceramics recovered from our recent excavations at Navajas, again intermediate to both Tequila and Atemajac valleys but further to the south, has since identified both Arroyo Seco and Estolanos wares, although the latter type is rare.

I felt that the Tabachines shaft tomb lots could be re-examined and even seriated to provide more information. To create a framework, those tombs for which Galván had obtained obsidian hydration readings were placed in the relative order of their dates. After arranging the listing of ceramic types and lithic artifacts to correspond to this sequence, I then proceeded to insert the tomb lots for which there were no absolute chronological data. The result is a clear three-part division, which I call Early, Middle, and Late Tabachines (Table 2). Tabachines Rojo sobre Crema was limited to the first two phases, Arroyo Seco Rojo Amplio and Borde Rojo to the last two, and the Colorines Rojo sobre Café types were found throughout the sequence. The Tabachines, Arroyo Seco, and Colorines wares as a whole were found in the same phases as their red on base representatives. Middle Tabachines is not merely transitional or a period of overlap; a few specific ceramic types were limited to that subphase, and the hollow figures and obsidian jewelry (Figure 13) associated with the heyday of the shaft tombs seem to drop out after Early Tabachines, at least at the Tabachines cemetery. Test pits at three sites in the La Venta Corridor generally substantiated the relative order of the material in question, but each specific subphase was difficult to isolate (Beekman 1996a:351–431).

With this new three-phase breakdown of Tabachines, the distribution of the Atemajac valley bichromes can be compared to Weigand's rough placement of his diagnostics (Weigand 1992: Figure 9). Crude and fine variants of Aqualulco Red on Cream, found throughout the Tequila valley sequence, correspond to at least two types within the Colorines ware and one from the Tabachines ware that together extend across all three Tabachines sub-phases. Oconahua Red on White, from the early part of the Tequila sequence, is essentially identical to Tabachines Rojo sobre Crema, found in Early and Middle Tabachines. Finally, Teuchitlan Red on Cream, which occurs in the later Tequila valleys sites, has some relationship to Arroyo Seco Rojo Amplio and Borde Rojo, from the Middle and Late Tabachines subphases. The relative order of the Tequila valleys diagnostics is therefore paralleled in the better-grounded Atemajac valley sequence.

### Absolute Chronology

Putting absolute dates to the sequences is more of a challenge. Galván reports a series of obsidian hydration dates for the Tabachines phase (750 B.C.–A.D. 450), and one from the following El Grillo phase (A.D. 520) in the Atemajac valley (1991:256; Schön-dube and Galván 1978:163–164). They bracket the three-part breakdown of Tabachines and the following phase quite well, but the dates were calculated in the 1970s, prior to any of the refinements considered critical today, such as thermal sensors, etc. Supporters and detractors of obsidian hydration dating are in agreement that successful use of the method requires more than simple measurement of the hydration rind and application of a constant (e.g. Braswell 1992; Webster and Freter 1990; Webster et al. 1993), and

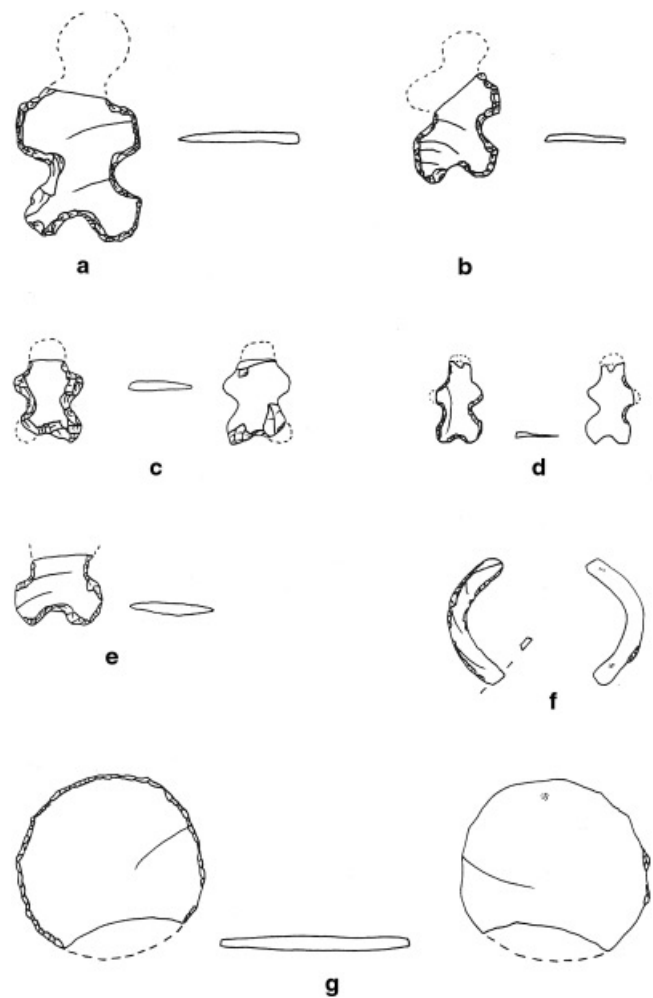


Figure 13. Obsidian jewelry: (a) 7\U.1.13; (b) 7\U.1.10; (c) 7\U.2.4; (d) 7\U.1.15; (e) 7\U.1.11; (f) 7\U.1.15; (g) 33\GS.152.

so the Tabachines dates as reported should not be “read” directly. Hence, I remain skeptical of the absolute dates that have been assigned to the phases, although I found that the hydration readings produced a plausible relative ordering of the tombs.

Far more useful are radiocarbon dates, a tight cluster of which come from the excavations at the Magdalena valley site of Huitzilapa (Ramos and López 1996). Although the ceramic assemblage from the tomb has not yet been described in detail, specific elements that are chronologically useful include El Arenal style hollow figurines, *Tabachines Polished Black*, Oconahua Red on White, and a much greater number of vessels described as finely made Aqualulco Red on Creams. In terms of the modified ceramic chronology, these materials would seem to place the tomb in the Early Tabachines phase, in part because of the lack of the Arroyo Seco types that come in with the Middle Tabachines phase. Arroyo Seco is also absent in other, later contexts at the site (Lorenza López, personal communication). The excellent collection of calibrated radiocarbon dates from the Huitzilapa shaft tomb clusters in the first century A.D.

Our 2000 excavations at Llano Grande, along the western edge of the Magdalena valley across from Huitzilapa, focused on three

**Table 2.** Seriation of offerings in the Tabachines shaft tombs. Distribution of offerings by tomb reconstructed from Galván (1991).

Galván 1991 breakdown	Tabachines Temprano							Tabachines Tardío														
	Early Tabachines							Middle Tabachines							Late Tabachines							
Beekman 1996 breakdown	Early Tabachines							Middle Tabachines							Late Tabachines							
Obsidian Hydration dates	753 ±60 B.C.	233 ±10 B.C.		163 ±45 B.C.	93 ±150 B.C.	38 ±50 B.C.	3 B.C.							57 ±20 A.D.	142 ±140 A.D.		277 A.D.		277 A.D.	437 A.D.	457 ±40 A .D.	
Shaft tomb number	3	CG	BG	8	6	1	17	18	21	VG	2	13	5	7	IX	10	11	15	16	14	20	9
Tabachines Exterior Burdo	3																					
Solid Figurines		1	1																			
Tabachines Crema Inciso			1																			
Colorines Rojo Cortado				1																		
Tabachines Rojo Claro					1																	
Hollow Figurines	1	1	1	4	4			1														
Colorines Rojo Café Burdo	2				2	1	1				1											
Tabachines Negro	1			1	1					1		1	1									
Tabachines Crema	1	2		2	2				2	1			1	1								
Colorines Lineas Multiples	1			2	3	1	1		2				2									1
Tabachines Rojo sobre Crema		2	1		1	3				1			2	2	1							
Tabachines Rojo Naranja			1	1								1	1									
Tabachines Güinda				1		1							1									
Colorines Rojo Burdo									1				3									
Colorines Abultado									1	1												
Colorines Burdo Simple											1											
Negative sobre Rojo											1											
Arroyo Seco Borde Rojo									1			1		1								
Arroyo Seco Simple														1								
Arroyo Seco Rojo Amplio								2	2	1		2	2	1		1	5	1	1	2	1	1
Colorines Rojo sobre Café Ollas	3	1		2		3	1	1		1	1	2	2		1	3	1	2	4	1		2
Tabachines ware	5	4	3	5	5	4		2	3		2	6	3	1								
Colorines ware	6	1		5	5	5	3	1	4	1	3	1	7	2		2	3	1	2	4	1	2
Arroyo Seco ware								2		3	1		3	3	2		1	5	1	1	2	1
Obsidian Figure	1			5	2	1																
Zoomorphic mortar				1																		
Earspool				2																		
Seal				2																		
Obsidian Point			2	2			1															
Handled Scraper		3								1												
Discoidal Scraper				2	2							5										



structures of a circle of the Teuchitlan Tradition and the intervening patio. Excavated ceramics included Oconahua Red on White, Colorines Rojo sobre Café ollas, Tabachines Polished Black, and one large Colorines olla that had been redecorated with *Pseudo-Cloisonne* decoration (see Holien 1977). The assemblage appeared to be from the Early Tabachines subphase, as there was again no evidence of the Arroyo Seco ware. No ceramic changes were noted over the span of the construction of the circle and its later occupation. Over a dozen calibrated radiocarbon dates evaluated against their stratigraphic contexts suggest an occupation from A.D. 200–300 (Beekman and Weigand 2006). A number of additional samples produced essentially modern results, as a result of severe root action and our confusion at the time over some post-occupation layers. Regardless, in concert with the evidence from Huitzilapa, the extension of Early Tabachines to a date around A.D. 300 or so seemed justified.

The radiocarbon dates obtained during Long's (1966) study of a shaft tomb outside the Hacienda San Sebastián, in the southwestern part of the Magdalena lake basin, suggest similar dates for similar materials. Long's uncalibrated radiocarbon dates (Berger et al. 1965:346; Berger and Libby 1966:475–476, 1967:483) included three dates off of Pacific and Caribbean shell, and complications associated with upwelling may decrease their value. But the remaining two dates off bone collagen gave uncalibrated dates with their intercepts and central ranges in the third and fourth centuries A.D. The published descriptions (Long 1966) of the pottery from the tomb indicate the presence of Oconahua Red on White (described using Long's term of Ameca Grey), obsidian jewelry, and hollow figures that again suggest an Early Tabachines date.

Yet recent radiocarbon dates from Navajas, in the far southeastern corner of the Tequila valleys, add a new dimension to the problem. Our excavations were carried out within two Teuchitlan tradition circles. Tyndall's analysis (in Beekman et al. 2007) identified the ceramics as primarily types from the Arroyo Seco group, supplemented by Colorines and Tabachines types. Calibrated radiocarbon dates evaluated against their stratigraphic contexts range from 50 B.C. to A.D. 200 (Beekman and Weigand 2006), thus amply bracketing the Huitzilapa shaft tomb and closely abutting the dates from Llano Grande and San Sebastián. There thus seems to be a clash between the dated assemblages, the most prominent distinction being the absence of the Arroyo Seco group at Huitzilapa, Llano Grande, or San Sebastián. Arroyo Seco ware was also not found in the La Venta Corridor, where the Estolanos group was instead defined in its place.

The Arroyo Seco group, originally defined in the Atemajac valley to the east, therefore only appears to extend southwest from the Atemajac valley into the Navajas area and not in the other regions mentioned in this discussion. Only further fieldwork can confirm the distribution of these valuable chronological markers, but there appears to be a basic northwest-southeast division in ceramic spheres within the Tequila valleys, an important finding for purposes of developing a regional chronology. The absence of Arroyo Seco types in the far western part of the core thus cannot be used to infer an Early Tabachines date, and in fact the late dates for San Sebastián, Llano Grande, and Huitzilapa suggest that they significantly postdate what is called Early Tabachines at the Tabachines cemetery or at Navajas. This may go far to explain Weigand's interpretation (1985) of an abandonment of the western sites in the later parts of the sequence—the assemblages in the west “look” older because they are lacking later diagnostics.

The Late Tabachines subphase at the Tabachines cemetery is characterized by notable social changes (see Beekman and Galván, this issue), and an impoverished ceramic assemblage dominated by only a few types from the Arroyo Seco and Colorines wares. Red decoration is vastly simpler on the Arroyo Seco types than on their Estolanos counterparts in the La Venta Corridor. A similar pattern has been evident in the recent excavations at Navajas, where the related Teuchitlan Red on Creams are very rare, even though types from the Arroyo Seco and even Estolanos wares are clearly in evidence. This pattern suggests some interesting possibilities. First, Teuchitlan Red on Creams may have a narrower chronological or distributional range than currently believed. Second, dating attempts that emphasize the Teuchitlan type as a particularly pivotal marker without taking into account other types in the Arroyo Seco group to which it belongs may mistakenly date a context as early.

Weigand's current excavations at Guachimontón should provide contextualized additional absolute dates soon that will help pin down parts of the ceramic sequence. Guachimontón, the largest site of the Teuchitlan Tradition and the epitome of an elaborate architectural complex, will be pivotal for pushing back the first appearance of examples of that class of architectural forms. Weigand has stated (Weigand and García de Weigand 2001) that the pottery may be from earlier than expected in the ceramic sequence, but the site falls within that geographic area of uncertainty where the later markers, Arroyo Seco types, may or may not occur. Only a full typological analysis evaluating pastes, form, and decoration in stratigraphic contexts will establish this for certain.

Based on the data discussed here, it appears that the Tabachines ceramic sequence is only partially applicable to the Tequila valleys. The area where it is most effective is in the southeastern part of the valleys, where most Tabachines types find parallels, and slightly less so in the La Venta Corridor that links the Atemajac and Tequila valleys. Known Early Tabachines ceramic assemblages do not have associated radiocarbon dates and therefore its dating is not possible at this time. Middle Tabachines contexts are radiocarbon dated at Navajas across the entire range 50 B.C.–A.D. 200. Late Tabachines should end by A.D. 550 with the appearance of the El Grillo phase (Beekman 1996b), but the transition between Middle and Late subphases remains unclear. The Magdalena lake basin west of the Tequila volcano lacks significant late diagnostics such as Arroyo Seco, hampering the identification of the Middle and Late Tabachines phases in that area.

## REGIONAL COMPARISONS AND CONCLUSIONS

I have discussed evidence for the linkage of ceramic chronological data from the Atemajac and Tequila valleys, using the Tabachines cemetery as a starting point. There are limits to how much farther the comparisons may be extended. Two recently published descriptions of ceramics associated with shaft tombs and Teuchitlan tradition architecture are for the Bolaños canyon to the north (Cabrero and López 2002) and the Sayula valley to the south (Valdez 2005). The former, unfortunately, describes a ceramic assemblage that is very different from that described in this article. The latter includes suggestive local types that appear conceptually parallel to our own, occurring in two partly contemporaneous local complexes named Usmajac (ca. 2060–1690 B.P. [see Valdez 2005: 172]) and Verdia (ca. 1915–1490 B.P. [Valdez 2005: 194]; see Valdez et al., this issue). For example, the types *Usmajac Bayo a Caoba a Gris*, *Usmajac Negro Ahumado*, *Usmajac Rojo sobre*

*Crema*, and *Usmajac Rojo sobre Bayo/Caoba/Gris* appear related to Tabachines Crema, Tabachines Negro, and Oconahua Red on White to judge from the descriptions of pastes, forms, and decoration (Valdez 2005: 173–180, 185–188, Cuadro 6, Figura 8). The dates for *Usmajac* correspond very well to those from Middle Tabachines contexts at Navajas and the slightly later dates from Llano Grande.

Verdia types appear more heterogeneous and difficult to compare. However, the type *Verdia Rojo sobre Crema* shares distinctive decorative elements (starburst or “guachimontón” forms) with the fine Aqualulco Red on Creams (Valdez 2005: Cuadro 7, Figura 11). The illustrations of forms grouped by complex rather than by type (Valdez 2005: Figuras 1–4) support a linkage between *Usmajac* and Tabachines types—the links to the later Verdía complex are less clear, as they are between Arroyo Seco and Teuchitlan Red on Cream. Yet the most direct parallels are said to be the types *Tizapan Rojo sobre Gris* (Oconahua Red on White?) and *Tizapan Rojo sobre Café* (Colorines Rojo sobre Café?), occurring alongside Verdía materials in the northern part of the valley and considered a foreign import (Valdez 2005: 152–153, Cuadro 3). Clearly the links are not neat, and close inspection of actual samples would be necessary to confirm or reject the suggested similarities.

Unfortunately, extending the comparisons made here to further regions is not possible at this time. Most of the published ceramic sequences that exist for western Mexico are more concerned with later periods, while early materials are often ill defined, and typically are recovered from surface contexts. As a result, the tripartite division of the ceramics in central Jalisco is difficult to corroborate through comparative research, as all three major wares (Tabachines, Colorines, Arroyo Seco) would typically be encompassed within a single “shaft tomb phase” in older publications (e.g., Kelly 1949).

Despite the past overemphasis in western Mexico upon pottery for the delineation of synchronic ceramic “provinces” (Kelly 1948), and even for social interpretation, the reality is that ceramic descriptions have actually been quite brief and inadequate for modern archaeological research. As a good chronological sequence is the backbone of any culture-historical reconstruction, and complex theoretical issues are impossible to address without it, considerably greater effort must be invested in stratigraphic excavation, absolute dating, and the adequate description of the materials recovered. Major revisions to our understanding of the society that built the shaft tombs and the circles of the Teuchitlan Tradition may come from simply improving our approach to chronology.

## RESUMEN

La tradición mortuoria de tumbas de tiro es una construcción arqueológica que incluye un rango amplio de formas de enterramiento, muchos de las cuales reflejan variaciones locales en el tratamiento de los muertos. Las tumbas de tiro en los valles de Tequila en el centro de Jalisco se caracterizan por el alto grado de mano de obra invertido en su construcción, ofrendas de materias exóticas, y la relación en ocasión entre las tumbas y arquitectura circular de la tradición Teuchitlan. Algunas investigadoras han usado estas características para definir los valles de Tequila como el “núcleo” de la tradición de tumbas de tiro, porque aquí se emplean más estratégicamente las tradiciones mortuorias para demostrar las distinciones

sociales. Los recorridos de Weigand empezaron a finales de los sesentas para entender el sistema de asentamiento para las tumbas de tiro. Ciertas limitaciones esforzaron una dependencia en materiales de superficie y materiales observados en pozos de saqueo para asociar la cerámica con tumbas y arquitectura. Este artículo discute la investigación continua sobre la cronología cerámica en los valles de Tequila, y en particular el periodo que abarca el uso de tumbas de tiro como forma de enterramiento de alto prestigio. Pretendemos discernir tres fases durante el formativo tardío hasta el clásico medio, aunque su fechamiento absoluto no es claro y solo se puede distinguirse en el extremo este de los valles de Tequila.

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