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## **The Early Classic Obsidian Trade at Los Horcones, Chiapas, México**



**Research Year:** 2006

**Culture:** Mixe-Zoquean, Teotihuacán

**Chronology:** Early Classic

**Location:** Tonalá, Chiapas, México

**Site:** Los Horcones

### **Table of Contents**

[Abstract](#)

[Resumen](#)

[Introduction](#)

[Chronology](#)

[The Obsidian Assemblage from Los Horcones](#)

[Obsidian Sourcing and Source Distribution Results](#)

[Obsidian Exchange Patterns on the Pacific Coast of Chiapas during the Classic Period](#)

[Los Horcones and Obsidian Exchange Patterns at the Macro-Regional Scale](#)

[Discussion](#)

[Acknowledgements](#)

[List of Figures](#)

[List of Tables](#)

[Sources Cited](#)

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## **Abstract**

Proyecto Arqueológico Los Horcones (PALH) has conducted two seasons of archaeological fieldwork at the site of Los Horcones on the Pacific Coast of Chiapas with the primary goal of investigating the nature of Teotihuacán's presence at this site. PALH builds on the pioneering work of Carlos Navarrete (1976, 1986) who was the first to identify evidence of connections between this site and Central México. This report summarizes the result of sourcing analysis conducted on obsidian artifacts from Los Horcones. The evidence shows the importance of trade and exchange in the history of this site and the remarkable extent of the networks that brought this valuable resource to Los Horcones. Six distinct sources were being exploited, first among them was green obsidian from Pachuca showing strong economic ties between Los Horcones and Teotihuacán during the Early Classic.

## **Resumen**

La principal meta de las dos temporadas de trabajos de campo realizados por el Proyecto Arqueológico Los Horcones (PALH) en la costa del Pacífico de Chiapas en el sitio de Los Horcones a sido investigar los contactos entre Teotihuacán y este sitio. El PALH tomo como punto de inicio el trabajo pionero de Carlos Navarrete (1976, 1986) quien primero identifico conexiones entre Los Horcones y el México Central. Este reporte presenta los resultados de análisis químico y visual de artefactos de obsidiana de Los Horcones. La evidencia muestra la importancia del intercambio interregional en la historia de este sitio. Obsidiana de seis yacimientos distintos fue utilizada en Los Horcones. El yacimiento mas representado fue el de Pachuca que evidencia los fuertes vínculos económicos entre Los Horcones y Teotihuacán durante el Clásico Temprano.

## **Introduction**

Following the pioneering work of Carlos Navarrete (1976, 1986), Proyecto Arqueológico Los Horcones (PALH) was initiated in 2005 with the primary goal of investigating the nature of the Teotihuacán presence at the site of Los Horcones located in the Tonalá region of the Pacific Coast of Chiapas, México. Two seasons of archaeological fieldwork (January – March 2005 and 2006) that included mapping of the major monumental architecture and excavations revealed that evidence of contacts between Los Horcones and Teotihuacán was far more widespread than the monuments originally published by Navarrete (1976, 1986) and later reanalyzed by Taube (2000) and Garcia-Des Lauriers (2005). Moreover, Los Horcones maintained strong connections with Veracruz and the Pacific Coast of Guatemala as well as other regions (Garcia-Des Lauriers 2007). FAMSI funds were requested to subsidize chemical sourcing of obsidian artifacts and radiocarbon dates in order to reconstruct the trade networks and contextualize them chronologically. Before presenting the results, it is important to point out the unique location of Los Horcones.

The strategic location of Los Horcones is of the utmost importance for understanding why trade played a major role in the history and development of this site. Within the Tonalá region, the site of Los Horcones is located on the north side of Cerro Bernal, the tallest point on a small mountain range located on the southern side of the Pacific coastal plain (Figure 1) (Navarrete 1986:3). Cerro Bernal is a large granite rock outcrop that is perpendicular to the Sierra Madre de Chiapas, with its piedmont extending to the estuaries and lagoons (Kennett and Voorhies 2002:3; Navarrete 1986:3). The foothills on the inland side of this mountain range extend to where the road to Puerto Arista branches off from Highway 200 and to the town of Tres Picos (Figure 1) (Navarrete 1986:3). The specific physiographic characteristics of Cerro Bernal make it a unique feature on the landscape of the Pacific coastal plain. First of all, it is the only mountain feature on the south side of the coastal plain with its foothills extending into the estuary and lagoon system (Voorhies et al. 2006). Moreover, its foothills on the inland side constrict the terrestrial pass forming a narrow natural corridor that could have been easily controlled by Los Horcones.

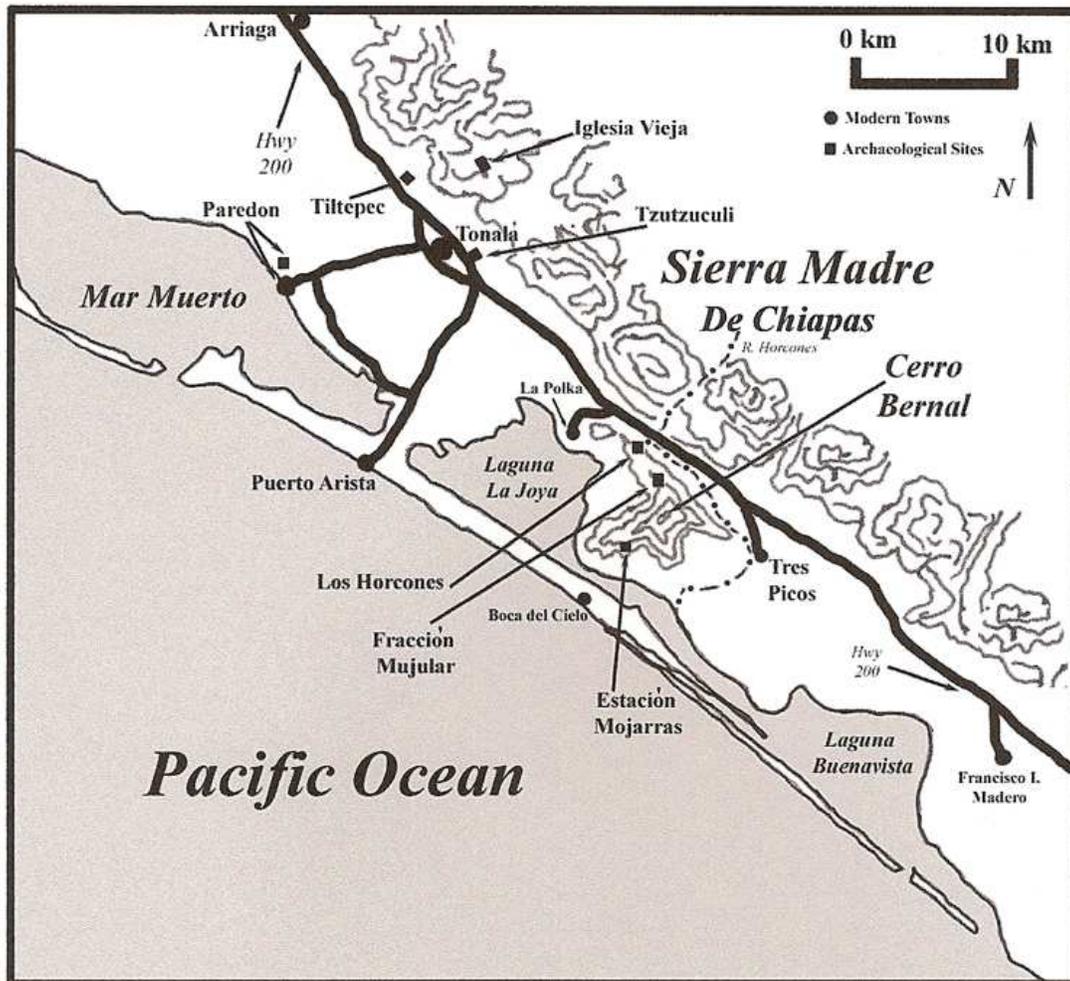


Figure 1. Map of Study Area.

## Chronology

A major part of the research conducted by PALH involved establishing a baseline data set that included a preliminary assessment of the chronology of Los Horcones. The sample of ceramic material from surface collections and excavations indicates that perhaps the earliest occupation of the site begins around AD 200 approximately and lasted until about AD 700. However, most of the material dates from AD 400-600, which currently seems to be the height of occupation at Los Horcones (Garcia-Des Lauriers 2007:136-162). Radiocarbon dates run on samples from excavations conducted during the 2006 season coincide with the evidence from the ceramic chronology ([Table 1](#)). The current evidence seems to indicate that the monumental area of Los Horcones was occupied largely during the Early Classic with no evidence of its reuse in later periods (Garcia-Des Lauriers 2007:89-99).

**Table 1. Radiocarbon Dates from Los Horcones, Chiapas, México**

<b>Laboratory Sample number</b>	<b>Sample I.D.</b>	<b>14C age (yrs BP)</b>	<b>Calibrated values* 2 sigma (95%) range</b>
UCIAMS-31469	G-167	1420±15	AD 655-605
UCIAMS-31461	B-102	1505±15	AD 600-540
UCIAMS-31463	B-139	1515±15	AD 600-535 (98%)
UCIAMS-31462	B-12	1520±20	AD 600-530 (85%), AD 440-485 (14%)
UCIAMS-31468	G-161	1530±15	AD 590-530 (75%), AD 440-490 (24%)
UCIAMS-31465	G-186	1560±15	AD 545-430
UCIAMS-31467	G-196	1575±15	AD 535-430
UCIAMS-31464	G-206	1580±15	AD 535-430
UCIAMS-31466	G-192	1585±15	AD 535-425
UCIAMS-31460	B-25	1590±15	AD 535-425

\*Calib 5.0.2 protocol using Intcal04 (Reimer et al. 2004). Calibrated values rounded to the nearest 5 years. Percentage figures in parenthesis are relative areas under probability distributions for multiple intercepts in the calibration data set.

## The Obsidian Assemblage from Los Horcones

The obsidian assemblage from Los Horcones was recovered from the systematic surface collection in 2005 (n=241) representing 33.6% of the total sample; and other 66.4% (n=476) was excavated in 2006. Like Matacapan, Los Horcones lacks local chert or obsidian sources making it necessary for its inhabitants to participate in long distance trade networks to acquire these resources (Santley 1989). Quartz deposits from Cerro Bernal are inadequate for producing blades, but were used for making a small number of bi-facially worked artifacts. The residents of Los Horcones have ample local supplies of granite and granodiorite that they used extensively for milling stones, but these macrocrystalline rocks are not appropriate for the production of fine quality chipped stone technologies.



**Figure 2. Percussion Blade from Los Horcones  
Made from El Chayal Obsidian.**

The bulk of the sample (89%) was composed of prismatic blades or blade fragments located with domestic debris in secondary context. No blade cores were found; however, two percussion blades, both from the El Chayal source, suggest macrocore preparation and the possibility that larger cores, if present, were coming from Guatemala ([Figure 2](#)). The sample of blades recovered included some first and second

series removals, but primarily third series blades ([Figure 3](#)) (Clark and Bryant 1997). Of the artifacts made with green Pachuca obsidian, all were finished blades or blade tools, and no cores from this source were identified. While preliminary assessments of technology were made, the primary focus was on determining the patterns of exchange visible in this obsidian sample. With this in mind, I focused on chemical and visual sourcing of the raw material as a means of elucidating these patterns.



**Figure 3. Prismatic Blades from Los Horcones.**

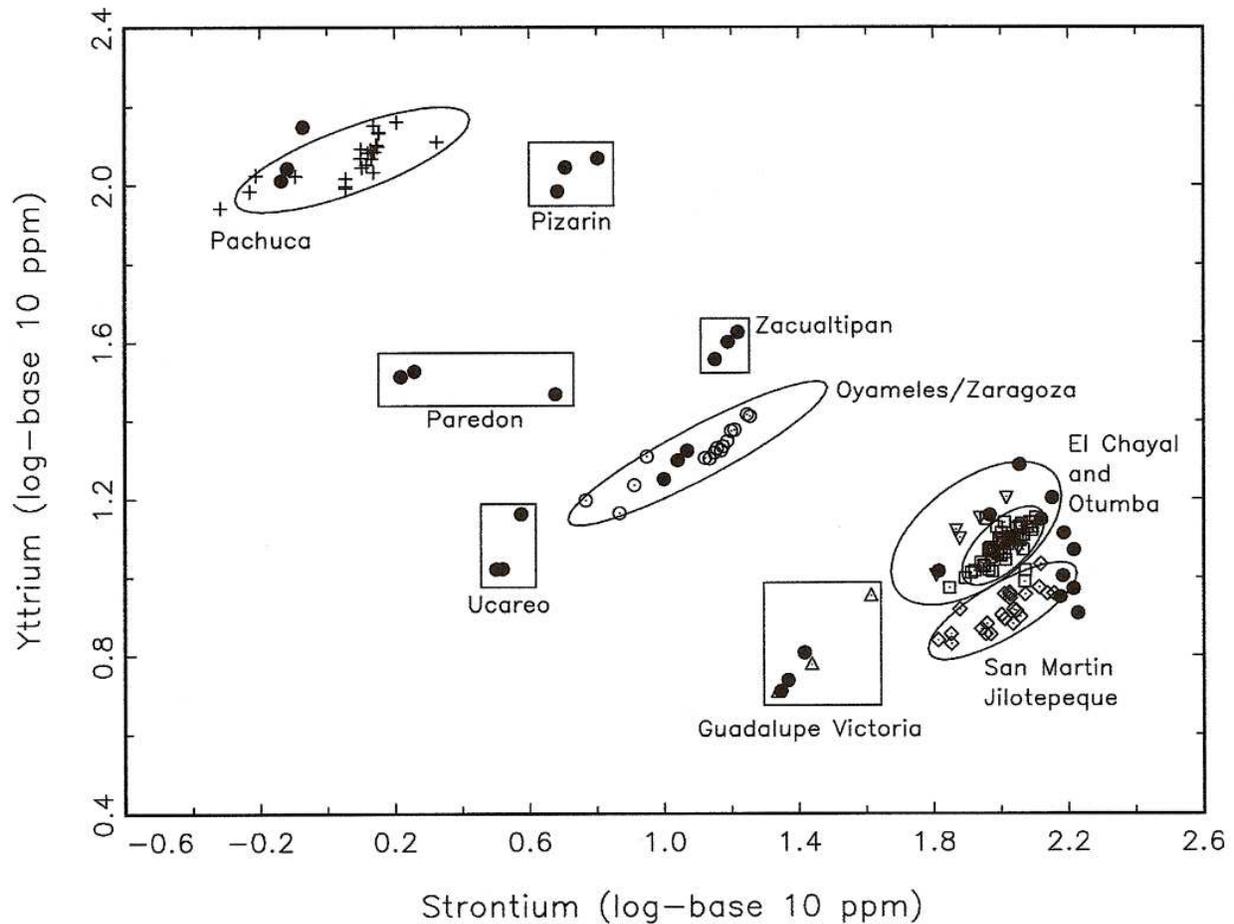
### **Obsidian Sourcing and Source Distribution Results**

The diversity of colors apparent in the sample of obsidian from Los Horcones was first noted by Shuji Araki who did a preliminary sort of the 2005 surface collection material, yet he did not assign this color variation to any particular sources. In order to confirm the number of sources present in the obsidian assemblage of Los Horcones visual and chemical characterizations were carried out. The visual sourcing was conducted by Matthew R. Des Lauriers and me using comparative samples from known sources at the New World Archaeological Foundation. The variants that we looked for were similarities in color, consistency, translucency, and inclusions. The visual sourcing was

complemented by chemical analysis of 124 artifacts (17.3% of the total assemblage) using Laser Ablation Inductively Coupled Mass Spectrometry (LA-ICP-MS). The study was conducted by Hector Neff at the Institute of Integrative Research of Materials, Environments and Societies at California State University, Long Beach.

Before presenting the results of these analyses, it is important to point out how the artifacts were chosen for chemical sourcing. I intuitively chose the sample to meet several criteria. First, artifacts that could not be reliably sourced through visual examination were selected for further analysis. Second, I selected material from both surface and excavated contexts that represented the visually identified diversity of the larger sample. Of the excavated material, I chose artifacts from different contexts and depths of the deposit in an attempt to identify changing patterns of obsidian consumption through time.

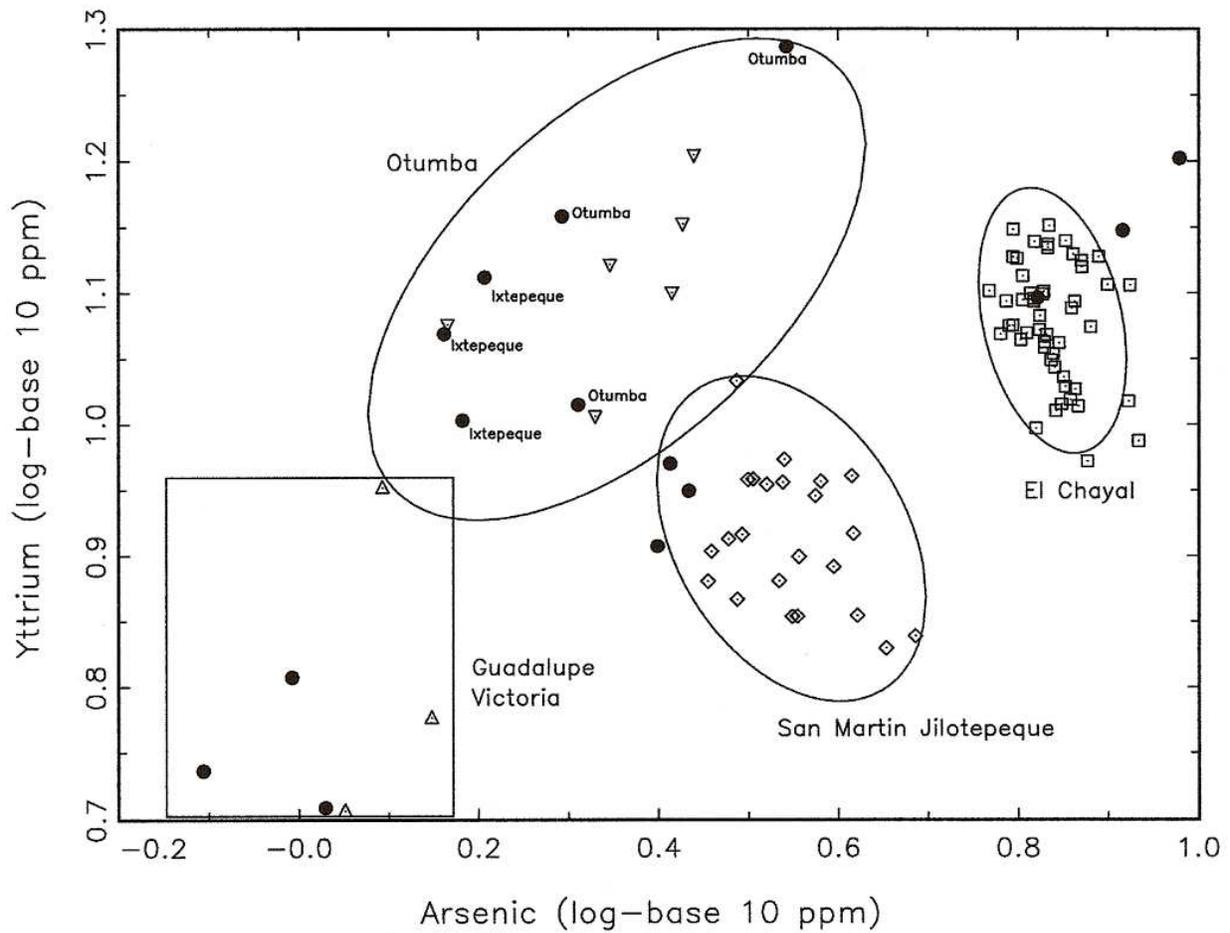
The results of the LA-ICP-MS data are presented in [Figure 4](#), which is a bivariate plot that compares strontium and yttrium log concentrations in the submitted samples for Los Horcones plotted along with data for known sources. While the samples for Pachuca and Oyameles/Zaragoza form distinct clusters, samples attributed to El Chayal, San Martin Jilotepeque, Otumba and to a lesser degree Guadalupe Victoria are not as clearly distinguished in their ratios for these two elements. In order to further distinguish between these sources, Hector Neff provided a comparison of arsenic and yttrium log concentrations, where the samples attributed to the El Chayal source separate out more clearly, as do clusters for Otumba and San Martin Jilotepeque ([Figure 5](#)). However, in this instance, the Otumba overlaps with Ixtepeque sources. The bivariate plot of yttrium and barium log concentrations confirms the attributions of Los Horcones samples to the Otumba source, distinguishing it from Ixtepeque obsidian and reinforces the attributions made to the San Martin Jilotepeque source ([Figure 6](#)).



- Samples from Los Horcones attributed to Oyameles/Zaragoza
- ◇ Samples from Los Horcones attributed to San Martin Jilotepeque
- ▽ Samples from Los Horcones attributed to El Chayal
- Samples from Los Horcones attributed to Otumba
- △ Samples from Los Horcones attributed to Guadalupe Victoria
- + Samples from Los Horcones attributed to Pachuca

**Figure 4. Bivariate Plot of Strontium and Yttrium Log Concentrations.**

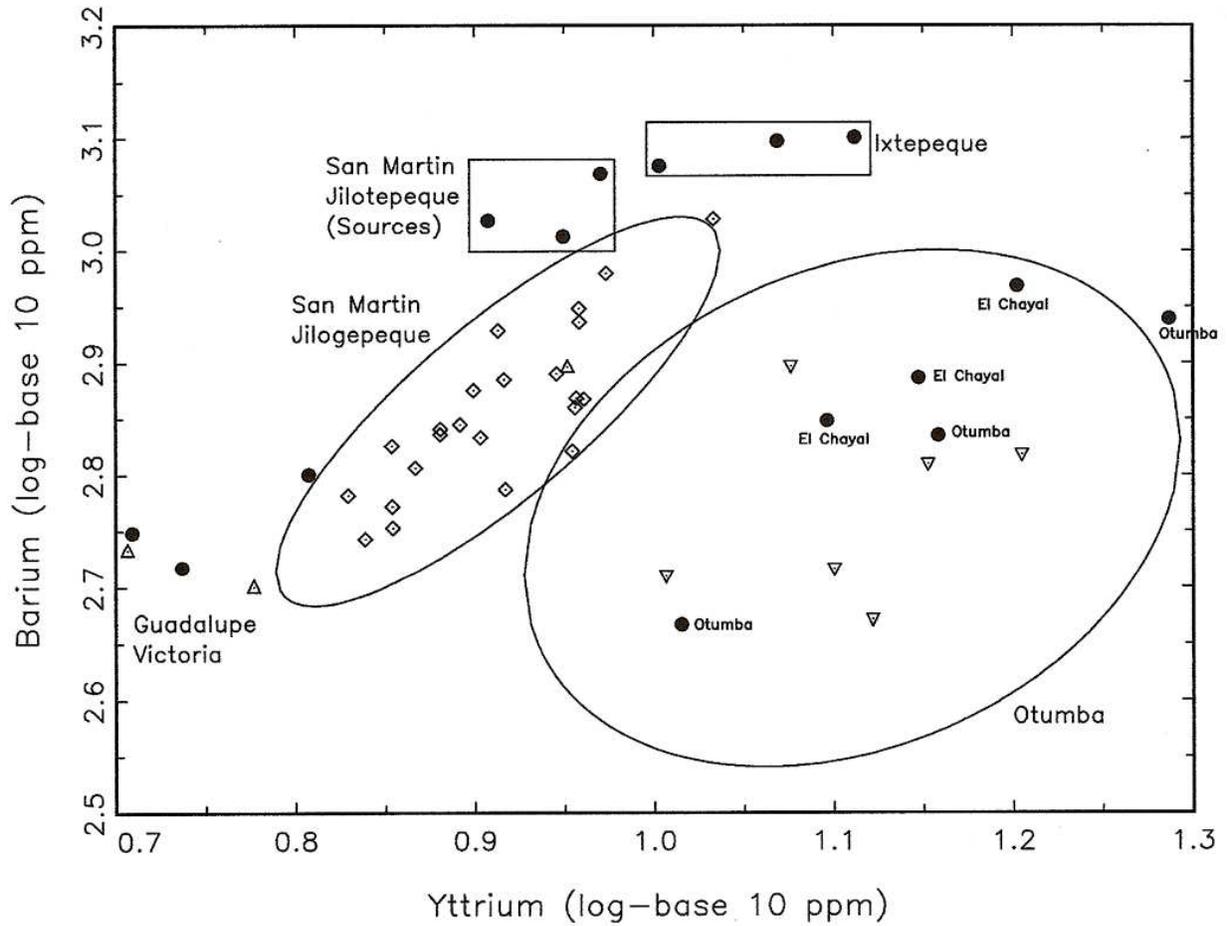
All Los Horcones obsidian samples are presented together with data for Mexican and Guatemalan sources. Ellipses represent 90% confidence level for membership in the artifact groups from the various sources.



- △ Samples from Los Horcones attributed to Guadalupe Victoria
- ◇ Samples from Los Horcones attributed to San Martin Jilotepeque
- ▽ Samples from Los Horcones attributed to Otumba
- Samples from Los Horcones attributed to El Chayal

**Figure 5. Bivariate Plot of Arsenic and Yttrium Log Concentrations.**

Artifacts from Los Horcones assigned to Guadalupe Victoria, Otumba, San Martin Jilotepeque, and El Chayal together with raw materials from five sources. Ellipses represent 90% confidence level for membership in the artifact groups assigned to the various sources.

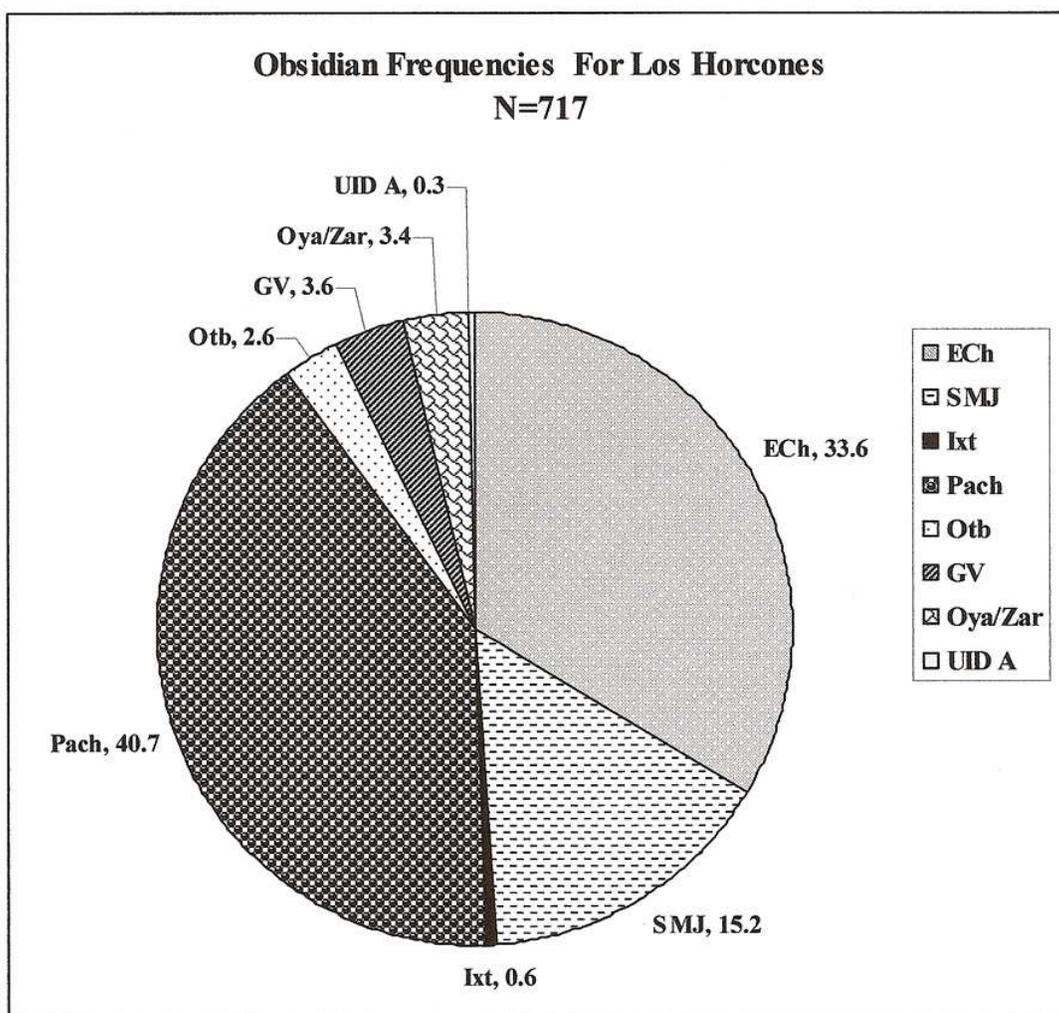


- ◇ Samples from Los Horcones attributed to San Martin Jilotepeque
- ▽ Samples from Los Horcones attributed to Otumba

**Figure 6. Bivariate Plot of Yttrium and Barium Log Concentrations.**

Artifacts from Los Horcones assigned to Guadalupe Victoria, Otumba, and San Martin Jilotepeque together with raw material samples from five sources. Ellipses represent 90% confidence level for membership in the artifact groups assigned to the various sources.

When I synthesize the data from the bulk compositional analysis and the visual attributions, the distributions of obsidian from these different sources at Los Horcones are remarkable. First, the assemblage from Los Horcones is composed of material from at least six distinct sources and possibly as many as eight. The significant percentages of San Martin Jilotepeque (15.2%) and El Chayal (33.6%) obsidian are not altogether surprising because these are the closest sources to Los Horcones ([Figure 7](#)). The presence of measurable quantities of obsidian from Otumba (2.6%), Oyameles/Zaragoza (3.4%), and Guadalupe Victoria (3.6%) suggest that Los Horcones participated in trade networks with regions as distant as Veracruz and Central México ([Figure 7](#)). Interactions with the Central Mexican metropolis of Teotihuacán are further borne out with the presence of Otumba obsidian, but most importantly with the dominance of Pachuca obsidian in the Los Horcones assemblage. Artifacts made of green obsidian from the Pachuca source make up 40.7% of the total obsidian consumed at the site of Los Horcones, making it the single most important source at the site and also the most distant in terms of linear distance ([Figure 7](#)).



**Figure 7. Obsidian Frequencies for Los Horcones.**

This figure summarizes obsidian source distributions at Los Horcones. The numbers represent the percentage of the total sample attributed to that source from Los Horcones.

The abbreviations for the obsidian sources are as follows: SMJ = San Martin Jilotepeque, ECh = El Chayal, Ixt = Ixtepeque, Pach = Pachuca, Otb = Otumba, GV = Guadalupe Victoria, Oya/Zar = Oyameles/Zaragoza, UID A = Unidentified Source A.

### **Obsidian Exchange Patterns on the Pacific Coast of Chiapas during the Classic Period**

Analyzing intra-regional comparisons of obsidian distributions for the Classic Period on the Pacific Coast of Chiapas is a difficult task. There has been little work conducted in the Tonalá region of Chiapas, and none of this research has consistently reported data on obsidian frequencies. There has been much more research conducted in the Soconusco, and much of the current information for the Classic Period comes from sites documented by the Proyecto Soconusco, directed by Barbara Voorhies (1989a, 1989b). Voorhies (1989b:123) and her team identified a relatively large number of sites with components dating to the Classic period. Of these known Classic period sites, detailed data on obsidian distributions has been published for five of them (Clark et al. 1989: Table 12-1).

The most comprehensive study of obsidian distributions from the Soconusco was conducted by Clark, Lee and Salcedo (1989), and I use data from this study to make comparisons with Los Horcones ([Table 2](#)). One of the first major observations is that Los Horcones has the largest sample from any single site in the region. It has approximately half the quantity of studied obsidian as the five sites dating to the Classic period in the Soconusco. Moreover, the quantity of Pachuca obsidian at Los Horcones represents 93.6% of the total sample of obsidian from this source for this region during the Classic Period, suggesting that perhaps the obsidian from this source came to Los Horcones first and then to the rest of the Soconusco region ([Table 2](#)). However, due to the small sample size, this suggestion will need further verification as research progresses. The overall assemblage from Los Horcones is comparable in terms of its diversity to Late Classic Las Morenas. However, at Las Morenas the Guatemalan sources are more highly represented and the Central Mexican and Veracruz sources are significantly less important ([Table 2](#)).

**Table 2. Obsidian Frequencies for Classic Period Sites in the Soconusco\***

The table attempts to summarize the known patterns of obsidian distribution for the Pacific Coast of Chiapas during the Classic Period and contextualizes the Los Horcones assemblage within these regional patterns.

The abbreviations for the obsidian sources are as follows: SMJ = San Martin Jilotepeque, ECh= El Chayal, Taj = Tajumulco, Ixt = Ixtepeque, Oriz/GV = Orizaba/Guadalupe Victoria, Pach = Pachuca, Zin/Uca = Zinapécuaro/Ucareo, Oya/Zar = Oyameles/Zaragoza, Zac = Zacualtipan, Otb = Otumba

Time Period	Site	Sample Size	SM J	ECh	Taj	Ixt	Oriz/GV	Pach	Zin/Uca	Oya/Zar	Zac	Otb
E. Classic AD 200-400	Río Arriba	37	83.8	8.1	5.4	0	0	0	0	2.7	0	0
	Acapetahua	24	45.8	12.5	20.8	0	0	20.8	0	0	0	0
	Izapa	15	53.3	13.3	33.3	0	0	0	0	0	0	0
E. Classic AD 400-700	Río Arriba	70	64.3	35.7	0	0	0	0	0	0	0	0
	Acapetahua	183	50.8	41.5	3.3	0	.5	2.2	0	0	1.1	0
	Rancho Alegre	29	68	13.8	10.3	6.9	0	0	0	0	0	0
	Las Lomas	12	41.7	58.3	0	0	0	0	0	0	0	0
	Izapa	20	40	45	15	0	0	0	0	0	0	0
	<b>Los Horcones<sup>▲</sup></b>	<b>717</b>	<b>15.2</b>	<b>33.6</b>	<b>0</b>	<b>.6</b>	<b>3.6</b>	<b>40.7<sup>◇</sup></b>	<b>0</b>	<b>3.4</b>	<b>0</b>	<b>2.6</b>
	L. Classic	Río Arriba	72	44.4	40.3	0	5.6	0	0	5.6	2.8	0
	Acapetahua	83	60.2	30.1	3.6	0	4.8	1.2	0	0	0	0
	Rancho Alegre	35	74.3	17.1	2.9	0	0	0	0	0	0	0
	Las Lomas	327	69.7	26.3	.9	2.5	0	0	0	.3	0	0
	Las Morenas	105	36.2	14.3	19.1	3.8	14.3	7.6	2.9	0	0	0
	Izapa	41	53.7	31.7	9.8	0	0	4.9	0	0	0	0
	Huanacastal	120	23.3	26.7	47.5	0	2.5	0	0	0	0	0
	<b>TOTAL</b>	<b>1600<sup>†</sup></b>										

\*All of the data, except Los Horcones frequencies, is cited from Clark, Lee & Salcedo (1989: Table 12-1).

▲ Los Horcones is in the Tonalá region of the Pacific Coast of Chiapas, just west of the ecological region of the Soconusco proper. However, there is no comparable data for the Tonalá region, and so I compare Los Horcones with the data from the most proximal region.

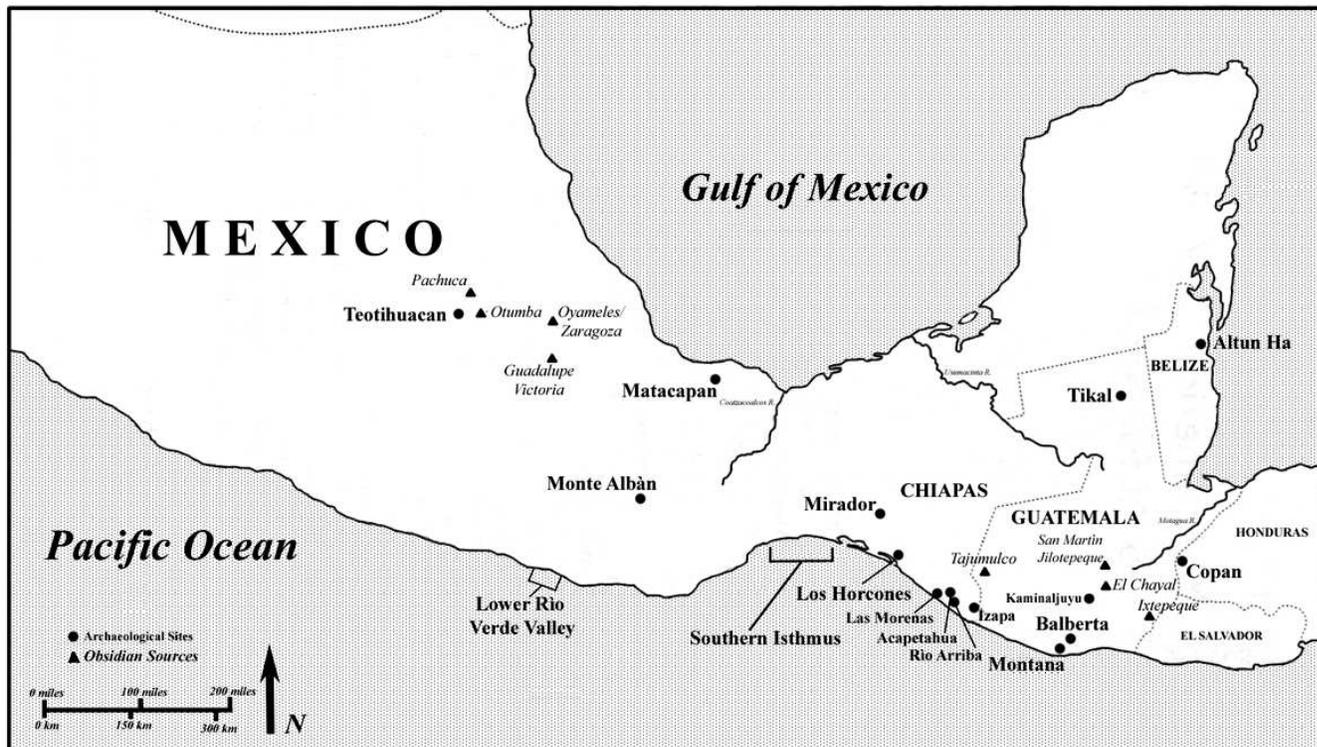
◇ The quantity of Pachuca at Los Horcones represents 93.6% of the currently reported Pachuca obsidian for the Soconusco region of Chiapas during the Classic Period.

† It is important to note that 45% of the total sample of obsidian from all Classic Period sites reported here is from Los Horcones.

For the Classic Period, Los Horcones, with its strategic location, was perhaps an important center of consumption and possibly distribution of obsidian for the Pacific coast of Chiapas. Moreover, half of the obsidian in its assemblage came from Central Mexican sources, with Pachuca being the single most abundant source represented. Clark, Lee and Salcedo (1989:282-283) point out, albeit somewhat tentatively, that there was no indication of Teotihuacán influence in the obsidian industry in the Soconusco. The evidence from Los Horcones suggests otherwise. Teotihuacano merchants may have been involved in centralizing the distribution of Pachuca obsidian at Los Horcones and further down the coast. The small quantities of Pachuca that made it to some of the larger Classic period sites farther south in the Soconusco may have come from Los Horcones or from merchants traveling through this site. The changes in Pachuca frequencies seen in Acapetahua, for example, suggest this as a possibility. From AD 200-400, Acapetahua had 20.7% Pachuca obsidian, but from around AD 400-600, this percentage dropped to 2.2%. Coincidentally, this latter part of the Early Classic was when Los Horcones was at its height and perhaps controlling distributions of obsidian from Pachuca in the local region ([Table 2](#)). Furthermore, Los Horcones was also linked into the exchange networks that brought obsidian from Veracruz, although in relatively small quantities. Spence (1996:23) notes that there is no evidence indicating that Teotihuacán controlled the Puebla-Veracruz obsidian sources, yet stone from these sources may have made it to the Maya area, for example, through the same networks as Pachuca, Otumba, and other Central Mexican obsidians.

### **Los Horcones and Obsidian Exchange Patterns at the Macro-Regional Scale**

The pattern of obsidian distribution at Los Horcones is anomalous compared to data from other contemporaneous sites in the Soconusco region, however it serves as a good data set for comparing with other sites known to have been “influenced” by Teotihuacán. First I discuss data from the Pacific Coast of Guatemala and the Southern Isthmus which form the southern and northern neighboring regions, and then move farther afield to discuss patterns at Matcapan and the Río Verde Valley of Oaxaca.



**Figure 8. Map of Mesoamerica with Sites Mentioned in Text and Obsidian Sources.**

The Teotihuacán presence in the Pacific Coast of Guatemala has been a topic of study for some time and manifests itself in the presence of *incensarios*, tripod vessels, *candeleros*, as well as obsidian artifacts (Hellmuth 1975, 1978; Berlo 1983, 1984, 1989; Bové 1990, 2002; Bové et al. 1993; Bové and Medrano Busto 2003). The sites of Balberta and Montana have more detailed data on obsidian distributions than from other Teotihuacán “influenced” sites in this region (Figure 8). For Balberta, much of the Pachuca obsidian was found in ritual contexts dating to around AD 150-275, suggesting to Bové and Medrano Busto (2003: 50-51) that these finds may represent some of the earliest ties between the Pacific Coast of Guatemala and Teotihuacán (Figure 8). The obsidian was largely found cached with effigy cacao beans, perhaps commemorating these ties through a form of elite gift exchanges, in a similar manner as at Altun Ha, Belize (Bové and Medrano Busto 2003: 50-51; Pendergast 2003; Spence 1996). The large lithic assemblage from Balberta is also dominated by prismatic blade tools. However, no cores were present indicating that many of these artifacts were brought in as finished tools rather than locally produced (Carpio 1993: 87). Much of the obsidian at this site was from closer Guatemalan sources, with Pachuca obsidian appearing in Early Classic contexts in quantities larger than those seen for Tikal and Kaminaljuyú, but nowhere near the frequencies seen at Los Horcones (Bové and Medrano Busto 2003: 50-51; Carpio 1993: 101). At Tikal, the overall proportion of green obsidian

seems to be about 1%, but this varied during different time periods and in different contexts (Spence 1996: 27). Some Early Classic contexts, such as the Mundo Perdido had frequencies of approximately 10% Pachuca obsidian (Spence 1996: 27). For Balberta, consumption of obsidian from several sources suggests the presence of complex trade networks during this time, and the use of Pachuca obsidian as a marker of status among the burgeoning elites.

The appearance of Pachuca obsidian in the material record of Balberta predates the major period of occupation at Los Horcones. As Teotihuacán merchants began to trade with the Pacific Coast of Guatemala, they may have been inspired to look for better routes and to establish strategic nodes to help make the transfer of goods more efficient as well as secure these paths. Los Horcones would have been an ideal site and Cerro Bernal an ideal location for controlling the trade routes and consolidating goods moving north and south along the Pacific Coast ([Figure 1](#)).

The site of Montana is contemporaneous with Los Horcones and Bové and Medrano Busto (2003: 72-74) have argued that it was an enclave of Teotihuacanos on the Pacific Coast of Guatemala ([Figure 8](#)). However, unlike Los Horcones, virtually no Pachuca obsidian was recovered from this site. The presence of Teotihuacanos in this region is thought to represent Teotihuacán strategic gains that secured access to trade with the Highlands (Bové and Medrano Busto 2003: 73; Berlo 1984). This site, like Los Horcones, may have helped secure access to trade routes for the Teotihuacanos.

Immediately to the northwest, in the Southern Isthmus, the patterns of obsidian exchange were also undergoing major transformations during the Early Classic ([Figure 8](#)). During much of the Formative the two main obsidian sources used in the region were Guadalupe Victoria and El Chayal, but by AD 300 there was no obsidian from these sources consumed in the region (Zeitlin 1982: 266-268). After this point, Zeitlin (1982:268) infers that the Isthmus was cut off from the networks that were bringing in Guatemalan obsidian to the region. During the Early Classic, however, obsidian from the Zaragoza source dominated and continues to be one of the major obsidian sources in the area until the Postclassic (Zeitlin 1982: 267). In the Early Classic assemblage of the Southern Isthmus, there is a notable absence of Pachuca obsidian or obsidian from any other Central Mexican source, suggesting to Zeitlin (1982: 269) that there may have been “two separate Mexican exchange networks, one controlled by Teotihuacán and the other under Tajín administration.” This “dual-administration hypothesis” may be supported by the data from Los Horcones. Perhaps the rise of Los Horcones in the Tonalá region around this time marked a shift in the trade routes. Obsidian controlled by Teotihuacán passed directly through Los Horcones perhaps obstructing the movement of Guatemalan obsidian into the Southern Isthmus. Zaragoza obsidian at Los Horcones may have been entering through the Southern Isthmus or was brought through other networks traveled by Teotihuacano merchants coming through the Gulf Coast before cutting down through the Central Depression, as data from the site of Mirador suggests, and then into the Pacific Coast (Agrinier 1975).

While the Southern Isthmus lacked any material indicating direct ties to Teotihuacán, just north along the Pacific Coast of Oaxaca in the Río Verde Valley ([Figure 8](#)), frequencies of obsidian comparable to Los Horcones have been documented by Arthur Joyce and colleagues (et al. 1995; Joyce 2003). During the Early Classic, there is a disruption in the settlement pattern observed for this region that also corresponds to the appearance of Teotihuacán-like ceramics and obsidian. At San Francisco de Arriba, a first-order site Workinger (2002) documented frequencies of 85% Pachuca obsidian in a sample of 285 obsidian artifacts. Other Early Classic deposits from the Río Verde Valley yielded frequencies of 61% Pachuca obsidian, from a small sample of 71 artifacts (Joyce et al. 1995; Joyce 2003). Obsidian from the Zaragoza source was also important during this period (Joyce et al. 1995). The obsidian frequencies from the Río Verde Valley reflect significant ties to Teotihuacán, although the sample sizes are somewhat smaller than those from Los Horcones. Teotihuacán's apparent lack of interest in the Southern Isthmus, may reflect an absence of resources available in the Southern Isthmus that appealed to Teotihuacán's economic concerns. Moreover it suggests that the trade moving south down the coast was mediated by Los Horcones.

The site of Maticapan, which Santley (1983, 1989, 2007; Santley and Arnold 2005) has proposed was a Teotihuacán enclave, is another important source of comparisons with Los Horcones ([Figure 8](#)). While some scholars have suggested that Santley (1983, 1989, 2007) overemphasized the Teotihuacán presence at this site (Daneels 2002; Cowgill 2003), more recent research by Santley and Arnold (1996, 2005; Santley et al. 2001; Santley 2007) suggests that contacts with Central México were more widespread throughout the Tuxtla region and reaffirm the importance of Maticapan as a potential Teotihuacán enclave. The obsidian consumed at Maticapan consisted primarily of Zaragoza and Guadalupe Victoria obsidian, with Pachuca frequencies fluctuating from 5.3% of the assemblage in the Early Classic (AD 350-450) to as much as 13.3% in what Santley and Arnold (2005) call the Late Middle Classic (AD 550-650). The frequency of Pachuca dropped to less than 1% in the Early Late Classic (AD 650-850) (Santley and Arnold 2005: 188). The assemblage from Maticapan is similar to Los Horcones and the Río Verde Valley, that is, largely made up of blades and blade fragments probably traded as complete artifacts with no cores present or significant evidence of local production (Santley 1989: 140).

The presence of Guadalupe Victoria and Zaragoza obsidian at Los Horcones, while representing only a small proportion of the sample, suggests that the networks that this material traveled to the Pacific Coast of Chiapas may have passed through Maticapan or that merchants stationed at Maticapan were also part of groups coming to Los Horcones ([Figure 8](#)). Although Zaragoza obsidian was one of the dominant sources consumed in the Isthmus, the complete absence of Pachuca obsidian in this region is difficult to explain with the networks passing so close by through Los Horcones. Yet the patterns of macro-regional obsidian exchange suggest the Southern Isthmus was somehow cut off from these larger movements of goods, partly perhaps due to the establishment of Los Horcones and a greater reliance of trade moving down the Gulf Coast into the Tuxtla region and then down through the Central Depression into the Pacific Coast of Chiapas, where goods were traded farther down to the Soconusco and

the Pacific Coast of Guatemala. Los Horcones with its diverse assemblage of obsidian may have played a key role in terms of consumption, because it had to import all of its obsidian. The high frequency of Pachuca obsidian at Los Horcones suggests that it may have also played a role in redistributing this resource down to the Soconusco and as far east as the Pacific Coast of Guatemala. From there, Montana and other sites along the Pacific Coast of Guatemala could have served as links into the Highlands and the Petén.

## **Discussion**

The use of Pachuca obsidian as a correlate for Teotihuacán interaction during the Early Classic is more complicated than has sometimes been presented. The mere presence or absence of this material does not ultimately yield a very substantive evaluation of what behaviors or relationships are being represented. Instead, approaches that incorporate a discussion of the specific archaeological contexts, types of artifacts, and frequencies of foreign obsidian in relation to local resources can often be more useful for reconstructing the relationships between Teotihuacán and other sites (Spence 1996).

In the Maya region, significant quantities of Pachuca obsidian have been located as well as some artifacts made of Otumba obsidian (Spence 1996). However, a contextual analysis of these artifacts reveals that many of them were found in contexts such as burials, caches, and other offerings, indicating that more than mere commodity, Pachuca obsidian served as a means of linking Maya elites to Teotihuacán rather than as a major commodity traded for purely commercial purposes (Spence 1996). Pachuca obsidian seems to have functioned largely symbolic roles and was being brought mainly as a prestige good into the Maya region (Spence 1996). Santley (1983, 1989) points out that one factor contributing to the importance of Pachuca as a prestige good in the Maya region, is that, in terms of fulfilling their basic tool stone needs, the Maya had local sources of high quality obsidian and chert. Thus obsidian from Pachuca remained much more important as a novelty, partly because of its color, and as a referent for social relations between Maya elites and Teotihuacán.

At sites such as Matacapán, in the Tuxtla region, and Los Horcones in the Tonalá region, where there are no local sources of obsidian or chert that can fulfill the basic needs for a chipped stone technology, non-local obsidian such as that coming from the Pachuca source did not serve purely as a prestige good. At Los Horcones, the Early Classic chipped stone technology was largely focused on blade production much like in the rest of the Pacific coast of Chiapas at this time (Clark 1989). Obsidian from Pachuca, El Chayal, Oyamales/Zaragoza, Guadalupe Victoria, Otumba, and San Martín Jilotepeque was used in much the same way throughout the site. All of the obsidian recovered by the PALH crew, came from the monumental area of the site, but in contexts that indicate that these were common everyday tools, rather than carefully cached ritual items. In the absence of excavations in residential areas, I cannot currently discount the possibility that obsidian from the Pachuca and Otumba source were solely prestige items consumed largely by the elites of Los Horcones. However

the relatively high frequencies of Pachuca obsidian being consumed at Los Horcones and the types of artifacts and contexts seems to indicate that it perhaps did not hold quite the same aura of preciousness and rarity that it did in the Maya region for example.

In the case of sites like Los Horcones and Maticapan, where obsidian for everyday use had to be imported long distances and no good local alternatives existed, prestige may not have been placed on obsidian from any given source, but rather prestige was placed on the quantity of obsidian held by an individual or corporate group, and on access to the networks that continued supplying them with these relatively large quantities consistently. For Los Horcones, its strategic location facilitated the acquisition of obsidian from distant regions because it was at the crossroads of trade routes and exchange networks. The relatively large quantities of obsidian from San Martín Jilotepeque and El Chayal, are not altogether surprising given that these are the closest sources to this site. The significant proportions of Pachuca obsidian and measurable quantities of Otumba suggest that Teotihuacano merchants were perhaps directly involved in the trade of these resources into Los Horcones. The smaller quantities of obsidian from the Oyameles/Zaragoza and Guadalupe Victoria sources indicate that perhaps these were coming to Los Horcones through the same networks as the Pachuca and Otumba obsidian, but not necessarily in the hands of Teotihuacanos (Spence 1996). The diversity of obsidian sources visible at Los Horcones, and its strategic location certainly suggests that this site was a gateway community (Hirth 1978) where goods from different regions were consumed and traded and access to trade goods and networks of exchange may have played a major role in how prestige was acquired and symbolically displayed at this site. Obsidian as a major trade good at Los Horcones may have conveyed status, not in its presence, absence, or point of origin per se, but in quantity, quality, and consistent access to the networks that brought this resource to the Pacific coast of Chiapas.

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## List of Figures

- [Figure 1.](#) Map of Study Area.
- [Figure 2.](#) Percussion Blade from Los Horcones Made from El Chayal Obsidian.
- [Figure 3.](#) Prismatic Blades from Los Horcones.
- [Figure 4.](#) Bivariate Plot of Strontium and Yttrium Log Concentrations.
- [Figure 5.](#) Bivariate Plot of Arsenic and Yttrium Log Concentrations.
- [Figure 6.](#) Bivariate Plot of Yttrium and Barium Log Concentrations.
- [Figure 7.](#) Obsidian Frequencies for Los Horcones.
- [Figure 8.](#) Map of Mesoamerica with Sites Mentioned in Text and Obsidian Sources.

## List of Tables

- [Table 1.](#) Radiocarbon Dates from Los Horcones, Chiapas, México.
- [Table 2.](#) Obsidian Frequencies for Classic Period Sites in the Soconusco.

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