

LLANO DEL JICARO

An Olmec monument workshop

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Abstract

Llano del Jicaro, Veracruz, is a workshop site where Olmec monuments were carved from exposed boulders of Cerro Cintepec basalt. The site, which lies in the hinterland of the major Olmec center of Laguna de los Cerros, was discovered in 1960 by Alfonso Medellín Zenil, who moved one of its unfinished monuments to the Museum of Anthropology in Jalapa. In 1991 more intensive archaeological investigations at Llano del Jicaro located nine additional boulders, including a tabletop altar, with evidence of carving. Excavations around four of these monoliths uncovered debitage and hammerstones from the manufacturing process. Survey also located the remains of the probable residences of the stonemasons.

The Olmec culture of southern Veracruz and Tabasco, dating to the Early and Middle Formative periods (ca. 1150 to 500 B.C.), has long been renowned for its carved-stone monuments. These three-dimensional and bas-relief sculptures, which include colossal heads, altars, statues, and stelae, are concentrated at the major ceremonial centers of La Venta, San Lorenzo, and Laguna de los Cerros, and occur in smaller numbers at Tres Zapotes and secondary sites (Grove 1994:Figure 1). They were carved primarily from igneous rocks produced by the volcanoes of the Tuxtla Mountains, a source quite distant from San Lorenzo and La Venta in particular. Olmec monuments thus evince the achievements of a nascent complex society: the development of craft specialization and a shared style or aesthetic, the control of human labor to manufacture and transport the stones, and the regional political networks needed to facilitate their acquisition over long distances. They also indicate how secular power came to be linked to sacred authority, since some of the monuments portray rulers with objects marked by supernatural qualities (e.g., Coe and Diehl 1980:1:296–297, 2:148; Drucker 1981; Grove 1973, 1981; Lowe 1989:45; Velson and Clark 1975).

While the monuments are important for understanding Olmec sociopolitical evolution and regional interaction, they have generally been viewed in isolation, as art or icons (Bove 1978:1). Most analytical attention has focused on their form or iconographic content (e.g., Clewlow 1974; Coe and Diehl 1980; de la Fuente 1973, 1977, 1981; Grove 1973, 1981; Milbrath 1979; Wicke 1971; see also Graham 1989). Questions dealing with their technological aspects—such as determining how and where the stone was quarried and carved—have received less attention. These issues, whose importance was discussed at some length by Coe and Diehl (1980:1:296–297) for the San Lorenzo monuments, are the subject of this report on archaeological investigations at the only known Olmec monument workshop—Llano del Jicaro, Veracruz.

BACKGROUND

Petrographic analyses of Olmec monuments by Williams and Heizer (1965) and by Coe and Diehl (1980) have determined that most of them were made from Cerro Cintepec basalt, a type named for a major volcano in the Tuxtla Mountains. This is a Plio-Pleistocene age basalt, dark gray in color, which is coarsely porphyritic olivine-augine with large, abundant feldspar phenocrysts (Williams and Heizer 1965:3, 5–6). Williams and Heizer (1965:5) observed large boulders of Cerro Cintepec basalt on the southeastern slopes of the Tuxtla Mountains, and proposed that this was the source for the stone used by Olmec sculptors. In the absence of evidence for a monument workshop at San Lorenzo, Coe and Diehl (1980:1:297, 391) hypothesized that the San Lorenzo Olmecs controlled the southeastern area of the Tuxtla Mountains—some 60 km away—and sent supervisors there to direct local laborers in the carving of monuments.¹

Another scenario for the exploitation of this basalt is that the major Olmec center near the Tuxtla Mountains, Laguna de los Cerros, directed the quarrying and dispersal of stone and/or monuments to the other centers, at least during part of their shared history (Drucker 1981:n. 29). Laguna de los Cerros was excavated in 1960 by Alfonso Medellín Zenil, who mapped 95 mounds and reported 27 monuments, many of which were in the Olmec style (Medellín Zenil 1960, 1971; Wicke 1971:47; see also Bove 1978). The site has yielded Early and Middle Formative ceramics (Bove 1978), but much of its construction dates to the Classic period (Medellín Zenil 1960).

¹ There is some evidence at San Lorenzo for the reworking of previously carved stones (Coe and Diehl 1980:1:297; Guillén 1993; see also Porter 1989). Much of the basalt debitage found in Coe and Diehl's excavations was more likely derived from metate manufacture than from the carving of stone monuments from boulders or preforms (Coe and Diehl 1980:1:404).

Six Laguna de los Cerros monuments analyzed by Williams and Heizer (1965:17) were made of Cerro Cintepec basalt. However, one of them, designated Monument 8 in the Laguna de los Cerros series, actually came from another site, Llano del Jicaro. This site, 7 km northwest of Laguna de los Cerros, was briefly investigated by Medellín Zenil as part of his project at the major center. Medellín Zenil observed unfinished monuments among the many basalt boulders that litter the surface at Llano del Jicaro. He suggested that the site functioned as a monument workshop under the control of Laguna de los Cerros, whose elites would have commissioned the Monument 8 statue (Medellín Zenil 1960:92-93, Plate 22, 1971:34-35, Plate 36).

Monument 8 (Figure 1) has unusual characteristics due to the fact that it is an unfinished work, with its large forms merely blocked out (Medellín Zenil 1960:93; Bernal [1969:64] shared this opinion; cf. de la Fuente 1977:265). The statue is of a seated person on whose oversized head the carvers had delineated the outlines of projecting rectangular eye plaques and a rectangular mouth area (de la Fuente 1973:143-144, Figure 103, 1977:265-267). These features are very similar to those found on two large heads from Laguna de los Cerros—Monuments 1 and 2 (de la Fuente 1973:135-138). The seated person's crossed legs were preformed by the sculptors as a rectangular block topped by the unfinished areas for the hands resting on what would be the knees. Thus the carvers at Llano del Jicaro worked the monument up to a certain stage, smoothing even the preformed or unfinished areas, perhaps in anticipation of its being transported to another locale for the final carving of details.

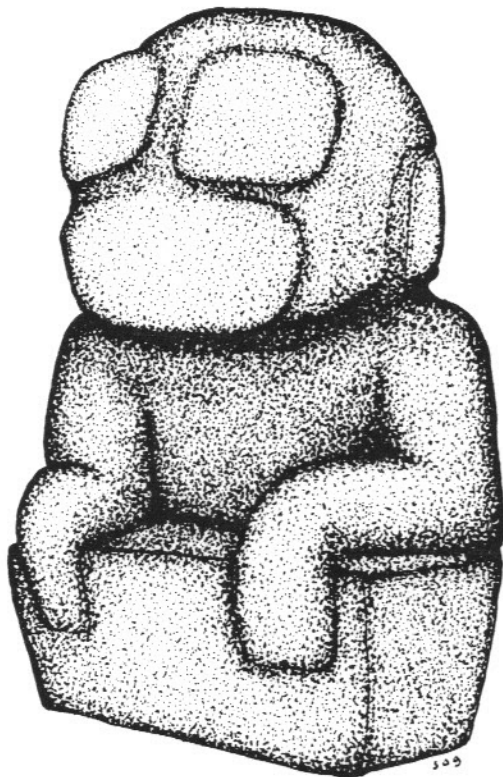


Figure 1. Monument 8 from Llano del Jicaro, height = 1.95 m. Drawing after de la Fuente (1973:143-144, Figure 103).

Medellín Zenil moved the statue to the state capital of Jalapa, where it is now on display in the Museum of Anthropology (Winfield Capitaine 1987:Catalog #046). He had originally encountered the monument lying on its back, and following its removal he excavated where it had lain, clearing a 12-m² area. In cultural deposits that extended no more than 40 cm below the surface (bs) Medellín Zenil (1960:92-93) found sherds that he dated to the Classic period and a small disk of volcanic stone, but no debitage from the stonemaking process.

In addition to Monument 8, Medellín Zenil (1960:92) found three other large monoliths at Llano del Jicaro. Information concerning them comes from his unpublished field notes made available to Ponciano Ortiz Ceballos of the Universidad Veracruzana. According to Ortiz Ceballos (1986) 20 m southeast of Monument 8 (whose original location is not now known) was another unfinished work, Monument 12, and this monolith did have stone debitage scattered around it.² The other two monuments were an unfinished tabletop altar and a great sheet of basalt with trimmed sides. These last two were found by Ortiz Ceballos in a 1979 visit to reestablish the site's location. He did not find Monument 12, however, and it may have been removed (Ortiz Ceballos 1986). On subsequent visits, the author and David Grove observed that a portion of the site was destroyed between 1989 and 1990 by the construction of a ranch.

In spring 1991 a program of archaeological investigations was carried out at Llano del Jicaro, as part of the La Isla-Llano del Jicaro Project that sought to gain further data on sites within the probable hinterland of Laguna de los Cerros (see Grove 1994). If this site was indeed a place where Olmec monuments were manufactured, then it could provide information on stonemaking technology. It could also shed more light on Laguna de los Cerros, the least-known Olmec center, in terms of its access to and possible exporting of stone or monuments.

The short 1991 field season involved a preliminary examination of the site, to lay the foundation for future investigations. Three specific goals were established to determine the nature of the site and the integrity of its archaeological contexts. The first was to survey systematically the area to search for any additional carved stones and to plot the locations of all the monuments on a site map. The second objective was to excavate test pits around a sample of the carved stones to recover evidence of their manufacture and to assess the archaeological contexts of those materials. A final objective was to look for habitation areas on the presumption that the stonemakers lived in the immediate area rather than in Laguna de los Cerros or some other site as yet unknown.³

SITE SURVEY

The general relief at Llano del Jicaro is that of a raised plain (llano) bounded by small valleys whose streams drain into the San Juan River to the south. During the rainy season, the com-

² Medellín Zenil's field notes describe Monument 12 as an attempt to carve the jaws of a jaguar (Ortiz Ceballos 1986). This may be the "Monument 21" briefly mentioned by Medellín Zenil (1960:93).

³ Medellín Zenil (1960:92) had reported that Llano del Jicaro lacked evidence of mounds or other signs of habitation. However, the artisans might not have lived there year-round as full-time craftsmen, but instead on a seasonal or temporary basis, making the monuments only when they were required. Remains of their habitations would therefore be more ephemeral than those of a full-fledged permanent community.

compact clay soils and flat topography create standing water over a large portion of the site (the *potrero* zone). Today the *potrero* zone is mostly covered with grasses and herbaceous plants used for cattle pasture, interspersed with a low subperennial forest (with several *jicaro* trees). Soil color is dark gray to gray-brown (Munsell 10YR3/1–4/1) turning to a distinctive yellow (7.5YR7/8; 10YR8–7/6) at about 50 cm bs where it comes in contact with exfoliating basalt boulders that lie below the shallow soil layer.

In the southeastern corner of the site is a series of low ridges (Figure 2). These raised areas, cresting at about 2 m above the plain, were designated the *lomas* zone. Here the vegetation consisted of more trees and herbs with fewer grasses. The soil is about the same as in the *potrero* zone: dark gray brown (10YR3/2) but less clayey and with many small stones. Surface artifacts were visible in this zone, and they included Formative- and Classic-period sherds, obsidian chips, and ground-stone implements.

Basalt boulders occurred on the surface or partially buried in both the *potrero* and the *lomas* zones, and some of them exhibited evidence of carving. In addition, possible habitation remains were located in a portion of the *lomas* zone that overlooks a valley to the east, in the general direction of Laguna de los Cerros. (The edge of this valley is just east of the fence line on the site map.) These remains consisted of artifact concentrations, together with stones that probably served as house foundations, atop the naturally raised ridges. A spring located 600 m

south of this habitation area, if present in the past, could have served as a water source for the inhabitants. There were no artificial mounds or other evidence of a large permanent settlement. Thus, despite the presence of stone “monuments,” Llano del Jicaro was not a secondary center to Laguna de los Cerros, but instead fulfilled a special function for that primate center.

The site boundaries were defined by the presence of carved stones and other surface artifacts, delimiting an area of approximately 20 ha. Additional forays were made beyond the site to look for other possible workshops. Although basalt boulders having the same potential for exploitation extend for several kilometers away from the site, no evidence for stoneworking was observed. Thus, Llano del Jicaro is not part of some generalized quarry area but exhibits the characteristics of a distinct site.

DESCRIPTIONS OF THE WORKED STONES

Among the many hundreds of boulders that lie exposed on the surface at Llano del Jicaro, our survey located nine with evidence of pre-Hispanic human modification. We grouped these into four classes based on their general form (altar, slab, “channel” stone, and “stela blank”), and numbered them sequentially. Their locations are shown in Figure 2, and Table 1 provides their dimensions. Because it was uncertain that all of these monoliths were intended to be made into monuments, we designated them “Worked Stones” (WS). They include two noted by Medellín Zenil in his field notes (Ortiz Ceballos 1986), our WS 1 and WS 3. Each is briefly described here based on field observations as well as on information from our excavations around four of them (WS 1, 3, 8, and 9; see below).

Worked Stone 1

The intended form of this monolith was a tabletop “altar”—a name for monuments that more likely served as thrones (Grove 1973)—similar to those found at San Lorenzo, La Venta, and Laguna de los Cerros. It sits within the *potrero* zone of the site surrounded by partially buried smaller pieces of stone, some of which may be debitage from the altar’s manufacture. Despite being somewhat larger than the two published altars from Laguna de los Cerros (Monument 5, 61 cm tall, and Monument 28, 86 cm tall; de la Fuente 1973:140–141, 153–155), the Llano del Jicaro altar fits well within a wide range of altar sizes from La Venta and San Lorenzo.

WS 1 is the most finished of the worked stones but also is in the poorest condition. Sometime in the past it had split horizontally, so the top portion was broken off from the base. In 1960 Medellín Zenil’s workers put the two parts back together (Ortiz Ceballos 1986), and this is how the altar appears today (Figure 3). We suspect that the monument’s bottom half had been tipped over onto its back side when Medellín Zenil found it. The back side (which would have faced the ground) is in excellent condition, while the front (which would have formed the top surface) is very eroded. The altar also rests on a slant with the front side tipped up, probably the result of its repositioning.

All four sides of the altar had been roughed out (by percussion) and smoothed (by pecking or grinding) down to the base. The sides taper down slightly toward the base, and the basal dimensions are given in Table 1. The bottom of the altar was

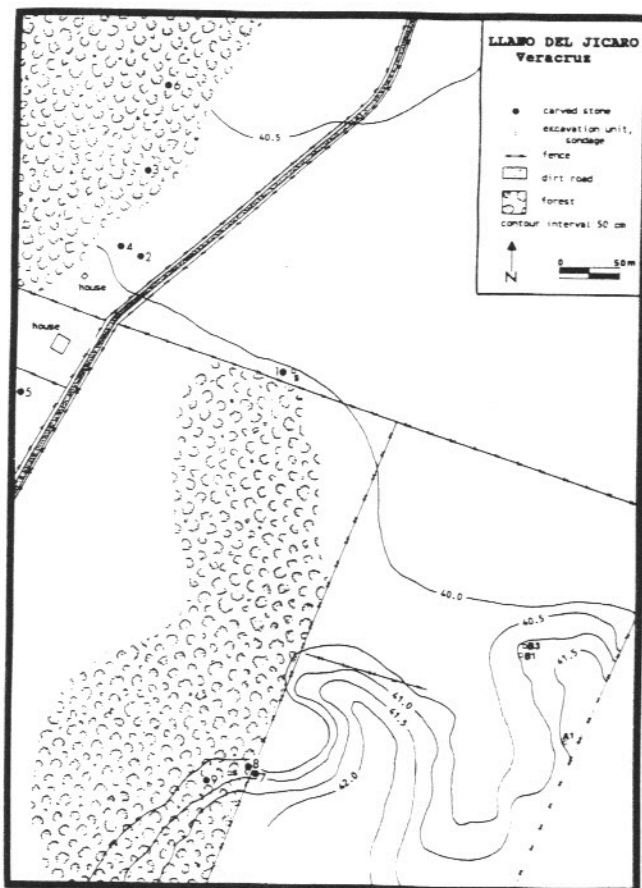


Figure 2. Llano del Jicaro site map.

Table 1. Dimensions of the worked stones

Worked Stone	Length	Width	Actual Height	Height Above Ground	Width of Channel	Depth of Channel
1 (altar)	202	130	128			
2 (slab)	344	235		20		
3 (slab)	330	260	120	60		
4 (channel)	146	98		110	20	10
5 (channel)	154	92		40	26	16
6 (channel)	140	74		37	24	13-24
7 (channel)	192	90		42	25	11-17
8 (channel)	196	82	62	34	24-30	10-21
9 (stela) (carved dimensions)	212	122	70	30		
	170	80	25			

Note: Measurements in cm.

not observed, as we did not move or excavate under the monolith. The top has an irregularly shaped raised area in the center that exhibits some straight lines along which the carvers were pecking the surface. Similar raised areas are found on the tops of other Olmec altars.

The front face of the monument is marked by the removal of stone to begin to form the upper ledge that distinguishes tabletop-style altars (Figure 4). A slight rounded projection below the ledge, at its central point, may represent the initial work to rough out the headdress of a person sitting in a niche, the usual depiction on these altars. The back still exhibits slightly raised, block-shaped areas in its upper and middle portions that were being removed by pecking. The carvers seemed to follow straight lines in pecking the stone to flatten and smooth its surface.

An unusual feature is the rectangular tab that projects out from the northeast (back) corner and extends virtually the entire intended height of the altar. This tab has straight sides and right-angled corners, and was finely pecked most of its length; only the back part is less finished. Because it is so well formed, one might suspect that the tab was meant to be a permanent part of the altar, although no other known altars have such a feature.

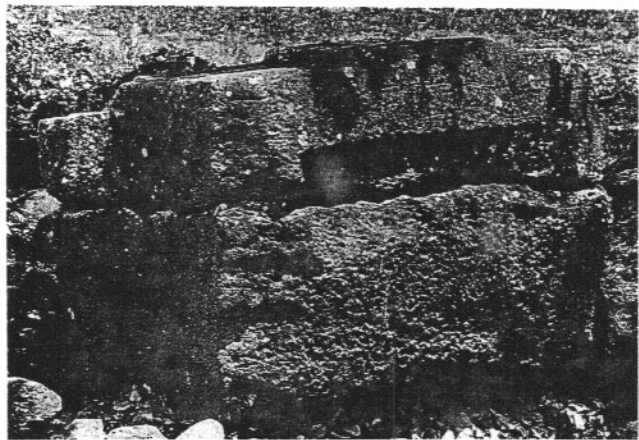


Figure 3. Worked Stone 1, the tabletop altar, after excavation.

However, the observations regarding Monument 8 (the statue) demonstrate that even obvious temporary or unfinished portions were well shaped and smoothed by the carvers at Llano del Jicaro.

Worked Stones 2 and 3

WS 2 and 3 are large flat slabs located close to one another in the *potrero* zone. WS 2 is the least modified of all identified worked stones and was difficult to assess as its exposed height is only 20 cm above the ground surface (Figure 5). The sides are very straight and vertical in some parts, with right-angled corners. The top is flat, rather than rounded, as an unmodified boulder would be. Its size is also comparable to that of WS 3.

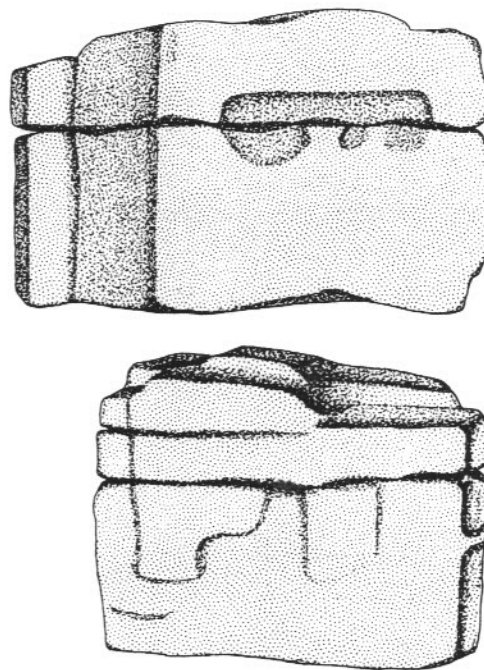


Figure 4. Perspective drawings of the front and back sides of Worked Stone 1.

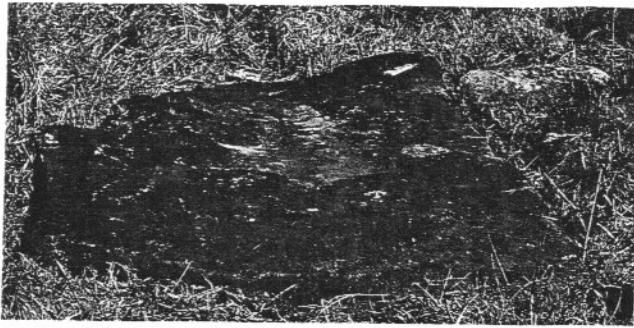


Figure 5. Worked Stone 2.

However, unlike WS 3, its shape is very irregular. Further investigation is needed to determine to what extent WS 2 had been worked.

WS 3, a well-shaped rectangle with a flat top, is the largest of the carved stones at the site (Figure 6). Its sides show evidence of initial percussive reduction on the bottom portion as well as subsequent straightening and pecking of the area closer to the top. The long north side still has a massive chunk of protruding stone on its lower portion, pocked with scars where large flakes had been removed. The short east side is more finished, its southern half straightened and smoothed down to the base, presenting right-angled corners. The southeast corner (to the left in Figure 6) gives the best indication of the likely intended height of the monolith, about 70 cm.

The top shows obvious evidence of pecking in only a few areas, but it is generally flat and very eroded. The top was apparently intended to be plain and flat like that of another monolith very similar in size and appearance to WS 3—Monument 51 at San Lorenzo (Coe and Diehl 1980:1:360). The San Lorenzo monument, labeled a “flat altar,” is only slightly smaller than WS 3, being 2.1 m long, 1.81 m wide, and 80 cm high.

Worked Stones 4–8

These five monoliths have the same design, which we referred to as “channel” stones. Three were in the *potrero* zone (WS 4, 5, and 6), and the remaining two were found close together in

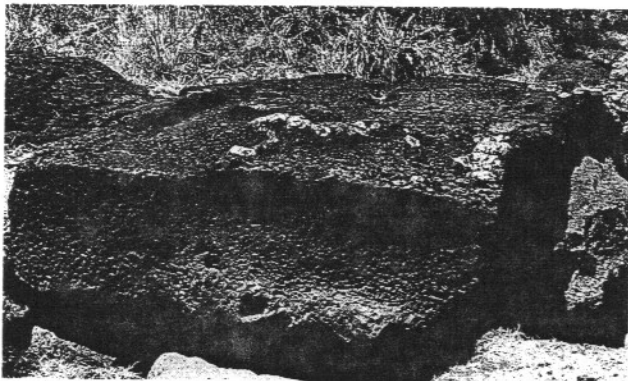


Figure 6. Worked Stone 3 during excavation.

the *lomas* zone. All are long, narrow, rectangular blocks with a trough or channel running lengthwise down the center of the upper surface. The majority exhibit a raised area of stone within the channel. These raised areas vary in their size and placement, therefore they probably represent stone in the process of being removed from the channel.

The sizes of these monoliths and the widths of their channels are very similar (see Table 1), indicating conformity to the same pattern or function. We are not certain of the intended final form of these objects or of their chronological placement. They cannot be stylistically linked to known Olmec monuments, and their dimensions are very different from those of the drain stones of La Venta (Heizer et al. 1968) and San Lorenzo (Coe and Diehl 1980:1:118–125, 349). However, they also have no analogues with known Classic-period artifacts.

Interestingly, the stones do not exhibit the same sequence of manufacturing stages. WS 4 (Figure 7) is significantly taller than the others because it was worked only on the top portion. The channel and the rest of the top surface, to a depth of only a few centimeters down the sides, had been worked by percussion and pecking before the rest of the sides had been roughed out to form a true rectangle. WS 5's channel is apparently the most finished, given the fact that it lacks a raised area in the center (Figure 8). However, one of its short ends had not yet been shaped by percussion, so the channel is closed off on that end.

WS 6–8 are more similar to one another. All are well-formed rectangles that had endured a great deal of work on their sides before the stone in the channel was completely removed (Figures 9–11). WS 8 in particular had many large flake scars on its sides, and the carvers had begun to peck smooth its northeast corner prior to abandoning their work.

Worked Stone 9

Another one of the *lomas* carvings not far from WS 7 and 8, WS 9 is a long boulder that was being worked into a narrow rectangle (Figure 12). Its presumed final dimensions are the size of a small stela, about 170 cm long and 80 cm wide, although the monument could have been intended for a different pur-

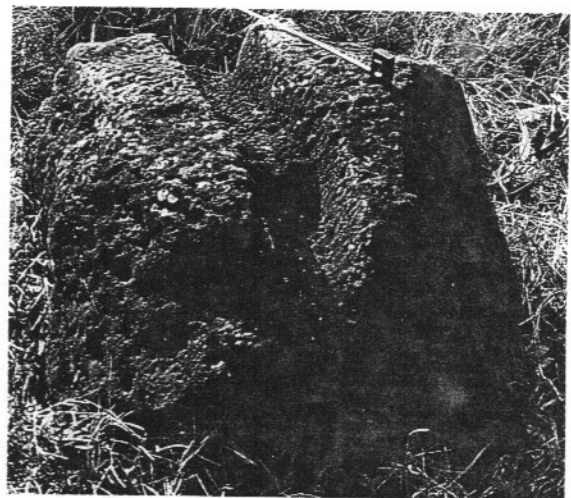


Figure 7. Worked Stone 4.



Figure 8. Worked Stone 5.

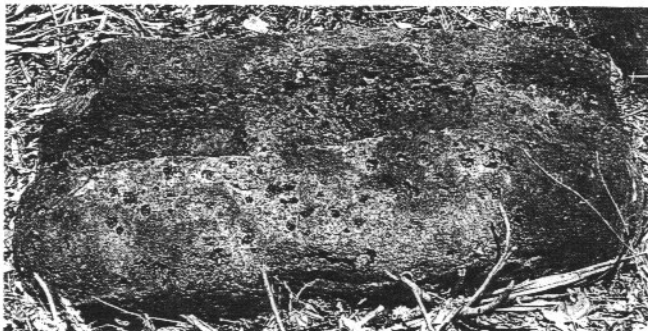


Figure 9. Worked Stone 6.

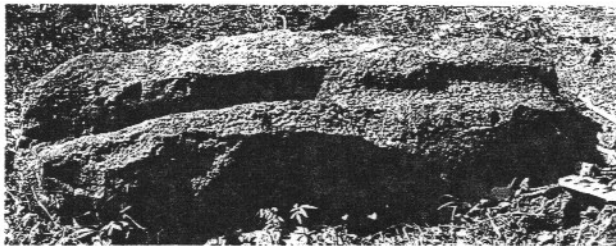


Figure 10. Worked Stone 7.

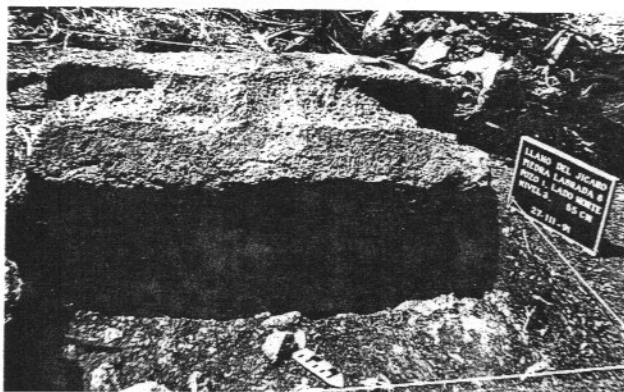


Figure 11. Worked Stone 8 during excavation.

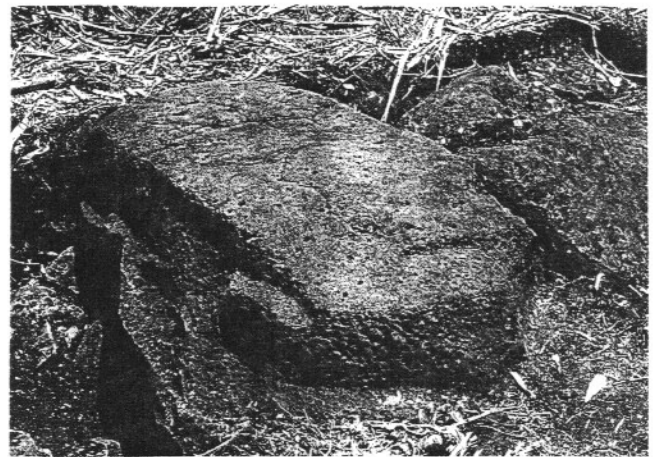


Figure 12. Worked Stone 9 during excavation.

pose, possibly another channel stone. These dimensions were determined from the carefully delineated lines, observable on its top surface, of what would have been the finished stone's edges. Its thickness, based on the extent of pecking to shape the vertical sides, would have been at least 25 cm (Figure 13). Below this top portion the boulder was still in the process of being roughed out by the removal of large flakes.

EXCAVATIONS

Test excavations were conducted in two areas: around a sample of the worked stones to look for evidence of their manufacture, and in the eastern portion of the *lomas* zone where surface artifacts indicated a possible habitation area for the stonemasons. In the absence of observable natural strata, units were excavated in artificial levels. Four of the worked stones were chosen for excavation. WS 1 and 3, in the *potrero* zone, represent two different forms that could stylistically be linked to known Olmec monuments. WS 8 (a channel stone) and 9 (the "stela blank") could not be dated based on their form, and were in the *lomas*



Figure 13. Close-up of pecked surface on Worked Stone 9.

zone. Exploratory test pits of 1-x-1- to 1-x-2-m dimensions were laid out parallel to and juxtaposed against the face of the worked stones. Our aim was to excavate down to the original ground level on which the stoneworkers stood as they worked.

These excavations revealed an upper matrix level of post-abandonment deposition covering a buildup of debitage produced by the stoneworking activities. Debitage consisted of large and small flakes and flake fragments, chunks, and angular pieces. A sample of debitage from the altar (WS 1) excavations was kept for further analysis.⁴ In the *lomas* zone field observations made at the WS 9 excavation determined that only about 15 percent of the rocks recovered there showed obvious evidence of possibly being debitage, the rest being part of the natural matrix of the *lomas*.

Many hammerstones were also recovered, some with good evidence of battering on their surfaces. The majority were sub-spherical stones of the local basalt. Survey indicated that the exposed rocks in the *lomas* zone naturally exfoliate to form a rounded shape, so this area was a potential source for these hammerstones. The hammerstones may have been used to pound the surface directly to remove large flakes of stone by percussion, and to peck the stone to wear down and smooth its surfaces. As noted by Coe and Diehl (1980:1:296), these types of percussion, along with grinding, were the major techniques employed to carve Olmec monuments. In addition to the local stone implements, a few fragmentary ground-stone tools recovered from these units were made from a nonlocal stone that has a distinctive light gray to white color.⁵

A small number of other types of artifacts were found in the excavations of both the worked stones and the habitation area. These include ceramic sherds, chips of gray obsidian, figurine fragments, and ground-stone utensils such as manos and pestles. The sherds were small and in very poor condition, most lacking their surface finish. Ceramics from the *potrero* zone were sometimes larger but very friable because of deposition conditions. The *lomas*-zone ceramics were smaller, and their surfaces were worn from exposure. Thus, it was difficult to identify many of the sherds to type, and few forms could be determined.

Seven ceramic types were distinguished on the basis of paste and surface treatment, and they were stylistically dated to the Formative and Classic periods.⁶ For the Formative period these

⁴ Examination of several pieces of debitage revealed that the Cerro Cintepec basalt here is typically vesicular and exhibits a range of color from a dark gray-brown to dark gray (10YR3/2; 2.5Y4/2), to a reddish brown, brown, or reddish yellow (5YR4-5/3; 7.5YR5/2-4, 6/4-6). The preliminary nature of this project precluded the implementation of debitage recovery and analysis techniques to assess the stages and procedures of Olmec monument manufacture. An unexcavated portion was left around every excavated worked stone for future research dedicated to the investigation of stoneworking techniques.

⁵ The exterior color of these nonlocal stone artifacts, light gray (7.5YR7/0; 10YR6/1-2; 2.5Y7/2) to white (10YR8/1), likely resulted from their deposition. Their interior color, observed by making a slight chip into a sample of them, was dark gray (2.5YR3-4/0). Some sherds from the *potrero* excavations similarly presented a white color on all exposed surfaces.

⁶ The ceramic artifacts from Llano del Jícaro together with those from La Isla were classified by Eric O. Juárez Valladeres under the direction of Ponciano Ortiz Ceballos. Type descriptions are presented in Grove and Gillespie (1992). At this time, the ceramic types cannot be dated to specific temporal divisions within the Formative and Classic periods.

were Café Burdo *tecomates*, Negro con Borde Blanco (primarily bowls), and Negro Pulido (bowls). Classic-period types were Naranja Fino (bowls and ollas), Gris Fino (bowls), and Café Burdo con Rastrillado Suave (globular ollas). The final type, Naranja o Blanco Burdo (ollas), cannot yet be exclusively dated to one of the two periods of occupation, but it is probably Classic.

To help assess the context and significance of recovered debitage and artifacts, two *sondage* pits were excavated away from the worked stones, one in the *potrero* zone and one in the *lomas* zone. The first, a 1-x-2-m unit excavated 10 m east of the altar, revealed no artifacts or pieces of stone in the matrix above the subsoil. In contrast, the *lomas* zone's 1-x-1.5-m *sondage* about 20 m east of WS 9 yielded the same quantities of angular stones and sherds in the upper excavation level as occurred in units adjacent to the worked stones in that zone. Artifacts and stones diminished by the depth of the subsoil at 50 cm bs. The results from this *sondage* indicate that artifacts recovered in the upper levels of the *lomas* excavations in particular may be the result of later occupations and disturbances.

Excavations at WS 1 (Altar)

Excavations were carried out adjacent to the altar's west (front), north, and east (back) sides (Figure 14). The units were taken down to 30 cm bs, just below the base of the altar's back side, except for a 1-x-1-m pit on the southwest corner that was excavated down to the level of the subsoil (50 cm bs). These investigations revealed evidence of Medellín Zenil's previous work here as well as the probable original location of the altar.

The altar had apparently lain on its back side in the area immediately behind its present location and had been pulled up onto its base, with the top portion repositioned. Excavation in the area of its original location revealed modern artifacts from a backfilled pit (sherds of a single beer bottle and pieces of string), indicating that Medellín Zenil had excavated here, just as he also had excavated under Monument 8. Below the bottom edge at the center of the altar's front face was a large fragment of shoe sole made from a tire, probably used to cushion the chain needed to pull the altar up onto its base.

These recent excavations and disturbances around the altar were also observed in the matrix, which consisted of two strata. The modern artifacts were found in Stratum I, a layer of dark brown-black to black, very hard clayey soil that changed to the more usual *potrero* soil at about 20 cm bs (Stratum II). This upper soil stratum was not observed elsewhere at the site, including the nearby *sondage* pit. All of the ceramics were recovered from Stratum II. One Formative sherd and 5 Classic sherds were all that could be classified by date. Most of the ceramics were located toward the top of Stratum II, which we interpret as the pre-1960 ground surface, as part of the postabandonment deposition around the worked stone.

Even though the altar had been slightly moved by Medellín Zenil, the quantity of debitage recovered from units adjacent to it reveal that it was originally carved in the same place where it is located today; the more distant units revealed far less debitage. Debitage included primary flakes and flake fragments with typical concave ventral surfaces and crushed striking platforms, indicating that the altar was initially roughed out here. There were also numerous hammerstones of the naturally occurring basalt, as well as two pieces of nonlocal stone. One of these

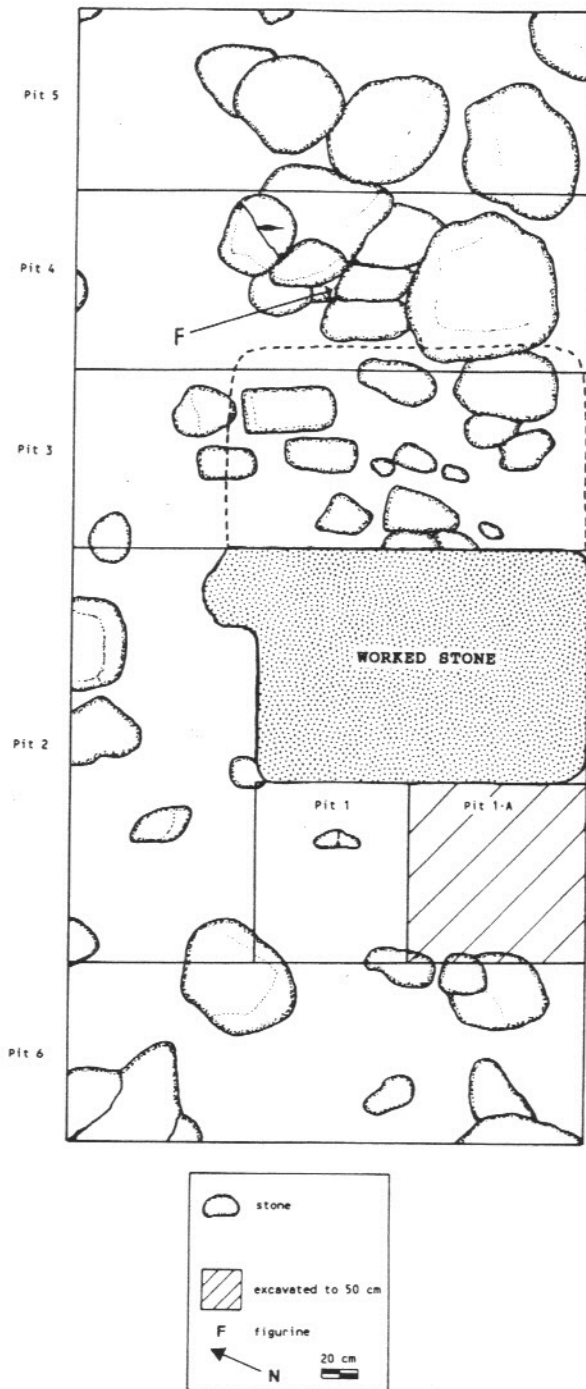


Figure 14. Plan view of the Worked Stone 1 excavations. Dashed line represents area excavated by Medellín Zenil (1960).

latter objects may have served as a polishing stone to grind the surface of the altar. Its shape and dimensions are similar to the "polishing pebbles" from San Lorenzo illustrated by Coe and Diehl (1980:1:237).

Additional units were opened on the back side of the altar to obtain a sample of materials untouched by Medellín Zenil's excavations. Between 1 and 3 m away from the back of the altar

was a concentration of large- and medium-sized stones, some of which seemed to be debitage while others were naturally rounded boulders. Resting against these stones, just outside the limits of Medellín Zenil's excavations and toward the base of Stratum II, was a solid ceramic figurine head (Figure 15). It was hand modeled of medium-textured orange paste (2.5YR5/8; the back is gray 2.5Y6/2). The head was in poor condition, lacking surface finish as well as facial features, but a portion of the headdress survived, a band on the forehead. In general style and paste, this figurine is very similar to those from San Lorenzo dating to the San Lorenzo B phase (Coe and Diehl 1980:1:272, Figure 348).

Excavations at WS 3 (Slab)

Excavations were carried out on the north and east sides of the stone, comprising one long and one short face (Figure 16). They revealed that this large slab sits upon a natural platform of what are today subsurface boulders. The monolith was apparently dragged onto these other boulders to raise it approximately 50 cm above the ancient ground surface. Pit 1, on the north side, was excavated down to the subsoil at a depth of 85 cm bs, approximately level with the base of the lower boulder (of the platform). At this depth were two large angular stones that may have been struck off WS 3 in the early stages of its carving, and sherds lay under these stones. Debitage and other artifact debris had accumulated above this ancient ground surface (at 85 cm bs) to a level of about 50 cm bs. Above this level the matrix is interpreted as postabandonment deposition.

The highest concentration of nonlocal stone artifacts came from this excavation. Most of these objects appeared to be fragments of ground-stone tools, but one was a complete hammerstone, about 8 cm in diameter, battered around its perimeter. Significantly, all of the classifiable ceramics were of Formative date, including the only examples of Negro Pulido found at Llano del Júcaro.

Excavations at WS 8 (Channel Stone)

Units were excavated on the two long sides of this channel stone, yielding a concentration of debitage between 30 and 75 cm bs, the depth at which the subsoil was encountered. The debitage consisted of large stone flakes with rounded dorsal sides and flat ventral sides, struck off the worked stone in the initial stages of

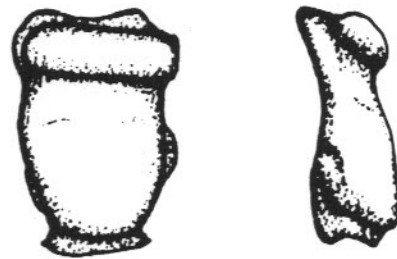


Figure 15. Two views of the figurine head found during the Worked Stone 1 excavations, height = 3.2 cm.

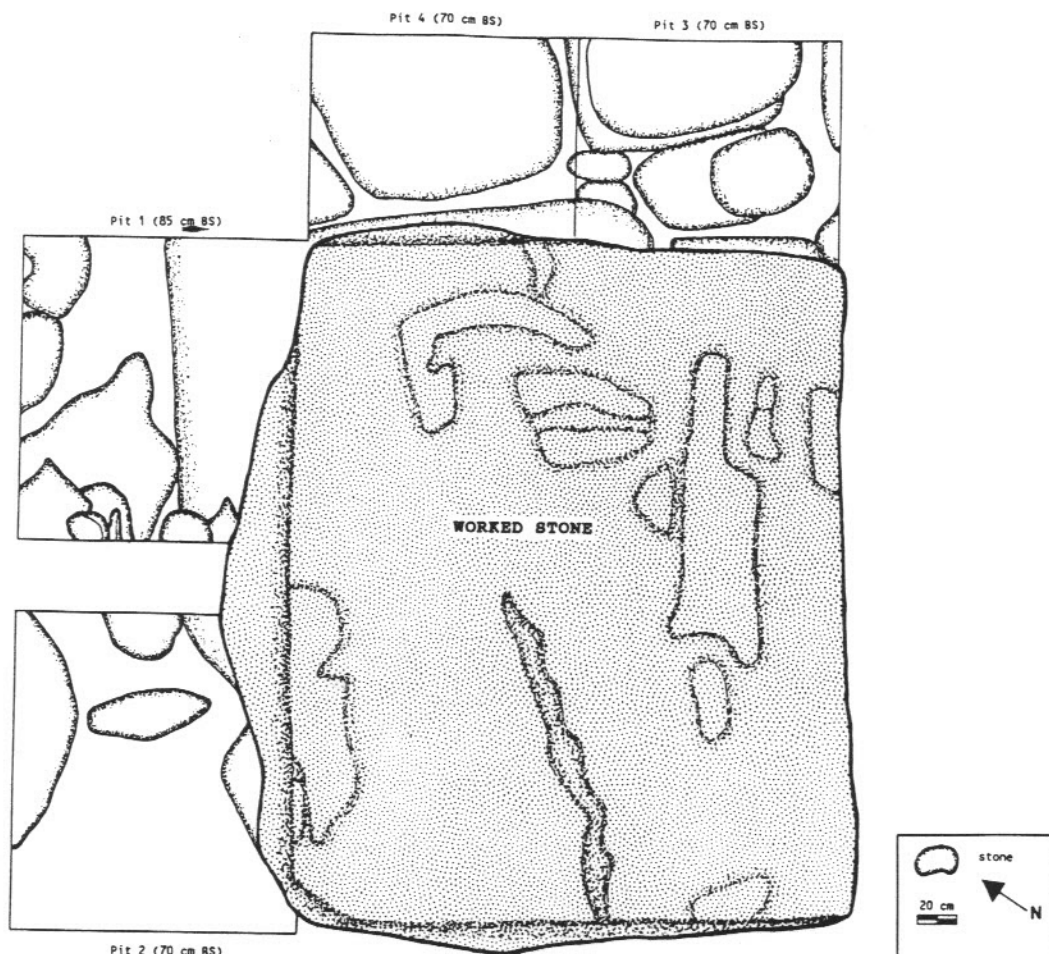


Figure 16. Plan view of the Worked Stone 3 excavations.

the manufacturing process and corresponding to the many flake scars on the face of the monolith.

Very few ceramics were recovered, and all of the classifiable ones date to the Classic period. They were distributed in all excavation levels, though concentrated above 40 cm bs, and thus call into question the chronological position of WS 8 (and all of the channel stones). However, two other artifacts recovered here suggest a Formative-period date. On each side of the channel stone, toward the top of the debitage concentration, we encountered a partial semicircular ground-stone disk made from the local basalt (Figure 17). The bases of these disks are only roughly shaped, but the tops have a shallow concavity that is pecked and ground flat. The two fragments are similar to one another but are not from the same artifact. Both were found concavity-side up approximately equidistant from the channel stone.

Although the function of the disks remains unknown, similar artifacts are contextually associated with the Formative period and with Olmec stoneworking. Medellín Zenil (1960:93) reported finding a disk in his excavations under the statue, Monument 8. In addition, at San Lorenzo Coe and Diehl (1980:1:235) excavated 20 “[r]oughly shaped and unsmoothed basalt

disks with plano-convex cross sections and a shallow arc of a depression in the upper surface” dating principally to the San Lorenzo A and B phases.⁷ Visual comparisons indicate that the Llano del Jicaro artifacts are virtually identical to the whole and fragmentary basalt disks encountered more recently at San Lorenzo by Ann Cyphers Guillén (personal communication 1994) in an area in which monuments were probably being recarved.

From the entirety of the evidence, we therefore believe that WS 8 and the other channel stones were carved in the Formative period. The few Classic-period sherds probably result from later occupation of the *lomas* area. They could have become mixed in with the debitage by slumping, as WS 8 is situated on the slope of the ridge and is tipped at an angle toward the downslope as if it, too, had slumped.

⁷ A third fragment of a disk was also recovered in the *lomas* excavations, with a reconstructed diameter of 21 cm, thickness of 3.9 cm, and depth of depression of 1.5 cm. The disk reported by Medellín Zenil (1960:93) from under Monument 8 was 19 cm in diameter and 3 cm thick. The disks from San Lorenzo ranged from 13 to 20 cm for diameter, with an average of 15.9 cm, and were 1.8–5.5 cm thick, with an average of 3.8 cm (Coe and Diehl 1980:1:235).

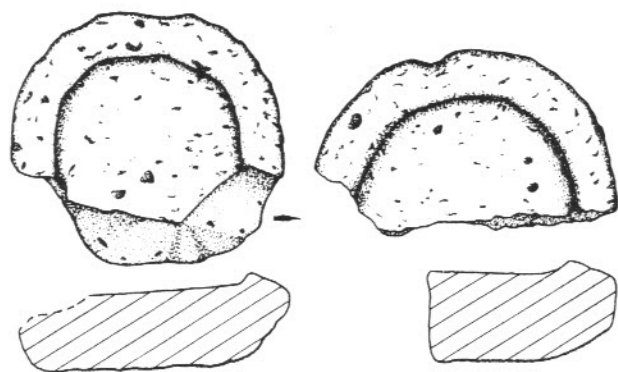


Figure 17. Partial basalt disks from the Worked Stone 8 excavations: left, reconstructed diameter = 16.9 cm, thickness = 6.2 cm, depth of the concavity varies from .8 to 1.7 cm; right, reconstructed diameter 18.8 = cm, thickness = 6.4 cm, depth of the concavity = .6 cm.

Excavations at WS 9 ("Stela")

WS 9 was the most deeply buried of the excavated stones, and our excavations of its two long sides did not reach the base of the boulder. Debitage and other artifacts diminished completely by the level of the subsoil at approximately 60 cm bs, at which point we ceased excavation. The base of the worked stone continued below this depth, so apparently the carvers did not completely clear this boulder before they started to shape it.

Unlike the excavations of WS 8 nearby, the work here yielded Formative- as well as Classic-period ceramics. Significantly, Formative sherds were found resting against the worked stone at a depth of 52 cm bs. These artifacts would indicate that WS 9 is another Olmec carving, while the Classic sherds, which were also recovered from the nearby *sondage*, resulted from subsequent occupation of the *lomas*.

The Lomas Excavations

In the eastern *lomas* area there were surface indications of habitations, namely artifact concentrations not found elsewhere at the site as well as discrete clusters of stone that may have been the remains of house foundations. Three 2-x-2-m test pits were opened here in two areas (A and B). The *Loma A* excavations, extended to 9 m², uncovered a portion of one of the stone concentrations, revealing that this was not a natural occurrence because the rocks were angular in shape and all were resting on top of the subsoil. (The naturally occurring stones are rounded and extend into the subsoil.) Mixed in with the stones were artifacts such as ground-stone tools made of the local basalt, sherds of Formative as well as Classic date, several chips of obsidian, and two tool fragments of nonlocal stone. Unfortunately, the foundation was in poor condition and its boundaries could not be discerned; the house floor itself was probably destroyed long ago.

Closer to the northwest edge of the *loma*, Area B had more surface artifacts, but the two test pits did not reveal any features or structures. The concentration of these artifacts probably resulted from their slumping down the slope of the *loma*. The occurrence of both Formative and Classic ceramics here, in an area where no worked stones were found, may indicate that the

stonecarvers resided at this location, at least on a temporary basis, and that there was a later occupation of this and the other portions of the *lomas* zone in the Classic period. The *lomas* area is a natural choice for occupation because it is raised above the seasonally inundated *potrero* zone.

SUMMARY AND DISCUSSION

Llano del Jícaro is an Olmec-period quarry area where Cerro Cintepec basalt boulders were selected and worked in situ to preform monuments. The nine worked stones at the site are in near proximity to one another, and survey of basalt exposures beyond the mapped site boundaries revealed no other unfinished carvings. Thus, Llano del Jícaro was a delimited activity area for the stonecarvers, who probably resided at the site as well.

In addition to the unfinished statue removed by Medellín Zenil in 1960, the site yielded a tabletop altar, two large slabs, five channel stones, and a narrow rectangle. They exhibit evidence of modification by both percussion (to remove large portions as flakes and chunks) and pecking (to flatten their surfaces). Excavations around four of the stones yielded tools, including hammerstones of the local basalt and a few implements of a nonlocal stone. Debitage was generally left where it had fallen, along with tools, pottery, and other artifacts. There is evidence that one of the largest stones had been raised up onto a "platform" of naturally occurring boulders to facilitate its carving.

Stylistic characteristics together with recovered artifacts indicate that the four excavated stones are apparently Formative-period carvings. Because the other worked stones display similar carving techniques, it is not unreasonable to suspect that all date to the Formative period. A Classic-period occupation of the *lomas* area in particular resulted in a scatter of ceramic artifacts that postdate the Olmec stonecarving activities.

While a probable habitation area for the stonecarvers was located at the site, Llano del Jícaro was not a secondary Olmec center with an elite group directing the manufacture of its own monuments. Formative artifacts were few and the house remains ephemeral, indicating a small population here for both the Formative and Classic periods. Thus, the carvers were more likely operating under the auspices of Laguna de los Cerros, only 7 km away, as Medellín Zenil first suggested in 1960. Additional monuments located by the La Isla-Llano del Jícaro Project in the Laguna de los Cerros hinterland, including those from La Isla (Grove et al. 1993), were also probably made at or near Llano del Jícaro.

Monument 8, the large statue found by Medellín Zenil, is similar to some of the monuments from Laguna de los Cerros. However, other carved stones at this workshop site, as well as monuments from elsewhere in the Laguna de los Cerros hinterland, exhibit an unexpected number of stylistic similarities with monuments from San Lorenzo and La Venta. At Llano del Jícaro, WS 3—the large slab—has its closest analogue in San Lorenzo Monument 51 (Coe and Diehl 1980:1:360). Close to Llano del Jícaro, La Isla Monument 1 bears a striking resemblance to Monument 10 at San Lorenzo (Coe and Diehl 1980:1:316) and to La Venta Monument 64 (de la Fuente 1973:111). La Isla also produced a stone head (Monument 2) that is similar to La Venta Monument 8 (de la Fuente 1973:62–64; see Grove et al. 1993).

These monuments and others at Laguna de los Cerros itself indicate that that center participated in the interregional ideological network that influenced the form and style of Olmec monuments (cf. Drucker 1981). Since San Lorenzo and La Venta have many monuments made of Cerro Cintepec basalt, it is possible that Laguna de los Cerros not only supplied this raw material but also provided the stone in the form of

preformed monuments made at workshops under its control, including Llano del Jícaro. The proximity of Laguna de los Cerros to the accessible boulders of Plio-Pleistocene basalt from the Tuxtla Mountains may therefore have been an important factor in its rise to prominence and in the nature of its interactions with the stone-poor ceremonial centers of San Lorenzo and La Venta.

RESUMEN

En el año de 1960 el arqueólogo Alfonso Medellín Zenil descubrió el sitio de Llano del Jícaro, que él identificó como un taller de monumentos olmecas, a unos 7 km al noroeste del centro olmeca Laguna de los Cerros, Veracruz. La topografía del sitio corresponde a llanuras, con terrenos bajos e inundables utilizados como potreros. No obstante, cruzando el sitio hay una prolongación de un antiguo flujo de lava del Cerro Cintepec en la sierra de Los Tuxtlas. Estos basaltos fueron utilizados para la fabricación de los monumentos; por eso, el sitio era tanto cantera como taller de los escultores. Uno de estos monolitos es el monumento 8 en la secuencia de monumentos de Laguna de los Cerros. Medellín Zenil trasladó el monumento, una estatua incompleta, al Museo de Antropología en Xalapa, y después realizó breves excavaciones debajo del lugar de monumento 8 y en otros lugares del sitio.

Durante una temporada breve en 1991 se inició el Proyecto La Isla-Llano del Jícaro con intento de obtener datos sobre los sitios en los alrededores de Laguna de los Cerros. Empezaron los estudios en Llano del Jícaro con un reconocimiento y el levantamiento de un plano topográfico del sitio. Se encontraron un total de nueve piedras labradas en el sitio, incluyendo dos que nosotros suponemos fueron mencionados por Medellín Zenil en sus notas del campo. Todas están incompletas. Uno de éstos es importante porque tiene la forma de los típicos altares olmecas, aunque no terminado. También entre las piedras labradas hay dos tablas grandes y cinco monolitos rectangulares acanalados, pero de forma muy diferente que las famosas drenajes de La Venta y San Lorenzo.

Se hicieron excavaciones en los alrededores de cuatro de las piedras labradas: núm. 1, el altar; núm. 3, una tabla grande; núm. 8, una de

las piedras acanaladas; y núm. 9, un bloque irregular de basalto que estaba en proceso de tallarse para lograr una forma rectangular. Las caras labradas de todas las piedras mostraron claramente un patrón de labrar por desgaste con picotazos, y en casi cada excavación se encontraron martillos de cantos rodados de basalto, y lascas de desecho. Se recuperaron tepalcates, pero muy erosionados, de dos períodos de ocupación, formativo y clásico. Sin embargo, creemos que todas las piedras labradas del sitio fueran talladas por artesanos olmecas con técnicas idénticas.

También, nuestro reconocimiento encontró vestigios de ocupación en algunas lomas bajas a unas 50 m al este del sitio, incluyendo posibles restos de cimientos de chozas pequeñas. El proyecto hizo tres pozos en este lugar, pero la delgada capa de depósitos arqueológicos estaba muy destruida. Por la presencia de tepalcates formativos y clásicos podemos decir que habían unas viviendas en las lomas durante estas épocas, posiblemente incluyendo aquéllas de los artesanos olmecas.

Estamos de acuerdo con Medellín Zenil de que en vista de la ausencia de un área de habitación grande cerca y la proximidad a Laguna de los Cerros, es probable que los tallistas de Llano del Jícaro trabajaran bajo el control de los jefes de este gran centro olmeca. Ya que Laguna de los Cerros está ubicada en la falda de las montañas cerca de algunos afloramientos de basalto, su proximidad a esta materia prima tan valiosa cumplió un papel significativo en el desarrollo de su poder y sus relaciones comerciales con otros centros olmecas, San Lorenzo y posiblemente La Venta más al este, ubicados en la llanura costera en donde no había basalto.

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