THE 1956 ARCHAEOLOGICAL INVESTIGATIONS AT LA MANGA, A LOMA SAN GABRIEL VILLAGE, DURANGO, MEXICO

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Maxwell Museum Technical Series No. 40

Maxwell Museum of Anthropology
MSCO1, 1050, 1 University of New Mexico
Albuquerque, New Mexico 87131-0001
Maxwellmuseum.unm.edu

2022

One more for J. Charles, for Ann, and thanks to those who helped along the way.

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PREFACE

In November 2021, Mike Foster sent me a copy of a report on La Manga in Durango, Mexico. The report was publication ready and I saw no reason to subject it to further editing, or to delay publication for any other reason. Instead the Maxwell Museum is happy to offer the report with very minor changes.

David A. Phillips, Jr.
Series Editor

ACKNOWLEDGEMENTS

A number of people provided varied assistance that facilitated the production of this report. I particularly would like to thank Ms. Anne M. Ch'ien, Administrator, Graduate Program, Department of Anthropology, University of Chicago for hunting down and copying Phyllis Jay's 61-year-old M.A. thesis so that I might have a complete and final copy of the document. I would also like to thank Dr. Bridget Zavala Moynahan, Instituto de Investigaciones Históricas, Universidad Juárez del Estado de Durango for tracking down the location of La Manga and providing an array of background information. Thanks also to Roger Boren, Staff Archaeologist, Center for Big Bend Studies, Sul Ross State University; Arqlga. Baudelina L. Garcia Uranga, Centro INAH Zacatecas, and Dr. Peter Jimenéz Betts, Centro INAH Zacatecas. I thank my wife Ann for proof reading an initial draft of this paper. I also thank Dr. J. Andrew Darling for his contributions to this document. Finally, I would like to thank David Phillips of the Maxwell Museum of Anthropology, University of New Mexico, for his interest in this report.

Michael S. Foster
January 2022

INTRODUCTION

In 1952, the late J. Charles Kelley undertook the first of his investigations of the northwest Mesoamerican frontier with a reconnaissance survey and excavations at the Weicker site in Durango, Mexico. However, it was his first season of fieldwork in 1954 at the Schroeder site in Durango that cemented his life-long studies of the Chalchihuites and Loma San Gabriel cultures of the northwest Mexico (Figure 1). During the summer of 1956 Kelley completed a second season of excavations at the Schroeder site, today is known as La Ferrería, south of Ciudad Victoria de Durango, Durango, Mexico. Kelley spent three field seasons at La Ferrería and excavations demonstrated the site was a major ceremonial center, if not the primary ceremonial center, of the Guadiana Branch of the Chalchihuites culture (Foster 2001; Guevara Sánchez 1994; Kelley 1971, 1985; Kelley and Kelley 1971). The site consists of a complex of plazas, platforms, a ball court (Kelley 1991), and a large pyramid on top of one of the hills occupied by the site. The importance of Kelley's excavations at La Ferrería cannot be overstated. From these he established the cultural, chronological, and ceramic sequences for the Guadiana Chalchihuites and demonstrated the existence of an extensive trade network between the highlands of Durango and the cultures of the Mexican West Coast (Foster 1993a, 2000, 2001a, 2017a; Guevara Sánchez 1994; Kelley 1971, 1985, 2000a; Kelley and Kelley 1971; Kelley and Winters 1960). In addition to the 1956 work at La Ferrería, Kelley's team undertook limited excavations at the nearby small site of La Manga (LCAJ1-9), the subject of this report (Figure 2).

Kelley, in his 1971 chapter Archaeology on the Northern Frontier: Zacatecas and Durango—in the *Handbook of Middle American Indians*—briefly discussed La Manga in his summary of the Loma San Gabriel culture. He states: … "at the La Manga site, about 2 km east [southeast] of Schroeder, there was a very curious combination of Loma architecture and pottery with much Chalchihuites pottery and other traits (Kelley 1971:800)." Otherwise, the excavations at La Manga have remained unpublished although one of Kelley's students, Phyllis Jay (Phyllis Jay Dolhinow), produced a M.A. thesis (1957) on the excavations. Much of the information imparted here is based on this thesis (along with some limited field notes from students participating in the field school). Subsequent studies of artifacts from La Manga, including obsidian sourcing studies, are also incorporated into this report.

Recently, La Manga appears to have been rerecorded as Lerdo (personal communication Bridget Zavala Moynahan 2018) (Punzo Díaz and M. Zavala 2005:31–32). It is located at UTM coordinates 13R 537592E, 2648536 N. The site is reported to measure 200 m along its major axis (NE-SW) and 100 m along its minor axis; it encompasses approximately 20,000 m^2 and today is bisected by a highway (Figures 3 and 4). Lerdo is described as a habitation site with two L-shaped platforms (Platforms 1 and 2) with smaller structures, all of which are constructed from course stone masonry. Platform 1 and two rectangular rooms are reported in the northern part of the site and are within a circular enclosure (not reported by Jay although illustrated by her on a sketch of the site's location and locality). Platform 2 has quadrangular structures joined by an alignment of stones that together formed an L-shaped configuration. The coarseness of the architecture was noted by Punzo Díaz and M. Zavala and a point was made of its dissimilarity to that of Chalchihuites sites in the general area. This is generally consistent with the architectural features as described by Jay (1957) and reported here. Punzo Díaz and M. Zavala note the presence of lithic and ceramic artifacts but they do not describe them in detail. No cultural or temporal affiliation was assigned to the site; the material culture is also said to be different than that at nearby (presumably Chalchihuites) sites.

It appears that if indeed Lerdo is La Manga, the fact that the site was partially excavated was not apparent or not recognized by Punzo Díaz and M. Zavala. In fairness, this may have been due to the lack of availability of site records and a copy of Jay's thesis. Nevertheless, the mention of the site in Kelley's (1971) *Handbook of Middle American Indians* article appears to have been overlooked.

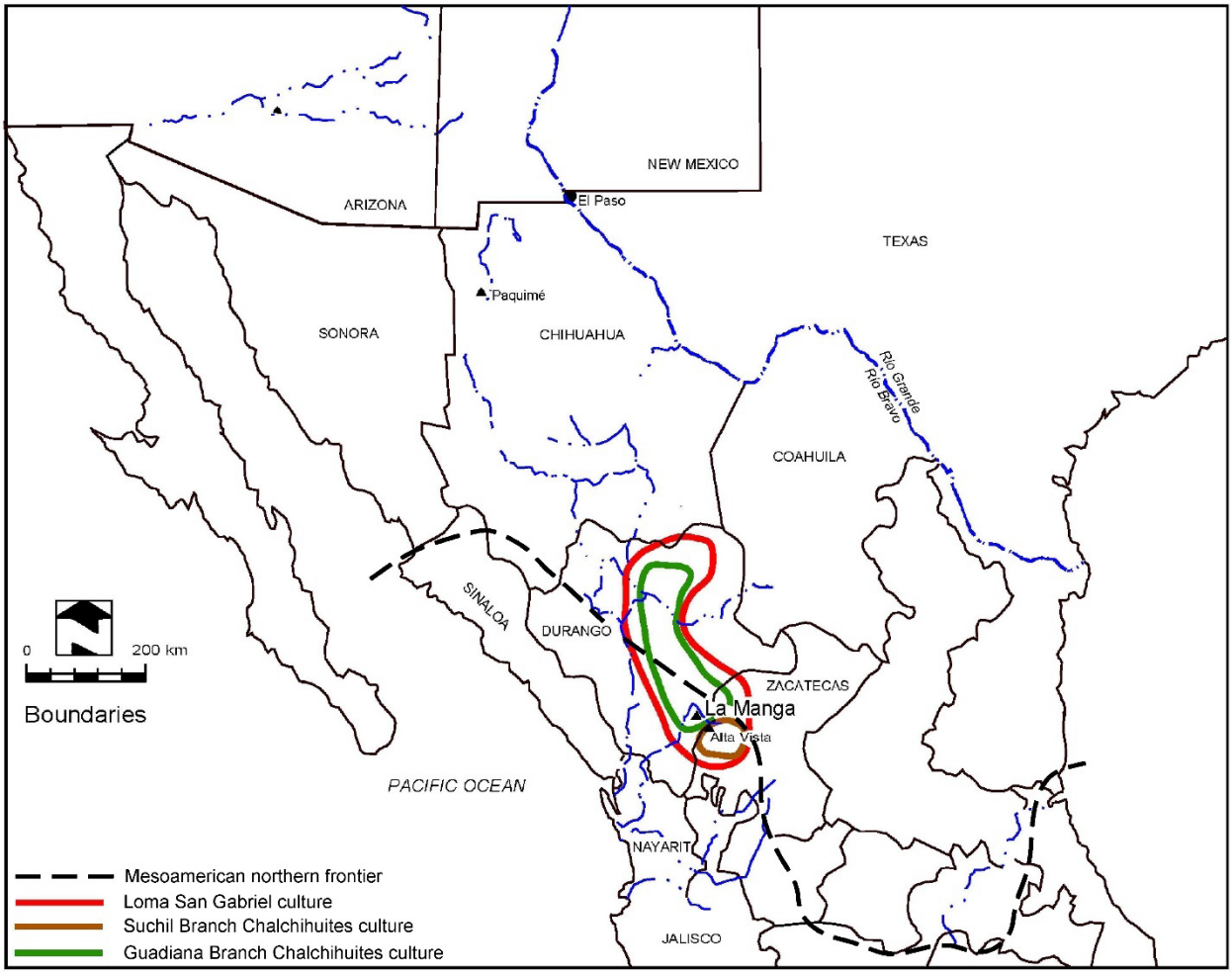

Figure 1. Map showing the boundaries of the Loma San Gabriel culture and those of the Suchil and Guadiana branches of the Chalchihuites culture in Zacatecas and Durango Mexico.

ENVIRONMENTAL SETTING

La Manga, located in the Guadiana Valley, is situated on a low hill adjacent to the eastern foothills of the Sierra Madre Occidental approximate 70 m above the valley floor at an elevation of approximately 1,950 m (Jay 1957:14–16). Environmentally, the area is within the extra-tropical dry lands of the steppe lands of the western margin of the Mesa del Norte (e.g., West 1964). Climatically, it is steppe or semiarid, cool (Bsk) (Vivó Escoto 1964). Rainfall in the area varies greatly from year to year and locality to locality. Today, precipitation averages between 500 and 1000 mm annually with the majority of the moisture falling during summer thunderstorms. A distinct, but lesser winter wet season also occurs.

The site is located approximately 500 m from the Río Tunal, which at the time of the excavation, flowed year-round (Jay 1957:15). The Río Tunal gives rise to the Río Mesquital that in turn becomes the Río San Pedro (San Pedro Mesquital) that enters the Pacific Ocean in southern Nayarit north of San Blas. The Río Tunal undoubtedly supplied domestic water to the inhabitants of La Manga as well as being a likely source of water for agriculture in the river's flood plain and adjacent valley floor. The now extinct Durango shiner, a small fish and possible food source, was native to the Río Tunal. In addition to the river, Jay (1957:15)

Figure 2. Map showing the location of La Manga and other archaeological sites in Durango.

Figure 3. Probable location of La Manga showing possible locations for Areas 1 and 2 (Google Earth 2019).

reports the presence of a stream (perhaps a branch of the Río Tunal) or spring at the base of the hill on which La Manga is located that had resulted in the formation of a "small marshy area." This too may have provided domestic water.

Vegetation at the site was dominated by prickly pear along with some yucca, mesquite, and agave. Hendricks (1960) reports a vegetational survey at the nearby La Ferrería site. Jay (1957:15) states that the vegetation on the La Manga site was similar to that found at La Ferrería. Hendricks notes that the hill on which La Ferrería is located was heavily covered with the several species of prickly pear along with varieties of shrubs, grasses, and some acacia. Hendricks suggests La Ferrería and La Manga were located at the western and southeastern fringes of the *Opuntia-Acacia* plant community that typifies the area surrounding the city of Victoria de Durango (Appendix A). Many of these plant families recorded provided sources of foods or materials for utilitarian purposes for the prehistoric, ethnohistoric, and modern native peoples of the region (e.g., Brooks et al. 1962; Foster 1984; Parmalee 1964; Pennington 1963, 1969).

REGIONAL CULTURAL HISTORY

The region under consideration has a long history of human occupation. Paleoindian, Archaic, and ceramic period remains have been recovered and the late prehistoric occupants were likely antecedents for many of the ethnohistoric and modern indigenous populations of the region.

Paleoindian and Archaic Periods

The Paleoindian and Archaic periods of Durango are not widely documented. A Clovis-like projectile point was found near the city of Durango (Foster 1985; 2000, 2002; Kelley 1953; Lorenzo 1953) and Spence (1971a) reports an early point fragment from northern Durango. Paleoindian traditions subsequent to Clovis are sparsely represented as well (Punzo Díaz and Rangel Estrada 2014). Remains of Pleistocene fauna have also been reported, but they were not associated with any human-made artifacts.

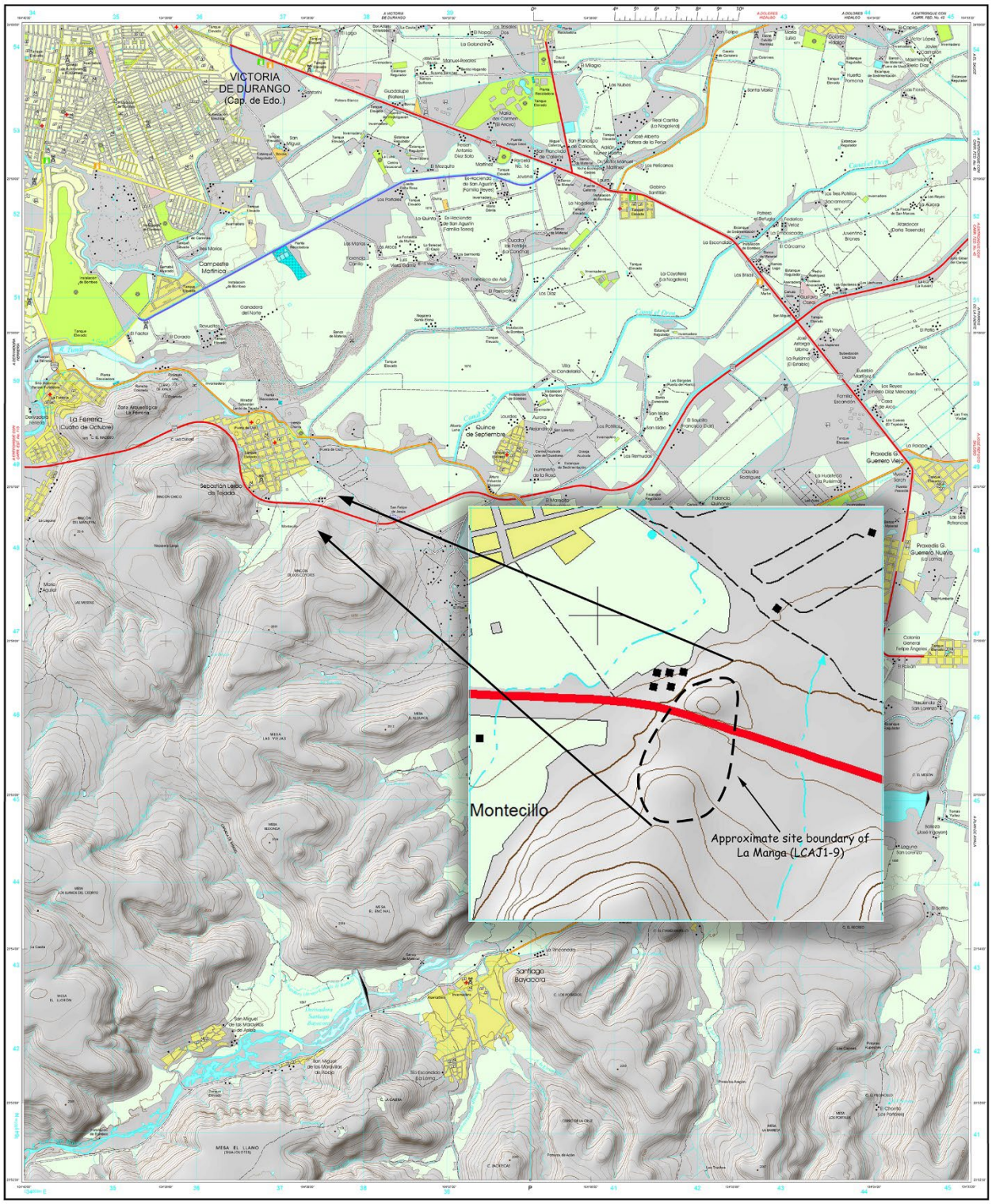

Figure 4. Carta Topográfica F13B12a, Durango (1:20,000), Instituto Nacional de Estadística y Geografía (2017), showing the location of La Manga (see inset for detail, the inset is 1,000 m square).

The Archaic period is only somewhat better understood. Kelley (1953, 1989a) defined the Los Caracoles complex based on investigation of a site of the same name on the northwest side of Laguna Santiaguillo in central Durango north of Victoria de Durango. Several small, stone-lined hearths, charcoal, and lithic artifacts similar to Cochise culture materials in the American Southwest were identified. Similar remains were identified at the Laguna Medina site on the eastern shore of Laguna Santiaguillo; several obsidian hydration dates from the site clustered between 224 B.C. and A.D. 122 (Kelley 1989a; Meighan 1978). Another small lithic site with a desert-varnished basalt chopper and fire-cracked rock reminiscent of Malpais and San Dieguito materials from the Sierra Pinacate area of northern Sonora (Hayden 1976) was recorded on the Río Mesquital (Kelley 1989a).

Los Caracoles complex materials have also been identified in southern Durango (Spence 1971). These too appear related to San Pedro Cochise materials of the American Southwest and to materials reported from Chihuahua (Marrs 1949). A variety of side scrapers, plane scrapers, choppers, and lenticular, triangular, and corner-notched projectile points occur in Los Caracoles contexts. Two other late Archaic complexes believed to be derived from the Los Caracoles complex, the Las Nieves and Santa Marta complexes, have also been tentatively identified (Spence 1971a). The Robles site in extreme eastern Durango produced a variety point types including Catan, Desmuke, Lerma, Shumla, Ellis, Ensor, Yarbrough, Scallorn, and Figueroa (Silva and Hester 1973) that date from as early as 8,000 B.C. to the late prehistoric period. Additionally, a published catalog of Durango projectile point types illustrates several Paleoindian points and many Archaic point types with affinities to southwestern Texas and Chihuahua (Lazalde 1992).

The Loma San Gabriel Culture

The Loma San Gabriel culture, centered along the eastern foothills of the Sierra Madre Occidental, is thought to represent the initial sedentary, ceramic producing culture of western Zacatecas and Durango. Kelley (1956:130–133) first defined the Loma San Gabriel (referred to hereafter as Loma) culture based on several seasons of survey and limited in the Zape and Villa Ocampo areas of northern Durango. Loma is generally described as a non- or sub-Mesoamerican, plainware/brownware culture that occupied small hamlets and villages (Foster 1978, 1980, 1985, 1989, 1991, 1993a, 1995a, 2000; Kelley 1956, 1971).

Loma sites typicality occur on the tops of isolated hills or mesas or on elevated settings with farmland below. The sites are generally small and consist of small, rectangular structures outlined by rows of vertical stone slabs with larger cornerstones. Some circular structures also occur, as do contiguous rooms, sometimes within low compounds. Larger sites, such as the Loma San Gabriel site, may have had defensive compounds enclosing portions of the site. In addition to domestic structures, small, piled stone altars and low, large rectangular platforms are sometimes found and at a few sites as are small platform mounds or other small-scale public architecture. In general, little intrasite organization of structures and features is apparent with structures scattered in any open and level place within the site. Cave sites are also known.

Loma material culture is simple with no or little apparent specialization in craft production beyond the household level. However, this is not to say there were no skilled ceramicists or flint knappers that likely exchanged their products for other material culture or foodstuffs within or between villages. Loma Plain, which ranges from buff to orange to brown in surface color, dominates the Loma ceramic assemblage. The surfaces of the sherds are often eroded with particles of sand temper protruding. Mica is also present in many of the sherds. The texture of the paste is medium to coarse as it the temper, which is usually well mixed and makes up 10 to 20 percent of the paste (Foster 1978, 1981, 1982, 1985, 2000).

The vast majority of Loma Plain vessels are dependent restricted vessels with flaring or recurvate rims. Vessel shape ranges from vase-like to ollas. These, based on limited data, vary from 10 to 50 cm in diameter and have orifices that range from 6.5 to 28 cm in diameter (Foster 1978:43–44, 1981, 1985). Bowls, which appear not to constitute a large percentage of the ceramic assemblages, are typically hemispherical with

unrestricted to slightly restricted orifices; some occur as composite forms (Figures 5, 6, 7, and 8a). It is of further note that Loma Plain sometimes incorporates rim tabs and tripod legs that reflect influence of the Chalchihuites ceramic tradition.

Variants of Loma Plain include Loma Textured, which has a textured decoration on the shoulders or body of the vessels. Such decoration was accomplished by scratching a vessel surface with grass or sticks or, in some instances, with a fingernail (Figure 8b and 8c). Some of the plane and textured sherds had a stucco layer, often a mixture of grass and mud, on the exteriors which averaged approximately 0.6-cm thick (Figure 8d). This layer appears to have been baked on and was likely applied after the firing of the vessel. Haury (1976:225) reports layers of stucco on some Hohokam sherds from Snaketown and certain groups of Yuma Indians utilize a stucco finish on their vessels. The Yumans applied the stucco after a vessel was sun dried. This appears to have acted as an insulator to keep the interior wall of the vessel from cracking when used in cooking. This stucco was thickest on the bottom and it tapers out as it approaches the rim of the vessel (Rogers 1932:34).

Loma Red, some of which are decorated with a fugitive red slip, appears to be a red slipped variety of Loma Plain. The surface of these vessels varies from a matte finish, which is often badly weathered, to moderately well-polished. A provisional third and rare variant of the plainware is Loma White Washed (Figure 8e). This variety is less varied in nature and may represent a refinement in Loma ceramic technology. The surfaces of these sherds are usually better scraped and smoothed and are a matte grayish-white in color. Some vessels are slipped white while others are of a white paste, which is not slipped. The nature and distribution of this type is not well understood.

The bichrome Chico Red-on-brown is the only decorated Loma ceramic type. It typically appears as small unrestricted to slightly restricted bowls, *tecomates*, and ollas (Foster 1978, 1981, 1985). Little can be said of the layout of red decorative elements or designs. Bands of red paint on the interior and exterior of bowls and red-painted bowl rims have been observed. One example, a small bowl recovered from northern Durango near Zape at the site of Santa Ana, had two rim tabs and the edge of the rim was painted red, which in places, extended sloppily downward on to the exterior of the bowl just below the rim. Within the interior of the bowl was a designed that extended across the bottom of the bowl. Kelley (1971:800) suggested the image was that of a crudely painted horned serpent with its mouth open (Figure 8d); this image is quite similar to such depictions rendered by the modern Huichol Indians of the region.

Other Loma ceramic artifacts include spindle whorls, perforated and unperforated sherd disks, worked sherds, beads, figurine fragments, and shell beads. The ground stone assemblage include of basin metates, one-hand manos, pestles, small stone balls, abrading stones, three-quarter and full-grooved axes, and mauls. Projectile points, bifaces, knives, and a variety of scrapers made from local rhyolites, cherts, and some obsidians make up the chipped stone assemblage. Spence (n.d., 1971) believes that most Loma lithic tool types are derived from the Los Caracoles complex, although several—handled end scrapers and curved and disk knives—appear to have their origins in the Chalchihuites culture.

Loma peoples appear to have subsisted on a mix of agriculture and hunting and gathering, the degrees of which likely varied seasonally and annually. Varieties of corn, beans, and squash were grown and supplemented with wild plant foods such as agave, cacti, yucca, nuts, seeds, and berries. Hunted animals included fish, rabbits, squirrels, rodents, deer, and possibly mountain sheep (Brooks et a1. 1962; Foster 1984).

Because of the lack of excavations at Loma sites and the recovery of datable material or diagnostic materials from stratified deposits, no phase sequence has been developed for the Loma culture (see Foster 2000:201). Both Kelley (1971:800, 1989) and Spence (n.d.:17–22, 1971) argued that the Loma culture developed out of the local Late Archaic culture (Caracoles complex) of western Zacatecas and Durango noting similarities

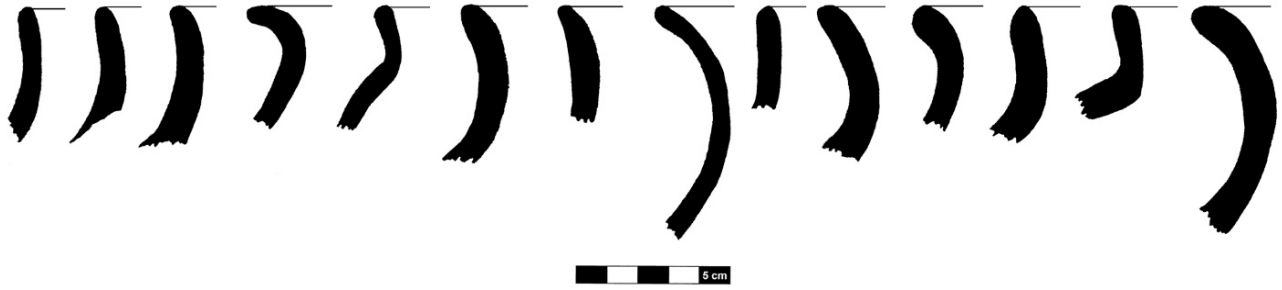

Figure 5. Examples of Loma Plain jar rim forms (Foster 1978, 1981).

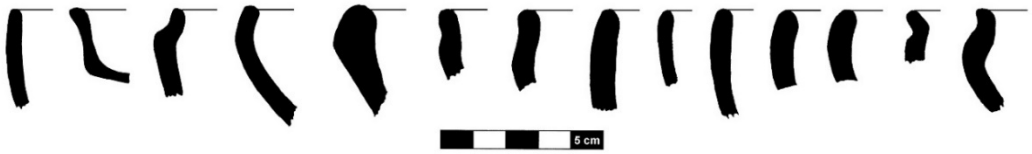

Figure 6. Examples of Loma Plain bowl rim forms (Foster 1978, 1981).

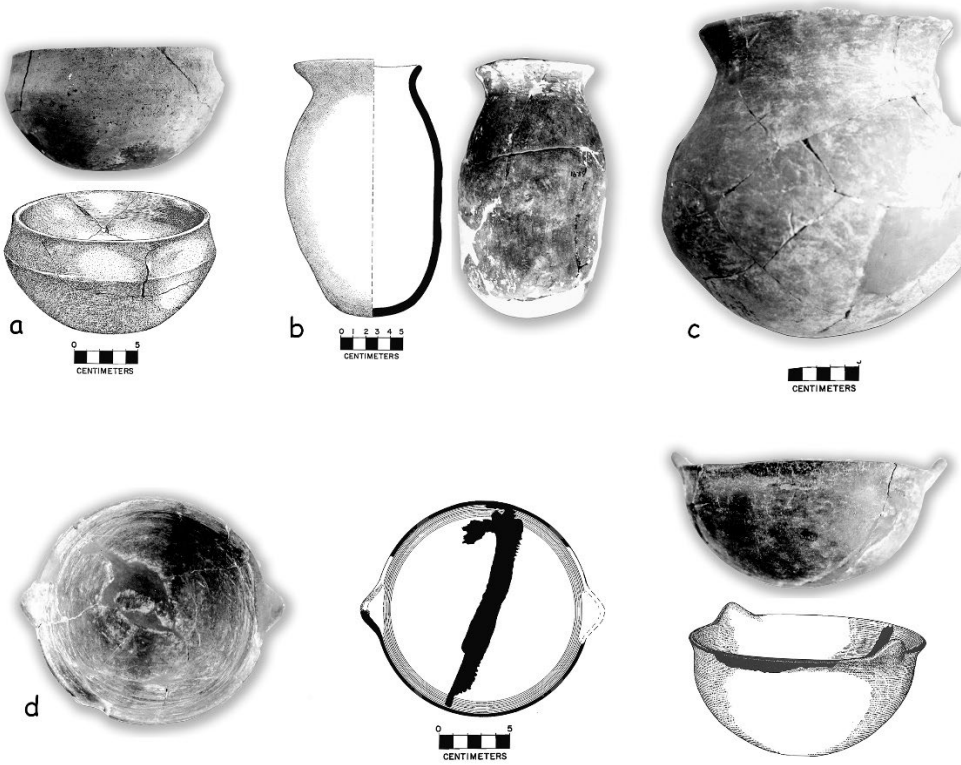

Figure 7. Examples of Loma San Gabriel ceramic (whole vessels): a. Loma Plain composite silhouette (La Ferrería); b. Loma Plain vase (LCBJ3-10); c. polished Loma Plain olla; and d. Chico Red-on-brown bowl with rim tabs and the possible design of a horned-serpent in the interior (Santa Ana).

Figure 8. Examples of Loma Plain sherds: a. Loma Plain; b. Loma Textured; c. Loma Textured (note partial texturing and burnished plain body); d. Loma Textured with stucco; and e. Loma White-washed.

in the stone tool assemblages between both groups. In his discussion of a Loma chronology, Spence (n.d.) states that there appear to be "pure" Loma sites that lack any evidence of Chalchihuites contact or influence, these sites may predate the development of the Chalchihuites culture. This is not to say that there are also Loma sites that are contemporaneous with the Chalchihuites culture yet lack any evidence of contact with Chalchihuites peoples. Nevertheless, there are a series of sites that have intrusive Chalchihuites projectile points or ceramics or that have artifacts with attributes that clearly exhibit Chalchihuites influence. Spence goes on to state, citing Riley and Winters (1963), that there may have been a continuum between Loma and the historic Tepehuan. Recently, building on Spence, Lazalde (1987) has suggested a three part division of this post-Archaic to protohistoic/historic continuum: Period I-Pre-Chalchihuites (ca. 50 B.C.–A.D. 600); Period II-Chalchihuites (A.D. 600–1450); and Period III-Tepehuan (A.D. 1450 to the Historic Period) (Figure 9). Although this scheme provides a general working temporal framework for investigation Loma prehistory, the development of a refined, temporally bounded phase sequence for the Loma culture is badly needed. Until such a framework exists, there cannot be a more comprehensive understanding of any aspect of Loma cultural development.

The Chalchihuites Culture

In order to place the excavations at La Manga in context, it is necessary to briefly summarize the culture history of the Chalchihuites culture. The Chalchihuites culture was first defined by J. Alden Mason (1937). He observed a commonality in the archaeological assemblages on sites stretching from La Quemada and Alta Vista in western Zacatecas to as far north as the El Zape area in north-central Durango (Kelley 1971). Today, our understanding of the Chalchihuites culture is based primarily on the work of J. Charles Kelley and his associates and students. Although Kelley's definition of the Chalchihuites culture is primarily based on the excavations at Alta Vista and at La Ferrería, extensive surveys and excavations at a number of other sites have augmented his formulation. Today, a cadre of Mexican and American archaeologists are building on the foundation built by Kelley.

The Suchil Branch Sequence

The Suchil branch of the Chalchihuites culture, which is found in Suchil and Río Colorado valleys of western Zacatecas, represents the initial Mesoamerican expression in the region. Although the Suchil branch cultural-temporal sequence is defined primarily from the work at Alta Vista, numerous other village and stronghold or fortress sites are present in the Suchil Valley and a number of these were also investigated. Kelley defined five phases for the Suchil branch (Figure 9): Canutillo, Vesúvio, Alta Vista, Calichal, and Retoño, dating from A.D. 200/300–750[1]. Only the Canutillo and Vesúvio phases are manifested in the Río

[1] Here, Kelley's (1971) original temporal boundaries of the various phases he defined are used. This is, however, a bit complicated by the fact that in Kelley (1985), based on a series of new ^{14}C assays from Alta Vista reevaluated and modified the beginning and end dates for both the Suchil and Guadiana branches. The Suchil branch sequence was revised to date A.D. 200 to 1,000 rather than A.D. 200 to 750. The Guadiana sequence was revised, including the addition of a new phase—the Molino phase, to date from ca. A.D. 875 to 1400+ rather than A.D. 600 to 1350+.

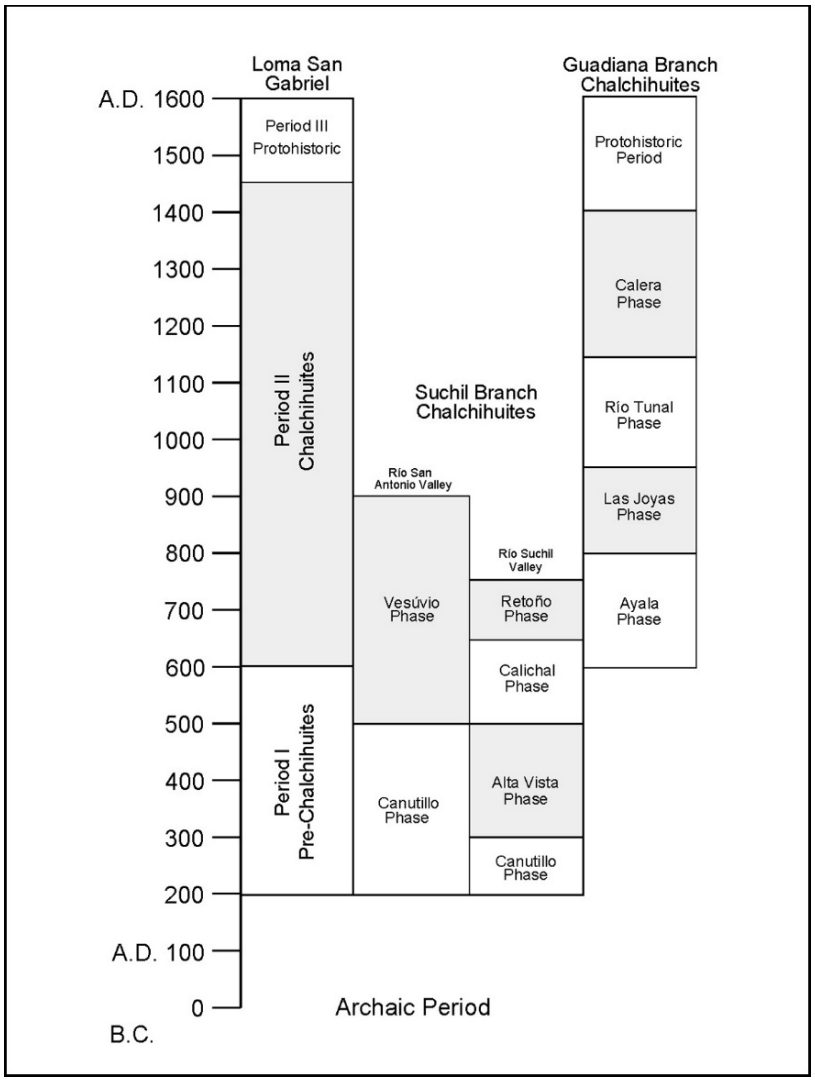

Figure 9. Loma San Gabriel cultural periods and Suchil and Guadiana branch Chalchihuites phases.

San Antonio valley while the Río Colorado valley in which Alta Vista is located manifests the Canutillo, Alta Vista, Calichal, and Retoño phases.

Canutillo Phase (A.D. 200–300/500)

The Canutillo phase represents the initial Preclassic period Mesoamerican tradition in western Zacatecas (Kelley 1971, 1989b; Trombold 1985). Small village sites typically consist of a series of house platforms surrounding small plazas (e.g., E. Kelley 1976). There is some evidence, the presence of Loma ceramics, to suggest some Canutillo settlements had earlier Loma components or developed as some Loma peoples were absorbed or displaced as a result of the Mesoamerican colonization of the area. A number of sites, including Alta Vista, that would become major Chalchihuites centers have earlier Canutillo occupations.

Subsequently, I have argued, based on an evaluation of data from the West Mexican Coast and calibrations of Kelley's ^{14}C assays, that his original dates for the Guadiana sequence, and therefore the Suchil sequence, were essentially correct (Foster 1995b, see also 2017a). More recently, Punzo Díaz and Ramírez Luna (2008) have offered a slight revision of the dating of the Guadiana branch phases as proposed by this author (Foster 2000:205–209, Figure 12.3, 2002). Since the modifications proposed by Punzo Díaz and Ramírez Luna adjust the temporal boundaries of some of the phases by only 50 years, the dating argued by myself is retained for this discussion with one exception, the Molino phase (see below).

Diagnostic ceramics for the phase are Canutillo Red-filled Engraved (Kelley and Kelley 1971:9–27) and Gualterio Red-on-cream (Kelley and Kelley 1971:49–55). A variety of vessel forms occur, some with rim tabs, with decoration on the interior or exterior. Notably, Vista Paint Cloisonné and Negative A appear late as trade wares (Kelley and Kelley 1971:159–173). The core architectural components of Alta Vista are associated with the Canutillo phase (Kelley 1989b:408–409).

Vesúvio Phase (A.D. 500–900)

The Vesúvio phase replaces the Canutillo phase in the Río San Antonio valley ca. A.D. 500 and lasts to ca. A.D. 950/1050 (Foster 1995a; Kelley 1971, 1985). By around A.D. 500 Vesúvio Red-filled Engraved (Kelley and Kelley 1971:37–45) evolved from Canutillo Red-filled Engraved; it is found in association with Gualterio Red-on-cream. This phase was primarily defined based on excavations at the village site of El Vesúvio where adobe architecture and cobblestone masonry roof support columns (not yet identified in previous Canutillo phase contexts) were identified. The site contained a complex of courts, altars, platforms, house platforms, and an apparent communal kitchen near which a quantity of burned beans and corn cobs were recovered (Kelley 1992).

In addition to Vesúvio Red-filled Engraved, Canutillo Red-filled Engraved and Gualterio Red-on-cream, carryovers from the Canutillo phase occur along with a small number of new ceramic types (Michilía Red-filled Engraved, Suchil Red-on-brown, Suchil Red-rimmed, and Suchil Red-rimmed) that would come to dominate in the Alta Vista phase. Some Vista Paint Cloisonné and Negative A were also recovered from Vesúvio phase contexts. An array of flaked- and ground- stone artifacts as well as some turquoise tesserae also occur in Vesúvio phase contexts. Flexed and semi-flexed burials of children and adults were recovered; associated funerary offerings were few and appeared to be personal jewelry (Kelley 1992).

Alta Vista Phase (A.D. 300–500)

The Alta Vista phase marks the transition to the Classic period in the Suchil branch of the Chalchihuites culture. Two major ceremonial centers, Alta Vista and Cerro de Moctehuma are built or greatly expanded at this time and the Alta Vista polity spreads throughout the Río Suchil valley into the Río Graceros drainage to the west (Kelley 1990a).

It is during this time that Alta Vista saw the construction of the site's nucleus (ca. A.D. 400–450) (Kelley and Kelley 2001). The site was clearly the primary ceremonial center of the Suchil Branch and came to be characterized by a variety of elaborate architectural features including a pyramid-plaza complex with pyramid containing a crypt with multiple burials (Kelley and Kelley 1980), a hall of columns, a labyrinth observatory with a free-standing gnomon at its eastern end, as well as a series of courtyards and other apparent administrative complexes. Alta Vista unequivocally becomes a Mesoamerican ceremonial center and the Chalchihuites a Mesoamerican cultural tradition. Kelley (e.g., 2000) argues that Alta Vista may have been established as an astronomical center by foreign emissaries, probably from Teotihuacán (Aveni et al. 1982:316; Kelley 2000:181; Kelley and Kelley 2000).

During the Alta Vista phase there was a proliferation of Chalchihuites material culture. Michilía Red-filled Engraved and Suchil Red-on-brown are the diagnostic ceramics for the phase (Kelley and Kelley1971:29–36, 57–76). These come in a variety of vessel forms with design elements that include an array of geometric elements and life forms. Also present are Vista Paint Cloisonné and Negative A pottery. Kelley 1990a:12) notes these are intrusive ceramic types that mark incorporation of the Suchil Chalchihuites into a larger interaction sphere involving West Mexican cultures to the south. The increase of exotic goods present is seen as further evidence of increased and expanded regional and pan-regional interaction.

Additionally, Alta Vista is the focal point of a network of roads radiating from the site. Also found are a series of prehistoric mines that produced a soft whitish-blue stone locally referred to as "chalchíhuitl." In addition to Alta Vista's vernal equinox labyrinth, the nearby sites of El Chapin and Cerro Pedregosa served

sun watching outposts that used the same horizon marker, Picacho Peak, to mark the summer and winter solstice sunrises (Kelley and Kelley 2000). Although Alta Vista was not the only major site in the Suchil Valley, the significance of the site and the Chalchihuites culture as a whole in Mesoamerican history cannot be understated. The reader is referred to Kelley (2001) for his most recent concise summary of Alta Vista and to Medina González and García Uranga (2010) for an authoritative history of research at Alta Vista.

Calichal Phase (A.D. 500–650)

The beginning of the Calichal phase appears to mark a widespread abandonment of sites, including Alta Vista, in the Río Colorado valley. What remains are a scattering of small agricultural villages where some Michilia Red-filled Engraved and Suchil Red-on-brown ceramics continue to be made. Two new ceramic types, Mercado Red-on-cream, and Amaro Red-on-cream, which are derived from Michilia Red-filled Engraved and Suchil Red-on-brown with influences from Gualterio wares, become the diagnostic types of this phase (Kelley 1971:784; Kelley and Kelley 1971:77–93, 95–103). This phase also marks the widespread cultural decline of the Suchil Chalchihuites of western Zacatecas. There is a visible decline and disappearance of the finer ceramic decorative techniques such as engraving and champlevé and in the overall quality of the ceramics being made. Many cultural traits that typified earlier phases disappear altogether. Ceremonial centers are abandoned and there was a general deterioration of the quality and complexity of architecture. Although stronghold sites continue to be occupied there appears to have been a migration of peoples out of the area (Kelley 1971:784–785).

Retoño Phase (A.D. 650–750)

Widespread cultural decline of the Chalchihuites culture continues during the Retoño phase. As its production declines, Mercado Red-on-cream gives rise to Refugio Red-on-brown, and Michilia Red-filled Engraved and Suchil Red-on-brown disappear. Refugio Red-on-brown, notable for its basked-handled vessels as well as tripods with rim tabs, becomes the diagnostic ceramic type for this phase (Kelley 1971; Kelley and Kelley 1971:105–113). Little is known of other types of material culture (Kelley 1971:785–786).

The Guadiana Branch Sequence

The development of the Guadiana Branch occurs as a result of the expansion of the Chalchihuites culture into Durango and its rise is thought to be associated with the decline and collapse of the Suchil Branch in western Zacatecas; however, the timing and reason(s) for that expansion are unclear (Kelley 1990b). As noted above, our understanding of the Guadiana Chalchihuites sequence is based almost exclusively on the work done at La Ferrería (Kelley 1971, 1990b). Kelley (1971) divided the Guadiana branch sequence into four phases, the Ayala, Las Joyas, Río Tunal, and Calera phases, which date from A.D. 550/600 to 1350+ (see Figure 9).

Ayala Phase (A.D. 600-800)

The Ayala phase, which is virtually identical to the Calichal phase of western Zacatecas (Kelley 1971, 1985, 1990b), is the initial phase in the Guadiana Chalchihuites sequence. It is defined by the presence of Mercado and Amaro Red-on-cream ceramics (Abbott 1960; Kelley and Kelley 1971:77–94, 95–105), although the Kelleys (personal communication, 1995) subsequently considered the differences between the two types insignificant. Mercado Red-on-cream comes in variety of vessel forms with decoration limited to the exterior of vessels while Amaro Red-on-cream appears as bowls with decorated interiors. Both are commonly decorated with geometric elements and life forms. Mercado life forms usually occur in panels on the sides of vessels below the rim, and Mercado tripod vessels commonly have rim tabs. Amaro interiors are often halved or quartered with life forms or geometric designs within the panels.

It is during the Ayala phase that the first evidence of Chalchihuites contact with the cultures of the Mexican West Coast appears. A variety of ceramics from the Chametla area of Sinaloa appear and other West Coast

materials found includes figurines (White-Filleted), spindle whorls, and various small items including copper (Foster 2000; Kelley 1971; Kelley and Winters 1960; Kelly 1938).

Refugio Red-on-brown (Kelley 1990b; Kelley and Kelley 1971:105–114), a poorly made ceramic type, appears late in the Ayala phase. It is the last Suchil Chalchihuites style ceramic type (Kelley 1990a) and it quickly evolved into Nevería Red-on-brown (Kelley and Kelley 1971:115–124).

Las Joyas Phase (A.D. 800-950)

Kelley (1971:786) saw the Las Joyas phase as a time of "remarkable" revitalization of the Chalchihuites culture with the introduction of many older Chalchihuites traits and concepts into the Durango area. The diagnostic ceramic type for the phase is Nevería Red-on-brown, which commonly appears as basket-handled vessels (Kelley and Kelley 1971:115–124). In most cases the handles are representations of double-headed serpents grasping opposing sides of the vessel in their mouths. They are decorated with various symbols that include the Venus symbol, the cross of Quetzalcoatl, eagles, anthropomorphs, and serpents. Vessel exteriors are decorated with probable representations of the Earth Monster, Xolotl, and animals such as dogs or coyotes or squirrels.

Also found is Lolandis Red-rimmed (Kelley and Kelley 1971:125–127). Despite the fact that this type was produced in quantity in Durango, its origins are on the West Coast (Kelley 1990b; Ward 1967). The appearance of Lolandis Red-rimmed and a significant increase in the influence of West Coast cultures in the Durango uplands during the Las Joyas phase led Kelley (1990b) to suggest that West Coast peoples migrated into the uplands at this time. This may have been tied to a concomitant period of inundation of much of the West Mexican coastal plain (see Foster 2017b:165–166). West Coast ceramic types from the Chametla (Kelly 1938) and Amapa (Grosscup 1976) areas, along with smoking pipes, copper ornaments, raw shell and shell ornaments, spindle whorls, and pyrite mirrors are found in Las Joyas phase contexts.

El Campo Buff was introduced into the Las Joyas phase ceramic assemblage that includes plainwares and polished red and black wares that sometimes appear as effigy vessels (Kelley 1971). The Morcillo Molcajete is also introduced and it typically appears as a small tripod bowl (Kelley and Kelley 1971:129–136).

Río Tunal Phase (A.D. 950-1150)

It is during this time that the Guadiana Chalchihuites reaches its maximum geographic extent. Río Tunal phase sites and components have been identified as far north as the Zape and Villa Ocampo areas of northern Durango. In the Guadiana valley, the Río Tunal and the subsequent Calera phases are represented by an apparent limited and scattered occupation (Kelley 1971). Otinapa Red-on-white, which is decorated with deep red geometric and rectilinear design elements that occur on a cream to chalky-white slip (Kelley and Kelley 1971:137–144), is the diagnostic ceramic type for this phase. Vessel forms include ollas, small globular jars with straight or slightly flaring necks, and large bowls that often have composite shapes. Also found in low frequencies are basket-handled Nevería-type vessels decorated in the Otinapa style, and Canatlán Red-banded is introduced (Kelley and Kelley 1971:145–146). Morcillo Molcajetes carry over and remain common. Other artifact types include stone pestles, paint palettes, "collar button" spindle whorls, and late, smoking pipes, copper items, and intrusive ceramics from the Guasave area and other Sinaloa polychromes that indicate further interaction with peoples of the West Coast (Kelley 1971, 1986, 2000; see also Jiménez 2020).

Calera Phase (A.D. 1150-1350/1400)

The Calera phase is defined by the presence of Nayar White-on-red (Kelley and Kelley 1971:149–158; Peithman 1961). Upper portions of vessels are slipped in a bright red that is decorated with a thick white paint that easily flakes. Design elements consist of nested triangles and circles, panels divided into quarters, and checkerboard-like designs that tend to be large and haphazardly placed around the vessel's body.

Canatlán Red-banded carries over and Madero Fluted (Kelley and Kelley 1971:147–148) is introduced. Also found are smoking pipes and collar-button spindle whorls.

At this time many new traits were introduced into the area greatly influencing the local culture(s). Many vestigial Chalchihuites ceramic traits become extensively modified or disappear completely. The Calera phase and cultural dynamics of this time remain poorly understood.

Molino Phase (A.D. 1350-1400+)

Kelley (1985) added a provisional fifth phase, the Molino phase, to the Guadiana branch sequence as a result of the study of a collection of material recovered from the site of Cañón del Molino (Ganot Rodriquez and Peschard Fernandez 1990, 1995, 1997; Kelley 1986). The site's ceramic assemblage is a mix of late Chalchihuites types and late types from the Mexican West Coast. Additionally, there is an apparent mixing of the two ceramic traditions as expressed in Molino Red-on-cream, a well-made and highly polished ware that exhibits vessel forms adapted from West Coast types and decorative elements that combine Chalchihuites and West Coast styles (Ganot Rodriquez and Peschard Fernandez 1995:Figure 8.6). Other West Coast items (copper, shell) are also common. Nevertheless, the significance and parameters of the Molino phase in Durango's prehistory await further elucidation. More recently, based on recent work at the site and a critical review of dating of the archaeological phases used in Durango, it has been argued that the Molino phase is best subsumed in the preceding Río Tunal and Calera phases (Murguía Hernández 2013; Punzo Díaz and Ramírez Luna 2008 2017; Punzo et al., 2008; Tsukada 2006). Given the arguments they put forth, the use of the Molino phase should be abandoned unless it can otherwise be demonstrated that such a designation has merit beyond the site of Cañón del Molino itself.

Prehistoric to Historic Period Transition

When the Spanish arrived in Durango, most of the area along the eastern foothills of the Sierra Madre was occupied by the Tepehuan. Citing a series of Tepehuan material culture traits (pipes, terraced incense burners, and certain ceramic traits that include tripod and handled vessels reminiscent of Chalchihuites ceramic types), Riley and Winters (1959) suggested a direct continuum between the prehistoric Loma and remnant Chalchihuites peoples and historic natives of the area. Subsequently, it has suggested that the Southern Tepehuan *xiotalh* ceremony may also have its roots in the Guadiana Chalchihuites (Willett 1997).

The prehistoric period of Durango's western uplands is poorly understood. The Acaxee and the Xixime occupied the area when the Spanish arrived. They practiced dry land farming, were actively engaged in warfare, and were known to take trophy heads and cannibalize their captives (Beals 1932; Brand 1933). Recently, Punzo Díaz and Ramírez Luna (2008, 2017) suggest that the Guadiana Chalchihuites culture lasted to ca. A.D. 1350 and that it was supplanted with the arrival of "prototepehuans," a group arriving in the region from the northwest. Initially Punzo Díaz and Ramírez Luna referred to this period, A.D. 1350–1563, as the Kuhuli phase; however, they have subsequently renamed it the Bajikam phase. Clearly, the transition to the Protohistoric period and the origins of the region's native population remain points of debate.

FIELD METHODS

Archaeological features and remains were scattered over the hill designated La Manga. The site was sufficiently large that it could not be fully investigated with the resources, time, and personnel available. Thus, two portions of the site were selected for investigation. The first, Area 1, was situated atop the hill on which the site was located. The second, Area 2, was located approximately 11 m downslope on a terrace east of Area 1. Additionally, test trenches were excavated on a narrow intervening terrace between Areas 1 and 2. Prior to the excavations, the hill was surveyed with the location of features and artifacts noted on a sketch map of the site that unfortunately conveys little useful information.

Structures were initially defined by the excavation of a series of test trenches. Once the size and shape of a structure or feature was determined, the fill covering it was excavated. Feature fill was shallow and homogeneous and thus it was not excavated in stratigraphic units. The fill was not screened and artifacts were collected as encountered. Artifacts were sorted and bagged by general type (i.e., ceramics, ground stone, flaked stone). Provenience information was recorded on the bag tag. Collected artifacts were returned on a daily to the La Ferrería field laboratory where they were washed and cataloged. At the end of the field season the artifacts were tallied at the Walker Museum Archaeological Laboratory at the University of Chicago. Mapping was done with a telescopic alidade and plane table (Jay 1957:17–18); Jay produced the original planview maps used here.

The following discussing is hindered by several factors. Among these are the lack of an overall site map that displays the distribution and relationship of the features investigated, conflicts between scales on maps and reported dimensions of features, and the lack of metric data regarding the size of some of the features. Additionally, the system used to designate features (platforms and structures) was ambiguous and these terms were applied inconsistently across the site. Because of this, I have reassigned sequential numbers to the features investigated and added some room designation in an effort to reduce the aforementioned confusion (Appendix A). Metric data for the features described below was generated using the scaled maps prepared by Jay and digitizing them using a CAD program.

ARCHITECTURE

The construction materials for these features, derived from local cobbles and boulders, were generally unshaped or roughly shaped. These were often combined with outcropped boulders and bedrock. The architecture was dominated by two general feature types; large, paved rectangular platforms and smaller rectanguloid features, presumed houses, that generally consisted of a smaller, paved floor contiguous with an unpaved space outlined with stone. Also found were rectangular, partially to nearly fully paved, presumed houses. Both Areas 1 and 2 had possible plaza areas.

Area 1

Area 1, comprised of Features 1 through 5 (Figure 10), was dominated by an L-shaped configuration of features that consist of a rectangular platform (Feature 1) that was tethered by a line of small rocks to a roomblock of at least three rooms (Feature 2). Just to the northeast and to the north of Feature 2 were two noncontiguous features, Features 3 and 4. Together these four features appear to have bound a plaza area. At the southeast corner of Area 1 was Feature 5.

Feature 1

Feature 1 was a paved masonry platform, a single course high, with its long axis oriented north-south; it measured a maximum of 9.8-m-long × 5.9-m-wide encompassing an area of approximately 51 m^2. The southern edge of the feature was marked by a natural outcrop of several small to medium boulders and rocks where the hilltop dropped to the talus covered hill side. The east and north edges of the platform were well defined by linear rows of small to medium-small rocks; some were vertical slab-like and some of these had fallen over. Many of the stones used to edge the platform were roughly shaped or appeared to be stone that had been split to form a flat face; this facilitated defining the northern and eastern edges of the platform during excavation. The opposite sides of such stones facing the interior of the feature were not shaped or otherwise modified. The west edge of the platform was not as well defined; trenching along the wall exposed approximately 8.1 m of the wall before it became too poorly preserved to further delineate.

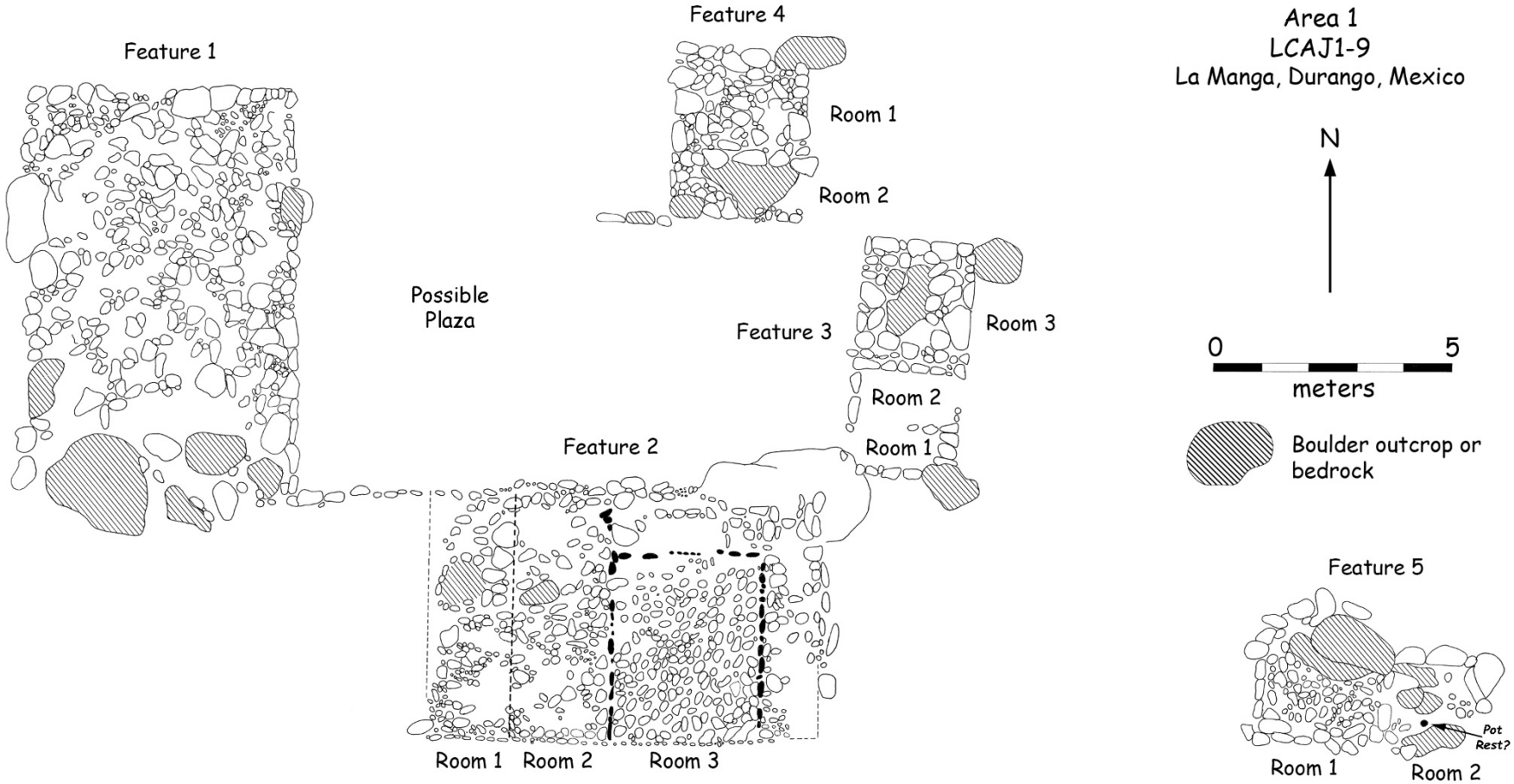

Figure 10. Area 1 at La Manga showing Features 1 through 5.

The platform, resting on culturally sterile native soil and rock, incorporated some naturally occurring large rocks and small boulders into the east and west walls and the southern end of the feature. The paving within the platform was not solid across the feature with the gaps in the paving being of varying sizes. No particular orientation or pattern was observed regarding the placement of the paving stones, all of which were unmodified or only possibly slightly modified by flaking. It is assumed that the paving likely served as a foundation for an earthen floor that covered the rock and filled the gaps between stones although the evidence of such was not identified. As the paving stones protruded through the ground surface of the platform at the time of the excavation, the feature appeared to have been impacted by post-occupational erosion.

Trenching designed to delineate the platform indicated the presence of 20 to 30 cm of fill adjacent to the feature. Few sherds were recovered from the trenching of the exterior of the platform and those that were recovered were predominately plainwares. Two partial "handaxes" were also recovered.

Two test trenches were excavated in the platform. One was oriented northwest-southeast along the east wall of the feature and the other was oriented east-west through the platform. These were excavated to a depth of 40 cm below the surface of the feature where culturally sterile rock and soil were encountered. The trenches were initially intended to be 1-m-wide, but one of them is reported being 1.4-m-wide and 3.4-m-long. A substantial number of plainwares sherds were recovered. Notably, Jay (1957:24) indicates surprise at the lack of small stones in the trench fill. It is not exactly clear what she is suggesting, but presumably she is indicting the platform fill consisted of clean homogenous soil as well as the paving stones. Although the trenches are reported to have been excavated to a depth of 40 cm below the surface, Jay reports the recovery of sherds at 45 cm below the surface.

While exposing the platform, a cluster of rocks was found along the exterior of its north wall. Initially, it was postulated that this jumble of rock sloping downward from the wall represented the remnant of a stairway. However, upon investigation it was determined to be collapsed wall.

Feature 2

Feature 2, located southeast of Feature 1, consisted of a roomblock of three contiguous masonry rooms. This roomblock was tethered to the southeast corner of Feature 1 by a line of small stones. It is worth mentioning that Jay noted the similarity of these rooms to those found at the Weicker site (Foster 1986; Kelley and Shackelford 1954) excavated in 1952. Her observation is borne out by a review of photographs and illustrations published in Foster (1986); see below.

Room 1. Room 1, outlined on Figure 10 with dished lines that apparently approximate the east and west walls, was the western most room. It measured a maximum of 5.2-m-north-south ×1.8-m-east-west and encompassed approximately 9.2 m^2. The western part of Room 3 consisted of a very rough area of small stones; it was unclear whether these were naturally occurring or whether they were part of the room's paving. Little other description of Room 1 was provided.

Room 2. Room 2 was located west of Room 1; the west wall of Room 2 is highlighted with a dashed line (projected?) in Figure 10. Based on this boundary, Room 2 measured 2.1-m-east-west × 5.3-m-north-south and encompassed approximately 10.4 m^2. This makes it nearly half the size of Room 1 and only slightly larger than Room 3.

An adobe-lined "basin" was exposed in the northwest quadrant of Room 2. This however, is not identified in Figure 10; it may have been in the open (unpaved) circular area in the north end of the room, which measured approximately 90-cm-north-south × 1.9-m-east-west. The basin itself measured 22 cm in diameter, it was 14-cm-deep, and had straight sides and a relatively flat bottom (Figures 11 and 12a). No

evidence of burning was evident and the local workman suggested it was a pot rest, although based on Figure 11, that seems unlikely.

The basin was discovered when an "adobe plug" was exposed during the removal of the paving stones from the roomblock. This suggests that the adobe basin was put in place and subsequently filled or sealed prior to the paving of the room.

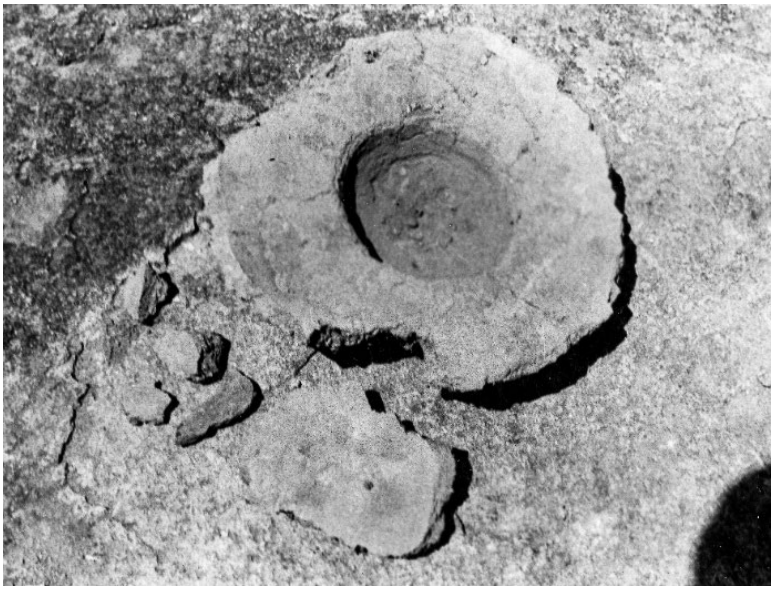

Figure 11. The Area 1, Feature 2, Room 2 basin after excavation of removal from situ. The basin measured 22 cm in diameter and 14 cm deep (Figure 12A).

Two additional partial basins (Figure 12b and 12c) were found about a meter to the north-northwest of the first basin. No mention was made of the dimensions or depths of these; they appear to have been shallower and less formal than the first. As with the first, the precise location of these is unclear. Like Room 1, the paving in Room 2 became rougher and irregular the greater the distance from the walls.

Room 3. Room 3, the eastern most room consisted of one larger room, of which the north, east, and west walls are highlighted in black in Figure 10, and a smaller room or perhaps patio entry area on the north end of the room. The northeast corner of Room 3 appears to have abutted a large outcropped boulder. The long axis of the room was oriented north-south; overall, it measured 5.4 × 3.2 m and encompassed approximately 16.6 m^2. The larger room (outlined in black) was nearly completely paved although paving in the northwest corner was more scattered and sparser. The dimensions of this paved area were 3.2 × 3.1 m covering an area of 12.4 m^2. Based on the map, the south wall, as was the entire south wall of the roomblock (Rooms 1–3), appears to have been delineated by a row of small rocks.

The smaller, mostly open area at the north end of the larger paved portion of Room 3 measured 1.2 × 3.3 m, covering an area of 4.2 m^2; this area was not well delineated. Rocks used to outline the northern, eastern, and western walls generally appeared larger, were scattered, and were more irregularly shaped than those used in the construction of the larger room. The function of this area is unclear. It may have been a small porch area, assuming the entry was at the north end of the room or, if at the back of the room, it may have been a small storage area.

Excavation of Room 3 was begun in its southwest corner. Clay fill was present and it appeared the paving stones had been covered with clay to form a floor. Nevertheless, the surface of the room was uneven with paving stones protruding suggesting the original floor surface had long been eroded although some clay fill

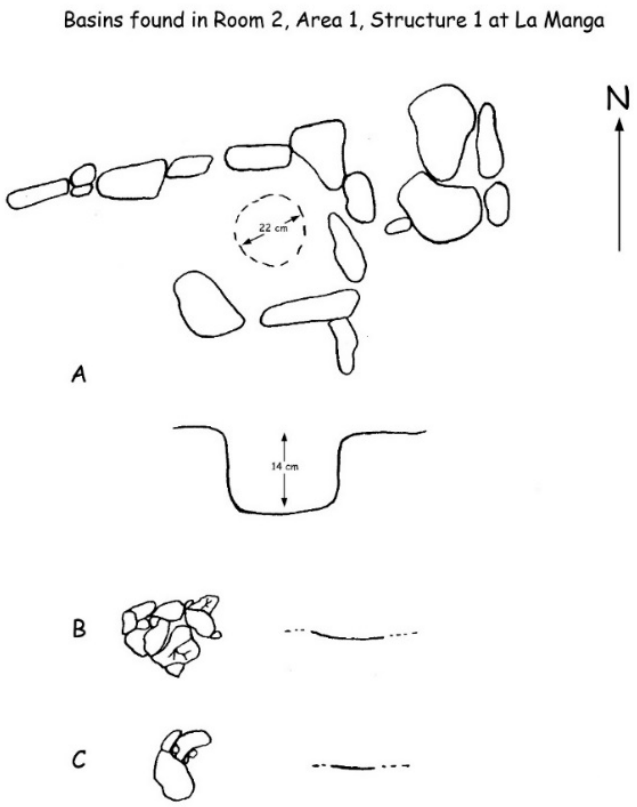

Figure 12. The planviews and profiles (not to scale) of the three basins identified in Room 2 of Feature 2 in Area 1.

between the paving stones remained. The paving in Room 1 appeared to rise toward the center of the room. Additionally, the paving became more "rough and irregular" the greater the distance from the walls. Overall, the floor of Room 3 was about 6 cm higher than that of the adjacent Room 2. At a depth of 3 to 13 cm below the surface, a number of sherds from a large olla were exposed. Once the paving in Room 3 had been exposed, it was removed exposing only culturally sterile fill and bedrock.

Possible Plaza

The final effort in the area of Features 1 and 2 was the excavation of a test trench oriented east-west through the possible plaza area east of Feature 1 (see Figure 10). The dimensions and precise location of the trench were not provided and no artifactual material was reported covered. No precise boundaries for this area were suggested, thus estimating its size is problematic. Nevertheless, based on Figure it is projected the area encompassed a minimum of 60 m^2 to as much as 85 m^2. Regardless, the function of this possible plaza area remains unresolved.

The east and northeast boundary of the presumed plaza appeared to be defined by several additional features. Excavations in this area resulted in the recovery of quantities of plainware sherds as well as flaked stone and one well-made projectile point. As Features 3 and 4 became more fully exposed, it was observed that both incorporated naturally occurring bedrock and boulder outcrops. Jay (1957:27) reports that the paving stones in the paved portions of the two features were larger than those used in Features 1 and 2 with stones ranging in size from 20 to 30 cm in width and up to a meter in height; some of these were set upright and many were irregularly shaped.

Feature 3

Feature 3 was made up of three rooms with Rooms 1 and 2 being outlined with stone and unpaved; Room 3 was a paved surface. Overall, the feature measured approximately 4.9-m-north-south × 2.3-m-east-west and encompassed an area of nearly 12 m^2.

The mostly open area outlined with stone abutting the southern edge of the paved surface of Feature 3 was, based on the presence of two stones projecting westward from its eastern wall, divided in two (Rooms 1 and 2) (see Figure 10). Overall, this generally unpaved area measured a maximum of 2.1-m-north-south × 2.4-m-east-west encompassing approximately 5.3 m^2. Room 1 measured a maximum of 1-m-north-south × 2.3-m-east-west encompassing approximately 2.5 m^2 (Figure 13) and Room 2 (Figure 14) measured a maximum of 1.1-m-north-south × 2.3-m-east-west encompassing 2.8 m^2. Jay notes that paving in Rooms 1 and 2 was not as extensive and that the stones used were much smaller than those in the feature's paved surface to the north. She (Jay 1957:26) further indicates that, "there were areas in the room where no paving was present and due to much loose rock in the fill it was difficult to identify paving stones in places." Jay subsequently reports that 10 to 20 cm of fill was excavated from the interiors of Rooms 1 and 2 to expose the paving present. No remnants of clay floors were identified and what paving was present was removed exposing only a culturally sterile subsurface; no floor or subfloor features were identified.

Room 3, the paved portion of Feature 3, measured a maximum of 2.8-m-north-south × 2.4-m-east-west; it encompassed an area approximately 6.6 m^2. It was constructed of small boulders and it was approximately 8 cm higher than the adjacent Room 2 (Figure 15). No floor or subfloor features were identified. Little detail regarding Room 3 was provided.

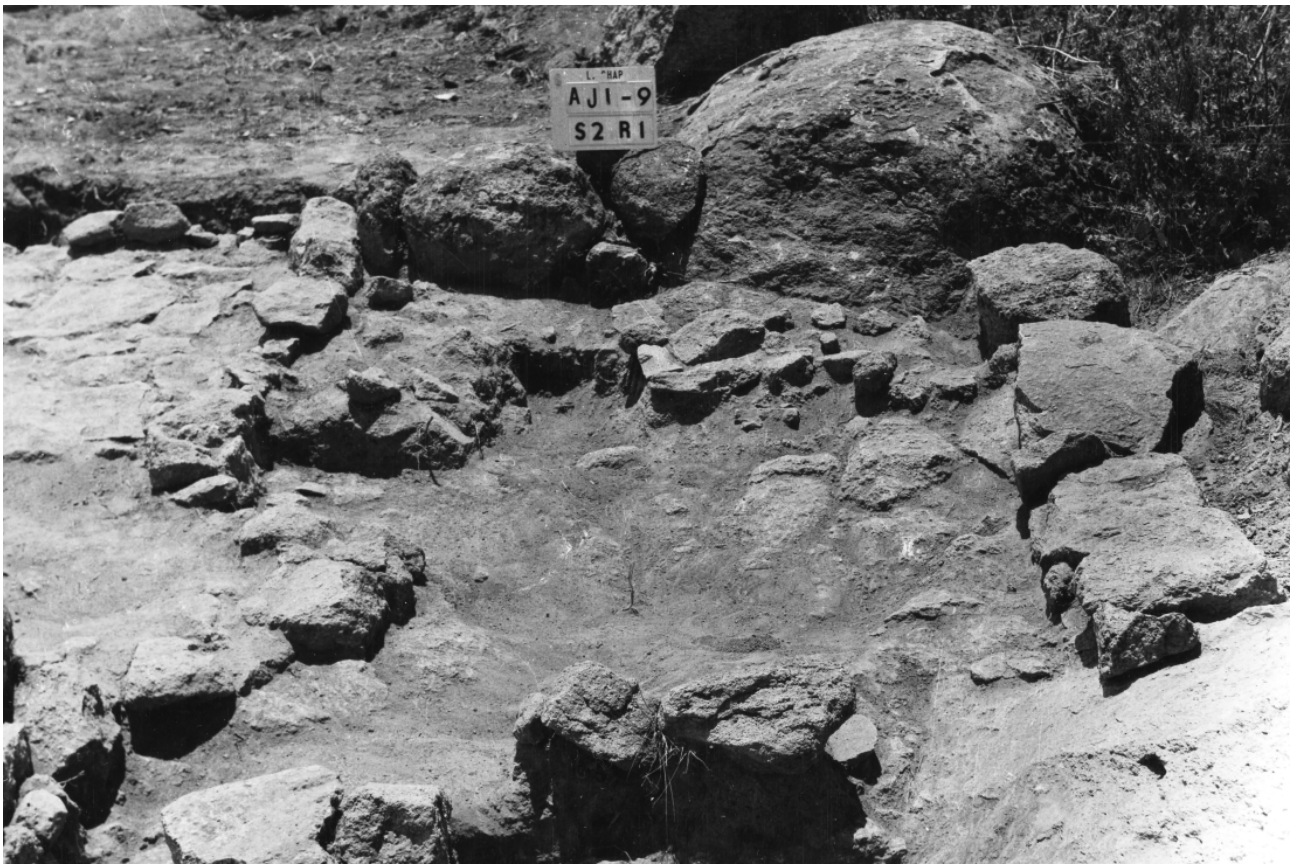

Figure 13. Excavated Room 1 Feature 3, Area 1, at La Manga. Facing west.

Figure 14. Excavated Room 2, Feature 3, Area 1, La Manga. Note extent of paving. Facing south-southwest.

Figure 15. Excavated Room 3, Feature 3, Area 1 at La Manga. Facing west-southwest.

Feature 4

Feature 4 was located approximately 1.3 m to the northwest of Feature 3. Together, these features may have formed the northeast boundary of the possible plaza area. Overall, Feature 4 measured a maximum of 3.7-m-north-south × 2.8-m-east-west and encompassed an area approximately 10 m^2. This feature too appeared to consist of a paved surface (Room 1) attached to a second room (Room 2) outlined in stone and partially paved (see Figure 10).

Room 1 pavement consisted of large rocks and small boulders; a boulder outcrop defined its northeast corner (Figure 16). It measured approximately 2.5-m-north-south × 2.8-m-east-west encompassing approximately 6.8 m^2. The southern edge of this pave area was bounded by a rock alignment that ranged 6 to 15 cm in height. This paved surface was higher than that of Room 2; thus, the effect was stepping down from Room 1 into Room 2.

Room 2 measured approximately 1-m-north-south × 2.9-m-east-west and encompassed 3.2 m^2. Figure 10 also suggests that Room 2 may have incorporated a bedrock surface as paving in the eastern two-thirds of the room. No floor or subfloor features were reported in either Rooms 1 or 2.

An additional test trench was excavated near Feature 4; however, its exact location and size were not reported. The trench was excavated to a depth of 15 to 40 cm where a culturally sterile substratum was encountered. The excavations yielded a core, a polished stone with beveled edges, and a few sherds.

Feature 5

Feature 5 was located at the southeast edge of Area 1 (see Figure 10). A number of vertical stone slabs were visible at the surface and it appeared to be a circular feature about 3 m in diameter (Figure 17). Additionally, a relatively high number of sherds were concentrated in this area. Upon excavation it became evident that the feature was not circular, but that it consisted of two rooms, one was a paved surface and the other was outlined with stone with less paving evident. Small to large rocks and small boulders as well as boulder and

Figure 16. Excavated Room 1, Feature 4, Area 1 at La Manga. Facing northeast.

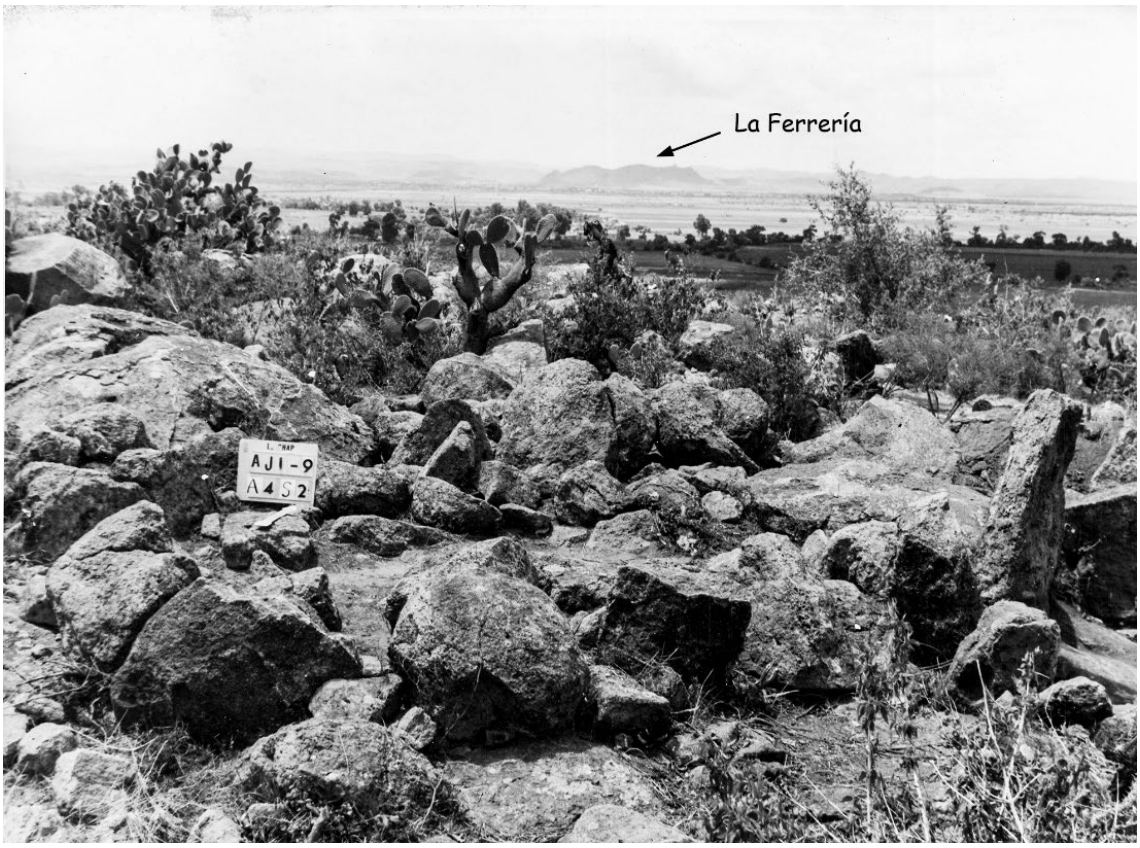

Figure 17. Overview of Feature 5 with fill removed (note: the hill in the background is the hill on which La Ferrería is located). Facing northwest.

bedrock outcrops were used to construct Feature 5. The long axis of the feature was oriented east-west; overall, it measured approximately 4.9-m-east-west and approximately 2.3-m-north-south, encompassing an area approximately 11.4 m^2.

The walls of Room 1, the westernmost room of Feature 5, were composed of large vertical rocks. Those forming the east wall were up to 1 m in height and those along the west wall were up to 1.25 m in height. Some of the vertical wall stones had fallen inward and others had fallen outward. The structure as a whole was surrounded by outcropped rock. Room 1 measured approximately 2.6-m-north-south × 2.8-m-east-west and encompassed approximately 8.3 m^2. The room was completely paved and its surface was rough (Figure 18).

Room 2 was the small, easternmost room. It measured 1.6-m-north-south × 1.9-m-east west and encompassed an area of approximately 3.1 m^2; it was less than half the size of Room 1 (Figure 19). Jay (1957:30) states that "natural rock" at the northeast corner of the room appeared to "cut off" the room. At 15 cm below the modern ground surface paving was exposed. The paving proved to be a layer approximately 5 cm thick; below it was bedrock.

Although plotted on the map of Area 1 and photodocumented, Jay makes no mention of a remnant of an adobe-lined basin exposed in Room 2 (Figure 20). Based on Figure 10, the basin was located in the room's southwestern quadrant. On the photo catalog card, it was described as a shallow bowl-shaped, hard adobe feature that was approximately 3–5 cm thick; no additional dimensions were provided. It was further described as being encircled by stones. No reference to any thermal alteration was made. The feature may have been a pot rest.

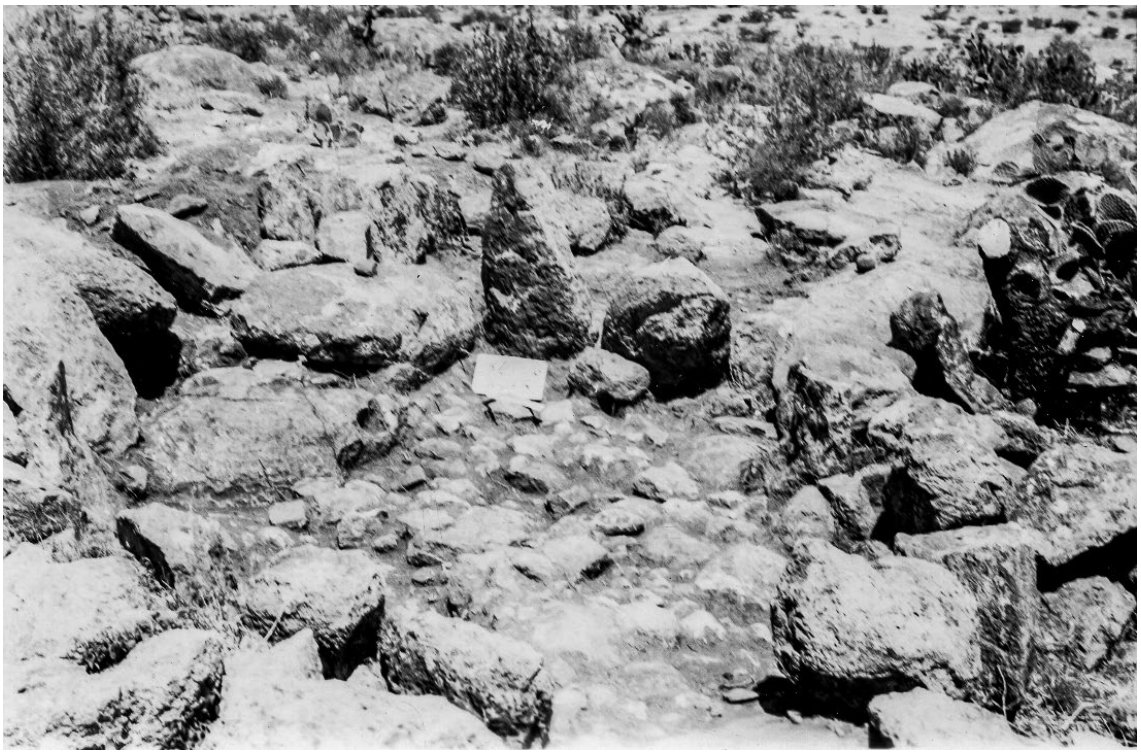

Figure 18. Feature 5, Room 1, Area 1 at La Manga with paved floor exposed after fill removal. Facing east-northeast.

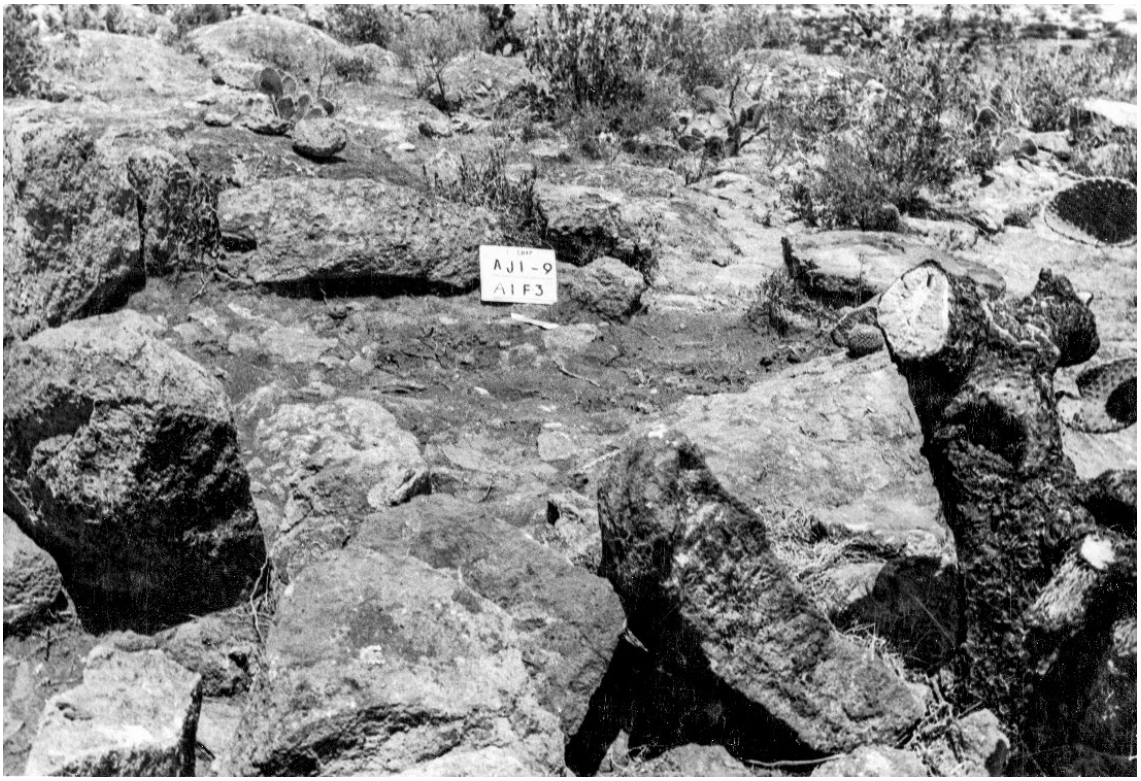

Figure 19. View of Feature 5, Room 2, Area 1 at La Manga. Photo shows the outcropped boulders incorporated into the wall construction and the subfloor of naturally occurring stone exposed after the removal of floor fill. Facing east-northeast.

Figure 20. Remnant of an adobe basin–a possible pot rest encircled by stones, in Feature 5, Room 2, Area 1 at La Manga.

Stairway

Access to Area 1 atop the hill on which La Manga is located was easiest from the east and northeast via the terraces on which Area 2 was located; the other sides of the hill were steep and rocky. Facilitating access to Area 1 from Area 2 was a stairway that was clearly visible from Area 2. The stairway, which was not described in detail, appears to have been bounded by boulders, some of which appear to be outcropped (Figures 21 and 22). Ten probable steps were identified and the feature as a whole appeared to be bedrock and boulders that had been cleared of debris to form the stairway. It was a crudely made feature and somewhat uneven; there was no suggestion that the stones used had been shaped or otherwise altered.

Based on Jay's map of the stairway, it was approximately 9.5 m in length and the steps ranged in width from 0.7 to 1.3 m and were 0.8 to 1.4-m-deep. As can be seen in Figure 21, at the top of the stairs a number of stones are illustrated. Jay made no mention of these; however, one could speculate that they are either a natural outcrop of stone or perhaps paving stones that formed a landing.

Area 2

Area 2 was located on a terrace east [north-northeast?] of Area 1; as noted, it was approximately 11 m below Area 1. This complex of platforms and rooms was similar to that in Area 1 in that it also manifested an L-shaped platform with a row of rooms extending northeastward; both the platform and row of rooms bounded a presumed plaza area (Figure 23). This L-shaped configuration, however, was oriented northwest-southeast as opposed to the one in Area 1 that was oriented north-south. The platform appeared to be approximately the same size as that in Area 1. Like Area 1, a paved platform with an outlined room, Feature 8, was located at the northeast corner on the plaza.

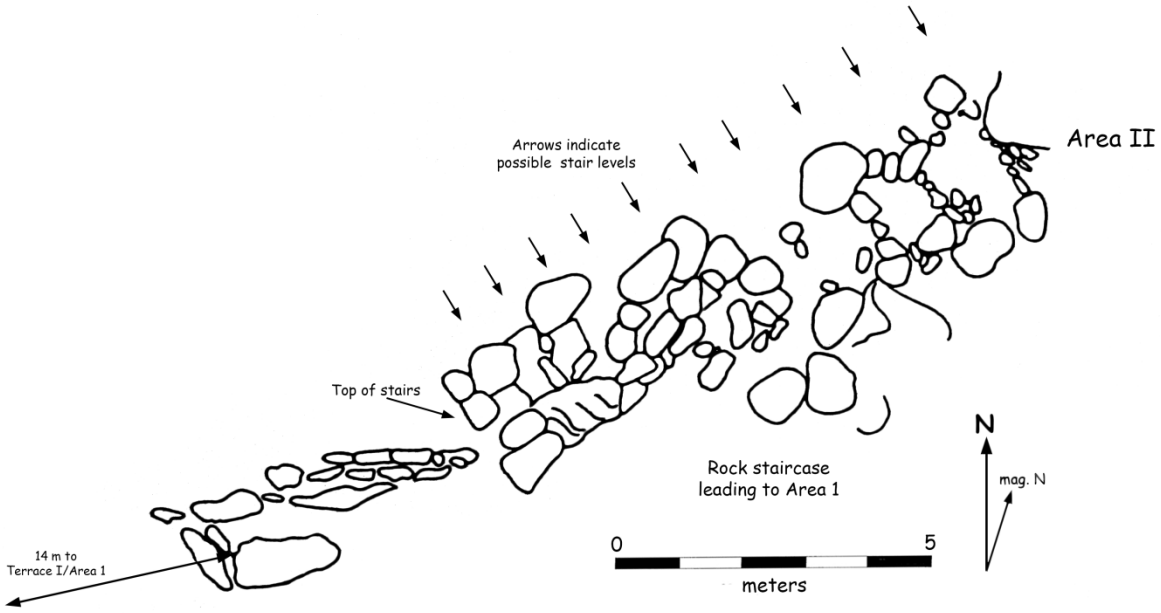

Figure 21. Planview of the stairway from Area 2 to Area 1 atop the hill.

Figure 22. Photo of stairway leading from Area 2 to Area 1. Facing southwest.

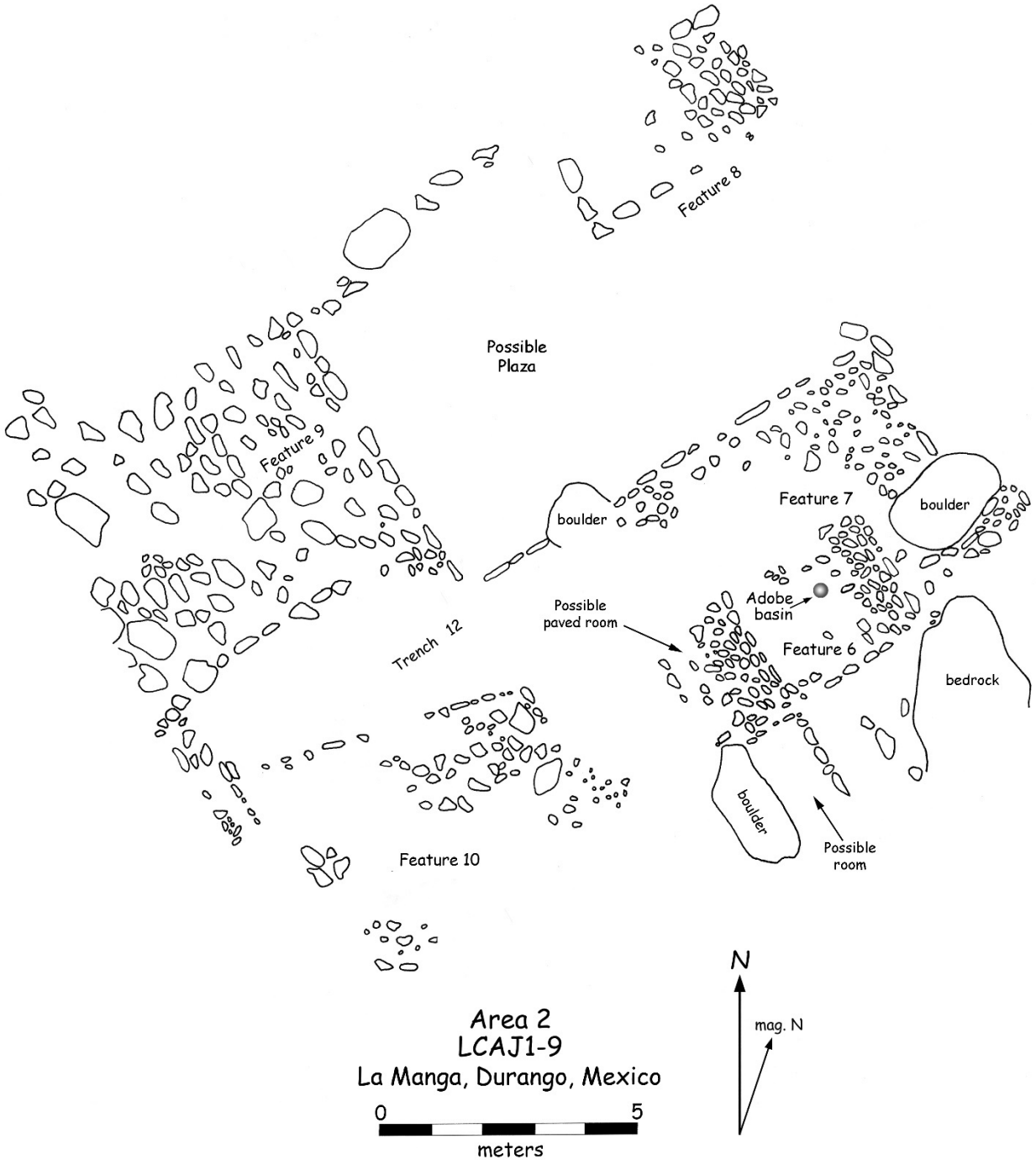

Figure 23. Planview of Area 2, La Manga, Durango.

Feature 6

Feature 6 was located along the southern edge of Area 2 south of Feature 7. It appears to have been a single, nearly square room with upright slab stones defining its northeast corner and the adjacent walls (Figure 24). Excavations revealed floor paving that extended approximately 2 m from the eastern wall before disappearing where the floor sloped downward. The paving present was "level and regular." Feature 6 was 15 cm higher than the partially surrounding Feature 7, and Feature 7 was approximately 30 cm higher than the presumed plaza to the north. Feature 6 measured 2.9-m-northeast-southwest × 2.8-m-northwest-southeast, encompassing an area of approximately 7.3 m^2.

Excavation of Feature 6 exposed another round adobe basin. It was located 1.5 m south of the northern wall of the structure and 70 cm east of the west wall (Figure 23). Jay (1957:33) describes the feature as crumbled with a hole in the middle. It measured 40-cm-north-south × 30-cm-east-west and had a "double edge," part of which had crumbled away. It sounds like the adobe basin found in Room 2 of Feature 5 in Area 1; perhaps the double lining reflects refurbishing of the feature. No mention of thermal alteration was made and its function is unclear.

Review of Figure 23 suggests that perhaps the remnants of a contiguous paved room was present along the west side of Room 6. Additionally, an alignment of stones extending southeast from the southwest corner of Room 6 is suggestive of yet another room, one with a large boulder forming its west wall. Jay, however, makes no mention of either of these features.

Feature 7

Feature 7 was located to the immediate north and northeast of Feature 6, and may have been a platform on which Feature 6 was built. Jay does not, however, suggest this. Upright slabs of stone were present along the northeast portion of the northern wall; these rose to a height of approximately 30 cm above the surrounding surface (Figure 25). The northeast interior corner was partially paved with rough stones. Based on the Figure 25, and assuming Feature 7 encompassed the area south of the presumed plaza and westward to the eastern edges of Features 9 and 10, it is projected that Feature 7 covered a maximum of 39 m^2, excluding the area of Feature 6. If Feature 6 was considered part of Feature 7 by its builders, it may have encompassed as much as 46 m^2. Few artifacts were recovered during the investigation of Feature 7; the ceramics were all plainwares.

Possible Plaza

A presumed plaza was located north of Feature 7. Features 8 and 9 appear to bound the space on the north and west. The eastern edge of this space did not appear to have been delineated by any bounding wall or stone alignment. If the eastern edges of Features 7 and 8 mark the eastern margin of the space, the plaza may have encompassed as much as 50 m^2. Jay makes passing mention that the plaza may have extended westward between Features 9 and 10, an area that was tested by the excavation of Trench 12 (see Figure 23). No information on the results of the excavation of Trench 12 was presented and based solely on the plan map of Area 2, it is not possible to assess the nature of the area between Features 9 and 10 or its relationship to the presumed plaza.

Feature 8

Feature 8 lies due north across the plaza area from Feature 7. It appears to be a remnant of a paved floor with an attached outlined room. The feature was paved and outlined with rough, irregularly-shaped stone; it rose about 30 cm above the surrounding surface (Figure 26). It was poorly preserved and difficult to excavate and define. The feature's fill was composed mostly of dirt with loose rock. Based on the plan map, the overall dimensions of Feature 8 are estimated to be 4.3-m-northeast-southwest × 2.5-m-northwest-southeast with it encompassing approximately 9 m^2. The paved area measured 1.6-m-northeast-southwest

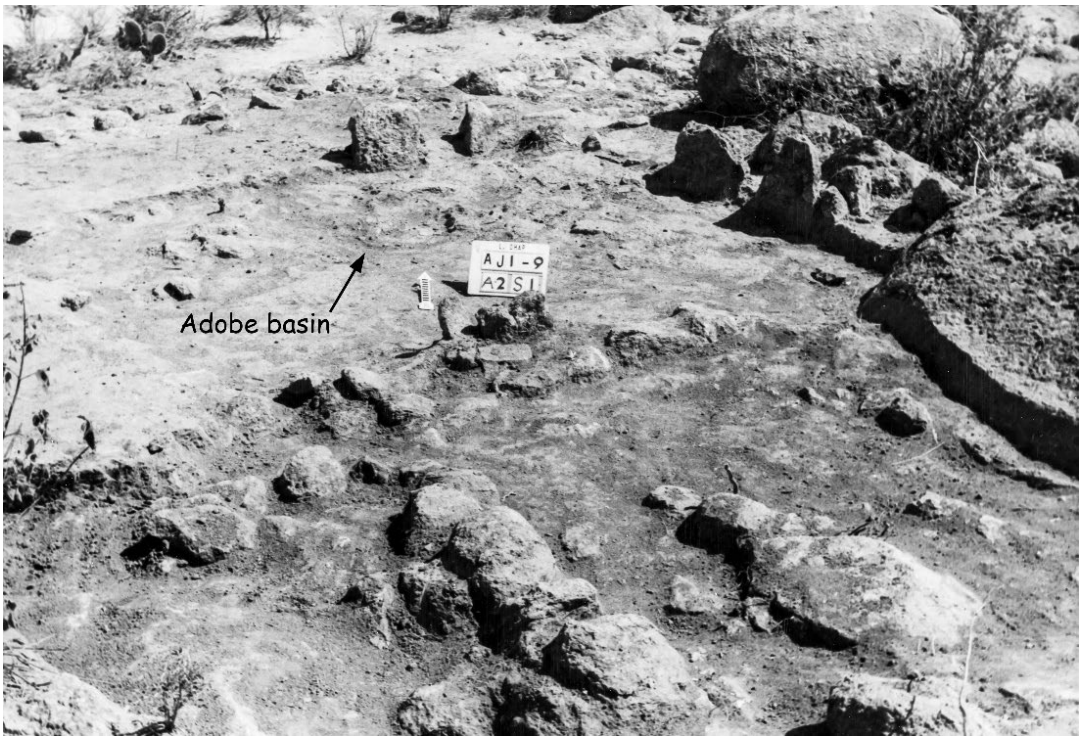

Figure 24. Photo of excavated Feature 6, Area 2 at La Manga. Note the adobe basin in the upper center of the photo. Facing north-northwest.

Figure 25. Feature 7, Area 2. Northeast corner of Feature 7 in the lower left center. Note the aforementioned rough paving in the northeast corner of the feature. As highlight, note a rise to Area 1 in the background (not clear if this is the stairway). Facing south.

× 2.5-m-northwest-southeast encompassing approximately 3.3 m^2. The unpaved area, partially outlined on the south and at the southwest corner is estimated to have measured 2.7-m-northeast-southwest × 2.5-m-northwest-southeast, encompassing approximately 5.8 m^2 making it nearly twice the size of the paved area.

Feature 9

Feature 9 was located west of the plaza area and at the northwest corner of Area 2; it was rectangular in form (Figure 27). Jay (1957:31) states that a rough alignment of stones extended from the northeast corner of the feature towards Feature 8; however, she was doubtful this was constructed or otherwise a cultural feature. The Feature 9 appeared to have been paved, but the stones were scattered with some notable gaps in the paving. The east and south boundaries of the feature were well defined; the northern and western edges were less so. It is estimated that Feature 9 measured 6.2-m-northeast-southwest × 5.5-m-northwest-southeast, encompassing estimated 32.8 m^2. The largest stone used in the platform was 37 cm in height.

Although it is not clear, Jay seems to be indicating the southwest corner of Feature 9 was at or near the foot of the stairway that led up to Area 1. She (Jay 1957:31) further states, " This corner is very interesting for if the two platforms, Platform 3 [Feature 9] and Platform 4 [Feature 10], had existed, then the direct approach to the rock-cut stairs could have been through a plaza area and up onto the edge and corner of two other structures." As mentioned above, an open, almost U-shaped area, was present between Feature 9 and what was tentatively defined as Feature 10. It appears she is suggesting that this area (the area where Trench 12 was excavated) might have served as the access to the staircase to Area 1 and that perhaps it was an extension of the plaza area.

Figure 26. Excavated Feature 8, Area 2 at La Manga. Facing north-northeast.

Figure 27. Southeast corner of excavated Feature 9, Area 2 at La Manga. Facing west.

Feature 10

Feature 10 was an amorphous and tentatively defined feature. As can be seen from Figure 23, a possible alignment of stone was present and it appears that perhaps a northeast corner of the feature was represented (Figure 28). In this northeastern corner area, a scattering of rock was present suggesting the area had been paved or partially so. A northwest corner may also have been represented, but the west and south walls could not be identified. Jay (1957:32) indicates that a slope, presumably a natural slope of the hill and not the stairway that lead to Area 1, started at the postulated southern wall area of Feature 10. Based on the plan map, the east-west alignment of stone possibly representing the feature's northern wall extended for nearly 6 m.

ARTIFACTS

A small assemblage of artifacts was recovered during the excavations at La Manga (Foster 1978; Jay 1957:33–66). The most abundant artifact type recovered was ceramic sherds. Most were types associated with the Loma culture, although the assemblage also included ceramic types associated with the Guadiana branch of the Chalchihuites culture. Some ground and flaked stone along with a small number of other artifact types were also recovered.

Ceramics

The La Manga sherd assemblage was dominated by plainwares including Loma Plain and Loma Textured and the Chalchihuites types El Campo Plain and Brown Utility ware. Decorated types recovered included

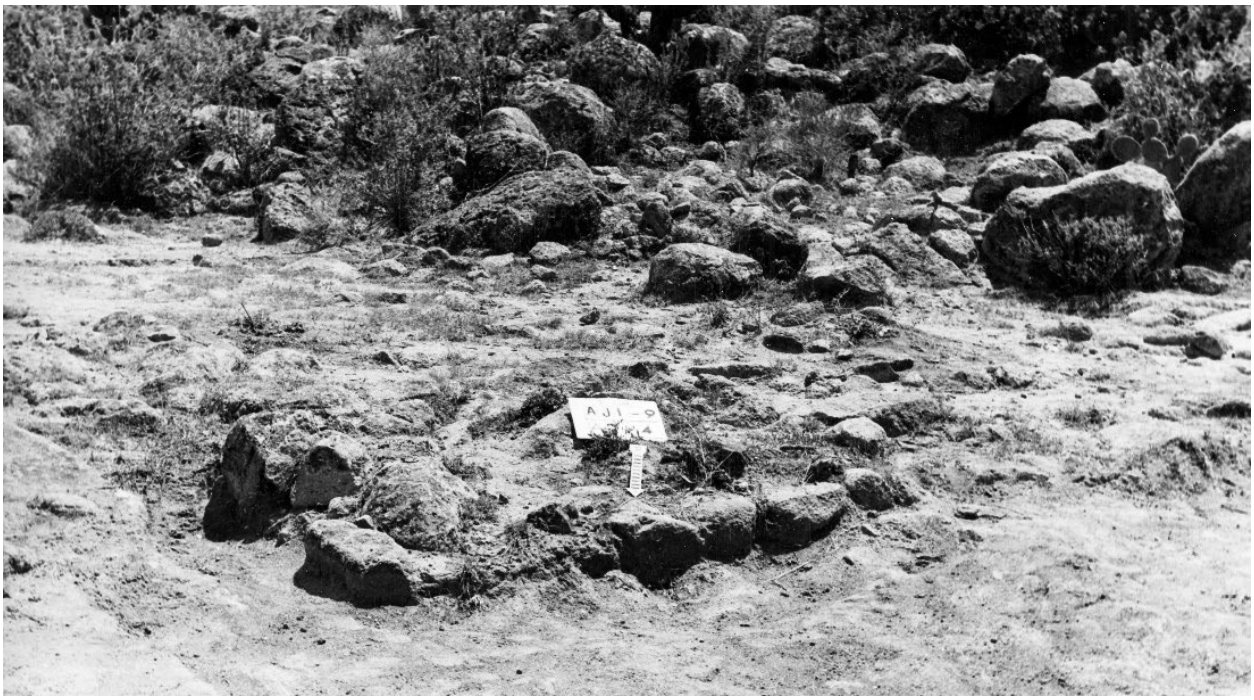

Figure 28. The excavated northeast corner of Feature 10, La Manga. Facing south.

Loma's Chico Red-on-brown and the Chalchihuites types Mercado Red-on-cream, Amaro Red-on-cream, Refugio Red-on-brown, Nevería Red-on-brown, and Otinapa Red-on-cream. The ceramic analysis completed by Jay is best viewed as a typological rough sort; no constituent analyses were completed. Undoubtedly J. Charles Kelley contributed significantly to the sorting and typing of the sherd assemblage. A total of 2,941sherds were tabulated by Jay; these are summarized in Tables 1 through 16. Jay makes mention of trade and historic/modern wares in her tables although these were never discussed or described in sufficient detail to determine their type or cultural affinity. Although included in the tallies in the following tables, here they are not discussed further. Additionally, a typed note in the La Manga project file makes mention of a possible Chametla polychrome (a West Mexican coastal type—e.g., Kelly 1938), the specific type was not identified. Lolandis Red Rimmed, a Chalchihuites type of possible West Coast origin, was also mentioned in the note. These, however, lack provenience associations and were not included in Jay's tallies. Thus, they are not further discussed.

Of the 2,941 sherds tabulated, 2,305 (78.4%) were recovered from Area 1 and the remaining 636 (21.6%) from Area 2; these include surface collections from Areas 1 and 2 as well as sherds recovered from excavation (Table 17). Two general surface collections were made, one from the site that produced 480 sherds (Table 1) and one from the "west hills" at La Manga that produced 65 sherds (Table 2). It is assumed both were grab samples and their contexts beyond general surface is unclear, especially that of the area referred to as the "west hills." Because of the ambiguous context of the "west hills" sample, it is not discussed further. Jay subsequently provided a tally of sherds collected from the surface of Area 2 (Table 12); it, however is not clear whether these were included in her tally for the surface collection as a whole.

The ceramic types recovered in the surface collection from the site mirrored those recovered during excavations. Only two types recovered during excavations, Refugio Red-on-brown and Polished Black, were not represented in the general surface collection.

Table 1. Ceramic sherd surface collections from the site of La Manga as a whole (Jay 1957:53).

Ceramic Type	Number of Sherds	Percentage
Loma Plain	225	46.9
Loma Textured (fingernail marked)	25	5.2
Loma Textured (brushed)	24	5.0
Chico Red-on-brown	15	3.1
Mercado Red-on-cream	2	0.4
Nevería Red-on-brown	6	1.3
Otinapa Red-on-white	8	1.7
El Campo Plain	12	2.5
Brown Utility Ware	73	15.2
Trade or Modern	4	0.8
Unclassified decorated	14	2.9
Unclassified plain	72	15.0
Total	**480**	**100.0**

Table 2. Ceramic sherd surface collections from west hills at La Manga.

Ceramic Type	Number of Sherds	Percentage
Loma Plain	22	33.9
Loma Textured (fingernail marked)	16	24.6
Chico Red-on-brown	1	1.5
Brown Utility Ware	24	36.9
Unclassified plain	2	3.1
Total	**65**	**100.0**

Loma Plain accounted for the majority of sherds (46.9%) recovered from the surface of the site while Loma types in total accounted for 60.2 percent of the sherds recovered; Chalchihuites types totaled 21.1 percent. The remaining 18.7 percent were unclassified (plain and decorated); a small number of trade or modern types were also included. The percentages of Loma versus Chalchihuites types recovered from the general surface are approximately the same as the relative percentages recovered from excavated contexts.

Sherd tallies from Area 1 collection units are found in Tables 3 through 11. Loma Plain was, generally, the most common ceramic type recovered and Loma types generally made up the majority of the ceramic types recovered. The most commonly recovered Chalchihuites type was the Brown Utility Ware, which in several instances approached 50 percent of the sherds collected in a given unit. Specifically, Brown Utility Ware from the platform Test Trench 1 (Table 5) accounted for 46.1 percent of the identifiable sherds collected and that exceeded the number of total identified Loma sherds from the unit. Additionally, Brown Utility Ware from Test Trench 2 from Area 1 (Table 6) accounted for 44.4 percent of the identified sherds collected, nearly equaling the number of Loma types recovered. However, in both cases the samples were small and thus are not particularly informative.

Two collection units, one from the area of Feature 2 (*n*=673; Table 3) and the other from the trenches outlining Features 3 and 4 (*n*=446; Table 10), produced the greatest number and greatest variety of identified sherd types. Loma types were generally the most common. The percentage of Chalchihuites types ranged from 11.1 to 53.8 percent with the percentage of decorated Chalchihuites types in any given collection unit ranging from 0 to 7.7 percent; the percentage of Chalchihuites utility wares ranged from 11.1 to 53.8 percent of the overall sherds recovered. Decorated Chalchihuites types recovered from Area 1 included Mercado Red-on-cream (not found in Area 2), Nevería Red-on-cream, and Otinapa Red-on-white. However, once again, the relatively small number of Chalchihuites sherds recovered from the various Area 1 collection units skews any significance that might be derived from their relative percentages. Nevertheless, a general pattern emerges regarding the presence of identified Chalchihuites types from Area 1. Decorated Chalchihuites types account for just 2 percent of the total sherd assemblage while utility wares (El Campo Plain, Brown Utility Ware, Polished Red, and Polished Black) account for just over 20 percent of the total ceramic assemblage. This of course assumes the polished red and black wares were seen and used as utility wares. Nevertheless, it is of note that these wares came in a variety of forms including bowls, jars, ollas, narrow-necked jars with flaring rims, tripod jars, and effigy jars, and that at least some may have been acquired and used for purposes other than utilitarian items. All that said, only single sherds of Red Polished and Black Polished were recovered from Area 1.

Table 3. Ceramic sherds from Area 1, Feature 2 room area (Rooms 1–3) at La Manga.

Ceramic Type	Number of Sherds	Percentage
Loma Plain	403	59.9
Loma Textured (fingernail marked)	36	5.4
Loma Textured (brushed)	27	4.1
Chico Red-on-brown	21	3.1
Nevería Red-on-brown	2	0.3
El Campo Plain	11	1.6
Brown Utility Ware	112	16.6
Unclassified decorated	19	2.8
Unclassified plain	42	6.2
Total	**673**	**100.0**

Table 4. Ceramic sherds from the Area 1, Feature 1.

Ceramic Type	Number of Sherds	Percentage
Loma Plain	89	41.0
Loma Textured (fingernail marked)	2	0.9
Loma Textured (brushed)	4	1.8
Chico Red-on-brown	4	1.8
Mercado Red-on-cream	2	0.9
El Campo Plain	1	0.5

Table 4 ***(continued)*****.** Ceramic sherds from the Area 1, Feature 1.

Ceramic Type	Number of Sherds	Percentage
Brown Utility Ware	47	21.7
Polished Black	1	0.5
Trade	1	0.5
Unclassified decorated	14	6.5
Unclassified plain	52	23.9
Total	**217**	**100.0**

Table 5. Ceramic sherds from the Area 1, Feature 1 Test Trench 1.

Ceramic Type	Number of Sherds	Percentage
Loma Plain	1	7.7
Loma Textured (brushed)	1	7.7
Mercado Red-on-cream	1	7.7
Brown Utility Ware	6	46.1
Unclassified plain	4	30.8
Total	**13**	**100.0**

Table 6. Ceramic sherds from Area 1, Test Trench 2.

Ceramic Type	Number of Sherds	Percentage
Loma Plain	3	16.6
Loma Textured (fingernail marked)	1	5.6
Loma Textured (brushed)	2	11.1
Chico Red-on-brown	2	11.1
Nevería Red-on-brown	1	5.6
Brown Utility Ware	8	44.4
Unclassified decorated	1	5.6
Total	**18**	**100.0**

Table 7. Ceramic sherds from surface area of Features 3 and 4, Area 1.

Ceramic Type	Number of Sherds	Percentage
Loma Plain	26	83.9
Mercado Red-on-cream	1	3.2
Brown Utility Ware	4	12.9
Total	**31**	**100.0**

Table 8. Ceramic sherds from Area 1, Feature 3, Rooms 1 and 2.

Ceramic Type	Number of Sherds	Percentage
Loma Plain	97	58.4
Loma Textured (fingernail marked)	4	2.4
Loma Textured (brushed)	2	1.2
Chico Red-on-brown	5	3.0
Nevería Red-on-brown	1	0.6
Otinapa Red-on-white	2	1.2
Brown Utility Ware	25	15.1
Unclassified decorated	6	3.6
Unclassified plain	24	14.5
Total	**166**	**100.0**

Table 9. Ceramic sherds from Area 1, the areas of Features 3 and 4.

Ceramic Type	Number of Sherds	Percentage
Loma Plain	8	88.9
El Campo Plain	1	11.1
Total	**9**	**100.0**

Table 10. Ceramic sherds from trenches outlining Features 3 and 4.

Ceramic Type	Number of Sherds	Percentage
Loma Plain	211	47.3
Loma Textured (fingernail marked)	18	4.0
Loma Textured (brushed)	17	3.8
Chico Red-on-brown	11	2.5
Mercado Red-on-cream	1	0.2
Nevería Red-on-brown	6	2.7
Otinapa Red-on-white	12	1.4
El Campo Plain	3	0.7
Brown Utility Ware	80	17.9
Polished Red	1	0.2
Unclassified decorated	18	4.1
Unclassified plain	68	15.2
Total	**446**	**100.0**

Table 11. Ceramic sherds from Area 1, Feature 5.

Ceramic Type	Number of Sherds	Percentage
Loma Plain	87	45.3
Loma Textured (fingernail marked)	12	6.3
Loma Textured (brushed)	13	6.8
Chico Red-on-brown	5	2.6
El Campo Plain	4	2.1
Brown Utility Ware	51	26.5
Unclassified decorated	7	3.6
Unclassified plain	13	6.8
Total	**192**	**100.0**

It is worth noting that unclassified decorated sherds accounted for 3.4 percent of the overall ceramic assemblage from Area 1 and that unclassified plainware sherds accounted for 12 percent of the grand total (Table 17). Some, perhaps many or most, may have been have been Chalchihuites wares, although by the time the La Manga excavations had occurred the Kelley Chalchihuites decorated ceramic types had been established and one would expect that if they were likely Chalchihuites types they would have been identified as such. Nevertheless, the collected ceramic assemblage from Area 1 would have remained dominated by Loma ceramic types.

Sherd tallies for Area 2 collection units are presented in Tables 12 through 17; a total of 636 (Table 17) sherds were collected from Area 2. Of these, Loma Plain accounted for 46.5 percent of the total and all identified Loma types (Loma Plain, Loma Textured [two varieties], and Chico Red-on-brown) accounted for 54.3 percent of the assemblage. Chalchihuites decorated and utility types, including the polished monochromes, account for 19.6 percent of the assemblage. Of the 125 sherds identified as Chalchihuites, 19 were from decorated types and 106 were from utility wares. The decorated Chalchihuites types included Refugio Red-on-brown, Nevería Red-on-brown, and Otinapa Red-on-brown; Refugio Red-on-brown was not recovered from Area 1. These percentages for both Loma and Chalchihuites types are roughly equivalent to those for Area 1.

Table 12. Ceramic sherds from the surface of Area 2.

Ceramic Type	Number of Sherds	Percentage
Loma Plain	27	36.0
Loma Textured (fingernail marked)	1	1.3
Chico Red-on-brown	4	5.3
Otinapa Red-on-white	3	4.0
El Campo Plain	11	14.7
Brown Utility Ware	9	12.0
Unclassified decorated	3	4.0
Unclassified plain	17	22.7
Total	**75**	**100.0**

Table 13. Ceramic sherd Area 2 platforms.*

Ceramic Type	Number of Sherds	Percentage
Loma Plain	97	39.3
Loma Textured (fingernail marked)	13	5.3
Loma Textured (brushed)	5	2.0
Chico Red-on-brown	4	1.6
Refugio Red-on-brown	1	0.4
Nevería Red-on-brown	1	0.4
Otinapa Red-on-white	2	0.8
El Campo Plain	1	0.4
Brown Utility Ware	25	10.1
Unclassified decorated	4	1.6
Unclassified plain	94	38.1
Total	**247**	**100.0**

*There were three platforms investigated in Area 2. Jay (1957:57) did not specify which platform these sherd counts are from or whether these are combined totals from all three Area 2 platforms. However, in Jay's discussion this table was presented before the table presenting sherd counts for Feature 6 Area 2 (the room abutting or within Feature 7), it is possible that these counts are for Feature 7.

Table 14. Ceramic sherds from Area 2, Feature 6.

Ceramic Type	Number of Sherds	Percentage
Loma Plain	103	63.2
Loma Textured (fingernail marked)	4	2.5
Loma Textured (brushed)	3	1.8
Chico Red-on-brown	5	3.1
Nevería Red-on-brown	1	0.6
Brown Utility Ware	14	8.6
Unclassified decorated	7	4.3
Unclassified plain	26	15.9
Total	**163**	**100.0**

Table 15. Ceramic sherds from the Area 2 plaza.

Ceramic Type	Number of Sherds	Percentage
Loma Plain	40	71.4
Loma Textured (fingernail marked)	1	1.8
Loma Textured (brushed)	1	1.8
Chico Red-on-brown	1	1.8
Refugio Red-on-brown	1	1.8
Brown Utility Ware	7	12.5
Unclassified decorated	1	1.8
Unclassified plain	4	7.1
Total	**56**	**100.0**

Table 16. Ceramic sherds from trenching outlining Area 2 Features 7, 8, 9, and 10 Area 2 features.*

Ceramic Type	Number of Sherds	Percentage
Loma Plain	29	23.2
Loma Textured (fingernail marked)	5	4.0
Loma Textured (brushed)	1	0.8
Chico Red-on-brown	1	0.8
Nevería Red-on-brown	3	2.4
Otinapa Red-on-white	7	5.6
El Campo Plain	4	3.2
Brown Utility Ware	35	28.0
Trade ware	2	1.6
Unclassified decorated	7	5.6
Unclassified plain	31	24.8
Total	**125**	**100.0**

*This appears, as the table's title indicates, a combined tally of all sherds from the trenches excavated to outline all four features in Area 2. Perhaps this is an indication that the counts in Table 14 are combined tallies for all four platforms as well.

Table 17. Summary of sherd counts for Areas 1 and 2 at La Manga.

Ceramic Type	Area 1		Area 2		Site Totals	
	Number of Sherds	Percentage	Number of Sherds	Percentage	Number of Sherds	Percentage
Loma Plain	1,172	50.9	296	46.5	1,468	50
Loma Textured (fingernail marked)	114	4.9	24	3.8	138	4.7
Loma Textured (brushed)	90	3.9	10	1.6	100	3.4
Chico Red-on-brown	64	2.8	15	2.4	79	2.7
Refugio Red-on-brown			2	0.3	2	0.0006
Mercado Red-on-cream	7	0.3			7	0.2
Nevería Red-on-brown	16	0.7	5	0.8	21	0.7
Otinapa Red-on-white	22	1.0	12	1.9	34	1.2
El Campo Plain	32	1.4	16	2.5	48	1.6
Brown Utility Ware	430	18.7	90	14.1	520	17.7
Polished Red	1	0.0004			1	0.0003
Polished Black	1	0.0004			1	0.0003
Unclassified decorated	79	3.4	22	3.5	101	3.4
Unclassified plain	277	12	144	22.6	421	14.3
Total	**2,305**	**100.0**	**636**	**100.0**	**2,941**	**100.00**

In summary, the Loma utility ware Loma Plain and its textured varieties account for 58.1 percent of La Manga's recovered ceramic assemblage. As discussed above, Loma plain wares come in a variety of forms including jars that have flaring or recurvate rims with vessel forms ranging from vase-like vessels to larger ollas. Because the La Manga recovered ceramic assemblage was not reanalyzed for this discussion nothing can be said specifically regarding the variability in the site's Loma plainware forms.

Chalchihuites utility wares (Brown Utility Ware, El Campo Plain, and possibly Polished Red and Polished Black) recovered account for just over 19.3 percent of the ceramics. Chalchihuites utility types are distinguishable from Loma types in that they are generally better made with finer pastes and more refined surface treatments. Jay (1957:50) distinguished the Chalchihuites Brown Utility Ware from Loma Plain primarily by surface treatment, noting the former was polished although not as extensively as the surfaces of the red and black wares. She did observe, however, that the Brown Utility Ware sherds recovered often had coarser tempered paste with higher percentages of "grit" than the Loma Plain sherds recovered. Surface color of the Brown Utility Ware recovered ranged from buff to orange to dark brown, a range seen in Loma Plain as well. Jay further reports that Brown Utility Ware sometimes exhibited either finger nail or brushed incised zones on the bottom portions of a vessel. Jay (1957:50) also states that El Campo Plain was easily differentiated from Loma Plain because of its distinctive rim from (Figure 29). No further description of the El Campo Plain sherds recovered was provided.

Unclassified plain wares make up 14.3 percent of the assemblage. In all, utility/plain wares compose a total of 91.7 percent of the ceramics recovered. Percentages of these from Area 1 are roughly comparable to the percentages from Area 2, although the recovered ceramic assemblage from Area 2 is roughly a quarter of that recovered from Area 1. The predominance of plain/utility wares in the La Manga ceramic assemblage is not surprising. If typical of Loma ceramic assemblages, the La Manga utility wares were likely primarily for food preparation and serving and for food and water storage.

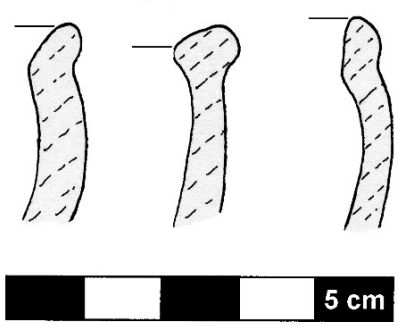

Figure 29. Rim profiles for El Campo Plain from La Manga (adapted from Jay 1957:50; the scale was added, presumedly these rim profiles were drawn to actual size).

The only decorated Loma type recovered La Manga was Chico Red-on-brown. A total of 64 sherds was recovered from Area 1 while Area 2 yielded 15 sherds of Chico Red-on-brown (2.8% vs. 2.4% respectively). This type is not commonly represented in the Loma ceramic assemblage and it is not known if this 2 to 3 percent range reflected at La Manga is typical of its overall distribution across the Loma ceramic assemblage; it is suspected that it likely varies greatly from site to site. Not found, or at least not identified at La Manga, were Loma Red and Loma White Washed.

The decorated Chalchihuites types Mercado Red-on-cream, Refugio Red-on-brown (Ayala phase types), Nevería Red-on-brown (Las Joyas phase), and Otinapa Red-on-white (Río Tunal phase) were recovered from La Manga. They total 64 sherds or 2.1 percent of the site's ceramic assemblage. Only nine sherds of Mercado Red-on-cream and Refugio Red-on-brown, 21 sherds of Nevería Red-on-brown, and 34 sherds of Otinapa Red-on-white were recovered. In totality, very few decorated vessels appear to be represented and access to Chalchihuites utility wares appears to have been greater than access to decorated types. The cost, economic or social or both, of decorated ceramics may have been more prohibitive for the occupants of La Manga. Unfortunately, the general contexts from which these sherds were recovered prohibit interpretation of their use, ritual or utilitarian, by the La Manga inhabitants.

Considering the proximity of La Manga to La Ferrería, it is not surprising that Guadiana Chalchihuites ceramics were present at the site. La Ferrería was likely a ceramic production center as well as a market center. Thus, the occupants of La Manga could have had socio-economic ties to La Ferrería that allowed them access to products and goods including both utilitarian and decorated ceramics. It is worth noting that Loma-Chalchihuites interaction is poorly understood.

More recently, Punzo Díaz (Punzo Díaz and M. Zavala 2005:67–68) also report the presence of Nevería Red-on-brown at La Manga (Lerdo) as well as the presence of brushed (textured) brown, smoothed brown, and smoothed coarse plainwares; none of the plainwares were typed.

Other Ceramic Artifacts

In addition to the sherd assemblage recovered, an incomplete ceramic bead and two sherd disks were recovered. The bead was long and narrow with a portion of one end missing. The lengthwise central perforation was approximately 2 mm in diameter; what remained measured 2.3 cm in length and 0.8 cm in diameter. It was made from a hard, fine, light-tan clay and the surface was well smoothed. It appeared to have been molded around a shaft (Foster 1978:68).

Both of the sherd disks recovered were unperforated. One was small, measuring 2.8 cm in diameter and 0.6 cm thick. It was from a Loma Plain vessel; its edges were ground and one surface was worn. The second disk was larger measuring 5.3 cm in diameter and 0.8 cm thick. The interior exhibits a trace of red paint suggesting the sherd may be from a redware bowl or bowl with a red painted interior; its edges were ground. Both were recovered from Area 1; one from Feature 2, Room 1, and the latter from a trench in the area of Features 3 and 4. Their function is unclear. It is possible they were blanks for sherd spindle whorls or they may have been gaming pieces (Foster 1978:62–63).

A small nodule of red pigment (ocher?) was also recovered. It was irregularly rectangular in form measuring 3.2 × 2.3 × 0.6 cm. One face exhibited several incised lines including what appeared to be an X (Figure 30).

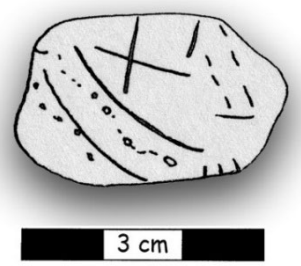

Figure 30. Small nodule of red pigment with incising (adapted from Jay 1957).

Jay also illustrated what she variously called an adobe basin or bowl (Figure 31). It was of a mix of adobe and grass; the basin itself measured 6 cm deep and 14 cm in diameter with the specimen having an overall maximum diameter of 26 cm. There is no thermal alteration or other evidence of use, thus the function of the specimen is unclear. It is similar to, although smaller, than the basin exposed in Room 2 of Feature 2. These basins are somewhat reminiscent of the extramural hearths identified at the Weicker site (Foster 1986; Figures 4, 6, and 7), but the La Manga specimens appear to have served a different function. Jay did not specify the provenience of this specimen.

Figure 31. Adobe basin from Area 2, Structure 1 (adapted from Jay 1957).

Flaked Stone

A small assemblage of flaked stone that consisted of projectile points, obsidian blades and possible tool fragments, fragmentary bifaces, scarpers, and cores made from rhyolite and other materials, was also recovered. Some of the flaked stone debitage recovered exhibited retouch or use-wear.

Projectile Points

In his analysis of Loma flaked stone tools, Spence (n.d., 1971a) identified and defined three projectile point types from La Manga: Cruz de la Boca Side-Notched, Santa Ana Side-Notched, and Schroeder Stemmed. Although a Cruz de la Boca Side-Notched point from La Manga is listed in Spence's (n.d.) summary of Loma lithics, it was not described by Jay nor did this author examine such a point during his analysis of Loma artifacts (Foster 1978). Spence (1971a:14) describes the points as generally having convex blade edges and side notches near a convex base. He (Spence 1971b) further discusses Cruz de la Boca Side-Notched points in his study Guadiana Chalchihuites lithics where he states that the type is very similar to Schroeder Side-Notched, a point type described as having a narrow blade with the basal portion being considerably broader than the blade. Spence (1971b:25) suggests that Schroeder Side-Notched may be a variant of Cruz de la Boca Side-Notched and that the Cruz de la Boca Side-Notched is likely derived from the Suchil Branch of the Chalchihuites culture (Spence 1971b:37). Based on points illustrated by Spence (1971a:44, Plate IX, L) the types appear to be somewhat variable in size and form. Metrics for this point type (*n*=23) indicate a range in length from 2.7–4.3 cm with mean of 3.7 cm; in width from 1.2–2.6 cm with a mean of 2.0 cm; and in thickness from 0.3–0.7 cm with a mean of 0.5 cm (Spence 1971a:35). A possible antecedent for these two point types was not identified in any pre-ceramic period contexts in western Zacatecas or Durango.

Two Santa Ana Side Notched projectile points were recovered from La Manga (Figure 32, Table 18). These points are triangular in form and tend to be long and somewhat narrow. Workmanship is generally good with bifacial retouch complete on both faces. The tips are sharp and the edges are straight to slightly convex. The side notches are not excessively deep and the shoulders are somewhat abrupt. The bases are straight to slightly convex. Spence (n.d.) indicates that this point type is likely a Loma innovation. He reports that this point type occurs in Guadiana Chalchihuites contexts, but very rarely (Spence 1971b:39). Spence (1971a:14), citing Roberts (1931:Pl. 39n), also notes this point is somewhat similar to points from eastern Arizona.

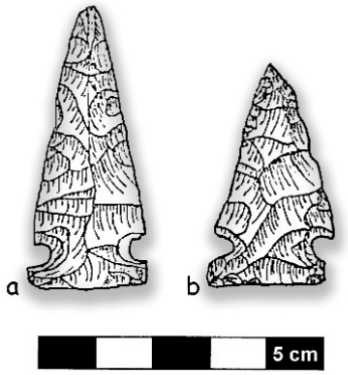

Figure 32. Santa Ana Side Notched projectile points from La Manga.

Table 18. Santa Ana Side Notched projectile points from La Manga (Foster 1970:134–135, Figure 30; Spence 1971a).

Specimen	Length	Blade Length	Shoulder Width	Stem Width	Base Width	Base Height	Thickness
a	4.9 cm	4.1 cm	1.9 cm	1.4 cm	2.1 cm	0.5 cm	0.4 cm
b	3.8 cm	3.1 cm	2.1 cm	1.4 cm	2.1 cm	0.5 cm	0.5 cm

The third point from La Manga typed by Spence (1971b:26) is a Schroeder Stemmed (Figure 33). He describes this point style as being relatively narrow with straight to convex blade edges with weak, sloping shoulders. The stems are short and expand toward the bases, which are typically straight to convex, although sometimes slightly concave. Based on Spence's illustration of this point, the tip and one shoulder appear to be missing. The metrics for this point type (*n*=7) indicate ranges in length from 2.7–3.6 cm with mean of 3.1 cm; in width from 1.3–1.6 cm with a mean of 1.5 cm; and in thickness from 0.3–0.6 cm with a mean of 0.5 cm (Spence 1971a:35). Spence (n.d.:20) further indicates that Schroeder Stemmed is likely a Guadiana Chalchihuites point type and as such may be intrusive at La Manga. The La Manga example appears to be an obsidian point described by Jay (1957:43, Figure 53). She reports it was incomplete and that it was 3-cm-long, 1.4 cm at it widest, and 0.6-cm-thick.

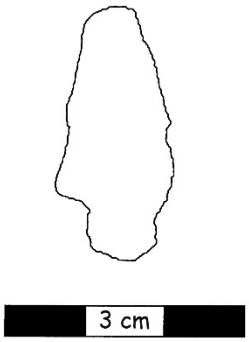

Figure 33. Outline of the Schroeder Stemmed projectile point from La Manga as identified by Spence (adapted from Spence 1971a:Plate X-E).

Other Flaked Stone

In addition to defining a series of projectile point types, Spence (Spence n.d., 1971a, 1971b) also defined a variety of other stone tool types from the La Manga (Table 19; Appendix B). Jay (1957:42–45) describes 19 flakes, retouched flakes, blades, and scrapers, however, there is no concordance between Spence's and Jay's analyses. Spence (n.d.:19) suggests the Small Plane Scraper recovered may have been adopted or obtained from the Guadiana Chalchihuites in that it has no antecedent in the local Archaic Los Caracoles.

Obsidian

Two fragmentary obsidian blades and three obsidian flakes were recovered from La Manga. Spence (n.d., 1971a) made visual identifications of these suggesting several possible sources. One specimen, a "fine" blade (prismatic), was identified as being from the Etzatlán (Jalisco) source and another was like that found at Carmelita, a Classic-Postclassic site located in the Sayula (Basin?) area of Jalisco. Spence describes this variety as a light, nearly translucent, rose-colored obsidian that occasionally exhibits thin black streaks running through it. Subsequently, Spence et al. (2002) reports that some of the material found at Carmelita was derived from the La Joya source in the Etzatlán Basin. La Joya (Etzatlán) obsidian is dark green in color with excellent fracturing qualities; a multi-colored or "rainbow" variety (the Carmelita variety?) is also present (Glasscock et al. 2010:206).

Table 19. Flaked stone tool types from La Manga identified by Spence (n.d.:Table 1)*

Tool Type	Number of Specimens
End Scrapers	
Large handled	1
Simple rectangular	1
Thumbnail	2
Short	2
Side Scrapers	
Broad	2
Small	1
Variable Scrapers	
Semicircular	1
Amorphous	2
Plane Scrapers	
Semicircular	1
Small	1
Blades	
Small flake blades	5
Fine blades	2
Knives	
Single edge	1
Concave base	1

*See Appendix C for descriptions of these tool types.

Spence (n.d., 1971) suggests that the La Manga blades were obtained through exchange with the Chalchihuites culture, probably from La Ferrería, as opposed to being acquired through exchange with individuals from the source areas. In turn, these blades were likely obtained by Chalchihuites people through trade with West Coast or highland West Mexico peoples (see Foster 1993a, 2000; Kelley 1986, 2000). Spence further reports the striking, platforms on the blades had been ground in preparation for removal from a core and he took this as an indication of knappers skilled in the production prismatic blades. Obsidian debris from Loma sites shows no evidence for prismatic blade production. Additionally, the apparent small quantity of prismatic blades at La Manga and at other Loma sites in general is taken by Spence as a further indication that Loma peoples most likely obtained the blades from Guadiana Chalchihuites groups.

Subsequent to Spence's studies, J. Andrew Darling (personal communication 2019) analyzed the obsidian from La Manga as part of a larger study of obsidian procurement in the north-central frontier of Mesoamerica; he provided the following summary:

> "Subsequent to his initial study of Loma lithics Spence submitted two obsidian samples from La Manga for source identification using neutron activation analysis (NAA); the study was conducted at the University of Michigan and the samples were analyzed for sodium (NA) and manganese (Mn) ratios. One specimen submitted was a "waste flake (Sample OB-1955, Spence #98) that Spence had visually identified with the letter "O" that subsequently revised to his A1 group (Spence's variety "A" was a catch-all for various sources in Durango most likely associated with the Llano Grande source zone in Durango). As part of a more wide-ranging study, the specimen was reanalyzed, again using NAA

(Darling 1998). I was able to confirm the source location, now referred to as Cerro Navajas (Llano Grande) [Table 20] in Durango (see Darling 1998:71).

The second sample, Sample OB-1890 (Spence #25), was a "core blade" (blade fragment) with a Spence visual ID of "W" that was revised to group "B," which is associated with the Ixtlán del Rio source located near the Ceboruco Volcano, Nayarit (Darling 1998:79; Ericson and Kimberlin 1977; Glasscock et al. 2010:205); the specimen was obviously an import."

Table 20. Mean element concentrations* from Cerro Navajas (CNDG–aka Llano Grande), Durango (Darling 1998).

Element	Mean	Standard Deviation	Element	Mean	Standard Deviation
Ba (barium)	748.908	9.332	Sb (antimony)	0.853	0.020
La (lanthanum)	40.885	0.486	Sc (scandium)	2.513	0.045
Lu (lutetium)	0.450	0.006	Sr (strontium)	94.792	10.151
Nb (liobium)	23.846	0.703	Ta (tantalum)	1.764	0.013
Sm (samarium)	5.487	0.067	Tb (terbium)	0.691	0.024
U (uranium)	7.749	0.165	Th (thorium)	23.185	0.216
Yb (ytterbium)	2.929	0.077	Zn (zinc)	33.882	1.527
Ce (cerium)	76.210	1.076	Zr (zirconium)	182.767	9.001
Co (cobalt)	0.602	0.009	Cl (chlorine)	503.950	50.280
Cs (cesium)	6.482	0.063	Dy (dysprosium)	4.491	0.187
Eu (europium)	0.556	0.008	K (potassium)	41889.683	1730.389
Fe (iron)	7642.317	85.347	Mn (manganese)	309.450	3.235
Hf (hafnium)	4.720	0.051	Na (sodium)	25488.917	176.186
Rb (rubidium)	203.742	1.219			

*Sources in parts per million measured by neutron activation analysis at University of Missouri Research Reactor facility.

In terms of procurement and utilization, Spence (nd:16–17) states that the local Llano Grande (Cerro Navajas, which should not be confused with the Sierra/Cerro de Navajas Pachuca source) is most common in sites near the source, a number of which show evidence of obsidian tool production (mainly at sites in Kelley's LCAJ and LSAK quadrants [quadrants from aeronautical maps used by Kelley at the time because of the lack of topographic maps for the area]). As one moves away from the source the amount of this obsidian declines quickly, as does evidence for obsidian tool making. Spence (n.d., 1971b) goes on to state:

> "Obsidian waste on other Loma San Gabriel sites and on the Schroeder Site [La Ferrería] indicates local working at these places, and obsidian artifacts found there do not appear to be intrusive trade items. There is, however, some reason to suspect that the obsidian-rich Loma San Gabriel sites of the LCAJ quadrant were involved in the trade of obsidian as raw material in nodular form. The people of the Guadiana Branch of the Chalchihuites Culture used large quantities of obsidian which they must have obtained from this area. Since the obsidian-rich Loma San Gabriel sites themselves show very little evidence of the Guadiana Branch of the Chalchihuites Culture influence, it is more likely that they traded raw material (obsidian nodules) to "Chalchihuitized" Loma San Gabriel groups further east, who in turn passed it on to Chalchihuites people, than that they themselves were in direct contact with Chalchihuites groups."

Spence's conclusion is important and finds support from Darling's (1993, 1998) work where he concluded that one of the La Manga artifacts came from Cerro Navajas/Llano Grande and that it was consistent with obsidian from some Guadiana Branch Chalchihuites sites. Darling also concludes it is likely that Loma

peoples accessed their own local obsidian sources. Furthermore, he takes this probability as an indication that Loma was a separate cultural entity and not simply the peasant class of the Chalchihuites culture as some have implied (e.g., Hers 1989a, 1993).

Of related interest, Grave (2015) has reported on recent archaeological salvage work along the Durango to Mazatlán highway during which time he observed the omnipresence of obsidian nodules in the vicinity of Llano Grande. He recorded eight source locations that exhibited evidence for processing; four of these were in the foothills of the Cerro La Bandera. Additionally, Darling (personal communication 2019) states that his reanalysis of obsidian from Loma sites located along the western margin of the Guadiana Valley indicated a yet unidentified source that he designated "unk-G" (Darling 1998:475, Table D.7). Spence had visually identified this material and assigned it to his group "A2"; Darling suggests it may be from a local gravel source.

Ground Stone

The ground stone assemblage recovered from La Manga consisted of handstones, mano and metate fragments, a hammerstone, and polishing or abrading stones (Jay 1957:38; Table 21). The significance of the apparent lack of manos and metates recovered is of interest compared to the number of mauls and axe heads (most of which were broken and unusable) recovered. Given the limitations of the excavations, this could be a sampling error. However, that said, the surface of the site was examined and artifact collections made. Thus, one would assume that most of the manos and metates, whole or fragmentary, would have been collected or otherwise reported. Once abandoned, the site could have been scavenged and any usable tools collected for use elsewhere, or possibly, such implements were curated and removed when the site was abandoned. Table 22 and Figure 34 describe and illustrate the mauls and axe heads recovered.

Table 21. Summary of manos, metates, and polishing stones from La Manga (Jay 1957).

Tool Type	Condition	Length	Width	Thickness	Comments
Mano	Fragment	21.3 cm	8.75 cm	4.5 cm	Well worn, very flat grinding surface; it was weathered, pot-marked (possibly tuff).
Mano	Fragment	16 cm	9 cm	5.75 cm	Roughly triangular in cross-section; portion of the dorsal surface was flaked away; dorsal surface rough; ends flattened by pecking.
Mano	Compete	12.5 cm	6.5 cm	5 cm	Handstone; the grinding surface, which exhibited striations, was on a naturally beveled surface.
Metate	Fragment	—	—	—	Probable metate fragment. The depth of the trough was 8.5 cm; the specimen was well worn. Based on Jay's 1957:Figure 50, the specimen appears to be a fragment from a basin metate.
Polishing stone	Partial	6.35 cm	5 cm	2.5 cm	Broken on one end; weathered; striations on the use surface.
Abrading stone	Complete	4.75 cm	2.6 cm	1.1 cm	Edges were worn from use; wear on one broad surface; the other surface was unmodified; one side was straight with a shiny groove where used.
Polishing stone	Complete	3.4 cm (diameter)	—	2 cm	Pebble; asymmetrically circular with one very flat surface that was smooth but not polished.
Polishing stone	Fragment	4.3 cm (diameter)	—	1.6 cm	Five polishing facets; one end broken; one facet well-polished and exhibiting luster from use; one facet slightly concave.
Polishing stone	Fragment	9 cm	7.75 cm	2 cm	Heavily weathered; trace of pigment on the very flat and even surface.

Table 22. Summary of manos, metates, and polishing stones from La Manga (Jay 1957) (*continued*).

Tool Type	Condition	Length	Width	Thickness	Comments
Polishing stone	Fragment	8.1 cm	5.1 cm	2 cm	Worn and broken; striations on polishing surface run parallel to the width; edges worn; cross-section roughly triangular.
Round stone	Complete	2.9 cm (diameter)	—	—	Asymmetrically round; rough and pitted surface with use-wear (smoothing) on projecting points and edges.

Table 23. Axes and mauls from La Manga (Figure 34) (Foster 1985; Jay 1957).

Figure Number	Artifact Type and Description	Dimensions (length × width × thickness)	Provenience
34a	Small, full-grooved axe; well-shaped and with a ground smooth surface that exhibited some evidence of pecking. It was made of a light gray granitic material. The blade edge was dulled through use with flake scars along the edge on both faces of the blade. One face exhibited more scaring than the other. The butt exhibited battering apparently from use as a hammer.	9.4 × 4.4 × 3.0 cm	Surface
34b	Fragmentary axe(?) butt that was grooved on both faces.	7 cm wide × 3.5 cm thick	Area 1, near Features 3 and 4
34c	Small full-grooved axe fragment with ground surfaces; the groove measured 5 mm deep.	7 × 5.35 × 3.5 cm	Area 2, surface
34d	Maul. The specimen was made from a volcanic tuff material. Surface was smooth but weathered. Fully grooved; the groove was located just off center of the tool. The groove itself appears to have been cut into rather than pecked into the tool. One end exhibited extensive battering; the other end was less battered. The specimen appears to have been crudely made and because of the material from which it was made, it could not have been extensively used to work durable material.	12.8 × 7.1 × 5.6 cm (the groove was 8 mm wide and 3 mm deep)	Area 1, near Features 1 and 2
34e	¾-grooved maul fragment that had been split into two pieces. The ground and smoothed surface was weathered. It was made from basalt with small vesicles and it appeared to have been pecked into shape before being smoothed. The blade ends were badly damaged and the blade had split longitudinally with half the butt missing. It appeared the implement may have catastrophically failed during use.	14 × 8.5 × 7.8 cm	Area 1, surface
34f	Full-grooved axe fragment; the blade edge had been completely destroyed. Extensive flake scaring on both faces of the blade. The butt end exhibited similar flake scaring. The specimen was made from rhyolite. The groove was wide and well-polished.	10.6 × 6.75 × 3.25 cm	—
—	Hammerstone with battering on both ends; no evidence of polishing; made from volcanic tuff.	9.9 × 5.17 × 3.46 cm	—

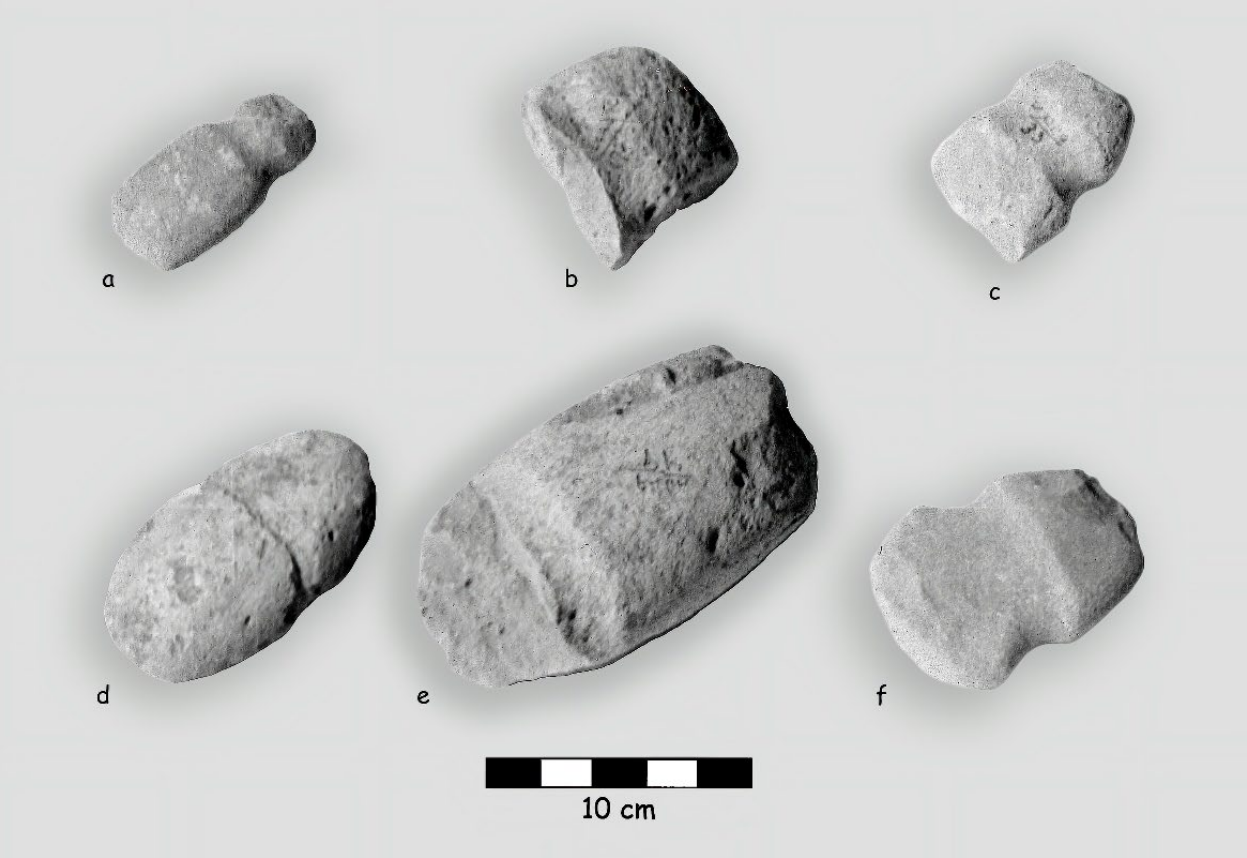

Figure 34. Axes and mauls from La Manga (adapted from Jay 1957).

Summary

The La Manga artifact assemblage appears to be a basic utilitarian assemblage. The ceramics were dominated by Loma Plain and two varieties of its variant Loma Textured (58.1%). The only Loma decorated type present was Chico Red-on-brown, which was represented by a small percentage of the total sherd count. Other than the unclassified decorated and plain wares, the next most common types represented were El Campo Plain and Brown Utility Ware, both utilitarian wares associated with the Chalchihuites culture. Together they account for just over 19 percent of the sherd assemblage. The plainwares, both Loma and Chalchihuites, represented at La Manga likely functioned for storage and for food preparation and serving.

A small number of Chalchihuites decorated types, Refugio Red-on-brown, Mercado Reed-on-cream; Nevería Red-on-brown, and Otinapa Red-on-white, were also recovered. These types are known to come in a variety of forms (Kelley 1971; Kelley and Kelley 1971:77–143) and they account for just over 2 percent of the site's total sherd assemblage. Given the length of time that La Manga may have been occupied, the number of Chalchihuites decorated vessels that were acquired over time appears to have been very low. Whether the decorated vessels represented served utilitarian purposes or were objects of ceremonial use is unknown. It is possible they could represent symbols of status within the La Manga community or perhaps they could be indicators of socio-political ties of one kind or another to individuals or societies residing at La Ferrería.

The mention of a possible Chametla sherd in the La Manga assemblage is also of interest. Ceramics emanating from the Chametla area of Mexico's west coast were prevalent at La Ferrería (Foster 2000; Kelley 1971; Kelley and Winters 1960) and there is no doubt that their presence is evidence that La Ferrería

was integrated into the Aztatlán trade network (Kelley 1986, 2000). It is argued here the if Chametla ceramics were present at La Manga, they were most likely obtained via down-the-line exchange with La Ferrería.

The flaked-stone assembled described for La Manga appears typical for a Loma site. The presence of flake debris suggests the manufacturing and maintenance of flaked-stone tools. The flaked-tool assemblage included various scrapers, knives, utilized or modified flakes, and projectile points likely associated with food procurement and preparation as well as other domestic activities such as hide scraping and carving of bone or wood.

The La Manga ground stone assemblage included mano and metate fragments, axes, mauls, and polishing and abrading stones. The manos appear to be mainly handstones and the metate fragment described is likely a fragment of a basin metate. These were likely used primarily in the processing of agricultural produce and wild plant foods.

The seeming prevalence of axe heads and mauls is of note, but not understood. The damage present on the axe heads is presumed to have occurred as a result of use on durable materials. The variation in sizes is suggestive of task specific use, for example heavy duty chopping or cutting verses light duty chopping of durable and less durable materials. Mauls on the other hand are generally associated with pounding and crushing and could have been used to pulverize seeds and softer minerals such as pigment (e.g., Rinaldo 1974:7:154).

In summary, the La Manga artifact assemblage appears to be that of a people who supplemented their agricultural produce with wild plant foods and hunted game. It is not a technologically sophisticated artifact assemblage. The more elaborate items, some decorated ceramics and possibly projectile points and some of the flaked stone tools, including some obsidian, recovered appear to have been imports from the neighboring Chalchihuites culture, as were some of the utilitarian ceramics.

DISCUSSION

The 1956 investigation of La Manga, although limited, figured into Kelley's (1971) initial interpretation and definition of the Loma San Gabriel culture. La Manga is one of two Loma San Gabriel sites, the other being the Weicker site excavated in 1951, to have been the focus of any level of excavations. The goals of this discussion have been to make the results of the La Manga excavation more readily available to the professional archaeological community; to reevaluate the previous conclusions regarding the occupation of La Manga; to reassess and update the analyses and conclusions of the initial investigation in light of subsequent work regarding the Loma culture and Durango prehistory; to further assess the site's interaction with and relation to La Ferrería and the Guadiana Chalchihuites; and to further elucidate La Manga's place in Durango prehistory.

Dating La Manga

No radiometric dates are available for La Manga. The presence of intrusive Guadiana Chalchihuites ceramics, specifically Mercado Red-on-cream, Refugio Red-on-brown, Nevería Red-on-brown, and Otinapa Red-on-white, suggests occupation spanning a period from the Chalchihuites Ayala phase into the Río Tunal phase, a time from as early as ca. A.D. 600 to as late as ca. A.D. 1150 (Foster 1995; 2000:203–205; Kelley 1971, 1985). This is a period in part coeval to the Chalchihuites occupation of La Ferrería (Foster 2001:655; Guevara Sánchez 1994; Kelley 197). It is certainly possible that the occupation of La Manga began before that expansion of the Chalchihuites into the Guadiana Valley, and thus the lack of earlier Chalchihuites ceramic types. As for when the occupation of La Manga ended, it is of note that the

late Chalchihuites ceramic types Nayar White-on-red and Madero Fluted—Calera phase (A.D. 1150–1350/1400)—were not identified at the site. The Kelleys (1971:150) state that Nayar White-on-red is unique to the Chalchihuites culture and is sufficiently distinctive that it cannot be confused with another type. Thus, the seeming lack of these two Chalchihuites types at La Manga is suggestive that the site was abandoned by the beginning of the Calera phase. It is, however, possible that for some undetermined reason, the occupants of La Manga had ceased interaction with Chalchihuites peoples and thus no trade wares were present. Nevertheless, based on the seemingly limited amount of material culture recovered and a general impression gleaned from Jay's discussion, a 500 year occupation of the site seems unlikely. It is also possible that the occupation of La Manga was sporadic over that period, possibly it was occupied seasonally or the site functioned as some type of undetermined special use site.

Architecture

The architecture at La Manga incorporated boulder and bedrock outcrops, pavers of unshaped or roughly shaped stone, and vertical set stone slabs and cobbles; all of which appear to be from the hill on which La Manga is located. Structures present included low-single level paved platforms and rooms with a paved, rectangular room to which was often attached a smaller, unpaved or partially paved room or patio outlined with vertical slab or cobble stones. It is likely the paved areas were surfaced with soil to infill the spaces between stones and to cover the paving in order to provide a smooth living surface. Some of these features appear to have bounded likely plaza areas.

One of the interesting things about the paved rooms attached to an outlined room or patio at La Manga is that this feature type is duplicated at the Weicker site (Foster1986, 2000:211, Figure 12.9; Kelley and Shackelford 1954). Despite the fact that this feature type was present at both sites, there are some notable differences. The features at the Weicker site appear to be more formal and they were located within compounds defined by rectangular, low single-course rock alignments; the two compounds investigated at the Weicker site contained three houses each. In her summary discussion, Jay (1957:62) makes a statement regarding some of the Weicker-like room features at La Manga that was not evident in her feature descriptions. She states that the La Manga features (Feature 2, Rooms 1, 2, and 3 of Area 1) were built on platforms and she seems to imply that this is a Chalchihuites-like architectural characteristic. The significance of this, however, is unclear. It could be a formal platform emulating a Chalchihuites building technique, or perhaps it is nothing more than the elevating and leveling of ground to provide a surface for the construction of the room, which seems the most likely explanation. Jay also indicates that excavations appear to have revealed that some areas may have been leveled and probably cleared before a structure was built.

In comparing La Manga and Weicker site houses (Figures 35 and 36), the best data on room/house size at La Manga comes from Area 1(identification of probable houses in Area 2 is problematic because of preservation and greater uncertainty in identifying what may or may not be a house). The following is based on data from Area 1 Features 2 (Rooms 1, 2, and 3), 3, 4, and 5. For this discussion, only data from Feature 8 in Area 2 is used (Table 23). The floor areas (both paved and unpaved combined) from the features from La Manga ranged from 9.2 to 16.6 m^2 with a mean of 11.2 m^2. Paved rooms ranged in size from 3.3 to 12.4 m^2 with a mean of 8.1 m^2 and unpaved rooms ranged from 3.1 to 5.8 m^2 and a mean of 4.3 m^2. The unpaved rooms, on average, were nearly half as small as the paved rooms.

The floor areas from the Weicker site Houses A–E ranged from 3.1 to 9.1 m^2 with a mean of 7.4 m^2. Paved rooms, including Houses B and E with both rooms paved, ranged in size from 3.06 to 6.9 m^2 with a mean of 4.4 m^2 and the unpaved rooms both measured approximately 4.70 m^2. The unpaved rooms at the Weicker site tended to be slightly larger than the paved rooms.

Table 24. Approximate floor areas of selected house features at La Manga and at the Weicker site.[1]

Feature Number	Paved Rooms (m^2)	Unpaved Rooms (m^2)	Total Estimated Floor Area (m^2)
La Manga			
Area 1			
Feature 2, Room 1	9.2	—	9.2
Feature 2, Room 2	10.4	—	10.4
Feature 2, Room 3	12.4	4.2	16.6
Feature 3	6.6	5.3 (2.5/2.8)	11.9
Feature 4	6.8	3.2	10.1
Feature 5	8.3	3.1	11.4
Area 2			
Feature 8	3.3	5.8	9.1
Weicker Site			
House A	4	4.7	8.7
House B[2]	4.1/3.5	—	7.6
House C	3.1	—	3.1
House D	4.4	4.7	9.1
House E[2]	5.2/3.9	—	9.1
House F	7	—	7

[1]Size estimates calculated by using DesignCAD 2018. [2]Both rooms paved.

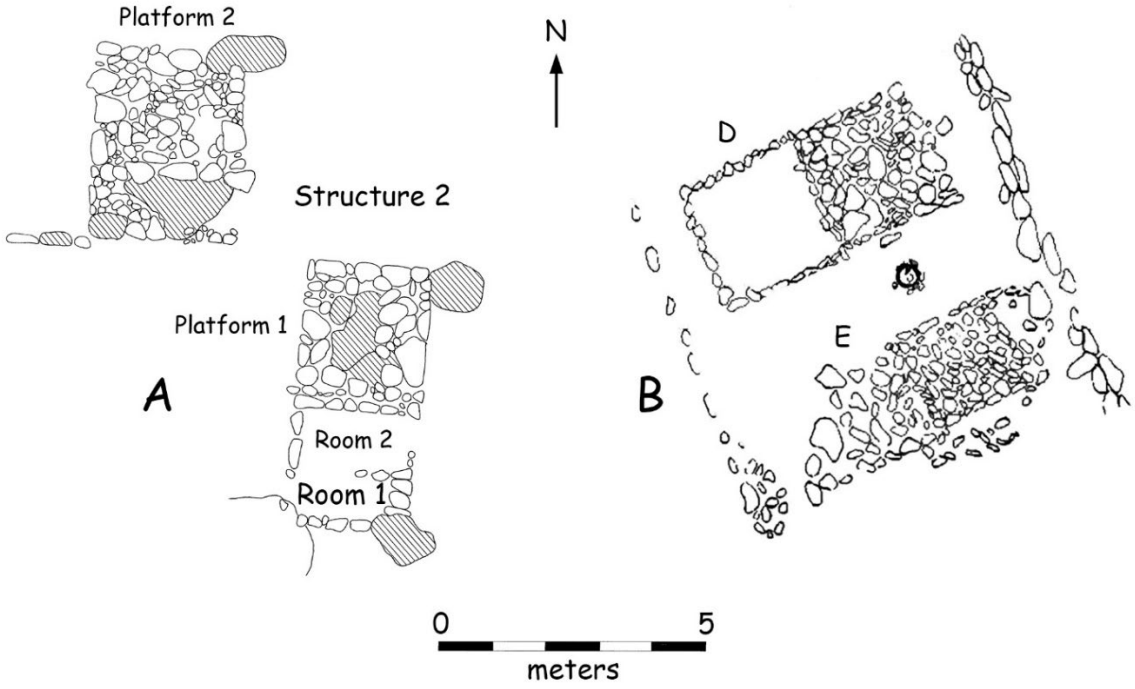

Figure 35. Comparison of houses from La Manga (Area 1, Structure 2, Platforms 1 and 2) and from the Weicker site (Compound 2, Houses D and E).

Figure 36. Weicker site houses D and E, Structure 2 (view to the south); compare to La Manga features Figures 10, 11, 12, and 13.

The overall floor area of the houses at La Manga is estimated to be about a third larger than that at the Weicker site. On average the paved rooms at La Manga are nearly twice the size of those at the Weicker site while the unpaved rooms are nearly equal in size. The paved rooms may have served as the primary focus of household activities (e.g., sleeping, food storage) while the unpaved portions may have functioned as patios, food preparation and other household activity loci, or perhaps storage areas. Given the small sample size and the poor preservation of many of the features, the significance of the differences in house size between the two sites is difficult to access. An obvious explanation may be site function and socio-economic complexity. La Manga looks to be larger habitation site with somewhat greater architectural variability; features include a staircase and large paved platforms (flat, paved rectangular surfaces) adjacent to probable plazas that could have functioned as communal areas for ceremonial or other social activities. Additionally, La Manga may have been occupied for an extended period whereas, as Kelley and Shackelford (1954) suggest, the Weicker Site was a "a small agricultural community" that saw a limited occupation.

Finally, Jay (1957) and Kelley (1971) argue that the architecture at La Manga was a mix of Loma and Chalchihuites styles. Specifically, Jay (1957:61) states, "Examples of Chalchihuites vertical slab and horizontal masonry were found at La Manga but for the most part the types were mixed in all structures." La Manga, like other Loma sites, lacks the monumental and sub-monumental platforms and platform mounds/pyramids that are prevalent at La Ferrería and other Chalchihuites sites. La Manga, and Loma sites in general, also lack the "Mesoamerican" courtyard group; a central plaza, with (or without) a central altar, surrounded by a rectangular mound or mounds on which houses were placed (e.g., E. A. Kelley 1976). Nor did Loma peoples make use of adobe or rubble core-veneer architecture that was faced and covered with plaster as found at Alta Vista and La Ferrería. Based on this author's observations (Foster 1878, 1985, 2000), Loma architecture and architectural features are generally very basic and building materials appear, not surprising, to be derived from on- or near-site materials that include outcropped boulders and large rocks, cobbles, and slab stones. There also appears to be considerable variation in the organization and

layout of features on Loma sites with opportunistic utilization of open spaces. There appears to be some leveling or clearing of areas, as mentioned above, prior to the building of features, but how frequently this occurs is unknown. Furthermore, the use of upright slab stones, boulders (outcropped or otherwise), cobbles, and paving stones (of various sizes and shapes) is commonplace on archaeological sites in Durango and western Zacatecas. It is how these materials were used and the type of features built from them that may be a better indication of whether they represent Loma or Chalchihuites architecture rather than simply their presence. Additionally, as noted above, the coarseness of the architecture at La Manga (Lerdo) was noted by Punzo Díaz and M. Zavala and a point was made of its dissimilarity to that of Chalchihuites sites in the general area. In other words, this author does not agree with Jay or Kelly that, based on architecture, La Maga is a Chalchihuitized (acculturated or incorporated) Loma site.

Loma San Gabriel or "Chalchihuitized" Loma San Gabriel: That is the Question

In her concluding discussion of La Manga, Jay (1957:65) makes the following statement:

> "The preceding evidence seems to suggest certain elements in the Loma San Gabriel assemblage and in the Chalchihuites assemblages at Schroeder [La Ferrería] are combined in La Manga. What has been called the Loma San Gabriel assemblage, on the basis of pottery, architecture, and artifacts may well be a domestic version of Chalchihuites at the ceremonial Schroeder Site. The decorated Chalchihuites wares are mixed with Loma Plain and Brown Utility, the architecture approaches a median between the Weicker site and Schroeder types one and two, and the artifacts are indistinguishable from those at Schroeder."

As discussed earlier, the general point of Chalchihuites influence at La Manga was subsequently reiterated by Kelley (1971:800) in his initially summary of Loma when he alluded to there being a blend of Loma and Chalchihuites material culture and architectural traits at the site. Spence (n.d., 1971b), in his study of Loma and Guadiana Chalchihuites lithic assemblages has also noted the influence of the two cultures on one another. The most obvious indicator of Chalchihuites contact or interaction at La Manga is the presence of Chalchihuites ceramics; they account for just over 21 percent of the identified ceramic types at the site. Most of that was utility wares with just over 2 percent being decorated types. Given the site's proximity to La Ferrería and the two sites' apparent contemporaneity, this is not a big surprise. If it is assumed that these percentages are representative of the total ceramic assemblage at the site and if we further assume that at least half of the unidentified ceramics are of Chalchihuites origin and the other half are of Loma origins, the relative percentage of Loma versus Chalchihuites ceramics at the site does not change. At face value, one could conclude that 30 percent of the overall ceramic assemblage being Chalchihuites is substantial and is an indicator of intense sustained interaction between the La Manga occupants and the Chalchihuites culture. However, given the apparent longevity the occupation of the La Manga, that interaction may have been less intense than suggested by the ceramic percentages and furthermore, it does not consider any ebb and flow of interaction between the two groups. The point being, the extent and nature of interaction between the La Manga occupants and their likely neighbors at La Ferrería remains an unanswered question. Application of the term Chalchihuitized to the site may be an overstated characterization. Nevertheless, as Kelley (1971:801) notes, Loma sites in proximity to Chalchihuites centers often appear to have been strongly influenced by the "higher" culture.

In her concluding discussion, Jay (1957:65–67) makes two additional points of significance. First, she states that she did not believe that La Manga was co-occupied by Loma and Chalchihuites people. In other words, no evidence of a Chalchihuites "*barrio*" or co-habitation of the site was identified. I concur with this conclusion.

The second point is Jay's suggestion that La Manga is essentially a residential site for the Chalchihuites ceremonial site La Ferrería. Of the early investigators (Kelley and Spence) only Jay (1957:66) lumps Loma and Chalchihuites into one cultural manifestation. She further states that the Weicker site was yet another example of Chalchihuites domestic architecture and that the idea that Loma and Chalchihuites are unrelated is likely incorrect. Clearly, Kelley (1971) did not consider this to be the case and it was not until more recently this idea was once again put forth.

The concept of the Loma San Gabriel culture, as well as that of the Chalchihuites culture, as presented by Kelley (1971) and Foster (1985, 1993b) have become the focus of recent criticism. In particular, some (e.g., Hers 1988, 1989a, 1989b) have lumped the Precolumbian cultures in northern Jalisco, central and western Zacatecas, and Durango (the Chalchihuites, La Quemada, Río Bolaños, and Loma) from the end of the Archaic to the protohistoric into a simplified, pre-1940s characterization of the Chalchihuites culture. This homogenization of the northwest Mexican archaeological record only serves to substantiate largely antiquated and diffusionist arguments regarding the relationship of certain archaeological traits found in central and northern frontier Mesoamerica while ignoring the obvious and considerable variation present in the archaeological record of the region. Furthermore, Hers provides no archaeological data to support her characterization.

As for Loma San Gabriel, Kelley's original formulation and Foster's (1978, 1985, 2000) subsequent studies view Loma as a separate, identifiable cultural manifestation in the archaeological record of western Zacatecas and Durango. Those arguing against Loma as a separate cultural entity appear to ignore or do not recognize the continuity between Loma and the earlier local Archaic base (Foster 1985; Kelley 1971; Spence n.d., 1971); the fact there are sites and features that appear to predate the development of the Guadiana Chalchihuites (and Suchil Chalchihuites) (e.g. Palacios Ríos 2015; Kelley 1971); the lack of evidence for Loma San Gabriel being the cultural foundation from which the Chalchihuites culture developed; the obvious differences between Loma and Chalchihuites chipped stone assemblages (Spence n.d. 1971); and the significant technological and stylistic differences between Loma and Chalchihuites ceramic assemblages, especially early in the Chalchihuites sequence. Loma ceramic types are not simply the domestic wares of the Chalchihuites culture (Foster 1981, 1985; Kelley 1971; Kelley and Kelley 1971). Additionally, although both the Loma and Chalchihuites cultures used cobbles and stone slabs in construction, there are often clear differences in construction techniques and in the types of structures and features built and significant differences in intrasite organization of features as well as overall settlement patterns. Furthermore, as discussed above, recent studies of obsidian sourcing and procurement in Zacatecas and Durango have shown that although Loma and Chalchihuites peoples in Durango exploited local obsidian sources, their patterns of procurement and use are quite distinct (Darling 1998). Darling also reports that obsidians from Jalisco and central Mexico occur in Chalchihuites sites but not in Loma sites, indicating the Guadiana Chalchihuites were participating in a regional or extra regional exchange network that apparently excluded Loma.

Even more recently, several researchers (e.g., Cruz 1994:45–46) have erroneously claimed that there are no Loma sites that do not have Chalchihuites materials on them. To the contrary, many Loma sites in both Durango and Zacatecas lack any evidence of Chalchihuites contact (e.g., Brooks 1971; Foster 1878, 1985). Furthermore, the presence of a Chalchihuites artifacts on a site does not necessarily make that site a Chalchihuites site or a Chalchihuitized site. The concept of intrusive artifacts as well as numerous other explanations seem to be being ignored, or not understood, in order to facilitate a particular argument.

All this said, a more comprehensive understanding and evaluation of Loma San Gabriel is needed, badly needed. Kelley's focus on the Chalchihuites culture, Alta Vista, and the Aztatlán mercantile system subsequent to his initial 1971 summary of Loma San Gabriel (see also Kelley 1956) precluded any further intensive investigation by him. The only other studies of Loma during this early period were the important and too often overlooked studies of Loma and Chalchihuites lithics by Michael Spence summarized in his

1971(a) monograph. Equally important, if not more so, are the unpublished individual manuscripts Spence completed on both the Suchil and Guadiana Chalchihuites and Loma lithic artifacts. In addition to being data laden, these are replete with ideas that did and still provide the bases for continued and future investigations of both the Loma San Gabriel and Chalchihuites cultures (see also Spence 1978).

In 1976, in need of a dissertation topic to complete my Ph.D. at the University of Colorado, Kelley suggested taking on Loma San Gabriel and he graciously provide me a Datsun sedan load (and then some) of boxes of Loma artifacts and accompanying files. These were dutifully driven from Carbondale, Illinois back to Frederick, Colorado where they were unloaded into a makeshift laboratory in the basement of the house in which my wife and I were living. Over a two-year period, I went through the collection with the goal being to assess and expand on Kelley's Loma formulation. This included what can be best described as a reconnaissance survey of a limited number of Loma sites Kelley had previously recorded as well as some of the sites recorded by Richard Brooks (1971). All this resulted in my dissertation, such as it is, from which a number of subsequent articles were extracted. I found no significant divergence from Kelley's initial description of Loma. What my dissertation did, at least partially, was to flesh-out the outline Kelley had provided. In the intervening 40 plus years there have been numerous arguments regarding the existence and definition of Loma San Gabriel. In those I have found nothing to cause the abandonment of Kelley's characterization of the Loma San Gabriel culture. Once again, there has been virtually no focused systematic study of the Loma San Gabriel culture, no or little detailed recordings of sites (including site maps, artifact tallies, feature descriptions), and no systematic excavation of what are believed to be Loma sites. Thus, our understanding of Loma has progressed little over the last six decades. Who is right, who is wrong is yet to be determined. Despite recent and ongoing work in the area by a contingent of Mexican archaeologists, given the lack of resources available for archaeological research in western Zacatecas and Durango and the generally few numbers of people currently involved, it is unlikely the issues at hand will be resolved anytime soon.

APPENDICIES

Appendix A. Plant species found in the vicinity of La Ferrería and La Manga, Durango (Hendricks 1960).

Family/Genus and Species	Common Name	Family/Genus and Species	Common Name
Opuntia durangensis	Durango prickly pear	Liliaceae	Lily
O. megacantha (robusta?)	(Mission?) Prickly pear	Loganiaceae	Loganias
Aizoaceae	Carpet weeds	Malvaceae	Mallow
Amaranthaceae	Amaranth/pigweed	Martyniaceae	Unicorn
Anacardiaceae	Sumac	Nyctaginaceae	Four o'clock
Apocynaceae	Dogbane	Oleaceae	Ash
Apocynaceae	Milkweed	Onagraceae	Evening primrose
Asteraceae/Compositae	Sunflower	Oxalidaceae	Wood Sorrel
Betulaceae	Birch	Papaveraceae	Poppy
Bignoniaceae	Bignonia	Pinaceae	Pine
Boraginaceae	Heliotrope or borage- or forget-me-not	Plantaginaceae	Plantain
Burseraceae	Torchwood	Plumbaginaceae	Thrift
Cactaceae	Cactus	Polemoniaceae	Phlox
Caryophyllaceae	Pink or carnation	Polygonaceae	Knotweed
Convolvulaceae	Bindweed or morning glory	Portulacaceae	Purslane
Cruciferae or Brassicaceae	Mustard and includes many green vegetables of the cabbage family	Pontederiaceae	Pickerel-weed
Cucurbitaceae	Squash	Rubiaceae	Madder
Cyperaceae	Sedge	Salicaceae	Willow
Euphorbiaceae	Sperge	Scrophulariaceae	Snapdragon
Gramineae	Grass	Selaginellaceae	Selaginella
Hydrophyllaceae (Boraginaceae)	Waterleaf	Solanaceae	Potato/nightshade
Iridaceae	Iris	Umbelliferae	Carrot
Labiatae	Mint	Verbenaceae	Vervain
Leguminosae	Legume, pea, or bean		

Appendix B. Concordance of Foster and Jay's feature designations for La Manga.

Foster this report	Jay (1957)
Area 1	
Feature 1	Structure 1, Platform
Feature 2	Structure 1, roomblock (Rooms 1, 2, and 3)
Feature 3, Rooms 1, 2, and 3	Structure 2, Platform 1, Rooms 1 and 2
Feature 4, Rooms 1 and 2	Structure 2, Platform 2
Feature 5, Room 1 and 2	Structure 3, Rooms 1 and 2
Area 2	
Feature 6	Structure 1
Feature 7	Platform 1
Feature 8	Platform 2
Feature 9	Platform 3
Feature 10	Platform 4

Appendix C. Spence's (1971) descriptions of stone tool types from La Manga.*

Tool Type	Descriptions
End Scrapers	
Large handled	Worked along the edges to form a handle that is usually distinguished from the broader head. The type is characteristic of the Chalchihuites Culture, although it is rare in the latest (Río Tunal and Calera) phases.
Simple rectangular	Rectangular pieces with parallel edges, percussion worked at the scraping end and often along both edges. Occasionally both ends have scraping edges. They have a distribution similar to the handled varieties, and probably are part of the same functional complex.
Thumbnail	Small, thin, oval to circular flakes retouched as scrapers on part of the edge and appearing in minor quantities throughout the sequence.
Short	Very small flakes, relatively narrow, retouched crudely along the edges to form end scrapers and appearing through most of the sequence.
Side Scrapers	
Broad	Variable but usually roughly rectangular flakes, relatively broad and thin, worked on one or more edges. They appear throughout the sequence…
Small	Small, narrow pieces roughly retouched to form scraping edges along the sides. They are smaller than the short side scrapers, and extend through much of the sequence.
Variable Scrapers	
Semicircular	Roughly circular or oval to rectangular in form, with a high, steep-sided dorsal face. The scraping edge encompasses about one-third to one-half of the base, usually on the longer edge. The type is common throughout the sequence.
Amorphous	Roughly retouched flakes and chunks.
Plane Scrapers	
Semicircular	Longer than broad, with one of the longer edges forming the working edge. The dorsal face is high, and often slopes back to overhang the base at the rear. The type occurs through most of the sequence
Small	Similar to, but smaller than, the large variety. In some the sides are pinched in near the base to give a domed effect. The type appears to be a Chalchihuites culture type…
Blades	
Small flake blades	Small blades with fairly rough edges.
Fine blades	Fine prismatic obsidian blades of the type well known from Mesoamerican sites. They are much more regular than the small flake blades, and had been derived from cores considerably superior to those here termed the small fine type. The striking platforms have been ground, and in some cases may also have been repeatedly struck with a pebble or other hard object. No cores were found which were fine enough to relate to these blades. This, plus the varieties of obsidian used in them (all foreign, mostly from Jalisco) and the absence of waste or other items of the same obsidian varieties, make it clear that these blades were imported in finished condition.
Knives	
Single edge	Bifacially worked, one long edge thinned and sharpened by retouch and the other squared off, either naturally or by a few percussion blows, to provide an area for the finger to exert pressure. They appear throughout the Durango sequence.
Concave base	Slightly to markedly convex bases and straight to convex edges. They appear throughout the sequence.

*See Spence 1971 for further comparative information.

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