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Proto-Urban Social Transformations and Community Organization at La Laguna, Tlaxcala, During the Late Pre-Classic



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Location: Tlaxcala, México

Site: La Laguna

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Abstract

This report details the recent excavations at the site of La Laguna, Tlaxcala, (occupied circa 600 BC – 100 AD, located in the "Teotihuacan Corridor" as designated by Archaeologist Ángel García Cook), and the abandonment of which coincides with the urbanization and political expansion of that great city. The excavations were focused in two residential areas of the site: the first in the periphery of the community, and the second in its center. We were able to document certain specialized production activities, particularly those associated with the maguey process and obsidian carving. It is possible that such activities could have contributed to the inter-regional exchange, which brought foreign products to La Laguna. For the distribution of earflares (*orejeras*), we suggest that there may have been subtle variations between the inhabitants of the periphery of the community and those from the center – the first having only earflares made from clay, of a solid and hollow form, and the second with hollow earflares, decorated, and made of jade.

Changes in the obsidian exchange network were inferred based on a geochemical study utilizing LA-ICP-MS, which showed a growth in the importance of the deposits from Pachuca, Hidalgo during the Terminal Formative. It is possible that these changes were followed by the religious integration of the Central Highlands during the Late Formative, when the representation of several gods from the pantheon of the Classic and Postclassic, (including Huehuetotl, Tlaloc, and Xipe-Totec), existed at La Laguna and other large and small contemporary sites. With ongoing analyses and new excavations we hope to shed some light on the social processes which transformed the community during this key period in the history of the Highlands.

Resumen

Este informe detalla las excavaciones recientes en el sitio La Laguna, Tlaxcala, ocupado cerca de 600 a.C.–100 d.C., ubicado en el "corredor teotihuacano" designado por el Aqo. Ángel García Cook, y el abandono, que coincide con la urbanización y expansión política de aquella gran urbe. Las excavaciones se enfocaron en dos áreas residenciales del sitio: la primera en la periferia de la comunidad, y la segunda en su centro. Logramos documentar ciertas actividades de producción especializadas, particularmente aquellas asociadas con el proceso del maguey y la talladura de obsidiana. Es posible que tales actividades pudieron haber contribuido al intercambio interregional el cual trajo productos extranjeros a La Laguna. Por la distribución de las orejeras, sugerimos que pudo haber variedades sutiles entre los habitantes de la periferia de la comunidad y de los del centro – el primero teniendo solo orejeras hechas de barro de forma sólida y hueca, y el segundo teniendo orejeras huecas, decoradas, y hechas de jade.

Se concluyeron cambios en las redes de intercambio de obsidiana en base a un estudio geoquímico utilizando LA-ICP-MS, que mostró un crecimiento en la importancia de los

yacimientos de Pachuca, Hidalgo, durante el Formativo Terminal. Es posible que a estos cambios le siguieron la integración religiosa del altiplano central durante el Formativo Tardío, cuando existía la representación de varios dioses del panteón del Clásico y Posclásico en La Laguna (incluyendo el Huehuetectl, Tlaloc, y Xipe-Totoca) y otros sitios contemporáneos, grandes y pequeños. Esperamos traer luz a los procesos sociales con los análisis en curso y nuevas excavaciones, que transformaron la comunidad durante este período clave en la historia del altiplano.

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Introduction

This report details one season of domestic excavations at the archaeological site of La Laguna, Tlaxcala, México ([Figure 1](#)). La Laguna was the center of a regional polity during the Middle to Terminal Formative periods (c. 600 B.C.–A.D. 100), whose abandonment coincided with the urbanization and political expansion of Teotihuacán. Recent investigations at the site demonstrate its inhabitants to have been active participants in the interregional economic and ideological exchange networks that intensified in central México during the centuries preceding Teotihuacán's political integration of the region. Ongoing analyses are illuminating the subtle transformations in specialized economic activities, forms of status differentiation, and iconographic depictions of central Mexican deities at the site. The investigations contribute to generating a richer understanding of the role of second-tier centers, such as La Laguna, in the enduring changes that took place in central México during the initial development of urban, state-level political and religious institutions.



Figure 1. Back corner of Mound C at La Laguna with La Malinche volcano in distance.

Location and Chronology of La Laguna

The La Laguna site is located on the modern hacienda of the same name in northern Tlaxcala (municipalities of Terrenate and Lázaro Cárdenas), 30 km north of the peak of the La Malinche volcano ([Figure 2](#)). The site straddles the continental divide at an elevation of 2600 m, and sits within the natural corridor of communication extending between the northern Basin of México and the Oriental Valley of Puebla, heading to the Gulf of México. Recognizing the strategic nature of this corridor to the movement of people and goods, Ángel García Cook (1981) named it the "Teotihuacán Corridor" corresponding to the Classic period occupation of Tlaxcala, when Teotihuacán-style materials appear at sites in the region. La Laguna is located 90 km east/southeast of Teotihuacán, within the corridor where it meets the Sierra Iztacamaxtitlan pass, heading to northern Puebla. It seems likely that the positioning of the site at this natural crossroads contributed in part to its growth during the Middle to Late Formative periods.

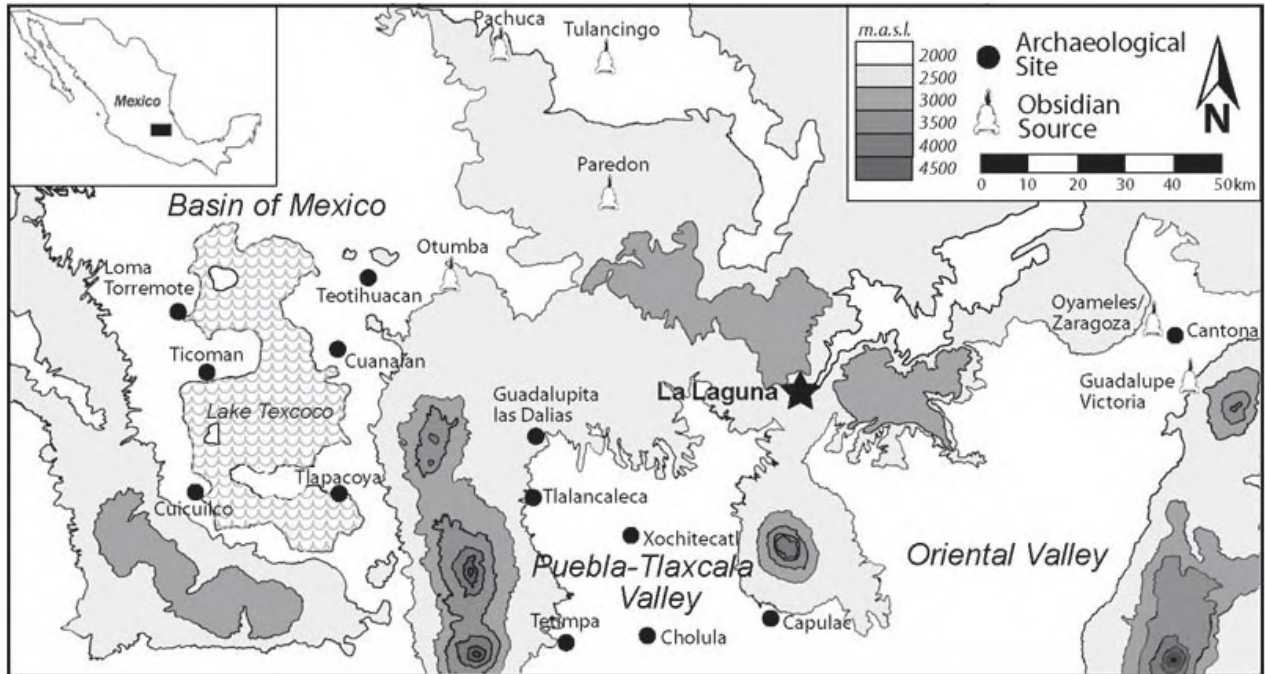


Figure 2. Eastern central México showing location of La Laguna, selected archaeological sites, and obsidian sources.

La Laguna was registered in two separate regional archaeological surveys that included parts of northern and central Tlaxcala. Both projects included only surface collections at the site, but documented it as the largest in their areas during the Formative period (Merino Carrión 1989; Snow 1969). The first excavations at the site were initiated in 2003 by Aleksander Borejsza, UCLA, joined by the author in 2004 under the project "Investigaciones del Formativo en la Región de Apizaco, Tlaxcala" directed by Richard Lesure, UCLA. These investigations included the mapping of the site ([Figure 3](#)), domestic excavations, and the investigation of agricultural terraces. The domestic excavations of 2005, reported on here, were directed by the author as the "Proyecto Arqueológico La Laguna (PALL)."

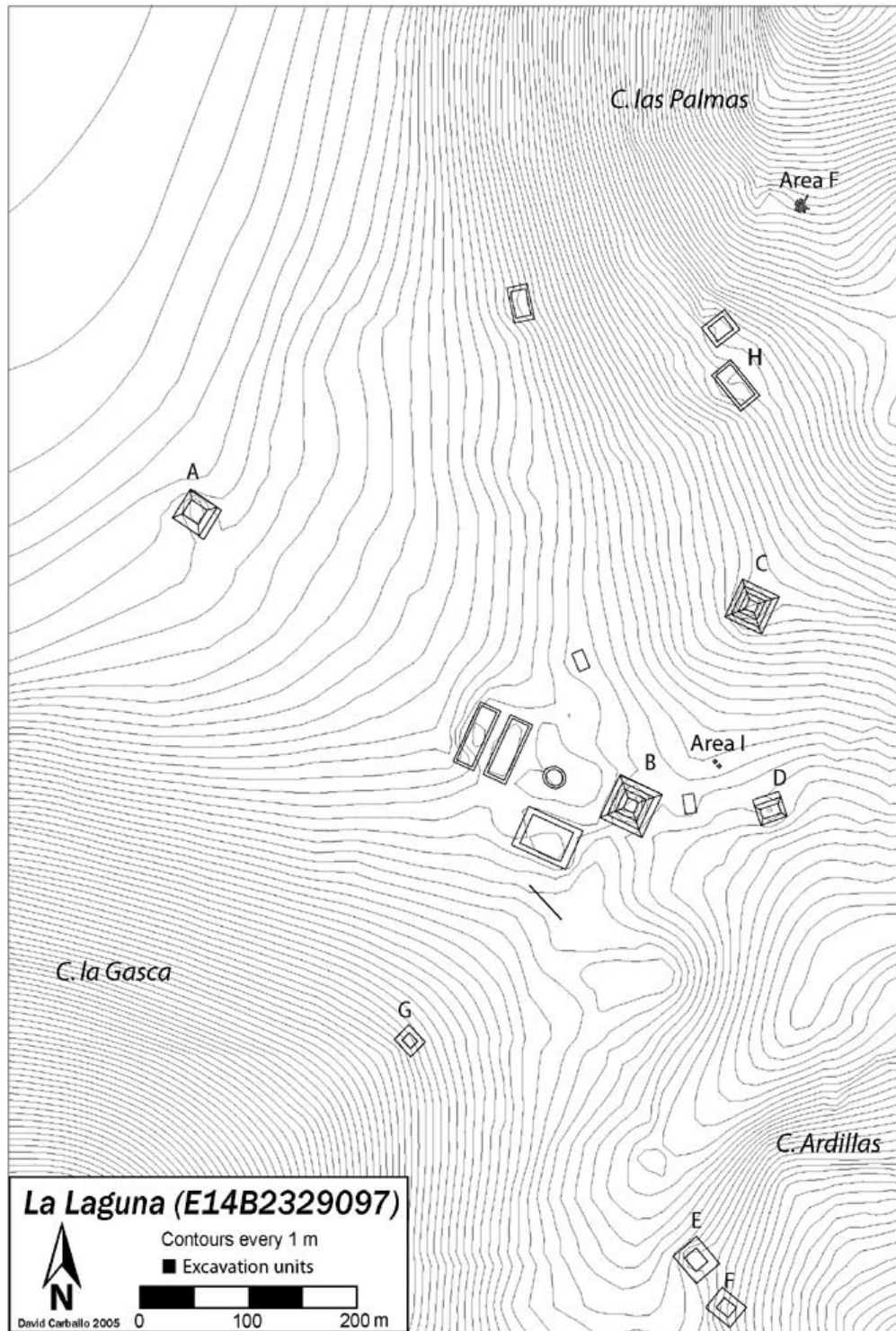


Figure 3. Map of La Laguna showing mounds visible from surface and locations of excavations in Areas F and I.

Our investigations document that the site was a community of 250 hectares during the Late Formative period, which included a ceremonial core, outlying mounds, and

dispersed occupation covering the slopes and saddle between three adjacent hills. Its size and number of mounds indicate La Laguna to have been an important center within its sub-region of the Puebla-Tlaxcala Valley, yet considerably smaller than contemporary centers in southern Puebla-Tlaxcala and the Basin, such as Tlalancaleca, Xochitécatl, Cholula, Cuicuilco, and Teotihuacán (see García Cook 1981; Plunket and Uruñuela 2005; Sanders et al. 1979; Serra Puche et al. 2004). Radiocarbon dates obtained by Lesure place the Formative occupation of the site between c. 600 B.C.–A.D. 100, consistent with the ceramic phases that have been encountered during excavations ([Figure 4](#), shown below).

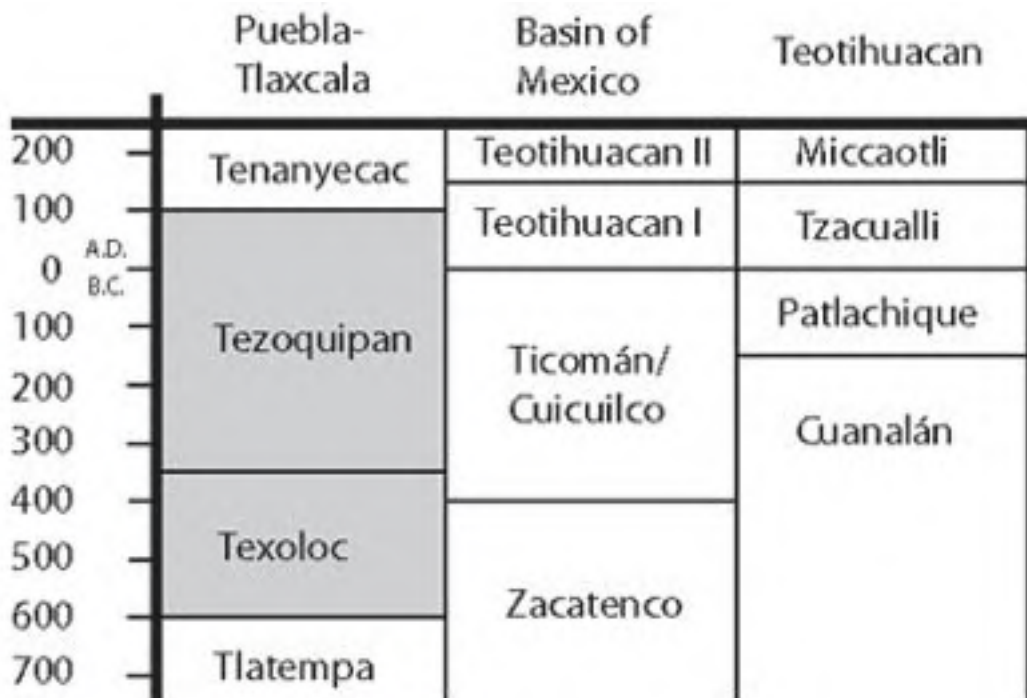


Figure 4. Preliminary chronology for Formative period occupation of La Laguna (shaded) and other central Mexican phase designations.

Excavations in Domestic Areas

The primary objectives of PALL investigations in 2005 were to excavate horizontal exposures in two domestic areas of the site, one at the periphery and one in the site center, in order to examine spatial and chronological variability in household assemblages. We have been establishing excavation areas with independent grid systems in our investigations at the site, and the 2005 excavations were undertaken in Area F and Area I ([Figure 3](#), and [Figure 5](#)). The excavations were aimed at recovering cultural features and materials associated with domestic architecture. This was

successfully achieved for both areas; however, more time was spent investigating Area F, resulting in a more comprehensive understanding of its residential layout.

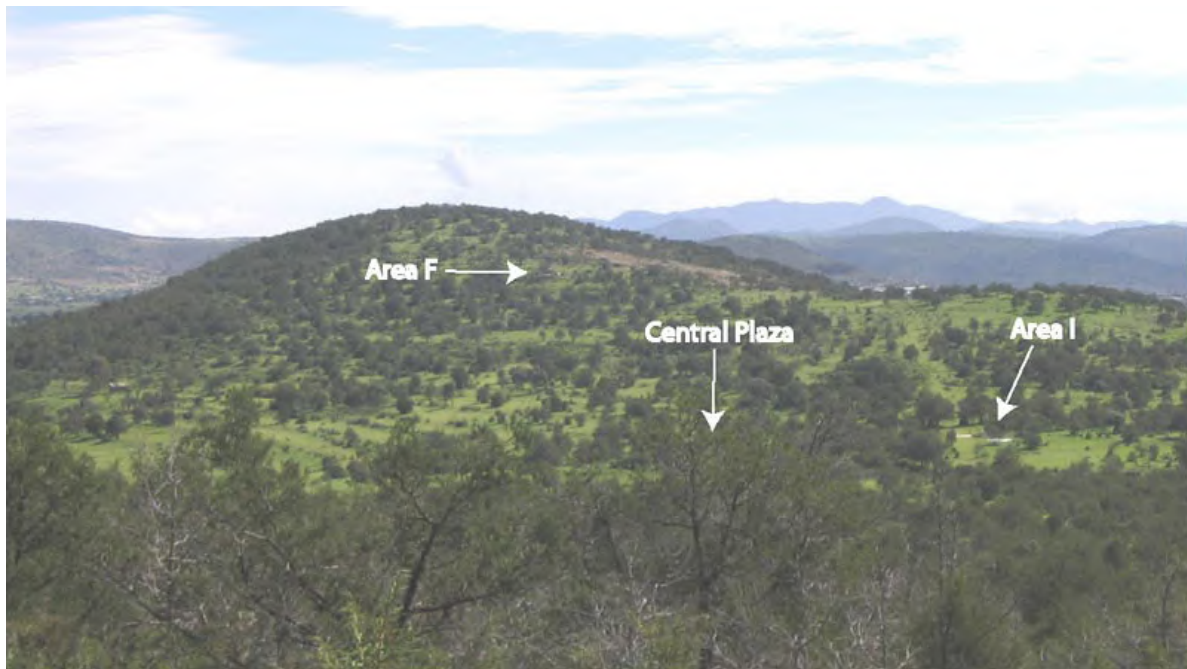


Figure 5. Panoramic view of La Laguna looking north toward 2005 excavation areas.

Area F

Excavation Area F is located mid-slope on the hill Cerro Las Palmas, near the site periphery. The hill-slope is terraced with a series of rubble walls, ditches, and metepantles (ridges planted with the maguey cactus to limit erosion). These features were explored by Borejsza in 2004, resulting in the discovery of a wall corresponding to the domestic structure we excavated in 2005. The structure represents the remains of a sizeable residential platform with at least one house, and was associated with cultural features including storage and trash pits, hearths, and burials ([Figure 6](#), and [Figure 7](#)). Two to three occupation surfaces were discovered, allowing us to examine changes in domestic life in the area over time.



Figure 6. Residential platform from Area F.

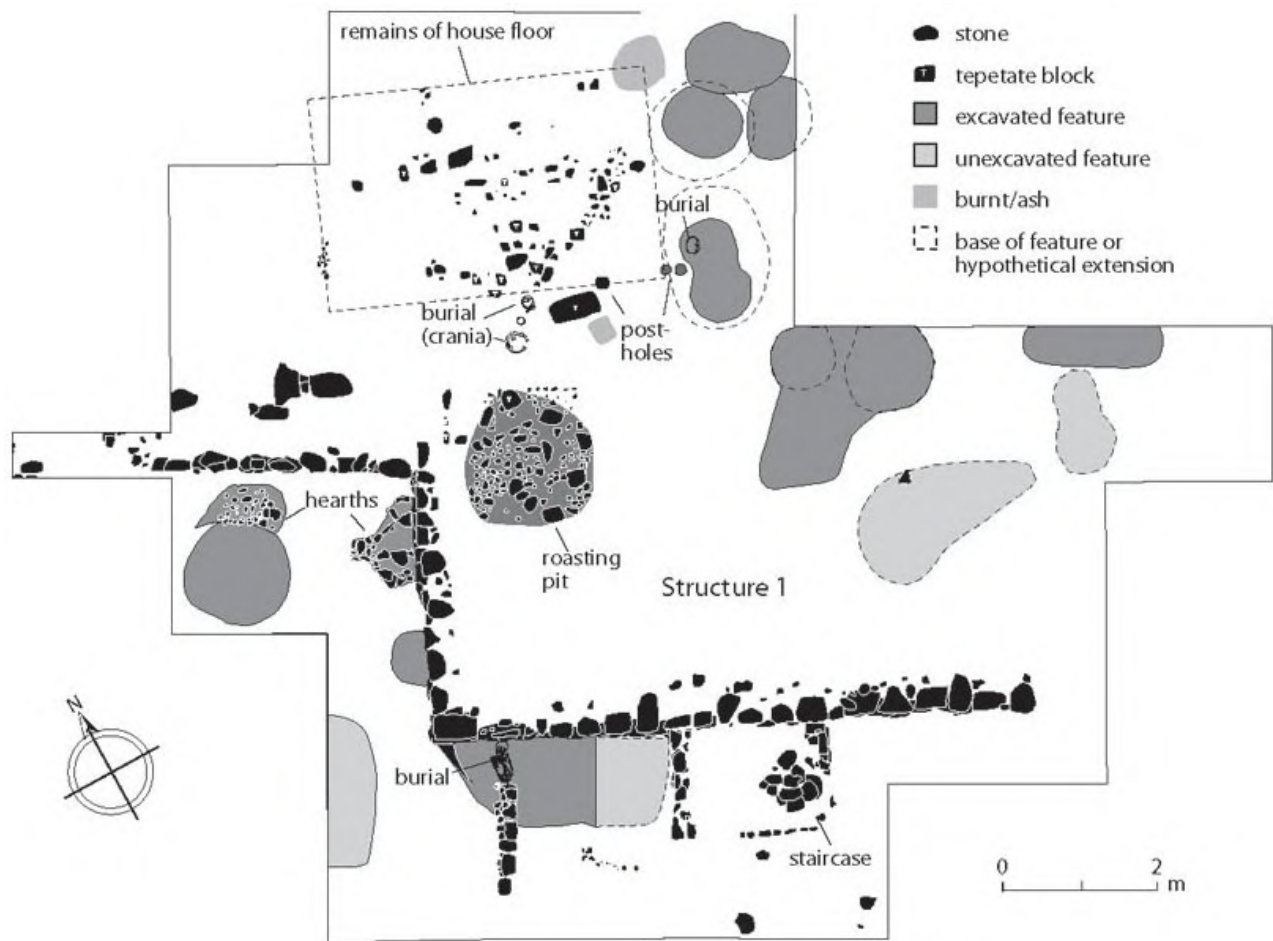


Figure 7. Illustration of excavations in Area F showing residential platform (Structure 1) and associated features.

Among the abundant domestic refuse recovered from Area F were carbonized spines from the maguey plant, obsidian and andesite scrapers likely used in maguey

processing, perforated pottery sherds that may have been used as whorls in the spinning of maguey fiber (ixtle), and a roasting pit in front of the house that may have served for cooking the plant (see Parsons and Parsons 1990 regarding central Mexican maguey processing). These finds suggest that maguey processing activities possess a long history at La Laguna, as pulque production was critical to the historic period hacienda and continues nearby today.

Three burial deposits were encountered in Area F including a flexed sub-adult, a neonate deposited in a shouldered bowl ([Figure 8](#)), and two crania flanking a black ceramic cup, left on the floor of the residential platform in front of the remains of the house. This last deposit is particularly interesting for what it may tell us regarding the abandonment of La Laguna. The crania were clearly positioned on the platform floor, oriented south, facing toward the peak of La Malinche. As they were only 10 cm below the modern surface, the crania and cup were partially crushed. Nevertheless, the mandible of one individual was clearly positioned in front of its face, suggesting the deposition of an already defleshed skull ([Figure 9](#)). These features of the deposit are more consistent with the deposit having been a secondary use of the skulls, possibly as a form of termination ritual incorporating the ancestors of the family that lived on the platform.



Figure 8. Red and white restricted-rim bowl that held neonate remains and was covered by orange hemispherical bowl.



Figure 9. One of two human crania deposited in front of house remains flanking a black ceramic cup. Second crania was discovered to the left of the cup, but was excavated prior to this photo.

Area I

Excavation Area I is located in the center of the site, surrounded by its three largest mounds ([Figure 3](#)). The area was selected for excavation for the possible comparisons it could offer with Area F. A smaller exposure of domestic features was uncovered in Area I, partially because excavations were of shorter duration, and partially because the densities of sherds and other cultural materials were so high in some strata that excavations proceeded very slowly.

At least two occupation surfaces were revealed in Area I. One was associated with small stone walls and domestic features ([Figure 10](#)). These walls appear too insubstantial to have supported house walls, and likely correspond to external delineating walls in the patio of a larger adjacent structure. Certain features were located lower than the wall alignments, including a bell-shaped pit with abundant refuse. A tightly flexed burial of a seated adult was encountered a few meters in front of the wall alignments, possibly representing a mortuary bundle that had been moved from its original burial deposit.

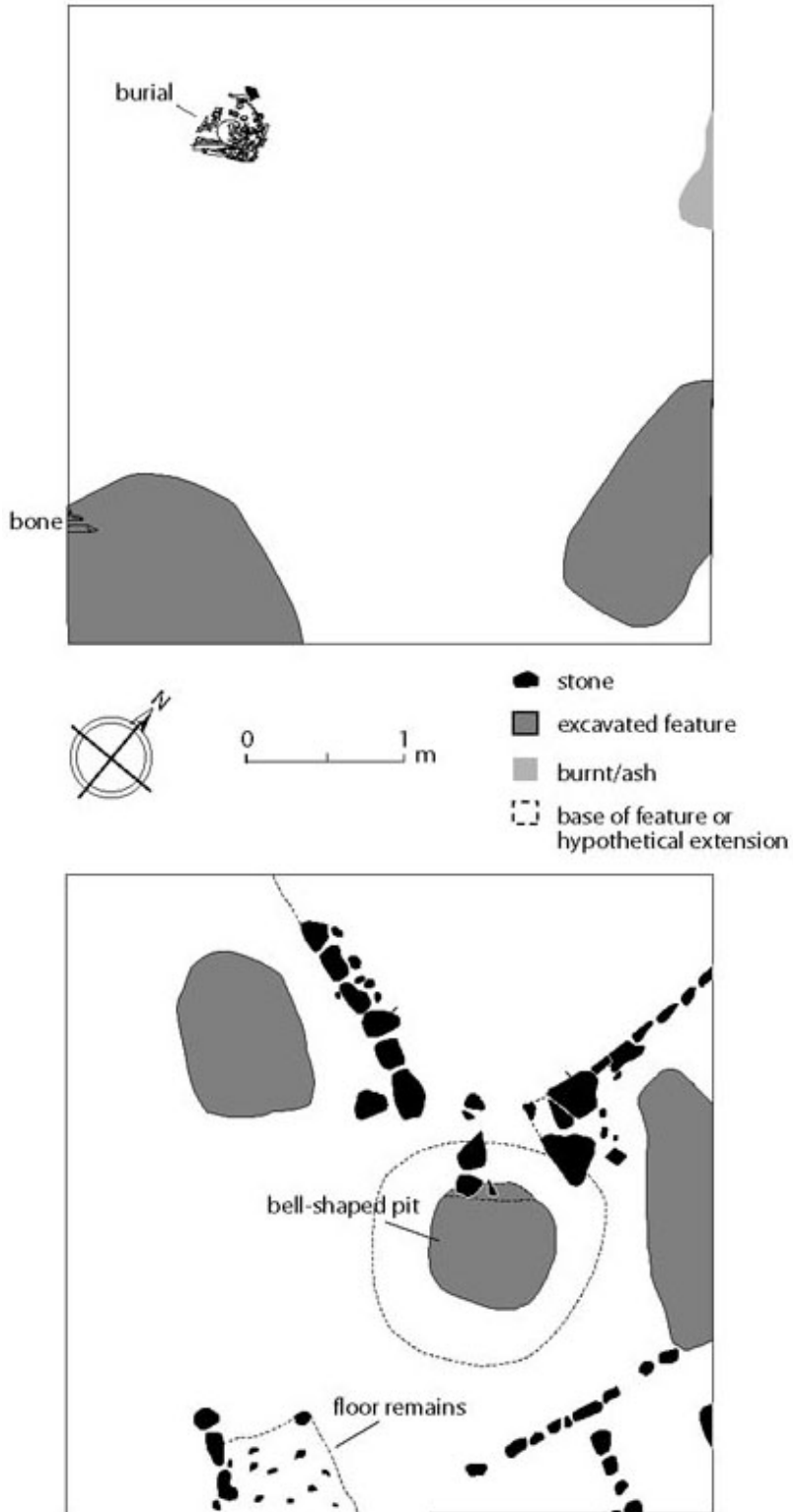


Figure 10. Illustration of excavations in Area I showing stone walls and associated features.

Proto-Urban Social Transformations

Understanding the social transformations that transpired at La Laguna over its seven centuries of Formative period occupation will require additional excavations and detailed laboratory analyses of materials from multiple residential and non-residential contexts. Nonetheless, significant progress has been made in illuminating the domestic lifeways of the members of the community. In particular, we are gaining a greater appreciation of the economic activities, status variability, and religious practices of La Laguna's inhabitants.

Economic Specialization

Specialized production activities documented at La Laguna thus far include the manufacturing of prismatic obsidian blades and the maguey processing possibilities discussed above. A compositional analysis of 25 obsidian samples using laser ablation-inductively coupled plasma-mass spectrometry (LA-ICP-MS) was conducted by Hector Neff at the Institute for Integrated Research in Materials (IIRMES), California State University, Long Beach ([Figure 11](#), and [Table 1](#), shown below). The study indicates that obsidian was imported to La Laguna from several sources, including Paredon (Puebla), Pachuca (Hidalgo), Otumba (México), and Oyameles/Zaragoza (Puebla). Paredon is the dominant tool-stone represented at the site, and sources located in the Mesa Central (Paredon, Pachuca, Otumba) represent 88% of the analyzed sample. An increase in the incidence of Pachuca obsidian and decrease in the incidence of Oyameles/Zaragoza obsidian from features dating to the Terminal Formative occupation (c. 50 B.C.–A.D. 100) was also registered, potentially indicating a shift in obsidian exchange networks corresponding with the rise of Teotihuacán.

	Paredon	Pachuca	Otumba	Oyameles/ Zaragoza	Total
Early features	12	0	1	2	15
Late features	4	4	1	1	10
Combined	16 (64%)	4 (16%)	2 (8%)	3 (12%)	25

Maguey processing at the site may have involved the production of cloth, cordage, and fermented *pulque*, but a satisfactory assessment requires more analyses. The positioning of La Laguna along a natural trade corridor and the presence of non-local resources at the site, such as marine shell, greenstone, and iron-ore, suggest an active role in the interregional exchange networks of the later Formative period by its inhabitants. More excavations are needed, however, before a determination of whether

specialized production activities using highland resources were directed for exchange outside of the community or only for local consumption.

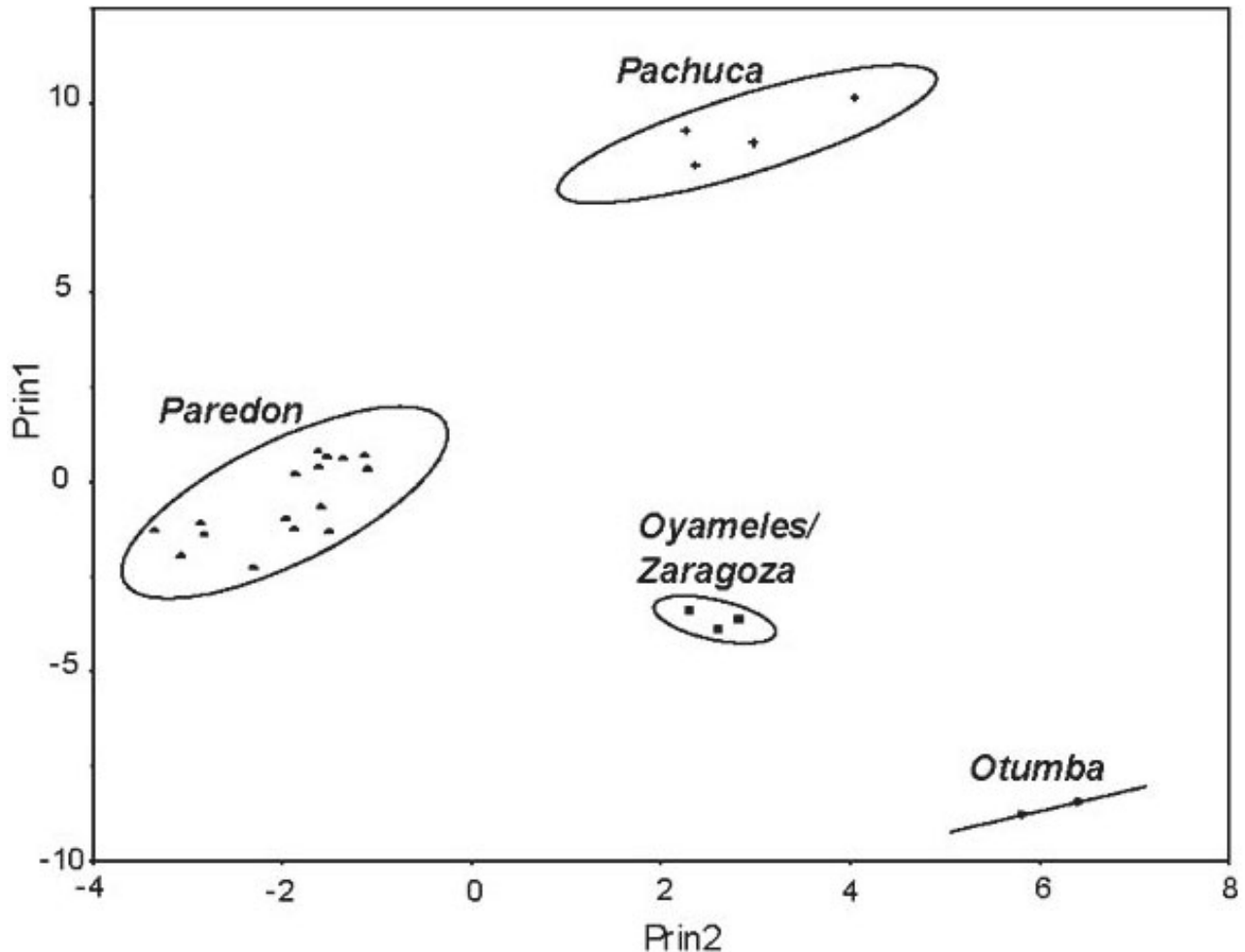


Figure 11. Obsidian source clusters based on first two principal components of LA-ICP-MS compositional analysis.

Status Differentiation

No clear status differentiations are evident between Areas F and I in burial offerings or quality of domestic architecture, although we would like a larger sample of the latter for Area I. Nonetheless, an interesting difference was registered in the personal adornments recovered from both excavation areas. Lesure (1999) has underscored the utility to investigations of early status inequalities of objects with subtle gradations in value, which communicate both social affiliations and distinctions in their display. In Mesoamerica, personal adornments such as earspools serve such a purpose (García Cook 1976).

Earspools at La Laguna were primarily made of clay, and were often slipped and painted. Ceramic earspools recovered thus far include solid/undecorated, hollow/undecorated, and hollow/decorated examples ([Figure 12](#)). The hollow examples are finely made and were usually polished.



Figure 12. Examples of earspools recovered from the excavation Areas F and I.

In comparing the earspools from Areas F and I, one notes a marked pattern. In Area F, only solid/undecorated and hollow/undecorated ceramic examples were recovered, while in Area I exclusively hollow/undecorated ceramic examples were recovered, with the addition of one hollow/decorated ceramic example and one example made of jade ([Table 2](#), shown below). Although this difference is a subtle one, it likely is indicative of slight status differences between the inhabitants of the periphery and center of the community.

Table 2. Earspool counts and densities recorded from the excavations.		
	Area F	Area I
Solid/undecorated ceramic	7	0
Hollow/undecorated ceramic	15	53
Hollow/decorated ceramic	0	1
Greenstone	0	1
Number/m³ excavated	0.16	1.54

Religious Integration

Along with the apparent elaborations in economic specialization and status differentiation at La Laguna, the community seems to have become increasingly integrated into the pan-central Mexican religious system of the Late Formative in its depictions of deities that became the foundations of Classic and Post Classic period central Mexican pantheons. In defining the Late Formative central Mexican sequence, George Vaillant (1939:525) first suggested that representations of gods in the Late Formative (Cuicuilco/Ticomán) period were indicative of the beginnings of a formalized central Mexican religious institution. He highlighted incense burners depicting the Fire God (Aztec Hueheteotl) and Storm God (Aztec Tlaloc) from his excavations at Ticomán as examples (Vaillant 1930:393, Plate LXXIX).

The Formative precursors of Hueheteotl and Tlaloc also appear to have been present at La Laguna, where their use in adorning domestic incense burners may have supplanted the use of zoomorphic burners related to a more localized ritual practice dubbed the cult of the "tejón" by García Cook (1981). In Tlaxcala, white-slipped ceramic Hueheteotls appear in the Texoloc phase and persist into the Tezoquipan phase (García Cook and Merino Carrión 1988). Such burners have also been recovered from Cuicuilco (Piña Chan 1960). The fragmented example from Area I of La Laguna consists of the lower torso attached to the pedestal ([Figure 13](#)). Vaillant's identification of incense burners depicting Tlaloc was based on the individual's fangs, an attribute of both the Ticomán and La Laguna specimens, which are almost identical ([Figure 14](#)). Tlaloc imagery has also been reported from Tlalancaleca (García Cook 1981; García Moll 1976).



Figure 13. Fire God (Huehuetéotl) incense-burner fragment from Area I.

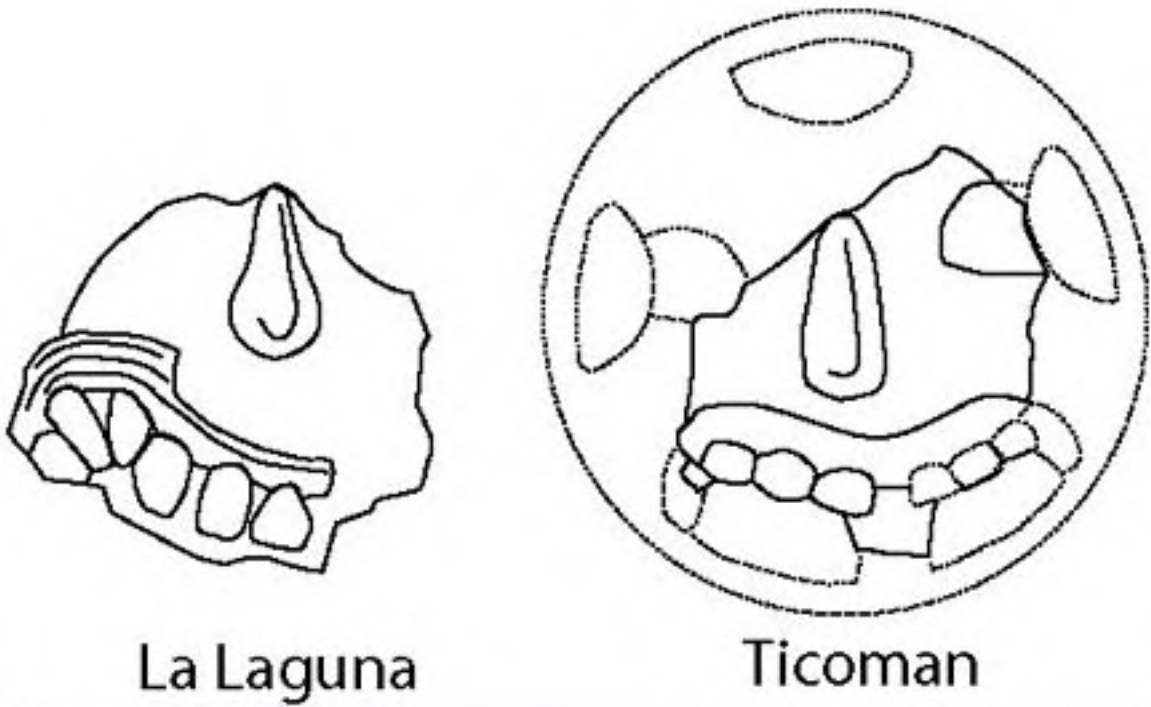


Figure 14. Storm God (Tlaloc) incense-burner fragments from Area F (photo) and comparison of one with an example Vaillant (1930) illustrated from Ticoman (illustration).

The head of a hollow figurine possessing the characteristics of the Post Classic Flayed God (Xipe-Totec) was also recovered in Area F at La Laguna, suggesting that much of the central Mexican pantheon elaborated on during the Classic and Post Classic periods was already established during the Late Formative. Such religious practices appear to have had an integrative, rather than divisive, role in the community as their remains appear in both Areas F and I, and in the assemblages of many contemporaneous sites, large and small, in Puebla-Tlaxcala and the Basin of México.

Conclusion

Domestic excavations at La Laguna are providing new information regarding many of the social transformations that characterized central Mexican societies during the development of urban centers and the political integration of the region. The community appears to have benefited from its positioning along natural corridors of communication, as its inhabitants were active participants in the interregional economic and ideological exchange networks of the period. Increases in economic specialization, status differentiation, and religious integration appear to have significantly affected the community before it was abandoned, coinciding with Teotihuacano urbanization and political expansion. The processes associated with these important social transformations are still not adequately understood; however, we hope to contribute to this ongoing endeavor with more excavations and analyses.

Acknowledgements

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