The Urbanization of Tula

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The ancient Toltec capital, Tula, grew in complexity and size from the ninth to around the thirteenth century. Urbanization began at Magoni Hill, continued across the Tula River toward Tula Chico and culminated with the colonization of Tula Grande. New research shows that these transformations were never orderly and lineal. This article uses stratigraphic research, the examination of the layers of material found in archeological digs, done at Tula Grande to examine the city's history.

Tula's urban development began after the decline of Teotihuacan.[1] Evidence of how human beings transformed the landscape is to be found in the vicinity of where the Rosas and Tula Rivers meet, in the southwestern part of the state of Hidalgo.

Due to their size and monumental architecture, two sites are regarded as key in the formation of urban Tula. The first was a 4-square-kilometer settlement founded in the seventh century A.D., located near the west bank of the Tula River and the piedmont and top of Magoni Hill. The second, a 5- to 6-square kilometer settlement, was located straight across the river, on the east side, at Tula Chico, and its construction begun in the eighth century A.D. Tula Chico was abandoned in the tenth century and a new civic and ceremonial complex was built at El Tesoro Hill, also known as Tula Grande. At that time the urban area covered 13 square kilometers and by the eleventh century expanded to 16 square kilometers.[2]

Excavations undertaken during the 1997 National Institute of Anthropology and History (INAH) maintenance program in Tula Grande recorded a sequence of strata that pose some questions on explanations previously offered to account for Tula's growth. By analyzing the sequence of deposits of two important buildings located on the northern side of Tula Grande's main plaza, Building B or the Tlahuizcalpantecutli Pyramid and Building 3, or the Quemado Palace, this article will discuss an archaeological tradition that holds that Tula's urban development spread from a hilltop from west to east.

But first, it is important to understand the origin of the arguments used in the opening statements of this paper. Therefore I will try to outline how archaeo-

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logical research has contributed to the explanation of Tula's development.

We owe most of what it is currently known about Tula Grande to Jorge R. Acosta,[3] who unearthed and restored the main buildings located at El Tesoro Hill. Acosta developed a stratigraphic sequence for Tula Grande based on the excavations of Buildings B, C and 3. He describes three main stages of construction for Building B. The first stage, during Period I, started with the erection of a five-tiered rectangular platform that had two adjoining low platforms to the east and west. During this period, the building was covered with smooth rectangular slabs of volcanic rock. By Period II the building had been resurfaced with carved slabs and the adjoining platforms had been enlarged. During Period III the building facias were resurfaced again using smooth slabs, and extensive adobe work was done to enlarge the east side platform where Building 1 or the Quetzalcóatl Palace was erected. The west platform was leveled off to make way for the construction of Building 3 or Quemado Palace. The Coatepantli, a wall surrounding the north and east sides of the Tlahuizcalpantecutli Pyramid, was also constructed at this time.

Using ceramic sherds found at several excavation sites in Tula Grande, Acosta concludes that they represent two different cultural stages; the black-on-orange complex corresponding to that of Tula's invaders, the Chichimecs, and the Tula-Mazapa complex, corresponding to the city's builders. Sherds from the Coyotlatelco complex are grouped in the early stages of Tula's development.

Acosta was interested in ceramics only insofar as they would provide archaeological confirmation of ethnohistorical accounts of Tula's destruction by Chichimec migrants from the north. His excavation reports are ambiguous about the correlations between stratigraphic and ceramic analysis, such as the relationship between the Coyotlatelco or Tula-Mazapa ceramic complexes and the description of the three periods of architectural development of Building B. After reviewing stratigraphic events and ceramic descriptions, the reader is left to analyze both sets of data to reach his or her own conclusions about how they relate to each other.

In the 1980s, the study of ceramics as an indicator of urban development and cultural change in Tula was undertaken by the INAH and the University of Missouri Tula Archaeological Project. Dr. Robert Cobean's analysis produced a comprehensive ceramic classification to place sherd types in chronological order.[4] He describes four ceramic complexes for Tula:

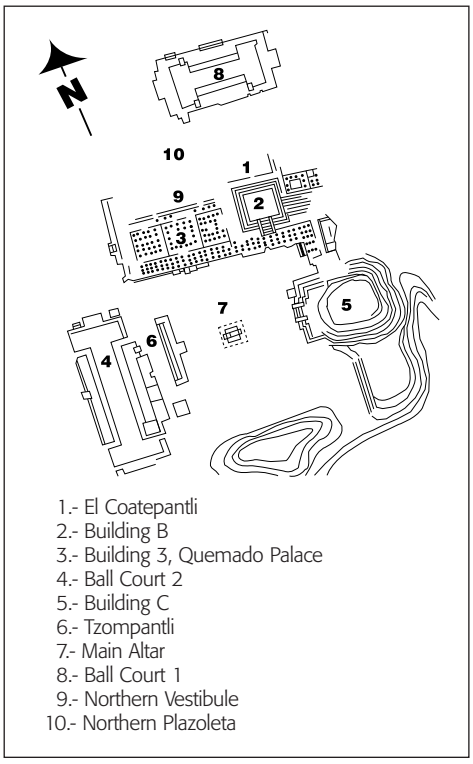
TULA

Sixty-five kilometers north of Mexico City in the state of Hidalgo is the archeological site of what was one of ancient Mexico's most important cities, Tula. Although as this article argues, construction dates back as early as the seventh or eighth centuries, migrants from central Mexico, the Toltecs, probably made it their capital in the tenth century A.D. and it eventually grew to between 30,000 and 40,000 inhabitants, covering nearly 16 square kilometers. From there, their influence spread throughout Mesoamerica, including parts of the Maya areas to the south, until the city was destroyed by nomadic tribes from the north, the Chichimecs. The Toltecs' is the oldest documented empire in the northeastern part of Mesoamerica.

One of Mesoamerica's most widespread religious beliefs, the legend of the cultural hero, the supposedly white-skinned and bearded Quetzalcóatl, centers around Tula. Although the stories vary depending on where they are told, the broad outline is that he ruled in Tula until being tricked into committing incest with his sister and fleeing in shame to the West, where, after swearing to return, he threw himself onto a bonfire. Like their military and economic influence, the Toltecs also spread this belief. Centuries later, then, the Mexicas, or Aztecs, still believed the legend, and their leaders considered that the conquistador Hernán Cortés might be his descendent coming to fulfil the prophesy.

The Tula archeological site of today includes what was the main ceremonial center, with remains of magnificent palaces, painted with brightly colored frescoes, ball courts and several pyramids. (**Source:** Yolotl González Torres, *Diccionario de la mitología y religión de Mesoamérica* (Mexico City: Larousse, 1999).

The remains of Tula's main pyramid in the city's ceremonial plaza.



Tula Grande's main buildings.

Prado phase complex
A.D. 700-800
Corral phase complex
A.D. 800-900
Terminal Corral phase complex
A.D. 900-950
Tollan phase complex
A.D. 950-1150/1200

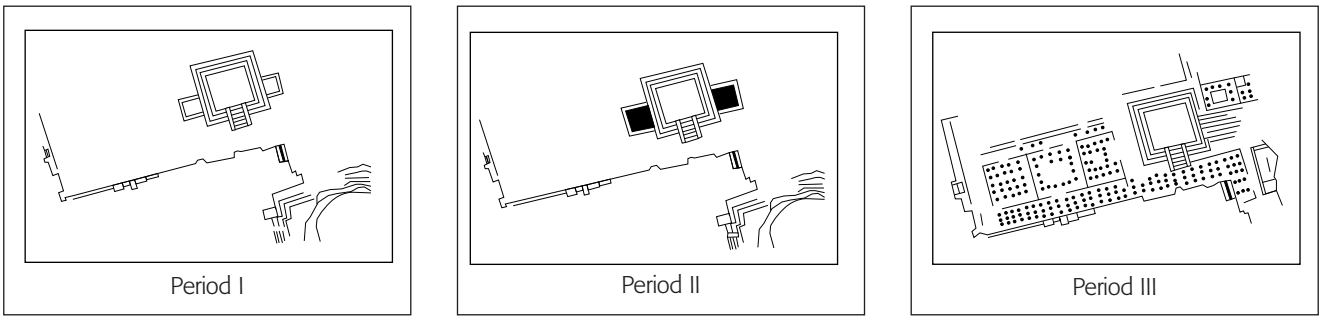
Thus, field research carried out on a regional scale and in the vicinity of the confluence of the Tula and Rosas Rivers allowed them to define settlement sizes and composition from A.D. 700 until A.D. 1150/1200, over 300 years of cultural transformations that led to the construction of the legendary city.

Acosta's work at Tula Grande discovered Corral phase ceramics. INAH and University of Missouri field surveys in this locality did not find traces of landscape transformations related to that phase, however. Therefore, Tula Grande's archaeological evidence, including Acosta's description of Building B stratigraphy, was not taken into consideration to explain its urban development. The 1997 Archaeological Maintenance Program provided evidence to evaluate Acosta's work and the outline of Tula's chronological development. Archaeological stratigraphic excavations[5] were conducted in Building 3 and the North Plazoleta to repair the drainage system located in the sunken patios of Rooms 1, 2 and 3.

Building 3, known as the Quemado Palace, was constructed by the Toltecs during Period III, at the same time as the Coatepantli and the Quetzalcóatl Palace, a colonnade that Acosta discovered on top of the adobe platform to the east of Pyramid B.[6] The Quemado Palace rests atop a large platform that encloses the northern side of the main plaza of Tula Grande. It is rectangular, subdivided into three large rooms or halls, each of which has a sunken patio or impluvia in its center that would have been under a hole in the roof, or compluvium, that would have allowed light into the building.[7] Six small rooms were built adjacent to the north wall; then the halls and rooms were enclosed on the north, west and south by three elongated narrow colonnaded rooms or vestibules.

The drainage systems of Halls 1, 2 and 3 were explored by stratigraphic excavation. Halls 1 and 2 drain north and excavations were conducted from the impluvia to a main drainage collector; room 3's impluvium drains west. The entire system was cleaned and the final section rebuilt. The drainage system was originally built using square slabs of volcanic rock, the same material used to face Building B and bench decorative reliefs, to form a square conduit to drain rain water collected in the impluvia.

During the excavation process several stratigraphic units and feature interfaces were found and their deposi-



Acosta's three-period stratigraphic secuence.

tional order are a record of events that predate Acosta's periods of architectural development described for Building B's west side. The depositional sequence was found to be more complex than Acosta's descriptions account for. After removing the strata of surfaces in use today archeologists found:

Building 3, Hall 1

1. A 1.1-meter wide horizontal feature interface adobe wall running east-west the whole width of the interior, parallel to and 1.31 meter from the northern bench and wall of Hall 1. This wall formed the northern limit of a building erected before Building 3. Evidence shows that it is divided in two, with an inner enclosed room to the south and an outer open space to the north.

2. Two superimposed stucco floors on either side of the adobe wall, representing the original construction and at least one remodeling of the building prior to Building 3. The stucco floor on the northern side was severely damaged by water from the roof. This represents a time when the building received no maintenance and was abandoned.

3. After removing an adobe underflooring layer in the center part of Hall 2's impluvium, a pink-orange, stuccoed volcanic rock slab floor was found.

4. Under the stone floor was a horizontal feature interface of a white stuccoed, slanted 86 cm talus wall that runs north-south. This talus lies on a basalt stone wall.

Entrance Corridor To Tula Grande's Main Plaza

The corridor entrance located between Buildings B and 3 was explored. Excavations revealed a stuccoed floor paving the way, facing the east side of Building 3's wall, and a horizontal feature interface of a basalt stone wall located off the center of the corridor that runs north-south the whole length of Building B. Acosta's 1956 archaeological report[8] describes an adobe wall here forming the outer facade of Building B. The wall collapsed after a heavy rain storm and the whole facade decorated with horizontal vermeil lines on red, blue, yellow ocher, pink ocher, white and black bands was lost.

Building 3, Hall 2

Excavations conducted in Hall 2's Building 3 uncovered two stucco floors similar to the ones found in Hall 1. In exploring the drains we found that large sections of the drain canal had been looted and that the system used during Building-3 times had been in operation since the construction of the first building lying underneath it.

The Vestibule And the Northern Plazoleta

1. Two large excavations were conducted on the Northern Vestibule and one on the Northern Plazoleta. Most interesting were the deposits found during explorations within the Northern Vestibule on the northern side of Hall 2. Here we found a 3.50-meter talus and cornice platform with two levels. Its facade was built with small basalt stones and finished with a thin layer of lime plaster. This platform was covered by a reticular system of basalt wall foundation and fill, for the architectural development of the Vestibule and Northern Plazoleta. The facade's plaster finish showed signs of not having received proper maintenance before being buried.

2. At the Northern Plazoleta, 15 meters to the north of this last exploration, excavations revealed a 6.60-meter-deep stratigraphic sequence before reaching the hardpan. Two types of strata were found: vertical strata of chalk adobes laid to form the reticular wall foundation of the Northern Plazoleta, and six stuccoed floors that paved dif-

Tula's famous atlantes, statue-columns almost 5-meters high.

ferent stages of use of the open area between Building 3 and ball court number 1.

Preliminary analysis of sherds recovered in this location identified attributes from Prado A.D. 700 to Tollan A.D. 1150-1200 ceramic types.[9]

Several conclusions can be drawn from the archaeological evidence presented above. The most obvious is that further research needs to be done in and around Tula to evaluate its urban and cultural development.

So far our research has shown that:

1. Strata and interfaces found during the 1997 fieldwork season in Tula Grande showed a continuous process of building and remodeling from the Corral phases and perhaps earlier, with at least one major episode of the abandonment of the urban area or its deliberately being given no maintenance. This was the case for the construction under Building 3 and the two-stepped platforms located under the Northern Vestibule.

2. Acosta's interpretation of Buildings' B and 3 stratigraphy is not very accurate. According to the stratigraphic record, Building 3 and the adobe facade that once covered most of Building B, together with the adjoining adobe platform to the east and Building 1 on its summit belong to the same period interface. The three superimposed facades under the adobe deposits of Building B were never in view during Building 3's existence. They belonged to the same period interface as the construction under Building 3, and the ceramic types are related to the Late Corral phase.

3. We have tentatively placed the construction of the two-level platform under the Northern Vestibule during the Early Corral phase. Ball court number 1 was also constructed at this time. The fifth stuccoed floor found in Northern Plazoleta correlates with the plaza floor that extends north of the Corral platform. The remains of an adobe building and another stuccoed floor are still under this. We have not been able to determine the date of their deposition.

Contrary to common belief about Tula's urban development, we found that large civic buildings were in use at Tula Grande at the same time as in Tula Chico. Tula Grande was remodeled but not definitively abandoned as was Tula Chico. A great deal of construction began after the two-level Corral platform was abandoned, and ceramics still being analyzed show that this major development occurred during the Terminal Corral phase. The construction under Building 3 and the bas-reliefs and smooth stones facing Building B belong to that same period interface. Research is still being carried out at Tula, and we will have to evaluate our findings based on new stratigraphic data. VM

Notes

[1] Richard A. Diehl "Tollan y la caída de Teotihuacan," *El auge y la caída del Clásico en el México central*, Joseph B. Mountjoy, Donald L. Brockington, eds. (Mexico City: UNAM, 1987), pp. 129-143.

[2] Alba Guadalupe Mastache F. and Robert H. Cobean, "Tula," *Mesoamérica y el centro de México, una antología*, Jesús Monjarás-Ruiz and Emma Pérez Rocha, comps. (Mexico City: INAH, 1985), pp. 273-307.

[3] Jorge R. Acosta, *Archaeological Report from 1940 to 1964 Field Season* (México: Archivo del Consejo de Arqueología-INAH, inédito).

[4] Robert H. Cobean, *La cerámica de Tula, Hidalgo*, Colección Científica del INAH, no. 215 (Mexico City: INAH, 1990).

[5] Edward Harris, *Principles of Archaeological Stratigraphy* (London: Academic Press, 1992).

[6] Jorge R. Acosta, op. cit. 1947-48, pp. 6-8.

[7] Blanca Luz Paredes Gudiño, *Unidades habitacionales en Tula, Hidalgo*, Colección Científica del INAH, no. 210 (Mexico City: INAH, 1990).

[8] "Interpretación de algunos de los datos obtenidos en Tula relativos a la época tolteca," *Revista Mexicana de Estudios Antropológicos* 14, second part (Mexico City), 1956-1967, pp. 75-110.

[9] Cobean, op. cit.