Recent Investigations in the Puuc Region of Yucatán

edited by

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Archaeological Fieldwork in the Transitional Zone Between Puuc and Chenes (Campeche, Mexico)

Iken Paap

After the peak of settlement activity on the peninsula of Yucatán during the Late to Terminal Classic period (8th and 9th centuries A.D.), there was an abrupt end to all typical construction activities, followed by a change in the function and use of buildings, the introduction of new architectural concepts, and—eventually—the final abandonment of the settlements. Archaeological finds and features that indicate a drastic upheaval for the elites are found alongside evidence that suggests continuity in parts of the remaining, non-elite population. However, this continuity existed within radically changed sociocultural and environmental contexts. A major part of the discussion on these sudden changes focuses on the ‘C-shaped’ or ‘L-shaped’ structures, so named after their characteristic floor plans. These structures are deemed indicators for Epi- to Postclassic activities in the Puuc and neighboring regions. The preliminary results of recent excavations conducted by the Ibero-American Institute in Dzehkabtún (Campeche, Mexico) support the hypothesis that parts of the local population constructed and used the new building forms after the end of the Classic period.

El auge de las actividades durante el Clásico Tardío hasta el Clásico Terminal temprano (siglos VIII y IX d.C.) en muchos de los sitios en la península Yucatán fue seguido de un fin abrupto de toda construcción representativa. A continuación se puede observar una ‘reutilización’ de edificios abandonados, la erección de nuevas formas de edificios sencillos y –finalmente– el abandono definitivo de la mayoría de los asentamientos. Hallazgos arqueológicos que indican un cambio drástico para las élites se encuentran juntos con evidencias en favor de una continuidad en partes de la población local, non-élite. Sin embargo se trata de una continuidad bajo nuevas condiciones básicas socioculturales y ecológicas. Parte de esta discusión se centra en las llamadas ‘estructuras en forma de C’ o ‘en forma de L’, nombradas así por sus plantas características, que sirven como indicadores de actividades epi- y postclásicas para el Puuc y las regiones adyacentes. Los resultados preliminares de las recientes excavaciones del Instituto Ibero-Americano en Dzehkabtún (Campeche, México) apoyan la hipótesis de que partes de la población local construyeron y utilizaron las nuevas formas de construcción después del final del Clásico period.

In Dzehkabtún, a Maya site in the north of the Mexican state of Campeche (Figure 1), the Ibero-American Institute is conducting an archaeological research project on the sociopolitical context for the transition from the Late Classic to the Epiclassic period (A.D. 850-1100).1 Through surface mapping and excavation, the Dzehkabtún Archaeological Project aims to examine the causes and consequences of change for the inhabitants of this settlement at the end of the Classic period, as well as their strategies for crisis management during the sociopolitical and ecologic upheaval that took place during that time. Additionally, we plan to explore the previously little-known archaeological transitional zone between the architectural style-regions of the Puuc and the Chenes in the northern half of present-day state of Campeche.

Dzehkabtún is located in the north of the municipality of Hopelchén, Campeche, on the lands of the now abandoned hacienda Holcatzín. The visible archaeological remains of the ancient settlement center lie on a terrain that slightly slopes to the southeast. The remains are dominated by two 16 and 14 meter high pyramids that are surrounded by an area of dense patio constructions of architecture mainly typical of the region. The whole settlement once covered an area of at least four square kilometers (Figure 2).

This architecture, as well as the known monuments and sculptures from Dzehkabtún, demonstrate that the site was occupied from the Middle Preclassic period (500-250 B.C.) to the Epiclassic or Postclassic (c. A.D. 1100) at the latest. The known architecture of the settlement center—once rich in vaulted buildings, elaborate façades, and sculptured monuments—combines features of the Classic Maya Puuc and Chenes architectural styles (Andrews 1985:31-34). A ceramic survey in the Chenes region revealed a striking accumulation of Terminal Classic materials for Dzehkabtún (Williams-Beck 1994:145-150), but neither the method nor the data source on which this survey is based have been published. During the 19th and 20th centuries, the ‘palace’ area of Dzehkabtún was severely damaged due to stone robbery (Figure 3). Apart from large quantities of plain stones for building or road construction, a large number of monuments have been removed from the site. Some of them can be found in museums and private collections worldwide (Grube 2009).

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1 The Dzehkabtún Archaeological Project (Terminal Classic and Postclassic in northern Campeche, Mexico: Continuities and Disruptions) has been funded by the German Research Foundation (DFG) since 2011. The project is carried out in cooperation with the Instituto Nacional de Antropología e Historia in Mexico. Work would be unthinkable without the support from the Mexican colleagues, in particular from the co-director of the project, Antonio Benavides Castillo. The website with up-to-date information on the project in Spanish and German is http://www.dzk-online.de.

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Research History to 2007

Teobert Maler visited the ‘ruined city of Dsekatun’ on May 4, 1887. Most of his sketches, photographs, and descriptions are kept with his estate at the Ibero-American Institute in Berlin. Maler’s documentation forms the basis for the study of the elite architecture of the archaeological site, since the remaining buildings have been severely damaged since his visit in 1887 (Maler 1997:97-99, Tables 35-39).


Figure 1. Yucatán peninsula. The transitional zone between Puuc and Chenes architectural style provinces is marked with hatched lines (based on Brown and Witschey [2008:map 7] and Gendrop [1988:5, fig. 9]).

Figure 2. Dzehkabtún. 2D map, January 2014. Elaboration by Philipp Sebastian Jansen and Iken Paap.
Research Questions

In addition to a notable corpus of late sculptures and monuments (Grube 2009), large-scale construction activities from the Epiclassic or Postclassic periods have been documented in Dzehkabtún since 2008. Documentation shows that whole patio groups in the center of the settlement seem to have been transformed and covered with the characteristic ‘C-shaped’ or ‘L-shaped’ buildings, often by reusing older stones that were removed from collapsed Classic buildings (Paap 2008). If this is to be interpreted as a sign of a post-monumental peak at this settlement, questions arise as to the processes at the end of the Classic period in Dzehkabtún and the regional integration of this phenomenon.

While the so-called ‘collapse’ in the southern Maya lowlands (the Mexican and Guatemalan Petén) is relatively well understood, we still know little about the fundamental political and cultural changes in the transition from Classic to Postclassic on the central and northern Yucatán Peninsula. Although, the question of the impact of these changes on the lives of the non-elite inhabitants of the Maya cities of Yucatán has been raised as an important research issue since the late 1990s, only some isolated studies on this topic have so far been carried out. After the peak of settlement activities during the Late Classic period (c. A.D. 600-900) archaeologists observed a sudden end of all elite construction activities, a subsequent change in the use of function of existing buildings as well as the construction of new building forms, followed by the final abandonment of the settlements during the Terminal and Epiclassic periods (c. A.D. 900-1100) (Prem 2006; Reindel 2003).

A major part of the discussion on this topic are the so-called ‘C-shaped’ or ‘L-shaped’ structures, which are seen as indicators for Epi- and Postclassic activities in the Puuc and adjacent regions (Shaw and Johnstone 2006:268-269). Buildings of this type—named after their C-shaped or L-shaped floor plans—were usually built on low platforms. Often a long banquette ran along the inside of their three low walls (the fourth side was left open). The upper walls and roofs were made of perishable materials. We prefer an alternative term for this building type, namely a bench-type building. This term is more variable in relation to the possible layout of these buildings, and refers appropriately to their characteristic banquette.

Bench-type buildings are often found arranged in groups in the central areas of the settlements, where they were built inside existing courtyards or in open spaces, interfering with their original conception of space. The reuse of smooth and sculptured façade elements (e.g. columnillas and tamborcillos) from older buildings to shape the platform edges and the inner sides of the banquettes is characteristic of this building type.

Bench-type buildings were first recognized as an independent and chronologically relevant feature of architectural typology during the 1990s (Bey, Hanson, and Ringle 1997:239). Since then, they have been recognized and, in part, consolidated at several sites, for example, at Uxmal (Barrera and Huchím 1989; Huchím and Garcia 2000:1am. 6-10), Sayil (Dunning 1992:109; Tourtellot and Sabloff 1994:16), Huntichmul (personal communication, Rebeca E. Hill, Tulane University, October 2010), Labná (Gallareta 2003:127) and Xkipché (Paap 2006, 2010).

A comprehensive study on the occurrence and variability of this building type as well as an attempt to its classification—as Bey and May (2014) undertook it for the related popol nah buildings—is still pending. Until twenty years ago, bench-type buildings were often not even considered when mapping ancient Maya sites (for example, in Edzná, on the Acropolis at the foot of the main pyramid (Andrews 1984:Map 3).

Interpretations of the function of bench-type buildings differ. Archaeologists at first saw no reason to interpret them differently from the Classic residential platforms (Barrera and Huchím 1989:32-37, figs. 30-36; Huchím and Garcia 2000:139) but later on, interpretations as market places or meeting and reception rooms have been proposed (Tourtellot and Sabloff 1994:88). However, these interpretations were based on surface mappings and not on excavations. As with Tourtellot, Sabloff, and...
Carmean (1992:97), the underlying conception was that of a hiatus at the end of the Classic period with a subsequent Postclassic occupation by conquering and/or immigrating Maya under Toltec influence from the Gulf Coast region. This model would imply an interpretation of the bench-type buildings as an expression of cultural discontinuity, a fact that should be reflected in archaeological materials associated with the buildings.

**Bench-Type Buildings at Xkipché (Yucatán)**

At Xkipché, some nine kilometers southwest of Uxmal, six of these buildings (B23-29) were scientifically excavated in 2002 within the framework of the Xkipché Archaeological Project under the direction of Hanns J. Prem (Paap 2006, 2010:73-81). B23-29 belong to a group of nine buildings of this type, situated in the northwest of the main pyramid of Xkipché (Figure 4).

Stratigraphical analysis confirms the assumption of the late chronological position of the Xkipché bench-type buildings. They form the end of a long succession of construction phases (see Figures 5-7) in this area. After several graves that had been dug into the virgin soil, a large platform was erected with at least one building on top. A nearby cistern (chultún Ch23) ensured water supply. Later this construction was demolished and it appears that at least two low rectangular platforms were erected in its place. Finally, several rectangular elongated platforms were built above the already existing structures, with narrow structures in two parallel rows of three or four buildings—bench-type buildings B23-29. Chultún Ch23 had been left open and seemed to have still been accessible. The same was the case for chultunes Ch31, Ch32, and Ch92 in the neighborhood. Various modifications at the platforms indicate that they were in use over a prolonged period; however, absolute dating so far has not been possible, due to the destruction of the remains by milpa farming.

Although the excavated bench-type buildings differ in the type of architecture from Classic buildings, they follow the orientation and spatial layout of the previous buildings. The fact that they were placed directly on the exposed and well-preserved stucco floor of phases 2 and 3 makes a longer interruption of activities in this area unlikely.

The amount of ceramic debris, silex, and obsidian around the platforms was considerable; for the last two phases covering the erection and use of the bench-type buildings we counted 43,847 sherds that are mostly debris from the local tradition (Cehpech). Contrary to earlier statements (Prem 2003:296), several cisterns (chultunes) have been registered in the immediate vicinity of the platforms as well as the directly associated metates. All this reflects the usual scope of features and finds usually encountered in excavations of household platforms and supports an interpretation of these special buildings as habitational.

Nevertheless, although the results from Ek’ Balam (Bey, Hanson, and Ringle 1997) already anticipated the Xkipché findings, we had expected to encounter some more explicit friction or discontinuity in the ceramic repertoire starting after the second construction phase. However, the ceramic and lithic features contrarily support a strong continuity from Late Classic times into the latest levels (Figure 7). Pottery of clear ‘outside’ Postclassic connotation such as Dzibiac, Dzitas, or Mama ceramic groups do only occur in very small quantities and directly on the surface. For Xkipché we therefore assume a continuity of parts of the local population that inhabited the bench-type buildings, even though the specific reasons for this are still poorly understood. Nor is it clear whether the conclusions from the Xkipché materials may be applied to the entire Puuc or even beyond this region.

The assumption of a population-continuity from Classic to Epiclassic times in northern Yucatán is consistent with the earlier results from Ek’ Balam (Bey, Hanson, and Ringle 1997). It is basically supported by analysis of surface pottery at other sites such as Nohcacab (Shaw and Johnstone 2006) or Uxmal, where the ceramic materials, which have been unearthed in the context of consolidation works, were summarily counted and analyzed (Barrera Rubio 2003:23).

The results of the important excavations in the bench-type buildings of the Grupo Chanchich at Huntichmul (northern Campeche) in 2009 and 2010 within the framework of the Labná-Kiuic Regional Archaeology Project have so far not been published.
Figure 5. Xkipché. Planum of B23-29, phases 4 to 6 [see Figures 6 and 7] (Paap 2006:fig. 5).

Figure 6. Xkipché. Schematic profile of bench-type building B23c, as example for the B23-29 group (Paap 2006:fig. 9).

Figure 7. Xkipché. B23-29: left, number of ceramic sherds in %; right, associated construction phases (based on Paap 2006:figs. 6 and 12).
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Dzehkabtún: Survey and Mapping

Currently we have completed 40 hectares of surface mapping representing about 10% of the total settlement area. In addition to general and detailed 2D maps, a 3D virtual model was developed to analyze and represent the settlement in its spatial dimension. This includes a cautious virtual reconstruction based on the data from surface surveys and excavation.

The scientific quality and validity of a 3D reconstruction in archaeology depends mainly on the density and on the quality of the available data. Begand (2008) discussed in detail the opportunities and risks of virtual 3D reconstructions and alluded to the threat for scientific validity posed by a speculative database in favor of handsome and attractive models. As in the case of Dzehkabtún, only a very small amount of buildings have so far been excavated, and the majority of the data

Figure 8. Making of the virtual 3D model of Dzehkabtún: (a) meshed elevation points; (b) floor plan with the state of preservation marked by different levels of gray and superimposed reconstruction; (c) calculation of buildings’ height from the ground floor and the volume of the debris from the collapsed structure; (d) reconstructed view at the palace’s south wing; (e) detail of the model, looking to the southwest. Elaboration by Phillip Sebastian Jansen.
have been collected during surveys and mappings of the visible architectural remains on the surface. The risk of misinterpretations from data of this kind was demonstrated impressively by Arnauld, Becquelin, and Michelet in 1989.

Despite the known risks, we do not want to forego the advantages of a virtual reconstruction. We therefore try to make clear and visible the quality of the data in the model itself and simultaneously to achieve an aesthetic result, to allow non-experts access to the archaeology of this Maya settlement (Jansen and Paap 2014).

The database of the virtual model of Dzehkabtún is formed by a digital terrain model (DTM), developed from a grid of geodetic points from the surface mapping (Figure 8). On this terrain model, the floor plans of the building were superimposed and reconstructed with the software Google SketchUp from Trimble. This step is based on a detailed 2D map of the site, with all architectural remains marked from light gray (poor preservation, tentative reconstruction) to black (good preservation, confident reconstruction), following the results of our surveys and mappings.

Due to the quality of the available data, the virtual reconstruction in its current version does not take into account a possible time sequence of buildings but rather summarizes all recorded architectural remains in only one model. A detailed reconstruction of individual façades as well as the design of open spaces between buildings was omitted. Both will be gradually completed once we have data from further excavations.

The scientific standards in Dzehkabtún, and our capacities of technical implementation, make the virtual model based on the current state of research look somewhat ‘sober’ and less detailed than do the results of comparable current visualization projects (Schwerin et al. 2013).

Notwithstanding the aforementioned knowledge gaps, such a virtual model supports the analysis of the settlement structure and internal organization. It also helps to convey a more vivid impression to the wider public than using two-dimensional maps, sectional drawings, and scientific reports.

**Excavation**

In 2008, we were able to survey the massive and large-scale construction activities in the center of the settlement that were stylistically assigned to its post-monumental occupation (Figure 9). Whole patio groups seem to have been overlaid with bench-type buildings, often by reusing older façade stones. Differences in the design and conception of space to the investigated bench-type buildings in the Puuc–as in Xkipché or in Uxmal–are obvious. In the center of Dzehkabtún three bench-type buildings, parts of the ball court, and a round platform have been excavated in addition to several stratigraphic test pits. In the following section, we briefly present two of these excavations.
The analysis of the ceramic and lithic finds has currently not been completed. However, it is already clear that the platform fill—unlike in the case of structure 425 in Edzná—contained mainly decontextualized Late and Terminal Classic materials. We noted a remarkably large number of obsidian blades and imported pottery from the Petén, which are both indicators for long distance connections during the Classic. Postclassic diagnostic archaeological materials have been found only in very small quantities on the surface. No waste depositions were detected in the immediate vicinity of the platform. The shape of the building and the associated findings clearly indicate a representative or religious function of this platform, without permitting a more detailed statement.

**Building 76**

Building 76 was erected on top of a 2.30 meters high platform located between two courtyards. It is a bench type building, characteristic of Dzehkabtún, with a series of
**Figure 11 a-b. Building 76. (a) Surface of the last phase of occupation of the bench-type building; (b) Eastern and northern profile of trench 76-2 in the central room of the building.**
rooms formed by low foundation walls and wide banquets along the back wall (Figure 11a). Stairs and ramps made from recycled older façade stones on both long sides of the platform lead down to the ground level of the adjacent patios.

Directly on the surface of the former building (Figure 11b [h, i]), we found a few sherds clearly identifiable as Postclassic. In the underlying platform, the filling material was obviously shifted from a Late Classic context (Figure 11b [f]). In addition to ceramics, also spolia (e.g., fragments of columns and two capitals) and a remarkable amount of obsidian blades were found in the platform filling. Remains of an Early Classic substructure (Figure 11b [e]) with an associated floor (Figure 11b [d]) and its ch’ich base (Figure 11b [c]) have been excavated at the base of the platform. About 30 centimeters deeper another eroded extensive floor (Figure 11b [b]) covered a level (Figure 11b [a]) with Preclassic ceramics and remains of two stone-covered fireplaces.

Although, the building seems to have been in use for some years (in one of the rooms there were two floors constructed on top of each other), neither a significant Postclassic component nor a clear break with the Late Classic can so far be detected in the associated archaeological materials, as the architecture of the building and the stratigraphic features might suggest. This confirms the results from Xkipché (see above) and from other sites in the northern lowland that—at least outside the major centers—changes in sociopolitical organization that are manifest in a preference for new architectural forms must have been based in the local population. This is also confirmed by the results from the excavation of Platform 84.

Preliminary Results

In this article, we only presented two excavations from Dzehkabtún. Nevertheless, the results are substantially consistent with the other excavated areas within and outside the center of the settlement:

- Dzehkabtún was already extensively inhabited during the Late Preclassic period. Some of the ‘megalithic style’ buildings in the center date back to the Middle Preclassic. There are ceramic finds from the Early Preclassic, but no associated architecture could be detected so far.

- At the latest from the Late Classic, Dzehkabtún was involved in the long-distance trade networks of the Yucatán Peninsula, with the Petén (ceramics) and the present-day Guatemalan Highlands (obsidian).

- According to the current results, it can be assumed that a part of the resident population inhabiting the site during the Classic is responsible for the massive overbuilding of large parts of the center in the Terminal or Epiclassic. This should be examined in the next excavation campaigns in residential buildings near the center and in the periphery of the settlement.

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