

Report of Research Activities for Summer 2007
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During the Terminal Classic Period in eastern Mesoamerica (AD 800-1000), the Cupul region of central northern Yucatán served as an intermediary between Chichén Itzá and its principal trading port Isla Cerritos. The site of Xuenkal and its hinterlands, situated midway between Chichén Itzá and Isla Cerritos provides an ideal setting to evaluate the impact and extent of Chichén Itza's control over surrounding regions and to develop a clearer understanding of the nature and degree of interregional economic and political integration. While recent archaeological investigations at Xuenkal have begun to delineate the developmental trajectory of the site center, there is little information from outlying sites to place this data in its regional context. This crucial gap in our knowledge of political and economic dynamics in the northern Maya lowlands during this time formed the basis of my investigations during the Summer of 2007. The research conducted in part with Stone Center funding is serving as a valuable pilot project for the development of grant proposals, and will form the basis of two presentations at professional meetings and a manuscript for publication in a professional journal is in preparation. The results of these field investigations are outlined below.

Survey and Mapping at the Ancient Maya Center of Dzadz Naranja

In an effort to better define the nature of the polity centered at Xuenkal, archaeological survey and mapping at one of its secondary centers was conducted in July 2007. The site of Dzadz Naranja, located 11.5 km NNW of Xuenkal, was chosen for several reasons: (1) it is small enough to be mapped quickly yet large enough to possess a range of settlement from time periods relevant to addressing the research goals of the Xuenakal Archaeological Project, (2) its size, organization, and location relative to Xuenkal suggests that it may have served as a secondary administrative center to Xuenkal., (3) previous research documented Sotuta ceramic material in surface collections, and (4) it is accessible by road. Investigations at Dzadz Naranja were therefore conducted as a sub-project of the Proyecto Arqueológico Xuenkal. The focus was mapping the site core and its immediate environs with a total station and documenting variation in construction and architecture.

Mapping operations recorded a total of 498 total station measurements from 15 mapping stations (of these, three are fixed datums) that form one closed and three open traverses. The resulting map includes all known large construction at the site and several small structures within the central 200-x-400-m portion of the site core. The map also includes all other structures within the primary 300-x-500-m survey zone.

The site core is oriented around a loosely defined north-south axis and is dominated by several large (ranging from 20 meters to more than 50 meters on a side), low (1 to 2 meters tall) platforms constructed of stacked, very large tabular limestone blocks. The building materials and construction of these platforms, in addition to several other taller, pyramidal structures, is consistent with the megalithic style of architecture

that is common throughout the northern Maya lowlands during the Late Formative and Early Classic periods (Matthews and Moldonado Cárdenas 2006; Matthews 1998). At Dzadz Naranja, megalithic construction is visible on two low but horizontally expansive platforms (Structures 8 and 21), on three square platforms (Structures 6, 7, and 19), and on three taller, more pyramidal platforms (Structures 10, 16, 18). The two largest structures at the site, however, are an 8.6-m-tall temple pyramid (Structure 1) and a closely associated 8.3-m-tall elite residential compound (Structure 2). These two structures are consistent with much of the Late Classic monumental architecture encountered at other sites in the region, such as Xuenkal and Ek Balam further to the east. Near the center of the site core is an elite residential platform (Structure 17) that closely resembles the Sotuta platforms at Xuenkal in terms of placement within the site center and overall appearance. Analysis of surface collected ceramics suggests a Sotuta occupation of this structure as well as others within the site core. This could indicate that the shift in settlement patterns from the Late Classic to the Terminal Classic documented at Xuenkal may also be present at Dzadz Naranja.

The site core is bounded on the east and west sides by large (ca. 100 m diameter) doline sinkholes that can be classified as multi-use *dzadzob*. The east dzadz has vertical walls, a swampy bottom throughout, and supports a variety of large trees around its drier edges. The west dzadz bottom is mostly dry except for a relatively small swampy area where the doline pierces the water table. The relatively sparse settlement adjacent to the west dzadz contrasts with that of the east dzadz, which is characterized by a dense concentration of structures consisting mostly of low (0.5 – 1.0 m) rectangular platforms. The most striking feature of this part of the settlement includes a more than 40 m wide, low (1.4 m tall) megalithic platform (Structure 8) that extends 75 m from the main plaza to within 30 m of the east dzadz. Chich fill continues from the east edge of the platform to the rim of the dzadz.

A small surface-collected ceramic sample (n = 71) suggest that the site was continuously occupied from the Middle Preclassic to the Terminal Classic with the majority of material from the Cehpech ceramic sphere. Although no Postclassic sherds were recovered, a small Postclassic occupation is suggested by the three small adoratorios encountered during survey. Nearly 33 percent of sherds recovered belong to the Cehpech ceramic sphere (this figure includes all eroded slatewares of which a small portion may be Sotuta). More than nine percent of the sherds are Sotuta, although the actual Sotuta presence at the site was probably greater than is suggested by surface ceramics since the site was collected during the Cupul Survey. Early Classic and Late Preclassic sherds make up five percent of the sample, respectively, while only one sherd is diagnostic of the Middle Preclassic.

Survey and Mapping in the Xuenkal-Dzadz Naranja Transect

A program of rural survey and mapping in the Xuenkal hinterlands was initiated in 2007. Following the goals of the Proyecto Archeologico Xuenkal, this study of regional settlement patterns will allow the reconstruction of regional demography and agricultural practices and is fundamental to the economic and political study of the ancient polity centered at Xuenkal. The survey area is an 11.5 km long transect that extends northwest from the northern edge of the surveyed limit of Xuenkal to the site core of Dzadz Naranja, following the road linking the modern settlements of Espita and

Tusik. Survey efforts within the transect focused on: (1) the location and mapping of nucleated settlements, making use of local informants and settlement signatures suggested by analysis of satellite imagery, and (2) the location and mapping of all signs of ancient settlement visible in cleared ranch pastures and burned milpas.

Two temporary datums were strategically placed within each milpa to maximize visibility of all structures and to ensure spatial accuracy of total station measurements. Total station mapping was combined with GPS readings of all mapping datums and structures so that the map could be placed within the UTM grid system. All structures and archaeological features encountered during survey were recorded in the survey database. The database contains a shared set of attributes that provide a general description and architectural details of each structure and feature. Collections of surface artifacts from each structure were made at the same time as mapping operations and are used for relative dating of structures. Digital photos were taken of each structure, and in situ architecture was drawn in profile view. All data recorded during the 2007 season was integrated into the regional ArcGIS geodatabase for the Xuenkal Archaeological Project.

Twelve milpas were surveyed and mapped in the Xuenkal rural zone during the 2007 season. Total area surveyed was 13.53 ha and individual milpa area varied from 0.41 ha to 2.74 ha. The survey documented and mapped 78 total structures of which 16 are basal or secondary platforms. These preliminary survey data indicate that the region between Xuenkal and Dzadz Naranja consists of several nucleated settlements that contain substantial amounts of both Cehpech sphere (38%) and Sotuta sphere (28%) ceramics. Some milpas in close proximity to others expose different parts of the same settlement such as 07M01, 07M02, 07M03, 07M04, and 07M06. Further research is needed to verify the limits of this large nucleated settlement, but it is likely that it also includes 07M09 that lies 300 m to the west. A milpero working in milpa 07M01 at the time of our survey claimed that this area is referred to as Yonikte'. Other milpas with no observable archaeological features (07M05, 07M07, 07M08, and 07M12) document that settlement was not continuous within the survey area.