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A Preclassic Center in the Puuc Region: A Report on Xcoch, Yucatan, Mexico

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In Maya studies the origins of Puuc region centers is a crucial unanswered question in the archaeology of Northern Yucatan. New data from survey work at Xcoch in 2006 show that the site was a large Preclassic Maya center with monumental architecture in the Megalithic style, numerous pyramid quadrangles, and widespread Preclassic surface pottery. A find of major importance is the earliest pottery known for Yucatan collected from deep within the Xcoch cave, located beneath the second largest and perhaps oldest pyramid at the site. These data suggest the beginnings of a complex society with a significant population since early Middle Preclassic times (~800/700–400/300 BC). Xcoch data in concert with recent information from the Puuc sites of Kucic, Pasode Macho, Xocnacah, and Hantichmul I now indicate that there were important occupations in the Puuc region during the Preclassic period (Bey 2006; Bey and May C. 2005; Gallaretta and Ringle 2004; Smyth and Ortegón Zapata 2006).

The 2006 Survey

Xcoch is about 6 km northwest of the town of Santa Elena and approximately 10 km east of the archaeological zone of Uxmal (Fig. 1), and 20 km north of Chac (II). Xcoch is noted for a deep cave to water and a huge pyramid (over 30 m tall) located on a gigantic platform (up to 1 hectare) about 1.5 m tall (Figs. 2 and 4). Survey and mapping operations in 2006 showed that this pyramid and platform are the highest points of a massive monumental acropolis covering more than 10 hectares representing one of the largest man-made structures in the Puuc region. Built in the early Megalithic style considered an indicator of Preclassic to Early Classic occupation (Mathews and Maldonado C. 2006), the Great Pyramid Platform is ap-



Fig. 1. Map of the Northern Yucatan Peninsula showing the location of Xcoch and other sites mentioned in the text and around the Puuc region (modified from original by K. F. E. mery in Foias 2003:20).

proached on the south by two wide staircases of enormous pillow-shaped boulders some up to 2 m long with abundant chinking stones. This Megalithic Staircase is virtually identical to one recently consolidated at Xocnacah, a relatively small site but with a huge Middle Preclassic platform about 20 km east of Xcoch. Atop the Megalithic Staircase at Xcoch are three buildings, at least one with the remains of archaic, early style vaulted roofs, including possible step vaulting characteristic of the Proto-Puuc or early Oxkintok styles. The west side building aligned with the western part of the southern staircase is not vaulted but shows a megalithic stone foundation and unusual niche-like features flanking the south entryway suggesting that this may be a Preclassic structure. The staircase fronting this building is badly fallen but portrays a slightly different style of megalithic stonework with dry mortar chinking stones and larger, better shaped slab boulders than the other staircase immediate to the east. At this point without excavation, it is impossible to determine if this staircase and building are earlier phases in the construction sequence or just represent contemporaneous functional variation.

Mapping operations concentrated on the Xcoch Plaza, a long plaza immediately south of the Megalithic Staircase and adjacent to the water cave (Fig. 3). This long plaza measures approximately 100 m north-south by 50 m east-west, not including the Megalithic Staircase bordering the plaza on the north and 3 large pyramids on the east, west, and south sides each flanked by stone buildings. This spatial arrangement suggests a triadic-pyramid-acropolis complex typical of the Preclassic period in the southern lowlands (Hansen 1998); long plazas are believed also to be representative of Preclassic site structure (Killian and Urcid 2001; Santley 2007). The Cave Pyramid to the west and a smaller, similar pyramid to the east are constructed in the Megalithic style and contain recessed staircases with shaped boulders as treads and risers (Fig. 5). These pyramids do not support vaulted buildings but show summit structures that had perishable roofs and foundations of well-faced stone blocks with multiple entryways. The building atop the Cave Pyramid presents evidence for 4 entryways suggesting the possibility of a radial pyramid with staircases ascending all four sides. A large Dos Arroyos polychrome sherd, interestingly, was found near the surface within the room interior arguing for an Early Classic (A.D. 300–600) terminal date for the building itself. An earlier Megalithic and perhaps Preclassic substructure is suggested by massive corner stones set deep below the floor level of the summit building and two large jamb-like stones centered on the east side. The considerable amount of debris from collapse and/or stone fill from intentional covering, however, make any absolute architectural determination impossible without excavation.

A similar block stone foundation showing three entry ways is also found about 30 m east atop the East Pyramid. This structure probably had one principal staircase on the west and small access stairs ascending lower pyramid tiers on the north and south. There also appears to be a lower staircase access passing between two foundations for perishable buildings on the north side. Numerous altars and platforms were located at the foot of both pyramids. A more typical multiple tiered, dressed stone Puuc-style pyramid with a frontal platform, dressed stone staircase, and two vaulted buildings connected by an unvaulted central room is found on the south end of the Plaza. This Puuc Pyramid clearly was a later construction given its different architectural style and orientation close to true north. Apparently contemporary, a range structure in the Early Puuc style estimated to date to the Late Classic period (A.D. 600–800) also oriented near true north was built upon the northern wing of the basal platform for the Cave Pyramid and its associated buildings. Wide Megalithic staircases on the west side of the plaza afford this building and are probably part of an earlier construction phase. Similar staircases are located on the Plaza's east side accessing smaller early style buildings north of the East Pyramid.

The Xcoch Plaza clearly shows variable architectural styles with a potential principal construction phase in the Preclassic period, continued occupation and renovation in the Early

Classic, and terminal construction in the Late Classic period. Numerous other pyramid structures and fallen vaulted buildings form a series of contiguous quadrangles some resembling E-Group complexes (quadrangles with pyramids on the west side) and many built upon early Megalithic style platforms and staircases, especially to the east and south of the Xcoch Plaza. While the survey is still preliminary, there are few visible buildings in the later Classic Puuc architectural style so characteristic of Uxmal, Kabah, Sayil, and others sites throughout the region. The few buildings that show decorative elements, so far, are limited to large spools and colonettes confined to the building corners integrated into Early Puuc or even Proto Puuc style buildings. These buildings are always located on the outside edge of settlement groups that are focused on more archaic constructions with Megalithic pyramid platforms and substantial multiple-room foundation brace buildings. The settlement survey suggests that Xcoch was a major early center that played a minor role in the great Terminal Classic florescence.

Settlement Reconnaissance

The limits of greater Xcoch are not known but there is evidence for major settlement radiating in all directions including monumental pyramid groups and large *aguadas* (artificial pond features; Fig. 2). The Xcoch cave passes directly beneath the Cave (west) Pyramid with some form of access ramps on the north and west sides and one causeway that converges on the Pyramid from the west and another causeway that approaches the Acropolis from southeast. The southeast causeway travels about 800 m before reaching a natural hill supporting three structures in a triadic group arrangement atop an expansive leveling platform: two megalithic style pyramids on the center and west without vaulted buildings and a vaulted range structure to the east. In 2006, a forest fire raged out of control burning a substantial portion of the surface vegetation a cross

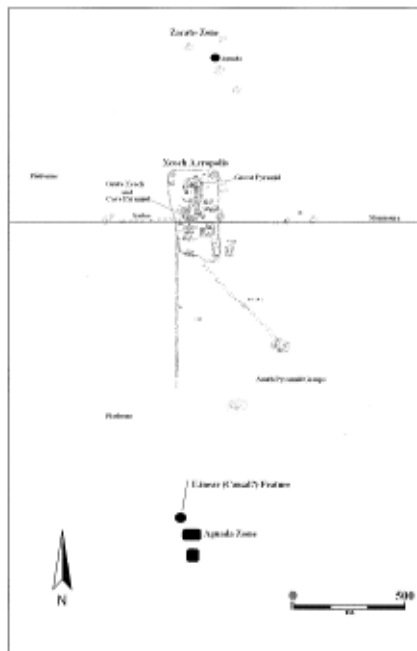


Fig. 2. Sketch map of Xcoch showing the Great Acropolis covering more than 10 hectares, the southeast and west causeways, the zone of Preclassic surface ceramics and associated platforms, and the Southeast Pyramid Group.

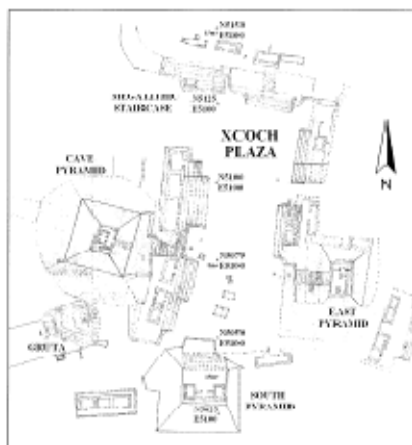


Fig. 3. Architectural map of the Xcoch Plaza showing the Cave and Cave Pyramid, the East Pyramid, the South Pyramid, and the Megalithic Staircase ascending the Great Pyramid Platform to the North.

the south-central portion of Xcoch. Although environmentally tragic, this fortuitous event for archaeology revealed the presence of the southeast causeway and numerous Megalithic house foundations and leveling platforms integrated into limestone outcroppings. Surface pottery was widespread including significant quantities of Preclassic and Early Classic ceramics. Two other pyramid groups are located about 900 m and 1.2 km south-southeast of the Great Pyramid.

There are three *aguadas* about 2 km to the south of the Great Pyramid within the irrigated agricultural parcels of the municipality of Santa Elena. Interestingly, tractor plowing in one of the north fields recently revealed a long linear feature (irrigation/drainage canal?) of stones and stucco that extends for at least 200 meters running into the northern-most *aguada* feature. Local Maya farmers have informed us that there is another pyramid group that we have not yet visited nearby referred to as Cahukmil, or place of side by side stone mounds. Another settlement cluster about 500 m west of the Xcoch cave contains a partially standing four-room Proto-Postclassic style building and other high monumental architecture located close to the municipal *menstrina* (borderline between Ticul and Santa Elena) that divides the site into north and south sections. The west causeway leading to the cave and Cave Pyramid appears to emanate from this particular settlement group.

A preliminary reconnaissance north of the Great Pyramid and Platform located a number of significant settlement groups. There are at least 5 settlement clusters between the Great Pyramid and a large zone of *zacate* about 700 meters north. Along the way, Preclassic and Early Classic surface pottery was identified and appears to be widespread. These settlement groups consisted of Megalithic pyramid platforms and numerous vaulted and unvaulted stone buildings including evidence for stepped vaulting with slab stones suggesting buildings constructed in the Proto-Postclassic architectural style (Middle Classic to circa 500–650 A.D.). Interestingly, a large circular depression (*aguada*?) in the *zacate* zone is located among three of these settlement clusters.

Surface Collection Survey

Much of the central zone of Xcoch has been intensively mapped and systematically surface collected. Preclassic surface pottery is particularly widespread in and around the cave



Fig. 4. The Great Pyramid looking north from approximately 800 m south-southeast. The Great Pyramid and Platform combined stand more than 40 meters above the ground surface.

and Great Acropolis, along the southeast causeway about 500 m from the Great Pyramid, and north towards the *zacate* zone. Interestingly, Preclassic and Early Classic ceramic patterns correspond closely to the areas of the largest and densest Megalithic architecture. In comparison, virtually no Preclassic pottery was found on the entire site surface surveys of both Choc (II) and Sayil and neither site contained extensive Megalithic architecture.

In 2005, survey methods including both architectural mapping and surface collection were designed to document both the settlement and artifactual landscapes. The *menstrina* was utilized as a survey baseline (E5000) since it runs at an east-west heading across the settlement limits of the site. North-south mainline *brachas* were opened 300 m beyond N5000 to N5300 and 300 meters south to N4700. We were not able to push the survey west of the N5000 line which is located about 100 m west of the Great Pyramid but did manage to survey east to the E5300 between N5300 and N4700. With the aid of a full-station Electronic Distance Measuring (EDM) transit and Global Positioning Systems (GPS) receiver, north-south and south-north main-line transects were opened every 100 m. Along the way, survey lines were flagged every 25 m for surface collecting and mapping. More than 20 hectares were intensively surveyed, surface collected, and mapped using the EDM transit and GPS receiver to establish elevations and contours. The main group at Xcoch including the settlement immediately associated with the Xcoch-cave, the Xcoch Plaza, and three building groups to the south east were extensively cleared and mapped. Surface collection survey sampled the Great Pyramid and Platform but these settlement features have not yet been intensively mapped.

Following the establishment of main line *brachas*, a collection team opened west-east cross-lines at each main-line flagged station (every 25 m) using compass and tripod, premeasured nylon ropes (2.5 m), and survey flags. Then, at 25 m intervals three additional flags were placed marking the locations of 3 by 3 m sq collection units. Four collection units were collected on each cross-line. All artifacts underwent formal and typological analyses. The surface survey collected 4,260 potsherds from 230 collection units yielding a mean of 22.2 sherds per collection unit with ceramics. As expected, the vast majority of surface ceramics are identified as belonging



Fig. 5. The Cave Pyramid looking west after preliminary clearing. This Pyramid is directly above the cave and shows Megalithic stonework and staircases similar to Middle Preclassic architecture recently identified at nearby sites such as Xocnuc.

to the Celpech ceramic complex; almost all are Yucatán Striated and Maya Slate types with almost no decorated sherds and few fine paste wares such as Ticul Thin Slate or Teabo Red. This pattern is highly unusual compared to other Puuc sites given the fact that most collections were in Xcoch's central monumental zone. Similar spatial contexts produced significant quantities of these decorated and fine paste ceramic types on the surface collection surveys of Sayil and Chac. So far, Preclassic and Early Classic Potsherds were found in more than 15 different collection units across Xcoch, about 1 Preclassic sherd for every 11th unit. This is a significant pattern given that the surface collection survey at Sayil yielded only a few Preclassic sherds in 5,261 units, and there was no Preclassic surface pottery collected in 3,970 units at Chac.

The Xcoch Cave

The Xcoch cave is only one of three known caves with access to water in the region and was visited by John L. Stephens in 1841 (Stephens 1963:217). His description is surprisingly accurate considering that he spent only a few hours there. With great effort in 2006 after relocating the cave opening, we removed surface debris blocking the surface opening, including several large hardwood trees downed by Hurricanes Isadore and Wilma since 2004, and immediately felt strong gusts of cold air rushing forth from the ground opening. Clearing also revealed the ruined remains of an elaborate Megalithic staircase with a few treads and risers still visible on the south and east sides of a great circular chasm descending into the cave opening. In addition, there are several platforms, altars, and ruined buildings to the south in addition to the Cave Pyramid directly north as well as some form of access into the main plaza on the east (Fig. 3).

Venturing into the cave, we followed a long, low passage with white marl wall surfaces contrasting sharply with the blackened soot stains on the ceiling marking the passing of countless torchbearers over the centuries (Fig. 6). On both sides of the passage are low piles of stone, numerous dried torches and burned faggots, and faced-sculpted building stones apparently placed as ceremonial offerings. The passageway descends gradually over a distance of about 50 meters before reaching a large cavern that branches off into three directions; a well cut funnel-shaped altar stone marks the place of divergence. In accordance with Stephens' description, the far left passage travels in a northerly heading towards the water pool (about 175 m further) following a path heavily worn into the rock floor. The path eventually passes a large tabular stone slab fallen from the roof before narrowing and turning towards a deep chasm on the left. Alongside the chasm to the right are several wooden poles laid out as a makeshift bridge ascending a high rock ledge before winding and descending precipitously. Down a narrow vertical passage approaching the water source, we were blocked by a barricade wall of intentionally placed stone boulders.

Retracing our steps ascending the steep incline, we immediately noticed numerous surface concentrations of pottery of near-complete vessels (perhaps ceremonially broken) deposited along the edges of the trail descending to water. The sherds nearest the route to water were from water jars identified as Early Classic Chic Polychrome and Chemax Slateware as well as a few broken sherds of water vessels from Saepulkana,

a Contact-Early Colonial period red ware; there were no Late Classic or Postclassic ceramic wares recovered. There were, however, a number of Preclassic sherds such as Ucu Negro, Sierra Rojo and numerous remains of at least 3 very unusual vessels with long, narrow necks, globular bodies, and monopod supports identified as Yotolin Patterned Burnished (Fig. 7), allegedly the earliest known pottery in Yucatan (Brainerd 1958). Many more pottery sherds of this rare Preclassic patterned burnished ware were identified in other vessel forms such as a small stirrup handle that may have served as a base for a jar and dish with an everted rim. Although there is disagreement about the dating of this mysterious pottery found only near Mani, Sacalum, Lolton Cave, Tzucacab, and now Xcoch, Yotolin Patterned Burnished may belong to the early Middle Formative period (Brainerd 1958; Folan 1968; cf. Andrews V 1990). Its finding under the Cave Pyramid in the middle of an apparent Preclassic center is highly significant and, importantly, suggests that the Preclassic makers and users of this early pottery resided nearby.

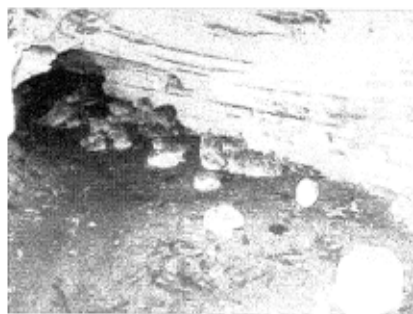


Fig. 6. The Gruta Xcoch showing white limestone marl, stone piles, and torch fragments aligning the well worn path to water.



Fig. 7. Diagnostic portions of 1 of at least 3 Yotolin Patterned Burnished water jars with long thin necks, globular body, and monopod support found deep within the Xcoch cave near the water source. This Preclassic ceramic ware is believed by some to be the earliest known pottery in the Yucatan. The scale is 10 cm.

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- RESUMEN: Nuevos datos de Xcoch indican la presencia de un centro Maya grande preclásico en la región Puuc. Construido alrededor de una profunda cueva de agua con asentamiento distribuido alrededor de una acrópolis masiva multi-nivel que sostiene una pirámide grande y una plataforma gigante, con numerosos cuadrángulos piramidales semejantes a los complejos de grupo-E están hechos en el estilo arquitectónico megalítico. En adición de la extensa cerámica de la superficie preclásica, muchos restos de canteros preclásicos y clásico temprano se encuentran dentro de la cueva Xcoch, incluyendo cantidades substanciales de las cerámicas más tempranas conocidas en la Yucatán. Estos datos sugieren una ocupación amplia y una sociedad compleja incipiente comenzando en el periodo preclásico medio temprano (~800–700 a.C.). Ocupaciones mayores del clásico temprano y menores del clásico terminal también están apoyados por los datos del recorrido que proveen una nueva percepción de la prehistoria temprana de los Maya de Yucatán.
- ZUSAMMENFASSUNG: Die neuen archäologischen Befunde aus Xcoch liefern Hinweise für die Existenz eines großen präklassischen Fundplatzes der Maya in der Region der Puuc-Hügel. Um eine tiefe wasserführende Höhle mit Siedlungsresten, und eine massive, aus mehreren Ebenen bestehenden und von einer Pyramide gekrönten Akropolis gruppieren sich verschiedene Gebäudegruppen, darunter auch eine mögliche E-Gruppe im megalithischen Stil. Neben weitverbreiteter präklassischer Keramik an der Oberfläche wurden viele Scherben prä- und frühklassischer Wasserkrüge in der Höhle von Xcoch gefunden, darunter auch substantielle Mengen der frühesten aus Yucatan bekannten Keramik. Diese Befunde weisen auf eine lange Besiedlungskontinuität und den Beginn gesellschaftlicher Komplexität ab der mittleren Prälklassik (~800–700 v. Chr.) hin. Größere frühklassische und geringe endklassische Besiedlung können ebenfalls durch die Oberflächenbefunde nachgewiesen werden und tragen dazu bei, ein neues Bild der frühen Geschichte der yukatекischen Maya zu entwerfen.

Recent Publications

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 2008 *XXI Simposio de Investigaciones Arqueológicas en Guatemala, 2007*. 2 Volumes, pp. 1117, maps, tabs, ill., color photos. No ISBN Number. Museo Nacional de Arqueología y Etnología, Guatemala. (Contents: Yvonne Putzeys, Jorge Cáceres, Edgar Telón y Sergio Cuyán: *Año 2006 y la arqueología en Q'um'arkaj: Proyecto Etnoarqueológico Q'um'arkaj rescate en tramo carretero Santa Cruz del Quiché-La Estancia*, pp. 1–12; Eddy Armando Joaquín: *Algunos datos acerca del patrón de asentamiento en una comunidad Isil del Altiplano Noroccidental de Guatemala*, pp. 13–24; Eugenia Robinson, Marlen Garnica y Juan Pablo Herrera: *Pacañ, un sitio ritual en las Tierras Altas de Guatemala*, pp. 25–34; Edwin Román: *Situación sociopolítica-económica de la cuenca media del río Motagua, durante la época prehispánica*, pp. 35–47; Erick T. Rochette y Mónica Pellecer: *¿A quién está asociado?: La*

