FAMSI © 2004: Kevin R. Schwarz

Understanding the Classic to Postclassic Architectural Transformation of Rural Households and Communities in the Quexil-Petenxil Basins, El Petén, Guatemala



Research Year: 2003 Culture: Maya Chronology: Classic to Postclassic Location: Petén, Guatemala Site: Quexil-Petenxil Basins

Table of Contents

Abstract <u>Resumen</u> <u>Project Summary</u> <u>Culture Historical Analysis</u> <u>Discussion and Conclusion</u> <u>Acknowledgements</u> <u>List of Figures</u> Sources Cited

Abstract

The research is a project of excavation and analysis of domestic and civic-ceremonial architecture aimed at understanding how ancient Maya households and communities transformed and reorganized themselves during a time of cultural change from the Late

Classic through Postclassic Periods. I excavated the remains of two villages in the Quexil-Petenxil Basins of Petén, Guatemala that preserve evidence of occupational continuity crucial to our understanding of this period of cultural change. Through the funded analysis of Accelerator Mass Spectrometer (AMS) radiocarbon samples, I present a significantly improved understanding of the site occupational history that contributes to a direct historical account of the Petén Maya from the Terminal Classic Period, to the rise of the Postclassic Itzá polity and Spanish contact.

Resumen

La investigación es un proyecto de excavación y análisis de la arquitectura doméstica y cívico-ceremonial, cuyo objetivo es entender cómo las unidades de vivienda y las antiguas comunidades mayas se fueron transformando y reorganizando durante una época de cambios culturales relativamente rápidos ocurridos entre los períodos Clásico Tardío y Postclásico. Excavé los restos de dos aldeas isleñas en las cuencas del Quexil y el Petenxil, en Petén, Guatemala, donde se conservan evidencias de una continuidad ocupacional que resulta crucial para nuestra comprensión de este período de cambio cultural. Por medio del conjunto de análisis de las muestras de radiocarbono por AMS de un sitio de las islas de Quexil, presento una imagen mucho más clara de la historia ocupacional del sitio, que contribuye a una descripción histórica directa de los mayas de Petén desde el período Clásico Terminal, hasta el surgimiento del estado itzá y el contacto con los españoles.

Submitted 02/04/2004 by: Kevin R. Schwarz Department of Anthropology Southern Illinois University at Carbondale krschwarz@hotmail.com



Figure 1. Map of the Petén Lakes Region, Guatemala and the Quexil Islands.

Project Summary

The project involves the excavation and analysis of prehispanic domestic and ceremonial architecture and associated activity areas from sites in the Quexil-Petenxil Basins of the Petén Lakes region of Guatemala (Figure 1). I investigated how Petén Maya households and rural communities transformed and reorganized themselves during a time of cultural change from the Late Classic (A.D. 600-800) through Postclassic Periods (A.D. 1000-1525). This research extends recent ethnohistoric and archaeological research into the political geography of the Postclassic and historic Petén Maya (Jones 1998; Rice *et al.* 1996, 1998). I investigated the Quexil Islands, two islands in Lake Quexil that were the site of a densely built and occupied Postclassic village which featured distinctive architecture in comparison with similarly sized Classic Period villages. I view changing architectural form and household behavior as indicators of sociopolitical change (Wilk and Rathje 1982; Deetz 1982; Lawrence and Low 1990;

Berman 1993, 1994; Gonlin 1994; Freter 1994). This association holds because the provisioning of social space through architecture is best viewed as a process of ongoing structuring of society in which the organization of society, core societal forces and external influences are played out (Giddens 1979, 1984). Through architecture, we can examine rural community survival, social reorganization and/or in-migration during and after the Terminal Classic period (Sabloff and Willey 1967; Thompson 1970; Tourtellot 1988; Rice 1988; Rice et al. 1998). More specifically, following the political decline (ca A.D. 800) events in the Central Petén may have led to increasing militarism and possible in-migration of Epiclassic groups from other regions, such as Yucatán (Kremer 1994; Rice et al. 1998), the Gulf Coastal region (Thompson 1970; Fox 1987) or the Petexbatún region of Guatemala (Tourtellot 1988; Rice 1988; Webster 2002). Several earlier investigators suggested that these in-migrants carried with them characteristic ceramics (Fine Orange and Plumbate) and architecture (C-shaped bench structures and central shrines among other forms). In contrast, my hypothesis is that political instability during the Terminal Classic led to the establishment of the island community by local villagers, a community that then grew under conditions of relative autonomy until it was incorporated in the Itzá polity during the Late Postclassic Period (Jones 1998; Rice et al. 1998). I infer that internal social processes including shifting practices of memorialization of ancestors (McAnany 1995; Gillespie 1999) contributed to the building of new forms of shrines in houses and public architecture as a part of the materialization of social reorganization.



Figure 2a. Maler Map of the Eastern Quexil Island.



Figure 2b. Maler Map of the Western Quexil Island.



Figure 3. Aerial Photo of the Quexil Islands.

My goal is to compare the formal and behavioral spatial manifestations of daily life in the Classic and Postclassic periods by exposing these architectural elements and associated artifacts. In 2001, I excavated extensive horizontal exposures of houses, temples, open halls and surrounding spaces of 14 Terminal Classic and Postclassic structures on the Quexil Islands (Figure 2a, Figure 2b, Figure 3, shown above, and Figure 4, shown below) and sampled six Late Classic structures in the adjacent Petenxil Basin. The excavations reveal a complex transformation in settlement location, site plan, civic-ceremonial and domestic architecture and use of activity areas. In the summer of 2002, with assistance from project ceramicist Dr. Prudence Rice, I finished the analysis of recovered artifacts. Completion of the project required radiocarbon dating of several archaeological contexts to better understand the site chronology of the Quexil Islands. Anchored by the AMS radiocarbon dating of five excavated samples funded by the Foundation for the Advancement of Mesoamerican Studies, Inc. (FAMSI), I present a contextual analysis of the excavation data that provides a unique opportunity to further our understanding of the occupational history of the Quexil Islands and the Classic to Postclassic transition in Petén.



Figure 4. Photo of the Quexil Islands from the shoreline.

Culture Historical Analysis

This topic is highly relevant to lowland Maya archaeology and Mesoamerican archaeology in general. Knowledge has increased about household and community organization in the Late Classic period (Haviland 1988; Tourtellot 1988; Palka 1998) and about the political organization of Petén in the Late Postclassic and Early Historic Periods (A.D. 1525-1697; Rice *et al.* 1998; Jones 1998; Wurster 2000; Cecil 2001; Pugh 2001). The cultural and demographic transformation of that region from the Classic to Postclassic periods is still poorly understood.

In an effort to understand this period of cultural transformation, I conducted the 2001 field season in the Quexil-Petenxil Basins. The investigation focused on understanding how rural domestic architecture and use of space was modified following the decline of Classic Maya states, particularly the Terminal Classic Period, often termed as the Maya Collapse. Additionally, the project shed considerable light on the Early Historic occupation of the Quexil Islands. I document the seventeenth-century occupation of the island settlement, which Spanish missionaries and soldiers repeatedly visited and described (Comparato 1983; Jones 1998:351-352).

The FAMSI grant funded five AMS radiocarbon analyses that considerably clarify the occupational history of the Quexil Islands. It now appears that the eastern island and likely the western island were intensively settled by the Early Terminal Classic Period. That is, AMS radiocarbon dates of occupational floors of a small "open hall" structure with a C-shape bench on the eastern island demonstrate the use of these characteristically "Postclassic" forms of architecture (Rice 1986, 1988) by the beginning of the ninth century A.D. Also analysis of the stratified midden and an adult burial demonstrates occupational continuity of the Quexil Islands from the Early Terminal Classic Period (A.D. 800-900) to the Early Historic Period. Three whole ceramic vessels from these burials and sherds from four Terminal Classic and Postclassic unslipped ceramic types, six slipped and polychrome types, and three censer types were better dated by this analysis. AMS radiocarbon analysis of a perinatal burial and an offering of human bones indicates the occupation of the Itzá at Taj Itzá in A.D. 1697 (Jones 1998).



Figure 5. Acropolis Group of the Eastern Quexil Island.

The hilly eastern island supports 16 structures arranged in concentric groups of terraces with domestic structures on the lower terraces (Figure 2a). The acropolis group (Figure 5) consists of five structures including an eastern pyramidal temple (Q14) and a Postclassic open hall (Q18). Surrounding this group, Structure Q19 is immediately west

and down slope from Structure Q18. During test excavations west of Structure Q19, I discovered a stratified midden that was underlain by two burials. The upper stratum (Level 2) of the midden included ceramics tentatively dated by Rice as Very Late Postclassic (A.D. 1250-1450; Figure 6). A lower stratum (L. 3) of the midden is dated by Rice to the Early Late Postclassic (A.D. 1250-1350).



Chronology for test pit Level 1- Very Late Postclassic (after A.D. 1450) Burial #3- AMS dated to A.D. 1668 +- 43 Level 2- Late Postclassic (A.D. 1250-1450) Level 3- Early Late Postclassic (A.D. 1250-1350) Level 3A- Late Terminal Classic (A.D. 950-1100) Level 5- Burial #2; A.D. 800/830-950)

Figure 6. Profile of test pit west of Structure Q19 (eastern island).



Figure 7. Photo of Burial #2.

Burial #2 is an extended, well-preserved adult female skeleton in a limestone cyst, aligned approximately westward (Figure 6, L. 5, Figure 7, shown above, and Figure 8). The burial offerings seemingly included four whole ceramic vessels. One vessel, a Jato Black-on-Grey tripodal dish, was placed over the cranium and dates to the Early Terminal Classic (Rice 1987:82-83 and personal communication; Figure 9 and Figure 10). A red-slipped vase supported the cranium. It was most likely a polychrome, however all paint has eroded (Figure 10). Burial #3 is a perinatal human encountered within a large ceramic olla capped by a small plate (all human remains analyzed by SIUC physical anthropologist William Duncan; Figure 11, Figure 12, Figure 13 and Figure 14, shown below). This vessel was placed at the knees and slightly above burial #2 so that their association was uncertain until I performed the radiocarbon analysis. The height of the vessel (28 cm) means that it protruded into the midden above, suggesting it to be a later intrusion. The two vessels are both Chilo Unslipped, a type generally identified with the Very Late Postclassic or Early Historic Periods (post A.D. 1450; Rice 1987:180). However, their placement in association with a putatively Terminal Classic burial complicates this identification.



Figure 8. Drawing of Burial #2.



Figure 9. Photo of Jato Black-on-Grey tripod dish.



Figure 10. Drawing of Jato Black-on-Grey tripod dish and red-slipped vase.



Figure 11. Photo of Chilo Unslipped Olla (containing Burial #3).



Figure 12. Photo from above of Chilo Unslipped Olla (illustrating perinatal burial).



Figure 13. Photo of Chilo Unslipped Lid.

I collected two samples for radiocarbon dating from these contexts. The first sample is bone material from burial #3. Bone is usable as a C-14 sample because of the sealed nature of the interment, precluding contamination. A cross-section collected from the femur has a high probability of accurate dating. The AMS radiocarbon analysis of the perinatal olla burial (Table 1, shown below) dates to A.D. 1668 \pm 43.¹ This date is exceptionally interesting because it demonstrates the occupation of the island in the decades immediately before and around the Spanish Conquest in this region. Second, it correlates with Rice's (1987:179-181) identification of Chilo Unslipped ceramics as representative of the Protohistoric Ayer phase. The second sample is charcoalized wood (~ 3 grams) recovered from between the cranium of burial #2 and the tripodal dish. However, dating of this sample yielded an anomalous date of 6147 \pm 47 B.C. It is likely, in retrospect, that the wood fragment that was thought to be associated with the burial is an ecofact that was merely part of the natural soil matrix. Nonetheless, the relative dating of the Jato Black-on-Grey tripod dish and other artifacts securely places burial #2 in the Early Terminal Classic Period.

¹ All radiocarbon dates discussed here are both calibrated and corrected.

Table 1. Summary of AMS Radiocarbon Analysis for the Quexil Islands					
Sample ID#	Arizona Lab. ID#	Operation	Material	Archaeological Context	Calibrated AMS Date A.D.
1	AA54524	Q1	wood charcoal	within shrine (assoc. w/offering of human bones)	1652 ± 41
2	AA54525	Q2	wood charcoal	hearth on bench surface	1041 ± 33
3	AA54526	Q18	wood charcoal	occupation floor in front of bench	810 ± 43
4	AA54527	Q19A– burial 3	bone	perinatal burial within Chilo Unslipped jar	1668 ± 43

The burials were located at the western edge of an east-west axis through the ceremonial core of the site (Figure 16, shown below). The association of the west with the underworld (Coggins 1980) suggests that the burial locale was a symbolically chosen and powerful place. Human ossuaries are associated with the western margin of ceremonial groups at other Petén Postclassic sites [e.g., Zacpetén (Pugh 2001:279-286, 2003:422) and Topoxté (Bullard 1970)]. The confirmation of two juxtaposed burials over a long time span (Terminal Classic–Early Historic Periods) suggests the persistence of social memory and sacralization of place among the inhabitants (McAnany 1995:160-162).



Figure 14. Drawing of Chilo Unslipped Olla and Lid (containing Burial #3).



Figure 15. Maler Map of Structures Q18 and Q19.



Figure 16. Photo of Bench of Structure Q18.

Structure Q18 is a Postclassic open hall that supports a well-made C-shaped bench and well-preserved stucco floor (Figure 15, Figure 16, shown above). The floor was relatively clean of artifacts but large amounts of charcoalized wood fragments sat in front of the bench. The charcoal may have been deposited through ritual activity since the concentration was near the building centerline. A sample of ~10 grams was collected. Most artifacts from Q18 come from the already mentioned midden, including Terminal Classic and Postclassic fine serving wares. The charcoal sample was AMS dated to A.D. 810 ± 43. The occupation of the open hall with the C-shaped bench demonstrates that the eastern island acropolis group was utilized early in the Terminal Classic Period. It also confirms that C-shaped bench structures were built in the Quexil-Petenxil Basin at a relatively early date. The finding places both the occupation of Structure Q18 along with the interment of burial #2 in the Early Terminal Classic Period (A.D. 800-900). This fact is important to my culture historical reconstruction of the movement of local inhabitants within the Quexil-Petenxil Basins to the islands. It also demonstrates the use of C-shaped bench forms at a relatively early date in the Quexil Basin.

The smaller western island supports six structures, arranged on architectural terraces roughly on a north-south axis (Figure 2b). The most southerly terrace supports a diminutive temple-open hall complex, structures Q1 and Q2 (Figure 17). Structure Q1 is a temple with an east-facing staircase in front of which Late Postclassic effigy censer fragments were deposited. These censers featured modeled depictions of Maya gods (Figure 18), including a fragmentary depiction of the diving god. I excavated a test pit on axis into the west side of Q1 that revealed an offering of human bone intruded into the structural fill. The offering includes two clavicles, a humerus, and female pelvis with Terminal Classic and Postclassic ceramics (Rice, personal communication). I recovered a sample of wood charcoal (<5 grams) among the bones that was dated to A.D. 1652 ± 41 (Table 1). Structure Q1 is abutted by a low open hall to the north, Structure Q2, with a C-shaped bench. A hearth feature was discovered on the bench surface that includes burnt rocks, sherds and fragments of wood charcoal (~5 grams) that were dated to A.D. 1041 ± 33. The radiocarbon analysis dates the occupation of the open hall and deposition of the offering at Q1 and provides a comparison of chronologies between the western and eastern islands.

For the western island, it is less certain if the settlement was mostly built in the Terminal Classic Period, although certainly Terminal Classic sherds were found on that island. However, the ceramic date of an upper level of construction fill for Structure Q1 to the Late Early Postclassic (A.D. 1100-1200) and the hearth date of the adjoining Structure Q2, an open hall demonstrate better the Early Postclassic occupation of this island. The dating of the offering of human bone that was placed intrusively into the west side of the structure indicates the long term usage of this structure group. The occupation of both islands thus spans into the period of Spanish contact with the Itzá Maya, culminating with conquest of A.D. 1697. These dates also corroborate the 1690s account the Spanish chronicler Juan Villagutierre Soto-Mayor (Comparato 1983:343) who in a

written manuscript described the island village of "*Equexil*", likely the Quexil Islands,² as inhabited by Itzá Maya who were engaged in religious activities ("idolatry") at a temple. That is, the evidence of effigy censers or "idols" found in association with temple buildings on both islands supports the use of these islands for religious ritual during the time frame of Villagutierre's description.



Figure 17. Maler Map of Structures Q1 and Q2 (with excavations and dated features marked).

² "Equexil" and "Eckixil" are most likely versions of *Ek' el xiw*, a Mayan toponym Hofling and Tesucún (1997:xiii, 237) identify as meaning *ek'*, or black, and *el xiw*, an herb or plant. Likely a specific plant grew in the vicinity of Lake Quexil, from which the lake's name is derived.



Figure 18. Drawing of Effigy censer sherds for Structure Q1.

Discussion and Conclusion

The project advances Mesoamerican and specifically Maya archaeology because it investigates the least known era in later Petén cultural history (P. Rice 1986) so that a direct historical account can be developed (Kremer 1994; Rice *et al.* 1998). This is

important work because it improves a poorly understood chronology (Rice 1987:235-239; Rice *et al.* 1996:304) to address processes of cultural transformation of architectural design through in-migration and internal social change. The project focuses on dynamic cultural processes in a rural community as it interacted with Classic period polities, as those relationships later declined, and as it was reincorporated in the Postclassic Itzá polity. In this study, I utilize the chronological analysis to inform my culture historical reconstruction. Ultimately the aim of the study is to understand how the form and organization of house architecture and rural settlement patterns were transformed between the Classic and Postclassic Period, a transformation that alternately may have been due to internal reorganization in Terminal Classic Maya outsiders (Thompson 1970; Fox 1987; Rice 1988; Tourtellot 1988; Webster 2002). Thus, results of the AMS radiocarbon analysis (<u>Table 1</u>) are important anchoring points in this reconstruction and lead to a consideration of culture process.

Indeed, this report presents only a portion of the comprehensive analysis that I have developed fully in other works, including my dissertation (Schwarz 2001, 2003, 2004). As such, the following discussion can only briefly summarize that analysis especially as it applies to the chronological and culture historical analysis.

The Quexil Islands were intensively settled in the Early Terminal Classic period, as is documented by analysis of a stratified midden and burials and an AMS radiocarbon analysis demonstrating the occupation of the acropolis group of the eastern island at A.D. 810 \pm 43 (Table 1). Likely the island location was settled as a result of political instability brought about by the Terminal Classic collapse of nearby states and urban areas. The island setting and external walls identified at nearby lakes region sites, such as Zacpetén (Pugh 2001) and Muralla de Leon (Rice 1986) demonstrate the defensible and defended nature of these sites and this was certainly an era of warfare and conflict in Petén (Demarest *et al.* 1997; Webster 2002).

Civic-ceremonial architecture at the eastern Quexil Island featured structure arrangements demonstrative of plaza plan 2, a Classic Period east-west alignment of structures prevalent at Tikal (Becker 1971, 1982, 1999). This coupled with artifact evidence (Schwarz 2004) suggests local cultural and populational continuity in the Classic to Postclassic time frame. Unlike many investigators (Thompson 1970; Fox 1987; Rice 1988; Tourtellot 1988) I do not think architectural or artifactual change in the Petén Lakes regions suggests the in-migration of Maya or non-Maya from Seibal or elsewhere. Rather I suggest that cultural transformation occurred as local villagers transformed their settlements and domestic architecture as part of a reorganization of society necessitated by macro-level political change occurring during the Maya political collapse. I infer that the use of C-shaped bench forms relates closely to changes in the architectural expression of ancestor veneration, such as the use of benches as altars (Gillespie 1999). Given this, similarities with bench forms at Seibal and elsewhere are more likely due to the adoption of a common set of religious architectural symbols in this region of Mesoamerica by local inhabitants (e.g., following Ringle et al. 1998) than due to the in-migration of large numbers of outsiders into the Petén Lakes region (contra Fox 1987; Rice 1988; Tourtellot 1988; Webster 2002). The Quexil Islands later became

a well-integrated village within the Itzá state, most likely by the Late Postclassic Period (A.D. 1250-1450) in that cult religious ritual involving the use and burning of ceramic effigy censers (dated to this period) and animal offerings occurred there. As reported above, the Early Historic occupation of the Quexil Islands is well attested by my excavations and radiocarbon analysis and is corroborated by seventeenth-century Spanish texts.

Thus we have an exceptional record of the Maya settlement of a small, island village beginning in the Early Terminal Classic Period, with a long period of occupation, finally being abandoned approximately nine centuries later, following the Spanish Conquest. The most immediate problem is understanding how the Maya of the Quexil-Petenxil Basins survived the period of political crisis in the Terminal Classic Period to reorganize their rural society in light of the new conditions of the Postclassic, a reorganization that I view mostly through the lense of architecture. I view the transformation as a process of ongoing structuring of society (Giddens 1979, 1984) through the provisioning of social space of both domestic and civic-ceremonial architecture. My study documents how macro-political change during and after the Classic Maya Collapse, emanating from core regions, both shaped local communities and how those local communities adapted and actively transformed themselves and their domestic architecture to promote their own social reproduction in a era of greater political conflict that including elements of warfare, migration and political change. I conclude that the rural Maya of the Quexil-Petenxil Basin survived the political change of the Maya Collapse through a combination of purposeful political and practical action and transformed their social and family organization, effectively restructuring their households and communities, including their house architecture and spatialized religious practices, to adapt themselves to the social and political realities of post-collapse Maya society.

Acknowledgements

I would like to acknowledge the support of the National Science Foundation, for which a dissertation improvement grant (BCS-0002831) funded the fieldwork carried out by this project. I thank the Foundation for the Advancement of Mesoamerican Studies, Inc., (FAMSI) for their support of the radiocarbon analysis. Additionally, I thank my dissertation committee, Dr. Don Rice (chair), Dr. Prudence Rice, Dr. Charles Hofling, Dr. Susan Gillespie, and Dr. Carma Gorman for their support over the last several years. Any shortcomings of this work, however, remain my own.

Of course, the support of my family was also important to the completion of this project. In particular, I thank my wife, Hongfei Liu; father, David Schwarz; and brother, Brian Schwarz for their aid and patience over the years. Dr. Prudence Rice carried out the ceramic analysis, in its crucial parts, so my special thanks go to her. Also William Duncan (SIUC) conducted all osteological analyses for this project, so thanks are due him. Sr. Ivo Romero skillfully prepared all the drawn illustrations presented here. I thank the Instituto de Antropología e Historia of Guatemala, which graciously permitted this work to occur. As well, I give collective thanks to colleagues and students at the Centro Universitario de Petén, Guatemala as well as other individuals too numerous to mention by name, who have aided this project in various ways. In particular, I thank the communities of Santa Elena, San Benito, and Ixlú, Guatemala whose approval and help as project participants made the project successful. Also owners of land in the Quexil-Petenxil Basins, particularly the Sagastume and Ortíz families, both approved and supported the work put forward here, so my thanks are extended to them.

List of Figures

- Figure 1. Map of the Petén Lakes Region, Guatemala and the Quexil Islands.
- Figure 2a. Maler Map of the Eastern Quexil Island.
- Figure 2b. Maler Map of the Western Quexil Island.
- Figure 3. Aerial Photo of the Quexil Islands.
- Figure 4. Photo of the Quexil Islands from the shoreline.
- Figure 5. Acropolis Group of the Eastern Quexil Island.
- Figure 6. Profile of test pit west of Structure Q19 (eastern island).
- Figure 7. Photo of Burial #2.
- Figure 8. Drawing of Burial #2.
- Figure 9. Photo of Jato Black-on-Grey tripod dish.
- Figure 10. Drawing of Jato Black-on-Grey tripod dish and red-slipped vase.
- Figure 11. Photo of Chilo Unslipped Olla (containing Burial #3).
- Figure 12. Photo from above of Chilo Unslipped Olla (illustrating perinatal burial).
- Figure 13. Photo of Chilo Unslipped Lid.
- Figure 14. Drawing of Chilo Unslipped Olla and Lid (containing Burial #3).
- Figure 15. Maler Map of Structures Q18 and Q19.
- Figure 16. Photo of Bench of Structure Q18.

Figure 17. Maler Map of Structures Q1 and Q2 (with excavations and dated features marked).

Figure 18. Drawing of Effigy censer sherds for Structure Q1.

Drawn illustrations presented here were prepared by Sr. Ivo Romero.

Table 1. Summary of AMS Radiocarbon Analysis for the Quexil Islands.

Sources Cited

Becker, Marshall J.

- 1971 The Identification of a Second Plaza Plan at Tikal, Guatemala and Its Implications for Ancient Maya Social Complexity. Unpublished Ph.D. dissertation, Department of Anthropology, University of Pennsylvania.
- 1982 "Ancient Maya houses and their identification: An evaluation of architectural groups at Tikal and inferences regarding their functions." In *Revista española de antropología americana,* vol. 12:111-129.
- 1999 "Excavations in Residential Areas of Tikal: Groups with Shrines." In *Tikal Report No. 21.* University Museum, University of Pennsylvania, Philadelphia.

Berman, Marc

- 1993 "Continuity and Change in Household Life at Lukurmata." In *Domestic Architecture, Ethnicity, and Complementarity in the South-Central Andes,* ed. Mark S. Aldenderfer, pp. 114-135. University of Iowa Press, Iowa City.
- 1994 Lukurmata: Household Archaeology in Prehispanic Bolivia. Princeton University Press, Princeton, NJ.
- Bullard, William R.
- 1970 "Topoxte, A Postclassic Site in Petén Guatemala." In *Monographs and Papers in Maya Archaeology*, ed. W.R. Bullard, Papers of the Peabody Museum, Vol. 61, pp. 245-309. Harvard University, Cambridge, Mass.

Cecil, Leslie

2001 Technological Styles of Late Postclassic Slipped Pottery from the Central Petén Lakes Region, El Petén, Guatemala. Unpublished Ph.D. dissertation, Department of Anthropology, Southern Illinois University, Carbondale.

Chase, Arlen F.

1983 A Contextual Consideration of the Tayasal-Paxcaman Zone, El Petén, Guatemala. Unpublished Ph.D. dissertation, Department of Anthropology, University of Pennsylvania, Philadelphia.

Coggins, Clemency

1980 "The Shape of Time: Some Political Implications of the Four-Part Figure." In American Antiquity 45(4):727-739.

Comparato, Frank (transl.)

1983 *History of the Conquest of the Province of the Itza,* by Juan Villagutierre Soto-Mayor, Labrynthos.

Culbert, T. Patrick (ed.)

1973 Classic Maya Collapse. University of New Mexico Press, Albuquerque.

Deetz, James F.

1982 "Households: A Structural Key to Archaeological Explanation." In American Behavioral Scientist 25(6):717-724.

Demarest, Arthur A., Matt O'Mansky, Claudia Wolley, Dirk Van Tuerenhout, Takeshi Inomata, Joel Palka, and Hector Escobedo

1997 "Classic Maya Defensive Systems and Warfare in the Petexbatún Region: Archaeological Evidence and Investigations." In *Ancient Mesoamerica* 8:229-253.

Fox, John W.

1987 Maya Postclassic State Formation Segmentary Lineage Migration in Advancing Frontiers. Cambridge University Press.

Freter, AnneCorrine

1994 "The Classic Maya collapse at Copán, Honduras: An Analysis of Maya Rural Settlement Pattern." In *Archaeological Views from the Countryside,* edited by Glenn M. Schwartz and Stephen E. Falconer, pp.160-176. Smithsonian University Press, Washington.

Giddens, Anthony

- 1979 Central Problems in Social Theory. Action, Structure and Contradiction in Social Analysis. University of California Press, Berkeley.
- 1984 *The Constitution of Society.* Polity Press, Cambridge.

Gillespie, Susan

1999 "Olmec Thrones as Ancestral Altars: The Two Sides of Power." In *Material Symbols: Culture and Economy in Prehistory*, ed. John E. Robb, Center for Archaeological Investigations, Occasional Paper No. 26, pp. 224-256. Southern Illinois University at Carbondale.

Gonlin, Nancy

1994 "Rural Household Diversity in Late Classic Copán, Honduras." In Archaeological Views from the Countryside: Village Communities in Early Complex Societies, edited by Glenn M. Schwartz and Stephen E. Falconer, pp. 177-197. Smithsonian Institution Press, Washington D.C.

Haviland, William A.

- 1968 "Ancient Maya Lowland Social Organization." In *Middle America Research Institute Publication* 26:97-117.
- 1988 "Musical Hammocks at Tikal: Problems with Reconstructing Household Composition." In *Household and Community in the Mesoamerican Past,* edited by R.R. Wilk and W.A. Ashmore, pp. 121-134. University of New Mexico Press, Albuquerque.

Hofling, Charles A. and Félix Fernando Tesucún

Jones, Grant D.

1998 *The Conquest of the Last Maya Kingdom.* Stanford University Press, Stanford, CA.

Kremer, Jurgen

1994 "The Putun Hypothesis Reconsidered." In *Acta Mesoamericana* 4:290-307, ed. Hanns J. Premm, Verlag Von Flemming, Mockmuul.

Lawrence, Denise L. and Setha M. Low

1990 "The Built Environment and Spatial Form." In Annual Review of Anthropology 19:453-506.

¹⁹⁹⁷ Itzaj Maya-Spanish-English Dictionary. University of Utah Press.

McAnany, Patricia

1995 Living with the Ancestors: Kinship and Kingship in Ancient Maya Society. University of Texas Press, Austin.

Palka, Joel

1998 "Reconstructing Classic Maya Socioeconomic Differentiation and the Collapse at Dos Pilas, Petén, Guatemala." In *Ancient Mesoamerica* 8:293-306.

Pugh, Timothy W.

- 2001 Architecture, Ritual, and Social Identity at Late Postclassic Zacpetén. Unpublished Ph.D. dissertation.
- 2003 "The Exemplary Center of the Late Postclassic Kowoj Maya." In *Latin American Antiquity* 14(4):408-430.

Rice, Don S.

- 1986 "The Petén Postclassic: A Settlement Perspective." In *Late Lowland Maya Civilization: Classic to Postclassic,* edited by Jeremy A. Sabloff and E. Wyllys Andrews V., pp. 301-347. University of New Mexico Press, Albuquerque.
- 1988 "Classic to Postclassic Household Transitions in the Central Petén, Guatemala." In *Household and Community in the Mesoamerican Past*, edited by Richard R. Wilk and Wendy A. Ashmore, pp. 227-248. University of New Mexico Press, Albuquerque.

Rice, Don S., Prudence M. Rice, Romulo Sánchez Polo, and Grant D. Jones

1996 Proyecto Maya-Colonial. Geografía política del siglo XVII en el centro de Petén, Guatemala. Informe preliminar al Instituto de Antropología e Historia de Guatemala sobre investigaciones del campo en los años 1994-1995. Center for Archaeological Investigations and Department of Anthropology, Southern Illinois University at Carbondale.

Rice, Don S., Prudence M. Rice, and Timothy W. Pugh

1998 "Settlement Continuity and Change in the Central Petén Lakes Region: The Case of Zacpetén." In *Anatomía de una Civilización: Aproximaciones Interdisciplinarias a la Cultura Maya,* edited by A. Ciudad Ruiz, Y. Fernández Marquínez, J. Miguel García Campillo, M. Josefa Iglesias Ponce de León, A. Lacadena García-Gallo, and L.T. Sanz Castro, pp. 207-252. Sociedad Española de Estudios Mayas, Madrid.

Rice, Prudence M.

- 1986 "The Petén Postclassic: Perspectives from the Central Petén Lakes." In *Late Lowland Maya Civilization: Classic to Postclassic,* eds. Jeremy Sabloff and E.W. Andrews V., pp. 251-300. University of New Mexico Press, Albuquerque.
- 1987 "Economic Change in the Lowland Maya Late Classic Period." In Specialization, Exchange, and Complex Societies, edited by Elizabeth M. Brumfiel and Timothy K. Earle, pp.76-85. Cambridge University Press, Cambridge.

Ringle, William M., Tomás Gallerta Negrón, and George J. Bey III

1998 "The Return of Quetzalcoatl: Evidence for the spread of a world religion during the Epiclassic Period." In *Ancient Mesoamerica* 9:183-232.

Sabloff, Jeremy A. and Gordon R. Willey

1967 "The Collapse of Maya Civilization in the Southern Lowlands: A Consideration of History and Process." In *Southwest Journal of Anthropology* 23(4):311-336.

Schwarz, Kevin R.

- 2001 "Eckixil: La investigación de la historia y arqueología de una aldea Itzá." In *Revista Petén-Itzá* 43:50-55.
- 2003 "Transformación Clásica-Postclásica en patrones de asentamiento rurales: Las Investigaciones del Islote Quexil Oriental, El Petén, Guatemala." In XVI Simposio de Investigaciones de Guatemala. Juan Pedro Laporte and Hector Escobedo (eds.), pp. 70-91. National Institute of Anthropology and History, Guatemala City, Guatemala.
- 2004 Understanding the Classic to Postclassic Transformation in Maya Domestic Spatial Organization: The Case of the Quexil-Petenxil Basins, Guatemala. Unpublished Ph.D. dissertation, Department of Anthropology, Southern Illinois University, Carbondale.

Thompson, J. Eric

Tourtellot, Gair

1988 *Excavations at Seibal: Department of Petén, Guatemala: Peripheral Survey and Excavation-Settlement and Community Patterns.* Memoirs of the Peabody Museum of Archaeology and Ethnology, Vol. 16, Harvard University.

¹⁹⁷⁰ *Maya History and Religion.* University of Oklahoma Press, Norman.

Webster, David

2002 The Fall of the Ancient Maya: Solving the Mystery of the Maya Collapse. Thames & Hudson, London.

Wilk, Richard R. and William Rathje

1982 "Archaeology of the Household: Building a Prehistory of Domestic Life." In American Behavioral Scientist 25(6):617-639.

Wurster, Wolfgang W. (ed.)

2000 El Sitio Maya de Topoxté: Investigaciones en una isla del lago Yaxhá, Petén, Guatemala. Verlag Philipp Von Zabern, Main Am Rhein.