# Maya Hieroglyphs and Maya Archaeology: Collusion or Collision?

Arlen F. Chase, Diane Z. Chase, and Rafael Cobos

University of Central Florida and University of Yucatan

paper to appear in Spanish in Mayab

There is a need for a re-assessment of the alignment of archaeology and epigraphy in the Maya area. Ideally, a feed-back relationship should exist between epigraphy and archaeology, but in recent years epigraphy has become the driving force of all things Maya – largely because of the long history of decipherment and the detail that is available through ancient texts. With notable exceptions (see, for example, Baudez 1999 or Marcus 1992), epigraphic interpretation is accepted by Maya archaeologists with few challenges. While many archaeologists attempt to align their research with epigraphic assertions, some epigraphic readings have been far to literal in their portrayal of dynastic history – with archaeological data simply being fitted to preconceived frames of reference or, alternatively, ignored altogether. Yet, there is upheaval within the ranks of epigraphic study, with shifting readings and interpretations that can be used to cast doubt on some previously accepted "facts" (e.g., Martin 2005a). Archaeologists also have been suggesting alternative possibilities for conceptualizing the organization of the ancient Maya (e.g., Rice 2004). The time is therefore ripe for a realignment of ancient Maya history and archaeology.

# **Epigraphic History or How We Came to the Present Consensus**

The current emphasis on hieroglyphic history in Maya archaeology derives from a long tradition of epigraphic decipherment that has succeeded in moving text translation and interpretation to the forefront of Maya Studies (Figure 1). For most of the formative years in Maya archaeology, the ancient hieroglyphic records were viewed as time counts of long-gone priests trying to propitiate various deities (e.g. Thompson 1927, 1950, 1970). J. Eric S. Thompson, one of the founding fathers of hieroglyphic study, was

adamant that the hieroglyphic texts were not actual history. According to Thompson (1950), there were: no names of kings, individuals, or places; no records of events; and, certainly no economic accounts contained within these texts. Maya hieroglyphics were thought to deal exclusively with celestial events, deities, and counts of time. So strong was Thompson's hold on Maya archaeology that opposing viewpoints were largely silenced until his death in 1977.

Alternatives to Thompson's ideas came from several Russian speakers, whose views were not easily endorsed during the modern "Cold War" when Russia and the West were at odds. In these interpretations, Maya hieroglyphs were viewed as both phonetic and historical (a discredited viewpoint that had earlier been championed by Beyer [1931, 1937] for Chichen Itza). Yuri Knorosov championed a view that Maya hieroglyphs were phonetic, something vehemently opposed by Thompson. Knorosov's works were translated and circulated by both Tatiana Proskouriakoff (translated articles in the University Museum library) and Sophie Coe (e.g., Knorosov 1967). Knorosov himself (1958) published an article in *American Antiquity* in English. This piece was castigated by Thompson (1959), whose opinions were so strong that they effectively halted any movement toward a phonetic approach to Maya hieroglyphs from coming into widespread acceptance for almost two decades.

The subsequent work of Tatiana Proskouriakoff (1960, 1961) meticulously documented the existence of a dated succession of individuals in the Piedras Negras monuments and further correlated specific hieroglyphs with important events in the lives of each individual. Her research firmly demonstrated the historical nature of the ancient Maya texts and fundamentally changed the nature of Maya Studies. Proskouriakoff did

not, however, attempt widespread phonetic readings. Her analysis of the Yaxchilan texts (Proskouriakoff 1963, 1964) reaffirmed the historical content of Maya hieroglyphs with its dynastic records of birth, accession, warfare, and successive "kings."

Kelley (1962, 1976) was the first epigrapher to explicitly combine both the historic and phonetic approaches in his work on Quirigua, thus laying the foundation for modern epigraphic studies. But, it was the Mesa Redondas de Palenque, organized by Merle Greene Robertson (Gidwitz 2002), that finally bore the fruit of the epigraphic revolution (Coe 1992). Originally started to interpret the dynastic history of Palenque (e.g., Schele 1978), these conferences blossomed into an exchange of information between epigraphers, archaeologists, and art historians that revolutionized the interpretation of Classic Maya society by moving epigraphic interpretation from simple statements concerning important points in an individual's life (birth accession, and death) to considerations of warfare, politics, and hieroglyphic change (e.g., Culbert 1991, Grube 1991; Houston 1993; Stuart 1993). Building on this base, Linda Schele (1982, 1988, 1990) popularized phoneticism in epigraphic interpretation to a lay public. Particularly important in bringing Maya hieroglyphs to a broader audience were books by Linda Schele and David Freidel (1990) and by Linda Schele and Peter Mathews (1998); the first presented an overview of Classic Maya history based on the hieroglyphic material; the second looked at hieroglyphs, iconography, and specific site contexts. More recently, Simon Martin and Nikolai Grube (2000) have synthesized the dynastic records and interrelationships of the various Maya sites into a "historical consensus . . . of high order hegemonies centered on the key dynasties of Tikal and, especially, Calakmul" (Houston and Lacandena 2004:121).

Partially as a response to Thompson's original claim that Maya hieroglyphic texts dealt exclusively with ritual and ceremonial aspects of Maya society, post-Proskouriakoff epigraphers have emphasized the historical content of these texts. Today, most epigraphic interpretation constitutes literal Maya history, although there is a growing recognition of the part that deities and religion played in the materials recorded in Maya texts (e.g. Stuart and Houston 1994; Taube 2004). While not discounting the historic value of hieroglyphic texts, we believe that ritual symbolism and archaeological data are more relevant than might be surmised from current epigraphic syntheses.

# Archaeology, Epigraphy, and Changing Perspectives on Classic Maya Society

Until recently, Maya archaeology and epigraphy have had a largely supplementary, as opposed to a complementary, relationship. When the dated texts were available, historic reconstruction was derived from hieroglyphs; when texts could not be interpreted, archaeological data were used to model ancient Maya society. Tension is, however, evident in the epigraphic and archaeological relationship. The texts are somewhat myopic in scale, focusing on "royal" individuals – their birth and accession, their parentage, their dynastic counts, their warfare events, and their participation in ceremonies. In contrast, the archaeological data reflect a much broader group of people, allowing population reconstruction (Culbert and Rice 1990) and suggesting possible social, political, and economic organization among the various sites (A. Chase and D. Chase 2003); however, these archaeological data lack the individual perspective of the hieroglyphic history. While archaeology indicates the existence of markets and extensive trade networks (A. Chase 1998; A. Chase and D. Chase 2004; Hirth 1998; Sidrys 1976),

few economic relationships, outside of possible tribute records (Stuart 1993), exist in the texts. While both epigraphers and archaeologists agree that warfare existed (Proskouriakoff 1963; Webster 1976, 1977), the scale of these warfare events, the participants in these events, and even the events (e.g. Uaxactun vs. Tikal in the Early Classic; Schele and Freidel 1990 versus Laporte and Fialko 1995:58) are not in concordance. Thus, there are numerous areas where hieroglyphic texts and archaeological contexts can be combined in a truly conjunctive approach.

Our initial understanding of ancient Maya society was largely derived from archaeology, iconography, and ethnographic projections into the past. The iconography and initial interpretation of building forms, along with contemporary studies of religious cofradias, gave a stronger religious focus to Classic Maya society. Theocracies of priestrulers were seen as directing life for Maya peasants. The extension of "milpa" or slashand-burn agriculture back into the past as the primary basis for Maya subsistence meant that low population numbers dominated the Maya landscape (research into intensive forms of agriculture did not take place until the 1970's; e.g., Harrison and Turner 1978). These postulated low population numbers fed an archaeological model of ceremonial centers populated by star-gazing priests (Morley and Brainerd 1956; Willey 1956). However, there is a long history of contentious debate over how complex Classic Maya society had been (Becker 1979). The issues of complexity in Maya agriculture and denser urban Maya settlement were both brought into open debate as a result of archaeological data collected at Tikal by the University of Pennsylvania Tikal Project, which ran from 1956 to 1969 (W. Coe 1962, 1965; Haviland 1970; Puleston 1983), and

continue into the present (D. Chase et al. 1990; Fox et al. 1996; Iannone 2002; Sanders and Webster 1988).

By the mid-1960s, the new epigraphic interpretations of dynasties in combination with the extensive archaeological data from Tikal and, to some extent, Seibal (Willey 1975), began to result in the formulation of new models of Classic Maya society in which ruling dynasties (e.g. Jones 1977) controlled vast populations (Culbert et al. 1990). However, the lack of textual reference to economic and administrative matters resulted in confusion over the existence of Maya markets and bureaucracies, both of which must have existed at some sites, if only based on the population numbers found in the Classic Period (see D. Chase and A. Chase 1992). Instead, the "royalness" of the Maya texts was translated into an archaeological concern with palaces and courts (e.g., Inomata and Houston 1998).

Archaeologists are great model-borrowers, always searching for ways to reconstruct ancient behavior and lifeways from excavated material remains. Initially, Maya archaeologists looked to ethnographic data for models (Becker 1979; Vogt 1961, 1964, 1983). Cultural anthropologists provided detailed information on daily life and some felt that many of the answers to the Maya past lay in their ethnographies (e.g., Reina 1967; Reina and Hill 1978:276) – in spite of the vast temporal gap between the ancient and modern Maya. There was not yet a full realization of the changes that took place both pre- and post-contact (e.g., Wantanabe 1990). Cultural anthropology, then, formed a large part of the pre-epigraphic model for the ancient Maya. When the historic nature of Maya hieroglyphs was established, it was natural that archaeologists would gravitate to the texts and readings, mining them to aid interpretation. At the same time,

epigraphers began to write new synthetic texts on the ancient Maya, using only very limited examples of excavated archaeological data (Schele and Friedel 1990; Schele and Mathews 1998; Martin and Grube 2000). Thus, archaeological data came to be "fitted" to epigraphic readings — and these readings were never really tested with archaeological data. In spite of lip service, there was no true "conjunctive approach."

With the expansion of hieroglyphic readings and history over the last two decades, archaeology in the Maya area has become dominated by epigraphy. Rather than two separate data bases that are compared and contrasted with each other, the one (archaeology) has tended to become subliminated by the other (epigraphy) – and epigraphers were exceedingly dogmatic and defensive of their readings (e.g., epigraphers were insistent that Teotihuacan individuals were literally present in the Southern lowlands [Stuart 2000, 2004] in spite of strong archaeological evidence to the contrary [Braswell 2003; White et al. 2000]). Yet, this should not be the case. There are problems with the epigraphic data base on a whole variety of levels, problems that can sometimes be resolved with comparison to appropriate archaeological data.

# **Problems for the Conjunctive Approach**

A conjunctive approach is one in which there is interplay between archaeological data and other classes of data to reach a better interpretation (e.g., Fash and Sharer 1991). A conjunctive approach does not presume that one data class is necessarily better than any other; the value of the data is instead context driven. To effectively amalgamate epigraphy and archaeology in the Maya area, a number of issues need resolution. Nearly

all of these issues relate to the role of hieroglyphic writing in ancient Maya society and to the nature and context of the texts themselves.

# Language, Texts, and Archaeology

What role did hieroglyphic writing play in ancient Maya society? Was Maya society multi-ethnic with different languages being spoken? Was Maya writing uniform across the Maya area, forming a single written prestige language? Or, were there spatial dialects and syntax differences (representing considerable variability)? And, did different media exhibit different kinds of texts? Did all individuals have access to hieroglyphs? Or, were the texts restricted to a certain part of Maya society? Who could read Maya texts? The kinds of information included, the intended purpose, and the audience are clearly important in establishing the literal validity of texts.

The current readings suggest that the subjects that are covered by the hieroglyphic texts are limited and also appear to vary depending on the media used. Thus, stone monuments deal with dynastic records pertaining to birth, parentage, accession, warfare, and period endings (Figure 2) — only infrequently mentioning deaths or other rituals.

Texts on smaller artifacts often consist of possessive clauses or of prophetic statements.

Texts in codices generally deal with astronomical and calendric matters. Economic subjects are rarely encountered, but there are some possible records for tribute (see Stuart 1993).

Because of the harsh tropical environment, most often Mayanists deal with texts on stone, potentially severely skewing our view of ancient Maya history. How much of our epigraphic understanding may be distorted due to sampling and taphonomy related to the archaeological record is not yet clear. Not all sites have hieroglyphic texts, meaning

that much of the Maya area is not represented in the consensual dynastic history. It is possible that the absence of texts at smaller sites implies the existence of a regional site hierarchy. Even within a single site, however, hieroglyphic texts are farily limited, usually appearing in one small part of the site, possibly correlated with a small portion of the population who could read and write. Not only is the preservation and recovery of hieroglyphic texts potentially skewed, but the ancient Maya themselves removed, replaced, and defaced texts – effectively changing history.

These are all questions that need to be addressed and are matters of concern and contention among epigraphers and linguists (Houston and Stuart 1992; Houston et al. 2000, 2001). There are also subjects for which archaeology may not be able to provide definitive answers.

# Individual Identities: Archaeology, Epigraphy, and Iconography

Who were the individuals portrayed on the monuments and what role did they have in Maya society? Epigraphic reconstructions refer to them as "kings" and "queens," but were there "kings" and "queens" among the ancient Maya? The use of these terms of reference, which have meaning to Western scholarship, contains baggage that may not accurately mirror ancient Maya society and social structure. An all-powerful potentate may not have existed. Aztec society was characterized by councils and dual leadership (Hassig 1985, 1988); the more singular focus on Moctezuma and his predecessors found in most history books is cast with a strong European focus on royalty and dynasty. We also may be similarly biased in our interpretations of ancient Maya society. Questions have been raised over the possibility that our constructed "royal dynasties" may in fact actually represent a subset of Classic Period Maya priests (Rice 2004; see also Ringle

2004). Rice (2004:270) argues that the titles given to the individuals on stelae are appropriate for "jaguar" priests and that this may be what is portrayed in the iconography. Thus, the Maya may have had a dual system of political organization (see also Becker 1979). In fact, the Maya likely had multiple forms of government that were coeval in different regions at any one time; these would have ranged from simpler forms of organization to more complex levels of administration and bureaucracies (see Marcus 1993). Ringle (2004) has argued that a number of possible governmental forms can be derived from the iconography of Chichen Itza, but that much of this iconography in fact demonstrates a dual system of organization. Thus, the current model of kingship may not have had any basis in reality.

While one might assume that the easiest concordance between history and archaeology is the identification of the individuals on the monuments (the "rulers"), this is not necessarily the case. Named "kings" are fairly rare in the excavated Maya archaeological record (and not for a lack of effort). "Pacal" at Palenque and "Ah Cacao" ("Ruler A") at Tikal are perhaps the two that are best established (see Martin and Grube 2000 who use different names for these individuals). Even with these two well-known examples, however, some controversy arises. The interpretation of Pacal's original skeletal age at death differed significantly from his age recorded in the texts, leading to an extended debate that eventually resulted in the re-assessment of his skeletal age (Testler 2006). Tikal Burial 116, identified as the tomb of Ah Cacao (Coe 1990), contains hieroglyphic texts with several different names. The primary name used in texts on artifacts included within this tomb, including that on the famous jadeite vase, is one

that is not found for Ah Cacao in texts on the stone monuments and wooden lintels; however, the chamber and its contents indicate an extremely high status individual.

Sometimes, individuals are indirectly linked to burial locales via textual interpretation. This occurs at Dos Pilas, Guatemala, where a monument set in front of a building described the covering of the tomb of "Ruler 3," later correlated with the tomb recovered archaeologically within that structure (Demarest et al. 1991). At Yaxchilan, Mexico, lintels on a building portray Shield Jaguar and his constort, who are also named on artifacts from two important interments in the same structure (Moll 2004). Similarly, two names were painted on ceramic vessels included within a tomb at Calakmul and archaeologists selected one as appropriate for the individual in the chamber (Carrasco et al. 1999). But, such linkages can only be inferred, especially when other burial contents do not suggest the interment of a ruler. Multiple names can be found in a chamber on vessels (as in the Calakmul example). Stuart (1989:158) explicitly cautions that names on vessels in tombs likely do not identify individuals in the chambers (in fact, the Dos Pilas chamber, mentioned above, contained a vessel that named an individual associated with an Ik emblem glyph, but this individual was not selected to be the occupant of that tomb). It is believed that ceramic vessels containing the names of "rulers" were commonly gifted to other individuals (e.g., Taschek and Ball 1992 for Buenavista). Thus, the mere presence of a name alone is insufficient to determine the identity of the individual with which the name occurs. The Maya practice of using multiple names for a single individual also compounds this confusing situation. What this means is that apart from a few potentially well known examples cited above, positive correlations between individuals burials and individuals named in hieroglyphic texts are rare.

The lack of correlation between historic figures and archaeologically recovered individuals has led some archaeologists to name no rulers at all in their archaeological contexts. Others have attempted to name multiple individuals as rulers by correlating the named individuals in hieroglyphic texts with the most important burials identified at any one site. However, there may be more royal interments than rulers. Some years ago, the Copan Project had three successive news releases announcing that the founder, Yax Kuk Mo, had been found in the archaeological record – each associated with the new discovery of a prominent tomb more opulent or elaborate than the last. While presently established as being a burial in Margarita (Bell et al. 2004), we would not be overly surprised if future research might encounter other worthy interments. At other sites, like Uaxactun (Valdes and Fahsen 1995) and Caracol (Grube 1994; Martin and Grube 2000), epigraphers have made convenient identifications of some burials as being certain individuals. However, these correlations frequently do not explore details of archaeological context and interpretation. In fact, at Caracol, a series of obviously royal tombs – all contextually located in locales of prime importance – exhibit hieroglyphic dates (Figure 3) that make it unlikely that any of these individuals were the protagonists in the site's formal dynastic history (A. Chase and D. Chase 1996a).

Given the problems in identifying interments with rulers (and the pressure to do so in media releases), it is not a surprise that conjoining history and archaeology in more complex endeavors is difficult. However, it has been possible to compare named rulers with similar timespan building projects to ascertain if the proclaimed greatness of these individuals is expressed beyond the hieroglyphic record itself – in monumental architecture or in public works (see Jones 2003; Stuart 2004; Webster 2002); this, of

course, assumes that the individuals on the monuments are the same people responsible for initiating construction projects at a given site (Figure 4). However, these comparisons are difficult without substantial excavation and fine-tune dating.

## Disjunction and Conjunction: Warfare, Political Structure, and Religion

Numerous examples of the disjunction and conjunction of history and archaeology in the Maya area may be found at a number of sites that have both a sizeable corpus of monuments and that have been the subjects of large-scale excavation projects. Such databases – that can permit a true feed-back relationship between archaeology and epigraphy – exist for: Palenque, Piedras Negras, Yaxchilan, Dos Pilas and Aguateca, Tikal, Caracol, Calakmul, Quirigua, Copan, Seibal, and Chichen Itza. At all of these sites, however, it is important to note that the consensual epigraphic history appeared long before the archaeological data were fully analyzed. Given that written history – complete with warfare and inferred political relations – can be personalized and made far more interesting to the lay public than simple potsherds and lithics, it is not surprising that epigraphic models and consensual history now dominate the general view of Maya archaeology. However, given the extant historic interpretation and archaeological data, a truly conjunctive approach can be undertaken to examine key aspects of ancient Maya life, including warfare, political structure, and religion.

A conjunctive approach has been explicitly attempted at Caracol, Belize, where epigraphic interpretation concerning warfare has been tested with archaeological data. Hieroglyphic texts supplied dates for successful warfare events at Caracol in A.D. 562 and between A.D. 626 and A.D. 636. Archaeological contexts that conjoined hieroglyphic data with ceramic sub-assemblages permitted the use of pottery to

discriminate these temporal eras in the site's archaeological record (A. Chase 1994). The research design used the material correlates of anthropological theory on the results of successful warfare (Otterbein 1973) to search for increased prosperity among the population and to look for structural integration of the city. In fact, this was exactly what the archaeological record showed: following the wars, there was a substantial population increase and the overall population had greater access to goods and to special ritual items. Public work projects integrated the site physically through a purposefully imposed system of causeways and administrative/market areas (A. Chase and D. Chase 1989; D. Chase and A. Chase 2002, 2004a), while shared mortuary ritual united them symbolically (D. Chase and A. Chase 1998, 2003a). Thus, the expectations of successful warfare were more than met, supporting the initial epigraphic readings of these events.

There are, however, other cases where the fit between history and archaeology is not as neat and tidy – and the disjunction requires further consideration and analysis.

Texts and archaeology often provide far different views of exactly the same time period.

For instance, Late Classic Caracol is largely silent in the hieroglyphic record at precisely the time that archaeology indicates that the site reached maximum population and spatial extent and was large, prosperous, and well integrated (D. Chase and A. Chase 2002). However, the lack of texts led epigraphers to underestimate and downplay the site's importance during this time (Martin and Grube 2000).

The lack of texts has proven extremely problematic for both interpreting and aligning temporal sequences in the Northern lowlands. Because of the diversity of architectural styles (Puuc, Chenes, Rio Bec) and the general lack of readable texts, there has been a long-standing disagreement over the temporal placement of various sites in the

Northern lowlands. These arguments have specifically involved the alignment of sites in the Puuc region to those elsewhere in the peninsula and particularly to Chichen Itza (Cobos 2004, Sabloff and Andrews 1986), as well as questions in the temporal alignment of the Northern and Southern lowlands (D. Chase and A. Chase 1982, 2004b). The fact that the texts of the northern lowlands, especially those from Chichen Itza (e.g., Thompson 1937; Wren and Schmidt 1991), use a variant dating scheme, employ a different syntax, and focus on different content has not helped in the overall interpretation. The problems in both finding and reading texts from the Northern lowlands have meant that this part of the Maya world has been largely excluded from most epigraphic and synthetic overviews (e.g., Schele and Freidel 1990).

Epigraphic texts and archaeological data may also be used to examine political organization for the ancient Maya. Overarching models of Maya political and territorial organization vary substantially depending upon the database used. Archaeological data has been used to argue for both simple and complex political organization among the ancient Maya (A. Chase and D. Chase 1996b; Ianone 2002; Marcus 1993; Sanders and Webster 1988; Webster 2002) and it is likely that different levels of organization characterized different parts of the Maya area. Epigraphic data has provided two extremes for Classic Period political organization – multiple, small independent city-states, each with their own emblem glyph (Mathews 1991), versus two large hegemonic empires centered on Tikal and Calakmul (Martin and Grube 1995). Needless to say, a concordance on ancient Maya political organization has yet to be reached. However, the spatial review of warfare events suggests that regional states, intermediate in size between the two epigraphic models may be appropriate for much of the Maya area.

Spatial expectations relating to successful warfare events are also supported by the application of standard military theory relating to marching distance and territorial control (A. Chase and D. Chase 1998). Military models would suggest that a polity reliant on human foot traffic could only control a maximum territorial area of a radius of 60 kilometers from the central node. Warfare that occurred between sites that were less than 60 kilometers apart could be seen as being territorially driven; warfare at greater distances would be driven by other than territorial interests. Such modeling can effectively explain Caracol's interest in Naranjo, Guatemala, located some 45 kilometers from the Caracol epicenter. From Naranjo, territorial control of Tikal (some 75 kilometers distant from Caracol, but only 30 kilometers distant from Naranjo) was possible. Thus, purpose may be accorded to hieroglyphically recorded events.

Reconstruction of ancient Maya religion is another area with great potential for future conjunctive research. The shift in epigraphic interpretations to emphasize historic personages and events led to a de-emphasis of religion and calendrics. Gods were subliminated into historic contexts. While humans could have god names (e.g. Houston and Stuart 1996, 1998), gods generally were not named in their own right. Texts came to be viewed as dealing with historic reality and not with cosmology or deities, except in rare instances such as those found in the clearly mythological Palenque texts (Lounsbury 1980, 1985; Stuart 2005). Most texts were interpreted in a literal sense with no allegorical claims, this in spite of iconography that shows vision serpents (Figure 5) and situates rulers within a liminal plane (see D. Chase and A. Chase n.d. and Houston and Stuart 1996). Thus, almost all names in texts were considered to be names or titles of

historical individuals; all places were real on-the-ground locales; and, the texts were interpreted as literal history.

Changes in the interpretation of Maya hieroglyphs are bringing deities and religion into what was once literal historic text. Just as modern leaders call on their gods to aid them in momentous decisions and in acts of war, so too did the ancient Maya. Thus, the word yitah, once interpreted as "brother" is now seen as meaning "witnessing" or "overseeing" by a supernatural (Ringle 2004:168, following: Houston 2000:177; Houston et al. 2000:355; Stuart 2000:483, 508, Note 12; Stuart et al. 1999:196-198). Recent decipherments at Copan and La Corona view buildings as having been dedicated to specific deities (e.g., Stuart 2004) and Stephen Houston (1998) has argued for an architectural class of buildings that were built solely to house specific deities. All of these buildings are associated with texts that explicate relationships to deities rather than to historic individuals. What is now being demonstrated in the epigraphic translations are a mix of actual events associated with mythical beings and places. Yet, god titles, such as K'awil, are still seen in literal translation as names applied to historic individuals and not as referents to the deity itself (i.e., an alternative reading to CLK Stela 115; Martin 2005a:8); similarly, vision serpents and other supernatural creatures can become easily confused with historical individuals (e.g., "Waterlily Serpent;" see Martin 2005a:9). Given the past emphasis on literal readings of the Maya texts, these newer complicating factors re-inforce the need for the epigraphically-derived models now in use to be reanalyzed as to content and context.

Aspects of religious symbolism may even be present in hard epigraphic data, such as emblem glyphs. Emblem glyphs are generally viewed as being associated with real

places. However, there is some evidence to suggest that this may not always have been the case. Some examples at Tonina occur with otherworld creatures (Yadeun 1993). The Spayjc monument from southern Quintana Roo (Grube 2004), portrays 13 distinct emblems, far too many for a single "real" place or event (following Stuart 1993). In reality, however, the most problematic emblem is the "snake" or "Site O" emblem. A one-to-one concordance of sites and emblems has led to its tentative placement at the site of Calakmul, largely because of the large number of eroded stelae found at that site. Yet, the snake emblem occurs throughout the texts of the Southern Lowlands and has recently been correlated with the Guatemalan site of La Corona (Schuster 1997). It also has been correlated with the site of Dzibanche (Nalda 2004). Perhaps of even more interest, Calakmul is now viewed as having alternately used both a bat and a snake emblem; the bat emblem appears in both the early and later texts of that site. Martin (2005a:12) has posited that the snake emblem may represent a movable royal house in the Levi-Straus / Gillespie (2000) sense; however, this model has been found wanting in other archaeological and ethnographic Maya contexts (A. Chase and D. Chase 2004; Wantanabe 2004). Martin notes that the bat emblem occurs at Copan and looks for distinguishing characteristics between the bat emblems of Copan and Calakmul, but does not note the occurrence of another bat emblem in the Usumacinta area around Bonampak (Dutting 1978). Thus, rather than having a single movable group of elites associated with a specific emblem, as Martin infers for the snake emblem at Calakmul and Dzibanche, multiple elite groups use the same emblem. It is further telling that the several individuals associated with the snake emblems that occur in the Caracol and Naranjo texts of the early Late Classic Period are not named in the texts of Calakmul; in fact, it

seems likely that distinct individuals and dates appear in the contemporaneous Calakmul texts (e.g., CLK Stela 28 and 29; Martin 2005a:7). Thus, like the bat emblem (Figure 6), the snake emblem may have been used by spatially distinct groups. The use of these emblems does not necessarily correlate with a single group of nobility. Not considered in this mix is the potential symbolic, i.e. *religious*, value of the bat and snake emblems or the similarity and disjunction of the archaeological remains at the various sites that use these emblems.

## Conclusion

There has been an explosion in archaeological and epigraphic data within the last quarter century. The simpler models of the past have been made more complex as new details about ancient Maya lifeways have emerged. But, like everything else, more data means that it is no longer possible to tell a simple story. More data has led to more complications in our past interpretations, both in archaeology and in epigraphy. In archaeology, there is a realization that multiple ethnic groups of ancient Maya existed and interacted, meaning that archaeological research designs need to be increasingly sophisticated to deal with the temporal and spatial variability (D. Chase 2004). In epigraphy, no longer can the lay public be actively encouraged to participate in decipherment as it moves into the realms of philology and linguistic discourse (Houston and Lacandena 2004).

Thus, while epigraphers may argue over the language or languages used in the ancient texts and over syntax, words, and meaning, epigraphy still provides us with basic insights into the lives and events associated with certain past individuals. The epigraphic

models of political organization, however, may be in need of some reconsideration and revision – and it is precisely here that archaeology and a conjunctive approach is useful. Archaeology provides a check and balance system with epigraphy through providing contextual information relative to the identification of specific individuals and postulated events (e.g., Teotihuacan presence in the Maya lowlands [White et al. 2000] or warfare [D. Chase and A. Chase 2002, 2003b].

Epigraphy cannot remain the guiding unchanging light for the field of Maya Studies. Too much is in flux. Houston and Lacandena (2004:122) have noted that "all Mayanists should understand something about hieroglyphs, their possibilities for study, their limitations, their linkages to other features of ancient life . . . Their nonstudy is a nonoption." This cautionary note also applies in reverse to epigraphers. Ignoring or misapplying archaeological data to historical interpretation means that the field as a whole suffers. There is a need, now more then ever, for collusion between archaeology and epigraphy in the reconstruction of ancient Maya society.

## **Figures**

- Figure 1. Individuals who were key in laying the groundwork for the current epigraphic paradigm: a. J. Eric Thompson (1898-1975); b. Yuri Knorosov (1922-1999); c. Tatianna Proskouriakoff (1909-1985); d. David H. Kelley; e. Merle Greene Robertson; f. Linda Schele (1942-1998).
- Figure 2. Caracol Stela 5, illustrating the portrayal of Maya royalty; hieroglyphic texts occurred in cartouches on the sides of the monument in cartouches and in the blank boxes in front of the face (after Beetz and Satterthwaite 1981:fig. 6).
- Figure 3. Painted capstone (black on red) from inside tomb in Structure L3, recording the covering of the chamber in 9.9.0.16.17 2 Caban 15 Uo or A.D. 614 (text is 32 cm high; after A. Chase and D. Chase 1987; fig. 37).
- Figure 4. Upper façade of a building buried within the summit of Caana at Caracol, Belize, illustrating Caracol individuals seated on earth monsters (presumably in the underworld based on the fish eating water lilies) and accompanied by a hieroglyphic text (total height is 2.1 m).
- Figure 5. The carved spatulate end of a bone pin from Caracol, Belize; while most of the hieroglyphs are lost, iconography related to blood-letting and the vision serpent is clear (ca. 4 cm wide).
- Figure 6. Examples of emblem glyphs portraying the leaf-nose bat, thought to represent three spatially distinct sites: a. Calakmul; b. Copan; c. Lakanja.

#### References

Baudez, Claude

1999 "Perils of Iconography: The Maya." Antiquity 73:946-950.

Becker, Marshall J.

1979 "Priests, Peasants, and Ceremonial Centers: The Intellectual History of a Model." in N. Hammond and G. Willey, Eds., *Maya Archaeology and Ethnohistory*, pp. 3-20. Austin: University of Texas Press.

Bell, Ellen E., Robert J. Sharer, Loa P. Traxler, David W. Sedat, Christine W. Carrelli, and Lynn A. Grant

2004 "Tombs and Burials in the Early Classic Acropolis at Copan." in E.E. Bell, M.A. Canuto,
and R.J. Sharer, Eds., *Understanding Early Classic Copan*, pp. 131-157. Philadelphia:
University of Pennsylvania Museum.

Braswell, Geoffrey E.

2003 Ed., *The Maya and Teotihuacan: Reinterpreting Early Classic Interaction*. Austin: University of Texas Press.

Carrasco, Ramon, Sylvia Boucher, P. Alvarez, V. Tiesler Blos, V. Garcia, R. Garcia, and J. Vasquez
1999 "A Dynastic Tomb from Campeche, Mexico: New Evidence on Jaguar Paw, A Ruler of
Calakmul." *Latin American Antiquity* 10:47-58.

Chase, Arlen F.

"A Contextual Approach to the Ceramics of Caracol, Belize." in D. Chase and A. Chase,
 Eds., Studies in the Archaeology of Caracol, Belize, pp. 157-182. Monograph 7. San
 Francisco: Pre-Columbian Art Research Institute.

"Planeacion Civica e Integracion de Sitio en Caracol, Belice: Definiendo una Economia Administrada del Periodo Clasico Maya." *Los Investigadores de la Cultura Maya* 6(1):26-44 (Campeche: Universidad Autonoma de Campeche).

Chase, Arlen F. and Diane Z. Chase

1989 "The Investigation of Classic Period Maya Warfare at Caracol, Belize." Mayab 5: 5-18.

1996a "The Organization and Composition of Classic Lowland Maya Society: The View from Caracol, Belize." in Merle Robertson, Martha Macri, and Jan McHargue, Eds., Eighth Palenque Round Table, 1993, pp. 213-222. San Francisco: Pre-Columbian Art Research Institute.

1996b "More than Kin and King: Centralized Political Organization Among the Ancient Maya." Current Anthropology 37(5):803-810.

"Late Classic Maya Political Structure, Polity Size, and Warfare Arenas." in A. Ciudad Ruiz et al., Eds., *Anatomia de una civilizacion: Aproximaciones Interdisciplinarias a la Cultura Maya*, pp. 11-29. Madrid: Sociedad Espanola de Estudios Mayas.

2003 "Minor Centers, Complexity, and Scale in Lowland Maya Settlement Archaeology." in G. Iannone and S. Connell, Eds., *Perspectives on Ancient Maya Rural Complexity*, pp. 108-118. Monograph 49. Los Angeles: The Cotsen Institute of Archaeology (University of California).

2004 "Exploring Ancient Economic Relationships at Caracol, Belize." Research Reports in Belizean Archaeology 1:115-127.

Chase, Diane Z.

2004

"Diverse Voices: Towards an Understanding of Belize Valley Archaeology." in J. Garber, Ed., *The Ancient Maya of the Belize Valley: Half a Century of Archaeological Research*, pp. 335-348. Gainesville: University Press of Florida.

#### Chase, Diane Z. and Arlen F. Chase

- 1982 "Yucatec Influence in Terminal Classic Northern Belize." *American Antiquity* 47:596-614.
- "Mesoamerican Elites: Assumptions, Definitions, and Models." in D. Z. Chase and A. F. Chase, Eds., Mesoamerican Elites: An Archaeological Assessment, pp. 3-17. Norman: University of Oklahoma Press.
- "The Architectural Context of Caches, Burials, and Other Ritual Activities for the Classic Period Maya (as Reflected at Caracol, Belize)." in Stephen D. Houston, Ed., Function and Meaning in Classic Maya Architecture, pp. 299-332. Washington, D.C.: Dumbarton Oaks.
- 2002 "Classic Maya Warfare and Settlement Archaeology at Caracol, Belize." Estudios de Cultura Maya 22:33-51.
- 2003a "Secular, Sagrado, y Revisitado: La Profanacion, alteracion, y reconsagracion de los Antiguos Entierros Mayas." in A. Ciudad Ruiz, M.H. Ruz Sosa, and M.J.Iglesias Ponce de Leon, Eds., Antropología de la Eternidad: La Muerte en la Cultura Maya, pp. 255-277. Publicación 7. Madrid: Sociedad de los Estudios Mayas.
- 2003b "Texts and Contexts in Classic Maya Warfare: A Brief Consideration of Epigraphy and Archaeology at Caracol, belice." in M.K. Brown and T.W. Stanton, Eds., *Ancient Mesoamerican Warfare*, pp. 171-188. Walnut Creek: Alta Mira Press.
- 2004a "Archaeological Perspectives on Classic Maya Social Organization from Caracol, Belize." *Ancient Mesoamerica* 15:111-119.
- 2004b "Hermeneutics, Transitions, and Transformations in Classic to Postclassic Maya Society." in A. Demarest, P. Rice, and D. Rice, Eds., *The Terminal Classic in the Maya Lowlands: Collapse, Transition, and Transformation*, pp. 12-27. Boulder: University of Colorado Press, Boulder.
- n.d. "Changes in Maya Religious Worldview: Liminality and the Archaeological Record." in L.G. Cecil and T.W. Pugh, Eds., *Maya Worldview at Conquest*. Boulder: University of Colorado Press.

#### Chase, Diane Z., Arlen F. Chase, and William A. Haviland

1990 "The Classic Maya City: Reconsidering 'The Mesoamerican Urban Tradition..'" *American Anthropologist* 92: 499-506.

#### Cobos, Rafael

"Chichen Itza: Settlement and Hegemony During the Terminal Classic Period." in A. Demarest, P. Rice, and D. Rice, Eds., The Terminal Classic in the Maya Lowlands: Collapse, Transition, and Transformation, pp. 517-544. Boulder: University of Colorado Press.

#### Coe, Michael D.

1992 Breaking the Maya Code. New York: Thames and Hudson.

#### Coe, William R.

- 1962 "A Summary of Excavation and Research at Tikal, Guatemala: 1956-1961." *American Antiquity* 27:479-507.
- 1965 "Tikal, Guatemala, and Emergent Maya Civilization." Science 147:1401-1419.
- 1990 Escavations in the Great Plaza, North Terrace, and North Acropolis of Tikal, Guatemala. Tikal Report 14 (6 vols.). Philadelphia: University of Pennsylvania Museum.

#### Culbert, T. Patrick

1991 Ed., Classic Maya Political History: Hieroglyphic and Archaeological Evidence. Cambridge: Cambridge University Press.

#### Culbert, T. Patrick and Don S. Rice

1990 Eds., *Precolumbian Population History in the Maya Lowlands*. Albuquerque: University of New Mexico Press.

## Culbert, T. Patrick, Laura J. Kosakowsky, Robert E. Fry, and William A. Haviland

"The Population of Tikal, Guatemala." in T.P. Culbert and D.S. Rice, Eds., *Precolumbian Population History in the Maya Lowlands*, pp. 103-121. Albuquerque: University of New Mexico Press.

Demarest, Arthur A., Hector Escobedo, Juan Antonio Valdes, Lori Wright, Kittie Emery, and Stephen Houston

"Arqueologia, epigrafia, y el descubrimiento de una tumba real en el centro ceremonial de Dos Pilas, Peten, Guatemala." *U tz'ib* 1(1):14-28 (Asociación Tikal, Guatemala).

#### Dutting, Dieter

1978 "Bats' in the Usumacinta Valley: Remarks on Inscriptions of Bonampak and the Neighboring Sites in Chiapas, Mexico." *Zeitschrift fur Ethnologie* 103:1-56.

#### Fash, William and Robert J. Sharer

"Sociopolical Developments and Methodological Issues at Copan, Honduras: A Conjunctive Approach." *Latin American Antiquity* 2:166-187.

#### Fox, John, Scott Cook, Arlen F. Chase, and Diane Z. Chase

"Questions of Political and Economic Integration: Segmentary versus Centralized States Among the Ancient Maya." *Current Anthropology* 37(5):795-801.

#### Gidwitz, Tom

2002 "Doyenne of Mayanists." Archaeology 55(3):42-49.

#### Grube, Nikolai

"An Investigation of the Primary Standard Sequence on Classic Maya Ceramics." in
 M.G. Robertson and V.M. Fields, Eds., Sixth Palenque Round Table, 1986, pp. 223-232.
 Norman: University of Oklahoma Press.

"Epigraphic Research at Caracol, Belize." in D.Z. Chase and A.F. Chase, Eds., Studies in the Archaeology of Caracol, Belize, pp. 83-122. Monograph 7. San Francisco: Pre-Columbian Research Institute.

## Harrison, Peter and Billy Lee Turner

1978 Eds., Prehispanic Maya Agriculture. Albuquerque: University of New Mexico Press.

#### Hassig, Ross

1985 Trade, Tribute, and Transportation: The Sixteenth-Century Political Economy of the Valley of Mexico. Norman: University of Oklahoma Press.

1988 Aztec Warfare: Imperial Expansion and Political Control. Norman: University of Oklahoma Press.

## Haviland, William

1970 "Tikal, Guatemala, and Mesoamerican Urbanism." World Archaeology 2:186-198.

#### Hirth, Kenneth

"The Distributional Approach: A New Way to Identify Marketplace Exchange in the Archaeological Record." *Current Anthropology* 39:451-476.

#### Houston, Stephen D.

1993 Hieroglyphs and History at Dos Pilas: Dynastic Politics of the Classic Maya. Austin: University of Texas Press.

1998 "Finding Function and Meaning in Classic Maya Architecture." in S.D. Houston, Ed., Function and Meaning in Classic Maya Architecture, pp. 519-538. Washington, D.C.: Dumbarton Oaks. 2000 "Into the Minds of the Ancients: Advances in Maya Glyph Studies." *Journal of World Prehistory* 14(2):121-201.

#### Houston, Stephen D. and Alfonso Lacadena Garcia-Gallo

"Maya Epigraphy at the Millennium: Personal Notes." in C.W. Golden and G. Borgstede, Eds., Continuities and Changes in Maya Archaeology: Perspectives at the Millennium, pp. 115-123. New York: Routledge.

#### Houston, Stephen D. and David Stuart

"On Maya Hieroglyphic Literacy." Current Anthropology 33(5):589-593.

"Of Gods, Glyphs and Kings: Divinity and Rulership Among the Classic Maya." Antiquity 70:289-312.

"The Ancient Self: Personhood and Portraiture in the Classic Period," RES 33:73-101.

## Houston, Stephen D., John Robertson, and David Stuart

2000 "The Language of Classic Maya Inscriptions." Current Anthropology 41(3):321-356.

2001 "More on the Language of Classic Maya Inscriptions." *Current Anthropology* 42(4):558-559.

#### Iannone, Glyles

2002 "Annales History and the Anceint Maya State: Some Observations on the Dynamic Model." *American Anthropologist* 104(1):68-78.

## Inomata, Takeshi and Stephen D. Houston

1998 Eds., Royal Courts of the Ancient Maya (2 vols.). Boulder: Westview Press.

# Jones, Christopher D.

1977 "Inauguration Dates of Three Late Classic Rulers at Tikal, Guatemala." *American Antiquity* 42:28-60.

2003 "The Tikal Renaissance and the East Plaza Ball Court." in J.A. Sabloff, Ed., *Tikal: Dynasties, Foreigners, & Affairs of State*, pp. 207-225. Santa Fe: School of American Research Press.

#### Kelley, David H.

1962 "Glyphic Evidence for a Dynastic Sequence at Quirigua, Guatemala." American Antiquity 27:323-335.

1976 Deciphering the Maya Script. Austin: University of Texas Press.

#### Knorosov, Yuri V.

1958 "The Problem of the Study of the Maya Hieroglyphic Writing." *American Antiquity* 23(3):284-291.

1967 "Selected Chapters from 'The Writing of the Maya Indians.'" translated by T. Proskouriakoff. Russian Translation Series 4. Cambridge: Peabody Museum of Archaeology and Ethnology (Harvard University).

#### Laporte, Juan Pedrso and Vilma Fialko

"Un Reencuentro con Mundo Perdido, Tikal, Guatemala." Ancient Mesoamerica 6:41-94.

## Lounsbury, Floyd G.

"Some Problems in the Interpretation of the Mythological Portion of the Hieroglyphic Text of the Temple of the Cross at Palenque." in M.G. Robertson, Ed., *Third Palenque Round Table, 1978*, pp. 99-115. Austin: University of Texas Press.

"The Identities of the Mythological Figures in the Cross Group Inscriptions of Palenque." in M.G. Robertson and E.P. Benson, Eds., Fourth Palenque Round Table, 1980, pp. 45-58. San Francisco: Pre-Columbian Art Research Institute.

#### Marcus, Joyce

1992 Mesoamerican Writing Systems: Propaganda, Myth, and History in Four Ancient Civilizations. Princeton: Princeton University Press.

"Ancient Maya Political Organization." in J.A. Sabloff and J.S. Henderson, Eds., Lowland Maya Civilization in the 8<sup>th</sup> Century AD, pp. 111-183. Washington, D.C.: Dumbarton Oaks.

#### Martin, Simon

2005a "Of Snakes and Bats: Shifting Identities at Calakmul." The PARI Journal 6(2):5-15.

2005b "Caracol Altar 21 Revistied: More Data on Double Bird and Tikal's Wars of the Mid-Sixth Century." *The PARI Journal* 6(1):1-9.

#### Martin, Simon and Nikolai Grube

1995 "Maya Superstates." *Archaeology* 48(6):41-43.

2000 Chronicle of May Kings and Queens: Deciphering the Dynasties of the Ancient Maya. London: Thames and Hudson.

#### Mathews, Peter D.

"Classic Maya Emblem Glyphs." in T.P. Culbert, Ed., *Classic Maya Political History*, pp. 19-29. Cambridge: Cambridge University Press.

#### Moll, Roberto Garcia

2004 "Shield Jaguar and Structure 23 at Yaxchilan." in M. Miller and S. Martin, *Courtly Art of the Ancient Maya*, pp. 268-270. San Francisco: Fine Arts Museums (Thames & Hudson).

#### Morley, Sylvanus G. and George W. Brainerd

1956 The Ancient Maya. 3<sup>rd</sup> Ed. Stanford: Stanford University Press.

#### Nalda, Enrique

2004 Los Cautivos de Dzibanche. Mexico: Instituto Nacional de Antropologia e Historia.

#### Otterbein, Karl F.

1973 "The Anthropology of War." in J. Honigmann, Ed., *Handbook of Social and Cultural Anthropology*, pp. 923-958. Chicago: Rand McNally.

#### Proskouriakoff, Tatiana

1960 "Historical Implications of a Pattern of Dates at Piedras Negras, Guatemala." *American Antiquity* 25:454-475.

"The Lords of the Maya Realm." Expedition 4(1):14-21.

1963 "Historical Data in the Inscriptions of Yaxchilan, Part I." *Estudios de Cultura Maya* 3:149-167.

"Historical Data in the Inscriptions of Yaxchilan, Part II." Estudios de Cultura Maya 4:177-201.

#### Puleston, Dennis

1983 The Settlement Survey of Tikal. Tikal Report 13. Museum Monograph 48. Philadelphia: The University Museum.

#### Reina, Rueben E.

1967 "Milpas and Milperos: Implications for Prehistoric Times." *American Anthropologist* 69(9):1-20.

#### Reina, Ruben E. and Robert M. Hill II

1978 The Traditional Pottery of Guatemala. Austin: University of Texas Press.

#### Rice, Prudence D.

2004 Maya Political Science: Time, Astronomy, and the Cosmos. Austin: University of Texas Press,

#### Ringle, William

"On the Political Organization of Chichen Itza." Ancient Mesoamerica 15:167-218.

## Sabloff, Jeremy A. and E. Wyllys Andrews V

1986 Eds., Late Lowland Maya Civilization: Classic to Postclassic. Albuquerque: University of New Mexico Press.

## Sanders, William and David Webster

1988 "The Mesoamerican Urban Tradition." American Anthropologist 90:521-546.

## Schele, Linda

"Genealogical Documentation on the Tri-Figure Panels at Palenque." in M.G. Robertson and D.C. Jeffers, Eds, *Third Palenque Round Table*, pp. 41-70. Monterey: Pre-Columbian Art Research Center.

1982 Maya Glyphs: The Verbs. Austin: University of Texas Press.

"The Xibalba Shuffle: A Dance After Death." in E.P. Benson and G.G. Griffin, Eds., *Maya Iconography*, pp. 294-317. Princeton: Princeton University Press.

1990 "House Names and Dedication Rituals at Palenque." in F. Clancy and P. Harrison, Eds., Vision and Revision in Maya Studies, pp. 143-157. Albuquerque: University of New Mexico Press.

#### Schele, Linda and David A. Freidel

1990 A Forest of Kings: The Untold Story of the Ancient Maya. New York: William Morrow and Company.

#### Schele, Linda and Peter Matthews

1998 The Code of Kings: The Language of Seven Sacred Maya Temples and Tombs. New York: Scribner.

#### Schuster, Angela M. H.

"The Search for Site Q." *Archaeology* 50(5):42-45.

#### Sidrys, Raymond

1976 Mesoamerica: An Archaeological Analysis of Low-Energy Civilization. Unpublished Ph.D. Dissertation, Department of Anthropology. Los Angeles: University of California.

## Stuart, David

1989 "Hieroglyphs on Maya Vessels." in J. Kerr, *The Maya Vase Book: Volume 1*, pp. 149-160. New York: Kerr Associates.

"Historical Inscriptions and the Maya Collapse." in J.A. Sabloff and J.S. Henderson, Eds., Lowland Maya Civilization in the 8<sup>th</sup> Century AD, pp. 321-354. Washington, D.C.: Dumbarton Oaks.

2000 "The Arrival of Strangers:' Teotihuacan and Tollan in Classic Maya History." in D. Carrasco, L. Jones, and S. Sessions, Eds., *Mesoamerica's Classic Heritage: From Teotihuacan to the Aztec*, pp. 465-514. Boulder: University Press of Colorado Press.

2004 "The Beginnings of the Copan Dynasty: A Review of the Hieroglyphic and Historical Evidence." in E.E. Bell, M.A. Canuto, and R.J. Sharer, Eds., *Understanding Early Classic Copan*, pp. 215-247. Philadelphia: University of Pennsylvania Museum.

2005 The Inscriptions from Temple XIX at Palenque. San Francisco: The Pre-Columbian Art Research Institute.

## Stuart, David and Stephen D. Houston

1994 *Classic Maya Place Names*. Studies in Pre-Columbian Art & Archaeology 33. Washington, D.C.: Dumbarton Oaks.

#### Stuart, David, Stephen D. Houston, and John Robertson

1999 Reconstructing the Past: Classic Maya Language and Classic Maya Gods. Austin: Maya Workshop Foundation.

#### Taschek, Jennifer T. and Joseph W. Ball

"Lord Smoke-Squirrel's Cacao Cup: The Archaeological Context and Socio-Historical Significance of the Buenavista 'Jauncy Vase.'" in J. Kerr, *The Maya Vase Book: Volume* 3, pp. 490-497. New York: Kerr Associates.

#### Taube, Karl

2004 "Structure 10L-16 and Its Early Classic Antecedents: Fire and the Evocation and Resurrection of K'inich Yax K'uk Mo'." in E.E. Bell, M.A. Canuto, and R.J. Sharer, Eds., *Understanding Early Classic Copan*, pp. 265-295. Philadelphia: University of Pennsylvania Museum.

## Thompson, J. Eric S.

- 1927 The Civilization of the Mayas. Anthropology Leaflet 25. Chicago: Field Museum of Natural History.
- 1937 "A New Method of Deciphering Yuatecan Dates with Special Reference to Chichen Itza." Carnegie Institution of Washington Contribution 22. Publication 483. Washington, D.C.: Carnegie Institution of Washington.
- 1950 Maya Hieroglyphic Writing: An Introduction. Publication 589. Washington, D.C.: Carnegie Institution of Washington.
- "Systems of Hieroglyphic Writing in Middle America and Methods of Deciphering Them." *American Antiquity* 23:349-364.
- 1970 Maya History and Religion. Norman: University of Oklahoma Press.

#### Tiesler, Vera and Andrea Cucina

Janaab' Pakal of Palenque: Reconstructing the Life and Death of a Maya Ruler. Tucson: University of Arizona Press.

#### Valdes, Juan Antonio, and Federico Fahsen

"The Reigning Dynasty of Uaxactun During the Early Classic: The Rulers and the Ruled." *Ancient Mesoamerica* 6(2):197-219.

#### Vogt, Evon Z.

- "Some Aspects of Zinacantan Settlement Patterns and Ceremonial Organization." Estudios de Cultura Maya 1:131-145.
- "Some Implications of Zinacantan Social Structure for the Study of the Ancient Maya." Acatas of the 35<sup>th</sup> International Congress of Americanists 1:307-319.
- "Ancient and Contemporary Maya Settlement Patterns: A New Look From the Chiapas Highlands." in E.Z. Vogt, and R.M. Leventhal, Eds., *Prehistoric Settlement Patterns*, pp. 89-114. Albuquerque: University of New Mexico Press.

## Wantanabe, John M.

- 1990 "From Saints to Shibboleths: Image, Structure, and Identity in Maya Religious Syncretism." *American Ethnologist*, 17(1):131-150.
- "Some Models in a Muddle: Lineage and House in Classic Maya Social Organization."

  Ancient Mesoamerica 15:159-166.

#### Webster, David

1976 Defensive Earthworks at Becan, Campeche, Mexico. MARI Publication 41. New Orleans: Tulane University.

- 1977 "Warfare and the Evolution of Maya Society." in R.E.W. Adams, Ed., *The Origins of Maya Civilization*, pp. 335-372. Albuquerque: University of New Mexico Press.
- 2002 The Fall of the Ancient Maya: Solving the Mystery of the Maya Collapse. New York: Thames and Hudson.

## Willey, Gordon

- 1956 "The Structure of Ancient Maya Society: Evidence from the Southern Lowlands." American Anthropologist 58:777-782.
- 1975 "Introduction," Excavations at Seibal, Department of Peten, Guatemala. Peabody Museum Memoirs 13(1). Cambridge: Harvard University Press.

## White, Christine D., Michael W. Spence, Fred J. Longstaffe, and K.R. Law

2000 "Testing the Nature of Teotihuacan Imperialism at Kaminaljuyu Using Phosphate Oxygen-isotope Ratios." *Journal of Anthropological Research* 56:535-558.

#### Wren, Linnea H., and Peter Schmidt

"Elite Interaction During the Terminal Classic Period: New Evidence from Chichen Itza." in T.P. Culbert, Ed., Classic Maya Political History, pp. 199-225. Cambridge: Cambridge University Press.

#### Yadeun, Juan

1993 Tonina: El Laberinto del Inframundo. Chiapa (Mexico): Gobierno del Estado de Chiapas,