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NAKUM AND YAXHA DURING THE TERMINAL CLASSIC PERIOD: EXTERNAL RELATIONS AND STRATEGIES OF SURVIVAL AT THE TIME OF THE COLLAPSE

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Abstract

Recent investigations carried out at Nakum and Yaxha, two Maya sites located in north-eastern Guatemala, revealed important evidence of Terminal Classic occupation. Accessible archaeological and epigraphic data indicate that both cities established new economic and political alliances and contacts with other Lowland Maya centres and possibly also with more distant regions in Mesoamerica. As a result, new architectural modes and styles as well as new iconographic trends appeared in these centers. In Nakum, as in several other Terminal Classic sites, a combination of these new pan-Mesoamerican modes and the old, traditional symbols were used to legitimize the power of local elites and their rule over local population. The short term success of Nakum and possibly also of neighboring Yaxha was dependant upon a group of factors, the most important being their proximity to important resources (water sources, trade, and communication routes) and the considerable political and economic independence they gained after the collapse of the former hegemons of this area – Tikal and Naranjo.

Resumen

Trabajos de investigación arqueológica efectuados recientemente en los sitios mayas de Nakum y Yaxha ubicados en el NE de Guatemala (departamento El Peten) han proporcionado evidencia de distinto tipo referente a la ocupación durante el periodo Clásico Terminal. La información arqueológica y epigráfica conocida indica que en ambos sitios ocurren cambios políticos y económicos que resultaron en el establecimiento de nuevas alianzas y contactos con otros sitios de las Tierras Bajas Mayas Centrales y posiblemente también con regiones distantes del área Mesoamericana. Ejemplos claros de los cambios generados por el conjunto de fenómenos sociales acaecidos se observan en nuevos modos y estilos arquitectónicos, en la aparición de formas y modos tecno-estilísticos en la industria cerámica así como nuevas tendencias iconográficas. En Nakum, al igual que en otros sitios del período Clásico Terminal, es evidente una combinación de los nuevos modos pan mesoamericanos con la tradición local cuyo simbolismo fue utilizado por las elites locales para legitimizar su derecho de gobierno sobre la población local. Este éxito de corta duración en Nakum y posiblemente también en el cercano Yaxha dependió de un grupo de factores diferentes, de los cuales el más importante fue su proximidad a recursos importantes (fuentes de agua, vías de comunicación y accesibilidad a rutas comerciales), así como la considerable independencia política y económica alcanzada por los gobernantes locales gracias al colapso de Tikal y Naranjo, los dos sitios que siempre fueron los centros de poder predominantes en la zona.

INTRODUCTION

The Terminal Classic was a time of profound changes in the Maya Lowlands, marked by the collapse of the majority of the Maya cities. Although several decades ago it was believed that this collapse was a short-term phenomenon caused by a single factor, we now know that only multivariate models can be applied to the Classic Maya Collapse issue (e.g. Aimers 2007: 351). Research conducted in the past few decades has shown that the Terminal Classic period cannot be solely characterized by the demise of the Maya civilization since there is ample evidence of transformation and even growth in some centres that survived these turbulent times and continued to thrive until the Postclassic or Colonial periods (see Demarest *et al.* 2004; Demarest 2004a: 240-276; Yaeger & Hodell 2008).

Nakum and Yaxha, two sites located in north-eastern Guatemala (in the Triangulo Park of eastern Peten) are among the few centres of this region that survived the collapse of their neighbours by a century, or more. During the Terminal Classic, both sites established new economic and political alliances with other Lowland Maya centres and possibly also with the more distant regions of Mesoamerica. As a result, new architectural modes and styles as well as new iconographic trends appeared at these centres. At least in the case of Nakum (as in other Terminal Classic enclaves), a combination of these new pan-Mesoamerican modes and the old, traditional symbols were used to legitimize the power of the local elites and their rule over the local population.

Here we examine Terminal Classic growth at both sites, emphasizing the appearance of non-local traits in their architecture and iconography. Next, we will interpret these non-local trends, trying to answer a fundamental question: why were they used and what was their provenance? In the final part of this article we will discuss the possible reasons for Nakum's growth, focusing on survival strategies employed at this site, within the context of a wider geographical perspective.

ARCHITECTURE

Many scholars have tried to relate architecture and its different styles to particular people and societies. In this view new modes or forms of architecture may be influenced by the styles or ideas carried by a new group of people and thus may indicate migration and ethnic affiliation. Architecture (especially ritual construction) is clearly tied to social activity. Civilisations usually expend much energy in building these edifices and do so according to canons and styles which can serve as diagnostic markers (Aimers 2004: 310). In the case of Mesoamerica, scholars have debated whether the appearance of Olmec style art, Teotihuacan architecture, or Toltec style buildings and sculptures in the Maya area indicate migration and colonization, or merely the establishment of new cultural and/or trade contacts. As of today, this remains an open question, engendering spirited discussions with little agreement as to the nature of these influences from a scientific standpoint. The same may be said about the spread and adoption of different architectural forms in various Maya sites during the final part of the Classic period – such us C-shaped structures, round and tandem plan structures, central plaza platforms and other "new" constructions. It is not clear, as yet, if their appearance and adoption by many sites conclusively proves the migration of outside groups, or the participation of local groups in a pan-Mesoamerican sphere of interaction (see Schwarz 2009: 415). The latter topic is addressed in this article and below we describe all "non-local", "foreign", or "new" traits that were documented both at Nakum and Yaxha during the Terminal Classic period.

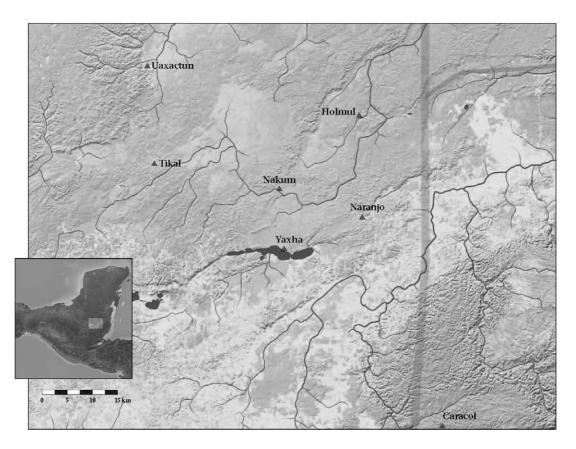


Figure 1. Map showing location of both Nakum and Yaxha in a wider region. Map courtesy of Precolumbia Mesoweb Press.

The case of Nakum

The site of Nakum saw an immense construction programme during the Terminal Classic period, one that can be compared to very few other Southern Lowland Maya centres. Recent investigations carried out by the Triangulo Project of IDAEH and the newly initiated Jagiellonian University Nakum Archaeological Project indicate that in the 9th century almost all earlier constructions were remodelled and many new buildings were added (Hermes & Źrałka 2008). This architectural boom is most evident in the largest complex of Nakum, namely, the Acropolis, which houses mainly high-status residential structures. Investigations of this complex have shown that during the Late Classic the Acropolis consisted of ca. 10 palaces whose residential space covered ca. 526 m². This residential space saw a nearly three-fold increase (to approx. 1558 m²) during the ensuing Terminal Classic period due to the construction of many new palace-style buildings and the enlargement of existing structures (Źrałka 2008: 204-210). Among the new constructions that appeared at that time in the Acropolis complex are Structures 24, 27, 62, G, H, L, O, P, Q, S, Z, and the Central Acropolis with Structures Y, 63, 63A, 64 and 65 (see Figs 2 and 3). Of special importance to the subject of our article are constructions displaying architectural traits not previously seen at Nakum.

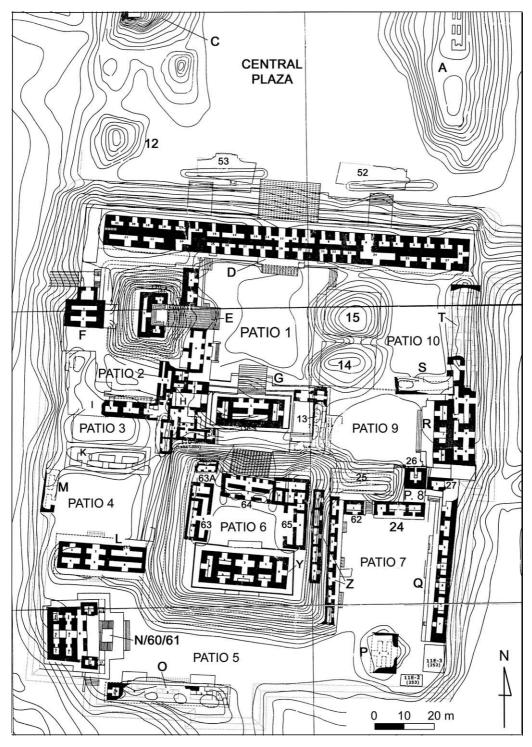


Figure 2. Map of the Nakum Acropolis (Triangulo Project, IDAEH).

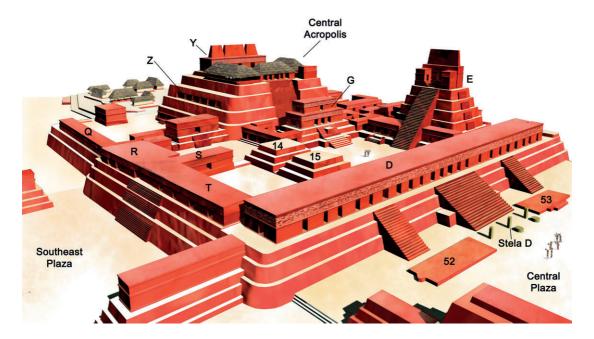


Figure 3. Reconstruction view of the Southern Sector of Nakum during the Terminal Classic period (by Breitner González and Telma Tobar).

One of the constructions, Structure E, is worth special mention. At the end of the Late Classic it was a great rectangular pyramid platform topped by a superstructure called Chamber 1. During the Terminal Classic period new chambers were added, both on the summit of the pyramid platform as well as at its base. One of the chambers built at the base of Structure E was situated on a platform closing Patio 1 from southwest that was embellished with a very characteristic profile called the *talud-tablero-atadura* (or reverse *talud*) mode (Hermes *et al.* 2001) (Fig. 4). This architectural element is unique at Nakum, but typical of the Epiclassic sites of the Gulf Coast (El Tajín) and Central Mexico (Xochicalco). It was also documented at Tikal during the Late Classic period (Laporte 1993: 307; Jones 2003) and in Yaxha during the final part of the Late Classic, or initial part of the Terminal Classic (see below).

Just south of Structure E lies another interesting building, Structure H, which adjoins six small interconnected rooms resembling a labyrinth (Fig. 5). The northern exterior walls of two of the labyrinth-like rooms (Rooms 1 and 5) were decorated with a very characteristic architectural motif, which consists of a vertical wall, a small moulding and an outward-sloping upper member or reverse *talud* (Fig. 5). The closest analogies to this type of motif come from several archaeological sites located in the Puuc region (Chacmultun, Structure A [Marquina 1964: Plate 225], Kiuic, Structure 1 from Group 2 [Pollock 1980: Fig. 602], Chunhuhub, Adjacent Palace [Pollock 1980: Fig. 674] and the House of the Governor at Uxmal [Kowalski 1987: figs 58 and 64]). Excavations in the area located south of Structure E indicate that six labyrinth-like rooms and Structure H in its last architectural stages most probably had a flat roof. The construction of flat roofs with the use of masonry and perishable materials was a new trait that became especially popular at the end of the Classic and during the Postclassic periods. This trend might have appeared as a result of Central Mexican influences where

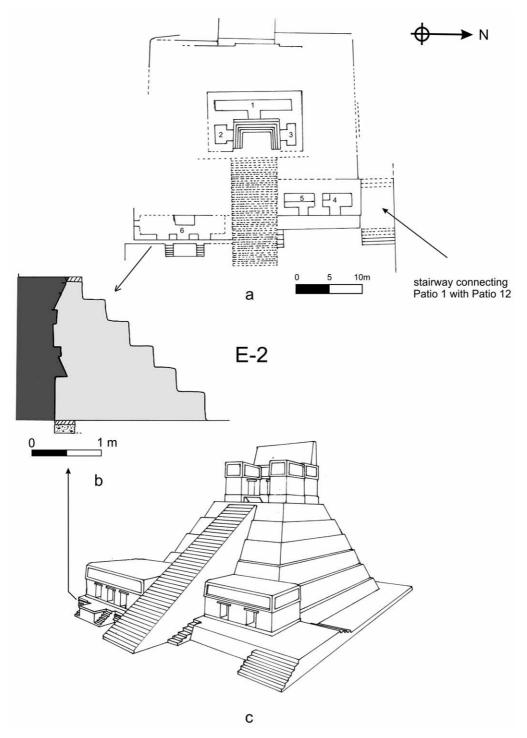


Figure 4. Reconstruction view of Structure E showing *talud-tablero-atadura* motif. Terminal Classic period (Triangulo Project, IDAEH).

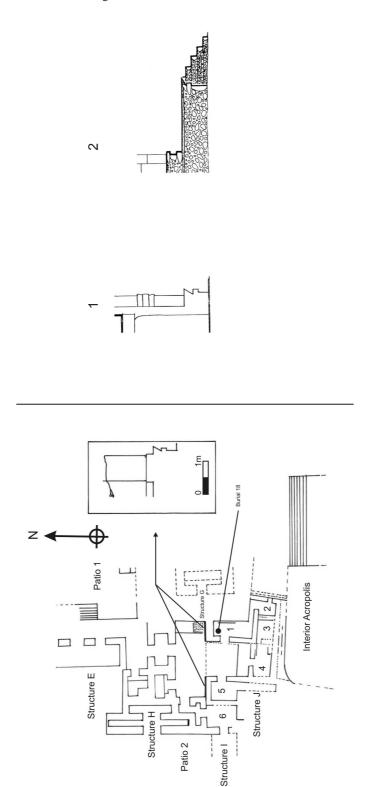


Figure 5. Plan of a complex system of rooms situated between Structures G, H and Central Acropolis along with a profile of motif discovered on the northern walls of Rooms 1 and 5 (nos 1 and 2 show similar motives from Chacmultun Structure A (1) and House of the Governor at Uxmal (2).

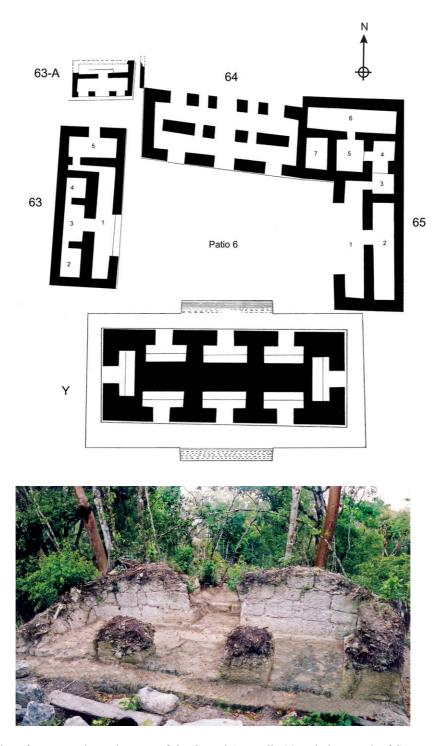


Figure 6. Plan of structures located on top of the Central Acropolis (a) and photograph of Structure 63A from Nakum (b). Drawing and photograph by Jarosław Źrałka.

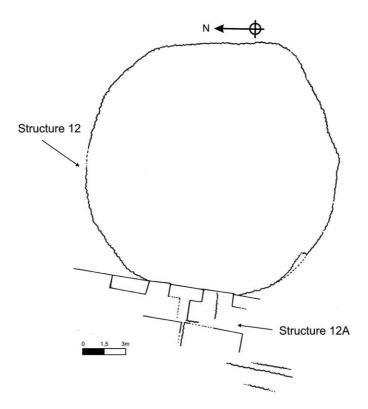


Figure 7. Plan of round construction (Structure 12) from Nakum (Triangulo Project, IDAEH).

this construction technique had been used for a long time (since Teotihuacan times) (e.g. Séjourne 1966, 1969).

Another neighbouring complex, the Central Acropolis, also underwent an important building process. It consists of a high platform surmounted by five superstructures constructed during the Terminal Classic (Calderón et al. 2008) (Fig. 6). The largest of them, Structure Y, was a two-story palace and most probably served as a royal residence. Just opposite to it, in the north-western corner of the Central Acropolis, another interesting building was discovered during excavations (Structure 63A). It consists of a front room with two masonry, square pillars forming a portico-like space for the structure, and a rear room with a bench in its interior (Calderón et al. 2003; 2008). Its plan is reminiscent of the tandem plan structures (Bazy 2004) seen at Chichen Itza, as well as at Mayapan, and other Postclassic sites. Another place at Nakum where the use of similar stone pillars was documented is the area between Structures H and G, where two pillars were constructed during the Terminal Classic period (Fig. 5). Just east of Structure 63A another construction incorporating pillars into its façade was built (Structure 64). It was located at the entrance to the Interior Acropolis complex, most probably to control entrance to the complex. Pillars of this kind were not used in Nakum before the Terminal Classic period. This architectural form is especially characteristic of the Northern Maya Lowland architecture (as at Chichen Itza), but pillars also became very popular during the final part of the Classic period in the Southern Maya Lowlands (see masonry piers in case of Uaxactun Structures A-II and A-IV, dated to the Tepeu 3 phase [Smith 1950: 47-48, Fig. 87], and possibly also Structure C-23 from Altun Ha [Pendergast 1982: 246-251]). In the Northern Maya Lowlands, pillars were sometimes employed in architecture during the Late and Terminal Classic periods. However, they became one of the most important architectural elements in Chichen Itza where grand galleries were supported by square pillars and round columns. Pillars were also commonly used in Mayapan and Postclassic sites of the Central Peten Lakes area, e.g. Topoxte, Paxte, and many others (Rice & Rice 1985; Rice 1986; Wurster 2000). The appearance of masonry pillars at Nakum is either the result of direct northern influence or may have originated from an unknown source via the southern lowland tradition. We favour the first option since they appear along with other architectural elements having a "northern connection". Further links with the north are seen in the plan of Structure 63A which, as mentioned above, is reminiscent of tandem plan structures popular in the Terminal Classic (see Chichen Itza; Ruppert 1952: figs 8, 9, 21, 23, 75, 113 as well as figs 57, 101-103, 106, 111 in which columns appear in the facade instead of pillars; Cobos 2004: some structures on figs 22.4 and 22.5) as well as in Postclassic times (Freidel 1981: 315-323; Rice 1986: 309).

Another important construction that shows foreign/new traits is located off the Acropolis complex, in the area of the Central Plaza. This spot seems to have been a sacred precinct for Nakum inhabitants, where people gathered during the most important religious ceremonies. It is enclosed by large pyramidal constructions (Temples A, B and C) to the north, east and west, and by Structure 12 in the southwest. During archaeological excavations carried out by Zoila Calderón and Varinia Matute in 2004, it became clear that below the collapsed mound of Structure 12 two buildings are buried, both dating to the Terminal Classic. Moreover, it turned out that one of them is a circular structure (Fig. 7). Limited investigations of this construction showed that it consists of a round substructure approximately 16 m in diameter. The upper part of Structure 12 was not fully excavated (although two looters trenches dug into this construction were documented) and the shape and form of the superstructure that crowned the round platform remains unclear (Calderón et al. 2004). Structure 12 is analogous to other round constructions, especially to those known from Chichen Itza (Structure 3C15) and Nohmul (Structure 9) (Chase & Chase 1982, Hammond et al. 1988). It must be stressed that the round structure is an architectural form that was present since the Preclassic period (Aimers et al. 2000; Hendon 2000; Morales 1993; Szymański 2010). One group of round structures (having a round superstructure usually surmounted on a substructure of the same shape) became very characteristic during the Terminal Classic and Postclassic periods in the Maya area (Szymański 2010). This type of round structure appears in Terminal Classic contexts at numerous sites, most of which can be classified as cultural enclaves that were experiencing growth while the rest of the Maya civilisation was declining. Among the sites with important Terminal Classic occupation or Terminal Classic-Postclassic transition which had round buildings, we should mention Ceibal, Nohmul, Ucanal, Calzada Mopan and several other Belizean sites in the Southern Lowlands and Uxmal, Chichen Itza in the Northern Lowlands. William Ringle and his colleagues (Ringle et al. 1998: 219, 221-222; see also in Masson & Mock 2004: 391) argue that during the Terminal Classic period, a pan-Mesoamerican sphere of political and religious interaction was established, focusing on the cult of Quetzalcoatl. Thus, they associate the Terminal Classic round structures with the spread of the feathered serpent symbolism. Others stress strong links to wind deities since in Central Mexico round structures were typical for Ehecatl – the wind aspect of Quetzalcoatl (Taube 2000: 112-114; see also Źrałka 2008: 134-135). Recently, McAnany and Gallareta Negron proposed that round constructions were not only of religious but also of ritual-economic use. They connect round structures with mercantile activities that possibly "were associated with ritual practices performed at these shrines" (McAnany & Gallareta Negron 2010: 162). This architectural innovation was meant to strengthen the rule of local lords. McAnany and Gallareta Negron also see the appearance and application of this architectural form by many Maya sites at the end of the Classic period as a result of Chichen Itza sphere of influence (Ibid. 162).

The last interesting example of new architectural style comes from Nakum's Northern Sector. Recent excavations by the Nakum Archaeological Project in the northernmost complex of this sector

of the site has revealed the existence of a Terminal Classic group built at the top of an earlier Late Preclassic platform (Structure 99). It consists of a triadic pattern architectural complex, with the main building (having five interconnected rooms) and two additional, rectangular constructions exhibiting a rare architectural technique. The latter buildings (one of them also had interior stuccoed bench) are constructed from shaped stones arranged in rows which seem to function as a foundation brace for their superstructures which were made of perishable materials. The existence of similar constructions have been reported among others by Don Rice (1986: 306 and Fig. 9.2a) for the Central Peten area during the Postclassic. Again, this economical and simple construction form and technique was not documented for earlier times at Nakum, but instead shows links and connections to Postclassical architecture found in the Central Peten. It is quite possible that Nakum is one of the first sites where such constructions were built and they antedate similar Central Peten examples.

The case of Yaxha

Recently, Yaxha has been the subject of an intense excavation and restoration programme carried out by the Triangulo and PDS (*Programa de Desarrollo Sostenible de Peten*) Projects. As a result, several large complexes have been investigated, including the North Acropolis, East Acropolis, South Acropolis, Plazas B and C, as well as the West and Maler Groups. Data from this research showed that although Yaxha saw two cultural and architectural peaks in its history (during the Late Preclassic and then in the second part of the Late Classic or Tepeu 2 phase), it also had important Terminal Classic growth.

Excavations carried out in the North Acropolis are of special importance to the topic under discussion. This complex was almost entirely constructed during the Late Preclassic period and consisted of three large pyramids forming a triadic pattern group. Excavations showed that in the following Early and Late Classic there was almost no, or very limited, architectural activity in this complex. It is only in the Terminal Classic that we see the emergence of the second peak of architectural activity at this location. At that time several new palaces were constructed and all existing Late Classic buildings were rebuilt several times. Moreover, archaeological excavations showed that some of the neighbouring, earlier Preclassic pyramids were dismantled, most probably to provide construction material for the new Terminal Classic structures. However, the largest of these old pyramids (Structure 142) must have still played an important function during this period. At the top of this enormous pyramid an unusual construction was documented during the restoration work (Figs. 8 and 9). Although it was not fully excavated, material found on its surface indicates that it is of Terminal Classic date. It has a C-shaped plan and is very similar to C-plan structures which were very popular, especially in Postclassic architecture (Rice 1986: 306-309). It now seems very plausible that this construction form first appeared in the Petexbatun-Pasión area during the Late Classic and later spread out into the Central Peten area and other regions (Demarest 2004b: 104-106; Rice & Rice 2004: 132; Tourtellot & Gonzalez 2004: 73-74). Demarest and others (see Rice & Rice 2004: 132) suggest that the appearance of this architectural form in Central Peten along with related ceramic assemblage may be proof of migration; refugees might have streamed in from the war-ravaged Petexbatun, or Pasión River zone. In the Northern Maya Lowlands, C-shaped structures are of a later date than in the south and are usually connected to the Terminal Classic-Postclassic transition. Such structures were documented in Ek Balam, Uxmal and Sayil (Bey et al. 1997). The appearance of C-shaped constructions at Yaxha may indicate that this site had broad cultural contacts with other Southern and Northern Lowland sites where similar buildings were documented. Alternatively, they might be the result of migration (of Petexbatun-Pasion people), considering the fact that Yaxha underwent important growth during the Terminal Classic and might have been an enclave for people originating

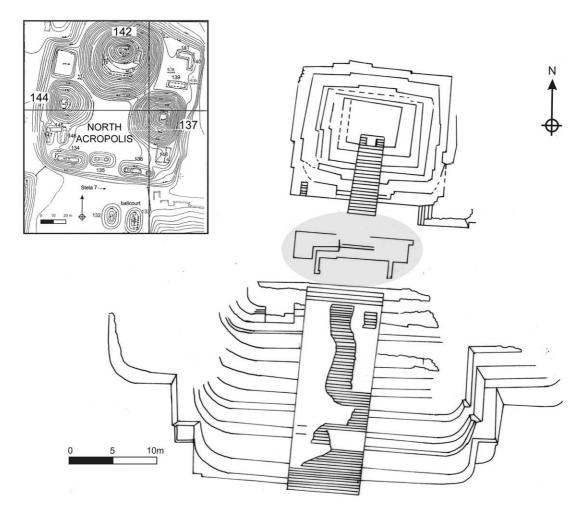


Figure 8. Plan of the C-shaped structure discovered at the top of a large pyramid of the North Acropolis of Yaxha (Structure 142).

from other abandoned places. Another example of the presence of C-shaped structures at Yaxha (although of a different size and layout) is in Plaza B, located in the eastern sector of the site. Plaza B is enclosed from the west by a low platform – Structure 90. It was first excavated by Nicholas Hellmuth who discovered round columns in the façade of this building (Hellmuth 1978: 86, 1993). Hellmuth also found modelled sherds from the Tepeu 3 phase on the room floor of Structure 90. However, he argued that they "postdate the erection of the building" (Hellmuth 1993: 23). Recent investigations by Bernard Hermes showed that Structure 90 consisted of a basal platform topped by a C-shaped single-range building which had a row of round columns in its façade (Fig. 10). These columns were constructed of small well-worked stones, a technique not seen before at Yaxha. Architecturally, Structure 90 with a colonnaded open façade, is very similar to the contemporaneous column structures (or open hall buildings) found at Chichen Itza or at later Postclassic sites (e.g. Mayapan). This architectural form was also widespread in the Highlands during the Postclassic and



Figure 9. Photograph of the North Acropolis of Yaxha. Arrow shows C-shaped structure situated on top of Structure 142 pyramid (photograph by Robert Słaboński).

remained popular through Colonial and even until modern times. The custom of using columns in architecture in the Southern Lowlands, although very rare, has also been documented at several other sites. Round columns were discovered in Early Classic Structure 1-3rd at Blue Creek (Driver 1996: 25-33; Guderjan 2004: 237 and Fig. 5) and Aguateca (Str. M8-37), where they are dated to ca. AD 800 (Valdes & Fahsen 2004: 154). Other examples were documented for the Terminal Classic period in Structure A-20 at Xunantunich (Braswell 1998: 722) and Structure N10-2 at Lamanai (Pendergast 1981). In the Northern Lowlands columns were extremely popular in Puuc architecture and they were used as early as the 6th century AD (Driver 1996: 31, 33; Gendrop 1987). They were also present, although on a minor scale, in Río Bec and Chenes architecture (Gendrop 1987, 1998). Nevertheless, columns became widespread especially in the Terminal Classic and Postclassic periods in the architecture of northern Yucatan. In terms of building material, Structure 90 from Yaxha finds its closest counterpart in Xunantunich Str. A-20, where the columns were also built from small stones mixed with mortar. However, its plan is very similar to column constructions known from Northern Maya Lowlands (Chichen Itza [Ruppert 1952: figs 33, 74 and 83], Mayapan [Proskouriakoff 1962: Figs. 1 and 2a; Rice 1986: 315]) as well as from some Postclassic Peten sites (Rice 1986: 312-315). Hellmuth (1993) has already pointed out that Structure 90 resembles Structure 5C2 from Chichen Itza.

Another building at Yaxha – a small platform located on top of pyramid platform of Structure 1 – also used small well-worked stones as construction material. This platform bears a *talud-tablero-atadura* profile (Fig. 11) which, as has already been mentioned, became very characteristic for many

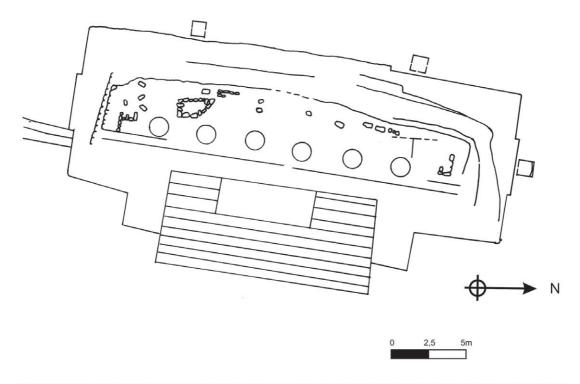




Figure 10. Plan and photograph of Yaxha Structure 90.



Figure 11. Structure 1 from Yaxha with *talud-tablero-atadura* motif (photograph by Wiesław Koszkul).

Mesoamerican sites during Epiclassic times. Excavations by Bernard Hermes showed that this platform was constructed at the end of the Late Classic or the beginning of the Terminal Classic.

East of Structure 1 lies another interesting construction: Structure 4 – a low pyramid topped by a two-roomed chamber. Excavations indicate that it was constructed in the Late Classic and underwent remodelling during the following Terminal Classic period when the superstructure located at the top of the pyramid received a flat roof (*loza plana*) in a similar way as labyrinth-like construction from Nakum at more or less the same time.

James Aimers (2004: 310) also points out that among other characteristic or diagnostic Terminal Classic architectural forms is central platform at plazas. According to Tourtellot, Sabloff and Carmean (1992: 91; see also Aimers 2004: 310), Structure A-13 at Seibal (a small platform located in the middle of the Group A Central Plaza) has foreign or Putun-Chontal traits and it resembles Terminal Classic and Postclassic platforms used for ritual dancing found in Chichen Itza and Uxmal. Other similar architectural examples have been documented at Baking Pot while similar platforms are known from a later period at Mayapan (Aimers 2004: 310-311). A plaza central platform in the Terminal Classic context has also been found at Yaxha, in the area of the West Group. This is a small architectural compound located in the north-central part of the site, west of the North Acropolis. Excavations conducted by Bernard Hermes revealed that although the first version of the platform of the West

Group was constructed during the Late Preclassic, it achieved its final shape and form during the Terminal Classic. At that time a new, almost quadrangular platform was built (measuring 50x45 m) along with the majority of the structures visible now, all of which enclose a small plaza (Fig. 12). In the central part of that plaza, a small square platform (Str. 103, measuring 3.50x3.50 m and 1 m high) was erected. Subsequently, during a small remodelling program it was enlarged by 0.50 m to the north, south and east, achieving a cross-like shape. Its height was also increased (Hermes 2006; Źrałka 2008: 166-167). Its form may indicate ceremonial functions and possible cultural connections with other Terminal Classic sites where such central plaza platforms were discovered. Moreover, this is the first time that this kind of construction has been formed at Yaxha.

ARCHITECTURE AND THE PROBLEM OF DATING

Stratigraphically and ceramically, it is known that the majority of the above-described constructions date to the Terminal Classic era and most probably appeared in the second part of this period. Recent investigations at Nakum showed that three phases can be distinguished in the architectural history of the Terminal Classic period at this site. The first architectural phase is characterised by the construction of buildings that stylistically continue an older Late Classic architectural tradition (the building of pyramid-temples like Structures C and V, and palace constructions with large and long vaulted chambers). Many buildings that can be ascribed to this phase (e.g., Structures L, S, and G) were embellished with stone masks on the upper part of their façades and corners. Also, during this stage earlier Late Classic buildings were rebuilt by adding new chambers (e.g., Structures D and E). In the second phase, we observe some major changes: usable space in existing buildings was divided to create more rooms of an increasingly private character. Typical for this phase, circulation of traffic within the large Acropolis complex was restricted by the construction of new buildings, which in turn resulted in the formation of new and smaller patios. Finally, the last stage is characterised by the further remodelling of existing structures and, as seen earlier, restricted traffic circulation in the Acropolis complex due to the addition of small rooms of labyrinth-like character between Structure G, I and the Central Acropolis. Another typical feature for this late phase was the use of flat roofs (techos de loza plana) and constructions shaped as square brackets (corchete): []. These constructions served as access rooms to more private spaces and chambers. Also, structures erected during this phase tend to have thinner walls. Buildings with evidence of foreign influences such as tandem plan constructions, buildings with masonry pillars and foundation brace constructions from Structure 99 can all be ascribed to the two latter phases.

In the case of Yaxha at least two architectural phases can be distinguished for the period under discussion. The first of them, similarly to Nakum, represents a continuity with an earlier Late Classic architecture using large masonry rooms and the construction of low pyramids. The same phase saw the application in architecture of small, well-worked stones as well as the use of *talud-tablero atadura* style (as seen in case of Structure 1). The second phase can only be tentatively ascribed to the second or final part of the Terminal Classic and it is characterised by the appearance of several new architectural traits (C-shaped structures, and construction of flat roofs as well as plaza central platforms).

Elsewhere (Hermes & Źrałka 2008: 66-67, Źrałka 2008: 213-214), we have shown that the Terminal Classic period at both Nakum and Yaxha dates to between ca. AD 800-900/950. As mentioned earlier, the "new" architectural traits at Nakum and Yaxha appeared mainly during the second part of the Terminal Classic and seem to be connected with new influences. Most probably, they were part of the changing cultural landscape at the end of the Classic period when new or foreign traits were widely adopted at many Maya sites. As such, they were most probably the result of survival strategies and were intended to strengthen the power of the local lords. It is difficult to resolve the motivation

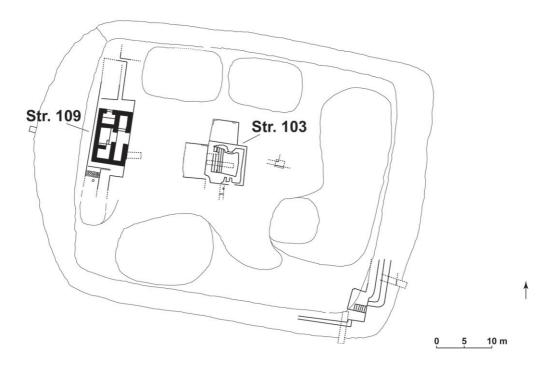




Figure 12. Plan of Yaxha West Group and photograph of a plaza central platform (Structure 103) discovered in the middle of this complex (drawing: PDS Project and Katarzyna Radnicka, photography by Robert Słaboński).

behind the appearance of these new architectural elements; their presence might have been the result of migration or cultural influence, or merely a desire to try something new and fashionable. Since we do not have ceramics from the Northern Lowlands at either Yaxha and Nakum, it is possible that these new architectural traits might rather be the result of broad cultural contacts with contemporaneous Terminal Classic Northern Maya centres, including Chichen Itza, as well as other important Terminal Classic centres of the Southern Lowlands. However, we argue that at least Nakum, might have received migrants who came from other neighboring sites that have been abandoned during this period (Źrałka 2008). This influx of refugees may have been partly responsible for the architectural boom and demographic increase during the Terminal Classic. The idea that Nakum became the destination of neighboring refugee populations is borne out by archaeological and architectural data from the epicentre and periphery of this site (see Hermes & Źrałka 2008; Źrałka 2008).

EPIGRAPHY AND ICONOGRAPHY

Epigraphic data indicate that at the turn of the Late and Terminal Classic periods Yaxha was defeated by Naranjo and subjugated to the latter centre (Grube 2000: 264-265; Martin & Grube 2008: 82). Inscriptions from Naranjo Stelae 35 and 12 mention a war that was waged by Naranjo in AD 799, which resulted in Yaxha having to pay tribute to the victorious neighbour (Grube 2000: 264). After this event no carved monuments were dedicated at Yaxha. However, it is not clear if Naranjo imposed at Yaxha its own, loyal ruler, left the old, local dynast or ruled defeated site on its own. We argue that Naranjo's subjugation might have lasted until this site started facing problems of the Terminal Classic period and was slowly collapsing. As a result Yaxha might have been able to break away from the old enemy and enjoyed a short term independence. In our opinion these changes are reflected in architecture of Yaxha. We think that the first Terminal Classic phase at Yaxha was related to a period of Naranjo domination over the former centre. Although still very hypothetical, it is possible that the appearance of the small, well-worked stones in architecture of Yaxha (a technique documented also at Naranjo) might have been a result of Naranjo influences at a possibly subjugated Yaxha. The second phase, characterised by the application of new architectural traits, might be connected with the period of short independence of Yaxha after the collapse of Naranjo. Yaxha most probably established new trade and cultural connections with other Terminal Classic sites.

At Nakum the majority of documented inscriptions carved in stone or modelled in stucco date to the Terminal Classic. Three carved stelae (Stelae U, C and D) are known from Nakum and date to AD 771, 815 and 849 respectively. However, in the course of recent years, new inscriptions have been discovered at Nakum. All of them are related to Terminal Classic architecture. The first is a hieroglyphic block that was found in the middle of the stairway of Structure G. Another inscription has been documented on the upper part of the façade of neighbouring Structure H. It is modelled in stucco and represents several glyphs along with an element which resembles Tlaloc googles. In both cases the glyphs are not well preserved but according to Simon Martin (personal communication, 2006) their style is very schematic and typical for the Terminal Classic period, showing close analogies to contemporaneous inscriptions from the Northern Lowland Maya centres. Indeed, these inscriptions are so schematic that it seems as if the scribes who made them were slowly abandoning their knowledge of writing, or were unfamiliar with what they were transcribing.

The same may be said about a recently found inscription from a hieroglyphic bench that was discovered by Zoila Calderón in the West Group of Nakum. One of structures of this complex (Structure 89) was heavily destroyed by a large looters' trench. After clearing the trench and documenting its profile, archaeologists discovered a bench which was covered with glyphs (Calderón 2008; Fialko, personal communication, 2009). The schematic and geometrical style of the glyphs is very similar

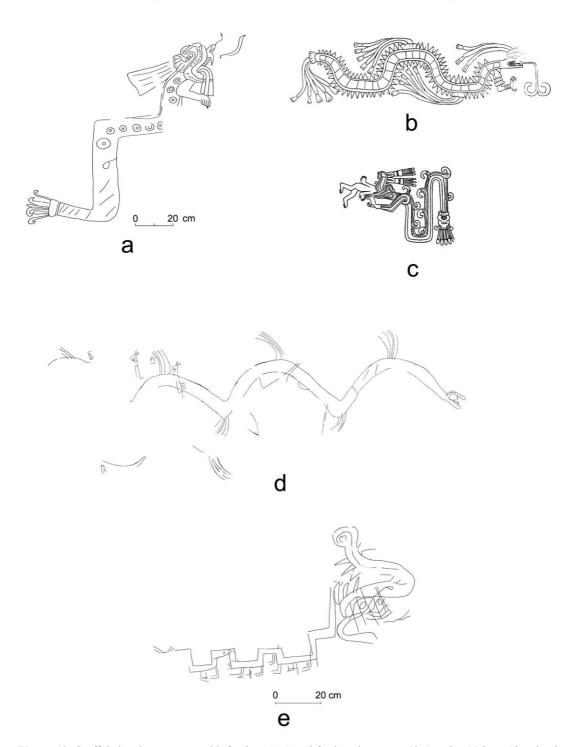


Figure 13. Graffiti showing serpents with forelegs (a-c) and feathered serpents (d-e); a,d-e: Nakum (drawing by Jarosław Źrałka and Katarzyna Radnicka); b) Chichen Itza (after Morris *et al.* 1931: Fig. 259); c) Borgia Codex.

to the Northern Yucatan inscriptions and confirms links with this area as well as late dating of this inscription.

Another important iconographic source of information are graffiti that have not received much attention in Maya research. Many graffiti have been documented at Nakum structures. Most of them were rendered on the walls of Terminal Classic structures, in what constitutes *terminus post quem* for their dating. Some of these images represent a "mexicanized" style differing from the Classic Maya art and show "foreign" affiliations revealing knowledge of inter-regional Mesoamerican art. This style was typical for many Maya centres of the Terminal Classic period and it is found expressed, among other places, in the carved monuments of Seibal, Ixlu, Jimbal and Ucanal in the Southern Lowlands and Chichen Itza in the Northern Lowlands.

This "mexicanized" style is represented by graffito that shows a legged reptile or snake with a feather crest on the head and a spotted body (graffito E12 – Fig. 13a). Its style and iconographic details differ significantly from the serpent iconography typical for the Classic period Southern Maya Lowlands, but are very similar to representations of serpents known from Chichen Itza (Fig. 13b) and surprisingly, depictions of serpents and lizards in several Postclassic manuscripts (Dresden Codex, Borgia, and Laud – Fig. 13c).

Of special importance are also graffiti documented in Nakum Structures E and W and showing floating feathered serpents (Fig. 13d-e). The cult of this deity became very characteristic in the Maya area towards the end of the Classic period. Some of the oldest actual representations of the feathered serpent in Maya area come from Chichen Itza and other Northern Lowland sites (e.g., Uxmal; Taube 1992: 136-140) during the Terminal Classic period and its appearance might have been a result of "central Mexican" influences.

Another interesting graffito showing late affiliations has been documented on the bench of one of the chambers of Structure Y, which crowns the Central Acropolis complex. Structure Y as well as several neighbouring buildings were constructed during the Terminal Classic period and most probably served as a royal palace for the dynasty that ruled Nakum during this time. The graffito in question represents two seated men, who are most probably playing a game known as patolli (Fig. 14). It is of great size and was probably incised by the original inhabitants of this building. However, both figures are rendered in a style (seen especially in their hair-styles) that is very similar to the "mexicanized" figures known from Terminal Classic monuments at other sites (especially from Seibal or even from more distant Chichen Itza). Moreover, the style of the patolli board is very different from the majority of all documented patolli boards known from the Maya area. An almost identical example can be seen in Chichen Itza Structure 5C-35 (known as El Arco). El Arco covers two older substructures, one of which (the Western Substructure) was covered by a similar patolli (Martín & Schmidt 2009: 86-87). Other similar patolli boards have been also documented in the Northern Lowlands (in Structure II of Chicanna; Andrews & Andrews 1980: Fig. 115b,d). The closest analogies to Chichen Itza, Chicanna and Nakum examples are seen in Central Mexico (Teotihuacan and Tula), where similar patolli boards are known and are ascribed to the so-called type I (according to the classification proposed by Swezey and Bittman [1983]; also see Martín Díaz & Schmidt 2009: 87). Since the first known examples of this type are from Central Mexico, it is very plausible the new patolli board form might find their origin there.

THE DEMISE OF LOCAL POWERS

Epigraphic studies carried out during the past two decades have completely changed our perception of the political organisation of the Classic Maya. Today, we know that there were many different levels of relationships and dependencies between the various Lowland Maya sites. Research by Maya

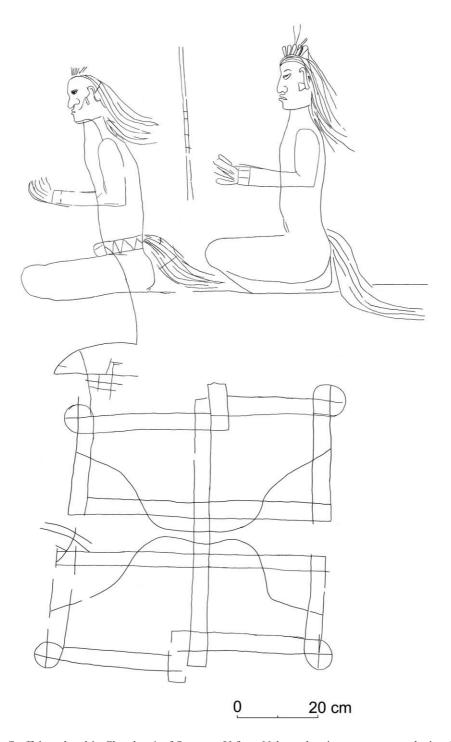


Figure 14. Graffiti rendered in Chamber 1 of Structure Y from Nakum showing two persons playing (?) patolli. Drawing by Katarzyna Radnicka.

epigraphers Simon Martin and Nikolai Grube (2000, 2008) has shown that among the most powerful Maya states were two superpowers: Tikal in northern Guatemala and the Snake kingdom in southern Mexico. These two were the most important states in the area and were powerful enough to conquer their neighbours, probably in pursuit of extended tribute networks. Both strove to drag smaller petty states into their orbit while trying to eliminate the main opposition from the political landscape. During the Late Classic, Nakum and Yaxha were situated very close to the borders of the two main political hegemons of the area: Tikal and Naranjo – the latter being part of the larger Snake kingdom for at least some part of the Late Classic.

It is assumed that Nakum was a secondary site and was possibly subjugated by one of its powerful neighbours. It is plausible that for a long period in its history, Nakum was part of the Yaxha kingdom and may even have used its emblem glyph. This assumption is partly supported by a pectoral that was found in a royal tomb that was recently excavated in Structure 15 in Nakum. The pectoral mentions a previously unknown ruler: *Ixim Chan* who seems to bear the title of *Yaxa' ajaw* (Źrałka *et al.* 2011). Although the pectoral is older than the tomb, its presence at Nakum may indicate that the ruling Nakum dynasty used the Yaxha emblem glyph, implying that it was either a suzerainty of Yaxha, or that it may have been directly ruled by Yaxha kings. Being a Yaxha ally or vassal, Nakum was probably part of a far-ranging Tikal sphere of influence in the model proposed by Martin and Grube. This line of reasoning is supported by the similarities that can be found between the style of some of the pyramids in Nakum and their counterparts at Tikal, as well as by resemblances in the ceramic assemblage.

Both Tikal and Naranjo suffered from a drastic crisis during the Terminal Classic period. Tikal experienced a very profound (about 80-85%) population decrease during the Terminal Classic Eznab phase, both in the centre and at the peripheries (Culbert 1973, Culbert *et al.* 1990: Tables 5.1 and 5.2, Fry 1969: 166; Valdes & Fahsen 2004). This was accompanied by a decline in construction activity and the fragmentation of political authority. Recent investigations at Naranjo by Fialko indicate that this city also suffered a decline in construction activity as well as a demographic loss, although a significant number of people continued to occupy the site well into the Terminal Classic (Aquino 2007). This occupation is concentrated mainly in the central and western parts of the site epicentre as well as in the south-western periphery of Naranjo (Fialko 2005a: 229; Fialko *et al.* 2007). Of special importance is the absence of Fine Orange and Fine Gray vessels in the ceramic assemblage at Naranjo. This indicates that during the Terminal Classic period this city lost control and access to the most important trading routes (Aquino 2007).

The political and economic crises that affected these two large centres during the Terminal Classic period probably led to the partial or complete autonomy of smaller secondary centres such as Nakum, which apparently took control over commercial routes including the one along the Holmul River. Other small sites such as Jimbal and Ixlu located close to Tikal also enjoyed independence for a short period of time. Their rulers not only started erecting stone monuments with their portraits but they also titled themselves as *k'uhul ajaw* ("divine lord") of *Mutu'l* using the Tikal emblem glyph (Schele & Freidel 1990: 391). These data seem to indicate that the authority of Tikal was reduced during the Terminal Classic period by secondary rulers who seized control over their respective centres. A parallel situation might have been present in Xunantunich, as well as in smaller sites such as El Aguacate and Chunhuitz, located close to Naranjo (Grube 2004: 211; LeCount *et al.* 2002: 43, LeCount 2005). All of them might have gained partial or complete independence after the collapse of the dominant Naranjo and Calakmul polities. The crisis of Naranjo might have also led to the short but intensive revival of Yaxha in the second part of the Terminal Classic period.

In a similar pattern, the demise of once-great hegemons of the Southern Maya Lowlands accompanied by the short-term independence of their former subordinate centres has been documented in many other parts of the Maya Lowlands. In the western part of the Maya area, the collapse of Palenque was accompanied by the growth of some smaller secondary sites like Comalcalco, Pomona, Tila and even Tonina where one of the latest Long Count records has been documented (Schele & Freidel 1990; Rice & Forsyth 2004: 43; Stuart & Stuart 2008: 234-236). There is some evidence indicating that at the end of the Classic period one of Comalcalco rulers used the Palenque (*Baakal*) emblem glyph (Stuart & Stuart 2008: 234) – a clear sign of the usurpation of the once independent power of the Palenque kingdom. The same may be said of the greater Calakmul kingdom where in the 9th century, stelae were dedicated by rulers of smaller subsidiary centres such as Oxpemul, La Muñeca and Nadzcaan (Martin & Grube 2000: 115).

In sum, archaeological and epigraphic research show that the traditional Maya geopolitical structure based on the existence of powerful kingdoms or superpowers suffered an irreversible demise during the Terminal Classic, a period marked by balkanization and fragmentation processes. As a result, in many regions of the Southern Maya Lowlands, the collapse of the great powers was accompanied by the rise of new, smaller petty states which were once subjugated by their hegemons. One such petty state was Nakum, which might have controlled some of its neighbours. Evidence of strong Terminal Classic occupation and important building programmes were discovered at several smaller sites located in close proximity to Nakum, indicating that these sites might have been part of a new and small Terminal Classic Nakum polity. Two such sites - El Tigre and El Carmen, investigated through a salvage archaeology programme, produced considerable evidence of Terminal Classic occupation and architectural activity (Chan 1999; Fialko & Ramírez 2004; Źrałka 2008: 175-176, 179-181). Research by Rosa Chan at one of these sites - El Tigre - indicates that it was founded at the turn of the Late and Terminal Classic periods (Chan 1999) and might have been populated by people coming from recently abandoned areas. It is possible that during the Terminal Classic period these smaller sites were controlled by Nakum and functioned as its outposts, forming a small Terminal Classic polity, or enclave, in this area (Źrałka 2008: 210-211). The nature of the political relationship between this new polity and its neighbour (Yaxha) are not well known. However, it seems very plausible that although the latter site was undergoing stable growth (at least during the first part of the Terminal Classic period), Nakum was playing hegemon in this region and dominated Yaxha.

This idea might be further supported by epigraphic data. Almost all carved monuments from Nakum date to the Terminal Classic period. One of them, Stela C, dedicated in AD 815 mentions the name of a local ruler (impossible to read due to its poor state of preservation) which is followed by the Nakum emblem glyph identified by Nikolai Grube (2000: 253). This is the first instance in which the Nakum lords used the prestigious *k'uhul ajaw* title. Another monument, Stela D, was dedicated by a different ruler in AD 849 (Fig. 15). In this case the king most probably used a very rare titular epithet: *elk'in* (?) *kaloomte'* or east kaloomte' (Simon Martin, personal communication, 2010) which may indicate political claims and aspirations of the local ruler assuming the title of a high lord of the east. It might also indicate that Nakum was at that time one of the most important kingdoms in the eastern part of the Southern Maya Lowlands – at least nominally.

DISCUSSION

"Foreign", "non-Peten" or "non-Classic" traits seen in Terminal Classic architecture and iconography have been documented at many Southern Lowland Maya sites, especially those sites which managed to survive, at least for some time, the Classic Maya collapse. Among them we have Central and Southeastern Peten centres and many others from Belize (Chase & Chase 1982; Hammond *et al.* 1988; Laporte 2004; Laporte & Mejía 2002; Laporte & Quezada 1998; Rice & Rice 2004, Sharer & Traxler 2006; Tourtellot & Gonzales 2004). Many of these sites which were still thriving during the Terminal Classic, or survived into the Postclassic era, were located close to important rivers, lakes and other sources of water, i.e. places crucial for canoe trade and aquatic resources.

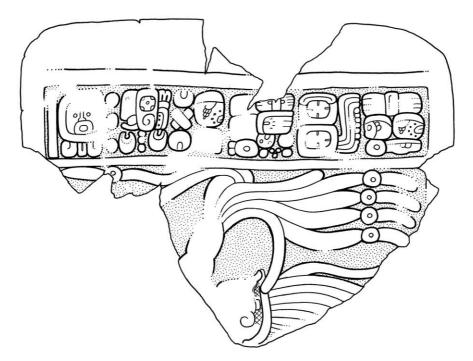


Figure 15. Nakum Stela D. Drawing by Christophe Helmke.

We argue that the short-term success of Nakum in the Terminal Classic period was related to several factors, the first and the most important probably being the drastic crisis and collapse of neighbouring Tikal and Naranjo that created an opportunity for Nakum to expand. The location of Nakum also needs to be considered. It is situated on the banks of the Holmul River, which was an important trading route in the Preclassic and Classic periods. The Holmul River might have indirectly provided access to the Caribbean through the Río Bravo. We must bear in mind that at the end of the Classic period, Caribbean and Yucatan trade was mainly controlled by the far larger polity of Chichen Itza. Links with Chichen Itza and other northern sites are visible in the architecture and iconography of Nakum and possibly also of neighbouring Yaxha.

In all probability, the local elites of these emerging centres responded to the widespread collapse by establishing new trade routes and cultural contacts with the above-mentioned centres. These contacts were intended to consolidate their power and position over the local population. Following this trend, the Nakum elite made important choices during the Terminal Classic period in order to adjust to the new socioeconomic reality. One of these changes apparently involved the decision to accept a new ideological programme.

Various scholars proposed different theories concerning the spread of new cultural and iconographic trends in the final part of the Classic period. Arturo Pascual Soto and Erik Velásquez García (see this volume) argue that during the Classic-Postclassic transition rulers of various Maya centers applied new military ideology associated with the cult of Venus in order to reaffirm their political power in the context of the economic and institutional crisis characterizing this period. This ideology seen in iconographic programme of various Maya centers spread out from the city of El Tajin as both authors state. Other scientists, such as William Ringle, Tomás Gallareta Negron, and George J. Bey (1998) proposed that sites such as Chichen Itza, Seibal and many others participated in a pan-Mesoamerican

elite cult network of the Terminal Classic period which emphasized similar religious themes (focused on the feathered serpent) and a material culture style. However, these scholars reject large-scale immigration in conjunction with this new style arguing that it spread through pilgrimage, mercenaries and political alliances (Ringle *et al.* 1998). They also argue that the widespread use of C-plan structures, circular plan constructions and other architectural forms as well as specific iconography and Fine Orange and Plumbate vessels are evidence of this cult network (Schwarz 2009: 421). Though some scholars criticize the model of Ringle and his colleagues, it is a fact that a set of different cultural traits was shared at that time by various Mesoamerican centres, from Central Mexico, Gulf Coast, through Maya area forming a distinctive international style. This style became very popular among cosmopolitan elites of different parts of Mesoamerica (Olko 2010: 68), constituting a mean of panregional expression in the new cultural and religious network.

We think Nakum might have been part of such a network and its success was partly the result of trade connections it established with Northern Lowland sites and other regions of Mesoamerica. We see evidence at Nakum that strongly suggests that its elites adopted new architectural and possibly iconographic-ideological trends associated with distant and prestigious powers of the final part of the Classic period (such as Chichen Itza) in order to strengthen their rule over the local population and over neighbouring centres whose societies had disintegrated. Thus we see the application of circular plan constructions, C-plan structures, tandem-plan structures, stone pillars and columns, and the *talud-tablero-atadura* style of architecture as well as some new iconographic trends (feathered serpent and legged serpent iconography) at both Nakum and Yaxha, evidence of the strong links both sites had with distant Maya centres and other Mesoamerican regions.

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REFERENCES

AIMERS, JAMES

2004 The Terminal Classic to Postclassic Transition in the Belize River Valley. In: *The Ancient Maya of the Belize Valley: Half a Century of Archaeological Research*, edited by J. Garber. Gainesville: University Press of Florida.

2007 What Maya Collapse? Terminal Classic Variation in the Maya Lowlands. *Journal of Archaeological Research* 15(2007): 329-377.

AIMERS, JAMES, TERRY POWIS & JAIME AWE

2000 Preclassic Round Structures of the Upper Belize River Valley. Latin American Antiquity 11(1): 71-86 ANDREWS, WYLLYS IV, WYLLYS ANDREWS V

1980 Excavations at Dzibilchaltun, Yucatan, Mexico (Tulane University, Publication 48). New Orleans: Middle American Research Institute.

AQUINO, DANIEL

2007 La ocupación Clásico Terminal del epicentro urbano de Naranjo, Petén. In: XX Simposio de Investigaciones Arqueológicas en Guatemala, 2006, edited by J.P. Laporte, B. Arroyo and H. Mejía: 489-501. Guatemala: Ministerio de Cultura y Deportes, Instituto de Antropología e Historía de Guatemala, Asociación Tikal.

BAZY, DAMIEN

2004 El grupo residencial del Patio 6, Acropolis Sur de Nakum, Petén, Guatemala. Estudio preliminar, Unpublished M.A. thesis. Paris: Universidad de Paris I Panthéon-Sorbonne.

BEY, GEORGE J., CRAIG HANSON & WILLIAM RINGLE

1997 Classic to Postclassic at Ek Balam, Yucatan: Architectural and ceramic evidence for defining the transition. *Latin American Antiquity* 8(3):237-254.

BRASWELL JENNIFER

1998 Adaptacion, supervivencia y fracaso en Belice durante el Clasico terminal. In: XI Simposio de Investigaciones Arqueologicas en Guatemala 1997, edited by J.P. Laporte and H. Escobedo: 721-728. Guatemala: Ministerio de Cultura y Deportes, IDAEH, Asociación Tikal.

CALDERÓN, ZOILA, BERNARD HERMES, BREITNER GONZÁLEZ & TELMA TOBAR

2008 La Acrópolis Interior de Nakum. In: *XXI Simposio de Investigaciones Arqueológicas en Guatemala, 2007*, edited by J. P. Laporte, B. Arroyo and H. Mejía: 349-356. Guatemala: Museo Nacional de Arqueológía e Etnología. Ministerio de Cultura y Deportes, Instituto de Antropología e Historia, Asociación Tikal, Fundación Arqueológica del Nuevo Mundo.

CALDERÓN, ZOILA

2003 Memoria anual de actividades. Unidad de arqueología local, año 2003. Unpublished manuscript on file, Proyecto Triángulo. Guatemala: Instituto de Antropología e Historia.

2008 *Memoria anual de actividades. Unidad de arqueología local, año 2008.* Unpublished manuscript on file, Proyecto Triángulo. Guatemala: Instituto de Antropología e Historia.

CALDERÓN, ZOILA, VARINIA MATUTE, JAROSŁAW ŹRAŁKA, SŁAWEK KONIK & WIESIEK KOSZKUL 2004 *Memoria anual de actividades. Unidad de arqueología local, año 2004.* Unpublished manuscript on file, Proyecto Triángulo. Guatemala: Instituto de Antropología e Historia.

CHAN, ROSA MARÍA

1999 Programa de rescate: Sitios arqueológicos Naranjito y El Tigre, vol. II: El Tigre. Unpublished manuscript on file, Proyecto Triángulo. Guatemala: Instituto de Antropología e Historia.

CHASE, DIANE, ARLEN CHASE

1982 Yucatec Influence in Terminal Classic Northern Belize. American Antiquity 47(3): 596-614.

COBOS PALMA, RAFAEL

2004 Chichén Itzá: Settlement Hegemony during the Terminal Classic Period. In: *The Terminal Classic in the Maya Lowlands: Collapse, Transition, and Transformation,* edited by A. Demarest, P. Rice and D. Rice: 517-544. Boulder: University Press of Colorado.

CULBERT, PATRICK

1973 The Maya Downfall at Tikal. In: *The Classic Maya Collapse*, edited by P. Culbert: 63-92. Albuquerque: University of New Mexico Press.

CULBERT, PATRICK, LAURA KOSAKOWSKY, ROBERT FRY & WILLIAM HAVILAND

1990 The Population of Tikal, Guatemala. In: *Precolumbian Population History in the Maya Lowlands*, edited by P. Culbert and D. Rice: 103-122. Albuquerque: University of New Mexico Press.

DEMAREST, ARTHUR

2004a Ancient Maya: The Rise and Fall of a Rainforest Civilization. Cambridge: Cambridge University Press. 2004b After the Maelstrom: Collapse of the Classic Maya Kingdoms and the Terminal Classic in Western Petén. In: The Terminal Classic in the Maya Lowlands: Collapse, Transition, and Transformation, edited by A. Demarest, P. Rice and D. Rice: 102-124. Boulder: University Press of Colorado.

DEMAREST, ARTHUR, PRUDENCE RICE & DON RICE (EDS.)

2004 The Terminal Classic in the Maya Lowlands: Collapse, Transition, and Transformation. Boulder: University Press of Colorado.

DRIVER, DAVID

1996 Continuing Excavations at Structure 1. In: Archaeological Research at Blue Creek, Belize. Progress Report of the Fourth (1995) Field Season, edited by Thomas Guderjan, David Driver and Helen Haines: 25-34. San Antonio: St. Mary's University.

FIALKO, VILMA

2005 Proceso evolutivo del epicentro monumental de Naranjo, Petén. In: *XVIII Simposio de Investigaciones Arqueológicas en Guatemala*, edited by J.P. Laporte, B. Arroyo and H. Mejía: 225-233. Guatemala: IDAEH, Asociación Tikal, FAMSI, Museo Nacional de Arqueológía y Etnología.

FIALKO, VILMA & FREDY RAMÍREZ

2004 Informe final de la temporada de campo de Arqueología Regional correspondiente al año 2004. Unpublished manuscript on file. Guatemala: Ministerio de Cultura y Deportes, Instituto de Antropología e Historia, Protección de sitios arqueológicos de Peten, PRONAT-Triángulo.

FIALKO, VILMA, ADRIANA SEGURA, CYRIL GIORGI & RAFAEL CAMBRANES

2007 El asentamiento en la periferia residencial de la zona suroeste de Naranjo, Petén. In: *XX Simposio de Investigaciones Arqueológicas en Guatemala, 2006,* edited by J. P. Laporte, B. Arroyo and H. Mejía: 319-332. Guatemala: Museo Nacional de Arqueología y Etnología. Digital version accessible at: www.asociaciontikal. com).

FREIDEL, DAVID

1981 Continuity and Disjunction: Late Postclassic Settlement Patterns in Northern Yucatan. In: *Lowland Maya Settlement Patterns*, edited by W. Ashmore: 311-332. Albuquerque: School of American Research, University of New Mexico Press.

FRY. ROBERT

1969 Ceramics and Settlement in the Periphery of Tikal, Guatemala. Unpublished Ph.D. dissertation. Tucson: University of Arizona.

GENDROP, PAUL

1987 Nuevas consideraciones en torno a los estilos Río Bec y Chenes. *Cuadernos de arquitectura mesoamericana* 10: 39-49.

1998 Río Bec, Chenes, and Puuc Styles in Maya Architecture. Culver City(CA): Labyrinthos.

GRUBE, NIKOLAI

2000 Monumentos esculpidos e inscripciones jeroglíficas en el triángulo Yaxha-Nakum-Naranjo. In: *El sitio Maya de Topoxte. Investigaciones en una isla del lago Yaxha, Peten, Guatemala*, edited by W. Wurster: 249-268. Mainz.

2004 La historia dinástica de Naranjo, Petén. *Beiträge zur Allgemeinen und Vergleichenden Archäologie* 24: 195-213.

GUDERJAN, THOMAS

2004 Public Architecture, Ritual, and Temporal Dynamics at the Maya Center of Blue Creek, Belize. *Ancient Mesoamerica* 15: 235-250.

HAMMOND, NORMAN, LAURA KOSAKOWSY, ANNE PYBURN, JOHN ROSE, J. STANEKO, SARA DONAGHEY, C. M. CLARK, MARK HORTON, COLLEEN GLEASON, DEBORAH MUYSKENS & THOMAS ADDYMAN

1988 The Evolution of an Ancient Maya City: Nohmul. National Geographic Research 4(4): 474-495.

HENDON, JULIA

2000 Round structures, household identity, and public performance in Preclassic Maya society. *Latin American Antiquity* 11(3): 299-301.

HERMES, BERNARD

2006 Informe final de los trabajos de investigación arqueológica efectuados por el PDS – Yaxha entre mayo 2005 y mayo 2006. Unpublished manuscript on file. Guatemala: Programa de Desarrollo Sostenible de Peten.

HERMES, BERNARD, ZOILA CALDERÓN, JUSTYNA OLKO & JAROSŁAW ŹRAŁKA

2001 *Memoria anual de actividades. Unidad de arqueología local, año 2001.* Unpublished manuscript on file, Proyecto Triángulo. Guatemala: Instituto de Antropología e Historia.

HERMES, BERNARD, PAULINO MORALES & SEBASTIAN MÖLLERS

1999 Investigación arqueológica en Yaxha, Peten: La Calzada del Lago y La Vía 5. In: XII Simposio de Investigaciones Arqueológicas en Guatemala 1998, edited by J.P. Laporte, H. Escobedo, and A.C. Monzón de Suasnavar: 115-147. Guatemala: Museo Nacional de Arqueología e Etnologia. Ministerio de Cultura y Deportes, Instituto de Antropología e Historia de Guatemala, Asociación Tikal.

HERMES, BERNARD & JAROSŁAW ŹRAŁKA

2008 La ocupación del periodo Clásico Terminal en Nakum, Peten. *Antropologia e Historia de Guatemala* III(7): 49-104

JONES, CHRISTOPHER

2003 The Tikal Renaissance and the East Plaza Ball Court. In: *Tikal: Dynasties, Foreigners, and Affairs of State*, edited by Jeremy A. Sabloff: 207-225. Santa Fe: School of American Research Press.

KOWALSKI, JEFF K.

1987 The House of the Governor: A Maya Palace at Uxmal, Yucatan, Mexico. Norman: University of Oklahoma Press.

LAPORTE, JUAN PEDRO

1993 Architecture and Social Change in Late Classic Maya Society: The Evidence from Mundo Perdido, Tikal. In: *Lowland Maya Civilization in the Eighth Century A.D.*, edited by J. Sabloff and J. Henderson: 299-320. Washington, D.C.: Dumbarton Oaks Research Library and Collection.

2004 Terminal Classic Settlement and Polity in the Mopan Valley, Peten, Guatemala. In: *The Terminal Classic in the Maya Lowlands: Collapse, Transition, and Transformation*, edited by A. Demarest, P. Rice and D. Rice:195-230. Boulder: University Press of Colorado.

LAPORTE, JUAN PEDRO & HÉCTOR MEJÍA

2002 Tras la huella del Mopan: arquitectura del Clásico terminal y del posclásico en el sureste de Peten. In: XV Simposio de Investigaciones Arqueológicas en Guatemala, 2001, edited by J.P. Laporte, H. Escobedo and B. Arroyo: 65-95. Guatemala: Ministerio de Cultura y Deportes, Instituto de Antropología e Historia de Guatemala, Asociación Tikal.

LAPORTE, JUAN PEDRO & HEIDY QUEZADA

1998 Un acercamiento al postclásico en el sureste de Petén. In: *XI Simposio de Investigaciones Arqueológicas en Guatemala, 1997*, edited by J.P. Laporte and H. Escobedo: 729-754. Guatemala: Ministerio de Cultura y Deportes, Instituto de Antropología e Historia de Guatemala, Asociación Tikal.

LECOUNT, LISA

2005 Continuity and Change in the Ceramic Complex of Xunantunich During the Late and Terminal Classic Periods. In: *Geographies of Power: Understanding the Nature of Terminal Classic Pottery in the Maya Lowlands* (BAR International Series 1447), edited by S. López Varela and A. Foias: 93-106, Oxford.

LECOUNT, LISA, JASON YAEGER, RICHARD LEVENTHAL & WENDY ASHMORE

2002 Dating The Rise And Fall Of Xunantunich, Belize: A Late And Terminal Classic Lowland Maya Regional Center. *Ancient Mesoamerica* 13(1):41-63.

MARTIN, SIMON & NIKOLAI GRUBE

2000 *Chronicle of the Maya Kings and Queens: Deciphering the Dynasties of the Ancient Maya,* 1st edition. London: Thames and Hudson.

2008 Chronicle of the Maya Kings and Queens: Deciphering the Dynasties of the Ancient Maya, 2nd edition. London: Thames and Hudson.

MARTÍN DÍAZ, ANA & PETER SCHMIDT

2009 Grafitos en Chichén Itzá, *Cuadernos de arquitectura y arqueología maya* 2 (*Los grafitos mayas*), edited by C. Vidal Lorenzo and G. Muñoz Cosme: 77-92. Valencia: Universitat Politècnica de València.

MARQUINA IGNACIO

1964 Arquitectura Prehispánica. Mexico: INAH.

MASSON, MARILYN & SHIRLEY BOTELER MOCK

2004 Ceramics and Settlement Patterns at Terminal Classic-period Lagoon Sites in Northeastern Belize. In: *The Terminal Classic in the Maya Lowlands: Collapse, Transition, and Transformation*, edited by A. Demarest, P. Rice and D. Rice: 367-401. Boulder: University Press of Colorado.

MCANANY, PATRICIA & TOMÁS GALLARETA NEGRÓN

2010 Bellicose Rulers and Climatological Peril? Retrofitting Twenty-First-Century Woes on Eight-Century Maya Society. In: *Questioning Collapse: Human Resilience, Ecological Vulnerability, and the Aftermath of Empire*, edited by P. McAnany and N. Yoffee: 142-175. New York: Cambridge University Press.

MORALES, PAULINO

1993 Estructuras de planta circular: nuevas referencias para las tierra bajas mayas centrales. In: *VI Simposio de Investigaciones Arqueológicas en Guatemala*, edited by J.P. Laporte, H. Escobedo and S. Villagran de Brady: 311-319. Guatemala: Museo Nacional de Arqueología e Etnología.

OLKO, JUSTYNA

2010 Meksyk przed konkwistą. Warszawa: Państwowy Instytut Wydawniczy.

PENDERGAST, DAVID

1981 Lamanai, Belize: Summary of Excavation Results, 1974-1980. *Journal of Field Archaeology* 8: 29-53. 1982 *Excavations at Altun Ha, Belize, 1964-1970*, vol. 2. Toronto: Royal Ontario Museum.

POLLOCK, HENRY E. D.

1980 The Puuc: An Archaeological Survey of the Hill Country of Yucatan and Northern Campeche, Mexico, Memoirs of the Peabody Museum, Vol. 19. Cambridge (MA): Peabody Museum of Archaeology and Ethnology, Harvard University.

PROSKOURIAKOFF, TATIANA

1962 Civic and Religious Structures at Mayapan. In: *Mayapan, Yucatan, Mexico* (Carnegie Institution of Washington, Publication 619), edited by H. E. D. Pollock, R. Roys, T. Proskouriakoff, and L. Smith. Washington D.C.

QUINTANA, OSCAR & WOLFGANG WURSTER

2002 Un nuevo plano del sitio Maya de Nakum, Peten, Guatemala. Beiträge Zur Allgemeinen und Vergleichenden Archäologie 22: 243-275. Mainz.

REENTS-BUDET, DORIE

1994 Painting the Maya Universe: Royal Ceramics of the Classic Period. Durham and London: Duke University Press, in association with Duke University Museum of Art.

RICE, DON

1986 The Peten Postclassic: A Settlement Perspective. In: *Late Lowland Maya Civilization: Classic to Postclassic*, edited by J. Sabloff and W. Andrews: 301-344. Albuquerque: School of American Research and University of New Mexico Press.

RICE, PRUDENCE & DONALD FORSYTH

2004 Terminal Classic-Period Lowland Ceramics. In: *The Terminal Classic in the Maya Lowlands: Collapse, Transition, and Transformation*, edited by A. Demarest, P. Rice and D. Rice: 28-59. Boulder: University Press of Colorado.

RICE, PRUDENCE & DON RICE

1985 Topoxte, Macanche, and the Central Peten Postclassic. In: *The Lowland Maya Postclassic*, edited by A. Chase and P. Rice. Austin: University of Texas Press.

2004 Late Classic to Postclassic Transformations in the Peten Lakes Region, Guatemala. In: *The Terminal Classic in the Maya Lowlands: Collapse, Transition, and Transformation*, edited by A. Demarest, P. Rice and D. Rice: 125-139. Boulder: University Press of Colorado.

RINGLE, WILLIAM, TOMÁS GALLARETA NEGRON & GEORGE J. BEY III

1998 The Return of Quetzalcoatl: Evidence for the Spread of a World Religion During the Epiclassic Period. *Ancient Mesoamerica* 9(2): 182-232

RUPPERT, KARL

1952 Chichen Itza: Architectural notes and plans (Carnegie Institution of Washington, Publication 595). Washington D.C.

SCHELE, LINDA & DAVID FREIDEL

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

SCHWARZ, KEVIN

2009 Eckixil: Understanding the Classic to Postclassic survival and transformation of a Peten Maya village. *Latin American Antiquity* 20(3): 413-441.

SÉJOURNÉ, LAURETTE

1966 Arquitectura y pintura en Teotihuacan. Mexico: Siglo XXI Editores.

1969 Teotihuacan, métropole de l'Amérique. Paris: F. Maspero.

SHARER, ROBERT & LOA TRAXLER

2006 The Ancient Maya. Stanford (CA): Stanford University Press.

SMITH, LEDYARD

1950 *Uaxactun, Guatemala: Excavations of 1931-1937* (Publication 588). Washington D.C.: Carnegie Institution of Washington.

STUART, DAVID, GEORGE STUART

2008 Palenque: Eternal City of the Maya, London: Thames & Hudson.

SWEZEY, WILLIAM & BENTE BITTMAN

1983 El rectángulo de cintas y el *patolli*: nueva evidencia de la antigüedad, distribución, variedad y formas de practicar este juego precolombino. *Mesoamerica* 6: 373-416.

SZYMAŃSKI. JAN

2010 Round Structures in Pre-Columbian Maya Architecture. In: *Polish Contributions in New World Archaeology*, New Series, Fasc. 2, edited by J.K. Kozłowski and J. Źrałka: 35-72. Cracow: Polish Academy of Arts and Sciences and Jagiellonian University.

TAUBE, KARL

1992 The Major Gods of Ancient Yucatan, Washington D.C.: Dumbarton Oaks Library and Collection.

2000 The Symbolism of Wind in Mesoamerica and the American Southwest. In: *The Road to Aztlan: Art from a Mythic Homeland*, edited by V. Fields and V. Zamudio-Taylor: 102-123. Los Angeles: County Museum of Art.

TOURTELLOT, GARY M. & JASON GONZÁLEZ

2004 The Last Hurrah: Continuity and Transformation at Seibal. In: *The Terminal Classic in the Maya Lowlands: Collapse, Transition, and Transformation*, edited by A. Demarest, P. Rice and D. Rice: 60-82. Boulder: University Press of Colorado,.

TOURTELLOT, GAIR, JEREMY SABLOFF, & KELLI CARMEAN

1992 "Will the Real Elites Please Stand Up?": An Archaeological Assessment of Maya Elite Behaviour in the Terminal Classic Period. In: *Mesoamerican Elites: An Archaeological Assessment*, edited by D. Chase and A. Chase: 80-98. Norman and London: University of Oklahoma Press.

VALDÉS, JUAN ANTONIO & FEDERICO FAHSEN

2004 Disaster in Sight: The Terminal Classic at Tikal and Uaxactun. In: *The Terminal Classic in the Maya Lowlands: Collapse, Transition, and Transformation*, edited by A. Demarest, P. Rice and D. Rice: 140-161. Boulder: University Press of Colorado.

WURSTER, WOLFGANG (ED.)

2000 El sitio Maya de Topoxte. Investigaciones en una isla del lago Yaxha, Peten, Guatemala. Mainz am Rhein: Verlag Phillip von Zabern.

YAEGER, JASON & DAVID HODELL

2008 The Collapse of Maya Civilization: Assessing the Interaction of Culture, Climate, and Environment. In: *El Niño, Catastrophism, and Culture Change in Ancient America*, edited by D. Sandweiss and J. Quilter: 187-242. Washington, D.C.: Dumbarton Oaks Research Library and Collection.

ŹRAŁKA, JAROSŁAW

2008 Terminal Classic Occupation in the Maya Sites Located in the Area of Triangulo Park, Peten, Guatemala. *Prace Archeologiczne*, No. 62. Cracow: Jagiellonian University Press.

ŹRAŁKA, JAROSŁAW & WIESŁAW KOSZKUL

2007 The Nakum Archaeological Project: Investigations on the Banks of the Holmul River, final report submitted to the Foundation for the Advancement of Mesoamerican Studies, Inc. (FAMSI). Available online at: www.famsi.org/reports/06022/index.html

ŹRAŁKA, JAROSŁAW, WIESŁAW KOSZKUL, SIMON MARTIN & BERNARD HERMES

2011 In the path of the Maize God: a royal tomb at Nakum, Peten, Guatemala. Antiquity 85(3): 890-908.