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EN COUVERTURE
Trois figurines d'ivoire de site prédynastique de Tell el-Farkha

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Archaeological Investigations at Nakum, Peten, Guatemala: New Data on the Site's Development and the Discovery of a Royal Tomb

Introduction

Maurice de Perigny discovered Nakum in 1905 and investigated the site again in 1910 and 1911 (for location and map of the site see Figures 1 and 2). Since then, the site has been researched by many expeditions and scholars; in particular, the Eighth Expedition from the Peabody Museum (Tozzer 1913); several expeditions from the Carnegie Institution of Washington (Morley 1938) and later, by Nicholas Hellmuth (1975; 1992). However, the expeditions conducted limited excavations while focusing on preparing or correcting plans of the site and documenting existing stelae. In the 1980's, Nakum attracted the interest of the *Instituto de Antropología e Historia de Guatemala* (IDAEH), which initiated the protection of buildings threatened by erosion and collapse. In addition, intensive archaeological excavations were started at the site by the IDAEH under the Triangulo Project in the 1990's, and are still in progress (Quintana, Wurster 2002; Hermes, Calderón 1999; 2000; Hermes *et al.* 2001; Calderón, Toraya 2002; Calderón *et al.* 2003; Calderón *et al.* 2004; Calderón, Matute 2005). This research has significantly advanced the understanding of the construction history of the site and its cultural development through time (Hermes 2002;

Hermes, Calderón 2002). Additionally, in 2006, a new project known as the Nakum Archaeological Project was also established by Jagiellonian University, Cracow, Poland. This project focuses on several important questions concerning Maya archaeology, particularly during the Early and Terminal Classic periods.

Previous Triangulo Project investigations at the site had revealed that Nakum was settled in the Middle Preclassic period, as indicated by Pre-Mamon ceramics discovered at several locations in the site (Hermes 2002). The earliest evidence of construction activity, however, dates to the end of this period, when original stages of the most important Nakum complexes were built (i.e., the triadic complex adorned with stucco masks in the Central Acropolis). In the Late Preclassic period Nakum experienced an impressive architectural boom discernible in many buildings and complexes at the site. All previous structures underwent significant remodelling with the addition of many new constructions, particularly in the second half of this period. The beginning of the Early Classic in the site resembles the situation of many other Lowland Maya centres: architectural activity at this time was considerably diminished as compared to the previous

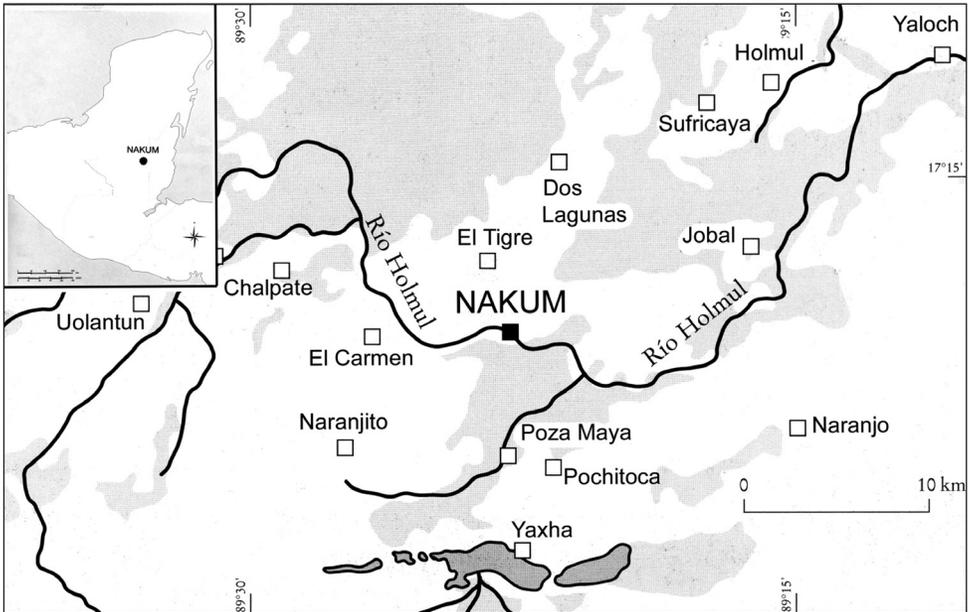


Fig. 1. Map of the area around Nakum, Peten, Guatemala (after Quintana, Wurster 2002)

period. Early Classic activity at Nakum seems to be limited to the area of Patio 1 in the Acropolis complex. In the second part of this period, the northeastern, northern, western and at least some parts of the southern side of the patio were rebuilt in the *talud-tablero* style (cf. Koszkuł *et al.* 2006; Hermes *et al.* 2006). In the Late Classic period, Nakum saw a continuation of significant growth. During this epoch the original versions of the structures around the Central Plaza were probably built and many earlier buildings were greatly enlarged. But it is the Terminal Classic activity at this site that is particularly interesting. During the Terminal Classic, when most neighbouring sites were in decline, Nakum experienced enormous architectural and political growth. As the result of this activity, the final version of the Acropolis was formed, consisting of twelve courtyards surrounded mostly by residential structures. The site probably collapsed

ca. AD 950. Investigations at Nakum have not detected any construction activity in the Early Postclassic period, although some minute traces of human existence have been documented (Hermes 2002; Hermes, Calderón 2002).

Sixteen stelae and ten altars have been discovered at Nakum so far but only three of them are sculpted. These three stelae date to the Late and Terminal Classic periods: Stela U—AD 771; Stela C—AD 815; Stela D—AD 849. The text from Stela C is the best-preserved and in the A8 has the only known example of a probable toponym of Nakum (cf. Grube 2000).

The Nakum Archaeological Project (NAP)

May of 2006 saw the first excavating season of the Nakum Archaeological Project. The focus of the Project was to investigate the Early and Terminal Classic periods in

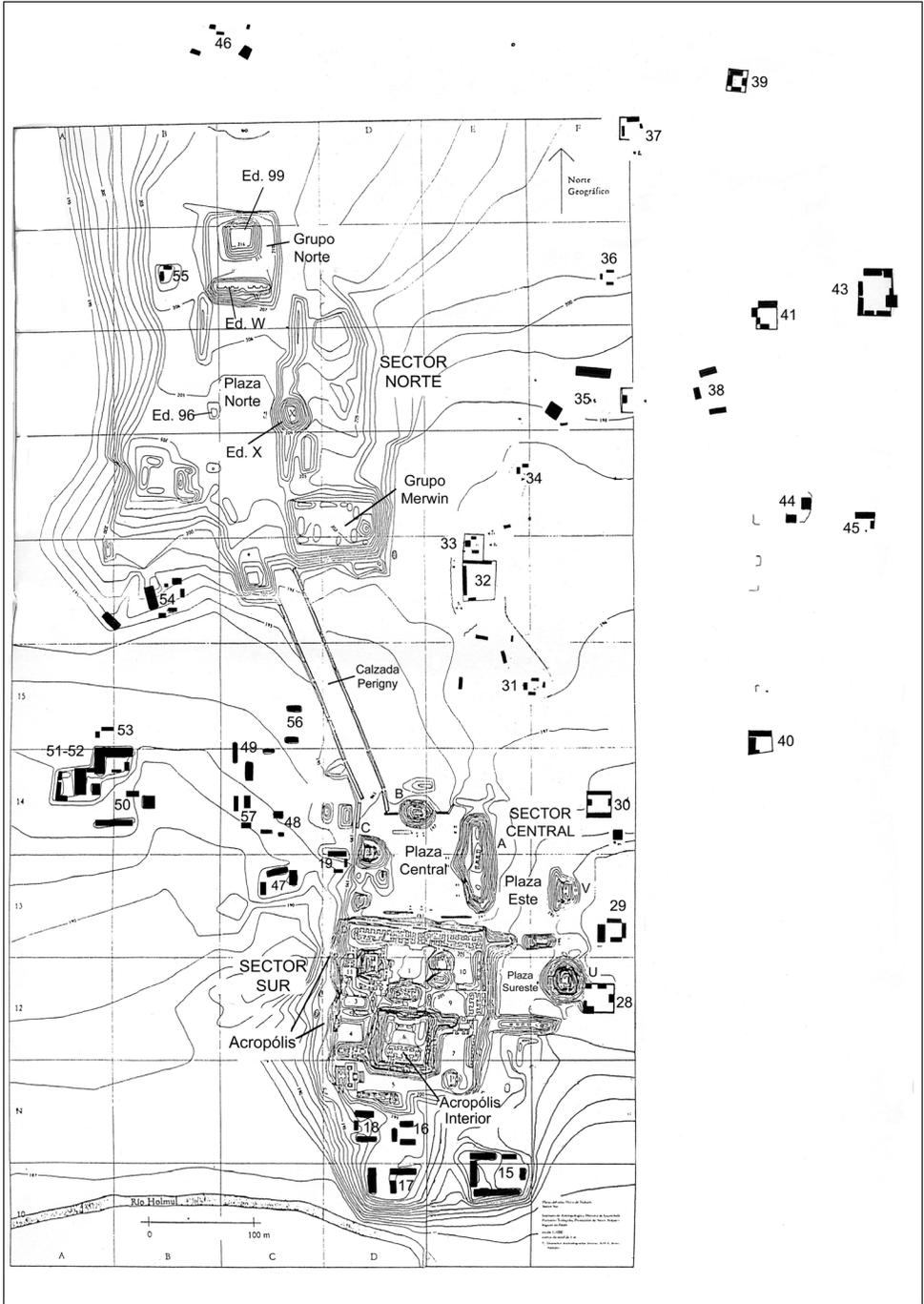


Fig. 2. Map of Nakum (after Quintana, Wurster 2002)

Nakum: analysis of the earlier Triangulo Project excavations at the site had suggested its development as being of particular interest in these two periods. In the Early Classic, for example, the *talud-tablero* style appeared in Nakum architecture, as well as some green obsidian artifacts, implying contacts with the Teotihuacan culture, presumably through Tikal. These contacts may have been the result of the activity of Siyaj K'ak' in Peten at that time. In the Terminal Classic, while most neighbouring sites were collapsing, Nakum was experiencing enormous architectural growth and activity. Taking into account all these data, the site was chosen for analyzing two significant issues in Maya archaeology: (i) the Teotihuacan-Maya relations in the Early Classic and (ii) the nature of Classic Maya collapse in the Terminal Classic. Thus, our excavations in the site concentrate particularly on the complexes and buildings which may yield interesting data related to these two periods. Besides these two main goals, the Project also had other objectives, such as a study of Nakum's elite by investigating several patio groups located on the periphery of the site as well as by excavating a number of structures in the core area in order to ascertain their function, constructional sequence, and dating.

The first field season of the NAP lasted six weeks and the Project itself is planned for at least several years. The Project is conducted under the auspices of the Institute of Archeology of the Jagiellonian University, and is being directed by Dr. Jarosław Żrałka and Wiesław Koszkul, M.A.

Early Classic and the Teotihuacan contacts at Nakum

As already mentioned, the Triangulo Project excavations uncovered four Tzakol 3 *talud-tablero* structures located around the centrally-situated Patio 1 in the Southern

Sector of the site (cf. Fig. 3). In this area some green obsidian artefacts and an offering consisting of a cylindrical tripod vessel with an inverted basal-flanged bowl placed inside were also found (Koszkul *et al.* 2006; Hermes *et al.* 2006). The NAP excavations have focused on the eastern side of the patio (Fig. 4a), where Structure 15 covers the eastern *talud-tablero* platform. This area has remained practically unexplored up to this point and has been selected for investigating the architectural details of the *talud-tablero* facade of Structure 15 Sub-3 (the structure was denominated earlier as 14/15 Sub-1), as well as to study its upper surface in the centre (presently covered by Structures 15 and 14) in search of the remains of a superstructure which it had probably supported in the Tzakol 3 phase.

Another objective related to the *talud-tablero* structures has been to verify whether these platforms were four entirely separate buildings, or whether they were merged together at their corners, forming a sunken patio in the centre. We have hypothesized that they were merged together and, to corroborate this assumption, we opened a test pit in the hypothetical location where the *talud-tablero* platforms D Sub-6 and 15 Sub-3 should have joined each other (Op. VI, Suboperation 1, northeastern corner of Patio 1). Several dozens of centimetres below the surface, we found the upper moulding of Structure 14/15 Sub 1 and then, the corner itself, where the two platforms were indeed merged together (Fig. 4b). Therefore, the patio was completely closed from the north-eastern side, and we speculate that the structures in the north-western and probably south-western corners of the patio likewise merged (cf. Fig. 5). The southern part of the patio from this time is little known because the *talud-tablero* structure there (G Sub-2) was detected only in one point. In the case of the eastern structure (15 Sub-3), only the

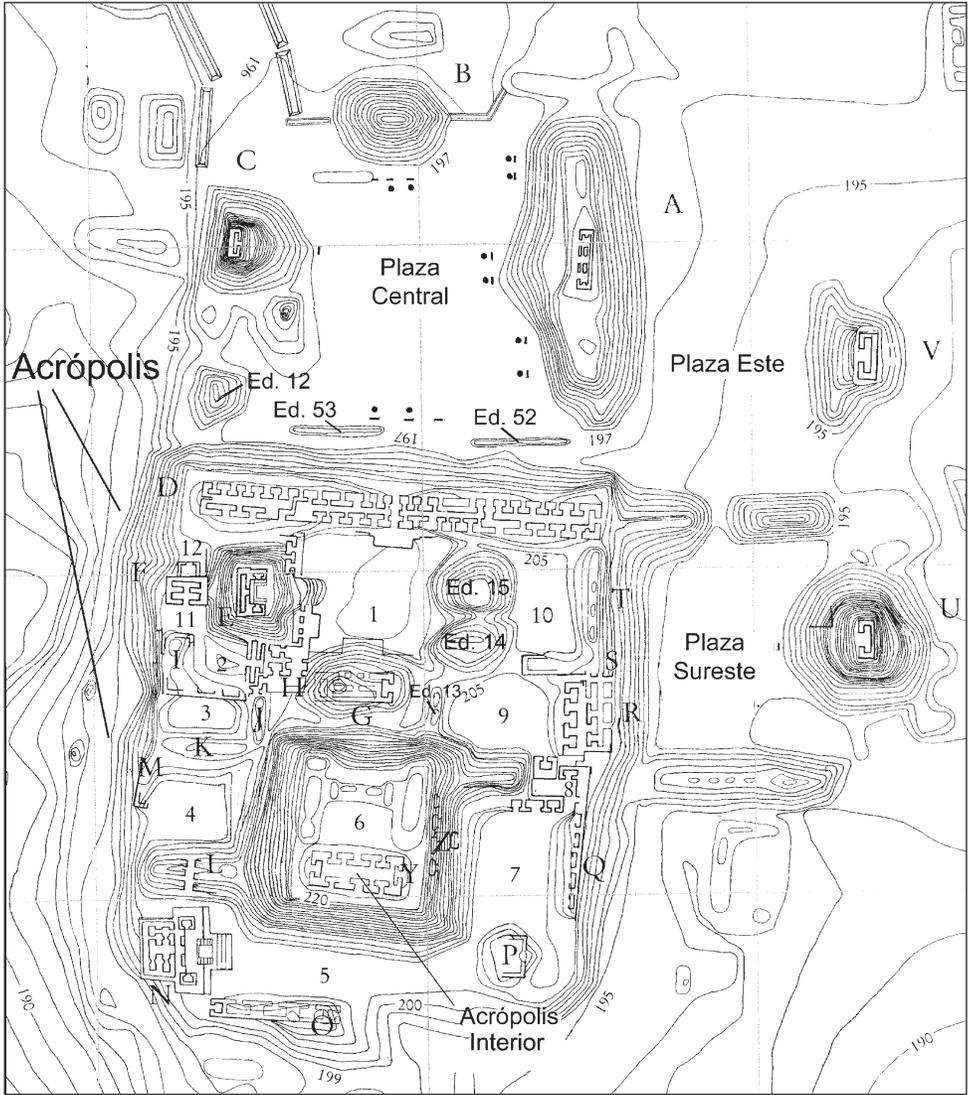


Fig. 3. Map of the Southern Sector, Nakum (after Quintana, Wurster 2002)

northern part of it was unearthed in 2006, and further investigation of the structure is warranted in order to establish the style of its facade and the character of the patio from the eastern side. It seems, however, that Patio 1 was enclosed by *talud-tablero* structures at least from its north-eastern,

northern, western and southern side, forming a sunken courtyard in the centre¹. The

¹ Investigations carried out in the 2007 season at the eastern part of Patio 1 revealed that since the Proto-classic period, there were two structures at this location (now referred to as 14 Sub-1 and 15 Sub-1). In

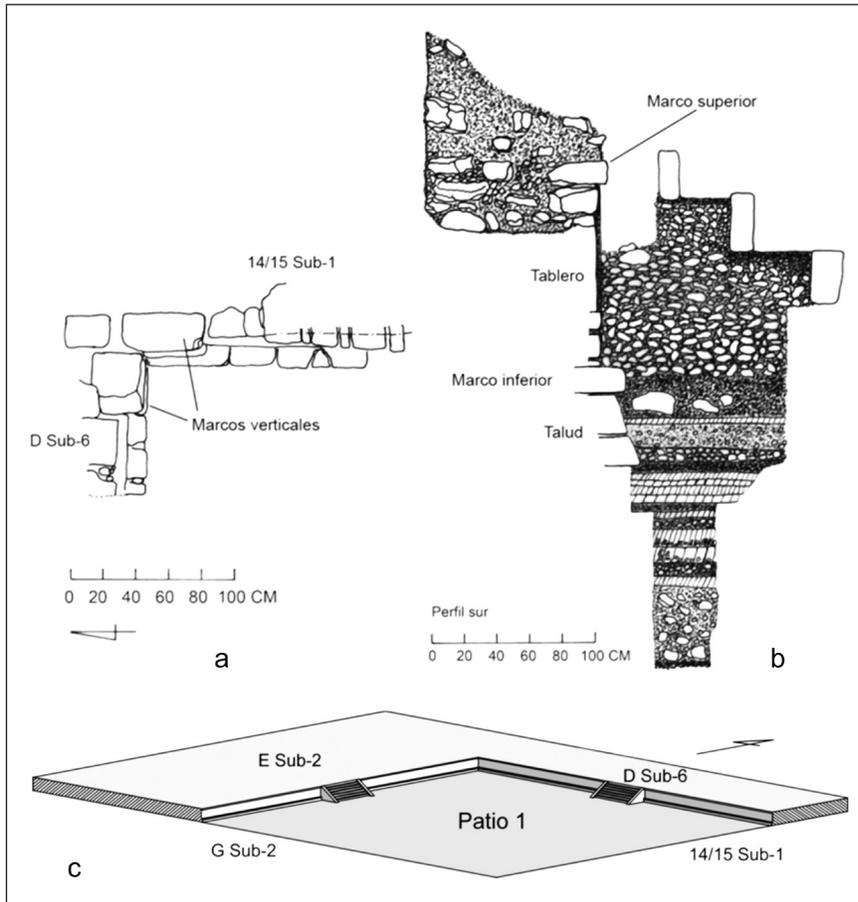


Fig. 5. (a) Plan of the merged Structures D Sub-6 and 15 Sub-3 in the northeastern corner of Patio 1 (drawing by W. Koszkul); (b) south profile in Op. VI, Suboperation 6 with *talud-tablero* facade covered by stairs added later (drawing by W. Koszkul); (c) reconstruction of Patio 1 with *talud-tablero* structures in the Tzakol 3 phase, Nakum (drawing by A. Witkowska and W. Koszkul)

talud-tablero platforms were approximately 2 meters high, and the patio enclosed by them was very large, ca. 46×49 meters long (for more information, see Koszkul *et al.* 2006).

The upper part of the tablero of Structure 15 Sub-3 was also exposed in a trench

running southward from the corner. At the southern end of the trench, another test pit was opened (Op. VI, Suboperation 5) for uncovering the *talud-tablero* facade, and creating a short tunnel in it; the investigations revealed details of the construction technique used to build the *talud-tablero* façades (cf. Fig. 6; see also Koszkul *et al.* 2006).

In Suboperations 2 and 4, located between Structures 14 and 15, the lower terraces of

during the 2007 season will be presented in one of the next volumes of „Recherches Archéologiques“.

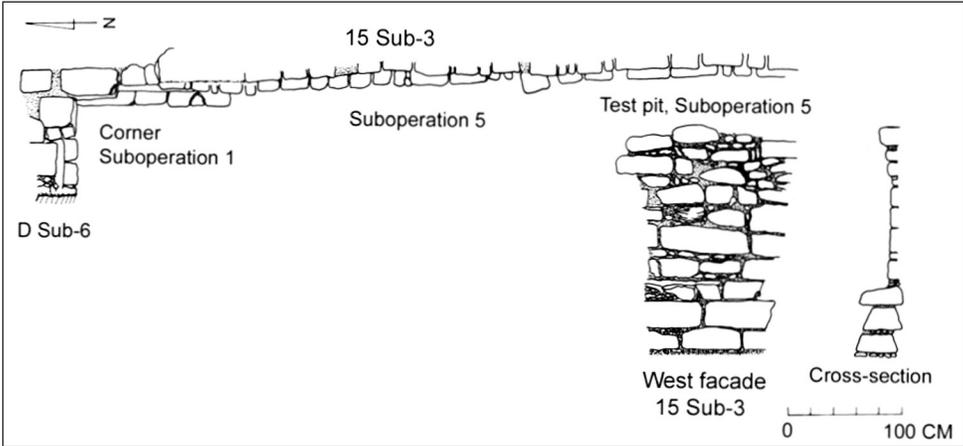


Fig. 6. Talud-tablero facade of Structure 15 Sub-3 in Op. VI, Suboperation 5, Nakum (drawing by W. Koszkuł)

these structures were documented (Fig. 7), and in Suboperation 4 we eventually reached a N–S oriented structure, which must have been part of the eastern platform from the Early Classic period. In order to find the southern extension of the eastern structure, a test pit was opened in Suboperation 6 located at the foot of the southern facade of Structure 14. Using data from Suboperation 1 and 5, we marked the hypothetical line of the facade of structure 14/15 Sub-1 and opened the pit at this location. During excavations, the remains of two stairways joining Patio 9 to Structure 14 were found (dated probably to the Late or Terminal Classic periods). Beneath these stairways, a series of six floors that were above a N-S oriented stucco-covered construction were found. The upper part of the construction was connected to Patio 1 by a stucco-covered stairway (in 2006, we uncovered two upper steps thereof). In the forthcoming seasons, we will continue our investigations in these test pits (Suboperations 2, 4, 5 and 6), in order to proceed to the Tzakol 3 layers and constructions.

The test pit in Suboperation 6 was used also as a “laboratory” for the detailed

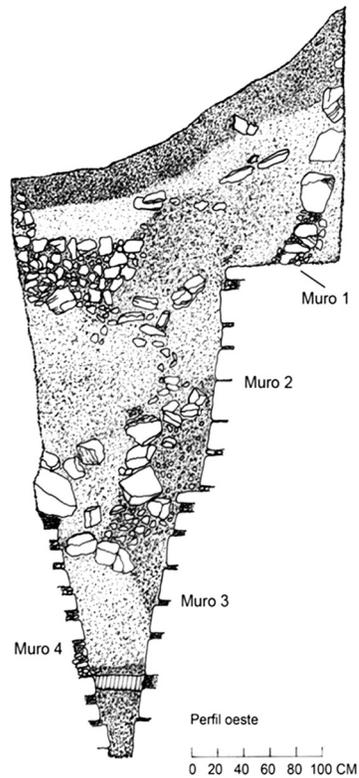


Fig. 7. Lower terraces of Structures 14 and 15 in Op. VI, Suboperation 2, Nakum (drawing by W. Koszkuł and B. Pilarski)

observation of certain features related to the technique employed in the construction of floors, walls, etc. For example, while carefully excavating the floors of the test-pit, apart from ceramics, we also found pieces of charcoal which allow for the verification of ceramic dating of these floors. Floors in other test-pits also contained similar remains. Charcoal is sometimes found in the floors and in stuccos of the facades as a residue from the burning of lime. We plan to use this charcoal for the absolute dating of the floors and plasters. Sometimes it is highly time-consuming to retrieve a sufficient sample of charcoal, but the results could prove very interesting; many floors contain both ceramic materials and charcoal, though some of them (especially where an additional floor was built directly upon another), are scarce on ceramics, if indeed there are any. Therefore, charcoal sometimes provides the only available means of dating the floors, although we must also bear in mind that it might have been reused during the process of burning lime.

Investigations of Structure 15: Offerings 3 and 4, and Tomb 1

In the area of Patio 1, another important goal of the Project is to investigate Structure 15 with a view to study its function, dating and construction stages as well as to check whether this construction also contains tombs. Based on archaeological data from Caracol and Tikal (Chase, Chase 1994; 2004), Wieslaw Koszkuł has hypothesized that structures located on the eastern sides of the plazas at Nakum may also contain important tombs. The dominant structure built on the eastern side of a plaza in the Tikal Plaza Plan 2 complexes is identified as a funeral structure of the family that inhabited a given architectural group. It is assumed that burials found in these eastern structures may have belonged to the extended family

founders or other important family/lineage members (cf. Becker 1971; 1999). The same pattern was documented, among others, at Caracol, where many eastern structures contained well-furnished tombs (Chase, Chase 1987; 1994). Locating such a tomb in Nakum would contribute to bolstering the knowledge of ancient Nakum elites and of the Maya culture at that site. For this purpose, a test-pit was opened on the summit of Structure 15, where two offerings as well as the first tomb in Nakum have been found.

Structure 15, located on the eastern side of Patio 1, is a large twelve-meter high pyramid, almost quadrangular and flat at the summit (cf. Fig. 3). The investigations of the Project indicate that it did not support any vaulted building in the final phases of its use; only stone foundations for a superstructure, built of perishable material (probably a temple) were found (cf. Fig. 8). The ceramic material excavated above Floor 1 suggests a Terminal Classic date for the constructions built on it (Walls 1–3), whereas the ceramics found between Floor 2 and Floor 1 imply a Late Classic dating of this layer and Wall 4.

Excavations were extended towards the east and the north. In the new eastern profile of the test pit, Offering 4 was found almost directly below the surface (cf. Fig. 9). The offering consisted of an *olla* of the Cambio Unslipped type covered with a ceramic sherd; inside the vessel, there were three black rings with carved representations of human faces on the outer surface, as well as six stone beads and the remains of bones. Each of these rings are carved in soft black material and are rather wide, like western signets (Fig. 10). The stratigraphic location of the *olla* suggests that it belongs to the Terminal Classic.

The slabs which covered the tomb were found ca. 1.75 m below the surface of the summit of Structure 15. To the east of them,

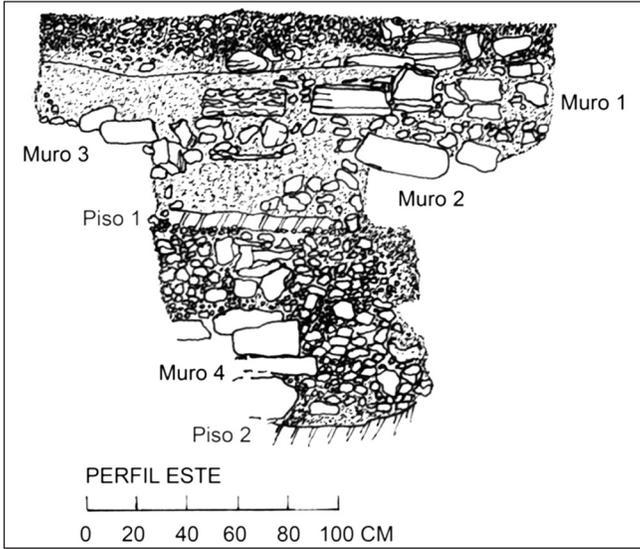


Fig. 8. East profile no 1 in Op. VI, Suboperation 3, with documented remains of last constructions on the summit of Structure 15, Nakum (drawing by W. Koszkul)

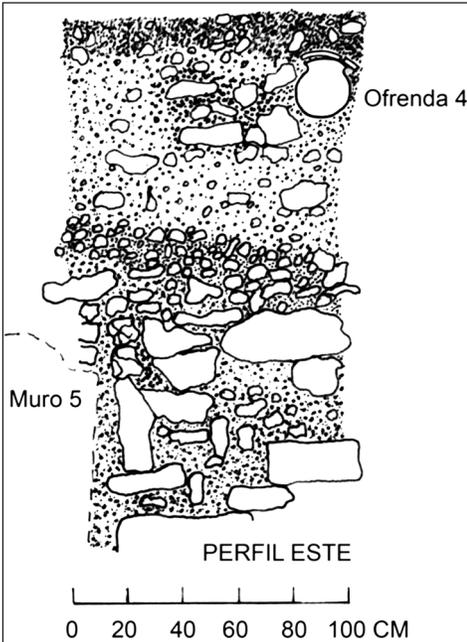


Fig. 9. East profile no 2 in Op. VI, Suboperation 3, with the Offering 4 visible in its upper part, Structure 15, Nakum (drawing by W. Koszkul)



Fig. 10. Signets discovered inside the vessel in Offering 4, Structure 15, Nakum

an additional three slabs covering an offering were encountered (cf. Fig. 11). The offering (Offering 3) is stratigraphically later than the tomb and it was formed as a cist lined with cut stones at its northern, eastern and southern sides. Offering 3 included two vessels: a Saxche Orange Polychrome tripod plate and a Tinaja Red bowl. The first vessel was ritually smashed with a large cut stone which was found inside that vessel supporting one of the slabs which covered the offering (Fig. 12). A greenstone tube 12 cm long was also uncovered between the two vessels; it was broken into two pieces, probably also

with a stone found lying diagonally next to the tube. The offering was dated ceramically to the Late Classic period.

The tomb encountered in Structure 15 is the first that has been discovered at Nakum. It was built on the central E–W axis of the structure and was very large, ca. 4.55 m long in the north-south direction, 1.50 m wide and ca. 2.20 m high (Figs. 13 and 14). To construct the tomb, the Maya dug down to the previous floors till they reached a wall built in the N–S direction. The western and northern walls of the tomb were erected on the lower floor, whilst the eastern wall of

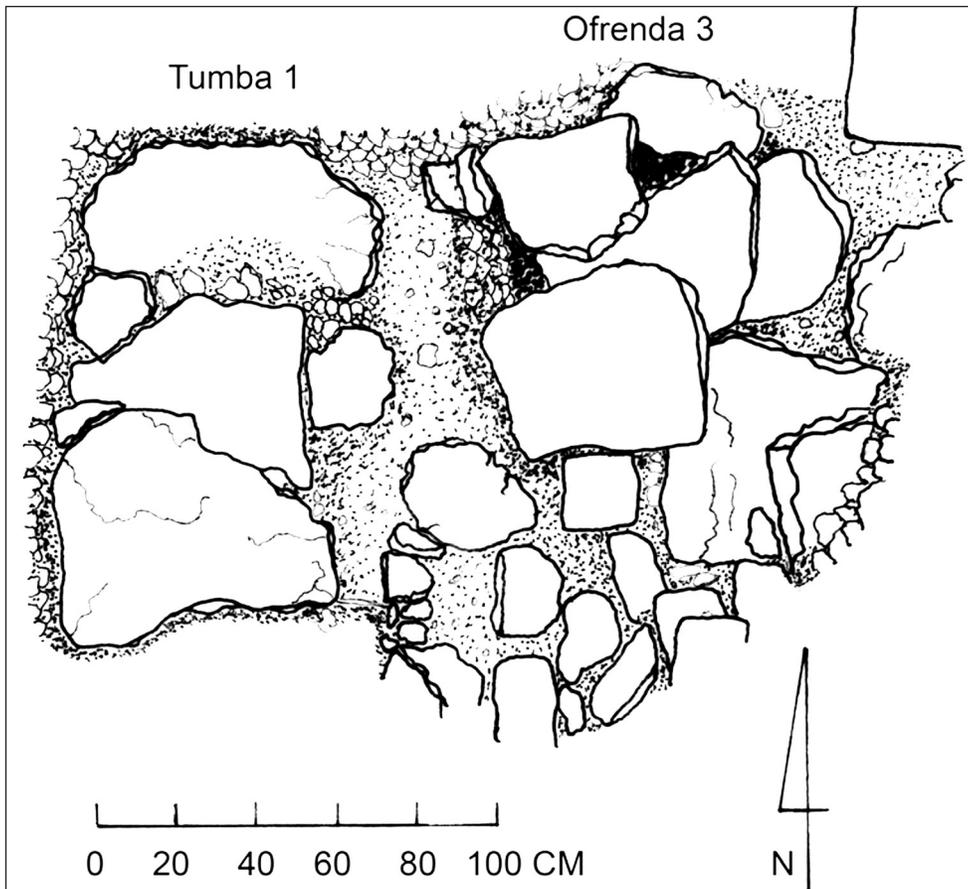


Fig. 11. Slabs which covered the royal tomb and Offering 3, Structure 15, Nakum (drawing by W. Koszkul)

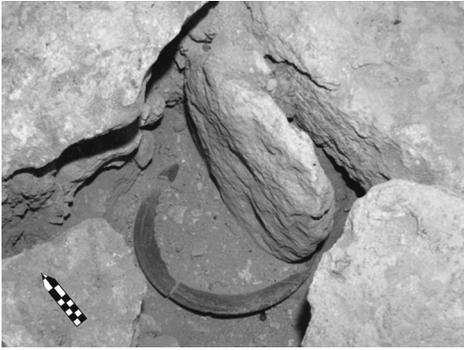


Fig. 12. Part of the Offering 3 with the stone put in the vessel, Structure 15, Nakum

the tomb was built on the above-mentioned wall. The erection of the southern wall began on another, somewhat higher floor, which must have been cut by the Maya during the construction of the tomb (cf. Fig. 14). Below that floor, the southern wall of the tomb was reinforced with mortar mixed with small stones; at some later point, the mortar partially peeled off and fell inside Vessel 2, breaking it into two parts. The different character of the masonry in the upper and central part of the western wall of the tomb suggests that during the construction of the

tomb a rectangular hole was left in this location. Through this hole, which faced the stairs connecting Patio 1 with the summit of this structure, the individual to be buried could be placed inside the chamber.

In the northern part of the tomb, the remains of a human skeleton, its head oriented to the north, were found (Fig. 15). Unfortunately, the skeleton had been almost totally destroyed by rodents that had bitten the bones into small pieces and dragged them around (Fig. 19a); only a few bones were left *in situ*. The skeletal remains of these animals were found at several locations inside the tomb. The bones from the tomb were analysed by Varinia Matute, and her study revealed that the individual buried there might have been between 35 and 45 years old at the time of death. Because of the damage done to the bones by the rodents, however, the sex of the buried person could not be osteologically determined (Matute 2006).

The buried individual was furnished with many rich offerings, including three ceramic vessels (V.1–V.3), four jade ear-spoons (no. 2–5), a jade pectoral (no. 1) and almost five hundred beads of different material and

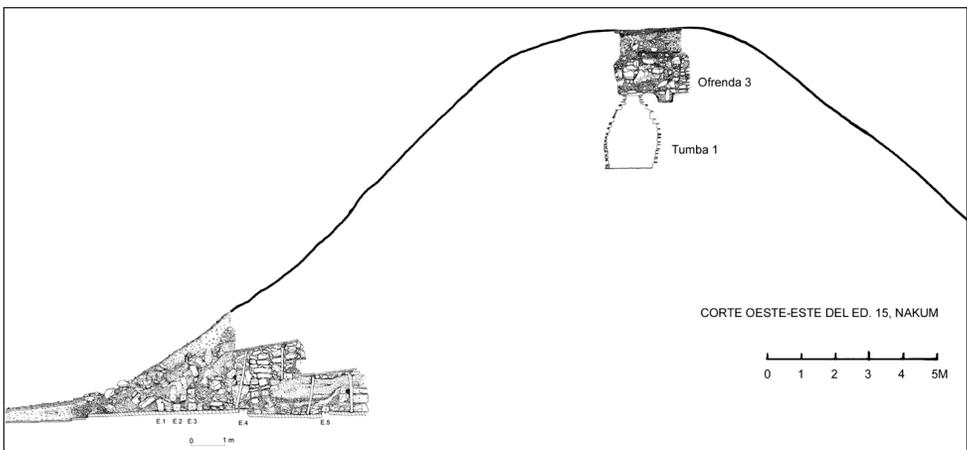


Fig. 13. Cross-section of Structure 15 with north profiles of excavations made on its central west-east axis, Nakum (drawing by W. Koszkul and B. Pilarski)

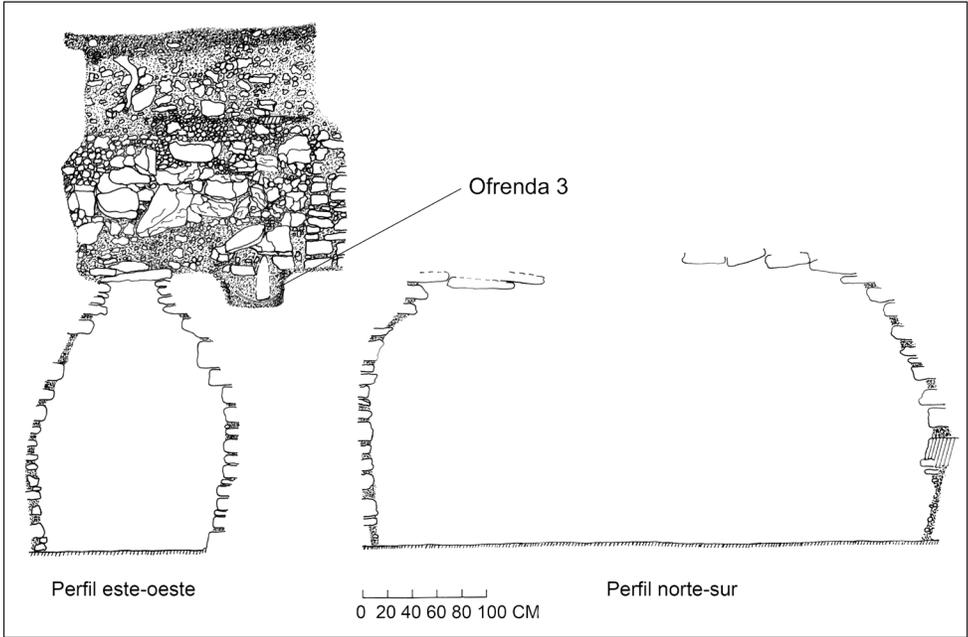


Fig. 14. North profile and the cross sections of the royal tomb, Structure 15, Nakum (drawing by W. Koszkul)



Fig. 15. First moments after entering the tomb and before exploration, Structure 15, Nakum

shapes which were from a main necklace (Concentration 1 [C.1]) and from at least a few or even a dozen other necklaces or chains (Concentrations 2 and 3 [C.2, C.3]) (Fig. 16). During the exploration, the tomb was divided into 215 sectors for artefacts and into 20 sectors for bones, in order to ensure a more accurate documentation of the fine beads and pieces of bones deposited in the layer of soil and dust on the bottom of the burial chamber (ca. 3–7 cm thick).

Three vessels were found in the southern part of the tomb (cf. Figs. 17, 16): Vessel 1 (V.1) is a flat-based bowl of the Azúcar Impressed type, whereas Vessel 3 (V.3) is a flat-based bowl of the Chaquiste Impressed type. Particularly interesting, however, is Vessel 2, a Saxche Orange Polychrome tripod plate. An examination of the vessel's interior revealed the skeleton of a bird as well as pieces of charcoal. A single dancing male figure was painted on the flat interior bottom of the plate (Fig. 18). The figure represents the dancing Maize God and is an excellent example of a Tikal Dancer style plate (cf. Culbert 1993, figs 43a and 48c; Smith 1955, fig. 73a1; Boot 2003). Analysis of all three vessels made by the Project ceramist Bernard Hermes indicates that the tomb can be dated to Tepeu 1 phase or to the transition between Tepeu 1 and Tepeu 2 phases.

In the southern part of the concentration of the largest greenstone beads (C.1) and to the south of the fragments of a skull and ear-spoons, a shell-shaped jade pectoral 10.6 cm long and 4.9 cm wide was found *in situ* (Fig. 19a). Its position indicates that it was part of a necklace containing the greenstone beads (Fig. 19b) and was laid on the dead person's chest. The pectoral had been worn with the longer endings oriented horizontally, the concave side facing outwards, and the convex side turned inwards. In the upper part of the convex side are two suspension holes which end on the side of the pectoral.

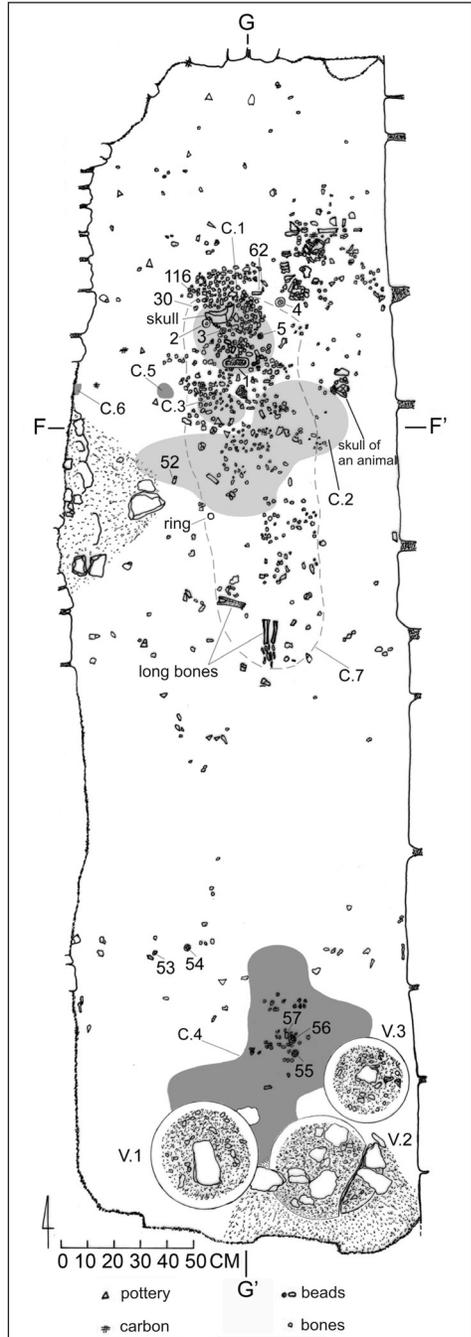


Fig. 16. Plan of the royal tomb, Structure 15, Nakum (drawing by W. Koszkuł and J. Żrałka)



Fig. 17. Three vessels deposited in the southern part of the tomb, Structure 15, Nakum



Fig. 18. Ceramic vessel with the painted representation of the Dancing Maize God discovered in the royal tomb, Structure 15, Nakum



Fig. 19. Jade pectoral and jade beads found in the royal tomb, Structure 15, Nakum

The upper part of the concave side of the pectoral is ornamented with an incision representing an anthropomorphic ancestral figure with elaborate headdress (Fig. 20). Moreover, five glyphs were incised in the centre of its convex side (Fig. 21). The different character of lines in the two incisions suggests that they were probably made by different artists. Nonetheless, the style of the incisions indicates that they could have been made at different times, but presumably within the Early Classic period.

The analysis of the inscription on the pectoral (cf. Fig. 22), carried out, among others, by Simon Martin (Martin 2006; Koszkuł *et al.* 2007), proves that the first glyph refers to the pectoral itself. The second and the third glyphs function as a pair: the second glyph is a toponym with the suffix ‘-ha’ which usually stands for water, while the third one is the *ajaw* glyph. Combined, the two glyphs constitute an emblem glyph meaning ‘the ruler of the ?-ha’. In this case, the emblem glyph precedes the ruler’s name given at the end of the inscription. The fourth glyph is probably the head of some deity, and the fifth glyph presents the head of a serpent and it can be read as *chan*. Recently, David Stuart has also suggested (written information, November 2006) that the second glyph may refer to Yaxha. This gives rise to a number of additional questions concerning the relations between the two cities and the origin of the pectoral. According to Stuart, the fourth glyph represents the head of the Maize God and thus the ruler’s name can be probably read as Ixim Chan. Taking all these data into account, the inscription can be interpreted as follows: “This is the pectoral of the Yaxha ruler Ixim Chan.”

To the west of the upper part of the buried individual, some shells were deposited in two locations (cf. Fig. 16, C.5 and C.6). In the southern part of the tomb, to the north of the vessels, 141 small imperforated shells

were also uncovered (C.4). Moreover, a very narrow shell ring was found in the central part of the tomb, near the presumable position of the right hand of the deceased. Additionally, to the north of the vessels four stone spindle whorls were also deposited (Figs. 23, 16, nos. 54–57).

During the exploration of the tomb, on the floor in the central part of the chamber, a thin layer of some organic remains of dark brown colour was detected, probably the remains of a mat or cloth of the buried individual (C.7). In addition, in the central part of the tomb, close to its western wall, we found a small piece of dark substance (ca. 1×1 cm) with probably some fabric or a different object imprinted on it. Dots and lines are clearly visible on that piece, though more detailed information can be derived only from thorough laboratory research.

Excavations in the Northern Sector

Previous research of the Triangulo Project in the Southern Sector of Nakum proved that many structures and complexes in that area were extensively rebuilt and enlarged during the Terminal Classic period (Hermes 2002; Žračka 2008; Žračka *et al.* 2008). The main objective of our investigations in the lesser-known Northern Sector (Fig. 24) was to verify whether this part of the site was similarly inhabited and had undergone important building programs during this period. Moreover, an important goal of our Project is to reconstruct the architectural history of this part of the site, from its initial settlement to its abandonment.

Our investigation especially focused on excavating the North Group, the largest complex of the Northern Sector. The North Group consists of a large platform that is topped by one long palace-like construction with fourteen chambers (Structure W), one large platform almost flat at the top (Structure 99) and at least two low mounds



Fig. 20. Jade pectoral – concave side with the representation of an ancestor figure, Nakum



Fig. 21. Jade pectoral – convex side with the glyptic inscription, Nakum

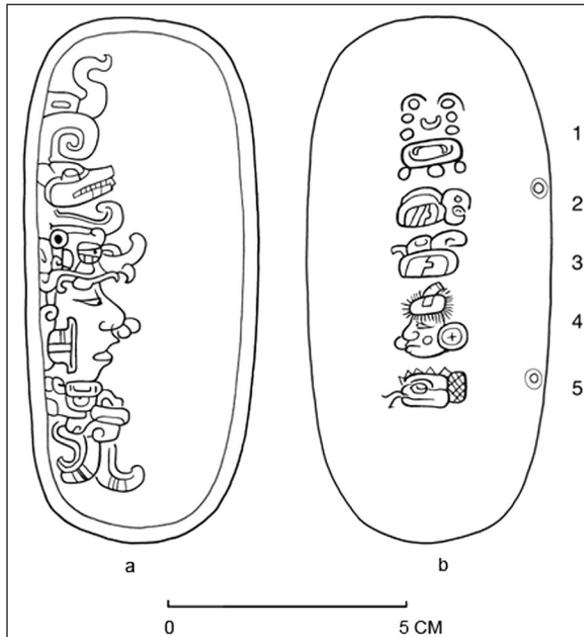


Fig. 22. The Nakum jade pectoral (drawing by S. Martin)



Fig. 23. Spindle whorls discovered in the royal tomb, Structure 15, Nakum

which are most probably part of residential constructions. Each of the above-mentioned structures surround a small courtyard (Fig. 25). Some scholars had supposed that the North Group and other parts of the Northern Sector were in large part abandoned during Terminal Classic times, and that people had moved from here to the southern part of the site. Contrary to these expectations, during our investigations in 2006, numerous traces of Terminal Classic occupation were found in this sector. At the top of Structure 99, extensive excavations brought about the discovery of a superstructure which consisted of five rooms and was dated to the Terminal Classic period (Fig. 26). During the 2006 season, the western and central part of the superstructure was excavated. In the 2007 season it was completely uncovered and its exact form and dimensions were measured. The whole construction measured ca. 16 m (E–W) by 9.20 m (N–S). The main access to the superstructure was located at its southern side which had three doorways. The lower parts of the walls of this superstructure were constructed from small and medium size stones. Its upper part and roof were made from perishable materials. The floor in the northern and north-western part of this superstructure was strewn with numerous

broken vessels, axes (fragments and entire artefacts), fragments of *manos*, figurines, and two pieces of greenstone. The majority of these artefacts dated from the Terminal Classic, although Late Preclassic ceramics were also found. It is possible that this was part of a termination ritual which transpired during the Terminal Classic period, prior to the abandonment of this structure. Similar rituals have been documented in many other Maya sites, especially within Terminal Classic contexts (cf. Chase, Chase 2004; Straight, Marken 2006). There is, however, the likelihood that these artefacts are part of a midden left behind by the Maya.

In front of Structure 99, in a small trench and deep test pit (Fig. 27), several episodes of North Group platform's rebuilding were detected; Floor 1 in this suboperation probably dates to the Terminal Classic, and below it, a succession of Late Preclassic layers and floors were found relating to the leveling and enlargement of the North Group platform.

Two test pits were also opened in the centre of the plaza between Structures 99 and W (Suboperations 2 and 3 of Operation IV). Of special interest is the test-pit from Suboperation 3 which yielded a series of Late Preclassic and Classic floors and

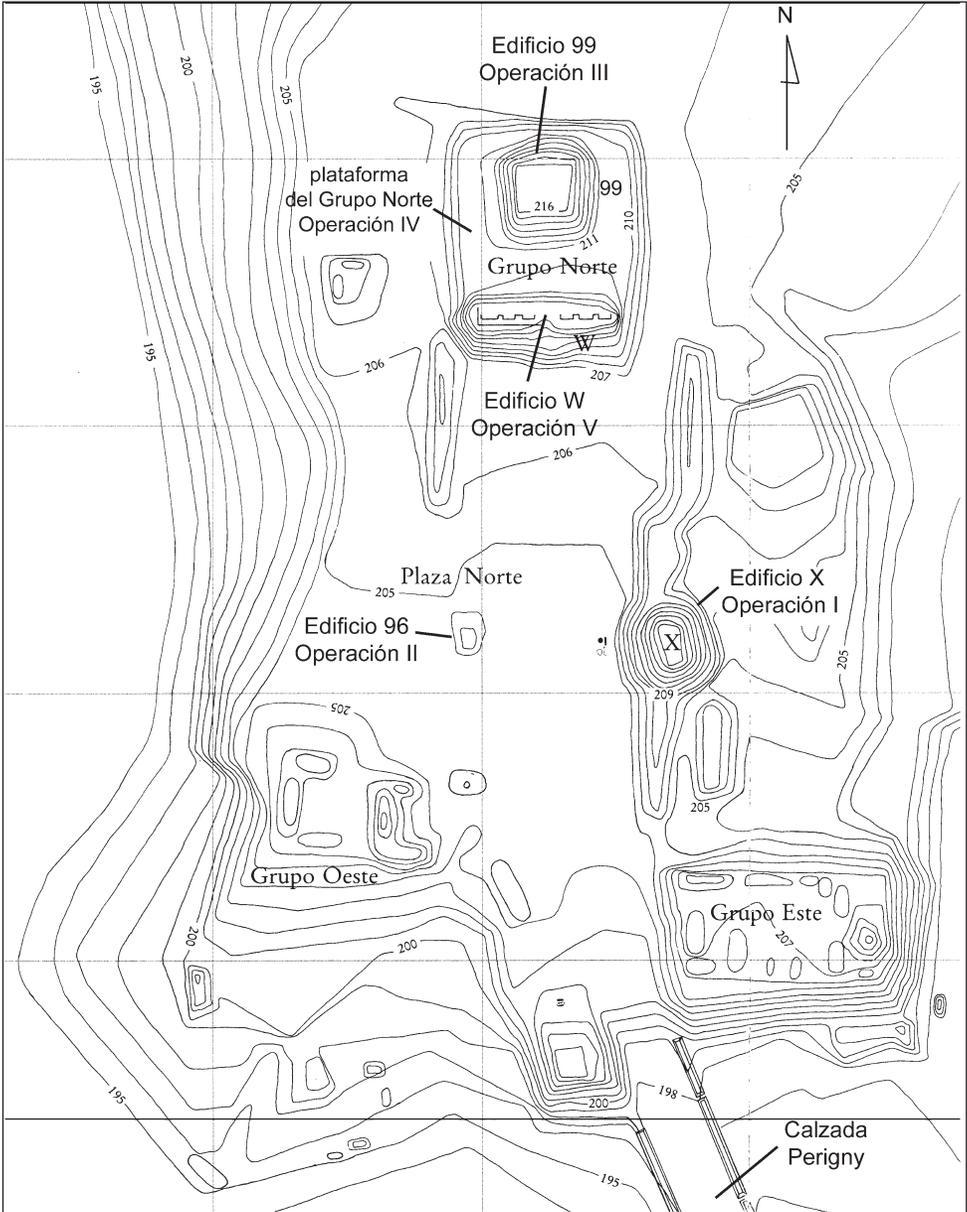


Fig. 24. Map of the Northern Sector, Nakum (after Quintana, Wurster 2002)

one substructure (Fig. 28). Only the upper two floors of this suboperation can be dated to the Classic period, probably to the Late and/or Terminal Classic. The remaining

constructions date to the Late Preclassic period. On the level of Floor 8, a well-preserved Late Preclassic wall was found featuring an apron molding in its upper part.



Fig. 25. Southern facade of Structure 99, North Group, Nakum

The structure was covered by new floors in the Late Preclassic period.

It is also worth mentioning the extensive excavations carried out in front of Structure X, where two plain monuments, a stela and an altar are located (cf. Fig. 24). Both monuments were reported first by Tozzer and then by Morley. Their descriptions indicate that during the time of their visits in Nakum, the stela was still in its original place, facing northward and standing beside, rather than behind the altar (Tozzer 1913, 188; Morley 1937–38, vol. 2, 11). Today, only part of the stela lies beside the altar. A small pile of soil located near and beneath the stela implied that we were not the first excavators at this place. Further examination corroborated that this fragment is the upper part of the stela which lies on loose soil, most likely a result

of illicit excavations. In the vicinity of the stela as well as below this monument, a concentration of many eccentric flints was discovered. They were probably part of a sub-stela cache or other offering that had been looted; it seems that the looters left the eccentric flints because they were not valuable for them. The eccentrics were formed into various shapes (scorpion, snakes, discs, tridents, etc, cf. Figs. 29 and 30). Close to the stela, three floors were also found; the floors were cut in the place where the upper part of the stela protruded from the surface. Most probably, this is the place where the stela was originally erected, although we did not find its base. In the area that was cut out in the floors, we also found dispersed fragments of human bones, probably also part of the sub-stela cache.

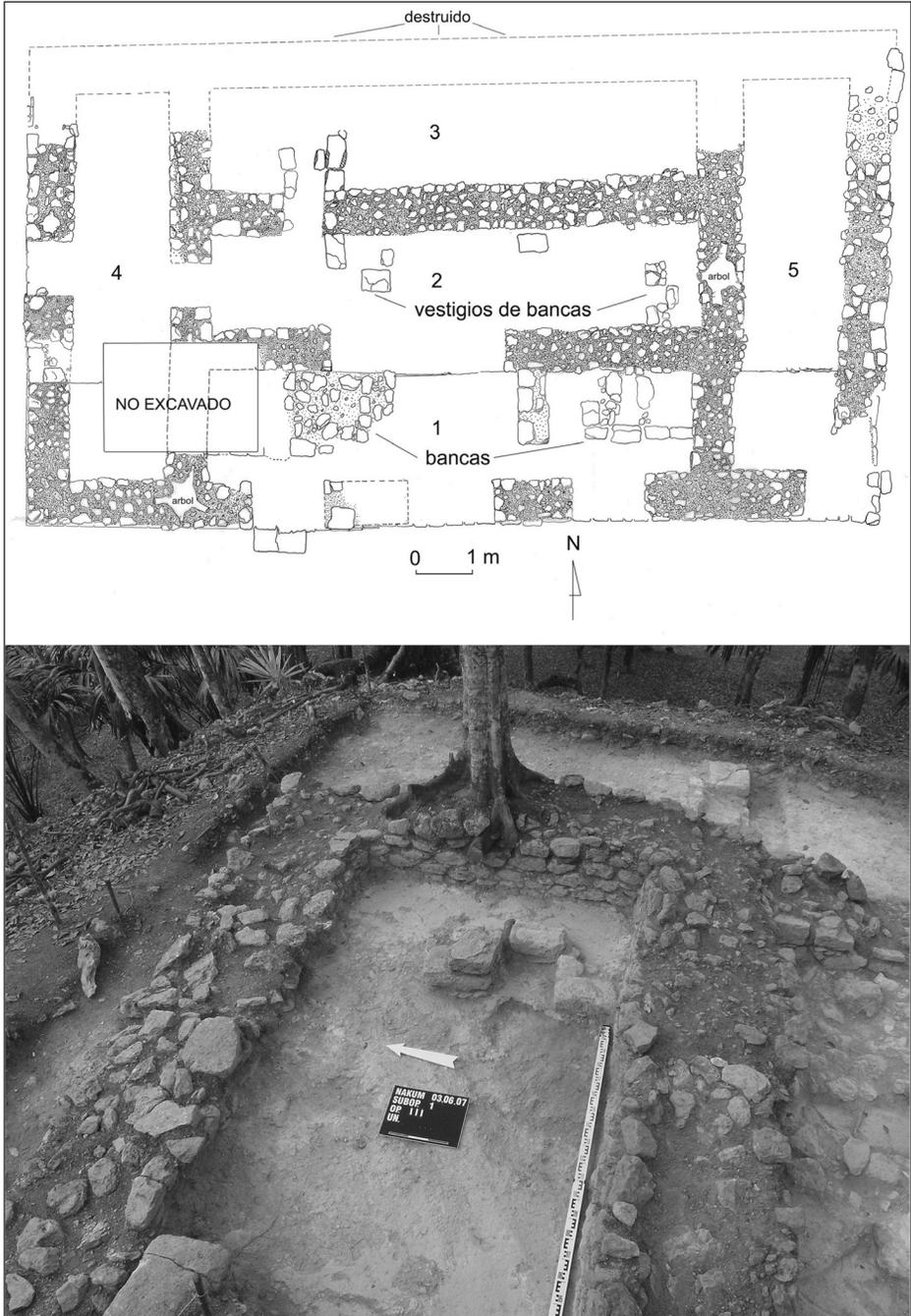


Fig. 26. Plan of the superstructure discovered on the summit of Structure 99 (above) and photo of the eastern part of Room 2 of the same superstructure, Nakum (drawing by P. Kurzawa)

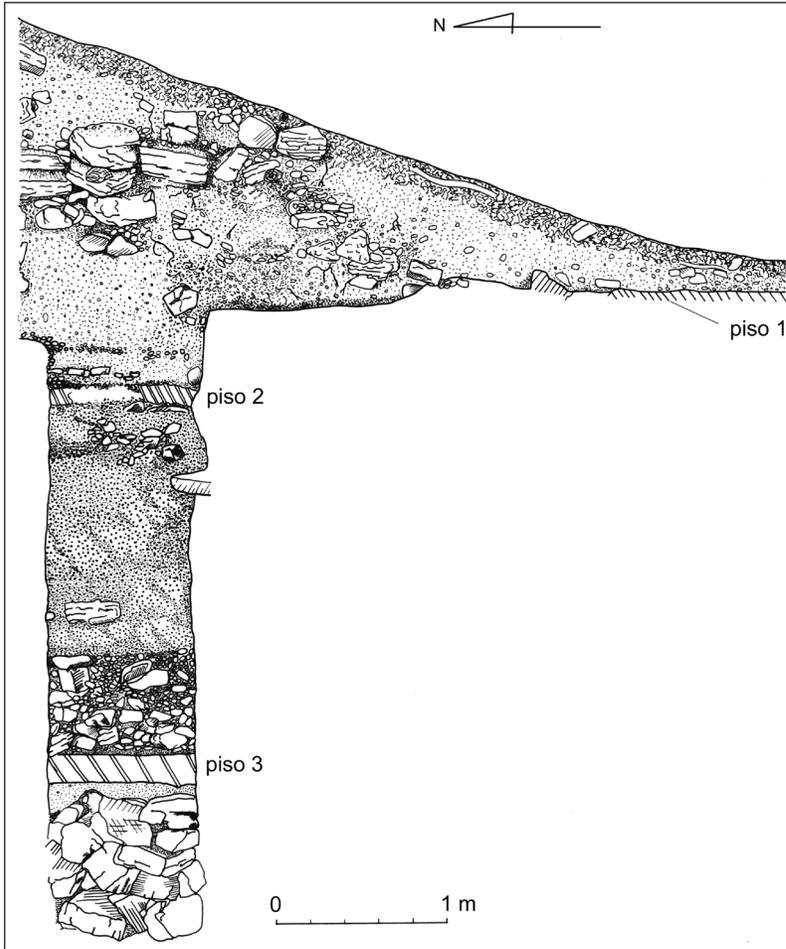


Fig. 27. East profile of the excavation made at the foot of the south facade of Structure 99 (Op. III, Suboperation 2), on its central north-south axis, Nakum (drawing by B. Pilarski)

Discussion and Conclusions

The first excavation season at Nakum yielded some interesting data regarding the growth of its architecture as well as its elite. The investigations of the Project in the Southern Sector confirmed several suppositions and led to discovery of the first tomb at the site. In the Early Classic period, Patio 1 was surrounded by *talud-tablero* facades from its northeastern, northern, western, and partially from the southern side. The

northern and eastern structures were found to be merged in the northeastern corner of the patio, suggesting that the corners of some of the above-mentioned structures may also have been merged. Thus it seems that the main objective of this Early Classic architectural activity around Patio 1 was to give a foreign appearance to its interior (particularly to the northern, western and southern sides), as well as to form the sunken patio in the centre. The closest analogy

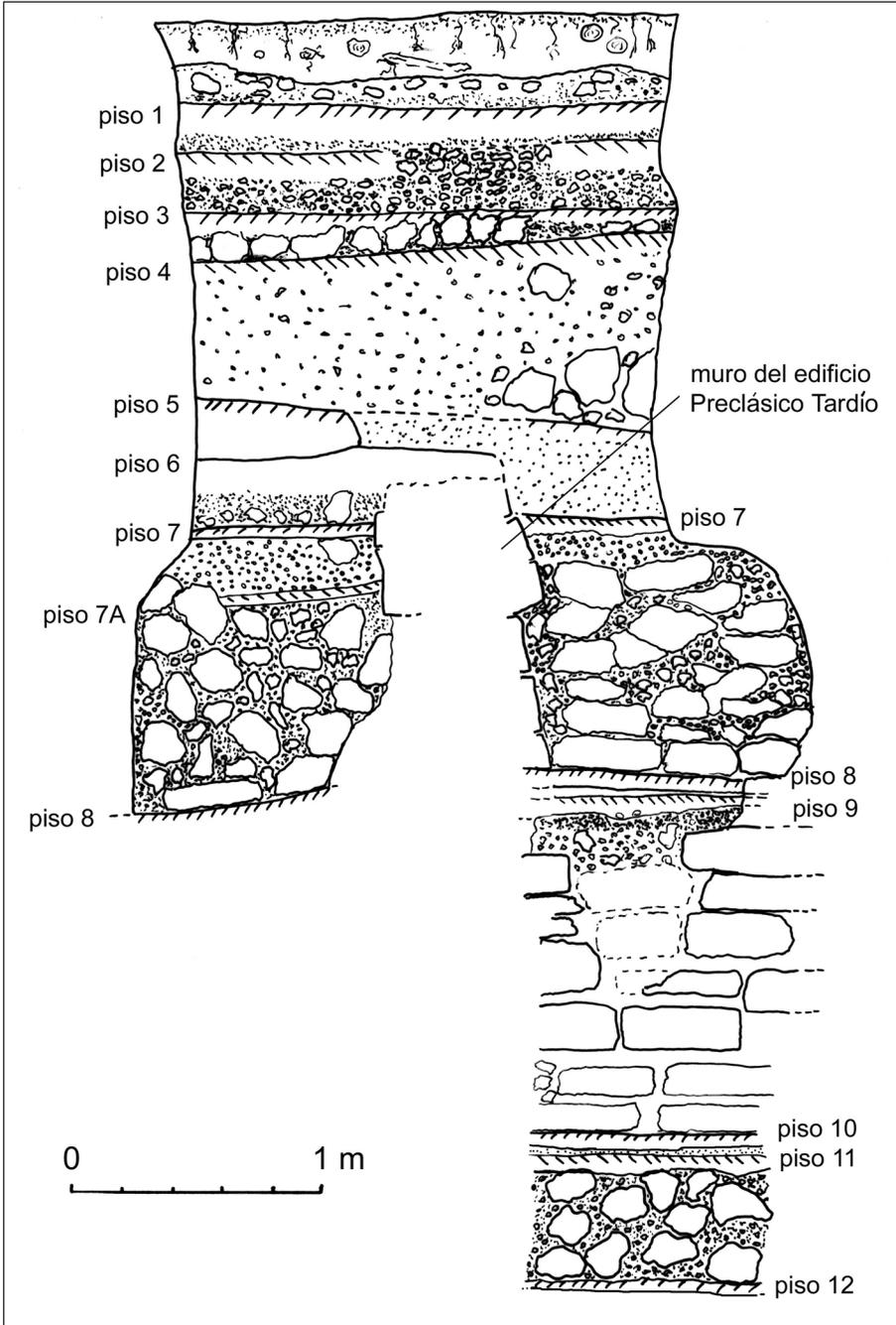


Fig. 28. South profile of the test-pit excavated in the North Group Platform (Op. IV, Suboperation 3), Nakum (drawing by A. Danecki and B. Pilariski)

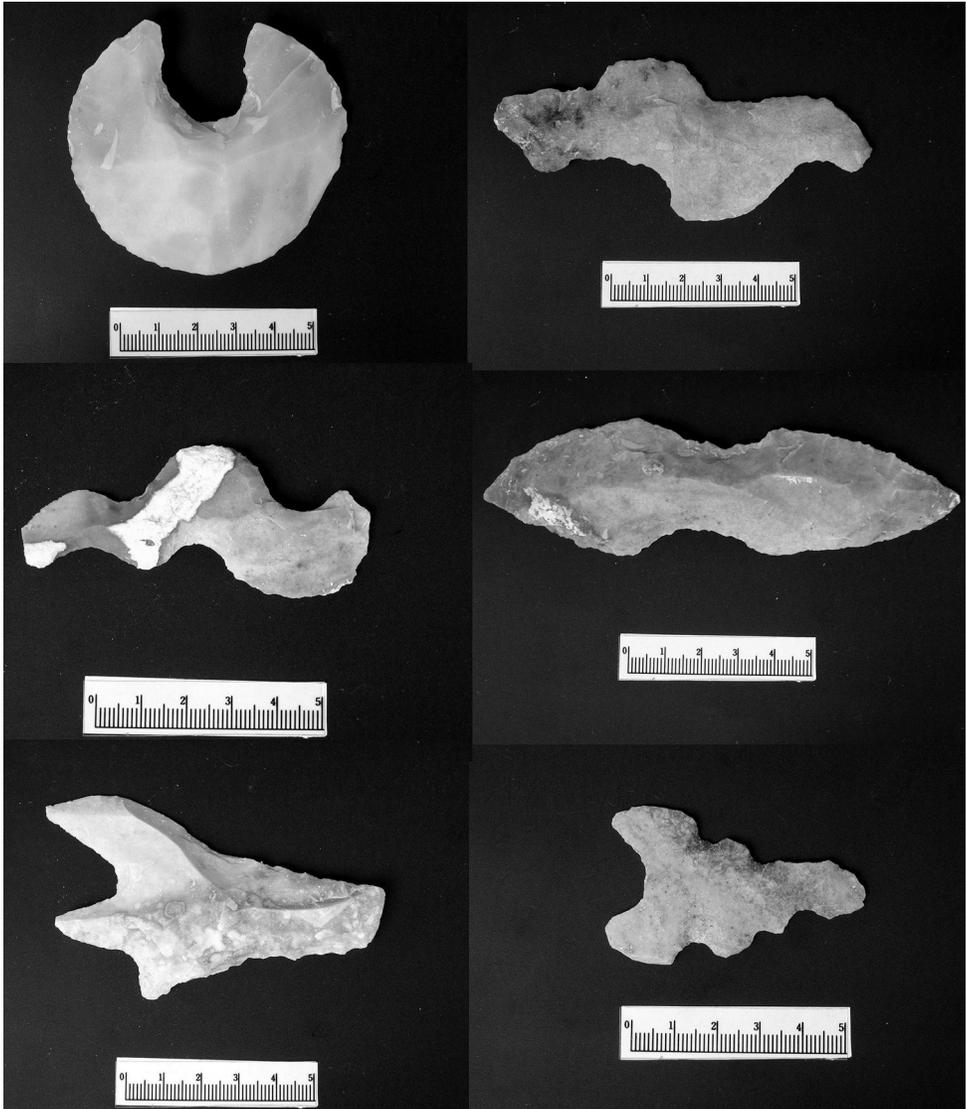


Fig. 29. Eccentric flints which were presumably part of the sub-stela cache, Offering 1, Northern Sector, Nakum

to the spatial arrangement of the Nakum *talud-tablero* structures seems to exist in Central Mexico, at Teotihuacan itself. However, available information about the Teotihuacan contacts in Nakum (indicated particularly by *talud-tablero* architectural style and green obsidian artefacts) does not allow

an uncontested evaluation of the nature of their appearance at the site (cf. Koszkuł *et al.* 2006). They probably showed up there as the result of political changes introduced by Siyaj K'ak' in Peten in AD 378, but we can only speculate whether these contacts were the result of the arrival of some Teotihuacan-

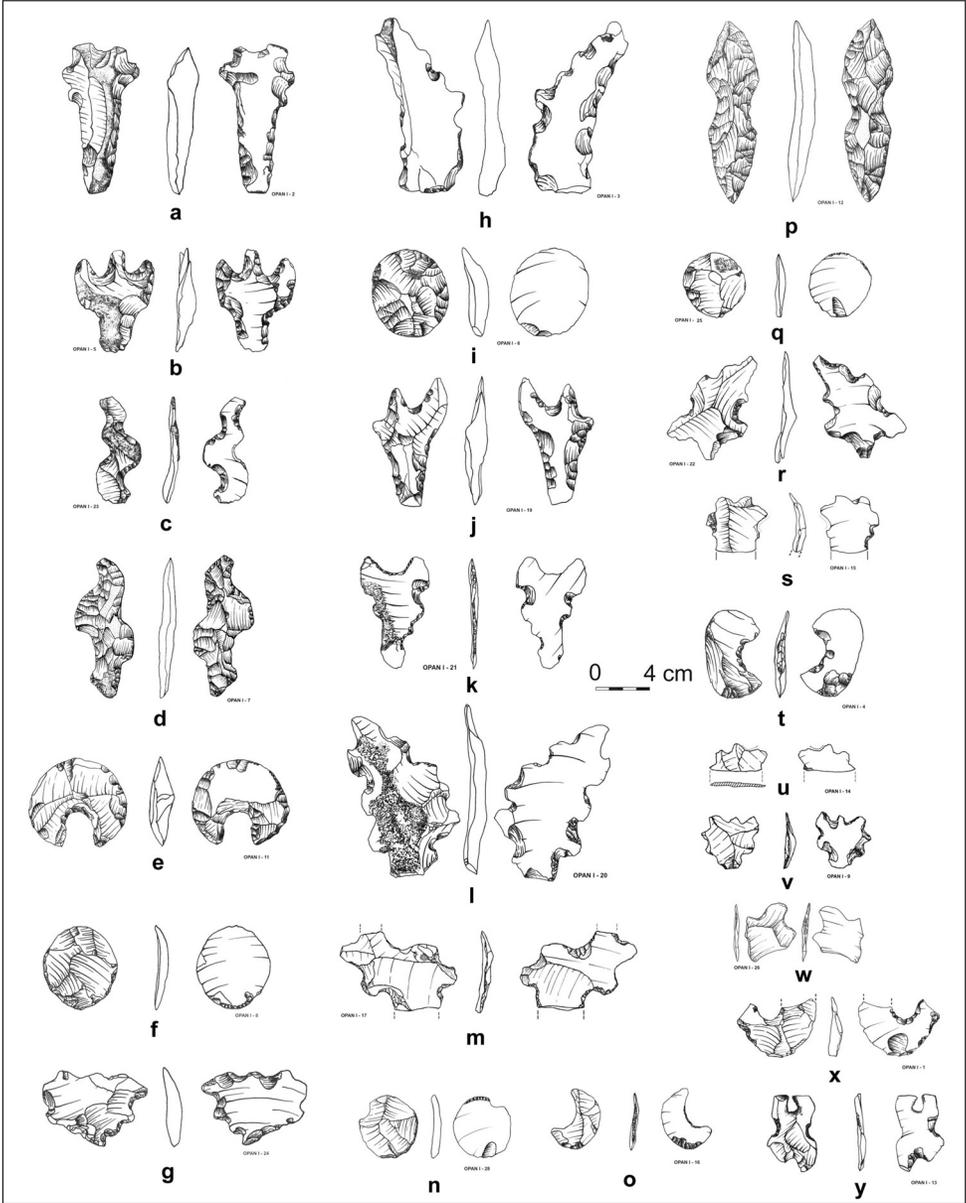


Fig. 30. Eccentric flints, Offering 1, Northern Sector, Nakum (drawing by B. Pilarski)

related people or sooner the free adaptation of prestigious “foreign” traits by local Nakum elite. In the case of the actual arrival of the Teotihuacan-related people, the use

of *talud-tablero* architecture could have been either imposed by the newcomers or it could have been voluntarily effected by local elites in order to reinforce their authority

and to underline their link with a new foreign power. The appearance of Teotihuacan contacts and/or Siyaj K'ak's name in several small or medium-size sites around Tikal (i.e. La Sufricaya, Bejucal, Nakum) may suggest that these centres benefited from the fall of Chaak Took Ich'aak I's rule and the dynastic change in Tikal as new allies of Siyaj K'ak'. Although there are no any direct clues, we cannot exclude the possibility that some of these sites, perhaps together with El Peru, could have helped earlier in the "arrival" of Siyaj K'ak' at Tikal and in the overthrow of its ruler².

In the coming seasons we shall continue our excavations in the area of Patio 1 in Nakum, to research the eastern platform and to obtain more data about the period of Teotihuacan contacts in the site.

Excavations in Structure 15 and the discovery of the tomb there have confirmed that the pattern of eastern funerary structure within a residential patio group also existed in Nakum. The location of such funerary temples (on the eastern side of plazas) was probably related to the symbolism of the sun. According to Maya beliefs, the sun is reborn in the east each day, and, in fact, ascended behind the eastern structure as seen from the plaza. This renewal might possibly symbolize and emphasize the rebirths of the individuals buried there after their deaths.

The location and size of the tomb itself as well as the wealth of its offerings, suggest that the person buried there belonged to a royal Late Classic Nakum family. Patio 1's situation in the heart of the Acropolis,

its axial position respective to the Central Acropolis, its spaciousness, and the size of the surrounding buildings, indicate that it was undoubtedly the most important residential and ceremonial complex in Nakum at this time. Structure E, located at the western side of the patio, with several vaulted rooms with long benches, was the most impressive residence in Nakum in the Late Classic. Structure 15, where the tomb was found, encloses Patio 1 from the east (cf. Fig. 2), and was probably used as the funerary temple for the family who lived in the patio. In front of the Central Acropolis, and simultaneously at the southern side of Patio 1, is located Structure G, which was probably used as a ceremonial and/or administrative building. Moreover, the royal status of the buried person is additionally emphasized by the heirloom pectoral and its inscription with the *ajaw* glyph.

The most interesting offerings found in the tomb are a Saxche Orange Polychrome vessel with a representation of the Maize God and, particularly, an incised jade pectoral. The dancing Maize God painted on the vessel may symbolize the revival of the ruler, after his/her death, as the god itself. As has been mentioned, the vessel belongs to the so-called Tikal Dancer style plates. Erik Boot has recently presented twenty-seven plates painted in that style (Boot 2003); only three of them were excavated during archaeological investigations, and they come from Tikal and the Uaxactun tombs (Culbert 1993, figs 43a and 48c; Smith 1955, fig. 73a1). The vessels in that style were probably produced mainly for funerary purposes, although the presence of many Tikal Dancer plate sherds in nonfunerary contexts, and the erosion of some plates' interiors, suggest that they must have been used also as service vessels (cf. Coggins 1975, 328; Reents-Budet 1994, 198). The stylistic and chemical variability of these vessels suggests that

² Throughout world history, there have been many instances of such alliances; during different conflicts and conquests, an invader often relied on more or less pivotal assistance from within the country being invaded. For example, in the not too distant past, Cortez's conquest of Central Mexico was significantly aided by many local tribes and centres.

they were probably manufactured in different workshops located in smaller subsidiary sites within the greater Tikal region (Reents-Budet 1994, 197–198, 339). Our discovery of a Tikal Dancer style plate in Structure 15's tomb indicates that Nakum might have been one such site.

The incised jade pectoral is undoubtedly the most outstanding find in the tomb. On the concave side of the pectoral, the head of an ancestor with detailed headdress was incised; the head of a mammal in its headdress probably represents part of the ancestor's personal name. The Nakum Pectoral was worn horizontally on the chest with the ancestor-figure facing outwards and looking down. Similar representations of ancestor-figures are known from architectural sculpture, stelae (for example on Stelae 29 and 31 from Tikal [Jones, Satterthwaite 1982, fig. 49a, 51c]), and also from certain portable items. Ancestors evoked in these representations probably legitimized the authority and the high status of their successors. In the case of the Nakum Pectoral, the character of the line in the two incisions differs, suggesting that these were made by different artists; but, otherwise, the glyphs could have been simply incised with a blunt tool. However, the mammal head visible in the headdress of the ancestor-figure suggests that this is not a depiction of Ixim Chan. Additionally; this indicates that these two incisions could have been made at different times by different artists. Which of them was made first, however, remains unclear. To speculate, at first an artist could have incised the ancestor-figure, and some time later, another artist could have added the glyphs with the name of the then-current owner of the pectoral, Ixim Chan. Alternatively, the first owner of the pectoral could have been Ixim Chan, who some time later decided to add the image of one of his ancestors; or the ancestor-figure could have been added by a successor

of Ixim Chan. At any event, it seems that Ixim Chan was presumably a successor of the ancestor-figure.

We can enter into similar speculation with regard to putative Yaxha-Nakum relations, based on the existence of the supposed Yaxha toponym in the inscription on the pectoral found in Nakum. If the second glyph from the inscription is indeed the toponym of Yaxha, it indicates that these two polities had a very strong relationship with each other. However, the available data permit only many hypothetical assumptions regarding the character and dating of these relations. For instance, the pectoral could have been received as a gift, or could have been taken from Yaxha as a trophy by a Nakum ruler in the Early or Late Classic periods. The presence of the Yaxha emblem might also suggest that Nakum could have been ruled at some time by a dynasty from Yaxha (as an example of such relationships between Maya polities, consider that between Tikal and Dos Pilas in the Late Classic period [Martin, Grube 2000]). The figure incised on the concave side of the pectoral could have been an important ancestor of Ixim Chan, and perhaps also an ancestor of the person buried in the Nakum tomb. His spiritual presence, recalled in the form of the image on the pectoral, might have been intended to support the person wearing the pectoral. However, it must be said that current data allow only for speculation regarding the connections between the ancestor-figure, Ixim Chan, and the buried person, as well as the character of the supposed relations between Yaxha and Nakum.

Another interesting element in the furniture at the tomb at Nakum is the presence of four stone spindle whorls (cf. Fig. 23). The spindle whorls strongly suggest that a royal woman was laid to rest in the tomb, because spinning and weaving were important activities for Maya women. In his article, Welsh

mentions twenty burials from the Maya area where spindle whorls were found; unfortunately, the sex of only five of these people has been established, with four of them being women (cf. Welsh 1988).

Alternatively, it is possible that the deposition of spindle whorls in the Nakum tomb could have a symbolic meaning. In Tzotzil Maya belief, for example, the process of weaving is conceived of as the process of being born (Prechtel, Carlsen 1988, 123). The same symbolism also existed in pre-Columbian Central Mexico. Thelma Sullivan, in her article about Tlazolteotl-Ixcuina, the patron of spinners and weavers, has stated that spinning and weaving symbolically “represent life, death, and rebirth” (Sullivan 1982). The spindle whorls placed inside the tomb as part of its furniture may reflect this symbolism, which in this case is similar to the representation of the dancing Maize God painted on the tripod plate: both the spindle whorls and the dancing Maize God may symbolize the revival of the ruler after his (or most probably, her) death.

Interestingly, many cultures in the ancient world had an analogous symbolism connecting spinning and weaving to a human being’s life and death. For example, in Greek mythology the Moirae, the goddesses of destiny, “span the thread of a human being’s life”. Such symbolism can be found in the Bible: one Psalm states: “you wove me in my mother’s womb” (New American Standard Bible, 1995, Psalm 139:13). Or, in another place: “As a weaver I rolled up my life. He cuts me off from the loom” (New American Standard Bible, 1995, Isaiah 38:12). It is evident that Mesoamericans likewise shared this symbolism.

We posit that in the Early Classic and in the first part of the Late Classic periods, Structure 15 was a mausoleum for a royal Nakum family that lived in Patio 1. The erection of Structure U with Stela U, and

probably some other pyramids outside the Acropolis in the second part of the Late Classic indicate that the most prominent Nakum individuals were probably buried there at this time. In the Terminal Classic, the royal palace was probably moved from Patio 1 to Structure Y in the Central Acropolis (cf. Fig. 3), and these changes might also coincide with or result from dynastic shifts within Nakum.

NAP research in the Northern Sector shows that this area was not abandoned in the Terminal Classic; thus the significant development of the Southern Sector at that time cannot be explained by this factor. A new version of Structure 96, new superstructures above Structure 99 and certain other renovations confirm substantial human activity in the area of the Northern Sector. Indeed, our research in Nakum confirms that during this period, the entire epicentre, as well as the periphery of the site, saw a great architectural boom.

The significant development and prosperity of Nakum in the Terminal Classic stands in contrast to the prevailing pattern of collapse and abandonment observed at many other lowland Maya sites during this turbulent epoch. Our research indicates that Nakum survived the collapse of other major cities such as Tikal or Naranjo by at least a century. The political crisis in the neighbouring sites apparently allowed Nakum’s ruling elite to consolidate their power and to gain control over trade routes, presumably those that ran along the Rio Holmul. The enormous number of palaces in Nakum at this time suggests a significant growth of local elite population. This probably facilitated the inflow of their relatives from collapsing neighbouring sites who might have sought shelter in Nakum. However, the success of Nakum was relatively brief; by the end of the Terminal Classic period (ca. 950), Nakum

apparently succumbed to the same forces that had caused the collapse and abandonment of most lowland Maya cities (Żrałka 2008).

During the forthcoming seasons of our excavations in Nakum, we will continue investigating the central issues, but our efforts will also focus on a more thorough exploration of Structure 15, where the tomb was found, and of Structure 14, which probably functioned as a funerary temple for the inhabitants of Patio 9. Particular attention will also be directed at the Preclassic habitation in the Northern Sector, which may shed more light on the origins of the site as an urban polity.

Acknowledgements

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Badania archeologiczne w Nakum, Peten, Gwatemala: nowe dane dotyczące rozwoju stanowiska oraz odkrycie grobowca królewskiego

Artykuł przedstawia najważniejsze wyniki badań archeologicznych prowadzonych przez Instytut Archeologii UJ w prekolumbijskim mieście Majów Nakum w północnej Gwatemali (Ameryka Środkowa). Badania te przeprowadzono w roku 2006 w dwóch kompleksach stanowiska w celu weryfikacji kilku hipotez dotyczących charakteru relacji kultury Majów z kulturą Teotihuacan, lokalizacji pochówków królewskich w obrębie piramid oraz osadnictwa w schyłkowym okresie klasycznym. W trakcie wykopalisk uzyskano wiele cennych informacji na temat rozwoju cywilizacji Majów oraz dokonano kilku spektakularnych odkryć, w tym grobowca królewskiego z późnego okresu klasycznego (ok. 700 r. n.e.), zawierającego między innymi jadeitowy pectoral pokryty inskrypcją hieroglificzną.

References

- Becker M.**, 1971 *Identification of a Second Plaza Plan at Tikal, Guatemala, and Its Implications for Ancient Maya Social Complexity*, unpublished Ph.D. thesis, Department of Anthropology, University of Pennsylvania, Philadelphia.
- 1999 *Excavations in Residential Areas of Tikal: Groups with Shrines*, Tikal Report, 21, Philadelphia.
- Boot E.**, 2003 *An Annotated Overview of "Tikal Dancer" Plates*, Mesoweb: <www.mesoweb.com/features/boot/TikalDancerPlates.pdf>
- Calderón Z., Toraya R.A.**, 2002 *Memoria anual de actividades. Unidad de arqueología local, año 2002*, Annual report. Unpublished manuscript on file, Triangulo Project, IDAEH, Guatemala.

- Calderón Z., Matute V.**, 2005 *Memoria anual de actividades. Unidad de arqueología local, año 2005*, Annual report. Unpublished manuscript on file, Triangulo Project, IDAEH, Guatemala.
- Calderón Z., Matute V., Žralka J., Conrad N., Bazy D.**, 2003 *Memoria anual de actividades. Unidad de arqueología local, año 2003*, Annual report. Unpublished manuscript on file, Triangulo Project, IDAEH, Guatemala.
- Calderón Z., Matute V., Žralka J., Konik S., Koszkuł W.**, 2004 *Memoria anual de actividades. Unidad de arqueología local, año 2004*, Annual report. Unpublished manuscript on file, Triangulo Project, IDAEH, Guatemala.
- Chase A., Chase D.**, 1987 *Investigations at the Classic Maya City of Caracol, Belize: 1985–1987*, Precolumbian Art Research Institute Monograph 3.
1994 *Studies in the Archaeology of Caracol, Belize*, Monograph, 7.
2004 *Terminal Classic Status-Linked Ceramics and the Maya “Collapse”: De Facto Refuse at Caracol, Belize*, (in:) A. Demarest, P. Rice, D. Rice (eds.), *The Terminal Classic in the Maya Lowlands: Collapse, Transition, and Transformation*, Boulder, Colo, pp. 342–366.
- Coggins C.**, 1975 *Painting and Drawing Styles at Tikal: An Historical and Iconographic Reconstruction*, unpublished Ph.D. dissertation, Harvard University, Cambridge, Mass.
- Culbert P.**, 1993 *The Ceramics of Tikal: Vessels from the Burials, Caches and Problematical Deposits*, Tikal Report, 25, Part A, University of Pennsylvania Museum, Monograph, 81, Philadelphia.
- Grube N.**, 2000 *Monumentos esculpidos e inscripciones jeroglíficas en el triángulo Yaxha-Nakum-Naranjo*, (in:) W. Wurster (ed.), *El sitio Maya de Topoxte: Investigaciones en una isla del lago Yaxha, Peten, Guatemala*, Mainz am Rhein, pp. 249–268.
- Hellmuth N.M.**, 1975 *Nakum: A Late Classic Maya Ruin*, *Archaeology*, 28 (4), pp. 270–272.
1992 *A Report to IDAEH on four days research at Nakum*, Foundation for Latin American Anthropological Research, IDEAH, Guatemala.
- Hermes B.**, 2002 *Síntesis preliminar de la ocupación prehispánica en el área central de Nakum*, *Beiträge zur Allgemeinen und Vergleichenden Archäologie*, 22, pp. 277–285.
- Hermes B., Calderón Z.**, 1999 *Memoria anual de actividades. Unidad de arqueología local, año 1999*, Annual report. Unpublished manuscript on file, Triangulo Project, IDAEH, Guatemala.
2000 *Memoria anual de actividades. Unidad de arqueología local, año 2000*, Annual report. Unpublished manuscript on file, Triangulo Project, IDAEH, Guatemala.
2002 *La secuencia de ocupación prehispánica en Nakum, Peten, Guatemala: una visión preliminar*, *Estudios Latinoamericanos*, 22, pp. 210–219.
- Hermes B., Calderón Z., Olko J., Žralka J.**, 2001 *Memoria anual de actividades. Unidad de arqueología local, año 2001*, Annual report. Unpublished manuscript on file, Triangulo Project, IDAEH, Guatemala.

- Hermes B., Koszkul W., Calderón Z.**, 2006 *Los Mayas y la cultura Teotihuacana: Descubrimientos de Nakum, Petén*, (in:) J. P. Laporte, B. Arroyo, H. Mejía (eds.), XIX Simposio de Investigaciones Arqueológicas en Guatemala, 2005, Guatemala, pp.895–910.
- Jones Ch., Satterthwaite L.**, 1982 *Monuments and Inscriptions of Tikal: The Carved Monuments*, Tikal Report, 33, Philadelphia.
- Koszkul W., Hermes B., Calderón Z.**, 2006 *Teotihuacan-related Finds from the Maya Site of Nakum, Peten, Guatemala*, *Mexicon*, 28 (6), pp. 117–127.
- Koszkul W., Żralka J., Hermes B., Martin S., García V.**, 2007 *Proyecto Arqueológico Nakum: Resultados De La Temporada 2006*, (in:) J.P. Laporte, B. Arroyo, H. Mejía (eds.), XX Simposio de Investigaciones Arqueológicas en Guatemala, 2006, Guatemala, pp. 651–670.
- Martin S.**, 2006 *Text and Image on the Jade Pectoral from Tomb 1 at Nakum*, unpublished manuscript in possession of the authors of the article.
- Martin S., Grube N.**, 2000 *Chronicle of the Maya Kings and Queens: Deciphering the Dynasties of the Ancient Maya*, London.
- Matute V.**, 2006 *Resultados del análisis osteológico de la osamenta proveniente de la Tumba 1 de Nakum*, (in:) Proyecto Arqueológico Nakum: Informe final, temporada 2006: Anexo 1 (by J. Zralka, W. Koszkul, V. García, B. Hermes), IDAEH, Guatemala.
- Morley S.G.**, 1937–38 *The Inscriptions of the Peten*, vol 1–5, Washington.
- New American Standard Bible**, 1995, The Lockman Foundation, La Habra, Calif.
- Quintana Ó., Wurster W.**, 2002 *Un nuevo plano del sitio Maya de Nakum, Petén, Guatemala*, *Beiträge zur Allgemeinen und Vergleichenden Archäologie*, 22, pp. 243–275.
- de Périgny M.**, 1910 *Villes Mortes de l'Amérique Centrale. Le Tour du Monde*, 15, Paris.
1911 *Les Ruines de Nakcum*, *Journal de la Société des Américanistes de Paris*, 8 (1–2), pp. 1–22.
- Prechtel M., Carlsen R.S.**, 1988 *Weaving and Cosmos Amongst the Tzutujil Maya of Guatemala*, *Res: Anthropology and Aesthetics*, 15, pp. 122–132.
- Reents-Budet D.**, 1994 *Painting the Maya Universe: Royal Ceramics of the Classic Period*, Durham and London.
- Smith R.**, 1955 *Ceramic sequence at Uaxactun, Guatemala*, Middle American Research Institute, Tulane University, Publication No. 20, New Orleans.

- Straight K., Marken D.**, 2006 *Los depósitos de terminación del Templo XIX, Palenque, Chiapas*, (in:) J. P. Laporte, B. Arroyo, H. Mejía (eds.), XIX Simposio de Investigaciones Arqueológicas en Guatemala, 2005, Guatemala, pp. 387–395.
- Sullivan T.**, 1982 *Tlazolteotl-Ixcuina: The Great Spinner and Weaver*, (in:) E. Hill Bone (ed.), *The Art and Iconography of Late Post-Classic Central Mexico*, Washington, DC, pp. 7–35.
- Tozzer A.M.**, 1913 *A Preliminary Study of the Prehistoric Ruins of Nakum, Guatemala*. *Memoirs of the Peabody Museum of American Archaeology and Ethnology*, 5/3, Cambridge, Mass.
- Welsh W.B.M.**, 1988 *An Analysis of Classic Lowland Maya Burials*, B A R, International Series, 409, Oxford.
- Żralka J.**, 2008 *Terminal Classic Occupation in the Maya Sites Located in the Area of Triángulo Park, Peten, Guatemala*, *Zeszyty Naukowe Uniwersytetu Jagiellońskiego*, 1299, *Prace Archeologiczne*, 62, Kraków.
- Żralka J., Koszkuł W., Hermes B., Martínez G.**, 2008, *Nuevos hallazgos de Nakum: la segunda temporada del Proyecto Arqueológico Nakum*, (in:) J.P. Laporte, B. Arroyo, H. Mejía (eds.), XXI Simposio de Investigaciones Arqueológicas en Guatemala, 2007, Guatemala, pp. 409–429.

