



## PRELIMINARY REPORT ON THE TENTH EXCAVATION SEASON OF THE ARCHAEOLOGICAL EXPEDITION TO WAD BEN NAGA

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**ABSTRACT:** The tenth excavation season of the Archaeological Expedition to Wad Ben Naga focused on the rescue excavations around the rail track intersecting the archaeological site, in the course of which the *kom H* (of Frédéric Cailliaud) was explored. Another task of the season was the partial re-excavation of the Eastern Temple (WBN 500) focused on the earliest occupation of the location. Furthermore, another part of the cemetery WBN C200 was explored.

**KEY WORDS:** ancient Sudan – Wad Ben Naga – Meroitic culture – Meroitic architecture – rescue excavations

The tenth excavation season of the Archaeological Expedition to Wad Ben Naga took place between 21 February and 8 April 2015. Archaeological works were launched on 24 February 2015 and concluded on 3 April 2015. The season was carried out under the guidelines of the *Ordinance for the Protection of Antiquities of 1999* of the Republic of the Sudan.

The mission was headed by Pavel Onderka (director), Vlastimil Vrtal (chief archaeologist), Alexander Gatzsche (chief conservator), Juwariya Osman Mohamed Zain (inspector of the National Corporation for Antiquities and Museums). It further consisted of Jiří Honzl (archaeologist), Eric Spindler (archaeologist), Ladislav Vendel (architect) and Martin Vlnas (architect).

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The works of the tenth season focused on [1] rescue excavations around the rail track intersecting the western part of the archaeological site, [2] excavations in and around the Eastern Temple (WBN 500, 550 and 560), [3] excavations and conservation of the Palace of Queen Amanishakheto (WBN 100); [4] excavations of the tumulus WBN C203, and processing of pottery finds from previous excavation seasons. Within the season several site management projects took place, including the preparations of the construction of the site museum and implementation of measures to protect the archaeological site.

### **[1] Rescue excavations around the rail track (WBN 800)**

The western part of the archaeological protected land is intersected by a rail track connecting Khartoum and Atbara. The rail track was built by the British in 1900. Its construction, as well as numerous repairs and reconstructions, have caused serious damage to the ancient monuments located in its vicinity. In 2014, another general reconstruction of the rail track was carried out by a Chinese contractor and only the presence of the mission at the site prevented major and irreversible damage to ancient monuments. The National Corporation for Antiquities and Museums had not been notified in advance of the plans of the Sudanese Railways National Corporation to reconstruct the rail track. Consequently, the mission prepared relevant materials and the Director-General of the National Corporation for Antiquities and Museums contacted the headquarters of the Sudanese Railways in Khartoum. Despite the fact that the Sudanese Railways failed to provide a grant for the vicinity of the rail track to be surveyed archaeologically, the Sudanese and the Czech parties agreed to proceed with rescue excavations. Although the project was announced to the Sudan Railways properly and in good time, railway officials repeatedly tried to interrupt the works, claiming that the excavations were being carried out within the rail track's 20 m buffer zone. The issue was solved by the inspector of the mission and the works eventually proceeded as planned. The rail track embankment was in no way affected by the rescue excavations. Due to the unwillingness of the Sudanese Railways to cover extra costs connected with the rescue excavations, the works on the project had to be broken down into more than one season. The works in the vicinity of the rail track continued during the eleventh and twelfth excavation seasons.

A total of four trenches (T25–26 and T28–29) were opened in the vicinity of the rail track. An elevation model (Pl. 1) of this part of the site was prepared in order to capture the present character of the terrain and predict erosion processes at the site

#### *T25 & T26*

Two trenches were delimited in the near vicinity of the railway in order to test for the presence of any archaeological structures in the area of the railway embankment. In the first trench T25 (4 x 10 m), all remains of previous human activity had been destroyed due to a ditch dug during the construction of the railway. To the north, the ditch intersects a kom with archaeological remains. In this area, debris from destroyed walls made of bricks and local stone is spread on both sides of the ditch, as well as on its bed, and also forms part of the railway embankment. In the trench T26 (2 x 50 m) located to the west of the railway, no structural remains were discovered.

Two trenches (T28 & T29; 10 x 10 m each) were set in the southern part of the kom located between the Typhonium and the railway, which represented potentially the most endangered area (Pl. 2). The kom is almost certainly identical with the “kom H” of Frédéric Cailliaud (Cailliaud 1826) and was also included in Hinkel’s plan of the site under designation WBN<sup>H</sup> 60 (Hinkel – Sieversten 2002: Pl. IX.72). During the third season of the Archaeological Expedition to Wad Ben Naga the kom was surveyed and its northern limit excavated (Onderka 2012: 126ff.).

The excavations in the trenches T28 and T29 revealed a complex archaeological situation with three structures from different periods. In the absence of the completion of the archaeological excavations, which will give us a proper understanding of the archaeological situation at the kom, the designation WBN 800 was allotted to the complex as a whole.

Four phases of construction activity were detected at the kom. The earliest phase was represented by a large building with thick walls built according to a regular plan (Fig. 1a, Pl. 3). The walls were built predominantly of mud bricks; only the westernmost wall seemed to have had a casing of fired bricks, preserved only in the trench T28. The building was built on levelled local bedrock (southern part) and hard-packed mix of

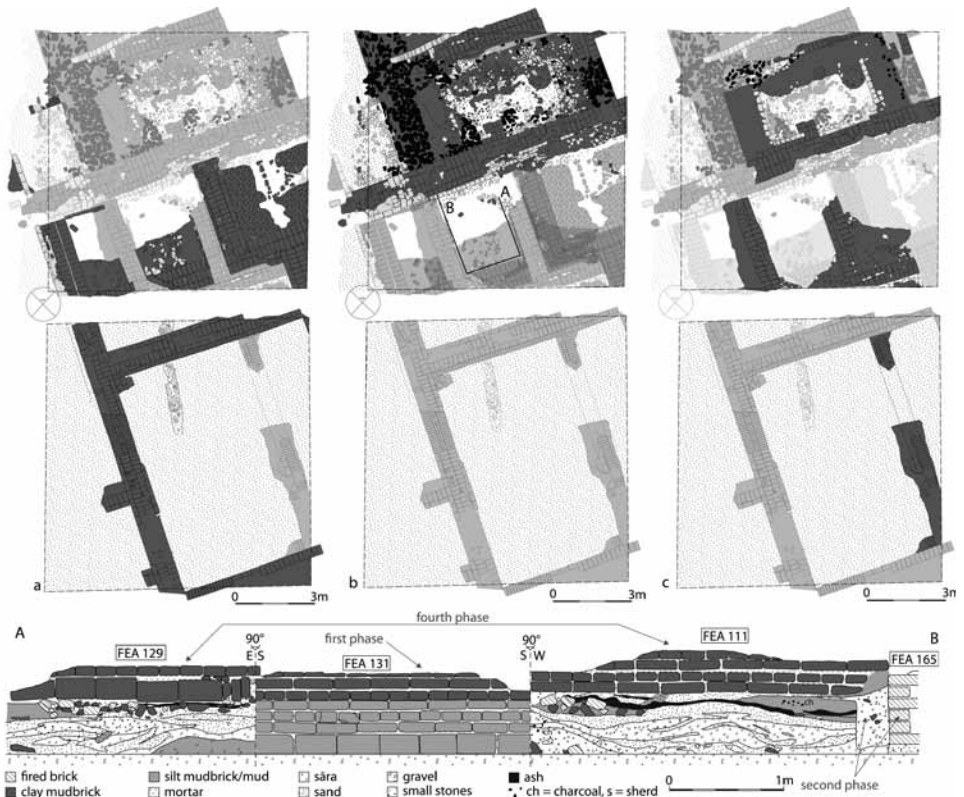


Fig. 1 Phase plan of trenches T28 and T29: a. first phase, b. second and third phase, c. fourth phase. Below: section showing stratigraphic relation between walls in the southern part of trench T28 (Drawing: Vlastimil Vrtal).

mud, pebbles and bedrock particles (northern part). The absence of openings in the walls indicates that the floor of the building was located on a higher level. Possible remnants of this floor, made of hard-packed mud and pebbles, were documented in the eastern part of T28 ca. 0.6 m above the foundations. The fill of the space between the walls contained several painted sandstone architectural elements, probably from an entranceway, and a large number of potsherds. White-slipped painted wares (decorated with both geometric and floral motifs, such as cross-hatching, wavy lines, wine tendrils, palm branches, etc.; Fig. 2, cf. Török 1997: Fig. 72, no. 95-1, Fig. 132; Wolf, S. *et al.* 2011: 237-239, Abb. 24) were well-represented in the pottery assemblage, while kaolinitic fineware was almost absent and some of the rare examples were rendered in very unusual forms with no decoration (Fig. 2, SM15/217, SM15/218). The assemblage represents some of the earliest pottery documented at Wad Ben Naga so far. Some sherds from this stratum also bore fragmentary inscriptions in Meroitic cursive script (Fig. 2, F15/008). Based on palaeography, the ostracon is dated to Rilly's Transitional A period, i.e. from the end of the second to the end of the first century BCE (Rilly – de Voogt 2012: 51-56).

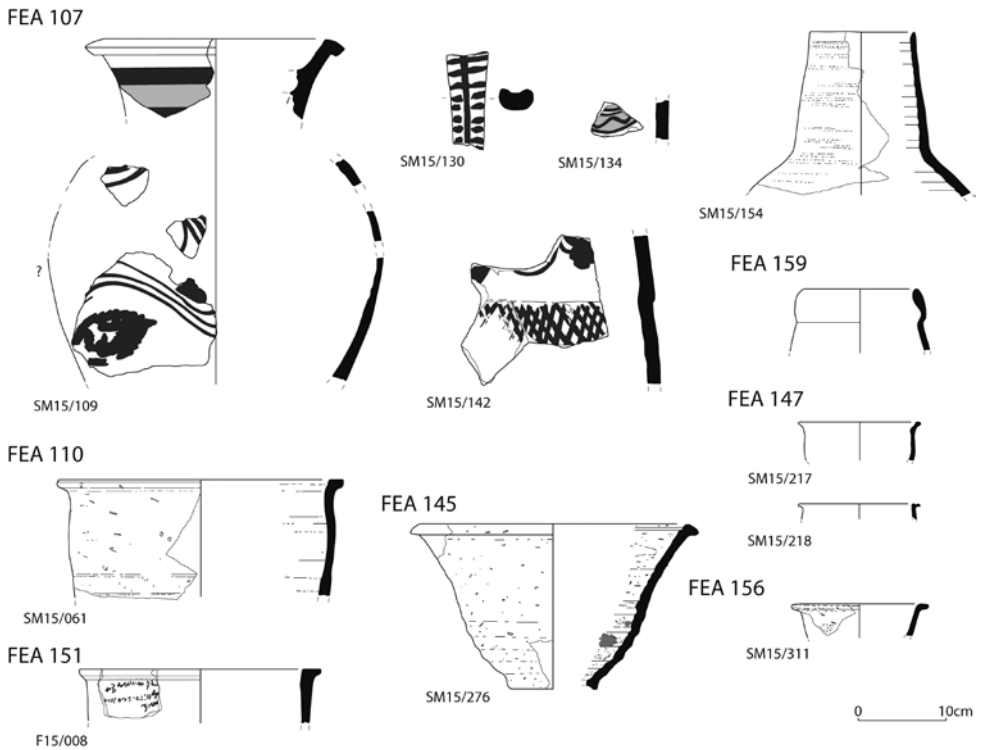


Fig. 2 Examples of pottery associated with the early building (first phase) in the trenches T28 and T29 (Drawing: Vlastimil Vrtal, Jiří Honzl).

It is possible that the early building belonged to the same horizon of construction activity in the western part of Central Wad Ben Naga as the foundations of walls documented under the Thoponion (structure WBN 700; Onderka 2013: 6–7).

At some point of time, this early building was partly levelled. A thin layer of ash dividing the two stratigraphic horizons in several areas can be probably associated with this activity. Subsequent construction works were concentrated in the trench T28. A thick wall with a casing of fired bricks cutting through the earlier walls (and fill) is the most distinct feature of this phase (cf. Fig. 1b, Pl. 4, centre). This wall probably represented the outer wall of a monumental building. To the north of this wall, two pairs of brick and stone walls were located perpendicular to it and provide evidence of some alteration to the building in the course of its history, or already during its construction. These walls supported another stone and brick wall, which formed a backing for a partly-preserved barrel-vaulted ceiling (Pl. 4, left side). The building probably had at least two storeys and was decorated with wall paintings, fragments of which were found in the debris. The dating and character of the building is unclear at the present state of research. It is most likely to have been a profane rather than sacral building.

The latest phase of occupation in this area was represented by relatively thin mudbrick walls constructed on a higher level and already in a slope formed by debris from earlier buildings (cf. Fig. 1c, Pl. 3). Some pottery finds, such as a fragment of the so-called Aswan "oil bottle" (cf. Smith 1998: 184-185; Gempeler 1992: forms T706-713) might indicate that this phase can be dated only to the Post-Meroitic Period.

## **[2] Excavations in and around the Eastern Temple (WBN 500, 550 and 560)**

During the excavation season, remains of the Eastern Temple were cleaned in order to document them using the Structure from Motion technique and to carry out additional soundings. Excavations focused mainly on the hypostyle hall (WBN 501), while parts of debris heaps from the Sudanese excavations were screened in a search for pottery material. Several previously unexplored fired brick concentrations located to the east of the temple's pylon were excavated.

The Eastern Temple (WBN 500) was discovered during the Sudanese Antiquities Service's first excavation season in late 1958 and early 1959 (Vercoutter 1962: 271-273). The Archaeological Expedition to Wad Ben Naga explored the structure during the second and third seasons (Onderka 2011: 60-61; Onderka 2012: 118-126). The first attempts to interpret the building and its development were published a couple of years later (Onderka – Vrtal *et al.* 2013: 75-82; Onderka – Vrtal *et al.* 2014: 146-147).

### *Revising Excavations*

The new excavations have provided new discoveries and enabled us to reassess the assumed development of the temple, which previously could rely only on Vercoutter's interpretation of finds from the Sudanese excavations. Vercoutter assumed that there were several stratigraphical horizons at the Eastern Temple: "Deux niveaux d'occupation de ce temple ont été noté : le niveau le plus récent étant à 35 cm. au dessus du niveau de construction. Ce niveau de construction pourrait, si l'on en juge par les objets trouvés, être date de la seconde moitié du II<sup>e</sup> et de la première moitié du III<sup>e</sup> siècle de notre ère. Le niveau le plus élevé deterait, dans ce cas, de l'extrême fin de l'Empire méroïtique, du IV<sup>e</sup> siècle ap. J.-C." (Vercoutter 1962: 272-273).

The revising excavations proved the existence of a pre-temple occupation at the location represented by postholes and remains of wall system (employing fired bricks

and mud bricks) with a slightly different orientation than that of the temple, under its hypostyle hall (WBN 501). Another well-identified structure of the pre-temple horizon is represented by foundations in negative of a large rectangular room/building, best visible under the room WBN 503. Before construction of these structures began, the terrain was ground shaped and graded. The local bedrock (*sāra*) was partly levelled, while depressions were filled by a hard-packed mixture of pebbles and reddish ferruginous soil. This mixture was amassed under the walls of the above-mentioned structures under the hypostyle hall. Minor depressions in the bedrock were filled in with a different material during the construction, or were incorporated into the construction of walls.

At some point in time, the structures belonging to the earliest horizon (cf. Pl. 5) were likely torn down and the terrain was levelled. The levelling strata consisted mainly of a mixture of pebbles with brownish mud upon which the so-called lower floor of hard-packed soil was created.

The location was newly used for the construction of a multi-roomed temple, in all probability dedicated to Amun, which will be referred to as the early Eastern Temple. The early Eastern Temple was most likely a part of the vast building program that Queen Amanishakheto commissioned at Wad Ben Naga, as indicated by epigraphic material. A stela of Amanishakheto was discovered *in situ* in the corresponding horizon within the area of the hypostyle hall WBN 501.

F15/001            Fragment of a stela of Amanishakheto (with inscriptions in Egyptian hieroglyphic and cursive Meroitic scripts; Fig. 3). Only a minor part of the decoration of the verso is preserved: it shows one feather from a feather crown (probably that of Amun), a part of a sceptre and possibly the top of the head). The verso was originally divided into two parts, i.e. the lunette and the main section with an unknown number of lines of Meroitic cursive text. The top of the lunette is formed by a winged sun disc under which the part of the inscription in Egyptian hieroglyphs is placed. On the verso remains of a scene with figures are located, of which only a small fragment has been preserved. The inscription, a parallel to the Stela of Amanishakheto found at Naga, reads:

*nswt bjty nb t3wy*    King of Upper and Lower Egypt, Lord of Two Lands,  
*s[3 r<sup>c</sup>] nb [...]*        Son of Ra, Lord of [...]  
*amnšh<sup>t</sup>o:qo*            It is Amanishakheto...

Three further small fragments of stelae (F15/002–004) were discovered in the spoil heaps located to the north of the temple. The fragmentary nature of the remains of texts makes it difficult to date them based on epigraphy. However, at least one fragment (F15/002) seems to date to Rilly’s Transitional A–B periods (Rilly 2012: 48–61).

Previously it was believed that the valued building material – namely the stone architectural features – was brought to the site secondarily. In light of the newly acquired evidence suggesting that the early Eastern Temple was built by Queen Amanishakheto, the columns might have originally been produced for the early Eastern Temple. As indicated by pottery finds (cf. below), the present strata were associated with pottery dated between the mid-1<sup>st</sup> century CE and the beginning of the 2<sup>nd</sup> century CE.

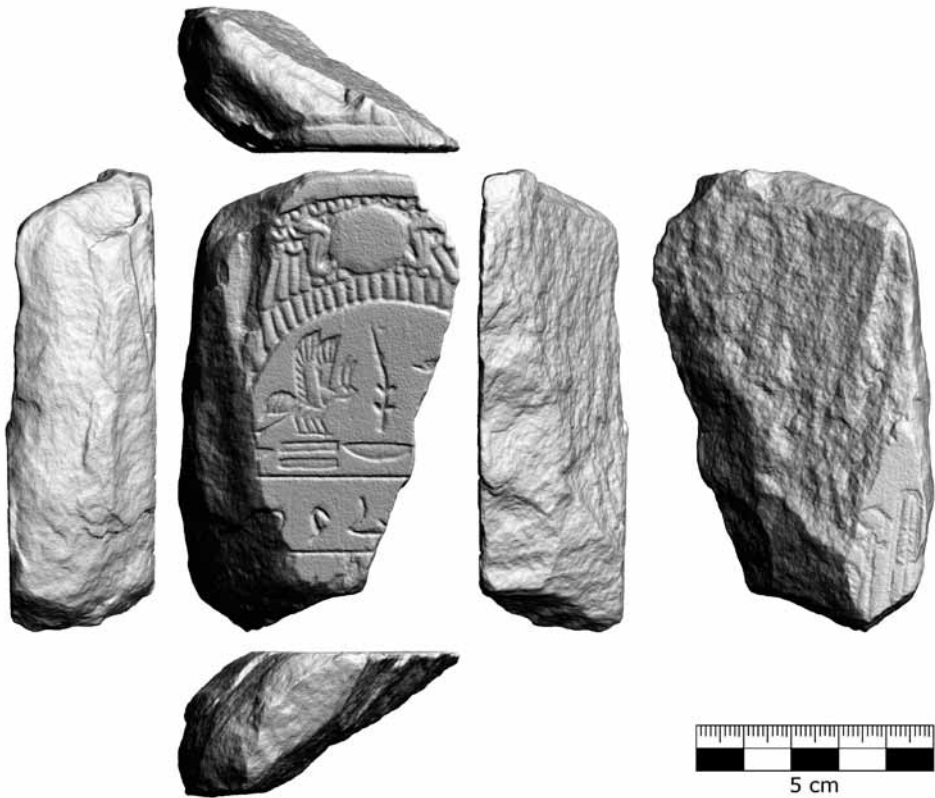


Fig. 3 Fragment of the stela of Amanishakheto (Illustration: Alexander Gatzsche).

At a later point in time, the temple (similarly to the Small Temple) underwent a general reconstruction. Above the lower floor of the early Eastern Temple a layer of mixed composition was created and topped by the floor of the later Eastern Temple. In some parts of the temple the floor of the early Eastern Temple was overlaid by a thin layer of crushed pinkish sandstone (probably coming from fragments of column drums).

A single context group of objects included *inter alia* several small boards once forming part of a piece of furniture. The radiocarbon dating of a sample of one of them provided the calibrated date 201–36 BCE<sup>2</sup>, serving as *terminus post quem* for the archaeological context.

The general reconstruction took place at some time in the (early) 2<sup>nd</sup> century CE. This third horizon corresponds to Vercoutter's "niveau de construction" (cf. above). The upper floor was as deep as Thabit Hassan Thabit excavated and it is this phase which is described in previous studies (Vercoutter 1962: 271-273; Onderka – Vrtal *et al.* 2013: 75-82; Onderka 2012: 118-126, etc.): The late Eastern Temple was built within several phases. The main phase included the reconstruction of the proper temple building (WBN 501–507), the later phases included the construction of the triple building (WBN 510–512) through construction of which two other rooms were created (WBN 508–509). In the next phase other four rooms were built (WBN 513–516). All these works followed in fairly rapid sequence.

<sup>2</sup> Sample CLR 14\_289, IntCal13 at P=0.93.

The fourth phase of occupation during the Post-Meroitic Period is anticipated on the basis of Vercoutter's report; however, archaeological evidence is largely absent. Room WBN 517 identified in the northern part of the hypostyle hall (WBN 501) may be seen as a proof of squatting activities in the ruins of the late Eastern Temple.

### *Pottery from the Eastern Temple*

The complete pottery assemblage from the Eastern Temple was processed in order to obtain some quantified data on pottery forms occurring in the temple (although this task was severely affected by the highly fragmentary nature of the assemblage) and to establish basic fabric classification. Altogether 30 fabric types were discerned, based on macroscopic evaluation. Samples of the individual fabrics were selected and prepared for petrographic analyses and analyses by re-firing. The petrographic analyses allowed us to study the components of the matrix more in detail and shed more light on some technological aspects of Meroitic pottery manufacture. Analysis by re-firing allowed estimation of original firing temperatures and identification of various clay types.

Although the original stratigraphy of the structure was almost absent due to the character of revising excavations, it was also possible to obtain a general idea of the chronological range into which the pottery assemblage fell. The datable examples fell into the period between the early 1<sup>st</sup> century CE and the 3<sup>rd</sup> century CE. Only a very few of the potsherds were found in a more or less undisturbed stratigraphic context, thus rendering the dating only hypothetical. However, the bulk of the forms occurring in the assemblage can be dated to the 2<sup>nd</sup> half of the 1<sup>st</sup> century CE – beginning of the 2<sup>nd</sup> century CE (Edwards' Groups Ib/II; Edwards 1999), which can be best explained by the fact that these originate in the first floor horizon, the excavations of which were perhaps not completed in 1958/1959. For the second floor horizon, a secure context can be attributed to a pair of censers briefly mentioned in Vercoutter's report on the excavations (inv. nos. SNM 11924, SNM 11925; Vercoutter 1962: 272) and datable to the 2<sup>nd</sup> century CE.

### *Structures WBN 550 and WBN 560*

East of the pylon of the Eastern Temple two more structures were discovered – the foundations of a square building (WBN 550) and a tank hewn into the bedrock (WBN 560; Pl. 7–8). The foundations of the square building WBN 550 resemble in their building style the foundations of the triple building (WBN 510–512). Not far away from the structure WBN 550 was the tank WBN 560. It was hollowed into the bedrock; its walls were reinforced with fired brick walls, its interior was coated with a thick layer of calcite plaster (Pl. 8). The inner and outer dimensions of the tank are 1.4 m (N-S) by 2.4 m (W-E) and 1.8 m (N-S) by 2.7 m, respectively. Similar tanks were discovered in the Royal Enclosure at Meroe (site of M 295, M 621 and M 932). According to Török (1997: 63ff, 175, 201), the basins in their general layout reproduce the water sanctuary M 195, i.e. the so-called Roman Bath.

### **[3] Works at the Palace of Queen Amanishakheto (WBN 100)**

The archaeological excavations in the Palace of Queen Amanishakheto were limited to clearing casemates in room 121. The fill of the casemates provided pottery assemblage datable to the period of construction of the Palace.



#### [4] Excavation of the Tumulus WBN C203

During the ninth excavation season, a cluster of three tumuli located to the west of the kom C, i.e. the Isis Temple, started to be explored. During the previous excavation season only two tumuli out of three were excavated. During the tenth season the exploration of the cluster was concluded.

The cluster was dominated by the middle tumulus (WBN C201), which in diameter and height surpasses both tumuli located at its sides. It included a burial of an adult individual laid to rest in the supine position. The northern tumulus (WBN C202) contained a burial of an archer deposited in a contracted position with the head towards the south and facing east. The burial pit contained standard items of funerary equipment, including iron arrow heads, a beer jug and an archer's ring (Onderka – Vrtal – Gatzsche 2015).

The superstructure of the tumulus WBN C203 was formed by fired brick fragments and local stones with a small portion of sandstone fragments. Several fragments of bricks possessed remains of plaster (with polychrome decoration). When compared with the previous two tumuli, the superstructure was fairly minimalistic. Its surviving remains were some 30 cm above the surrounding terrain. The tumulus contained a male burial laid to rest in a contracted position. The burial pit was most likely entered already during the antiquity. Individual bones were displaced and out of the original funerary equipment only the arrow heads were found.

Cemetery WBN C200 seems to have been a cemetery dated to the transition between the Meroitic and Post-Meroitic Periods, or as the case may be between the two burial traditions.

#### Conservation Report

Conservation works focused on several projects connected with the ongoing excavations and site management. Works in the Palace of Queen Amanishakheto (WBN 100) focused on stabilizing walls in the eastern part of the palace against the annual rains using the standard procedures developed for the *pro tempore* stabilization of the structure. The works in the Palace also included the treatment of plastered sandstone capitals from the room WBN 154. The plaster and exposed soft sandstone of the capitals were consolidated with a 10 per cent solution of Paraloid™ B44 in Acetone (weight/weight). Later the capitals were wrapped into a humidity permeable textile. The wrapped capitals were covered with a protective layer of soil.

After the excavations of the tumulus cluster WBN C201–C203 were completed, a reconstruction of the mounds took place with the intention of giving them their original appearance.

New finds, as well as finds from previous seasons were worked on.

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Pl. 1 Elevation map of the western part of Central Wad Ben Naga showing position of trenches T25, T26, T28, T29 and tumulus WBN C203 (Illustration: Vlastimil Vrtal).



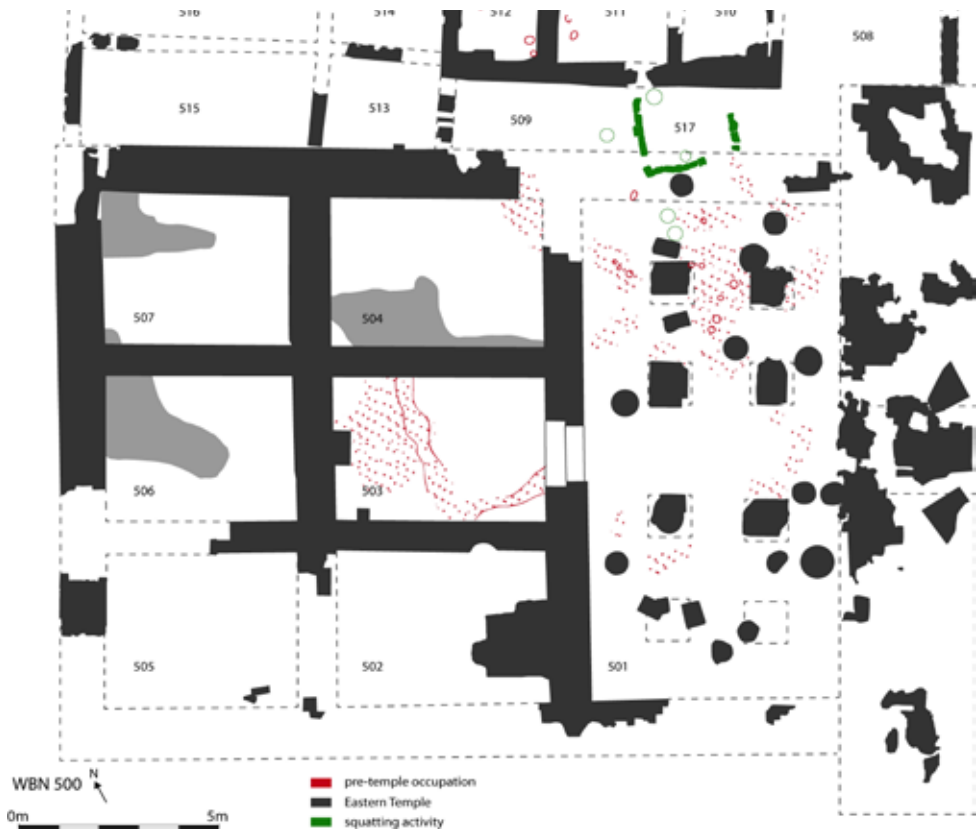
Pl. 2 Kom H before excavations; view to the east (Photo: Vlastimil Vrtal).



Pl. 3 Trench T28, view to the north. The walls of the first phase (center and on the left) were cut by a wall of the second phase (center, E-W orientation) and overbuilt by thin mudbrick walls of the fourth phase (center, left and top) (Photo: Vlastimil Vrtal).



Pl. 4 Trench T28, view to the east. The walls of the first phase (right) were cut by a wall of the second phase (center). Stone walls (left, third phase) most probably belonged to same building as the latter wall and supported barrel-vaulted ceiling (far left) (Photo: Vlastimil Vrtal).



Pl. 5 The Eastern Temple (Drawing: Vlastimil Vrtal, Ramona John, Pavel Onderka).



Pl. 6 3D-visualisation of the archeological situation in the Eastern Temple and structures WBN 550 and WBN 560 (Illustration: Alexander Gatzsche).



Pl. 7 Structures WBN 550 and WBN 560 to the east of the Eastern Temple (Photo: Pavel Onderka).



Pl. 8 Remains of a tank (WBN 560) unearthed to the east of the Eastern Temple (Photo: Pavel Onderka).