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Preliminary report on excavations in Memphis (Kom Tuman) in 2018

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From 18 March to 30 April 2018 the Centre for Egyptological Studies of the Russian Academy of Sciences (CES RAS) conducted a regular archaeological season at Kom Tuman. The work was carried out in the following areas: archaeological research; topographical survey; core-drilling; geological survey; work in the magazine. Archaeological work was conducted on two areas adjoining the fortified wall from outside — the workshops zone (VI.T12–T13, VII.A.13, VII.C12–C13) and the bastion zone (VII.C12–C13); on the area of the so-called ‘rescue excavations’ (X.F2–F3, X.G2–G3, X.H2–H3); in the location of the ‘side’ entrance to the palace of Apries. The topographical survey was focused on the palace of Apries. A 3-D model of the palace was finished, and two inner corners of the platform of the palace were also detected. A series of holes was made with a hand auger in order to determine the depth of the platform.

Keywords: Memphis, Kom Tuman, palace of Apries, White Walls, workshops, Late Period, Ptolemaic period, Roman period.

The site of Memphis has always played an important role in the history of the Ancient Egyptian state — even when it was not its capital. Due to its suitable geographical position the city had links to the Mediterranean region, the Red Sea basin, Central Africa, and the oases. Numerous trade routes crossed at Memphis, including those linking different Egyptian cities. These strategic advantages turned Memphis into the economic, military, and administrative center of the country.

Memphis also held a leading position in Egypt’s religious life. There was worshipped the principal state god Ptah, the creator of the universe, the protector of the king’s power, and the ‘Chief of artists’ who was the founder of arts and crafts.

Since 2001 the Centre for Egyptological Studies of the Russian Academy of Sciences (CES RAS) has conducted archaeological studies in the north-east part of Memphis, where the ruins of the palace of Apries, one of the last Egyptian pharaohs of the so-called Saite

dynasty (664–525 BC), are preserved. The Russian concession includes three ‘hills’: Kom Tuman, Tell Aziz, and Kom Dafbabi, and covers over 20 ha.

The CES RAS mission has collected important data shredding light on the history of the city. The city’s Saite-Persian centre has been planned. In the course of excavations of the so-called military camp located close to the palace of Apries, it was established that the ‘camp’ occupied a large area and was strongly fortified. Within the ‘camp’ were workshops for various purposes, including bronze casting for the production of weapons. The area was intended to house and provision a large contingent of warriors and craftsmen and was well equipped for this purpose.

There were also located chapels of different deities, trading areas etc.

In the 2010 season the mission discovered intact Roman period warehouses and cellars in the north-eastern part of Kom Tuman, indicating that the city’s economy and trade continued to flourish at this time, and that the city expanded towards the river.

In the course of the excavations numerous artefacts dated to the Old and New Kingdoms were discovered, leading us to the conclusion that layers from these periods are also present below the later structures.

In 2015 fragments of defensive walls dated to the Late Period were discovered. This suggests that Apries, one of the last Egyptian pharaohs of the so-called Saite (26th) dynasty, erected not only a palace but also a fortified ‘camp’ at Kom Tuman. In the 2017 season it became clear that both palace and ‘camp’ were surrounded with a massive wall, part of which is still preserved. The wall was equipped with massive bastions (fig. 1A). The length of the wall, the width of which reached 8 m, was traced for 150 m. This wall protected the ‘camp’ from natural cataclysms and enemies. The wall was coated with a limestone plaster, averaging 5 cm in thickness (fig. 1B).

According to the written sources it is exactly those walls that were referred to by Persians as the ‘White’ ones, deriving from the ancient toponym for Memphis ‘The White Wall’. According to Herodotus, the Persian administration and mercenaries were housed ἐν τῷ Λευκῷ Τείχεϊ τῷ ἐν Μέμφει.

From 18 March to 30 April 2018 CES RAS conducted a regular archaeological season at Kom Tuman. The team included Dr. Galina A. Belova (director of the mission), Dr. Sergej V. Ivanov (deputy director of the mission); Mr. Abu el-Fattah Yassin Abd el-Fattah, Mr. Batran Magdi Rahim, Mrs. Nagleh Ahmed Fuad Abd el-Mohsen, Mr. Sherif Abd el-Rahim (inspectors of the MSA); Dr. Dieter Eigner (field director); Mr. Ali Farouk Al-Quftawi (foreman of workmen); Dr. Alexander A. Belov, Mr. Nikolay V. Frolov (archaeologists); Dr. Sabine Laemmel, Ms. Victoria I. Yarmolovich (pottery analysts); Dr. Helena G. Tolmacheva (Egyptologist); Prof. Evgeniy M. Nesterov (geologist); Mr. Konstantin G. Loginov, Mr. Vladimir N. Sorokin (surveyors); Mr. Bernard Boismoreau (photographer); Mrs. Oksana V. Vingolte (draughtsman)¹.

¹ The Centre for Egyptological Studies of RAS would like to thank Dr. Khaled el-Enany, the Egyptian Minister of State for Antiquities, Dr. Mostafa Waziri, the Secretary General of the Supreme Council for Antiquities,

Dr. Ayman Ashmawy, Dr. Mohammed Ismail, Mr. Ibrahim Refat Ibrahim, and Mr. Essam Khamis, whose help was vital for the professional running of the expedition.



Fig. 1A (left). Fragment of the 'White' wall equipped with bastion



Fig. 1B (right). Coating of the wall

The work was carried out in the following areas:

- 1) archaeological research;
- 2) topographical survey;
- 3) core-drilling;
- 4) geological survey;
- 5) work in the magazine.

Archaeological research

In the 2018 season archaeological work was carried out on four areas, namely:

A. and B. On two areas adjoining the fortified wall from outside. Workshops were discovered in the upper layers of this part of the site, some situated on top of two (?) bastions of the fortified wall from an earlier period. For convenience of description these areas are respectively named the workshops zone (VI.T12–T13; VII.A.13; VII.C12–C13) and the bastion zone (VII.C12–C13).

C. on the area of the so-called ‘rescue excavations’ (X.F2–F3, X.G2–G3, X.H2–H3).

D. In the location of the ‘side’ entrance to the palace of Apries.

Before the excavations, the relevant areas were cleaned. A thick layer of waste and turab, averaging 1 m in depth, was removed from all areas. Squares VII.A13, VI.T12–VI.T15, VII.C12–VII.C13, X.F2–F3, X.G2–G3, X.H2–H3 were cleaned and prepared for excavations.

Excavations in the workshops zone

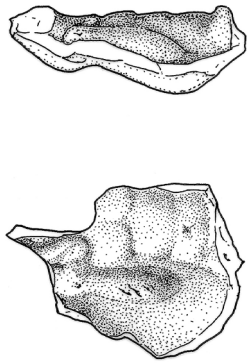
Work began here in 2005–2006. It was established that the workshops occupied a large area outside the fortified walls (excluding a furnace found beneath a Persian administrative building) and were in use for a long time. The structures unearthed date to the Persian and early Ptolemaic periods. The workshops were surrounded by low narrow walls.

Workshops for the production of faience paste and faience items, of the ‘Egyptian blue’ highly valued in the ancient world, of glass paste and coloured glass items, were discovered. It is likely that stone and terracotta figurines – object types which are widespread throughout Memphis – were produced here, as well as stone vessels (fig. 2).

A series of furnaces designed for high temperatures and arranged in a specific order was discovered in squares VI.T12–VI.T13 (c. 17.50–17.00 m ASL) (fig. 3). These probably belonged to the workshops discovered earlier. The furnaces themselves were short-lived structures that were damaged by the high temperatures reached in use. New furnaces were built on top of the old ones, often leading to the rebuilding of workshops. During the excavations, several dozen furnaces for various purposes (including casting bronze and producing bronze items, fig. 4) have been discovered and studied so far.

Various facilities (including, for instance, ones for grinding stones used in industries), different tools, vessels, production waste and so on come from this location (fig. 5).

Several accumulations of pottery were discovered in the workshops. Judging by the vessels found *in situ*, they kept functioning during the Ptolemaic period. The large accumulation of vessels and their fragments found in square VI.A13 is of special interest (fig. 6).



c



b



a

Fig. 2. Finds from workshops:
a — alabaster vessel;
b — faience amulet of Isis suckling Horus;
c — terracotta figurine of Harpocrates, photo (above) and drawing (below)



d



e

Fig. 2. Finds from workshops:

- d — terracotta plaque with a representation of a nude woman;
e — fragment of an object (decorative element?) made of 'Egyptian blue'



Fig. 3. Remains of a furnace



Fig. 4. Samples of arrowheads

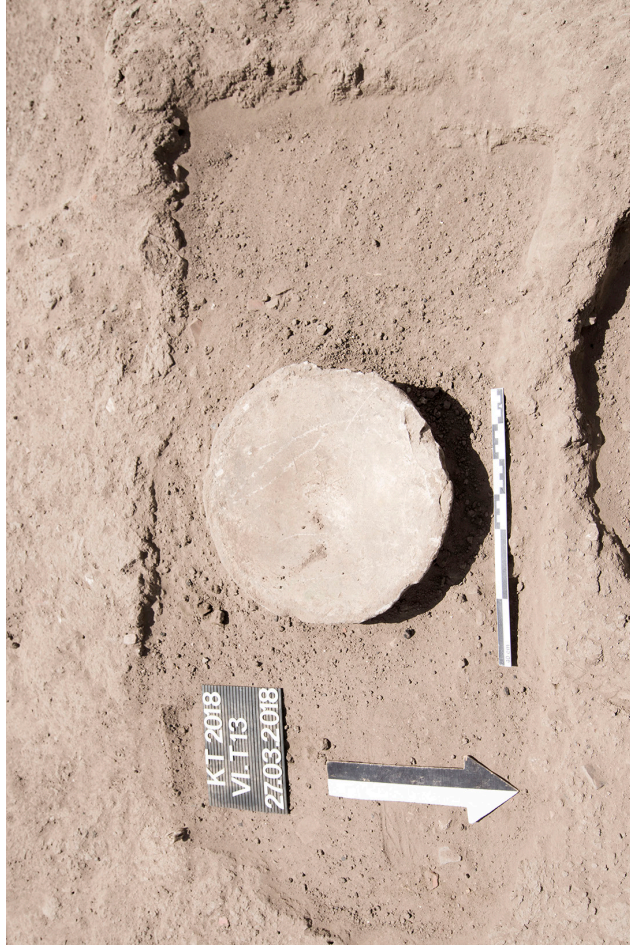


Fig. 5 (left). Part of an installation used for grinding



Fig. 6. An accumulation of pottery

In square VI.A13 a stock of ‘raw material’ was found, namely stone blocks stacked in pits. Those blocks have a regular form, and some have the remains of relief decoration, indicating the re-use of blocks from destroyed buildings. It is interesting to note that the corner of the pit was also formed from the same type of blocks (fig. 7).



Fig. 7. Limestone blocks

Excavations in the ‘bastion zone’

Work in this zone focused on tracing the shape and construction of the bastion adjoining the fortified wall.

A typical feature of Persian defensive constructions, the brickwork of square mud bricks had been registered in previous years. This season, work was carried out at 15.00–14.90 m ASL. It was established that the square brickwork is surrounded by the 2 m wide mud-brick wall. However, the shape of the bastion was not precisely determined because of the large size of this structure and its poor preservation. Attempts to trace the shape of the bastion will be continued next season.

In square VI.T13, in the workshop zone, fragments of square brickwork and white-washed wall were discovered. These probable formed part of another bastion (fig. 8).

In course of excavations it was also established that wall 30 had been rebuilt at least twice.



Fig. 8. Fragment of brickwork made of square bricks

Excavations in the ‘rescue area’

In 2018 excavations in the ‘rescue area’ were continued (squares X.F/G1, X.G2–3, X.H2–3).

This territory is mostly occupied by the large building 10, which is divided into several rooms (fig. 9). Only its central part has so far been cleared, namely rooms 205, 288, 289, 290, and 370. Unfortunately, its plan could not be traced completely because, as was established during the current season, the building had been renovated and reconstructed several times.

A renovation probably caused the floor to be raised in several rooms (its initial level was 13.80 m), whereas the layout of the rooms themselves remained unchanged. In room 288, for example, such a raising of the floor level can be clearly traced.

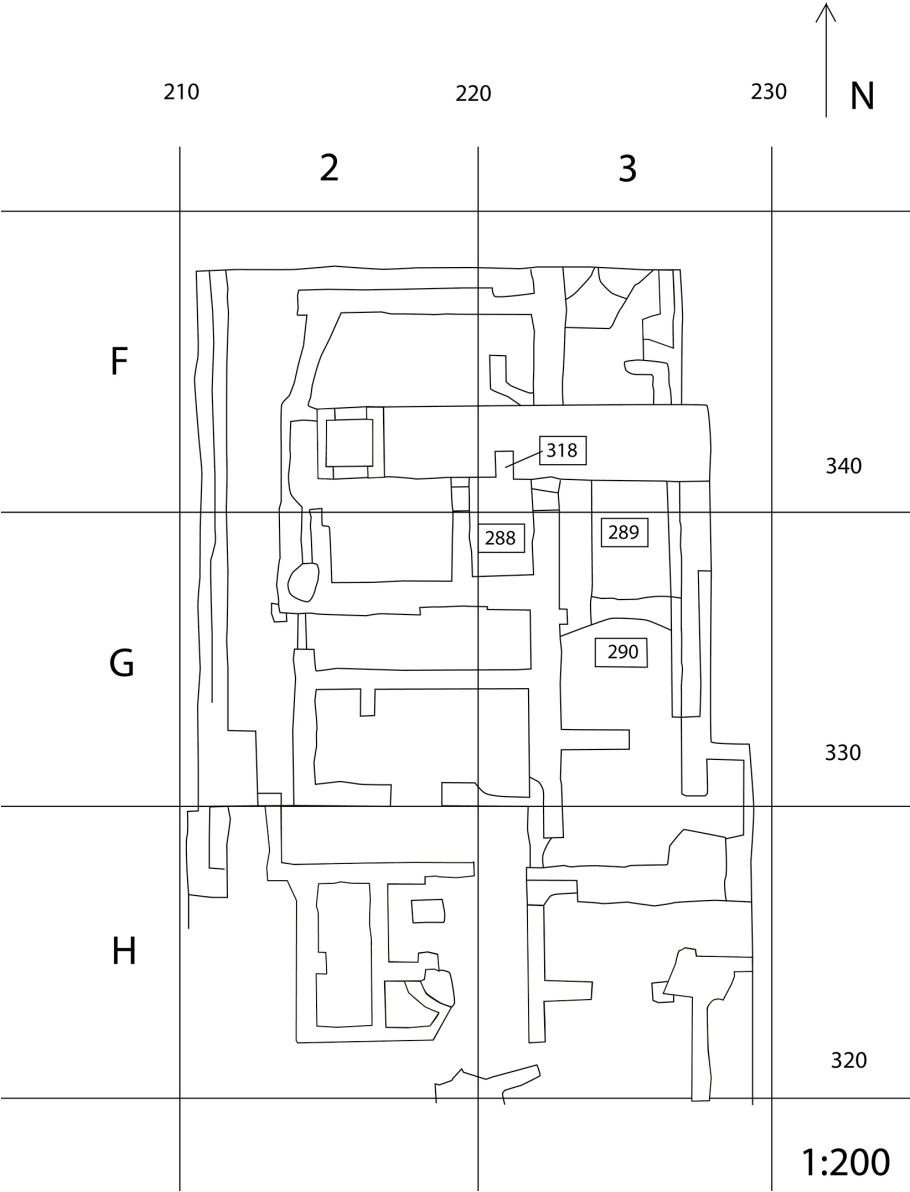


Fig. 9. Sketch of the plan of the building 10

At the same time, a partial change of the plan of building 10 should be associated with its remodelling. There were at least three such remodelling events. Room 289, for example, underwent significant remodelling.

One of these remodellings probably caused the western part of building 10 to be seriously changed. Although one would anticipate that the plan of the building would be symmetrical, walls 372 and 213 (the latter built above wall 372) of room 205 cut the building's western part. Those two walls were erected at different times. Wall 213 (85 cm wide) built of silt bricks is separated from wall 372 by a thin homogenous layer with minor inclusions of ceramic and limestone fragments (up to 8 cm). Wall 372 is much wider (120–140 cm) and built mostly of large mud bricks (40×20×14 cm). Attempts to trace the presumed western part of the building failed.

Massive defensive walls 192 and 283 stretch along the walls of building 10 from north to south. The surface between these walls was levelled with hard-packed soil just like the walls of building 2, studied in previous seasons.

It was presumably determined that a courtyard initially adjoined building 10 to the north. This courtyard was small and limited by a massive wall of dark mudbricks. It was paved with hard-packed soil with inclusions of limestone, ceramic fragments, and pebbles. Its surface was whitewashed.

Later this courtyard was filled with dense homogenous soil of mid-brown colour (with minor inclusions of limestone and ceramic fragments) and fragment of bricks from destroyed wall 196. On this level a platform was erected, limited by walls 197 and 214. The joint between the walls was patched with limestone-based mortar, averaging 10 cm in thickness, probably during the third phase of construction work. The platform was preserved for 3–4 courses of bricks (24×20×12 cm).

In this season the rooms of building 10, discovered in an earlier season, were cleaned to floor level, and a number of new rooms were unearthed. The floors and walls in this building were whitewashed. Large mud-bricks covered a small part of the floor in room 288. Rooms are connected with each other by passages with doors (fig. 10).

Some parts of the doorway were found near the outer side of the wall 210/211. There were threshold, stone socket and a small block set beneath the socket to raise it to the level of the threshold.

In the room 288 a limestone slab with a striped pattern on one surface was found. It cannot be excluded that it served as a door. Next to this slab a bronze lid was laid (fig. 11).

A rather deep niche with whitewashed walls was made in the northern wall of room 288 (fig. 12). Later it was filled with ceramic fragments.

Complete vessels of different shapes, loom weights, and bronze jewellery were found on the floor of room 289 (fig. 13).

A passage connected rooms 289 and 290.

In room 290 a child's body was found under fragments of Phoenician amphoras (13.25 m ASL). The child was placed extended on its back. There were bronze rings in its ears and a pair of bracelets on its legs (fig. 14). It is interesting to note that the custom of burying children in houses is still practiced in Egypt.

Characteristic features of the building (small rooms, massive doors, deep niches, whitewashed floors and walls etc.) allow its identification as a warehouse. This building probably belongs to a type of so-called 'pure storehouses' (*šnꜥ wꜥb*) functioning during the Saite dynas-



Fig. 10 (left). Passage between rooms 288 and 290



a



b

Fig. 11 (right). Limestone slab and bronze lid, room 288: a — in *situ*; b — the bronze lid after conservation



Fig. 12. Niche in wall, room 288

Fig. 13. Items found on the floor of room 289



a



b



c

Fig. 14. The child burial

ty at temples and sometimes palaces. Their sacrifices were purified, stored, and distributed. However, over time the rooms were reconstructed and turned into living areas.

Excavations at the palace of Apries

Study of the architecture of the palace of Apries remained an important part of the mission's work this season. Special attention was paid to the limestone gate found *in situ* to the south of the palace (square II.S16). The gate paired with it has not been preserved². The gate was equipped with a massive stone door, to judge from the slot for the door (fig. 15).



Fig. 15. The postern

The gate was incorporated in mudbrick walls being a part of a casemate type basement for a ramp.

From the stone gate a passage with whitewashed walls and floor ran in the direction of the ramp. Its length could not be traced, so it remains unknown whether the gate and the pas-

² The second gate was described by B. Kemp in 1976.

sage led to the palace or to the ramp. We cannot exclude that this passage³ was underground and could be used if necessary to avoid danger. This may be why Petrie's 'moat' was situated inexplicably high above the surface. Studies will be continued next season.

Topographical survey

In the 2018 season the topographical survey of the site was continued:

1. A 3-D model of the palace of Apries, which is an important part of historical and cultural heritage, was finished. This model can much simplify reconstructing the architecture of the palace complex.

2. The exact sizes of palace and platform are so far unknown. We marked points on the surface, where, judging by photographs from space, corners of the original palace and its platform might be situated. Two inner corners of the platform were detected. This work will continue next season.

Core drilling

This season a series of holes (18 in total) was made with a hand auger (fig. 16). The aim was to determine the depth of the platform of the palace of Apries. The holes corresponded to presumed locations of corners of the palace and its platform. To make the plan of the palace complex as precise as possible, the results of studying its architectural remains, satellite images and data obtained in the course of topographical survey were combined.

The depth of the holes reached 10–15 m. The samples obtained were thoroughly analyzed from geological and archaeological perspectives. Special attention was paid to the ceramics. It allowed to judge stratigraphy of the site. For instance, samples from the north-west corner of the palace were certainly dated to the Middle Kingdom.

The true height of the platform was determined. B. Kemp assumed it to be 13 m taking the floor of the 'side entrance' as a starting point of these calculations. However, it is only the very top of a huge structure, a major part of which goes deep underground. We drilled holes to a depth of 10 m from the surface, but have not yet reached the *gezira* sand.

It should be noted that the drilling process was complicated by the state of preservation of the site. A half-completed hole sometimes had to be abandoned if it encountered stones in its course, and another one had to be started nearby. More often the reason for this was dense layers of litter like plastic etc.

Geological survey

This season Prof. Evgeniy M. Nesterov, the head of the Department of Geology and Geo-ecology of the Herzen State Pedagogical University of Russia, took part in the expedition. He determined minerals used for construction work, for creation of sculptures, and for manufacture of stone tools. Detailed study allowed determination of their origins and, consequently, tracing of possible contacts with other cultures and lands.

³ It can be presumed that a second passage on the other side of the ramp existed.

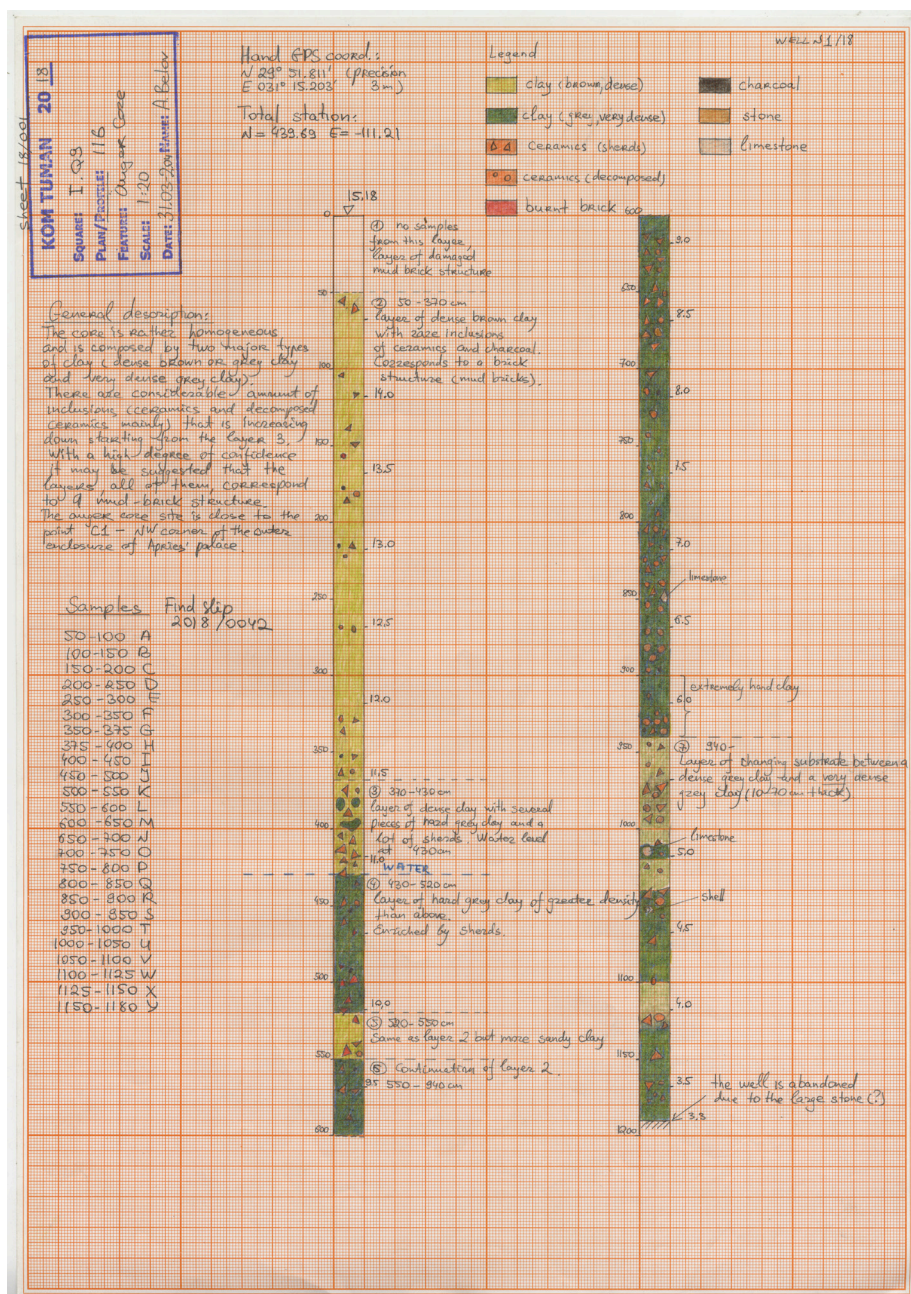


Fig. 16. One of the auger holes

Work in the Mit Rahina magazine

We also continued studying finds discovered during the current and previous seasons.

The study of excavated pottery is an important part of reconstruction of the history of a site. Here it has demonstrated that the upper layers dated to the Late Period, from the late Saite dynasty (the 6th century BC) to the 30th dynasty (the 3rd quarter of the 4th century BC). Numerous fragments of ceramics belonged to vessels of the Persian period (the 2nd half of the 5th — 1st half of the 4th century BC). It should be emphasized that many of the vessel forms intended for specific uses discovered at the site were in use over a long period of time.

Since the site has been plundered for centuries, it is not surprising that the Ptolemaic pottery (late 4th — 3rd century BC) was found on the surface and a little beneath the turab layer. It is important to note that the pottery accumulations of the Ptolemaic period generally include fragments of Old, Middle, and New Kingdom ceramics as well as from the Third Intermediate Period. How this happened is not clear. Those early fragments could possibly come from locations in Memphis or elsewhere where mud bricks were produced. They could also originate from strata disturbed by plunderers in the Ptolemaic period or even earlier. These fragments may have appeared as a result of later construction activities. Further studies of this phenomenon may allow mud brick production centres to be determined.

Early Roman pottery was found *in situ* and on the surface. However, Roman vessels occur less often compared to Ptolemaic ones.

The relatively smaller quantity of Ptolemaic and Roman ceramics leads to the conclusion that the population of this area decreased at this period. Samples of Roman pottery were discovered *in situ* at eastern edge of the site, close to the Nile.

Rare pottery types were discovered in layers dated to different periods — fragments of, for example, blue-painted vessels of the 18th dynasty, and complete items, such as Bes-vessels (fig. 17).

Unusual forms of ceramic items are also worth mentioning (fig. 18).

Examination of figurines, besides describing each item, included study of the technology and materials used for their production. These allow conclusions to be drawn about the transfer of technologies and trade contacts between countries.

Unfortunately, inscribed material such as stone blocks with cartouches and inscriptions (fig. 19) and imprints of seals (fig. 20) were found on the surface and cannot be used to date strata.

We also continued describing, drawing, and studying architectural details from the surface of the site and discovered during excavations.



a



b

Fig. 17. Examples of pottery:

a — blue-painted vessels of the 18th dynasty;
 b — a complete Bes-vessel



Fig. 18. Red figure astragalos



Fig. 19. Stone block with the cartouche of Amenhotep III

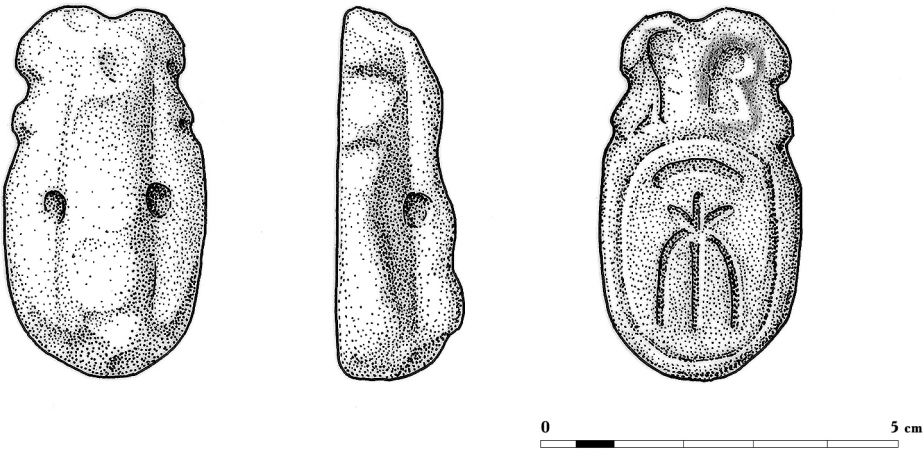


Fig. 20. Limestone seal with the cartouche of Ahmose II

Предварительный отчет о работе археологической экспедиции в Мемфисе (Ком-Туман) в 2018 г.

Г. А. Белова

С 18 марта по 30 апреля 2018 г. Центр египтологических исследований Российской академии наук (ЦЕИ РАН) провел очередной сезон исследований на памятнике Ком-Туман (Мемфис). Археологические раскопки проводились на двух участках, расположенных с внешней стороны оборонительной стены, в «зоне мастерских» (VI.T12–T13, VII.A.13, VII.C12–C13) и в «зоне бастиона» (VII.C12–C13), в районе так называемых «спасательных раскопок» (X. F2–F3, X. G2–G3, X.H2–H3) и на месте расположения «бокового» входа на территорию дворца Априя. Топографические работы, сосредоточенные на территории дворца Априя, увенчались созданием его трехмерной модели. Также были установлены внутренние углы платформы, на которой возвышался дворец. Разведочное бурение имело своей целью определить глубину данной платформы.

Ключевые слова: Мемфис, Ком-Туман, дворец Априя, Белые стены, мастерские, Поздний период, птолемеевское время.