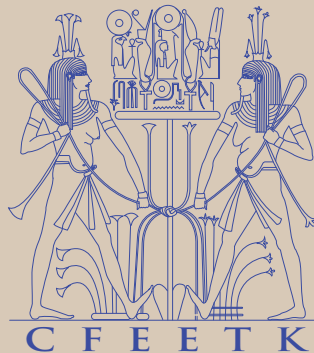


CAHIERS DE KARNAK



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Centre franco-égyptien d'étude des temples de Karnak

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PTOLEMAIC BATHS IN FRONT OF KARNAK TEMPLES. RECENT DISCOVERIES (SEASON 2009-2010)

Mansour Boraik*, Salah el-Masekh (MSA – CFEETK),
Anne-Marie Guimier-Sorbets (univ. Paris Ouest-Nanterre), Bérangère Redon (IFAO)

THE PTOLEMAIC baths of Karnak were uncovered in 2006 by the MSA during rescue excavations. An article published in 2009 presented the initial results of the research.¹ Since then, excavations have continued under the leadership of Salah el-Masekh.

The bath is built directly on the embankment that protected the temple of Karnak from the rising of the Nile, while enabling boats to moor and pilgrims to disembark. The dock has obviously been abandoned during the Late Period, and the Nile has advanced further westward, allowing the bath complex to be established partly on the platform and the mainland and partly on the accumulation of silt along the embankment.² Initial analyses allow us to propose the date of c. 120 BC for the abandonment of a mudbrick structure rebuilt above the baths,³ which mean that the bath's abandonment is earlier, and may be dated to the middle or third quarter of the 2nd c. BC.⁴

* Mansour Boraik would like to thank the Heads of the Ministry of State for Antiquities, Mr Ibrahim Soliman (Director of Karnak), Hamdi Abdel Galil (Chief inspector), Ameen Amar (Chief inspector), and our French colleagues. All the authors of this article would like to thank Shari Saunders for her improvements to our English texts.

1 M. BORAİK, "Ptolemaic Baths in front of the Temple of Karnak", in M.-Fr. Boussac, Th. Fournet, B. Redon (eds.), *Le bain collectif en Égypte, origine évolution et actualités des pratiques, Actes du colloque Balnéorient, Alexandrie, 1-4 déc. 2006, ÉtUrb* 7, 2009, p. 73-86.

2 M. BORAİK, M. GHILARDI *et al.*, "Geomorphological investigations in the western part of the Karnak temple (quay and ancient harbour): first results derived from stratigraphical profiles and manual auger boreholes and perspectives of research", *Karnak* 13, 2010, p. 101-109.

3 M. BORAİK, Th. FAUCHER, "Le trésor des bains de Karnak", *Karnak* 13, 2010, p. 79-100, part. p. 87.

4 The pottery unearthed during the excavation is being analyzed by Mohamed Naguib (MSA). The material discovered in the foundation trench of the bath dates back to the 30th dynasty (mid-fourth century BC), giving a broad *terminus post quem* for its foundation but means that, in any case, the bath was established in an area that had not experienced high occupancy at the beginning of the Ptolemaic period (also observed south of the platform leading to the temple: J. LAUFFRAY, *La chapelle d'Achôris à Karnak I. Les fouilles, l'architecture, le mobilier et l'anastylose*, Paris, 1995, p. 78-80).

The bath of Karnak is one of numerous Greek-style baths built all over Egypt after Alexander's conquest. It fits almost perfectly with the Greco-Egyptian bath model as it has been highlighted recently thanks to the excavations of Taposiris Magna, near Alexandria:⁵ it includes a total of five bathing rooms, two additional rooms and a service area, and is organized according to a simple bathing circuit (**fig. 1**). The main entrance of the baths is certainly on the east side, providing access to a large hall/cloakroom (6), with an adjoining room (possibly a locker room or storage place for equipment). The hall gives access to the south to another probable hall (5), also accompanied by an annex. From rooms 5 and 6, the bathers entered a rotunda (*tholoi* 1 and 2), each equipped with 16 hip-bathtubs. Both rotundas open finally onto a long corridor (3), which leads north to a room (4) that has been very disturbed by the construction of modern tanks. This last room is certainly for relaxation in individual immersion bathtubs (one has been found), a common practice after cleansing in the hip-bathtubs. Corridor 3 also provides access to all technical facilities of the building: a tank in the south, a redistributive basin in the centre, and the heating system to the west.

The bathing establishment at Karnak stands out for the luxury of its mosaics and wall paintings (see *infra* part. 2); furthermore, the hip-bathtubs' armrests flanking the doors of the two *tholoi* are decorated with an original and unique pattern in the Greek baths corpus (including the whole Mediterranean area): they are shaped like dolphins diving inside the *tholos*.⁶ The baths' excellent state of preservation allows us also to study in detail the underground heating system, which has often been destroyed in other baths of this type (see *infra* part. 1). This article aims to highlight the great interest of excavations carried out for nearly four years on the bath of Karnak and present two major features – its decoration (mosaics) and its technical amenities (heating system) – that mark its originality.⁷

Part. 1. The heating system

by Salah el-Masekh and Bérangeère Redon⁸

Heating systems for Greek-style baths first appear in Sicilian and Greek structures of the fourth-third century BC.⁹ Until very recently, it was thought that Egyptian baths were not heated, but recent discoveries of the French mission at Taposiris Magna have demonstrated the existence of a particular system in Egypt, characterized by the presence of a large underground fire that heated both the water used by bathers and parts of nearby rooms.¹⁰

5 Th. FOURNET, B. REDON, "Les bains souterrains de Taposiris Magna et le bain de tradition hellénique en Égypte", in *Le bain collectif*, p. 113-137; Th. FOURNET, B. REDON, "Greek Baths' Heating System: New Evidences from Egypt", in M. Trümper, S. Lucore (eds.), *Greek Baths and Bathing Culture: New Discoveries and Approaches, Proceedings of the Roma conference, 16-17 April 2010* (forthcoming).

6 M. BORAİK, in *Le bain collectif*, p. 75-76.

7 The Ptolemaic bath of Karnak will be published in a monograph under the direction of Mansour Boraik.

8 The authors would like to thank the Heads of the MSA, Mr Mansour Boraik (General Director of Upper Egypt and Luxor for MSA, Co-Director of the CFEETK), Christophe Thiers (Co-Director of the CFEETK), Ibrahim Soliman (Director of Karnak), Hamdi Abdel Galil (Chief inspector), Ameen Amar (Chief inspector). We also deeply thank Aurélie Terrier (architect) for her great work and her help in the interpretation of excavated remains in November 2010, Thomas Faucher (numismatist, IFAO), Olivier Onezime (surveyor, IFAO) who worked on the realisation of the mosaics' photography, and Thibaud Fournet (architect, IFPO), for having guided us in the interpretation of the remains and providing all the illustrations for this article. We are also grateful for the assistance provided by CFEETK, especially Jean-François Gout for the photographs, and the CFEETK's surveyors. B. Redon would also like to thank the ANR program Balnéorient (led by M.-Fr. Boussac) and IFAO (dir. L. Pantalacci, B. Midant-Reynes and S. Denoix) for their support. For more information about the Balnéorient baths program, see: <http://balneorient.hypotheses.org/> and <http://www.ifao.egnet.net/axes/culture-materielle/bains/>

9 M. TRÜMPER, "Regional versus international: conformity and diversity in complex public bath buildings of the Hellenistic period", in *Le bain collectif*, p. 139-179.

10 Th. FOURNET, B. REDON, in M. Trümper, S. Lucore (eds.), *Greek Baths and Bathing Culture* (forthcoming).

The bath of Karnak has well-preserved remains and particularly interesting technical devices. Our research on this system is not yet fully complete, but this article provides an opportunity for us to present a detailed description and to propose some hypotheses about how it functioned.

I. Description (fig. 1)

I.1. Room 3

Both north and south *tholoi* have two entries: the first from their individual entry hall (room 5 for *tholos* 1, room 6 for *tholos* 2), and the second leading to the same room (3). Although decorated with a mosaic floor, the function of room 3 is primarily for movement: it provided access to basins A and B, to the furnace, and, on the north, to room 4, which was much disturbed but still maintains clear evidence for a mosaic floor. Fragments of a sandstone bathtub discovered in the northwest corner may indicate that room 4 hosted the relaxation facilities of the baths, being equipped with one or more (likely several) immersion bathtubs. Room 3 is located next to *tholos* 2 and it is not impossible that bathers from the second *tholos* could also access it because no obstacle exists in corridor 3 to prevent such movement.

The two doors for each *tholos* have different widths which clearly indicate the direction of customer flow through the bathing complex: whereas the doors leading to their respective entrance rooms (locker, waiting and discussion room) are narrow and at least one of them is equipped with a door (indicated by a pivot hole at the entrance of *tholos* 2), the doors opening onto room 3 are wide allowing for unimpeded movement between the *tholos* and room 3. This size difference is probably because bathers were naked in this area and did not want to be visible from the entrance hall, whereas privacy was not required from room 3, that led them to the immersion tubs in room 4. Bath attendants (*parachytès*), bringing water to the *tholoi* bathers, were also probably numerous in room 3 that is outfitted with basin A (redistributive) and tank B (storage).

Not surprisingly, the heating system of the baths of Karnak was discovered in that key space of the building.

I.2. The furnace (fig. 2)

In its excavated state, the furnace is an incomplete ring of bricks, measuring at the top, 3.14 m N / S × 2.48 m max E / W (walls included) and preserved on a maximum height of 2 m.¹¹ Its floor is made of sandstone blocks, which, undoubtedly, belong to the ancient embankment – the platform on which the bath was installed. One should probably restore here a stairway on which is founded the furnace and probably also tank B.

The furnace wall is constructed of baked brick, of regular dimensions (31/32 × 16/17 × 7/8 cm), lying in radiating beds, overlaid with alternating stretchers and headers. The wall tapers off as it rises to form an oval surface-area. The crown of bricks is not complete and it encloses, towards west, a narrow wall (only one brick wide, 20 cm; preserved height: 1.40 m), with a significant slope to the inside of the ring. The furnace entrance is located in this wall.

I.3. Furnace's supply and service space (fig. 3)

The furnace was supplied fuel through a side, vaulted opening (70 cm wide × 90 cm high). This entrance opens to the west, where the service area was located, but it has not been excavated due to the presence of a modern tank directly west of this area, which probably affected the stratigraphy and makes it dangerous to excavate

¹¹ The lowest point of the furnace, to the west of its entrance, is at the absolute height of 72.42 m, while the highest bricks of the crown, on the east, south and north pillars, are at an altitude of 74.46, 74.38 and 74.33 m.

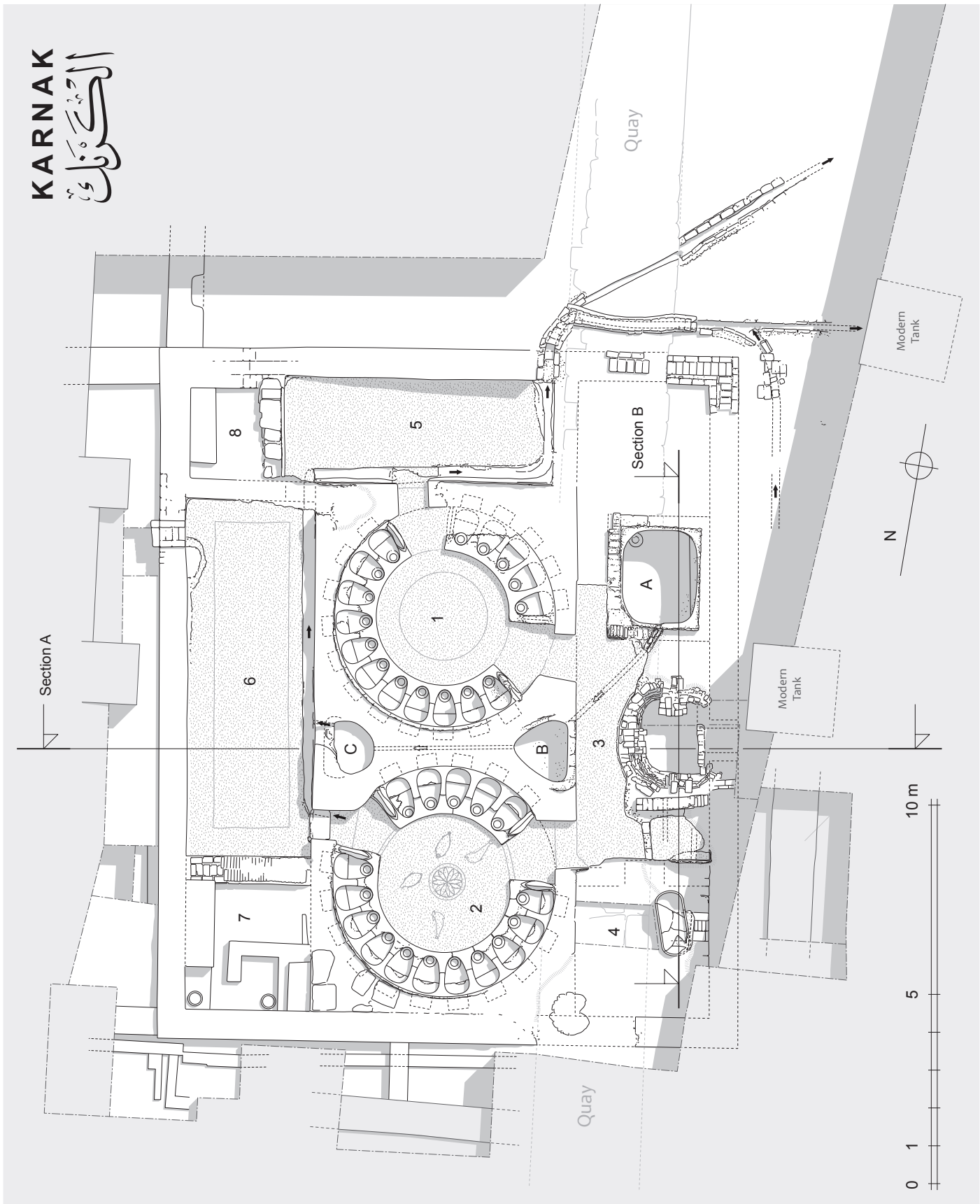


Fig. 1. Karnak, General plan of the baths © A. Terrier (survey), Th. Fournet (drawing).

here. There is no doubt, however, that the arched entrance of the furnace next to a service area was accessed via a staircase from outside the building. The level in this area is the same as the furnace's base, that is, more than 2 meters below the floor level inside the bath.¹² This buried area was probably bounded on the north by a wall made of burnt brick, which leans against the furnace's brick crown on its northwest corner. It has an east/west direction and measures 50 cm long and 15 cm wide.

1.4. Pillars (fig. 4)

The furnace's incomplete brick crown is interrupted to the north, south and east by three brick pillars that protrude and lean forward inside the crown (W pillar: 54×62 cm; S: 70×74 cm; E: 68 cm wide×unknown length because the pillar was partially collapsed). These pillars are not arranged symmetrically in the crown, as the north and south pillars are not exactly face-to-face because the south pier is wider than the north one. In addition, the east and north pillars are built with alternating bricks set on edge and face, while the south pier has a steep bank and was obviously more important structurally and is made up of alternating stretcher and header bricks. This construction probably indicates that the crown was repaired, as it would have been subject to high temperatures that may have weakened it.

1.5. Fill

The furnace was filled by a succession of destruction layers (US 214 and 217), mixing earth, grey to white ashes (especially in the southeast corner and northwest of the oven), and building material including some fragments of painted plaster (dark blue, cream) discovered on the top of fill and which certainly come from room 3's walls. There were also numerous red bricks, some being very dusty and showing signs of heat, especially in the upper fill, that come mainly from the collapse of the eastern pillar in the crown. Finally, many fragments of terracotta basins with thick walls (3-4 cm) were found. Some items were strewn on the bottom of the furnace: one is an oval basin (49×28 cm), while others seem to be rather circular, a fairly standard type that is poorly dated because it was used for a very long time in Egypt.

1.6. Circulation and access

The mosaic of room 3 ends near the furnace to follow the curve of its brick crown. This interruption is voluntary and the mortar of the mosaic was smoothed to present a unified appearance near the furnace. It is thus certain that the floor did not go over the oven and that the mosaic and the furnace are part of the same phase of construction, with one being interrupted to allow the situation of the other.

1.7. Terracotta channels

The furnace is abutted on the north by an east/west wall (MR 2004), where its bricks have certainly felt the effects of fire and high temperature. This brick wall, measuring 1.80×0.30 m and preserved to a height of about 30 cm from the level of the mosaic floor, is part of the heating system. The furnace is connected to a set of underground channels by a single opening (14 cm in diameter) (fig. 4).

¹² This location means that the silt's accumulation against the embankment was excavated in order to install the oven and provide a space for fuelling it. The architects were therefore sufficiently confident in the stability of the area to build the furnace, which means, perhaps, the presence of a structure to protect it against a flood from west of the bath complex.

North of the wall, between the furnace and room 4, the mosaic of room 3 forms a quadrangular space (1.30 × 1.50 m).¹³ Thanks to the partial destruction of that area's floor, we have been able to examine some of the bath's underground devices. First, there is an E/W gap (c. 1.80 m long,¹⁴ 50 cm high, 30 cm wide) that is set directly at a tangent to the furnace (**fig. 5**). It is located between two brick walls: the northern limit of the furnace and a wall forming an angle, which seems to support the floor of room 3 and two terracotta pipes (see *infra*). We don't know if this gap belongs to the original plan of room 3, or if it is the result of some later repair (see *infra*). Perpendicular and starting out from this gap, are two north/south channels, parallel to each other (**fig. 6**), made of slightly ribbed terracotta pipes, and about 12 cm in diameter. They are located directly under the two layers of hydraulic mortar for room 3's mosaic, about 20 cm below the floor's surface. The eastern pipe is situated in the direction of the furnace's mouth under wall 2004. The other pipe does not appear to have led directly into the furnace as a hole has not been spotted in the wall.

Perhaps related to these facilities, but without certainty, are cuts observed on the floor of the space between the furnace and room 4 (**fig. 7**). The first cut, running east/west, is 15-23 cm wide (16 cm in the centre), at least 81 cm long, and 2-3 cm deep. It is located along wall 2004 and its route follows exactly that of the first gap described above. Indeed, the original mosaic ends directly above the northern limit of the gap (the use of which is unknown in the first phase); in a second phase, the upper part of the gap (but, oddly, apparently not the lower part) is filled with bricks and a thick layer of hydraulic mortar, creating in room 3 a line of a different mortar type in the room's floor. The second cut in the mosaic has a north / south direction and joins the first cut and another break in the mosaic at the northeast corner of the furnace. This second cut is less regular than the first and is 13-23 cm wide (17 cm in the centre) and 93 cm long. The edges of this small trench are more regular than the first, but this difference may be a result of the baths' demolition.

1.8. Room 4

The separation wall between rooms 3 and 4 collapsed in antiquity and room 4 was disturbed in recent times with the construction of at least two modern tanks; therefore, it is impossible to demonstrate that the channels continued into room 4, under the separation wall;¹⁵ however, a clay pipe, similar to those in the channels of room 3, is visible in the only place in room 4 where the mosaic is preserved *in situ*¹⁶ (**fig. 8**). Almost in the line with the western pipe, it is constructed of three ribbed terracotta pipes fitted into each other, with a length of 41 cm for the northern pipe (the only complete one), and 25 and 29 cm for the other two; all are c. 12-13 cm in outer diameter. This channel is, as those described above, installed directly below the preparation mortar of the mosaic. It lies on a brick pillar (31 × 16 × 8 cm) of 52 cm high (with a plateau at 26 cm), 49 cm long and 33 cm wide (but it probably continues further east). The pillar is placed on a very clayey layer (20 cm thick), including fragments of sandstone, and is located above a line of sandstone blocks, which are undoubtedly part of the embankment and its facilities (stairs) (**fig. 7**). We do not know if the brick pillar is unique, or if the foundation of the western wall of the room consisted of similar pillars because this part of room 4 is completely disturbed. It should be noted that the level of the pillar's intermediate plateau is the same as the embankment blocks' level

¹³ The mosaic here has suffered from the collapse of the bath complex and / or disturbance in the western area.

¹⁴ The length of the measuring rod that could be inserted into the cavity.

¹⁵ A small area has been excavated in room 4 (2.20 × 1.10 m), but no clay pipe parallel to the first ones was found. It must be said that this room was particularly disturbed and that the channels may have disappeared. The sounding revealed the embankment wall at 60 cm below the mosaic.

¹⁶ On this mosaic, fragments of a sandstone tub, 76 m long and 0.66 m wide, have been discovered.

discovered in the sounding of the room 4 (alt.: 74.14 m), perhaps indicating that the pillar(s), playing role of abutment(s), have been used to fill the space between the staircase and the dock itself to level the area in order to construct room 4.

2. Interpretation¹⁷ (fig. 9)

The furnace's functioning seems simple to understand. Fuel was supplied from the west through a trough in the underground service area. To ensure the furnace's draught, chimneys were required. Although they were not discovered, their location can be postulated near wall 2004 (see *infra*) in the northeast angle of the furnace and, possibly, in its northwest corner. It is possible that one or two chimneys were also located in the southern part of the furnace, but nothing of a wall, similar to wall 2004, remains.

To make hot water available to bathers, the furnace's crown was probably surmounted by a metallic boiler or a basin with a metal bottom. Undoubtedly, the three massive pillars have a role in its support and they were perhaps bearing transverse metallic bars¹⁸ or a tiled structure that allowed the installation of the boiler upon it. Unfortunately, the boiler's dimensions are impossible to restore due to a lack of information in situ and a parallel.¹⁹ The obvious interruption of the mosaic near the furnace indicates that the boiler was probably accessible from hall 3, a low wall probably protecting them from the heat of the furnace's crown.

Pipelines in the north of room 3 and room 4 and wall 2004 are functionally linked with the furnace. Two interpretations of their role in this system are possible, with the latter seeming most likely. The first hypothesis would be to see the terracotta canals as heating channels to heat the floor in the north-western part of the baths. Such arrangements are common in the baths of the 3rd/2nd century BC in Sicily (Megara Hyblaea, Syracuse, Morgantina and perhaps Gela) and Greece (Gortys, Delos, Thessaloniki).²⁰ In Sicily, they are used to warm the water of collective bathtubs located above. In most cases, the pipes are made of brick and the bathtub floors are *opus signinum*.²¹ In Gortys, Arcadia, the cover of the heating channel is made of pumice stone slabs of about 30 cm thick while its walls are brick. This example measures 57 cm wide and 60 cm deep and heats three individual tubs.²² By comparison, the channels of Karnak seem too narrow (int. diam.: c. 9-10 cm) to be able to conduct adequate heat, especially since the existence of sandstone bathtubs (with bottoms not built directly above the heating channel) makes the system even less effective. Secondly, there is no trace of smoke or ashes in the pipes. Furthermore, to ensure the furnace's draught, chimneys are needed at the end of the pipes, but no trace of such devices has been found. Finally, even if we consider the possibility that the device was functioning with two pipes coming from the furnace, they are insufficient to assure an effective heating in the furnace and the smoke's evacuation from the furnace. This hypothesis is, thus, hardly convincing.

17 We thank Thibaud Fournet (IFPO) for his drawings and his valuable advice about the furnace's functioning; his competences as an architect and specialist in ancient baths have been of great help.

18 Cf. the examples of the villa della Pisanella's baths and Trinacria's thermae at Ostia in H. BROISE, J. SCHEID, *Recherches archéologiques à la Maglania, Le Balneum des frères Arvales, Roma Antica* 1, Rome, 1987, annexes 3 et 4.

19 The upper part of the heating crown of Taposiris Magna has been destroyed by the installation of later structures; Th. FOURNET, B. REDON, in M. Trümper, S. Lucore (eds.), *Greek Baths and Bathing Culture* (forthcoming).

20 *Ibid.*

21 H. BROISE, "La pratique du bain chaud par immersion en Sicile et dans la péninsule Italique à l'époque hellénistique", *Xenia Antiqua* 3, 1994, p. 23.

22 R. GINOUVÈS, Balaneutikè, *Recherches sur le bain dans l'Antiquité grecque, BEFAR* 200, 1962, p. 207.

The second hypothesis interprets these pipes as casings for canalisations (most probably in lead)²³ carrying hot water from the boiler to a basin located in room 4, by a siphon device. The sewage system of the bath (in the southwest corner of the building) also uses the same terracotta pipes and they are also employed to connect tank B and basin A, with the same siphon system that fills the basins at the same level. This solution is technically convincing, but finds no parallel in Greek baths, as far as we know.

In both cases, the role of wall 2004 is not entirely clear, but it has been used to support the chimneys we propose to reconstruct at least in the northern limit of the furnace. A similar device, which has now disappeared, may have been located to the south. The small trenches located north of wall 2004, in turn, may correspond to repairs of the system (the north/south one may possibly be the last transformation, when the two underground pipes are abandoned and replaced with a pipe embedded in the floor).

Finally, the heating system of the Karnak bath is comparable in many aspects with that of Taposiris Magna and other less well preserved Egyptian baths: it has a deep underground furnace chamber, which probably was used to produce hot water in a boiler, and was accessible to bath attendants responsible for supplying hot water to the bathers in the *tholoi* (fig. 10). But unlike the baths of Tebtynis or Taposiris Magna, both dating from the late second/early first century BC, the hot air from the Karnak furnace does not seem to have been evacuated through a hollow wall, normally used to heat the atmosphere of the immersion bathtubs' room. In the bath of Karnak, slightly older than these two examples, chimneys may have played such a role, but probably less efficiently than a real heating wall, which seems to be the next step in the evolution of the Greco-Egyptian-type bath heating system. On the contrary, the system of pipes carrying hot water to the bathtub room – currently unknown elsewhere – seems not to have had great success in Egypt. These two features show the importance of Karnak in the evolution of technical devices in the Greek baths of Egypt and the diversity of attempted architectural experiments during the Ptolemaic era.

23 Such a device has been noticed in an unpublished Ptolemaic bath of Medinet el-Fayoum/Arsinoe, located in the northern limit of the modern town.



Fig. 2. The furnace, from West © Cnrs-Cfeetk/J.-Fr. Gout.



Fig. 3. The entrance of the furnace, from East © Cnrs-Cfeetk/J.-Fr. Gout.



Fig. 4. Northern pillar and wall 2004, from South © Cnrs-Cfeetk/J.-Fr. Gout.



Fig. 5. The gap under the northern part of room 3 © S. el-Masekh, B. Redon.



Fig. 6. The western terracotta pipe under room 3 © S. el-Masekh, B. Redon.



Fig. 7. Room 4 and the northern part of room 3, with trenches in the mosaic floor © S. el-Masekh, B. Redon.



Fig. 8. The terracotta pipe and the brick pillar under the mosaic floor of room 4, view from West © A. Terrier.

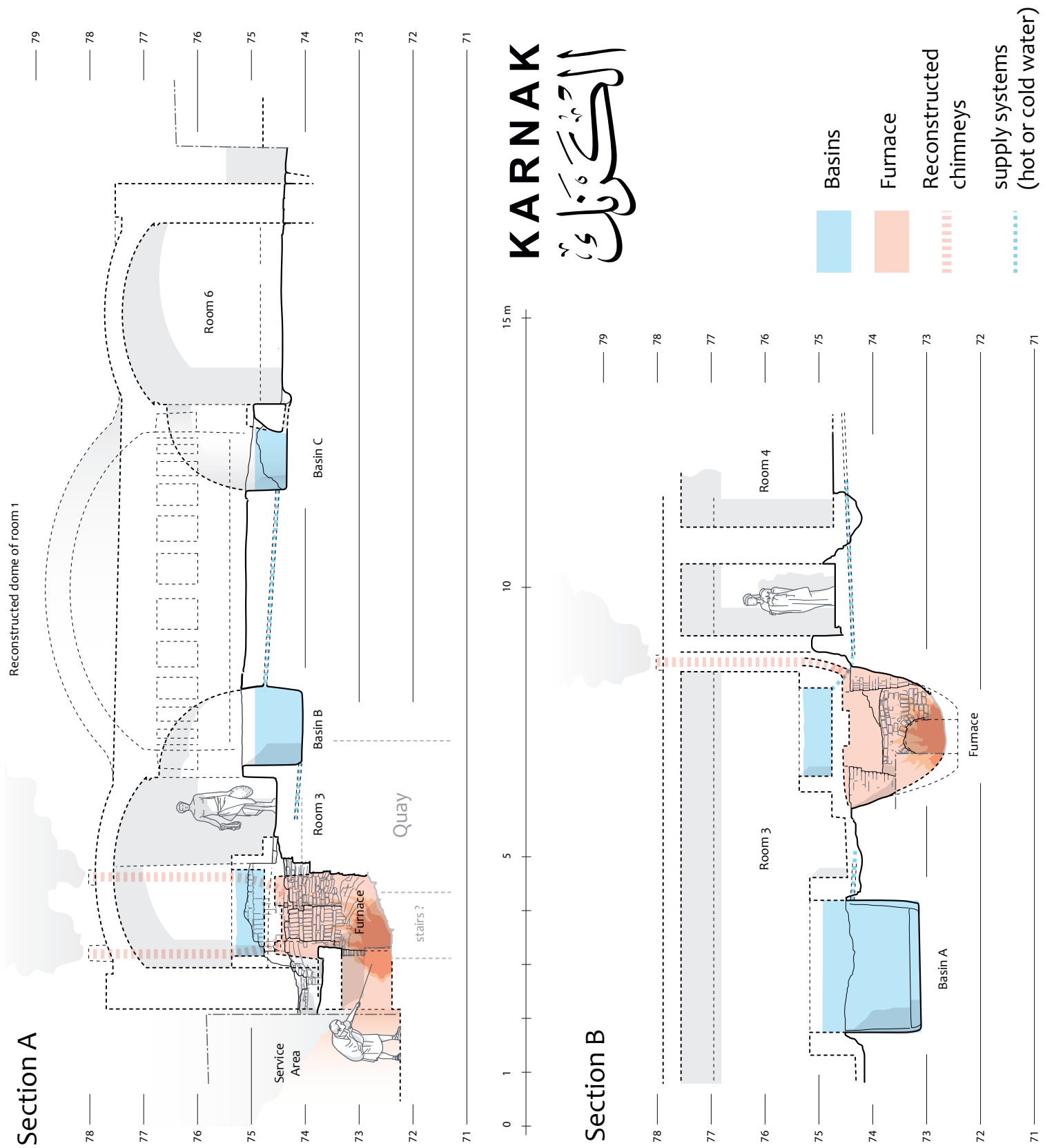


Fig. 9. Sections on the heating system and hypothetical reconstruction of the Karnak baths; A: section West/East; B: section North/South © A. Terrier (survey), Th. Fournet (drawing and reconstruction).

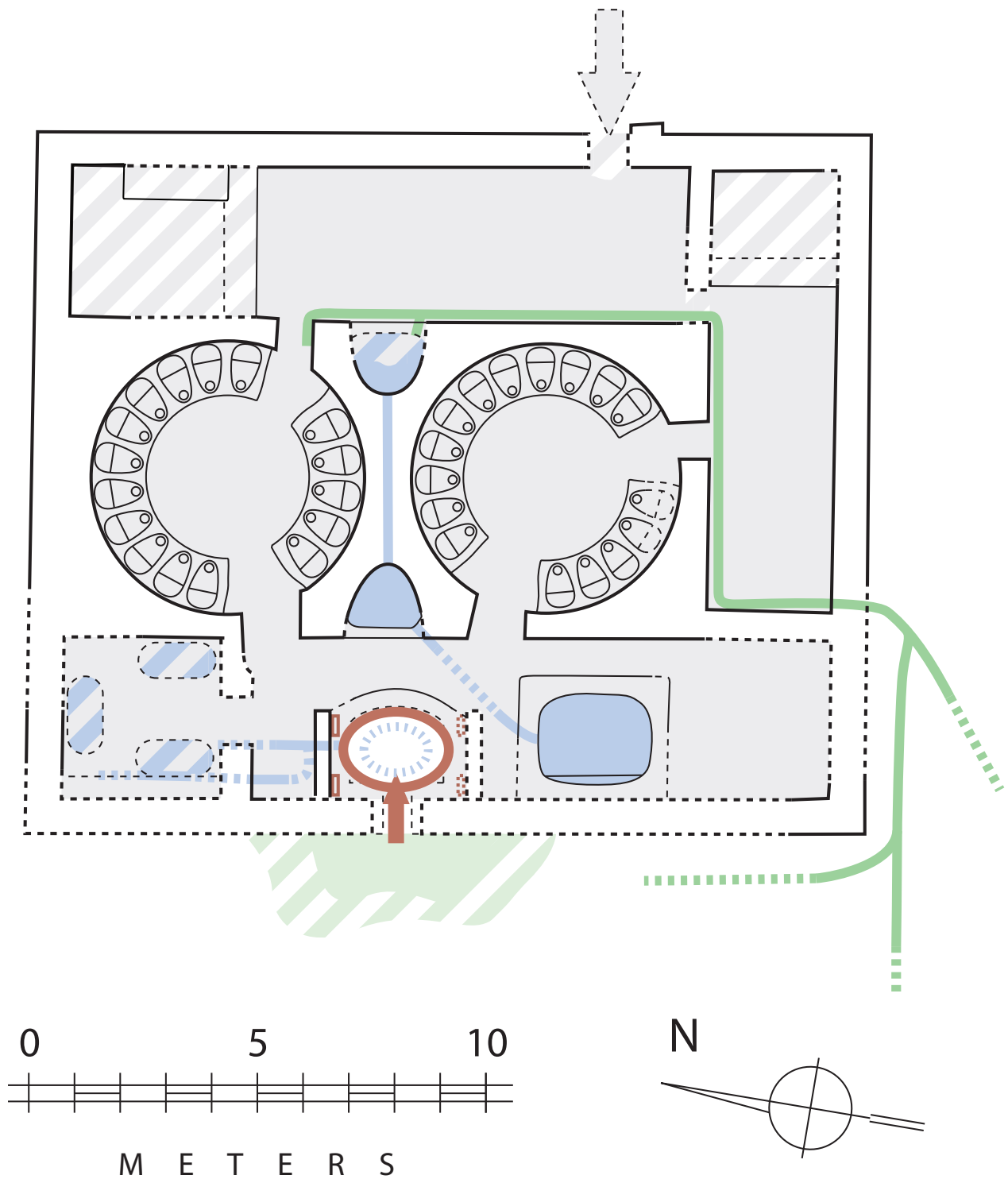


Fig. 10. Typological plan of the Karnak baths, represented with the Balneorient graphics norms © Th. Fournet.

Part. 2. The floor decoration and painted plaster of the baths

by Mansour Boraik and Anne-Marie Guimier-Sorbets²⁴

The meticulously built Hellenistic baths of Karnak consist of six rooms with floors covered in colourful mortar (**fig. 11**), some of which are enriched by chipped stone mosaic. The most striking of the rooms are two *tholoi*: circular spaces of about 5.60 m in diameter, each with two entrances and sixteen individual hip-bathtubs encircling a decorative pavement.

I. Northern tholos (room 2)

Coming from room 6, bathers entered the northern *tholos* through the east door. Crossing a threshold made of stone and across an entry floor decorated with zones and bands of contrasting colours, they would have stood upon a circular pavement of about 3.60 m in diameter, decorated with a mosaic of white limestone fragments, finely sanded and set into a dark red mortar. The room's centrepiece is a fleuron around which are two dolphins and two Nile tilapia. The heads of these aquatic animals are turned toward the central rosette, in a composition that is not radial but rather symmetrical along the axis of the eastern entrance, with the bellies of the dolphins and fishes located on the entrance's side (**fig. 12-13**).

I.1. Fleuron

The centre of the room's pavement is inscribed by an 8-9 cm wide band of terracotta fragments that create a circular tondo, 98 cm in diameter. The band itself is not very visible due to a thick layer of dark red mortar that covers most of the fragments (**fig. 14**) and its outer boundary is marked only by the coloured mortar and a change in technology; however, the band's inner boundary is clearly defined by a lead strip. The circular panel within the band presents a grey background on which is depicted a flower with twelve biconvex petals around its heart. This is a six-petalled rosette, drawn with a compass that has six identical petals, plotted using the same compass, in the intervals between the first petals, thus creating a flower with two superimposed corollas. The petals of the upper corolla are black, while the visible part of the petals in the lower corolla is white; all stand out against the grey background. The surfaces of the white,²⁵ black and grey stone chips that compose the petals are carefully sanded. Between the chips, the mortar is dark red. Lead strips line the edges of the dark petals and the external contours of the white petals. Creatively, the centre of the rosette is created with a reused ceramic base, 4.5 cm in diameter and having a raised ring.

I.2. Fish and dolphins

As with the circular panel's band and the rosette's petals, the dark silhouette of the aquatic animals is set against a contrasting background of white chips inserted into red mortar. The two dolphins are depicted in profile, arched, as if jumping out of the water, with their heads turned toward the flower.

Left of the flower, the profile of the western dolphin is turned to the right (**fig. 15**). It is made with black pebbles that are embedded in a thick dark red mortar edgewise, rarely lying down flat and not contiguous. The animal's dorsal fin is faintly marked while its pectoral fin is rendered with yellow-brown pebbles. Lead strips

24 A.-M. Guimier-Sorbets warmly thanks the Heads of the MSA, Mr Mansour Boraik (General Director of Upper Egypt at Luxor for MSA, Co-Director of the CFEETK), Ibrahim Soliman (Director of Karnak), Hamdi Abdel Galil (Chief inspector), Ameen Amar (Chief inspector), Salah el-Masekh (MSA), Bérangeère Redon (IFAO), Christophe Thiers (USR 3172-CFEETK), Jean-François Gout (USR 3172-CFEETK), Thomas Faucher (IFAO), Aurélie Terrier (architect), Thibaud Fournet (IFPO) and Alain Guimier.

25 The white stone may be marble as it has a fine grain and is harder than the limestone fragments used in the rest of the floor.

emphasize the crescent-shaped limit between the caudal fin and the body, which is also partially outlined by pieces of the same material, which are clearly visible on the rostrum's side, on the back of the animal, on its tail, and around its eye. The pebbles are laid to follow the dolphin's contours with three rows in the widest part of the body. Another row outlines the eye, with its pupil delineated by a small yellow, circular pebble that is laid down flat.

To the right of the flower, the northern dolphin faces left, in symmetry with its western counterpart (**fig. 16**). Although this dolphin is composed of black stone flakes that are mostly covered with dark red mortar, the two share many similarities: its pectoral fin is made of yellow brown pebbles; lead strips are used for the drawing of the rostrum, around the eye, and the internal limit of the tail, while the eye, still partially visible under the mortar, is created with a small yellow, circular pebble and a piece of a lead strip.

Also on the right side of the flower is the eastern tilapia, facing left with the head towards the central flower (**fig. 17**). The fish's quite large body and small tail are composed of fragments of black stone set in dark red mortar. Along its back and belly, small black pebbles are placed edgewise to depict spines: eight are distinguishable (one of which is made of a lead strip) along the belly, and another eight appear on the back. The entire body is surrounded by lead strips, although one quarter of them are covered by mortar. Partially visible lead strips also underline the eye, for which a small yellow-brown, circular pebble marks the pupil.

Placed symmetrical to the eastern tilapia, the southern tilapia faces right on flower's left side (**fig. 18**). Like its counterpart, its body is also made of black stone chips embedded in dark red mortar. Strips of lead define its entire body and draw its gill and eye (with the pupil made with a small yellow-brown pebble). Two longitudinal strips divide the tail into three parts, and other strips draw three of the fish's seven ventral spines (the other four are composed of black and white pebbles, laid flat).

1.3. Entry pavements

After crossing the stone threshold into the northern *tholos* from room 6, the floor of the eastern entrance has three zones of contrasting colours and techniques. Successively, they are: an area of red mortar embedded with colourful pebbles (w: 59-64 cm), a band of pieces of white limestone mosaic, finely sanded, set in a dark red mortar (w: 69 cm), and a strip of ceramic fragments embedded in a dark red mortar (w: 8-9 cm). The layout of this last fine band, that follows the hip-bathtubs, is straight and is delineated on both sides by lead strips.

The entrance area leading from the room into the *tholos* has four zones of mosaic (**fig. 19**). First is a dark red strip (w: 14-15 cm) that has straight contours and is composed of pottery fragments covered with a dark red mortar. The mortar is very damaged in this area, allowing us to see that the terracotta elements are quadrangular and relatively regular in size and shape. The second zone is a black band (w: 54 cm) made of polished fragments of hard stone, surrounded by red mortar that is now very degraded. The area between the hip-bathtubs is less regular (w. 99-134 cm) and is paved with colourful pebbles set in red mortar. The final zone is a dark red band (w: 12-13 cm) of pottery fragments in red mortar. The curved boundary of this band is not delineated by lead.

1.4. Interpretation

The shape and the rose-red colour of the flower petals show it to represent a *Nelumbo nucifera*, a lotus species introduced in Egypt during the Persian period and frequently represented in Egyptian art. Similarly, the characteristic tilapia, a Nile fish, often appears in art from the Pharaonic era onwards. More unusual are the dolphins, which are rarely attested in Upper Egypt. Yet, here in the Karnak baths, these animals that symbolize the sea

for the Greeks are abundant: their silhouettes in the mosaic pavement are echoed in the modelled dolphins that adorn the ends of the hip-bathtubs at either side of the doors leading into the two *tholoi*.²⁶ Previously, we have shown the «exotic» status of such dolphins, portrayed far from the sea, at inland Greek sites.²⁷

Although the mosaic's elements of flower, dolphins and fish are explicable, their location has to be explained. These elements are well known on banquet rooms pavements throughout the Greek world in the Hellenistic period, where they represent the tribute of the sea animals to the god Dionysus, who is symbolized by the flower.²⁸ Obviously, this interpretation is not valid in a bath building. Here, the decoration has an aquatic theme appropriate to the function of the room: the animals swim around a *Nelumbo*, a flower admired for its beauty, as its double corolla seems to spring from the waters to spread across the surface.

The axis of the eastern entrance provides the axis of symmetry for the mosaic's composition, thus indicating the pre-eminence of this entry over the other entrance. The room's rich decoration would have seemed all the more luxurious when the bath was in use, as the vibrant colours would have been heightened by the wet atmosphere and water runoff pooled across the floor. Under the light of the dome's *oculus*, this setting would have shone with a special lumination. Entering the northern *tholos*, bathers were flanked by the modelled dolphins on the hip-bathtubs' arms, looking back into the water after a jump. Once seated in the tubs between the moulded dolphins, bathers had before their eyes aquatic animals swimming around the blooming *Nelumbo*. Thus, clients were invited to enter and be immersed in an aquatic environment, which would have been particularly appreciated in the hot dry climate of Upper Egypt.

A parallel for this floor is the mosaic that similarly adorns a large (5.23 m in diameter) *tholos* fitted with hip-bathtubs at the site of Hu (former Diospolis Parva) in Upper Egypt. Found by chance in 1958, the mosaic is published in W. A. Daszewski's corpus of mosaics from Egypt.²⁹ The centre of the room is covered with a mosaic of irregular *opus tessellatum*. The decoration, presented on a white background, consists of concentric bands of aquatic animals (dolphin, tilapia, and octopus), an acanthus scroll and waves, and, in the centre, an open flower, rendered in gradations of rose, red, blue-grey and yellow petals.³⁰ Another pavement, from Canopus (Abukir) and now housed in the Greco-Roman Museum of Alexandria, has a *Nelumbo nucifera* in its centre and probably a band of wave pattern. The arrangement of the *tesserae* indicates that it was a circular pavement, and so it may have belonged to a *tholos* bath.³¹

26 The baths have been the subject of several articles, including in the papers of the Symposium on the Collective Baths in Egypt, where the discovery of the mosaics of the northern *tholos* was announced: BORAİK 2009.

27 A.-M. GUIMIER-SORBETS, "Technique et décor des sols dans les bains du monde grec classique et hellénistique", in *Le bain collectif*, p. 101-111.

28 A.-M. GUIMIER-SORBETS, "Dionysos dans l'andrôn. L'iconographie des mosaïques de la maison grecque au IV^e et au III^e siècle avant J.-C.", *MEFRA* 116, 2004, p. 895-932; *ead.*, "L'iconographie des mosaïques hellénistiques de Chypre", in A.-M. Guimier-Sorbets, D. Michaelidès (eds.), *Chypre à l'époque hellénistique et romaine, recherches récentes et nouvelles découvertes, Cahiers du Centre d'Études Chypriotes* 39, 2009, p. 141-152; *ead.*, "Dionysos dans la maison grecque. Iconographie des mosaïques des II^e et I^{er} siècles avant J.-Ch.", in *O Mosaico romano nos centros e nas periferias. Originalidades. Influências e identidades, Acta do X Coloquio Internacional da Associação Internacional para o Estudo do Mosaico Antigo (AIEMA), Conimbriga 2005*, Conimbriga, 2011, p. 175-188.

29 W.A. DASZEWSKI, *Corpus of Mosaics from Egypt I, Hellenistic and Early Roman Period*, Mayence, 1985, No. 46; *id.*, "Some problems of early mosaics from Egypt", in H. Maehler, V.M. Strocka (eds.), *Das Ptolemäische Ägypten*, Berlin, Mayence, 1978, p. 123-136, especially p. 123-125, fig. 110-112; W.A. DASZEWSKI, "Die Fussboden-Dekoration in Hausern und Palasten des griechisch-römischen Ägypten", in H. Pruckner (ed.), *Palast und Hütte*, Mayence, 1982, p. 395-411, especially p. 397, fig. 5.

30 The pavement was re-examined recently in A.-M. GUIMIER-SORBETS in *Le bain collectif*, p. 101-111.

31 W.A. DASZEWSKI, *Corpus of Mosaics from Egypt I*, Nos. 26-27.

2. Southern tholos (room 1)

2.1. Floor of the southern tholos

The southern *tholos* has the same dimensions as its northern counterpart, and is also accessible by two entries. The circular floor has a diameter of about 3.57 m. The decoration consists of an outer band (w: 56-57 cm) and a central circular panel (diameter: 2.45 m) (fig. 20).

The room's decoration results from the combination of contrasting colours, materials and techniques. The outer band is a mosaic of white limestone fragments in dark red mortar, while the centre is covered with dark red mortar embedded with multicoloured pebbles (fig. 21). The boundary between these two areas is carefully defined with white stone flakes placed edgewise to form a band of the same colour; yet, facing the southern entrance, it is noticeable that several areas of the band are made of black stone chips. Unfortunately, the decoration has been badly damaged here so the mortar has largely disappeared and many pieces are missing. The limit of this zone, towards the interior of the floor, is drawn with carefully aligned black flakes that spill out in the pebble-mortared panel. It does not seem to be a threshold setting and it lacks symmetry because the other side of the same "threshold" is made in white chips, still *in situ*. The black flakes probably represent an antique restoration, to be hidden under the thick layer of coloured mortar.

For bathers sitting in the hip-bathtubs of the southern *tholos*, their view would have embraced the contrasts of the central, dark red circular zone, then the white and red linear banded zone, and finally the hip-bathtubs' plinth that was covered with a red plaster (fig. 21). The same plaster was covering the hip-bathtubs' walls.

2.2. Entry pavements

The pavement of the western entrance to the southern *tholos*, which communicates with room 3, is divided into four zones. From the outside to the centre of the *tholos*, there is first a dark red band (w: 12-13 cm) of pottery fragments set in similarly coloured mortar. The curved boundary of the band, following the line of the bathtubs, is not marked by lead. The next band (w: 68 cm at its centre) is composed of white stone chips set in dark red mortar. The chips are not made of soft stone, as is the case for the band around the central pavement; instead, their size, hardness and polished surface is similar to the pieces of white stone (perhaps marble) used to create the white petals of the flower in the northern *tholos*. The third zone is a band (w: 10 cm) of black stone fragments set in red mortar. These chips are similar to those used in the pavement of the northern *tholos* and its western entrance. The final zone is an area of dark red mortar embedded with multicoloured pebbles, looking similar to the mosaic in the centre of the pavement. This area, 1.10 m wide along the axis, corresponds to the depth of the hip-bathtubs' seats.

The floor of the southern entrance from hall 5 is partially destroyed. It consists of a threshold stone – partially preserved and placed above the gutter – and, after a lacuna in the mortar, an area of red mortar and coloured pebbles, similar to the mosaic in the *tholos*' centre. In the destroyed area, it is possible to restore, by symmetry with the western entrance, a band of chipped stone mosaic.

3. Rooms 3, 4, 5

The floor of room 3, a circulation room, is covered with red mortar and multicoloured stones. It is preserved across a fairly large area, especially in the area between the eastern wall and the circular limit of the furnace.³² The remains of the floor in room 4, which included individual tubs for immersion bathing, are scanty with only

³² As is normal, the construction of the furnace has been made prior to the floors' coating.

fragments of red mortar and coloured pebbles preserved. Room 5 (7.05 m × 2.74 m) gave access to the southern *tholos*. It is bordered along its northern and western walls by a gutter, which runs towards hall 6. The floor of room 5 is covered with red mortar and colourful pebbles and no other decoration (**fig. 22**). The preserved parts of the coated wall of rooms 3 and 5 still have traces of creamy white painting, without incised lines or colour, at least in their preserved lower part.

4. Room 6

4.1. Floor of Room 6

Room 6 (9.35 m × 3.30 m) was used as a lobby for the bathers, providing access to the northern *tholos* and, perhaps, also to the southern *tholos* via room 5. A gutter borders its western wall. The floor decoration consists of two parts: the first is a peripheral band of red mortar (w: 62-73 cm); the second, in the centre of the floor, is covered with a mosaic of stone chips set into a red mortar and finely sanded. As in southern *tholos*, the decor of room 6 is a contrast of colours, materials and techniques (**fig. 23**).

4.2. Painted decoration of the western wall

Between the northwestern corner of the room and the door leading to the northern *tholos*, the lower part of the west wall (l. 42 cm) is painted with yellow ochre colour. Incised partition lines, as seen on other walls, are not evident here.

Directly above the gutter that runs along the western wall to the southern side of the door and above a line of red mortar that seals the edge of the gutter along the wall, one can see the lower part of the room's decoration consisting of a painted orthostat for which the red mortar band acts optically as a plinth. Progressing from north to south, from the door leading to *tholos* 2 to the end of the wall on the room's south side, eight orthostats are recognisable. Each block is a contrasting colour and each is defined by inscribed lines marked when the wall mortar was still fresh. Some of the original colours can be restored by referencing photographs taken shortly after the discovery and preserved plaster fragments that have not been exposed to the sun, which altered many of the *in situ* colours (e.g., the black is now blue and the yellow ochre is now much paler). The pattern of the orthostats is not fully regular. We find (**fig. 24**):

1. A bright red orthostat, 90 cm wide, height preserved between 18 and 27 cm, with a incised line very visible.
2. A black orthostat, 114 cm wide, (h. pres. 29-58 cm), incised line visible.
3. A light blue orthostat, 121 cm wide, (h. pres. 9-44 cm), incised line very visible.
4. A yellow ochre orthostat, 97.5 cm wide (h. pres. 12-22 cm), incised line visible.
5. A bright red orthostat, 101 cm wide, (h. pres. 8-24 cm), incised line visible.
6. A black orthostat, 118 cm wide, (h. pres. 7-21 cm), incised line visible.
7. A yellow ochre orthostat, 89 cm wide (h. pres. 12-48 cm), incised line visible.
8. A light blue orthostat, preserved on 49 cm wide (h. pres. 47-58 cm), incised line not visible.

After the eighth block, the plaster of the wall is destroyed.

On the northern wall, built of baked bricks, only a small portion of painted plaster remains (l. pres. 73 cm, h. pres. 4-40 cm). It is yellow ochre in colour and lacks a partition line, but likely represents a continuation of the painted orthostat decoration around the room. The other two walls (south and east) are not preserved in elevation and the only portion of preserved plaster is along the edge of the pavement. One can observe that the

painted layer only lies on the surface of the pavement, showing that the Karnak builders followed the custom of first laying the preparation layer on the wall, then laying the pavement, and finally covering the wall with the final coat of plaster to be painted.

The eastern wall had at least one niche, as its trace is seen in the baulk. Excavating the baulk further to the north, fragments of painted plaster have been found; some are white, others beige (a colour lighter than the yellow ochre of the orthostats). One fragment preserves an inside corner painted in beige (preserved dimensions: height 6 cm and 2 cm on each side of the angle) that could belong to a niche or some other recess in the wall.

4.3. Preparation of the wall

Across the length of the western wall, built of mud bricks, three layers of plaster are evident. Most certainly these are two sub-layers under the layer that receives the paint, rather than one undercoat and two coats of paint, as would be the case if the paint had been renewed. The thickness of each layer varies, depending on location and condition, but the painted layer ranges between 0.5 cm and 1.6 cm, while the two sub-layers together are approximately 3 cm thick, sometimes more.³³ Along the northern wall, built of fired brick, one sub-layer (c. 2 cm thick) and a painted layer (1-1.3 cm thick) are visible.

4.4. Interpretation of Room 6

From the preserved evidence it can be postulated that the entire room was decorated in structural style, with a base consisting of a series of orthostats, perhaps topped by a dado band then painted ashlar blocks and ending with a coronation. The careful excavations did not find any stucco elements so it seems likely that the illusionist decoration was made solely with painted colour and etched partition lines. It is difficult to say more.

With the floor imitating a flagstone pavement of contrasting colours and the walls of structural style, room 6 presents fine quality decoration, which is significant: Hall 6 was probably the main entrance room of the baths, giving access to *tholos* 2 – the most decorated of the two *tholoi* – and probably also serving as a dressing room (*apodyterion*). The presence of a single layer of painted plaster suggests, as in the other parts of the building, that the duration of its occupation was relatively limited.

The use of structural style, mimicking multi-coloured grand architectural elements with paint and sometimes stucco, is known in Greece from the late fifth century BC. Its use is attested in Alexandria, where the volume of the blocks is created with stucco and paint (as in the tombs of Mustafa Kamel), or paint alone (as in Tomb B1 at Gabbari³⁴). In Alexandria's houses for the dead, as well as those for the living, these methods of illusionist decoration were used frequently to embellish and ennoble ceremonial spaces for relatively little expense beginning from the time of city's foundation. It was an imitation of the modes coming, as well as the craftsmen, from Greece, including Macedonia.

³³ One would expect the thickness of the sub-layers to be variable because their purpose was to standardize the wall's surface.

³⁴ For analysis of the decoration of the grave site of B1 Gabbari Bridge and the structural style, cf. A.-M. GUIMIER-SORBETS, M.-D. NENNA, M. SEIF EL-DIN, "Le décor des tombes B1, B2 et B3", in J.-Y. Empereur, M.-D. Nenna (eds.), *Nécropolis I, ÉtAlex* 5, 2001, p. 161-207, and especially p. 190-192 for examples of the structural style in ancient Greece and its development in Alexandria.

5. Technical aspects of floor construction

The technique of construction of the Karnak bath pavements provides new information regarding floors of Ptolemaic Egypt. In the Greek world of the Hellenistic period, many floors were simply covered with a layer of lime mortar necessarily enhanced with either pebbles or small fragments of stone. In both cases, these elements were mixed with the mortar before laying the mixture on the ground or, if the layer was thin, they were randomly thrown on the floor after laying the mortar (which differs from the technique of the pebbled or chipped mosaics). In both cases, a roller was passed over the floor before the mortar set to ensure homogeneity of the mixture and to smooth the surface.

In the rooms studied here, two techniques are evident: pebbled mortar and chipped mosaic. The complete floors or floor sections made with pebbled mortar have a high density of pebbles, which are almost contiguous, but covered with a thin layer of a rose-to-red coloured mortar. This colour comes from the addition of powdered bricks into the mortar;³⁵ depending on the density of powdered clay mixed with the mortar, the colour is lighter or darker.

This finishing coat offers several advantages: it contributes to the sealing of the soil (as a hydraulic mortar); it adds colour, thus enhancing the room's decoration, and with its fine grain, it is easily smoothed and can cover the pebbles, which therefore do not need to be sanded to obtain a completely smooth floor – a luxurious standard for the ancients.

The disadvantage of this technique is that the top thin layer wears out quickly under bathers' feet, thus revealing the colourful pebbles. Such a floor would have required frequent maintenance, which may not have been done; indeed, the Karnak excavations revealed that this type of floor is only intact in the corners or along walls, for example in room 6's northeastern corner. A second drawback of this technique is seen in the depiction of marine animals: in order to make them visible it was necessary to create a colour contrast and, therefore, to use a thick layer of red mortar with the risk of flooding the elements (chips, coloured pebbles) of the motif. In the case of the marine motif, some of the elements have partially disappeared under the added layer, while others remain visible enough for the polychromic effect (e.g., the yellow eye).

This type of floor is known in Ptolemaic Egypt, with a house in the Brucheion area of Alexandria³⁶ being one example. Note that, despite the presence of powdered terracotta, this technique is different from the *opus signinum*, which includes aggregates of terracotta.³⁷ In addition, lime mortar floors, without colouring ceramic powder, are also common.

Chipped mosaics have a different construction: above the sub-floor layers, the stone fragments are inserted into a fine mortar, as close together as possible. Builders ensured the structural cohesion of these elements by rolling a heavy weight across the surface before levelling it with a careful sanding.³⁸ In both the southern *tholos*

35 Red bricks found in some parts of the building have the same colour (dark red-purple).

36 The house was unearthed during the excavations of the Centre d'Études Alexandrines (CEAlex, CNRS) in the cricket playground, cf. A.-M. GUIMIER-SORBETS, "Les ateliers de mosaïques à Alexandrie à l'époque hellénistique et au début de l'époque impériale: continuité et innovation", in D. Paunier, Ch. Schmidt (eds.), *Actes du VIIIe Colloque international pour l'étude de la Mosaïque antique et médiévale, Lausanne (Suisse), 6-11 Octobre 1997 I, Cahiers d'Archéologie romande* 85, Lausanne, 2001, p. 282-297. Regarding painted floors, see also *ead.*, "Peindre les sols: quelques emplois attestés dans le monde grec", in *Atti del X Congresso internazionale AIPMA, Naples, 2010*, p. 29-40, pl. III-IV.

37 V. VASSAL, *Les Pavements d'opus signinum: technique, décor, fonction architecturale, BAR International Series* 1472, 2006. See also M. GRANDI, F. GUIDOBALDI, "La classificazione dei mosaici e cementizi con inserti di ercolano ed il problema cronologico dell'introduzione dei marmi policromi nella cultura pavimentale romana", in *Atti del XIII colloquio dell'AISCOM, Canosa di Puglia, 21-24 février 2007, Tivoli, 2008*, p. 163-174.

38 The Karnak bath excavations discovered, in a pipe, a polisher made of a hard stone.

and Hall 6, the contours of the mosaic band and the pebbled central zone have been separated by chips placed edgewise, indicating that the bands were made before the central areas. Once the chips were fitted and sanded, the joints were refilled with a layer of mortar, coloured dark red due to a high density of powdered terracotta. The decorative nature of this technique lies in the contrast between the irregularly shaped white chips set in bright red mortar in opposition to the parts in plain rose-red mortar. In this construction, the floors of the Karnak baths offer further insight into the techniques and materials used by mosaicists until the end of the Hellenistic period.³⁹

The mosaic of the northern *tholos* baths in the port of Eretria (Euboea), dating to the third or the early second century BC, shares the same decor of two concentric parts of contrasting colours as in the southern *tholos* of Karnak.⁴⁰ This type of composition imitates tiling with contrasting colours, a design element of the most luxurious buildings.⁴¹

Chipped mosaic standing out against red mortar is another type of luxurious floor, a technique attested in two houses in Olynthus, dated before the destruction of the city in 348 BC,⁴² and in the palace of Vergina, built by Philip II in the second half of the same fourth century. In one of the palace's moderately sized banquet rooms, this technique is used for the threshold panel, while the rest of the pavement is decorated with magnificent mosaics of polychrome pebbles, portraying goddesses and foliage scrolls in the corners. In the largest banquet rooms (the apparatus rooms *par excellence*) of the palace's west wing, this type of mosaic is made of irregular elements (small tiles of white marble) standing out against a red coloured mortar.⁴³ Three banquet rooms are bordered on all four sides by beds for guests, and their platforms are made of dark pebbled mortar and so, in these prestigious rooms, we find the same contrast of techniques and colours as in the southern *tholos* and the entrance hall of the Karnak baths. Chipped pavements of marble with red mortar are common in the house of Delos.⁴⁴

The architecture of the Karnak bath and its carefully executed decor refer to Greek models, which could not fail to make a strong impression in Upper Egypt. We do not know, of course, either the sponsors' identities, nor the precise circumstances of the bath's construction; nevertheless, one can recall the papyrus from the Zenon archive, dated to the mid-third century BC, which provides detailed information about the daily life in the Fayoum less than a century after the Greek-Macedonian conquest of Egypt. It details life in the house of Diotimos in Philadelphia, which happens to include a bath provided with two *tholoi* for men and women and their vestibules. The Zenon text describes in detail the mosaic floor to be executed for the women's *tholos*,⁴⁵ noting that its centre

39 A.-M. GUIMIER-SORBETS, "De la mosaïque hellénistique à la mosaïque impériale. Continuités et ruptures techniques", in M. Molin (ed.), *Archéologie et Histoire des techniques du monde romain*, Paris, 2008, p. 63-74, pl. IX-XXII.

40 D. SALZMANN, *Untersuchungen zu den Antiken Mosaiken*, Berlin, 1982, No. 45.

41 The Marmaria *tholos* at Delphi offers, around 380-370, an example of a tiled floor made of a double ring of dark blue limestone, around a white circular slab, cf. J. CHARBONNEAUX, K. GOTTLÖB, *Fouilles de Delphes II, Le sanctuaire d'Athéna Pronaia, la tholos*, Athens, 1925, pl. 18-19, 26. The pl. 26 is reprinted in M.-Ch. HELLMANN, *L'Architecture grecque II, Architecture religieuse et funéraire*, Paris, 2006, p. 118, fig. 150.

42 Olynthus, House 5, cf. D.M. ROBINSON, *Excavations at Olynthus II, Architecture and Sculpture*, Baltimore, 1930, p. 55-59, fig. 153-161, pl. I; House B, *ibid.*, p. 102, fig. 229, and D. SALZMANN, *op. cit.*, No. 92, p. 104, pl. 165.

43 For the three large banquet rooms M1-3, cf. M. ANDRONIKOS, Ch. MAKARONAS, M. MOUTSOPOULOS, G. BAKALAKIS, *To Anaktoro tès Berginas*, Athens, 1961, p. 24-25, pl. 14.1; 15.2. For the banquet room E 13, cf. D. SALZMANN, *Untersuchungen zu den Antiken Mosaiken*, No. 130.

44 Ph. BRUNEAU, *Les Mosaïques, Exploration archéologique de Délos XXIX*, Athens, 1972.

45 The text of the papyrus *P.CairoZen. IV*, 59665, preserved in Cairo, has been discussed often: cf. Cl. PRÉAUX, *Les Grecs en Égypte d'après les archives de Zénon*, Brussels, 1947, p. 44; K. PARLASCA, "Hellenistische und römische Mosaiken aus Ägypten", in *La mosaïque gréco-romaine II*, Paris, 1975, p. 363-369; P. BRUNEAU, "Un devis de pose de mosaïques: le papyrus Cairo Zen. 59665", in STELE, *Papers in honour of N. Kontoleon*, Athens, 1978, p. 134-143; W.A. DASZEWSKI, *Corpus of Mosaics from Egypt I*, p. 6-14; P. BRUNEAU, "Philologie mosaïstique", *Journal des savants*, Janvier-Juin 1988, p. 3-73.

was to be adorned with a flower (*anthos*), as interpreted by W.A. Daszewski, and a band of *kochlos nautikos*, which some interpret as seashells, while others interpret as a wave pattern. The terms mentioned in the papyrus concerning materials and techniques used in mosaic-making have aroused much debate, and the discovery of the Karnak pavements could lead to new interpretations. The text specifies that the model (*paradeigma*) had to be given by the palace (of the Ptolemies, in Alexandria), and that the contractor had to comply with it: the same situation probably occurred for the construction and decoration of Karnak's baths, at the end of third century or in the first half of the second century BC, in an area remote from Alexandria.

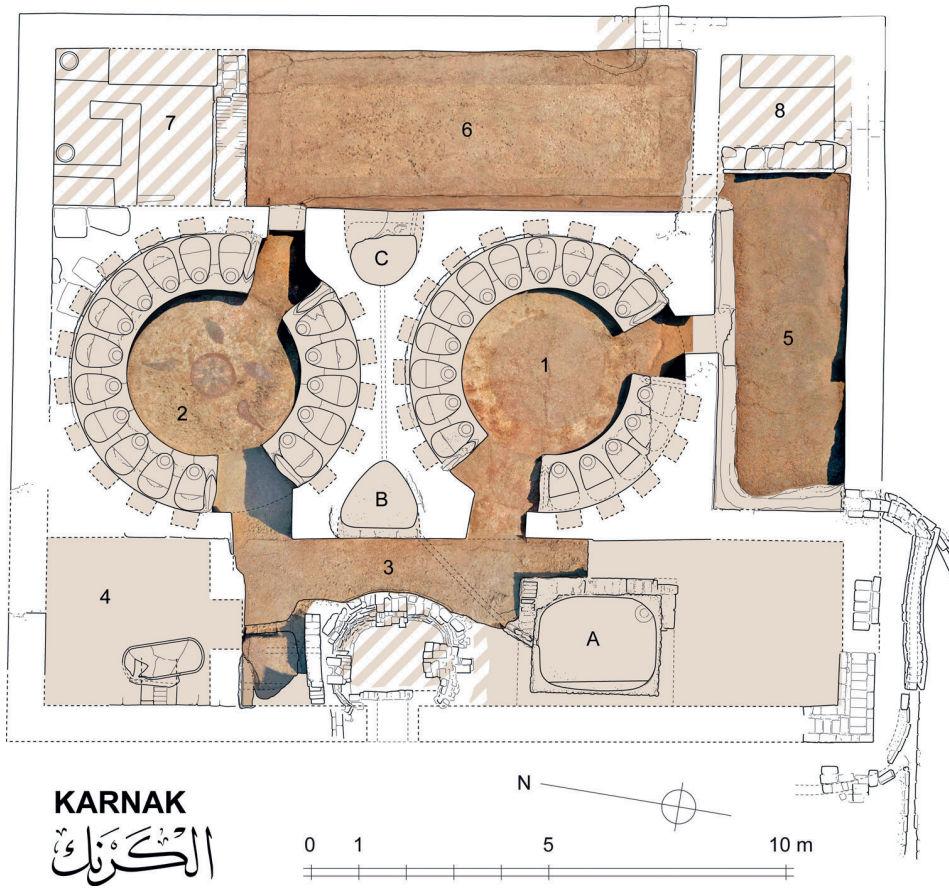


Fig. 11. Karnak, General plan of the baths, with the mosaics © A. Terrier (survey), Th. Fournet (drawing), O. Onézime (photo stitching and editing).



Fig. 12. Northern *tholos*, the whole floor © A.-M. Guimier-Sorbets.

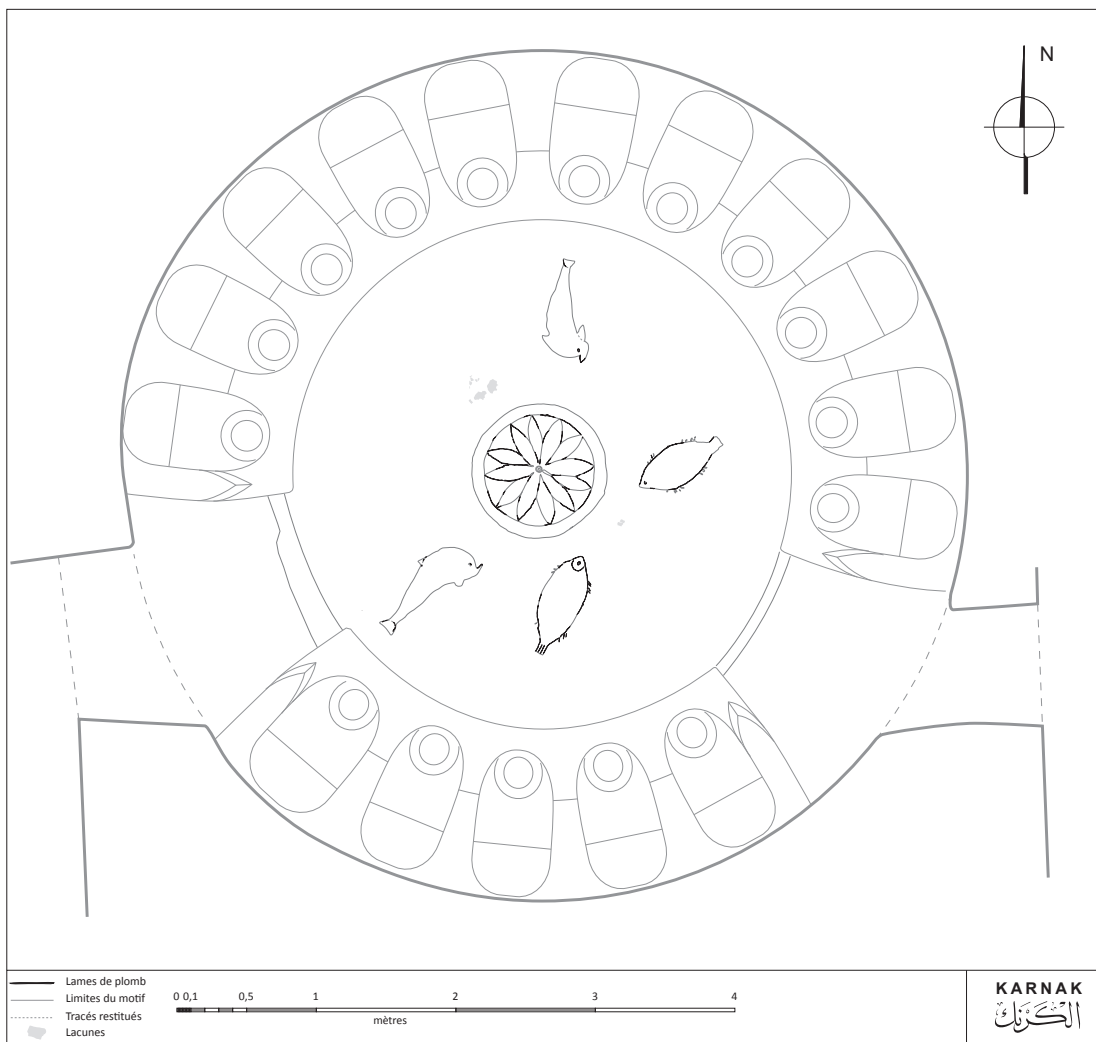


Fig. 13. Northern *tholos*, the floor's drawing © A. Guimier (survey), Th. Fournet (drawing).

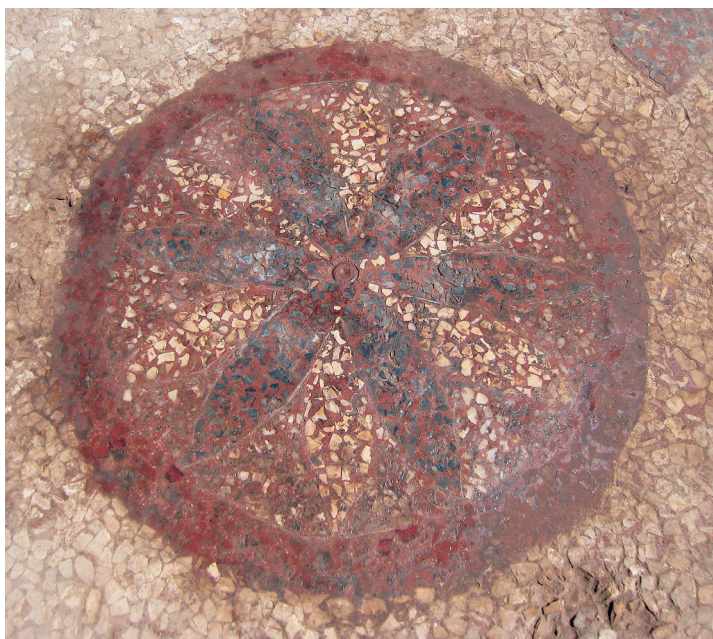


Fig. 14. Northern *tholos*, flower © A.-M. Guimier-Sorbets.

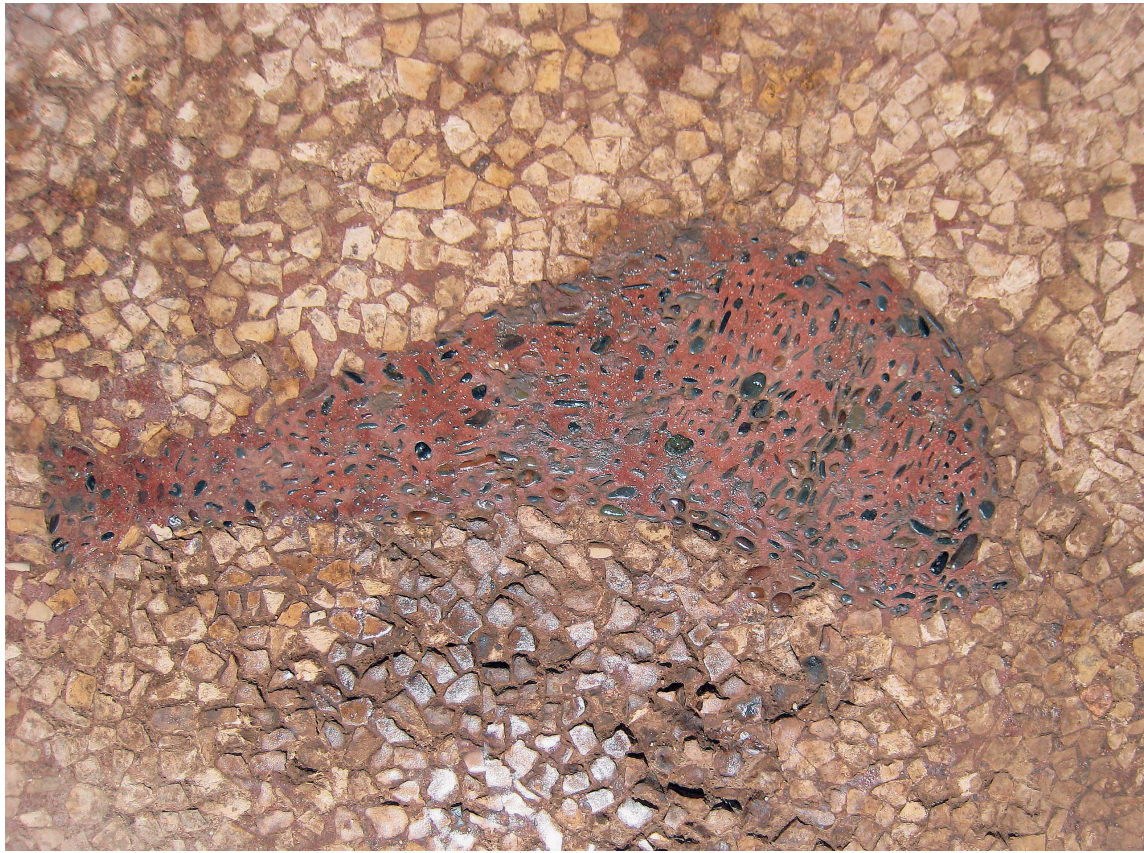


Fig. 15. Northern *tholos*, eastern dolphin © A.-M. Guimier-Sorbets.

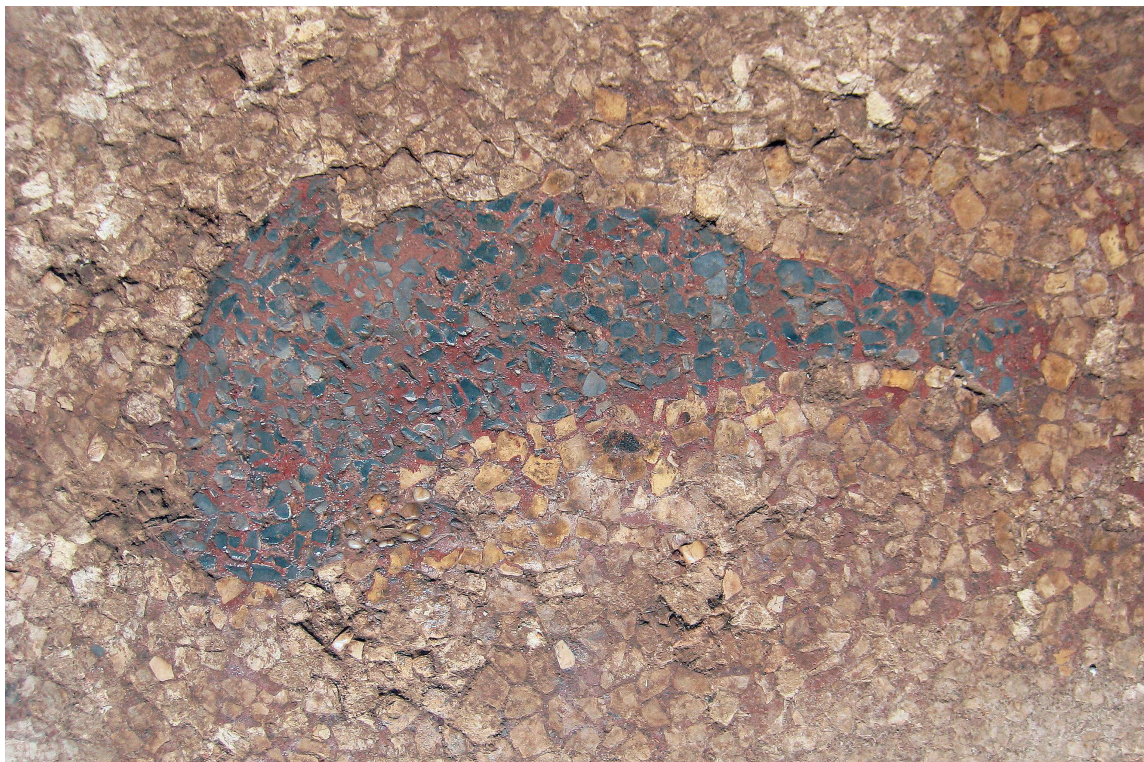


Fig. 16. Northern *tholos*, northern dolphin © A.-M. Guimier-Sorbets.

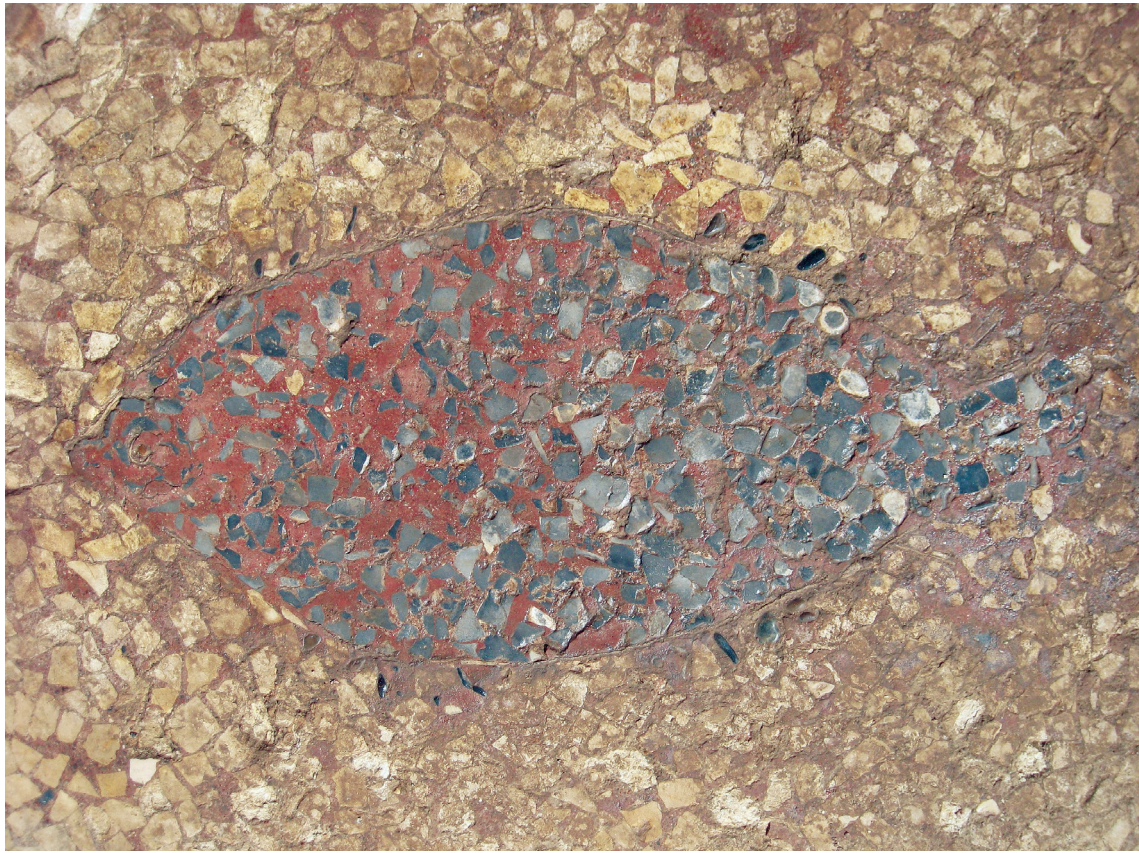


Fig. 17. Northern *tholos*, eastern tilapia © A.-M. Guimier-Sorbets.

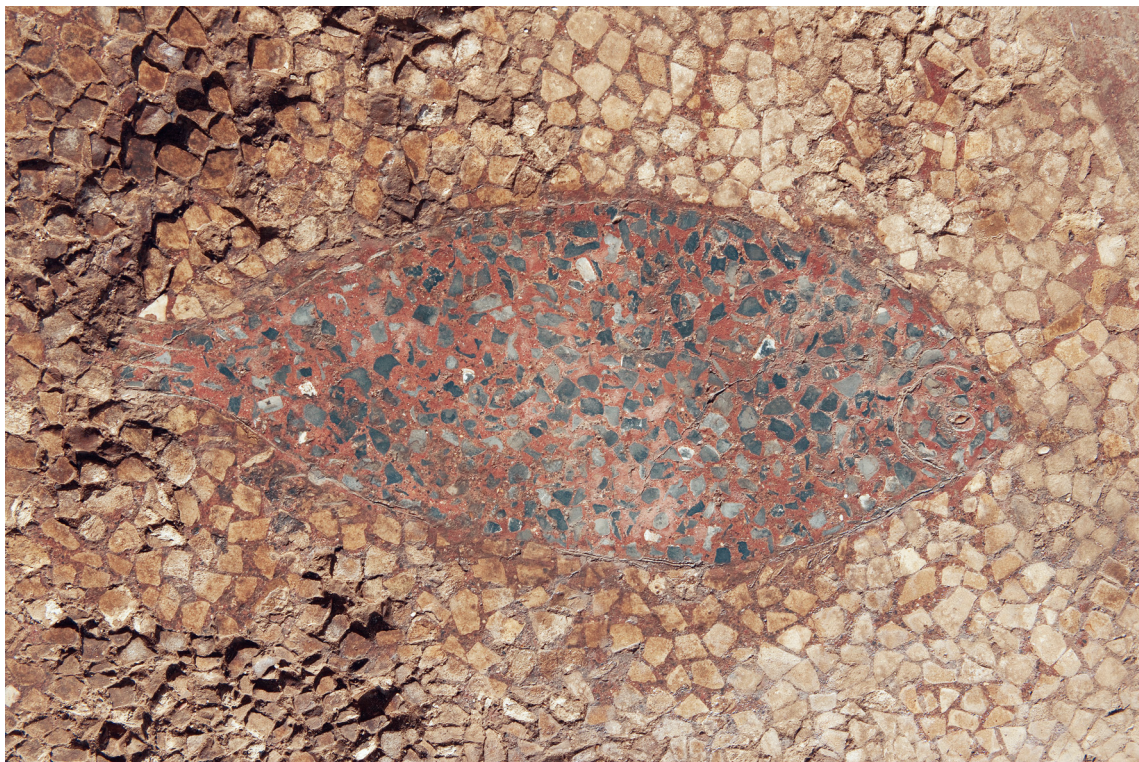


Fig. 18. Northern *tholos*, southern tilapia © Cnrs-Cfeetk/J.-Fr. Gout.



Fig. 19. Northern *tholos*, western entrance © M. Boraik.



Fig. 20. Southern *tholos*, the whole floor © A.-M. Guimier-Sorbets.



Fig. 21. Southern *tholos*, floor's detail © A.-M. Guimier-Sorbets.



Fig. 22. Room 5, the whole floor © A.-M. Guimier-Sorbets.

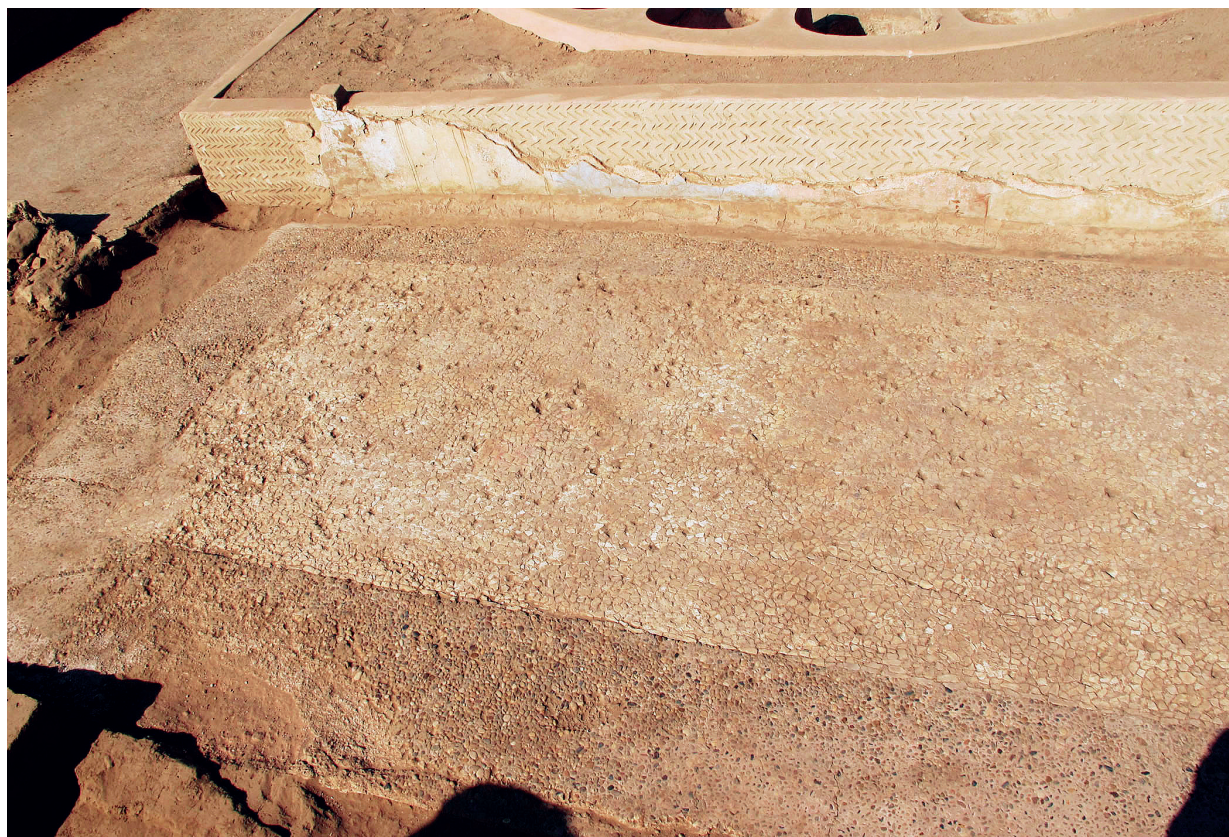


Fig. 23. Room 6, the whole floor © A.-M. Guimier-Sorbets.



Fig. 24. Room 6, painting, detail © Cnrs-Cfeetk/J.-Fr. Gout.

ENGLISH SUMMARIES

MICHEL AZIM, AGNÈS CABROL †, AUDE DOBRAKOWSKI, LUC GABOLDE

“Les mystères d’un sphinx”, p. I-II.

Publication of two photographs (calotypes) of Fr. de Campigneulles taken in the central part of Karnak, and purchased by the Musée d’Histoire Naturelle of Lille (France). One of them shows a mysterious sphinx, now lost. Study of the latter leads to the hypothesis that it may be a representation of Amun.

MANSOUR BORAİK

“The Sphinx Avenue Excavations. Second Report”, p. 13-32.

The excavations along the ancient road were divided into several sectors including the ramps before the gate of Euergetes; these excavations have brought to light significant information concerning the history of east Luxor. This sacred road, built by Nectanebo I, was probably used for the procession from Karnak to Luxor temple during the Opet festival, and was in use until the end of the Roman period. During the Ptolemaic period, many restorations and constructions in both Karnak and Luxor were achieved via the use of this sacred road. Such continuation of work opened up opportunities for economic and cultural development in the city for years to come.

MANSOUR BORAİK

“A Roman Bath at Karnak Temples. A Preliminary Report”, p. 33-46.

Recent excavation in front of Karnak temple sheds light on Roman life in Luxor through the discovery of a large bath complex. The excavated remains of this *thermae* cover some 300 m² and include many archaeological features, such as the well-preserved bathing pools. Most of the walls of the superstructure now stand less than a metre high, but some of the fired brick walls of the substructure are 3 metres tall. The *thermae* were remoulded and redecorated over what appears to be a long period of use, adding to the challenge inherent in understanding the history of the complex. The rooms of the *thermae* are laid out axial sequence. Much of the complex, including its foundation, was built of fired brick. Key features of the Karnak *thermae*, moving east to west,

include well-built drains, leading to *loutra* (water plunge pools), an extensive *hipocaustum*, and a *praefurnium*. The presence of two distinct *caldaria* suggests that the Karnak *thermae* had discreet sections for female and male bathers. This hypothesis is supported by the large number of glass bracelets and other feminine jewelry discovered in the drains on the southern side of the complex. Further excavations will reveal the full plan of the *thermae* and test this hypothesis.

MANSOUR BORAİK, SALAH EL-MASEKH, ANNE-MARIE GUIMIER-SORBETS, BÉRANGÈRE REDON

“Ptolemaic Baths in front of Karnak Temples. Recent Discoveries (Season 2009-2010)”, p. 47-77.

The article presents new results from the excavations of the Karnak baths during the 2009-2010 seasons. The building was uncovered in 2006 by the SCA during rescue excavations, and a preliminary report was published in 2009. Since then, excavations have continued and led to the discovery of the baths’ heating system. In the first part of the article, this structure is described and interpreted in light of recently uncovered comparanda in Egypt, particularly at Taposiris Magna. We show the ingeniousness of the heating devices in such Graeco-Egyptian baths by presenting one of the most ancient and well-preserved systems found in Egypt.

In the second part, the study focuses on the decoration of the baths, in particular on the mosaic floors and wall paintings. After a careful description of the whole decorative programme, which is identified with the “structural style”, we examine the technical aspects of their construction. Finally, we show that their luxury evokes Greek and Macedonian examples, such as the palace of Philip II of Macedon, father of Alexander the Great.

MANSOUR BORAİK, MOHAMED NAGUIB

“Ceramic Material from the Ptolemaic Baths Excavations in front of Karnak Temples”, p. 79-191.

In 2007 the Ministry of State for Antiquities started excavations to the north-west of the first pylon of Karnak temple, within the framework of the refurbishment programme of the sector located between the temple of Karnak and the Nile. The material presented here represents five different historical periods: Late period, Ptolemaic period, Roman period, and Islamic and Ottoman periods. The ceramic material is composed of different fabrics (clays), local and imported, and it was used for diverse purposes: storage, transportation, cooking, tableware, lighting etc. Study of this pottery corpus makes a vital contribution toward dating the site and also helps to model daily life in an area that was very active during the Graeco-Roman period.

PETER BRAND, JEAN REVEZ, JANUSZ KARKOWSKI, EMMANUEL LAROZE, CÉDRIC GOBEIL

“Karnak Hypostyle Hall Project, Report on the 2011 Field Season for the University of Memphis & the Université du Québec à Montréal”, p. 193-229.

During a six week field season in May and June of 2011, the Karnak Hypostyle Hall Project began to record inscriptions on the columns and abacus blocks of the building. This consisted of detailed collation of earlier records of the abacus blocks made by Ricardo Caminos in the 1950s and systematic photography of all the abaci facets *in situ* and of those now lying in the block yards. Many of the abaci have palimpsest inscriptions of erased Sety I or early Ramesses II inscriptions replaced by later Ramesses II reliefs. Orthogonal images of a representative sample of abaci facets were made in the block yards and from our scaffolding. Theodolite measurements of abaci facets and wall reliefs were also taken and a successful experiment was made to make a conventional photograph into an orthogonal one using the software program *Redresseur*. Collation of early

sketches of the column scenes by Harold Nelson yielded a wealth of new epigraphic data, including palimpsest inscriptions on some of the columns. Study of the abaci and column scenes also gave us new insights into the orientation of decoration, chronology of the relief decoration and post-pharaonic iconoclasm. Work also continued to produce “unrolled” and orthogonal images of the columns based on photogrammetric data obtained in 2007 and 2008. We also continued our earlier work to record inscribed blocks that have fallen from the upper levels of the walls that now lie in the northern and southern block yards.

JEAN-FRANÇOIS CARLOTTI, PHILIPPE MARTINEZ

“Nouvelles observations architecturales et épigraphiques sur la grande salle hypostyle du temple d’Amon-Rê à Karnak”, p. 231-277.

This study attempts to bring a new perspective to the history of the great hypostyle hall in Karnak. Different clues, architectural as well as epigraphic, either new or previously unconsidered, show that the monument as we know it is the result of modifications and alterations spanning many decades and different reigns, beginning with a primary project launched by Amenhotep III. If a projected high colonnade, similar to the one built at Luxor Temple, was never finished, the space thus delineated seems then to have been occupied by a peristyle court surrounded by pillars of *talatats* mainly bearing the name of queen Nefertiti. Tutankhamun, (perhaps Aj) and Horemhab then dismantled this structure and reused its foundations to support a new peristyle adorned with columns. It is only during the reigns of the first Ramessid kings that it was transformed again into a fully covered hypostyle hall; this should be understood as a truly Ramessid invention. Although this presents a coherent account of architectural development, a number of important historical questions remain open, especially when the numerous traces of erasure and deliberate damage are taken into account; these situate parts of the structure in the whirlwind of Amarna desecrations. Although this article offers a workable hypothesis that tries to integrate all the available evidence, a central aim is to reopen debate concerning the history of the monument to which other scholars will contribute.

SILVANA CINCOTTI

“Les fouilles dans le Musée”: la collection égyptienne de Turin et le Fonds Rifaud”, p. 279-285.

This article treats statues held in the Museum of Egyptian Antiquities in Turin that were discovered in Egypt by Jean Jacques Rifaud on behalf of the French consul Bernardino Drovetti. Research undertaken in Geneva on the unpublished manuscripts of Rifaud, as part of a PhD on the statues in the Turin museum, has permitted, as a first step, important information regarding the location of the standing statues of the goddess Sekhmet to be brought to light; in his report on the excavation, Rifaud says that he found the standing statues in the temple of Ptah, located north of the sacred precinct of the temple of Amun-Re at Karnak.

ROMAIN DAVID

“La céramique d’un habitat du v^e siècle à Karnak”, p. 287-297.

This article focuses on ceramics coming out of a securely dated Vth century layer from a small dwelling within the enclosure of the Ptah Temple at Karnak. An indicative typology provides information on the main production activities in such contexts.

CATHERINE DEFERNEZ

“Remarques à propos de quelques vases Bès découverts à Karnak”, p. 297-331.

This paper puts forward a few examples of well-preserved Bes-pots that were recently uncovered at Karnak in the upper levels of the debris of the Treasury of Shabaka. Dated to the Ptolemaic period (possibly to its first half), these pieces offer new evidence for this specific class of pottery. Otherwise rarely attested, these Bes vessels, which were manufactured in Nile clay, are not clearly recognizable because of their schematic decoration. This consists of, for example, the marking of eyes by fingerprints and, in some cases, a nose seems to be created by a slight pinching of the outer wall.

Most of the occurrences of this vessel-type identified at Karnak are presented here; these were found in several areas of the Amun-Re temple, as well as North and South Karnak. Some similar vessels were also recently recorded in the Mut Temple. Some closed shapes found at other sites in the Theban area are also included, as well as those discovered in several areas outside Thebes, particularly in the Delta; for example, reports which mention such vessels from several sites in the eastern part of the country are assessed.

Despite the small number of pieces, these Bes-pots are significant, and their analysis shows a major development in this class of pottery. They also provide new data for the classification established in a previous study, which was based on findings from the Persian site of Tell el-Herr.

DIDIER DEVAUCHELLE, GHISLAINE WIDMER

“Un *hiereus* en écriture démotique à Karnak”, p. 333-336.

Publication of a fragmentary sandstone block discovered in 2010 in the excavated material lying over the Ptolemaic baths in front of Karnak temple. The inscription, which could be a dedication, includes mention of the Greek title *hiereus* transcribed into Demotic for which very few examples are otherwise attested, thus providing new evidence for the cultural mixing in this area at the beginning of the Roman Period.

AMR GABER

“Aspects of the Deification of King Sety I”, p. 337-382.

This article investigates a corpus of documents which reflect the different strategies deployed in the deification of Sety I in the Nineteenth Dynasty. Analysis of these different documents, both epigraphic and iconographic, elucidates features of his deification, not only during his lifetime but also his posthumous deification by his son Ramesses II. These documents mainly come from the temples of Seti I at Abydos and Qurna, and the great hypostyle hall at Karnak. A comparative analysis of these documents with those of other deified kings is presented. A group of documents which present the veneration of Sety I are also discussed.

LUC GABOLDE

“Remarques sur le chemisage des obélisques de la Ouadjyt et sa datation”, p. 383-399.

It has been recently and often proposed that the enveloping masonry which surrounds the obelisks of Hatshepsut in the *Wadjyt* hall, hiding their lower parts, should be dated to her reign, having been erected for religious or architectural reasons. However, close reexamination of these arguments shows that they do not have a convincing basis. The previous attribution of this enveloping masonry to the reign of Thutmose III remains the most likely thesis; it is also the most convincing in respect to the texts dealing with the building activity in this area, and should be definitely preferred.

JÉRÉMY HOURDIN

“À propos de la chapelle d’Osiris-Padedankh de Chapenoupet II. Un apport à sa reconstitution épigraphique et architecturale”, p. 401-423.

Publication of new archaeological material found recently on the avenue of Sphinxes, between the temples of Karnak and Luxor. Some of the newly discovered blocks come from an already known Osirian chapel – the chapel of Osiris-Padedânkh (firstly published in *Karnak-Nord IV* in the 1950s) – and are elements of its doors and walls. Reconstructions of these features are presented, enhancing knowledge of the chapel. This monument was constructed under the pontificate of the god’s wife Shepenwepet II during Tanutamon’s obscure rule. Some other unidentified blocks are also published here to enable analysis and identification.

CHARLIE LABARTA

“Une stèle de Ramsès II au magasin Cheikh Labib à Karnak”, p. 425-436.

This article publishes a fragmentary pink granite stele of Ramesses II, which had been carved on the rear surface of an offering table of Mentuhotep II. It was found between the IIIrd and IVth pylon at Karnak and is currently held in the Sheikh Labib magazine. The inscription begins with mention of year 37 of Ramesses II, the date of his third jubilee; although a large part of the text is missing, the lower half preserves a speech of Amun, which contributes to the study of the royal eulogy during the XIXth dynasty.

NADIA LICITRA

“La réfection de l’enceinte du temple d’Amon sous le règne de Ramsès III : une nouvelle stèle découverte à Karnak”, p. 437-445.

In April 2012, a new stela of Ramesses III was discovered on the site of the Treasury of Shabaka. Its text commemorates the reconstruction of the enclosure wall of the temple of Amun during his reign, giving new information about the location of the northern section of the wall at the beginning of the XXth dynasty.

DAVID LORAND

“Une ‘Chapelle des Ancêtres’ à Karnak sous Sésostri I^{er}?”, p. 447-466.

Senwosret I undertook, during his 45-year reign, a nearly systematic re-building of the main divine temples of ancient Egypt. The cult place of Amun-Re in Karnak was not neglected. Among the various remains of the limestone temple and chapels, several statues dedicated by Senwosret I were excavated at the beginning of the 20th century. Three of them represent royal ancestors from the Old Kingdom and the Late First Intermediate Period. The statue Cairo CG 42004 of king Sahura and the statue of Prince Antef-Aa Cairo CG 42005 were found in Karnak, while a third one, representing king Niuserra, whose provenience is unknown (British Museum EA 870), probably also comes from the temple of Amun-Re. The dedication of former kings’ statues is part of a vivid royal interest in the past at the beginning of the 12th Dynasty in order to define the political ideology of the ruler. The three statues must have been kept in one or several room(s) of the Middle Kingdom temple of Amun-Re, probably in a structure anticipating the “Chapel of Ancestors” erected in the Akh-menu by Thutmose III.

CHRISTOPHE THIERS

“*Membra disiecta ptolemaica (II)*”, p. 467-491.

Publication of loose blocks belonging to monuments built at Karnak during the reigns of Ptolemy IV Philopator, Ptolemy VI Philometor and Ptolemy VIII Euergetes.

CHRISTOPHE THIERS, PIERRE ZIGNANI

“Le domaine du temple de Ptah à Karnak. Premières données de terrain”, p. 493-513.

During 2010-2012, excavations were conducted at the Temple of Ptah at Karnak. The work mainly focused in the southwestern part of the precinct, and inside the chapels and courtyard of the sanctuary. This preliminary report presents the traces of different developments in the environment of the temple during its long use, up to its secondary occupation after the end of the Pharaonic worship.

These preliminary investigations concern:

- the remains prior to construction of the sanctuary of Tuthmosis III (a gate of Senakhtenre Ahmose and massive mud-brick walls beneath the substructure of the temple);
- limestone bearing slabs which were reused as the floor of the chapels and the courtyard;
- limestone blocks of Tuthmosis III and Hatshepsut which were reused in the foundation of the temple;
- Ptolemaic and Kushite gates associated with mud-brick enclosure walls on the main axis and on another southernmost axis;
- the late Roman and secular occupation of the area.

Christophe Thiers, Pierre Zignani

معبد بتاح بالكرنك - المعطيات الأولية عن الموقع

بدأت أعمال الحفائر موسم ٢٠١٠ - ٢٠١٢ بمعبد بتاح بالكرنك وتم تركيز العمل بالمنطقة جنوب غرب الموقع ، وداخل المقاصير وكذلك فناء قدس الأقداس ، وهذا التقرير المبدئي يقدم بقايا تطورات مختلفة بالبيئة المحيطة بالمعبد خلال فترة استخدامه الطويلة وحتى فترة استغلاله الثانية بعد نهاية العبادة الفرعونية، والفحوص الأولى والدراسات الأولى كانت للبنية الأولية لمقصورة تحوتمس الثالث (بوابة سنخت ان رع أحمس وأسوار ضخمة من الطوب اللبن أسفل المباني السفلية للمعبد) البلوكات الحاملة من الحجر الجيري والتي تم إعادة استخدامها في أرضية المقاصير والفناء - بلوكات الحجر الجيري لتحوتمس الثالث وحتشبسوت والتي أعيد استخدامها في أساس المعبد بوابات العصرين الكوشي والبطلمي والمرتبطة بأسوار الحائط المحيط بالمعبد على المحور الأساسي والمحور الآخر الجنوبي - فترة الاستيطان بالمعبد على المحور الأساسي والمحور الآخر الجنوبي - فترة الاستيطان في العصر الروماني لهذه المنطقة.

Charlie Labarta

لوحة للملك رمسيس الثاني بمخزن الشيخ لبيب بالكرنك

ينشر المقال جزء من حجر الجرانيت للوحة من عصر رمسيس الثاني والتي تم نقشها فوق سطح مائدة قرايين من عصر أمنحوتب الثاني ، وقد عثر عليها بين الصرحين الثالث والرابع بالكرنك ومحفوظة حالياً بمخازن الشيخ لبيب. وتبدأ النقوش بالعام ٣٧ من حكم رمسيس الثاني - تاريخ عيدهِ اليوبيلي الثالث على الرغم من أن جزء كبير من النص مفقود - أما النصف الأسفل فيحمل كلام لآمون والتي تساهم في دراسة الشعائر الملكية خلال عصر الأسرة.

Nadia Licitra

إصلاح سور معبد آمون في عهد الملك رمسيس الثالث: لوحة جديدة مكتشفة بالكرنك

تم الكشف في أبريل عام ٢٠١٢ عن لوحة من عصر رمسيس الثالث بموقع كنز شباكا، والنص باللوحة يؤرخ لإعادة بناء السور المحيط بمعبد آمون رع خلال عصره ويعطي معلومات جديدة عن موقع القطاع الشمالي لهذا السور في بداية الأسرة.

David Lorand

مقصورة الأجداد بالكرنك من عهد سنوسرت الأول

لقد بدأ سنوسرت الأول خلال حكمه والذي إستمر لأكثر من سنه في إعادة بناء منظم لمعابد مصر القديمة ولم ينسى بالطبع المكان المقدس لآمون رع بالكرنك ومن بينه العديد من البقايا الحجرية المشيد من الحجر الجيري مثل المعابد والمقاصير غير ذلك العديد من التماثيل والتي قدمها سنوسرت الأول والتي تم إكتشافها في بدايه القرن العشرين. وثلاثة من هذه التماثيل تمثل أجداده ملوك الدولة القديمة ومن أواخر عصر الانتقال الأول. فقد تم إكتشاف تماثيل الملك ساحورع والمحفوظ بالبحر المصري CG42004 وتمثال الأمير أنتف عا« CG42005 بمعبد الكرنك بينما الثالث والذي يمثل الملك نوسرع والذي لم يُعرف مصدره والمعروضة بالمتحف البريطاني أيضا إنه EA870 ربما أيضا إنه جاء من معبد آمون رع بالكرنك والواقع أن تقديس تماثيل الملوك السابقين كان جزء من إهتمام بالماضي في بدايه الأسرة الثانية عشرة حتى يعطى طبيعة دينية على الحاكم السياسي وربما أن التماثيل الثلاثة كانوا محفوظين في واحدة من حجرات معبد الدولة الوسطى لآمون رع - أو ربما في المتحف المعروف بمقصورة الأجداد والتي شيدت في معبد الأخ منو بواسطة تحتمس الثالث.

Christophe Thiers

Membra disiecta ptolemaica II

هذه المقالة تنشر للبلوكات الواقعة والتي كانت جزء من آثار شيدت بالكرنك خلال عصور بطليموس الرابع (فليوباتير) وبتليموس السادس (فيلوميتير) وبتليموس الثامن (يوريجيتس)

Didier Devauchelle, Ghislaine Widmer

hiereus بالكتابة الديموطيقية بالكرنك

تشير المقالة إلى قطعة من الحجر الرملي تم الكشف عنها في حفائر الحمام البطلمي أمام الكرنك عام ٢٠١٠م- والقطعة عليها نقش والذي ربما يكون جزء من مقدمة تحمل لقب إغريقي مترجم إلى الديموطيقية والتي ليس لدينا منها الكثير من الأمثلة الآن وهي تمدنا بدليل جديد من المزج الثقافي لهذه المنطقة في بدايه العصر الروماني .

Amr Gaber

مظاهر تأليه الملك سبتي الأول

المقال يفحص أصل الوثائق التي تعكس الطرق المختلفة التي تم توظيفها لتقديس سبتي الأول من ملوك الدولة الحديثة الأسرة التاسعة عشرة. وتحليل تلك الوثائق المختلفة سواء مرسومة أو مصورة سوف توضح أن تقديس لم يكن في حياته ولكنه بعد مماته وبواسطة إبنه رمسيس الثاني وقد جاءت هذه الوثائق أساسا من معبده في أبيدوس والقرنة وصاله الأساطير بمعبد الكرنك - بالإضافة إلى ذلك فهناك تعليق عام يناقش هذه الوثائق وتعكس تقديس سبتي الأول.

Luc Gabolde

ملاحظات على كساء مسلات صالة واجيت وتأريخه

لقد اتضح حديثاً أن الأحجار المحيطة بمسلات حتشبسوت في صالة «الواجيت» وتخفي أجزاءها السفلية ترجع لنفس عصر هذه الملكة وأنه تم إقامتها لغرض معماري وديني ولكن بإعادة دراستها يتضح أن هذه الجدران ليس لها أساس وان الرأي السابق بأن هذه الأحجار المحيطة بقواعد المسلات من عصر تحوتمس الثالث هو الأقرب للصواب خاصة أنها تتطابق مع نصوص الإنشاء الخاصة بنفس عصر هذا الملك.

Jérémy Hourdin

مقصورة أوزير- با جد عنخ لشبنوبت الثانية ، إضافة لإعادة بناء النقوش والعمارة

هذا المقال يناقش بعض من الدلائل الأثرية تم إكتشافها بحفائر طريق أبو الهول بين معابد الكرنك والأقصر حيث جاءت بعض هذه القطع المنقوشة من مقصورة لأوزورس معروفه وهى مقصورة «أوزوريس بادى عنخ» والتي تم نشرها عام ١٩٥٠م بعض هذه البلوكات كانت أجزاء من أبواب لهذا الأثر وقد تم إعادة تركيب لهذه القطع بالمقالة تكمل معلوماتنا عن هذه المقصورة وقد تم إنشاء هذا الأثر خلال عصر الزوجه الإلهة «شبن إم أوبت» خلال عصر «تانت أمون» وأخيرا فهناك بعض البولكات تم نشرها لمزيد من المعرفة.

Silvana Cincotti

«الحفائر في المتحف»: المجموعة المصرية بتورين ووثائق Rifaud

تعنى هذه المقالة بتماثيل موجودة بمتحف الآثار المصرية بتورين والتي كانت قد اكتشفت بمصر بواسطة Jean Jacques Rifaud لصالح القنصل الفرنسي Bernardino Drovetti الأبحاث التي أجريت بجنيف على المخطوطات الغير منشورة ل Rifaud كجزء من رسالة دكتوراه على تماثيل متحف تورين، قد أوضحت معلومات هامة بخصوص موقع التماثيل الواقعة لسخمت. فيقول Rifaud في تقريره عن الحفائر أنه عثر لثماثيل الواقعة في معبد بتاح الواقع شمال معبد آمون رع بالكرنك.

Romain David

فخار استيطان من القرن الخامس بالكرنك

هذه المقالة تشير الى الفخار الذي يرجع للقرن الخامس الميلادي في الطبقة التي تعود لهذا العصر من منطقة سكنانية داخل معبد بتاح بالكرنك. والتصنيف الأولى يضيف معلومات عن وجود نشاط صناعي في هذه الطبقة بالموقع.

Catherine Defernez

ملاحظات بخصوص بعض أواني بس المكتشفة بالكرنك

تهدف المقالة إلى دراسة مجموعة من الأواني المحفوظة جيداً من أواني الإله بس والتي تم الكشف عنها في المستويات العليا بالرديم أعلى حجرة كنوز شباكا، وهي ترجع للعصر البطلمي (ربما النصف الأول)، وهذه القطع تقدم دليل جديد لهذا المستوى من الفخار، ومن ناحية أخرى لم يعثر على الكثير منها، أواني بس هذه والتي صنعت من طين النيل من الصعب التعرف عليها بسبب أسلوب زخرفتها المبهم والتي تتكون كمثال من تحديد العيون بواسطة طبع الأصبع وفي بعض الأحيان الأنف كان ينفذ بواسطة خط من الحافة الخارجية، ومعظم ظهور هذا النوع من الأواني كان بالكرنك وبأماكن عديدة بمعبد آمون رع، وكذلك شمال وجنوب الكرنك، وقد عثر على بعض نماذج لهذه الأواني في معبد موت.

بعض الأشكال المغلقة عثر عليها في مواقع مختلفة في منطقة طيبة تشمل أيضاً نماذج مشابهة في أماكن أخرى خارج طيبة خاصة في الدلتا خاصة وإن هناك بعض التقارير تؤكد العثور على مثل هذه الأواني شرق البلاد، وعلى الرغم من العدد القليل من القطع فإن أواني «بس» تعتبر فريدة ودراستها توضح تطور ضخم في هذا المستوى من الفخار، وتضيف معلومات جديدة في طريقة التصنيف السابقة والتي اعتمدت على بعض الأواني من العصر الفارسي في تل الحيرة.

Mansour Boraik, Mohamed Naguib

الأواني الفخارية من حفائر الحمامات البطلمية أمام معابد الكرنك

بدأت وزارة الدولة لشئون الآثار الحفائر في عام ٢٠٠٧ م إلى الشمال الغربي من الصرح الأول لمعبد الكرنك في إطار مشروع تطوير المنطقة الواقعة بين معبد الكرنك ونهر النيل ، والمقالة تقدم هنا فخار من خمسة عصور تاريخية: العصر المتأخر والعصر اليوناني والعصر الروماني والعصور الإسلامية والعثمانية، وقد صنعت الأواني الفخارية من مواد «طينية» محلية ومستوردة، وقد استخدم الفخار لأغراض مختلفة مثل التخزين والنقل وأواني طبخ المائدة والإنارة وغيرها. إن دراسة الفخار هامة جداً في المساعدة في تاريخ الموقع وتساعد في دراسة الحياة اليومية في المنطقة والتي كانت نشطة خلال العصر اليوناني الروماني.

Peter Brand, Jean Revez, Janusz Karkowski, Emmanuel Laroze, Cédric Gobeil

مشروع صالة الأعمدة بالكرنك - تقرير عن موسم ٢٠١١ بجامعة Memphis وجامعة Quebec مونتريال

بدء مشروع دراسة صالة الأعمدة لموسم ٢٠١٠ والذي إستمر لمدة ستة أسابيع في تسجيل النقوش على الأعمدة والدعامات التي تعلوها والتي كان قد قام بها ريكاردو كامينوس في ١٩٥٠ م وكذلك التصوير العلمي لكل الدعامات الخاصة بالأعمدة سواء الموجود مكانها أو التي في فناء الأحجار المنقوشة ومعظم دعامات الأعمدة عليها آثار نقوش ترجع لعصر سبتي الأول وبداية عصر رمسيس الثاني تم محوها وإعادة نقشها في عصر رمسيس الثاني. وقد تم إلتقاط بعض الصور العمودية للدعامات وكذلك النقوش على الأعمدة مع أخذ قياسات التيوبوليت للدعامات وكذلك نقوش الأعمدة وقد أمدت المشروع بمعلومات قيمة عن نقل النقوش بإفريقيا الغير واضحة على الأعمدة بمقارنتها بالرسومات والصور التي قام بها «هارولد نيلسون» وأعطت فكرة جديدة عن إتجاه الزخرفة وتاريخ نقشها وإستمرت الأعمال أيضا لتعطي أشكال عمودية لنقوش الأعمدة إعتيادا على الدراسة الفوتوجراميتية التي تم إلتقاطها مواسم ٢٠٠٧/٢٠٠٨ كما إستمرت دراسة الأحجار المنقوشة والتي سقطت من المستويات العليا للجدران والموجودة حاليا شمال وجنوب صاله الأعمدة .

Jean-François Carloti, Philippe Martinez

ملاحظات جديدة على العمارة والنقوش بصالة الأعمدة الكبرى بمعبد آمون رع بالكرنك

تهدف الدراسة إلى إعادة إلقاء الضوء على تاريخ صالة الأعمدة الكبرى بالكرنك، حيث توجد العديد من القرائن سواء معمارية أو رسومات حديثة أو غير مدروسة تبين أن هذا الأثر هو في الحقيقة نتاج العديد من التعديلات والتغييرات والتي حدثت على مر عقود طويلة وعصور مختلفة، وبدأ المشروع الأول لأنحوتب الثالث حيث صاله صف الأعمدة المرتفعة مثل تلك الموجودة في معبد الأقصر - وتم تخطيط المعبد مرة أخرى والذي على ما يبدو تم بتشييد فناء له رواق أعمدة محاط بأعمدة من أحجار الثلاثات والتي تحمل بصفة أساسية أسم الملكة نفرتيتي تم جاء عصر توت عنخ آمون رع وحورمحب والذين أزالوا هذا المبنى واستخدموا أحجاره في الأساسات التي تدعم رواق الأعمدة ثم جاء بداية عصر الرعامسة حيث تغيرت تماما وأصبحت مليئة بالاساطير والتي تبين أنها تكمل أسلوب عصر الرعامسة المعمارى وهكذا فقد شهد هذا التطور المعمارى لهذا الأثر العديد من المراحل على مر العصور وتظل كثير من الأسئلة خادعة تاريخيا حيث أن العديد من بقايا آثار تهشم النقوش لا بد من دراستها حيث تم تطهير المبنى من عاصفه تدنيس عصر العمارنه وستصبح نظرية كهذه المجال أمام العلماء لكثير من الجدل للتحقيق منه.

Mansour Boraik

الحمام الروماني أمام معابد الكرنك تقرير مبدئي

تم إضافة نجع الحساسنة إلى مشروع تطوير ساحة الكرنك بعد تعويض الأهالي عن الأرض التي كانوا يقيمون عليها وبإجراء الحفائر في هذه المنطقة تم الكشف عن حمام روماني كبير يشغل مساحة أكثر من ثلاثمائة متر مربع والحمام الروماني المكتشف مازال يحتفظ بجميع عناصره المعمارية كاملة وهو مشيد من الطوب الأحمر ويتميز بتخطيطه المعقد والذي يعكس الفترة الطويلة التي أستخدم فيها الحمام

ويمتد محور الحمام شرق غرباً ويتميز بمدخله الذي يؤدي إلى صالة ذات أعمدة وتنقسم إلى عدة أقسام على جانبيها حجرات إنتظار والحمام به أحواض للإستحمام بالمياه الباردة وأخرى بالمياه الساخنة إلى جانب قسم لحمام البخار كما عثر على حجرات للتسخين لها تصميمها المميز إلى جانب نظام صرف صحي شيد بأسلوب هندسي فريد وقد تم الكشف عن العديد من القطع الأثرية منها أساور زجاجية وخواتم وأقراط نسائية توضح أن الحمام كان يستخدم للرجال والنساء كما عثر على العديد من الأواني الفخارية المختلفة الأشكال والاحجام والتي توضح طول الفترة الزمنية التي أستخدم فيها هذا الحمام

والمقالة هي تقرير مبدئي عما تم الكشف عنه حيث أن الحفائر مازالت مستمرة والتي ستوضح التخطيط المعماري الكامل لهذا الحمام الفريد والذي يعكس الحياة الإجتماعية خلال العصر الروماني في المنطقة الغربية لمعابد الكرنك والتي كانت تشكل أهم مركز ديني سواء للمصريين أو الرومان في ذلك العصر

Mansour Boraik, Salah el-Masekh, Anne-Marie Guimier-Sorbets, Bérange Redon

الحمامات البطلمية أمام معابد الكرنك - الاكتشافات الحديثة موسم (٢٠٠٩ - ٢٠١٠)

يهدف المقال إلى تقديم النتائج الحديثة لحفائر الحمامات البطلمية بالكرنك خلال مواسم ٢٠٠٩ - ٢٠١٠ م. لقد تم اكتشاف المبنى في عام ٢٠٠٦ م بمعرفة المجلس الأعلى للآثار خلال حفائر إنقاذ (SCA) وتم نشر تقرير مبدئي عن العمل عام ٢٠٠٩ م ومنذ ذلك الوقت استمرت الحفائر وأسفرت عن اكتشاف نظام التسخين للحمام ، ففي الجزء الأول من المقال سيتم وصف المبنى وتفسيره في ضوء الاكتشافات الماثلة في مصر خاصة في منطقة تابوزيرس ماجنا ، وسوف نوضح باستفاضة نظم التسخين في الحمامات الإغريقية المصرية وذلك بشرح واحد من أقدمها وأكثرها حفظاً في مصر . وفي الجزء الثاني سوف نركز على زخرفة الحمام خاصة الأرضيات الموزايك (الفسيفساء) وألوان الحوائط ، وبعد وصف دقيق لكل برنامج الزخرفة المرتبطة بأسلوب البناء سوف نشرح التقنية لشكل هذه الزخرفة . وأخيراً سوف نوضح الأسلوب الإغريقي الذي تم تنفيذه بعناية والأمثلة المقدونية مثل قصر فيليب الثاني بمقدونيا والد الاسكندر الأكبر .

الملخصات العربية

Michel Azim, Agnès Cabrol, Aude Dobrakowski, Luc Gabolde

لغز تمثال لأبو الهول

تنشر المقالة صورتين تم إلتقاطهما بمعرفة «فرانسوا شامبيليه» في القطاع الأوسط لمعبد الكرنك والصور من مقتنيات متحف التاريخ الطبيعي في مدينة ليل بفرنسا (Musée d'Histoire Naturelle of Lille, France) واحده من هذه الصور تمثل تمثال أسطوري لأبو الهول مفقود الآن والدراسة توضح لنظرية أن يكون هذا تمثال لأمون.

Mansour Boraik

حفائر طريق أبو الهول التقرير الثانى

إستمرت أعمال حفائر طريق أبو الهول في عدة قطاعات مختلفة، لعل أهمها القطاع الواقع خلف مكتبة الأقصر العامه، والقطاع الممتد من طريق المطار وحتى نجع أبو عصبه وقد أضافت الحفائر الكثير من المعلومات عن تاريخ طيبة منذ العصور الفرعونية وحتى العصر الحديث ، حيث تم الكشف عن العديد من الأنشطة الأنسانية التي كانت على جانبي الطريق خلال العصور اليونانية والرومانية - كما تم الكشف عن إمتداد السد الكبير والذي كشف عنه أمام معبد الكرنك إلى الغرب من طريق الكباش الذى يقع أمام بوابة ويرجيتوس مما يؤكد أن معابد الكرنك كانت مشيدة فوق مايشبه الجزيرة، وان حفائر طريق أبو الهول تفتح المجال مستقبلا للمزيد من البحث إلى النحو الأقتصادي والسياحي لمحافظة الأقصر ويهدف المقال إلى الحديث عن أهم الأكتشافات على طول هذا الطريق المقدس والذي تم الكشف عن جميع قطاعاته إلا القطاع الأخير والذي يقع أمام سنترال الأقصر والذي يجرى به العمل الآن

Romain David

فخار استيطان من القرن الخامس بالكرنك

Catherine Defernez

ملاحظات بخصوص بعض أواني بس المكتشفة بالكرنك

Didier Devauchelle, Ghislaine Widmer

hiereus بالكتابة الديموطيقية بالكرنك

Amr Gaber

مظاهر تأليه الملك سيتي الأول

Luc Gabolde

ملاحظات على كساء مسلات صالة واجيت وتأريخه

Jérémy Hourdin

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Charlie Labarta

لوحة للملك رمسيس الثاني بمخزن الشيخ لبيب بالكرنك

Nadia Licitra

إصلاح سور معبد أمون في عهد الملك رمسيس الثالث: لوحة جديدة مكتشفة بالكرنك

David Lorand

مقصورة الأجداد بالكرنك من عهد سنوسرت الأول

Christophe Thiers

Membra disiecta ptolemaica II

Christophe Thiers, Pierre Zignani

معبد بتاح بالكرنك - المعطيات الأولية عن الموقع

المحتويات

Michel Azim, Agnès Cabrol †, Aude Dobrakowski, Luc Gabolde

لغز تمثال لأبو الهول

Mansour Boraik

حفائر طريق أبو الهول - التقرير الثاني

Mansour Boraik

حمام روماني بمعابد الكرنك - تقرير مبدئي

Mansour Boraik, Salah el-Masekh, Anne-Marie Guimier-Sorbets, Bérangère Redon

الحمامات البطلمية أمام معابد الكرنك - الاكتشافات الحديثة موسم (٢٠٠٩ - ٢٠١٠)

Mansour Boraik, Mohamed Naguib

الأواني الفخارية من حفائر الحمامات البطلمية أمام معابد الكرنك

Peter Brand, Jean Revez, Janusz Karkowski, Emmanuel Laroze, Cédric Gobeil

مشروع صالة الأعمدة بالكرنك - تقرير عن موسم ٢٠١١ بجامعة **Memphis** وجامعة **Quebec** مونتريال

Jean-François Carlotti, Philippe Martinez

ملاحظات جديدة على العمارة والنقوش بصالة الأعمدة الكبرى بمعبد آمون رع بالكرنك

Silvana Cincotti

الحفائر داخل المتحف - المجموعة المصرية بتورين ومجموعة ريفود **Rifaud**

مجلة الكرنك



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المركز المصري الفرسي لدراسة معابد الكرنك

القاهرة
٢٠١٣