BULLETIN ARCHÉOLOGIQUE des Écoles françaises à l'étranger

Bulletin archéologique des Écoles françaises à l'étranger
Égypte | 2025

Karnak-Nord (2024)

Les dépôts et mobilier du trésor de Thoutmosis Ier

Irmgard Hein, Jelena Gvozdenovic, Alexander Haidegger and Philip Seyr

OpenEdition Journals

Electronic version
URL: https://journals.openedition.org/baefe/13497
DOI: 10.4000/14fx4
ISSN: 2732-687X

Publisher
ResEFE

Provided by Université de Liège

LIÈGE université

Electronic reference
Irmgard Hein, Jelena Gvozdenovic, Alexander Haidegger and Philip Seyr, "Karnak-Nord (2024)" [Note of archaeological project], *Bulletin archéologique des Écoles françaises à l'étranger* [Online], Egypt, Online since 30 May 2025, connection on 01 August 2025. URL: http://journals.openedition.org/baefe/13497 ; DOI: https://doi.org/10.4000/14fx4

Karnak-Nord (2024)

Les dépôts et mobilier du trésor de Thoutmosis I^{er}

Irmgard Hein, Jelena Gvozdenovic, Alexander Haidegger and Philip Seyr

AUTHOR'S NOTE

Année de la campagne : 2024 (16 octobre – 15 novembre)
Numéro et intitulé exact de l'opération de terrain : 17223 – Karnak Nord. Les dépôts et mobilier du trésor de Thoutmosis I^{er}.
Composition de l'équipe de terrain : Irmgard Hein (égyptologue, université de Vienne, VIAS et institut d'égyptologie) ; Joanna Cabaj (égyptologue, université de Vienne) ; Jelena Gvozdenovic (étude des empreintes des sceaux, université de Vienne) ; Alexander Haidegger (spécialiste lithique, université de Vienne) ; Karin Kopetzky (égyptologue et céramologue, Austrian Academy of Sciences) ; Philipp Seyr (égyptologue et épigraphiste, université de Liège) ; Kerstin Rigler (égyptologue, université de Vienne).
Autorité nationale présente : Sanaa Mohammed Aly Youssef représentait le ministère du Tourisme et des Antiquités (MoTA), sous la supervision de Dr. Wagdi Abdelghaffar, Abd el-Khalek Abd el-Hamid, Ahmed Dowyi et Ghada Ibrahim Fouad.
Partenariats institutionnels : Université de Vienne, Autriche.
Organismes financeurs : Institut français d'arcéhéologie orientale (Ifao) ; université de Vienne (faculté des sciences historiques et culturelles, Institut d'Égyptologie et VIAS).

Donnée scientifiques produites :
https://doi.org/10.4000/baefe.1158
https://doi.org/10.4000/baefe.2814
https://doi.org/10.4000/baefe.8791
https://doi.org/10.4000/baefe.10887
https://doi.org/10.4000/11sxe

Introduction

1 We would like to explicitly thank the authorities of the Luxor region for their support: Dr. Wagdi Abdelghaffar, Director General of Upper Egyptian Antiquities; Abd el-Khalek Abd el-Hamid, Director of the Temple of Karnak. We would also like to thank Ghada Ibrahim Fouad, Head of the foreign missions at Karnak, and Ahmed Dowi, General Manager of the magazines at Karnak. We thank our collaborator, Salah Abd el-Naby Abd el-Wahab and Hisham Abd el-Hamid for the careful handling of the objects. Finally, we would like to thank Nicolle Leary for linguistic corrections made to the English text.

1. The mission “Karnak North – the archives”

2 The mission “Karnak North – the archives” is working on the request of the MoTA in order to complete the records of finds made during the IFAO’s former excavations in the area, under the leadership of Jean Jacquet[1].

3 From 1970 to 1978, fieldwork started by exploring the area of the Temple of Harp-Re (‘area H’) inside the enclosure wall of the Monthu District, but soon switched to the neighboring area outside of the enclosure wall where the Treasury of Tutmosis I and its immediate surroundings were the focus. This was called ‘*Fouille A*’, and the finds from these years are marked by the letter ‘A’. The building of the Treasury from the beginning of the 18th Dynasty was conducted on the ground already occupied from the Middle Kingdom and the Second Intermediate Period, and later occupation of the site was attested by the analysis of the material culture until the Roman Period[2].

4 Some eight years later, from 1986 to 1992, the fieldwork was expanded to the east in ‘*Fouille B*’ where settlement structures from the Middle Kingdom onwards were again detected[3], with these finds marked by the letter ‘B’.

5 Except for those finds which were transported to the Cairo Museum, all other finds were originally kept in store rooms in the Monthu District. In the summer of 2019, the objects were transferred to the storage facilities of Sheikh Labib, where the documentation was carried out.

2. Objectives of the 2024 mission

6 The mission is devoted to the study of the objects and the creation of digital photographic records for publication and an online database. As we have previously reported[4], the last nine seasons since 2013 have already documented a large part of the pottery[5], relief fragments and small objects made of stone, faience and other materials. The task in 2024 was to complete the documentation and recording of the finds through digital photography, and to combine these with the earlier archival materials. Objective is to create a digital database and prepare a further volume for the Karnak North publication series with the previously unexamined or unpublished finds. To this end, special studies were carried out for specific groups of objects, such as the seal impressions which were drawn and prepared for publication by J. Gvozdenovic and P. Seyr (see Section 4 below). A special study was undertaken on the stone tools. These

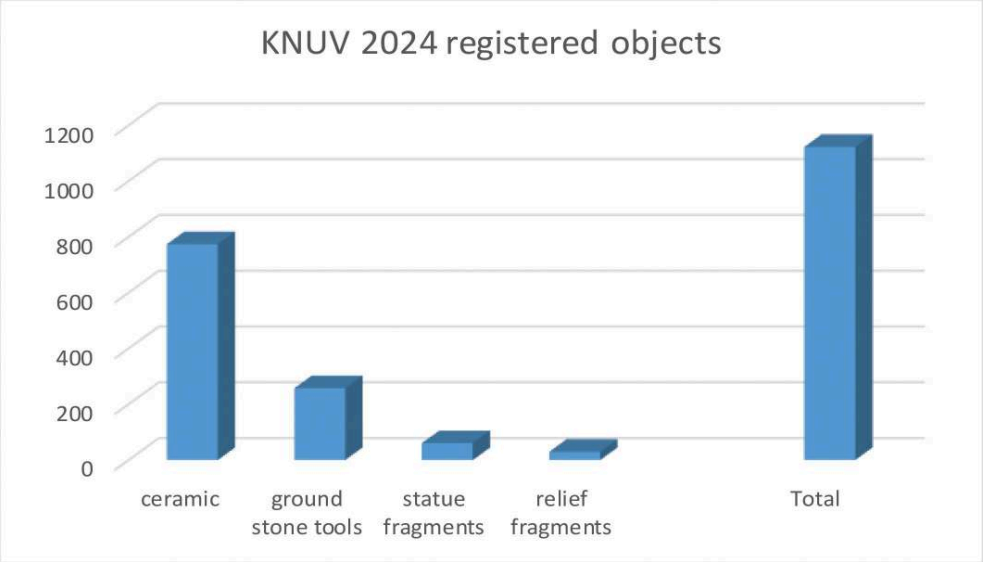
were already photographed in 2014 but have been chosen as a subject for a special investigation by A. Haidegger (see Section 4 below). During the former seasons, the digital recording of the ceramics was almost completed. The remaining 30 baskets of partly unregistered ceramics were documented, which will complement the typological publications by Helen Jacquet-Gordon along with the addition of a small amount of the last relief fragments[6]. Photography was undertaken by J. Cabaj. A further small task was to clean and pack into wood boxes the objects from the foundation deposits of Tutmosis I and a deposit of Pinodjem I (in total 472 items). These objects have already been published in the volume *Karnak Nord X*[7] and were digitally recorded in 2020.

3. Documentation of objects in 2024

7 All objects were systematically catalogued in Excel lists, with detailed information on registration numbers, indicating all registry numbers, object type, material and dimensions (Fig. 1).

8 A further key objective was to undertake comprehensive epigraphic documentation of the 162 seal impressions that had already been numbered in 2022, the majority of which originated from *Fouille A* (see Section 5 below).

Fig. 1. Karnak North, registered objects 2024, diagram according to groups of material.



3.1. Pottery

9 In the 2024 season, the remaining 30 baskets of pottery were recorded by I. Hein and K. Kopetzky. All pieces were compared with the types published in the 2012 volume of the Karnak North pottery[8], and we found 37 types that were not previously comparable. A total of 774 pieces were added to the database, most of which match a particular type. Furthermore, a re-examination of the bread moulds from *Fouille A* and *Fouille B* already included in the 1981 study by H. Jacquet-Gordon was carried out. Specific observations

on the bread moulds were recorded, and comments were made on the mould markings[9] (Fig. 2). These will be prepared for publication.

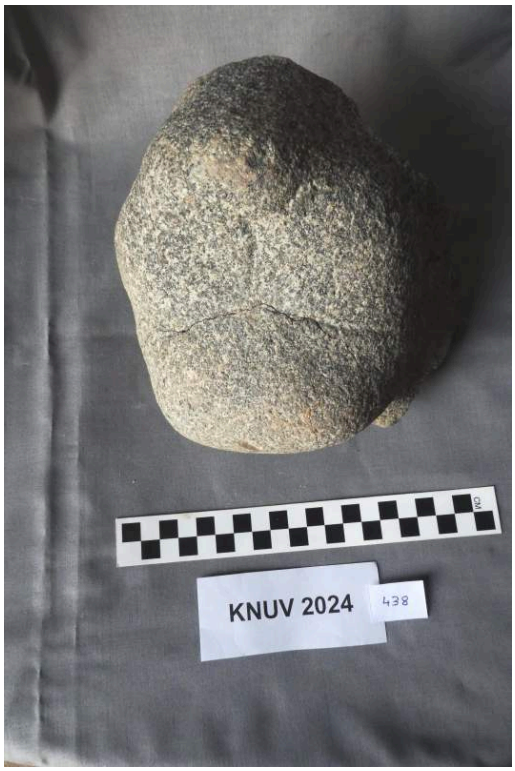
Fig. 2. Three bread moulds from Karnak North with pinched marks (I. Hein).

© Ifao. 17223_2024_NDMPM_001

3.2. Statue fragments

10 The recording of the statue fragments was concluded with the addition of a further 58 fragments of black granite. The fragments vary in size, from very small pieces measuring approximately 4 cm in length to larger pieces of up to 30 cm. Many of the fragments exhibited a rough surface texture, suggesting potential affiliation with the Sachmet statues (Fig. 3).

Fig. 3. Fragment of a Sachmet statue (I. Hein).



© Ifao. 17223_2024_NDMPM_002

4. Study of ground stone tools

[A. Haidegger]

11 The mode of recording and terminology used for ground stone tools draws heavily from the study of Silvia Prell on the macrolithic objects from Qantir published in 2011 with adaptations made when necessary[10]. Investigation focused primarily on raw materials, behaviours of discard, use-wear and patterns of primary use and secondary tool readaptation. To avoid confusion, all information on tool type quantities in the tables refers to primary tool utilisation. One must be aware that distinguishing between first intentional tool usage and sequences of reuse often proves to be difficult.

12 In total 258 objects were studied, of which 101 can be assigned to *Fouille A*, 125 to *Fouille B* and 1 to *Fouille H*. Furthermore, 31 objects have not been registered by the excavators and therefore cannot be correlated with specific areas. Due to this circumstance, only objects from *Fouille A* and *B* have been considered for analysis here.

Table 1. Distribution of tool types and raw materials in *Fouille A*.

Tool Type	**n**	**Raw Material**	**n**
Hammerstones	28	Diorite	19
Polishing Stones	27	Quartzite	13
Pestles	12	Limestone	13

Pressure Stones	7	Greywacke	9
Spindle Whorls	6	Chert	9
Abrasive Stones	6	Granodiorite	8
Net Sinkers	4	Granite	8
Work Plates	3	Sandstone	7
Handstones	3	Steatite	4
Anvils	2	Red Quartzite	3
Mortars	2	Porphyry	2
Querns	1	Conglomerate	2
		Siltstone	1
		Schist	1
		Calcite	1
		Indeterminable	1
Total	**101**	**Total**	**101**

13 The most frequent tool type in *Fouille A* is represented by hammerstones (n=28). They are characterised by a broad spectrum of raw materials with diorite and chert prevailing. Those manufactured from diorite in particular have been modified to spherical, cubical (Fig. 4.1) and planoconvex shapes. Frequently occurring smooth surfaces indicate that recurrent maintenance by polishing has been applied, thus suggesting intention for long use-life. Hammers often appear as combination tools (so called 'wheel hammers'), where, in addition to battering, they were intended for polishing and abrading[11] (Fig. 4.2). Hammers made from chert on the other hand rather act as opportunistically collected nodules which were only intended for short use-life. Interestingly KNUV 2024-1068 seems to have been originally intended for core preparation. The task failed, however, and the pebble has been repurposed for hammering operations (Fig. 4.3).

14 Polishing stones (n=27) show no definite material preference. A clear difference can be drawn between modified polishing stones, appearing as discs, boards, cubes and in planoconvex shape (Fig. 4.8), and those made from debris. One steatite object shows two deep U-shaped channels and might be designated as tool used for smoothing bone objects (Fig. 4.7)[12].

15 Pressure stones for handling bow drills (n=7) can be identified by the presence of up to five deeper moulds that are distributed over multiple surfaces. They always appear in planoconvex shapes with diorite, granite and granodiorite as preferred materials (Fig. 4.5).

16 Rougher grained rocks have been selected for utilisation as abrasive stones. All examples unearthed from *Fouille A* (n=6) have been made from sandstone with one example being made of quartzite. Their primary use wear consists of abrasion marks which could sometimes be observed on multiple surfaces. Two sandstone objects with deep incisions should be classified as whetstones.

17 Pestles (n=12) can be distinguished by their characteristic cylindrical shape with thicker terminal ends and clearly visible use wear on sometimes both proximal and distal ends. They have been primarily manufactured from diorite, granodiorite, granite and quartzite (Fig. 4.10).

18 Tools intended as ‘passive’ objects for tasks involving pressing or battering can be encountered in the form of work plates (n=3), anvils (n=2), mortars (n=2) and querns (n=1). Work plates, having all been made from limestone, seem to have been intentionally manufactured for such purposes as they all showcase planoconvex transversal sections with carefully smoothed top surfaces and rougher shaped bottom surfaces. Anvils on the other hand are characterized by being the product of reuse of other tool types. Querns and their accompanying handstones (n=3) (Fig. 4.9) have all been produced from quartzite and seldomly appear within the assemblage. Mortars are defined by a single deep mould with one exemplar acting as the only representative being made from calcite.

19 The most homogeneous group is represented by a row of objects that can be classified as spindle whorls (n=6)[13]. They have all been made of limestone revealing distinctive planoconvex shapes with similar dimensions and characteristic perforations (Fig. 4.4).

20 An assemblage of ovoid and, in one case, trapezoid prismatic shapes might be classified as net sinkers (n=4). They have been produced from sandstone, quartzite, chert and limestone and are sometimes characterised by one or two deeper incisions running either along their longitudinal or both longitudinal and transverse sections (Fig. 4.6)[14].

Fig. 4. Selection of ground stone tools from *Fouille A*: 1) cubical hammerstone, 2) wheel hammer, 3) chert hammerstone, 4) spindlewhorl, 5) pressurestone, 6) net sinker, 7) polishing tool for bonepins or arrowheads, 8) planoconvex polishing stone, 9) handstone, 10) pestle (reused as pressurestone).

Table 2. Distribution of tool types and raw materials in *Fouille B*.

Tool Type	**n**	**Raw Material**	**n**
Polishing Stones	48	Diorite	40
Hammerstones	44	Quartzite	22
Abrasive Stones	14	Chert	16
Handstones	6	Sandstone	7
Anvils	3	Quartz pebble	6
Pressure Stones	3	Greywacke	5
Querns	3	Red Granite	4
Semifinished Products	2	Red Quartzite	4
Chipped Flakes	1	Siltstone	4
Pestles	1	Granite	3
Total	**125**	Porphyry	3
		Conglomerate	2
		Granodiorite	2
		Limestone	2
		Indeterminable	2
		Basalt	1
		Schist	1
		Silicified Limestone	1
		Total	**125**

21 *Fouille B* showcases a similar pattern in tool type distribution as well as similar choices for raw materials. Polishing stones (n=48) act as the dominant tool type and polishers in planoconvex appearance made from quartzite are particularly common. KNUV 2024-1085 is of special interest in this regard as it displays a plain bottom surface with distinct flake scars from the initial shaping process on its top surface and therefore even might be regarded as semi-finished product of that type (Fig. 5.5).

22 Hammerstones (n=44) display the same pattern of modified tools and *ad hoc*-used pebbles as encountered in *Fouille A* (Fig. 5.1-2).

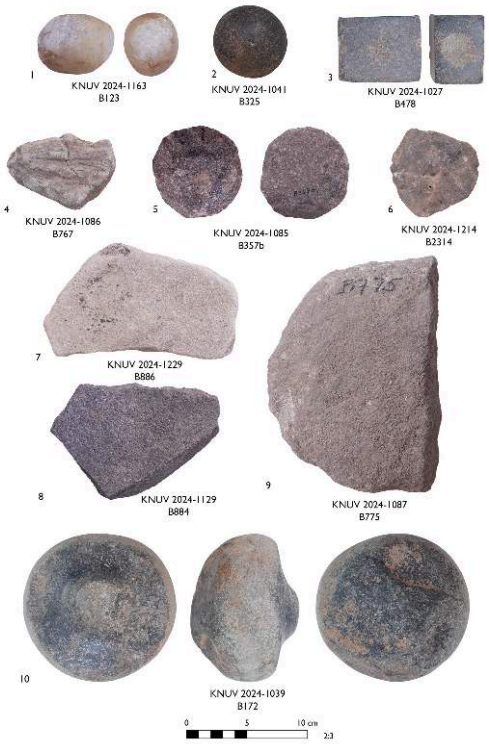
23 Handstones (n=6) and querns (n=3) appear more frequently and have been preferably manufactured from quartzite and red granite (Fig. 5.8-9). The former all display plain bottom surfaces and indicate application on plain querns, while the latter primarily show concave abrading surfaces. In general, querns are of rather small size with lengths ranging from 9 to 12 cm.

24 Anvils (n=3) are again represented by only a few objects and characterised by reuse of other tools. In this regard, KNUV 2024-1039 originally acted as a stone socket for a

pottery wheel[15] but also displays pecking marks indicating secondary use as such (Fig. 5.10).

25 Spindle whorls and net sinkers are missing entirely, while pressure stones (n=3) are present but play a far less important role (Fig. 5.6).

Fig. 5. Selection of ground stone tools from *Fouille B*: 1) Quartz pebble used as hammerstone, 2) spherical hammerstone, 3) cubical object (weight?) reused as hammer- and pressurestone, 4) whetstone, 5) semifinished planoconvex polishing stone (?), 6) pressurestone, 7) abrasionplate, 8) small quern, 9) handstone, 10) socket for pottery wheel reused as anvil.

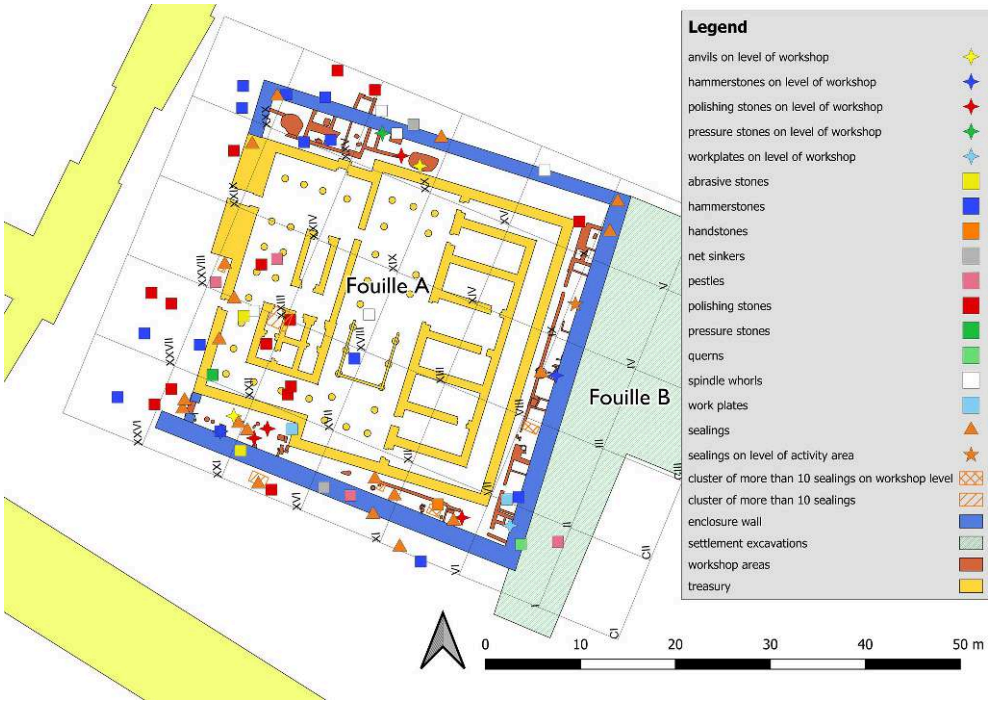


© Ifao. 17223_2024_NDMPM_004

Discussion

26 In general, both excavation areas present similar patterns of tool use and remodification, with battering and smoothing being the dominant tasks. Slight differences can be observed by the presence or absence of certain tool types. Spindle whorls, net sinkers and polishers for bone tools are only found in *Fouille A*. Pressure stones very likely have been applied in the production of carnelian beads. As indicated by Fig. 6, few artefacts can be directly associated with levels from the workshops, while the general overlap of macrolithics with those areas is worthy of note. Handstones and querns are slightly more abundant in *Fouille B* and their presence is in accord with the domestic character of the area. The abundance of hammerstones in the settlement is striking and it is tempting to associate their appearance with chipped stone tool industries[16].

Fig. 6. Ground-stone-tools (n=57) and sealings (n=20) that have been documented via single point position in *Fouille A*. Clusters of more than 10 sealings (n=6) have been considered as well (see legend for details).



5. Seal impressions and sealings

[J. Gvozdenovic, P. Seyr]

27 The sealing material from Karnak North is a corpus of seal impressions and a few seals recovered during the excavations of the IFAO in the 1970s and early 1990s. They can be divided into two groups according to their findspots. The first and larger one comes from the site of the so-called Treasury of Tutmosis I (*Fouille A*), and the second group was recovered from the later extension *Fouille B*. A small part of this corpus has been published in the excavation reports and the *Karnak Nord* volumes, however no comprehensive study of the sealing material has been conducted thus far.

28 During the previous campaigns, these sealings were registered and photographed[17]. The aim of our work during this season was to produce epigraphic documentation of the sealings as well as to conduct a typological study of the corpus and of the sealing practices.

29 The site of the Treasury (*Fouille A*) yielded a total of 141 seal impressions and 4 seals. This corpus consists of almost exclusively elliptical stamp seals varying in size, proportions, and orientation. The majority of the sealings are only fragmentarily preserved, and many of them show traces of secondary burning. According to the represented motifs, their date covers a wide time frame, but the majority can be broadly dated to the New Kingdom. A few seal impressions show the cartouches of Tutmosis III – some certainly posthumous and one with a sphinx trampling an enemy next to the king's cartouche, which is only partly preserved. A larger group consists of Ramesside seal impressions with different spellings of royal names and epithets (Fig. 7).

Their decoration is most often divided into two or more registers and contains a combination of seated deities under a sun disk flanked by two *uraei*. Within this constellation, the most frequent representations are that of Maat, Amun, and a falcon-headed deity, forming the beginning of the royal names and reading, e.g., *Rʿ-ms-sw* and *wsr-mʿ.t-rʿ*. The lower registers show sphinxes, scarabs, and different bird hieroglyphs, and their bottom part usually contains the signs  , or , followed by the filler . Due to their fragmentary state of preservation and the controversy on the reading of this type of seal inscriptions[18], their interpretation requires special scrutiny, but one cartouche of Ramses IX has been identified with certainty.

30 Many of the representations on the other sealings are centred around the cult of Amun-Ra. As such, several sealing fragments bear only the name and/or epithets of the god. Aside from these, representations of Khonsu, Hapy, and Heh have also been documented, as well as various figurative motifs including bulls, crocodiles, and snakes. One cluster of at least five different sealing fragments were all impressed by one *nsw-bjt* seal. Finally, around 20 seals contain abstract and spiral motifs characteristic of the Middle Kingdom and the Second Intermediate Period.

Fig. 7. Four Sealings from '*Fouille A*' (drawings J. Gvozdenovics).

© Ifao. 17223_2024_NDMDM_001

31 The settlement area (*Fouille B*) yielded a very different corpus from that of the site of the Treasury. Although similarly consisting of stamp seals, many rectangular impressions were documented. Only 17 seal impressions and no seals were recovered from this area. The largest part of this corpus depicts spirals, many of which were probably impressions of the same seal, and some show ornamental patterns with  and

 signs. According to its archaeological context, this corpus can be dated to the end of the Second Intermediate Period and the beginning of the New Kingdom[19].

32 As the corpus from *Fouille B* largely stems from a large single context[20], the study of the spatial distribution focused on *Fouille A*. By working with the registers from the original excavations, it was possible to reconstruct the original findspots of the majority of the sealings from the *Fouille A*. As shown in Fig. 6 most of the sealing material was found alongside the southern and eastern enclosure wall. Apart from being located on the outskirts of the Treasury, the majority of the finds were found ca. 1 m above the original level of the building dating to the reign of Tutmosis I, and thus they mostly belonging to later stages of occupation. At the same elevated level along the southern wall, a secondary structure containing baking ovens was uncovered and dated to the end of the 19th or the 20th Dynasty[21].

33 By reviewing the original documentation, it was possible to group the seal impressions according to clusters in which they were recovered. The comparison revealed some correlations within the distribution of seal decoration patterns as well as the nature of the sealed surface. For example, the 42 seal impressions from *Fouille B* published by J. Jacquet[22] were not only made of a dark fine-grained clay with a high proportion of mica inclusions, but a remarkably high number of them were fixed on papyrus scrolls (*bullae*). The same is true a group of 21 seal impressions with spiral motifs from *Fouille A* (A4107) [23]. For *Fouille A*, the material on which the sealings were fixed could be identified with certainty for 53% of the corpus. Out of these, 53.9% were attached to wood, including wooden planks and pegs, 31.6% to papyrus. 9.2% to textile and the remainder (ca. 5.3%) were used on pottery, stone and basketry. For *Fouille B*, nine seal impressions (52.9%) were used on a wooden surface and only one on textile.

34 In addition, our study revealed that the groups impressed with similar seal types also shared other characteristics that corroborate the existence of a common sealing practice within these groups. Two of the documented material aspects seemed particularly noteworthy.

35 First, many sealings with royal names of the 19th and 20th Dynasty from the ovens in *Fouille A* show impressions of wooden planks and pegs on their rear and can therefore be interpreted as door or box sealings[24]. Better-preserved examples of this group bear two impressions of different seals, indicating a practice of counter-sealing. Their epigraphic documentation proved particularly challenging because of the large number of overlapping impressions, which at first glance appeared to be double impressions of a single seal (Fig. 8a–c). However, a systematic examination of the pieces in question revealed that the overlap was only found on one half of the elliptical seal impression, while the other half showed no doubling. This contradicts the hypothesis that the seal was imprinted twice on the same spot. Our tests with stamps and sealing clay have shown that it is more likely the result of rolling the flat surface of the seal back and forth on a rounded lump of clay, a movement that might best be performed with finger rings. Furthermore, the sharp-edged carving and rich detail of the signs suggest that the employed seals were made of metal or precious stones, which may be supported by close parallels for the decoration of this group of seal impressions on several metal signet rings[25].

36 Second, a small number of at least three sealings showed 1–1.5 mm wide channels around the decorated surface of the seal, which are the impressions of a frame that

protruded over the seal and covered its edges (Fig. 8d–f). Their smooth surface, as well as the preserved parallels, suggest that the frames were made of metal and attached to rings on two sides[26]. In fact, two seals still preserve semicircular traces of the connection between the encasing of the sealing plaque or scarab and the support.

Fig. 8. Photos of seal impressions: a) KNUV_2022_2615; b) KNUV_2022_2587; c) KNUV_2022_2616; d) KNUV_2022_2585; e) KNUV_2022_2582; f) KNUV_2022_2495 (photos G. Esche).

BIBLIOGRAPHY

BEUTHE 2024

T. Beuthe, “Making a Good Impression: A Typology of Mounted Seal Impressions in the Middle Bronze Age Southern Levant”, *Near Eastern Archaeology* 87/1, 2024, pp. 26–31.

DOHERTY 2015

S.K. Doherty, *The Origins and Use of the Potter’s Wheel in Ancient Egypt*, ArchaeoEg 7, Oxford, 2015.

GUERRA et al. 2023

M.F. Guerra, S. La Niece, N. Meeks, S. Quirke, L. Troalen, “Finger-rings”, dans M.F. Guerra, M. Martinón-Torres, S. Quirke (eds.), *Ancient Egyptian Gold: Archaeology and Science in Jewellery (3500–1000 BC)*, Cambridge, 2023, pp. 387–410, https://doi.org/10.17863/CAM.99685.

HEIN 2020
I. Hein, “Karnak-Nord: Storerooms”, *BAEFE,* 2020, http://journals.openedition.org/baefe/1158; https://doi.org/10.4000/baefe.1158.

HEIN 2021
I. Hein, “Karnak Nord”, *BAEFE*, 2021, http://journals.openedition.org/baefe/2814; https://doi.org/10.4000/baefe.2814.

HEIN et al. 2023
I. Hein, R. Pauer, G. Esche, “Karnak-Nord (2022) : les dépôts et archives de Karnak-Nord. Étude du mobilier archéologique et des fragments de relief”, *BAEFE*, 2023, https://journals.openedition.org/baefe/8791;

https://doi.org/10.4000/baefe.8791.

HEIN et al. 2024
I. Hein, J. Cabaj, A. Haidegger, “Karnak-Nord (2023) : les dépôts et mobilier du trésor de Thoutmosis I^{er} », *BAEFE*, 2024, https://journals.openedition.org/baefe/10887; https://doi.org/10.4000/11sxe.

HITCHENS 2018
S. Hitchens, “Dressing the Pyramids in Cloth and Cordage: Spinning and Weaving at the Pyramids”, *AERAGRAM* 19-1, 2018, pp. 12–15.

JACQUET 1972
J. Jacquet, “Fouilles de Karnak Nord : quatrième campagne, 1971”, *BIFAO* 71, 1972, pp. 151–160.

JACQUET 1983
J. Jacquet, *Karnak-Nord V*, FIFAO 30/1–2, Cairo, 1983.

JACQUET 2001
J. Jacquet, *Karnak-Nord IX*, FIFAO 44, Cairo, 2001.

JACQUET-GORDON 1981
H. Jacquet-Gordon, “A Tentative Typology of Egyptian Bread Moulds”, in Do. Arnold (ed.), *Studien zur Altägyptischen Keramik*, SDAIK 9, Mainz am Rhein, 1981, pp. 11–24.

JACQUET-GORDON 1988
H. Jacquet-Gordon, *Karnak-Nord VI : le Trésor de Thoutmosis I^{er}. La décoration*, FIFAO 32, Cairo, 1988.

JACQUET-GORDON 1999
H. Jacquet-Gordon, *Karnak-Nord VIII : le Trésor de Thoutmosis I^{er}. Statues, Stèles et blocs réutilisés*, FIFAO 39, Cairo, 1999.

JACQUET-GORDON 2007
H. Jacquet-Gordon, “A Habitation Site at Karnak North Prior to the New Kingdom”, in M. Bietak, E. Czerny (eds.), *The Synchronisation of Civilisations in the Eastern Mediterranean in the Second Millenium B.C. III: Proceedings of the SCIEM 2000 – 2nd EuroConference, Vienna, 28th of May – 1st of June 2003*, Wien, 2007, pp. 317–324, https://doi.org/10.1553/0x0007eada.

JACQUET-GORDON 2012
H. Jacquet-Gordon, *Karnak-Nord X : le Trésor de Thoutmosis I^{er}. La céramique*, FIFAO 65, Cairo, 2012.

MALAK et al. 2022
E. Malak, C. Malleson, A. Witsell, *Ancient Egypt Research Associates’ Object Typology*, 2022, https://aeraweb.org/publications/books/.

PILGRIM 1996

C. von Pilgrim, *Elephantine XVIII: Untersuchungen in der Stadt des Mittleren Reiches und der Zweiten Zwischenzeit*, AVDAIK 91, Mainz am Rhein, 1996.

PRELL 2011

S. Prell, *Einblicke in die Werkstätten der Residenz: Die Stein- und Metallwerkzeuge des Grabungsplatzes Q I*, Forschungen in der Ramses-Stadt 8, Hildesheim, 2011.

PRELL 2019

S. Prell, "Macrolithics and the On-going Use of Stone Tools in Qantir-Piramesse and Tell el-Dab'a–Avaris, Eastern Delta/Egypt", in A. Squitieri, D. Eitam (eds.), *Stone Tools in the Ancient Near East and Egypt*, Archaeopress Ancient Near Eastern Archaeology 4, Oxford, 2019, pp. 223–233.

WEGNER 2007

J. Wegner, *The Mortuary Temple of Senwosret III at Abydos*, PPYE 8, New Haven, 2007.

YOYOTTE 1949

J. Yoyotte, "À propos des scarabées attribués à Ramsès VIII", *Kêmi* 10, 1949, pp. 86–89.

NOTES

1. HEIN et al. 2023.

2. JACQUET 1983.

3. JACQUET 2001.

4. HEIN 2020; HEIN 2021; HEIN 2024; HEIN et al. 2023.

5. JACQUET-GORDON 2012.

6. Cf. former reports: HEIN 2020; HEIN 2021; HEIN et al. 2023.

7. JACQUET-GORDON 2012, pp. 89–99 and 229, figs. 41–42 and 87.

8. JACQUET-GORDON 2012.

9. JACQUET-GORDON 1981, pp. 18–22, types D and E.

10. PRELL 2011, pp. 27–101.

11. PRELL 2011, pp. 35–36.

12. For comparison see PRELL 2019, pp. 225–228 and figs. 9–10.

13. For comparison see HITCHENS 2018, pp. 12–14.

14. For comparison see MALAK et al. 2022, pp. 80–82.

15. See DOHERTY 2015, pp. 10-14 for comparative examples.

16. HEIN et al. 2024, pp. 152–160.

17. HEIN et al. 2024, p. 4.

18. YOYOTTE 1949.

19. JACQUET 2001, p. 60.

20. JACQUET-GORDON 2007, pp. 321–323.

21. JACQUET 1972, p. 154.

22. JACQUET 2001, p. 60–62.

23. PILGRIM 1996, p. 238, type C; WEGNER 2007, pp. 300–301, type 1.

24. *Contra* JACQUET 1972, p. 154: "*Certains de ces sceaux montrent clairement des empreintes des ligatures qui retenaient les rouleaux de papyrus.*"

25. E.g. Brooklyn Museum 37.727E, Leiden RMO EG-ZM2393, EG-ZM2394, EG-ZM2395, and Munich ÄS 5851.

26. Cf. BEUTHE 2024 (type II); for this type of finger rings, see also GUERRA et al. 2023.

INDEX

Subjects: IFAO
Year of Investigation: 2024
nature https://ark.frantiq.fr/ark:/26678/pcrtEznNgQ3h63
anthroponymes https://ark.frantiq.fr/ark:/26678/pcrtlRLXY5Txkw
lieux https://ark.frantiq.fr/ark:/26678/pcrtPpSAeaOqDG
sujets https://ark.frantiq.fr/ark:/26678/pcrtEznNgQ3h63, https://ark.frantiq.fr/ark:/26678/pcrtaFscj0mIjr, https://ark.frantiq.fr/ark:/26678/pcrtZhnbHzuSzG, https://ark.frantiq.fr/ark:/26678/pcrtxs8Kml8jLw, https://ark.frantiq.fr/ark:/26678/pcrt1PtSvqzeS0, https://ark.frantiq.fr/ark:/26678/pcrtYOZqbPp1t1, https://ark.frantiq.fr/ark:/26678/pcrtIzSUofuocv
chronologie https://ark.frantiq.fr/ark:/26678/pcrtQfmmy4haAf, https://ark.frantiq.fr/ark:/26678/pcrtWdtTtgEFgD, https://ark.frantiq.fr/ark:/26678/pcrtbm27waEaeg, https://ark.frantiq.fr/ark:/26678/pcrt6g08f8rkk4d8xdx76wnc, https://ark.frantiq.fr/ark:/26678/pcrtzDYlUVRR94

AUTHORS

IRMGARD HEIN

https://idref.fr/031072143

Égyptologue, université de Vienne, VIAS et institut d'égyptologie

JELENA GVOZDENOVIC

Étude des empreintes des sceaux, université de Vienne

ALEXANDER HAIDEGGER

https://idref.fr/282704884

Spécialiste lithique, université de Vienne

PHILIP SEYR

Égyptologue et épigraphiste, université de Liège

ARCHAEOLOGICAL PROJECT DIRECTORS

IRMGARD HEIN

https://idref.fr/031072143

Égyptologue, université de Vienne, VIAS et institut d'égyptologie