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**Title: Textiles from Tomb II in Deir el-Bahari: preliminary report from season 2012/2013**

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**Abstract:** In the 2012/2013 season, the Polish–Egyptian Archaeological and Conservation Mission of the Temple of Hatshepsut at Deir el-Bahari (PCMA UW) continued work in a tomb (Tomb II) cut into the cliffs bordering the temple of Tuthmosis III from the west. The work focused on a shaft and two subterranean chambers (C and D), which yielded together more than 300 pieces of funerary linen and equipment. Despite the disturbed archaeological context, the finds constitute an important corpus of seldom studied and published Pharaonic textiles. Some of the textiles are of very high quality, up to 2 m in length and preserved with their original colors. Importantly, they portray characteristic features of Pharaonic Egyptian textiles. Several pieces have inscriptions, including one with a fragmentary cartouche.

**Keywords:** Deir el-Bahari, textiles, funerary linen, burial assemblage, Theban tombs

## المنسوجات من القبر الثاني في الدير البحري : التقرير الأولي من موسم 2012 \ 2013 .

Aleksandra Hallmann

**الملخص:** في موسم 2012 \ 2013 البعثة البولندية -المصرية للآثار والصيانة لمعبد حتشبسوت في الدير البحري ( *PCMA* , *UW* ) واصلت العمل في المقبرة (المقبرة الثانية ) بحفر المنحدرات المحاذية لمقبرة الملك تحوتمس الثالث من الغرب وركز العمل على عمود و حجرتين سريتين ( *C & D* ) والذي أسفر عن أكثر من 300 قطعة من الكتان والمعدات الجنائزية وعلى الرغم من سوء الحالة الأثرية تشكل الإكتشافات الجزء الأساسي المهم من صناعة و إنتشار المنسوجات الفرعونية. بعض المنسوجات ذات جودة عالية حوالي ( 2م ) طول ومحافظة على ألوانها الطبيعية والأهم الرسومات المميزة لملامح المنسوجات الفرعونية المصرية ،منها عدة قطع تحتوي على نقوش بالإضافة إلى واحدة مع جزء من خرطوش .

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RESEARCH



## ABBREVIATIONS

<i>AA</i>	<i>Archäologischer Anzeiger; Jahrbuch des Deutschen Archäologischen Instituts</i> (Berlin)
<i>ANM</i>	<i>Archéologie du Nil Moyen</i> (Lille)
<i>ASAE</i>	<i>Annales du Service des Antiquités de l'Égypte</i> (Cairo)
<i>AV</i>	<i>Archäologische Veröffentlichungen, Deutsches Archäologisches Institut, Abteilung Kairo</i> (Berlin–Mainz am Rhein)
<i>BAAL</i>	<i>Bulletin d'archéologie et d'architecture libanaises</i> (Beirut)
<i>BAH</i>	<i>Bibliothèque archéologique et historique</i> (Paris)
<i>BAR IS</i>	<i>British Archaeology Reports International Series</i> (Oxford)
<i>BASOR</i>	<i>Bulletin of the American Schools of Oriental Research</i> (Ann Arbor, MI)
<i>BCH</i>	<i>Bulletin de correspondance hellénique</i> (Paris)
<i>BdE</i>	<i>Bibliothèque d'étude</i> (Cairo)
<i>BIFAO</i>	<i>Bulletin de l'Institut français d'archéologie orientale</i> (Cairo)
<i>BSAA</i>	<i>Bulletin de la Société d'archéologie d'Alexandrie</i> (Cairo)
<i>BSFE</i>	<i>Bulletin de la Société française d'égyptologie</i> (Paris)
<i>CCE</i>	<i>Cahiers de la céramique égyptienne</i> (Cairo)
<i>EtTrav</i>	<i>Études et travaux. Travaux du Centre d'archéologie méditerranéenne de l'Académie des sciences polonaise</i> (Warsaw)
<i>FIFAO</i>	<i>Fouilles de l'Institut français d'archéologie orientale</i> (Cairo)
<i>GAMAR</i>	<i>Gdańsk Archaeological Museum African Reports</i> (Gdańsk)
<i>GM</i>	<i>Göttinger Miszellen</i> (Göttingen)
<i>IAMS</i>	<i>Institute of Archaeo-Metallurgical Studies</i> (London)
<i>JARCE</i>	<i>Journal of the American Research Center in Egypt</i> (Boston–Princeton–New York–Cairo)
<i>JEA</i>	<i>Journal of Egyptian Archaeology</i> (London)
<i>JGS</i>	<i>Journal of Glass Studies</i> (Corning, NY)
<i>JJP</i>	<i>Journal of Juristic Papyrology</i> (Warsaw)
<i>JRS</i>	<i>Journal of Roman Studies</i> (London)
<i>MDAIK</i>	<i>Mitteilungen des Deutschen Archäologischen Instituts, Abteilung Kairo</i> (Wiesbaden)
<i>OIP</i>	<i>Oriental Institute Publications</i> (Chicago)
<i>OLA</i>	<i>Orientalia lovaniensia analecta</i> (Louvain)
<i>PAM</i>	<i>Polish Archaeology in the Mediterranean</i> (Warsaw)
<i>PSAS</i>	<i>Proceedings of the Seminar for Arabian Studies</i> (London)
<i>SAAC</i>	<i>Studies in Ancient Art and Civilisation</i> (Kraków)
<i>SAK</i>	<i>Studien zur altägyptischen Kultur</i> (Hamburg)
<i>SAOC</i>	<i>Studies in Ancient Oriental Civilization</i> (Chicago)
<i>WVDOG</i>	<i>Wissenschaftliche Veröffentlichungen der deutschen Orient-Gesellschaft</i> (Berlin–Leipzig)

# TEXTILES FROM TOMB II IN DEIR EL-BAHARI: PRELIMINARY REPORT FROM SEASON 2012/2013

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**Abstract:** In the 2012/2013 season, the Polish–Egyptian Archaeological and Conservation Mission of the Temple of Hatshepsut at Deir el-Bahari (PCMA UW) continued work in a tomb (Tomb II) cut into the cliffs bordering the temple of Tuthmosis III from the west. The work focused on a shaft and two subterranean chambers (C and D), which yielded together more than 300 pieces of funerary linen and equipment. Despite the disturbed archaeological context, the finds constitute an important corpus of seldom studied and published Pharaonic textiles. Some of the textiles are of very high quality, up to 2 m in length and preserved with their original colors. Importantly, they portray characteristic features of Pharaonic Egyptian textiles. Several pieces have inscriptions, including one with a fragmentary cartouche.

**Keywords:** Deir el-Bahari, textiles, funerary linen, burial assemblage, Theban tombs

More than 300 pieces of linen of various size and in different states of preservation were found in a rock cut tomb (Tomb II) during two seasons of work (2011/2012, 2012/2013) by the Polish–Egyptian Archaeological and Conservation Mission of the Temple of Hatshepsut at Deir el-Bahari (PCMA UW).

The tomb is one of several cut in the cliffs surrounding the temple of Tuthmosis III (*Dsr-3ht*), the entrance to which, with a partly surviving causeway, is situated just behind the temple sanctuary [*Fig. 1*]. It and another sepulcher (Tomb I) were discovered by a Polish mission in November

1964–April 1965, during the exploration of the area of the temple of Tuthmosis III, while cleaning debris from the cliff behind the temple to the west (Lipińska 1968b: 142–143). Tomb II has two irregular chambers (A and B) on ground level and a shaft leading to two subterranean rooms (C and D) (Dąbrowski 1968: Pl. V).

Both tombs had been excavated previously and contained fragments of different burial assemblages (Lipińska 1968a: Part III/b). After the initial excavation the tomb was left open and apparently used as a rubbish hole. Current exploration work (the burial chambers in the first season and





*Fig. 1. Entrance to Tomb II in the cliff behind the Temple of Tuthmosis III in Deir el-Bahari*



*Fig. 2. Chamber D of Tomb II in Deir el-Bahari*

*All photos A. Hallmann.*

the shaft and two subterranean rooms in the following season<sup>1</sup>) yielded remnants of disturbed burials dated to the Third Intermediate Period/beginning of the Late Period [*Fig. 2*]. The archaeological material was mixed (including modern finds)<sup>2</sup> and pieces from the same coffins were scattered throughout the tomb. Examination of the contents revealed different elements of funerary equipment deriving probably from different burials. It is not clear how these finds reached the tomb or for that matter, if any of them originally belonged there. Only hypothetical scenarios can be proposed. It is probable that the remains from Tomb II shared the same fate as other

archaeological material found by the Polish Mission in other disturbed burials in the temple area in that they were reburied by the early excavators who were not interested in fragmentary pieces (Szafrński 2001: 196–199; Barwik 2003). Thus, it is also possible that some of the finds match items found in other tombs in the area of the temple of Hatshepsut in Deir el-Bahari.<sup>3</sup>

The extraordinary amount of textiles found, especially in comparison to other excavated artifacts, may suggest that Tomb II was chosen by early excavators as a place to rebury textiles, most of which probably derived from different burials.

## TEXTILES FROM TOMB II

The large amount of excavated textiles of different sizes and state of preservation, as well as their disturbed archaeological context, necessitated a selection of pieces for further study (Hallmann 2015). Dirt and sand were removed whenever possible, and loose bones, fragments of coffins, beads or plant material were separated. No effort was made to disjoin pieces from bones that were still stuck to them. Pieces of linen solidified into a hard mass, probably by resin used during embalming procedures, were stored in separate boxes.

Linen bags were found attached to some textiles [*Fig. 3*]. Those found loose were collected into five separate boxes (Box Nos 2132, 2135, 2148, 2197, 2160). The bags were filled most likely with leftover natron probably mixed with other components used during the embalming process (Lucas 1932: *passim*; Lucas and Harris 1999: 278–280; Lipińska 1971: 65, note 62). Similar bags were found by the Polish Mission in the 1964/1965 season, inside three coffins excavated in the debris of the newly discovered temple

<sup>1</sup> Aleksandra Hallmann and Piotr Czerkwiński, under the supervision of Mission director Dr. Zbigniew E. Szafrński (PCMA UW), were responsible for the exploration of the shaft and subterranean rooms of Tomb II (between 14 October and 7 November 2012).

<sup>2</sup> For example, a few modern cigarette boxes of the Samsoun Superieur brand with the date 1937; a label from the Imhotep Papyrus Institute (16, Pyramids Garden St., Beside Mina House Hotel); and a leaflet of ORWO negative film.

<sup>3</sup> For excavation in the Northern Chapel of Amun, which yielded some fragments of a coffin attributed to the priests of Amun and Montu, as well as linen pieces belonging to previously disturbed burials, see Szafrński 2001: 196–199; Barwik 2003; for excavation in the Chapel of Hatshepsut, which recovered among others some fragments of coffins from the Twenty-third–Twenty-sixth Dynasties (including one which had belonged to the vizier Padiamonet, Cf 38), as well as some linen pieces, see Szafrński 2008: 274–280.



of Tuthmosis III (Dąbrowska-Smektała 1968; Lipińska 1971). The bags are not isolated examples either in Deir el-Bahari and its vicinity or elsewhere in Egypt, and were found, according to Aston's typology, in embalming caches of Type A and B (Aston 2003: 153–163; Lipińska 1971; Budka 2010: 433–470).

### INSCRIBED TEXTILES

Inscribed textiles were identified and stored separately, to be studied as a corpus

of inscriptions by Zbigniew E. Szafrński (Inv. Nos 2021, 2022, 2023, 2024, 2025, 2026, 2027). Inscriptions were observed to be written in the vicinity of the starting border, selvedge, or self-band. One of the cloths (Inv. 2026) featured a partly preserved cartouche accompanied by a vertical column of elegant hieroglyphic inscription written in brownish-black ink that had become burned into the cloth [Fig. 4]. The exact reason for the burning of the fabric, resulting in a negative






Fig. 3. Linen bags: left, hard mass of linen with attached bags; right, loose bags collected in a box



Fig. 4. Linen with cartouche (Inv. 2026): overall view and close-up of inscription at far left

impression shaped like the signs, is not entirely clear. The composition of the ink may have been responsible for cloth deterioration (Hodjash and Berlev 1988: 250), and may have been the reason the fabric tore easily in this area. This is not an isolated example and even among the textiles from Tomb II there are similar pieces of linen where the fabric is torn along the hieroglyphic inscription (Inv. 2025, 2027) and the signs made with ink are burnt into the fabric (Inv. 2022).

The reading of Inv. 2026 was further encumbered by a black substance still glued to the fabric in places, which could not be removed without first implementing conservation procedures. Thus, only a provisional reading may be proposed at the moment: *...ny.sw.t bity [... t3-h-]r'-k [T] mn nb nsw.t t3.wy mr(y)...* The crucial part, namely, the cartouche, is partly destroyed. The sign  (Gardiner N 29) survived, as well as part of the sign above it, which seems to be the lower part of a recumbent lion (, Gardiner E 23). If the reading is correct then the remaining signs could point to Taharqo's name, probably its abbreviated version:  (Gauthier 1916: 31–40; von Beckerath 1999: 208–209; Dallibor 2005: 30–32).

The way the signs were written and also the application of brownish-black ink is similar to other pieces of linen dated to the Twenty-fifth Dynasty found in Thebes. One example is a textile fragment from the Metropolitan Museum of Art (MMA 25.3.214) belonging to the vizier Paherer, son of the vizier Khaemhor, from Montuemhat's family ([http://](http://www2.metmuseum.org/Collections/search-the-collections/548287)

[www2.metmuseum.org/Collections/search-the-collections/548287](http://www2.metmuseum.org/Collections/search-the-collections/548287) [accessed 23.03.2014]), and also on a few other pieces of linen with royal names. They can be seen also on a piece of linen with the name of Pi(ankh)y (BM EA 6640) ([http://www.britishmuseum.org/explore/highlights/highlight\\_objects/aes/t/textile\\_with\\_names\\_of\\_king\\_piy.aspx](http://www.britishmuseum.org/explore/highlights/highlight_objects/aes/t/textile_with_names_of_king_piy.aspx) [accessed 23.03.2014]), as well as on a few textiles with the name of Shabaqo. Several fragments (e.g., 99.97.0523) came from the intrusive burial of Wedjhor in TT 99 (Strudwick 1995: 91–92; for a color photo of the piece, see <http://www.fitzmuseum.cam.ac.uk/tt99/finds/textiles.html> [accessed 23.03.2014]), while others are held by the Musée de l'Homme in Paris, where they were rediscovered during an examination of mummies from the Twenty-fifth Dynasty family of “priests of Montu” from Deir el-Bahari (Yoyotte and Monier 2011: especially 112–115; Monier and Monier 1995: 30). The mummies were sent to Paris by Auguste Mariette to be exhibited at the International Exposition in 1867, where they were unwrapped.

The inscribed linen that is kept in the Pushkin State Museum of Fine Arts (Inv. I.A.a.6496) bears the complete titlature of Taharqo, as well as the name and titles of Montuemhat (owner of TT 34).<sup>4</sup> This example provides a close parallel for reconstructing the missing part of the text from linen Inv. 2026 (Hodjash and Berlev 1988). The particular number of signs in the lacuna will be fitted once the piece has been straightened out by specialists in textile restoration.

<sup>4</sup> For another example of linen with a Taharqo cartouche from an intrusive burial in the tomb of Paser (TT 367), published unfortunately without a photo, see Fakhry 1943: 412.

## UNINSCRIBED TEXTILES

A representative group of the uninscribed textiles was selected for further studies based on the presence of specific features, such as starting-border, self-band, selvedge, hem, fringes, or dyeing (Hallmann 2015). A few textiles with traces of black and/or reddish substances were also selected. Diagnostic pieces were inventoried, photographed, and stored in plastic breathable bags inside a separate box (No. 83).

During the inventorying of the textiles it became clear that some of them may derive from the same or very similar pieces of cloth, and thus some textiles were inventoried in groups, e.g., Inv. 2028/1–9. It does not mean, however, that they necessarily belonged to a single cloth. For example, judging by the woven decoration of the collection of pieces with blue decoration (Inv. 2031/1–15), the recorded examples belonged to at least two different cloths. Some of the pieces, such as one of the narrow blue strips Inv. 2031/1, were identified as an edge fragment of a larger piece (Inv. 2379/1), which survived with a blue horizontal stripe as well, but the blue band was woven using a different technique [Fig. 5].

The uninscribed textiles were inventoried under the following numbers: Inv. 1982/1–3, 2028/1–9, 2029, 2030/1–3, 2031/1–15, 2032/1–6, 2033/1–5, 2034/1–2, 2035, 2036/1–4, 2037, 2038/1–2, 2039/1–4, 2040/1–15, 2041/1–3, 2375/1–4, 2400/1–5.

## PRELIMINARY ANALYSIS

All the studied textiles were made of flax (*Linum usitatissimum*). Most of them are preserved with different shades of their “natural” color (bleached or not), but

a few were clearly dyed reddish-brown (Inv. 2021, Fig. 6 left) or pink (Inv. 2028), and partly blue (Inv. 2031/1–15, 2041/1–3, 2375/1–4, 2400/1–5; see Fig. 5) or pink (Inv. 2029, Fig. 6 right).

The length of the discovered textiles varies from the smallest piece just 0.5 cm long to the largest measuring 200 cm. None of the pieces could be determined as surviving to their full length. Most of them were torn deliberately for the purposes of the embalming process. Both the smaller and larger fragments display the characteristic features of Egyptian linen, making them a very important corpus of textiles for further study (Kemp and Vogelsang-Eastwood 2001: 109–144).

All the examined textiles are a tabby weave save for two groups which were partly woven in half-basket weave (Inv. 2041/1–3, 2379/1–4). These pieces have blue yarns woven into the fabric and muted by plain yarns which form a blue band woven in half-basket, whereas the rest of the fabric is tabby weave. For instance, linen Inv. 2379/1 [see Fig. 5] has 11 blue and 11 natural picks per cm, and a single warp (22 ends per cm), while the rest of the fabric is a tabby weave (weft 15, warp 22). Generally, a higher density of warp was observed on the examined pieces of linens (e.g., Inv. 2028/1 with a weft of 17 and a warp of 32; 2032/1 with a weft of 10 and a warp of 30) which gives the warp-faced appearance.

Some of the textiles survived with a starting-border consisting of groups of yarns (four: Inv. 2021, 2041/1–3, 2033/4–5, five: Inv. 2036 or even six: Inv. 2033/1–3), which formed a more complex transverse starting selvedge. The transverse edge that finishes the fabric is visible only





Fig. 5. Uninscribed linen pieces Inv. 2031/1 and 2379/1



Fig. 6. Dyed linen: left, Inv. 2021; right, Inv. 2029

as warp-fringes (Inv. 2028/1–3 and 8, 2029, 2031/12, 2032/1–6, 2039/1).

Many of the textiles have characteristic self-bands which vary in the number of bands from two double stranded self-bands (Inv. 2021, 2022, 2024, 2028/1–2 and 8, 2029, 2032/1–6, 2036/1–2) to a single three stranded self-band (Inv. 2039). Some of them run close to an edge, but most of them occur some distance away from the starting border or the warp-fringe hanging at the bottom. There are also fragments with self-bands that have neither a starting border nor a warp-fringe (Inv. 2024). Moreover, some of the cloths still had one selvedge which, unfortunately, was not always completely intact (e.g. Inv. 2021, 2022, 2023, 2028/3 and 7, 2031/1–15).

#### LINEN USAGE

Regardless of the specific nature of the archaeological context, the discovered textiles evidently represented funerary linen of some kind. It is highly probable, however, that many were of everyday use, not woven specifically for burial purposes.

Most of the cloth was used as mummy bandages (e.g., Inv. 2032/1–6, 2033/1–5, 2040/1–15), being torn from larger pieces of linen, usually along the selvedges. The width of these pieces is approximately 10–15 cm, and the length varies from 30 cm to 180 cm. Identified among the finds was an outer shroud (Inv. 2021) [*Fig. 6* left], brownish-red in hue, possibly placed over the mummy, and binding tapes (Inv. 2031/1–15) used to keep the shroud in place. The holding strips were of different length, but all were approximately 7 cm wide, whereas the shroud consisted of several fragments, the largest one being

about 200 cm long and 70 cm wide. It cannot be said whether the shroud and tapes were used together or whether they came from different burials.

Many pieces have black and reddish stains, made by a black substance (probably bitumen) and some kind of resin. A significant amount of black stains was discovered on the surface of numerous pieces of linen, sometimes in the shape of deliberate(?) patterns (Inv. 2038), which were frequently burned through the fabric leaving a negative impression (e.g., Inv. 2037, 2038). Moreover, there is one example (Inv. 2038) where the black substance burned through one fabric and made the exact same impression on the cloth underneath. The two substances are not present on the surface of each textile in equal measure, since there are fragments where the stains are completely absent (e.g., Inv. 2028). The different concentration of substance, however, hints at the use of particular pieces of linen, since those heavily impregnated with resin had to be used as inner wrappings (Taconis and Maat 2005: 60–61, 65–66). The textiles that were solidified in hard masses and found among other pieces of linen in Tomb II also belong to this category.

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I am very grateful to the director of the Mission, Dr. Zbigniew E. Szafranski, for the opportunity to work on this material. I would also like to thank Nigel Strudwick for kindly sharing his photos of the textiles from the intrusive burial of Wedjhor in TT 99, as well as Cynthia May Sheikholeslami for information regarding some linen dated to the Twenty-fifth Dynasty.

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## REFERENCES

- Aston, D. A. (2003). The Theban West Bank from the Twenty-fifth Dynasty to the Ptolemaic Period. In N. Strudwick and J. H. Taylor (Eds.), *The Theban necropolis: Past, present, and future* (pp. 138–166). London: British Museum Press.
- Barwik, M. (2003). New data concerning the Third Intermediate Period cemetery in the Hatshepsut temple at Deir el-Bahari. In N. Strudwick and J. H. Taylor (Eds.), *The Theban necropolis: Past, present, and future* (pp. 122–130). London: British Museum Press.
- Budka, J. (2010). *Bestattungsbrauch und Friedhofsstruktur im Asasif: eine Untersuchung der spätzeitlichen Befunde anhand der Ergebnisse der österreichischen Ausgrabungen in den Jahren 1969–1977*. Vienna: Verlag der Österreichischen Akademie der Wissenschaften.
- Dallibor, K. (2005). *Taharqo, Pharao aus Kusch: ein Beitrag zur Geschichte und Kultur der 25. Dynastie*. Berlin: Achet.
- Dąbrowska-Smektała, E. (1968). Coffins found in the Area of the Temple of Tuthmosis III at Deir el-Bahari. *BIFAO*, 66, 171–181.
- Dąbrowski, L. (1968). Preliminary report on the reconstruction works of Hatshepsut's Temple at Deir el Bahari during the seasons 1962–63 and 1963–64. *ASAE*, 60, 131–137.
- Fakhry, A. (1943). Tomb of Paser (No. 367 at Thebes). *ASAE*, 43, 389–414.
- Gauthier, H. (1916). *Le livre des rois d'Égypte IV. De la XXV<sup>e</sup> dynastie à la fin des Ptolémées*. Cairo: Institut français d'archéologie orientale.
- Hallmann, A. (2015). More items of funerary linen from the Deir el-Bahari burial assemblages. In Z. E. Szafrński (Ed.), *Deir el-Bahari studies* [=PAM 24/2] (pp. 113–136). Warsaw: Warsaw University Press.
- Hodjash, S. I., and Berlev, O. D. (1988). A new document from the times of the wars with Assyria. In E. Freier and W. F. Reineke (Eds.), *Karl Richard Lepsius (1810–1884): Akten der Tagung anlässlich seines 100. Todestages, 10.–12.7.1984 in Halle* [=Schriften zur Geschichte und Kultur des alten Orients 20] (pp. 247–259). Berlin: Akademie-Verlag.
- Kemp, B. J., and Vogelsang-Eastwood, G. (2001). *The ancient textile industry at Amarna* [=EES Excavation Memoirs 68]. London: Egypt Exploration Society.
- Lipińska, J. (1968a). A list of objects found at Deir el-Bahari in the area of the Temple of Tuthmosis III: IVth season of excavations 1964–1965. *ASAE*, 60, 153–204.
- Lipińska, J. (1968b). Preliminary report on the reconstruction works of the Temple of Hatshepsut at Deir el Bahari during the season 1964–1965. *ASAE*, 60, 139–152.
- Lipińska, J. (1971). A note on the problem of false mummies. *EtTrav*, 5, 65–70.
- Lucas, A. (1932). The use of natron in mummification. *JEA*, 18(3/4), 125–140.
- Lucas, A., and Harris, J. R. (1999). *Ancient Egyptian materials and industries*. Mineola, NY: Dover Publications.



- Monier, A., and Monier, T. (1995). Les momies et la momiologie. *Archéologia*, 308, 24–31.
- Strudwick, N. (1995). The High Priest of Amun Wedjahor. *GM*, 148, 91–94.
- Szafrński, Z. E. (2001). Deir el-Bahari. The Temple of Hatshepsut. Season 1999/2000. *PAM*, 12, 185–205.
- Szafrński, Z. E. (2008). Deir el-Bahari. Temple of Hatshepsut, season 2005/2006, *PAM*, 18, 269–284.
- Taconis, W. K., and Maat, G. J. R. (2005). Radiological findings in the human mummies and human heads. In M. J. Raven and W. K. Taconis, *Egyptian mummies: Radiological atlas of the collections in the National Museum of Antiquities at Leiden* (pp. 53–80). Turnhout: Brepols.
- von Beckerath, J. (1999). *Handbuch der ägyptischen Königsnamen* [=Münchner ägyptologische Studien 49] (2nd, augm. ed.). Mainz am Rhein: Philipp von Zabern.
- Yoyotte, J., and Monier, T. (2011). Identification des momies de deux familles de prêtres de Montou des XXV<sup>e</sup>–XXVI<sup>e</sup> dynasties égyptiennes. In P. Charlier (Ed.), *3<sup>e</sup> Colloque international de pathographie: Bourges, avril 2009* (pp. 85–126). Paris: de Boccard.

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