

Preliminary assessment of human remains from the Temple of Hatshepsut at Deir el Bahari



Abstract: Excavations over the course of many seasons by the Polish-Egyptian Mission in the Temple of Hatshepsut at Deir el-Bahari have revealed the presence of multiple intrusive burials within and around the temple structure itself. These burials are dated much later than the construction of Hatshepsut's temple, most of them seemingly from the Third Intermediate Period, and have been heavily disturbed over the millennia. This article presents a preliminary assessment of human remains from some of these burials. The remains are highly fragmentary and in varying states of preservation, from mummified to completely skeletonized. Only two individuals are present as nearly complete mummies. A brief inventory indicates the presence of multiple individuals, both adults and juveniles, and both male and female. At least one instance of a healed traumatic injury is visible in one of the mummified individuals. This preliminary study is intended to establish a foundation for future research regarding the life histories of these individuals.

Keywords: human remains, physical anthropology, Deir el Bahari, skeleton, mummy

In December 2017, a preliminary inventory of the human remains recovered from previous excavations within and near the Temple of Hatshepsut at Deir el Bahari, Egypt, was conducted by this author. The purpose of this inventory was to not only assess the condition and biological profiles of the human remains, but to establish directions for more in-depth future research. Due to time constraints and scheduling conflicts, this inventory could only be conducted on 13 December 2017; however, even from this brief analysis it is clear that future research may provide valuable insight into the lives of the individuals discussed here.

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The human remains are currently stored in wooden boxes on site at Deir el-Bahari, the arid climate ensuring excellent preservation. Two individuals are represented by nearly complete mummies (designated Mummy 607 and Mummy 483 by the excavators), but most

of the other remains are fragmentary and commingled, and are a mixture of skeletal and mummified elements. The remains are separated here according to their archaeological find spot, as recorded on the artifact tags with the remains.

ARCHAEOLOGICAL CONTEXT

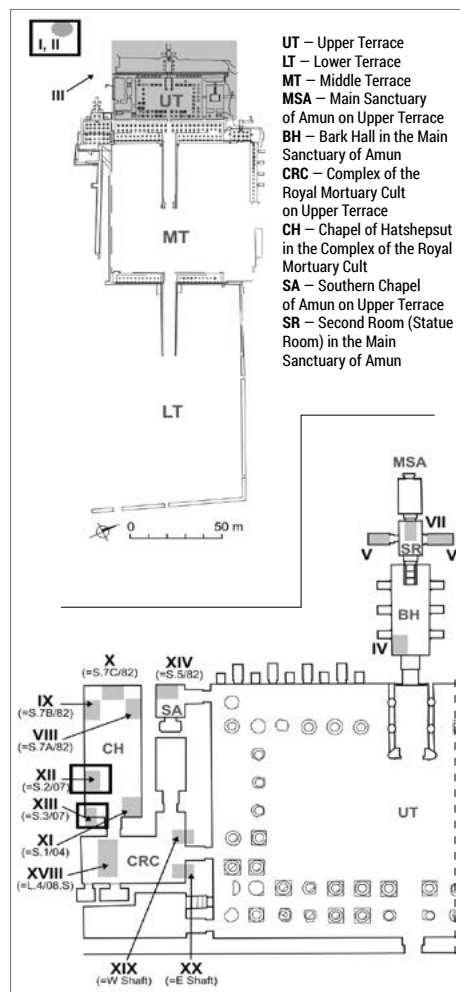


Fig. 1. Relative location of Tombs II, XII and the Late Roman/Coptic Tomb on the Upper Terrace of the Temple of Hatshepsut in Deir el-Bahari (PCMA UW Temple of Hatshepsut Project/after Szafrński 2015: 184)

During the latter part of the Third Intermediate Period, specifically the late Twenty-fifth and early Twenty-sixth Dynasties, Hatshepsut's temple seems to have become a favored necropolis for priests of the god Montu and their families (Barwick 2003; Sheikholeslami 2003). Numerous tombs from this period were found by explorers and excavators as early as the first half of the 18th century, when Richard Pococke wrote that he saw "many bones" lying around the site (Pococke 1743: 100). It is not surprising, then, that these tombs have been disturbed several times over the millennia, likely in antiquity and in modern times, contributing to the disarray and fragmentation of both funerary equipment and human remains (Szafrński 2015).

The human remains discussed in this text were found over the course of numerous excavation seasons, though most were recorded between 2006 and 2010 (Szafrński 2005; 2007; 2008; 2010; 2015). Based on the fragmentary funerary equipment found with the human remains, most interments seem to date to the Third Intermediate Period (Ashton 2009), with the exception of a late Roman/Coptic Tomb within the Chapel of Hatshepsut in the Complex of the Royal Mortuary Cult (Szafrński 2010).

The human remains discussed in this paper derive from Tomb II, Tomb XII, and the late Roman/Coptic Tomb [for the location, see *Fig. 1*].

Tomb II

Tomb II is cut into the rock behind and slightly west of the temple of Hatshepsut, and behind the temple of Tuthmosis III (Szafrński 2015). The tomb consists of a shaft and four chambers, labeled Chambers A through D [*Fig. 2*]. Though the fill in the tomb was heavily disturbed, fragments of funerary equipment suggest a date during the Third Intermediate Period, specifically between the late Twenty-fifth and the Twenty-sixth Dynasty (Aston 2009; Szafrński 2015).

Excavations in Tomb II yielded the remains of numerous individuals, though all are highly fragmentary. Human remains were found in the tomb shaft and in Chamber C and Chamber D of this tomb.

Shaft

Excavations in the shaft of Tomb II revealed the unwrapped torso of a mummy (the chest has been damaged postmortem and is absent) attached to the pelvic girdle and upper right leg (i.e. the proximal femur). In addition, the right leg (distal femur attached to the tibia, fibula, and foot) of a mummy was found [*Table 1*]. The leg is wrapped in horizontal layers of linen and coated with resinous material.

Chamber C

The chamber yielded a mummified head and neck of an adult [see *Table 1*]. The brain is present but the face has largely been destroyed postmortem. An addi-

tional cranium with the left side of the mandible was also present; although the third molars had clearly erupted in this individual's mandible (the dentition was lost postmortem), the incomplete closure of the cranial sutures suggests that the individual was a young adult (i.e., at least in the late teens and likely somewhat older). Severe accumulations of calculus (calcified plaque) are present on the dentition of this second individual. Morphological features of the cranium suggest the individual might have been a female, but more detailed examination would provide more certainty.

An additional bag from this area contains a partly complete maxilla with preserved facial skin including the right nostril and nasal aperture. Other remains found in this room include the articu-

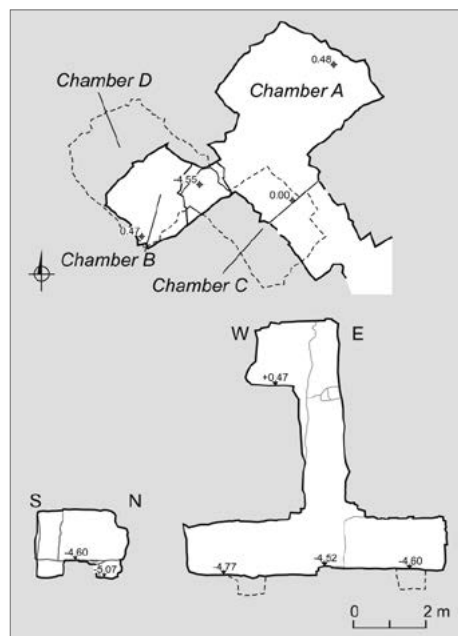


Fig. 2. Plan (top) and sections through Tomb II (PCMA UW Temple of Hatshepsut Project/after Szafrński 2015: 192)

lated lumbar vertebrae from an adult, a left adult mandible, a right proximal humerus, as well as rib and cranial fragments with some soft tissue still adhering to the bone. The trunk and abdomen area of a mummified individual may belong to the same person as the mummified head and neck. The abdomen of this individual is packed with linen. A right proximal humerus and scapula, still held together by soft tissue and mummification materials, may also derive from this same

individual. An additional mummified torso, however, is certainly from another individual. A third mummified human thorax, including the sacrum and lower vertebrae with articulated ribs, is also present. The chest and sternum are absent from this thorax and the cavity is packed with linen.

A male left *os coxa* is also present, along with two mummified forearms (one right and one left, radius and ulna) with the distal humerus still articulated.

Table 1. Human remains from Tomb II

Location of remains	Body part/portion	Sex	Age
Shaft	Torso with pelvic girdle and right proximal femur		
	Right leg (distal femur with tibia, fibula, and foot)	Undetermined	
MNI for Shaft: 1			
Chamber C			
	Cranium and neck	Undetermined	Adult
	Cranium with left mandible	Possibly female	Young adult
	Right maxilla	Undetermined	Adult
	Articulated lumbar vertebrae	Undetermined	Adult
	Left mandible	Undetermined	Adult
	Right proximal humerus	Undetermined	Adult
	Cranial fragments	Undetermined	Undetermined
	Rib fragments	Undetermined	Undetermined
	Trunk and abdomen	Undetermined	Adult
	Right proximal humerus with scapula	Undetermined	Adult
	Torso	Undetermined	Adult
	Torso with articulated sacrum, ribs, and lower vertebrae	Undetermined	Adult
	Left <i>os coxa</i>	Undetermined	Male
	Left forearm	Undetermined	Undetermined
	Right forearm	Undetermined	Undetermined
MNI for Chamber C: 3			
Chamber D	Right forearm (radius and ulna)	Undetermined	Adult
	Right mandible	Undetermined	Adult
	Left mandible	Undetermined	Adult
	Right <i>os coxa</i>	Female	Adult
MNI for Chamber D: 2			
Total MNI for Tomb II: 3			

Chamber D

Excavations in Room D produced a very gracile mummified right forearm (i.e., the articulated radius, ulna, and bones of the wrist and hand) of an adult [see *Table 1*]. A right *os coxa*, likely that of a female based on assessment of morphological features, may derive from the same individual (Buikstra and Ubelaker 1994; Phenice 1969; White, Black, and Folkens 2012). Two fragments of adult mandibles derive from two separate individuals, as one is quite gracile and the other very robust. The presence of third molars in occlusion in both mandibles indicates that both individuals were adults, i.e., at least in their early twenties at the time of death (Buikstra and Ubelaker 1994; Hillson 1996; White, Black, and Folkens 2012).

Summary

Though the remains within Tomb II are fragmentary, it is clear that the partial remains of at least several different individuals are present [see *Table 1*]. The table lists the unique elements (rather than every single fragment) of individuals, leading to an overall MNI (Minimum Number of Individuals) of three (3), with a high likelihood that more individuals are actually represented.

Tomb XII

Tomb XII (S.2/07) is located in the Chapel of Hatshepsut within the Complex of the Royal Mortuary Cult, on the southern side of the Upper Terrace of Hatshepsut's Temple [Fig. 3; for the location, see Fig. 1].

This tomb yielded one nearly complete mummy and the fragmentary remains of several other individuals. Mummy 607 was excavated in the 2006–

2007 fieldwork season. The remains are of an individual in a supine extended position with the hands crossed over the abdomen. The body is almost entirely present and largely intact, apart from the feet, which are fragmentary but seem to be mostly present in a separate bag in the same wooden box. There is extensive preservation of soft tissue and some linen remains attached to the body. In particular, the humeri (upper arms) remain wrapped in vertical sheets of linen. The lower limbs were first wrapped vertically with a coarsely-woven linen and then wrapped horizontally (i.e., the linen was wrapped in a spiral around the limb) with more finely woven linen bordered with blue stripes [Fig. 4].

A desire to recreate a life-like appearance during the mummification process is evidenced by the ball of linen in the left orbit (presumably the right orbit was similarly outfitted, but postmortem damage to the right side of the cranium has removed this evidence) and linen packing beneath the skin of the neck. A large mass of black resinous material (e.g., resin or bitumen) is present in the abdominal area, and there is no evidence of visceral packets or the viscera themselves.

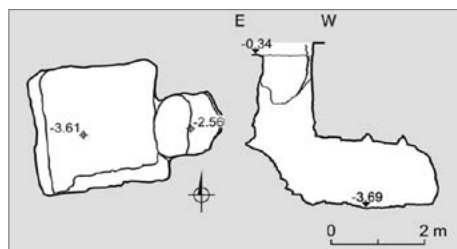


Fig. 3. Tomb XII, shown in plan (left) and section (right) (PCMA UW Temple of Hatshepsut Project/after Szafrński 2015: 196)

Extensive postmortem damage has occurred to the individual’s thorax and abdominal area. The legs appear to have been detached from the rest of the body (certainly postmortem). In addition, the right side of the cranium was crushed at some point postmortem, and the mouth damaged. Most of the dentition appears to be intact, however, and is still mostly covered by the soft tissue of the lips.

Within the damaged cranial vault are numerous limestone chips, as well as soil and debris; preliminary examination with a hand lamp revealed no evidence of brain suggesting excerebration during mummification or postmortem loss of brain tissue due to damage.. The right ear is still present and visible despite the post-mortem damage. There is no damage to the vertebra, but the head and neck are

Table 2. Human remains from Tomb XII

Body part/portion	Sex	Age
Mummy 607	Male	Adult
Maxilla	Undetermined	Subadult
Right scapula	Undetermined	Adult
Right scapula	Undetermined	Adult
Vertebral fragments	Undetermined	Adult
Tarsals and metatarsals	Undetermined	Adult
Left ulna	Undetermined	Adult
Total MNI for Tomb XII: 4		



Fig. 4. Blue-striped linen sheets covering the remains of Mummy 607 (PCMA UW Temple of Hatshepsut Project/photo R.A. Campbell)

stone of the Chapel's floor, and originally consisted two rooms separated by a wall (Szafrński 2010).

This tomb yielded a mostly complete mummy (Mummy 483) and the fragmented remains of several other individuals. Mummy 483 is a supine, fully extended individual. This mummy is mainly intact, but there is a large area of postmortem damage to the abdomen with much of the skin and tissue missing, the left orbit and mandible were partly crushed postmortem, and the lower legs have been

broken off. On the left lower limb, the distal left femur and all elements inferior to it are absent postmortem. The right femur is still intact, and the right tibia has been detached postmortem, but is still present. An additional right femur with attached soft tissue is also in the box, indicating the presence of at least two different individuals from this location.

The morphology of the pelvic girdle (e.g., the rounded pelvic aperture) of Mummy 483 suggests that this individual may have been a female, but more detailed

Table 3. Human remains from the Late Roman/Coptic Tomb (trench S.1/07)

Body part/portion	Sex	Age
Mummy 483	Possibly female	Adult
Right femur	Undetermined	Adult
Proximal tibia	Undetermined	Subadult
Articulated vertebral fragments (thoracic and lumbar)	Undetermined	Adult
Articulated lumbar vertebra	Undetermined	Adult
Total MNI for S.1/07: 4		



Fig. 6. Detail of the healed fracture in the distal portion of Mummy 483's right femur, showing significant angulation of the diaphysis (PCMA UW Temple of Hatshepsut Project/photo R.A. Campbell)

and thorough analysis is necessary to be certain, since soft tissue and/or mummification material obscures much of the skeletal structure. There is no evidence of male external genitalia. Future work will hopefully involve radiography to provide a clearer view of the skeletal elements through the extant soft tissue. Though it was not possible to determine the exact age of this individual, the fully fused epiphyseal end of the exposed right humerus suggests an age not less than the early twenties, and likely older since the epiphyseal lines, where visible, are obliterated.

The right femur of Mummy 483 displays a fully healed fracture in the distal portion of the diaphysis, approximately 10 cm superior to the distal end of the femur [Fig. 6]. Although the fracture healed completely, the diaphysis demonstrates significant anterior-posterior angulation, which likely contributed to the osteophyte formation evident on the distal end of the femur. Though this individual certainly survived for some years after the injury, the angulation of the affected bone would have severely affected this individual's gait and mobility, and perhaps the occupations in which he/she could engage.

Though Mummy 483 is the most complete individual from this area, additional fragmentary human remains were also found, including hand and foot bones, cranial fragments, and several lower limb bones. It is possible that all these fragments derive from the same individual, since they are all from an adult individual (i.e., all visible epiphyseal surfaces are completely fused and the epiphyseal lines obliterated). Two separate fragments of

articulated lumbar vertebra indicate the presence of two adults in addition to Mummy 483. A subadult, represented by an unfused proximal tibia, yields a preliminary MNI of four (including Mummy 483) for this location [Table 3]. The presence of an adult male individual is indicated by the morphology of a right *os coxa* from this locality. The absolute minimum number of individuals from this locality, then, is as follows: one adult male, a juvenile, and Mummy 483. However, it is highly likely that more individuals are actually represented, based on the differential preservation and varying robustness and gracility of the elements present.

MISCELLANEOUS

Fragmentary human remains, both mummified and skeletonized, from various excavation contexts within the temple, are stored in numerous smaller boxes and bags in a separate wooden box. At least four individuals are represented by these fragmentary remains stored in a separate, large wooden box, and the actual number may be somewhat higher. The mandible and maxilla of at least one subadult is present; the absence of third molars or crypts (i.e., alveoli or "sockets") for such molars (and no evidence of resorption of the crypts, as might occur from antemortem tooth loss in an older individual) suggests that this individual was likely a juvenile, probably under the age of approximately 18 years, at the time of death (Buikstra and Ubelaker 1994; Hillson 1996; Scheuer and Black 2000; White, Black, and Folkens 2012). At least one of the adults is a male, as assessed based on morphology of a right *os coxa*

(Buikstra and Ubelaker 1994; Phenice 1969; White, Black, and Folkens 2012). Another individual, who is quite gracile but seems to be an adult (i.e., likely no younger than early twenties at death) based on the eruption of all adult dentition, is represented by a mummified face, complete with wads of linen under the eyelids.

Most of the remains in this box consist of fragmentary upper and lower limbs, some mummification materials (i.e., linen and resinous material) still adhering to the soft tissue. Two feet remain mummified together in one bundle, but have somehow become separated from the rest of the body. Various other fragments of mummified limbs are also present.

CONCLUSIONS AND FUTURE DIRECTIONS

The work described here presents only the most preliminary analysis and basic inventory of human remains excavated in the Temple of Hatshepsut at Deir el-Bahari by the Polish–Egyptian Mission, but provides a solid foundation and promising avenues for future research. Careful sorting of the commingled remains will provide a more accurate count of the number of individuals present. The excellent preservation of the skeletal remains should allow more precise estimation of age at death for at least some of the individuals, as well as closer assessment of pathologies present. Future work will focus on refining these analyses and hopefully utilize other techniques, such as radiography, to better assess these human remains. Non-metric traits may also be recorded to assess the relatedness of these individuals, perhaps confirming the practice of family burial within the temple during the Third Intermediate Period.

With this more detailed data, it will be possible to gain a better idea of what the life of these individuals may have been like. For example, Mummy 483's well-

healed femoral fracture likely provides evidence of careful treatment, as such a fracture could have caused severe complications, and the well-healed but highly angulated diaphysis of this femur would certainly have affected this individual's gait and mobility. Close assessment of the biological and social implications that such an injury might have had on this individual may shed light on his or her social status, access to medical care, and community networks during this time period. The archaeological and taphonomic histories of these interments will also be elucidated with further study. The presence of multiple individuals in varying states of preservation, even within a single locality, suggests variation in the precise burial context (e.g., differing soil pH or soil composition), and together with the fragmentation of the bodies suggests that these interments did not remain undisturbed even before they were encountered by excavators. It is clear that much work remains to be done with these human remains, but this preliminary analysis provides clear avenues for further study.

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