Human remains from Tomb MMA 514 in North Asasif: preliminary assessment

Abstract: Since 2013 the Asasif Project has conducted excavations of several Middle Kingdom tombs in the North Asasif Necropolis under the direction of Patryk Chudzik. Located adjacent to the New Kingdom temple of Hatshepsut at Deir el Bahri in southern Egypt, these tombs were originally excavated in the early 20th century by H.E. Winlock. This article describes the results of a preliminary inventory of the human remains left behind from Winlock's excavations of one of these tombs, MMA 514, and its associated funerary complex. This tomb was reused at least twice in antiquity after the original interment, and Winlock's sometimes cursory (by modern standards) excavation methods have produced a highly mixed archaeological assemblage of human and faunal remains as well as archaeological artifacts from various time periods. In 2017, this author joined the Asasif Project for a very brief part of the excavation season to assess the condition and distribution of human remains from Tomb MMA 514. Although the human remains are in various stages of preservation and are highly fragmented, it is possible to identify at least nine separate individuals, ranging in age from infancy to adulthood.

Keywords: physical anthropology; Asasif; Middle Kingdom; Third Intermediate Period; rock-cut tomb

Since 2013, the tombs of the North Asasif Necropolis, adjacent to the well-known Temple of Hatshepsut at Deir el-Bahari (southern Egypt), have been targeted for renewed clearing by the Asasif Project of Patryk Chudzik. The primary focus of this work has been Tomb MMA 514, the excavation of which has yielded numerous fragmentary human remains, both skeletonized and mummified. These human remains were left behind with other archaeological debris after the tomb was excavated by H.E. Winlock in the early 20th century (Winlock 1922; 1923).

In December of 2017, this author joined the Asasif Project as the Head Physical Anthropologist and con-

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ducted a very preliminary inventory of the human remains from MMA 514. Due to severe time constraints, work focused on sorting the human remains from the faunal remains and briefly assessing broad patterns of age and sex distribution, in order to provide directions for more focused and productive future research. This article presents the findings of this inventory, as well as the contextual information about this tomb and the directions for research in the future.

ARCHAEOLOGICAL CONTEXT

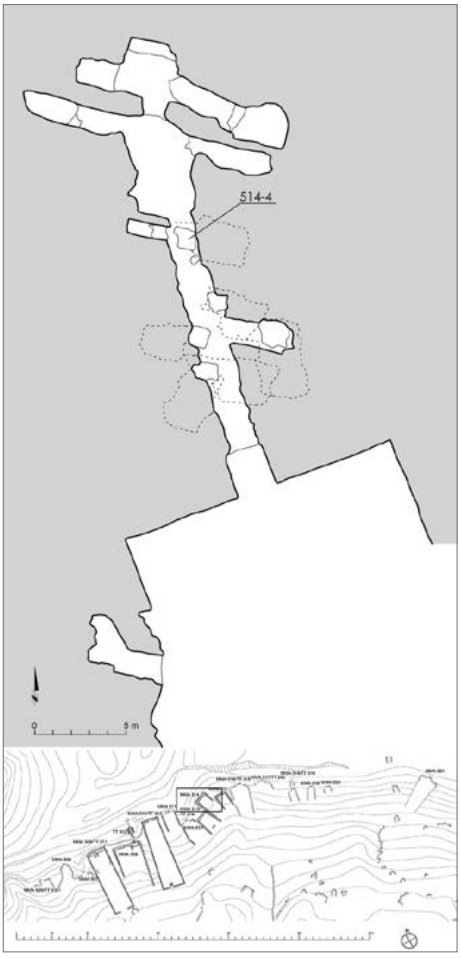

Fig. 1. Plan of MMA 514; inset, location of the tomb in the North Asasif Necropolis (PCMA UW Asasif Project/drawing K. Andraka)

For two decades in the early 20th century, Herbert E. Winlock conducted extensive excavations around Deir el-Bahari and Asasif on behalf of the Metropolitan Museum of Art in New York City. During the 1920s, Winlock excavated in the North Asasif Necropolis, discovering many tombs dating to the Middle Kingdom (about 2055–1650 BC[1]) [*Fig. 1* inset; see also Fig. 1 on page 185]. While the discovery of MMA 514 is not explicitly mentioned in Winlock's reports or publications, it seems most likely that this tomb was discovered between 1921 and 1923 when Winlock was working in the area of North Asasif (Winlock 1922; 1923). Several objects from MMA 514 now in the collection of the Metropolitan Museum of Art, including Roman-period gilded leaves (Accession Number 26.3.264a-c), a ceramic vessel from the Middle or New Kingdom (Accession Number 26.3.265), and a string of beads from the Middle Kingdom (Accession Number 26.3.262) list the discovery date as 1921–1922, suggesting that the original discovery and initial clearance of the tomb occurred during this time.[2]

Architecturally, MMA 514 fits the Type IIa of corridor tombs, a typical style for the tombs of officials in the North Asasif

1 All dates from Shaw 2003.

2 See Metropolitan Museum of Art: https://www.metmuseum.org/art/collection/search/556640 and 556041.

Necropolis during the Middle Kingdom (Arnold 1971: 43–46; Soliman 2009: 95–108, 191–192) [see *Fig. 1*]. The typical architectural form of these tombs is a complex that includes a relatively flat outdoor courtyard, often bounded by a low wall, a vertical tomb entrance cut into the cliff face, a squared-off room (likely used as a chapel for the funerary cult of the deceased), and a long descending corridor, often with multiple rooms opening off the central corridor (Winlock 1922; 1923). MMA 514 is no exception; the tomb complex is composed of an outer courtyard, from which the tomb entrance opens to an irregular chamber (likely intended as a chapel) and a long, high-ceilinged corridor, with several shafts off the main corridor and an irregularly-shaped burial chamber (Chudzik 2017). Though a precise date is still being determined based on ongoing ceramic analysis, fragments of Middle Kingdom funerary equipment suggest that the original complex was constructed during this period (Chudzik 2017). The tomb was reused several times, first in the early Eighteenth Dynasty (about 1550–1295 BC) for a single burial (one of the tomb shafts may also have been cut into the rock for this reuse), and again for several burials during the Third Intermediate Period (about 1069–664 BC) (P. Chudzik, personal communication, 2018).

Excavations of the courtyard of MMA 514 were conducted by the Asasif Project during the 2013/2014 season, and excavations of the tomb itself were completed in 2016. Another associated tomb (MMA 514a), cut into the courtyard of MMA 514, was also excavated during this time (Chudzik 2018, in this volume). Human remains were recovered from MMA 514 and the associated courtyard, as well as from MMA 514a. They were stored inside the main corridor of MMA 514 (where they were well-preserved by the arid environment) until 2017, when a preliminary inventory of the remains was conducted by this author. Work focused mainly on sorting the human remains from the faunal material [*Fig. 2*] and determining general demographic information (e.g., minimum number of individuals, as well as age and sex when possible). In 2017, the human remains from all contexts except for the tomb shafts were identified and catalogued. The latter will be sorted and analyzed in a future season.

Fig. 2. Sorting the human and faunal remains from MMA 514 (Photo R.A. Campbell)

HUMAN REMAINS

The human remains from MMA 514 and 514a are in various stages of preservation, ranging from badly weathered skeletal remains to well-preserved portions of mummified individuals, with soft tissue, linen, and resinous material intact. Some of the remains, human as well as animal, show evidence of burning.

All of the remains were commingled, not only with other human remains but with faunal remains, mummification materials (e.g., fragments of linen and resinous material), and fragments of wood. Because the tomb had been reused several times, and had also seemingly been looted, it is likely that the human remains are from various different time periods and phases of use.

DISTRIBUTION OF REMAINS

By far the greatest number of human remains were recovered from within and in front of the accompanying tomb MMA 514a. However, it should be noted that due to the multiple reuses and disturbances of the tomb complex, the find-spot for these elements may have little or no relationship to their original deposition. The remains from the main tomb (MMA 514) could have been brought to the courtyard during the reuse, possible looting, or earlier excavation of the tomb (in other excavations, Winlock was known to dump his excavation debris just outside the entrance of the tomb being excavated, P. Chudzik, personal communication, 2018).

It is not yet clear whether the fragmented individuals from the MMA 514 complex are from the same time period (presumably the last use of the tomb) or from earlier or different time periods. Winlock noted that the nearby tomb of Ipy (now termed Theban Tomb 315) had smaller rock-cut chambers around it for family members and "vassals" (Winlock 1922: 33). It maybe that some of the individuals found in and around this tomb may have been members of a family group. However, given the multiple reuses of the tomb, such relationships must remain the stuff of speculation at present.

METHODS

In cases of commingled remains, the standard bioarchaeological practice is to calculate the minimum number of individuals (MNI) that are represented in an archaeological assemblage (Adams and Byrd 2014; Osterholtz, Baustian, and Martin 2014). Though there are some variations in the methods for calculating MNI (Buikstra and Ubelaker 1994; Knüsel and Outram 2004; Osterholtz forthcoming), this number is broadly calculated by assessing specific portions of a skeletal element that bear identifiable, unique features that are not duplicated in a single element (Adams and Byrd 2008; Osterholtz, Baustian, and Martin 2014). This precludes the possibility of counting one individual more than once. It should be noted, however, that MNI tends to underestimate the actual number of individuals that were originally present, since it cannot account for unmatched bones, but only yields the minimum number of bodies that could have produced the observed skeletal material (Adams and Byrd 2008; Osterholtz, Baustian, and Martin 2014).

Age and sex were noted when possible, but a detailed assessment of age and sex was not possible within the brief study season. Age was broadly assessed (i.e., adult versus subadult) based on standard osteological methods for observing epiphyseal closure of long bones and dental eruption (Buikstra and Ubelaker 1994). While such standards are very useful for providing general age estimates, more precise age estimates should rely on population-specific standards whenever possible, particularly in cases of commingl-ed or pathological remains (Buikstra and Ubelaker 1994).

Sex was assessed based on standard osteological methods for assessing sex-specific morphological features of the *os coxa* (Buikstra and Ubelaker 1994). In many commingled or highly fragmented assemblages where sex-specific morphological features of the *os coxa* are unobservable, metric methods may be used to assess biological sex with a moderate degree of accuracy (Marlow 2016; Marlow and Kozieradzka-Ogunmakin 2016).

RESULTS

Based on the identification of unique elements (in this case, the distal right femur), a minimum of at least nine individuals is present (MNI = 9). Preliminary assessment of age at death indicates that most of the individuals were adults. At least one of the nine individuals was a subadult at the time of death, likely in his or her mid- to late teens, as indicated by the completely unfused distal epiphyseal surface of a right femur discovered in the entrance corridor of MMA 514a (Buikstra and Ubelaker 1994). A subadult left distal femur from Sector A4, of approximately the same size and shape and also with an unfused distal epiphyseal surface, may belong to the same individual. Other elements from a similarly-aged subadult (e.g., vertebrae, fragments of the *os coxae*) may also derive from the same

Fig. 3. Fragments of an infant cranium, as well as the occipital portion of four different adult crania (Photo R.A. Campbell)

individual, as there are no duplicated elements. An infant is represented only by cranial fragments found in front of Tomb 514a [*Fig. 3*]

Morphological assessment of *os coxa* fragments indicates that at least one individual was likely a male (Buikstra and Ubelaker 1994). The fragmentary nature of the remains and the short study season precluded more specific analysis, but future work will assess the possibility of using metric analysis for sex estimation in cases where the morphology of the *os coxa* cannot be evaluated due to taphonomic damage or fragmentation (Marlow 2016; Marlow and Kozieradzka-Ogunmakin 2016).

DISCUSSION

The layered and multi-faceted history of MMA 514 complicates attempts to understand the depositional sequence of the human remains that have been found in and around this tomb. While it is clear from other artifacts that the tomb was used for burial at least three different times in antiquity, it is not yet clear which individuals were interred in which time period. It may also be that none of the original Middle Kingdom inhabitants are present, having been removed from the tomb during reuse, looting, or excavation, an explanation that could also apply to the interred from the second reuse of the tomb during the Eighteenth Dynasty (Chudzik 2015; 2017; 2018; Winlock 1922). It is also possible, however, that the original human remains were simply moved aside to make way for the new burials, and that over time the original occupants were mixed with all of the subsequent tomb usurpers.

The range of taphonomic changes observed in the human remains, ranging from highly weathered skeletal elements to very well-preserved fragments of mummies still retaining soft tissue, may correlate with the various stages of the tomb complex's reuse and excavation. If the human remains were removed from the tomb before it was reused, as Winlock (1922) suggests, the newly interred remains would display less weathering than their older counterparts. Alternatively, the wide variation in preservation as well as the high degree of fragmentation could be at least partly attributed to Winlock's excavation practices (that is, the remains that were dumped outside the tomb and then covered by more excavation debris throughout the work season would be better preserved than those remains left exposed to Egypt's hot sun). Evidence for burning on some of the remains is almost certainly a mark of looting, as grave robbers were known to burn human remains as they attempted to remove the resin or any jewelry attached to the mummy (Winlock 1922).

The age range observed in the human remains from MMA 514 could support the interpretation of similar Middle Kingdom (especially Eleventh Dynasty) tombs as family burial places, a practice that was adopted at least during the Third Intermediate Period and likely earlier (Winlock 1922). Because DNA analysis of the remains is not currently possible, however, such relationships must remain in the realm of conjecture at this stage of the research.

CONCLUSIONS AND FUTURE WORK

The heterogenous, commingled nature of the archaeological deposits from MMA 514 requires a thorough understanding of the various phases of use and excavation of this tomb, as well as its broader place in the North Asasif Necropolis. This information cannot (and should not) be divorced from the analysis of the human remains themselves, as such contextual information yields information about how, why, and when these remains were placed within the tomb.

The 2017 study season was brief, and thus focused on an inventory and general understanding of the human remains from MMA 514 in order to provide directions for future research. A primary focus in future seasons will be completion of the inventory of human remains, using methods such as those outlined by Osterholtz (forthcoming). Age and sex will be assessed in more detail, and a complete study of pathology and trauma will be conducted. Plans are underway to also use radiographic analysis to gain additional information about the remains, particularly since so many of the elements are still encased in mummified tissue and linen. Examination of the stylistic elements of mummification techniques used (e.g., method of wrapping, general quantity of resin applied, etc.) in some of the well-preserved individuals may provide a better indication of the relative dates that the remains were placed in the tomb (Ikram 2015; Ikram and Dodson 1998).

Although the work presented here is only preliminary, it offers tantalizing clues about the use of the tomb MMA 514 and the Asasif Necropolis as a whole. If the human remains date from the same or similar time periods, the presence of individuals of varying ages may suggest that tombs were used by families or kin groups. If, however, the human remains date from different time periods, this suggests that tombs were not necessarily emptied when they were reused, but rather that the new burials were simply placed into the tomb while the original occupants were still present. On a broader level, this study also demonstrates the value of analyzing remains that are not only fragmentary and commingled, but that were discarded or ignored by previous researchers. Even in another excavator's trash, much may be learned about the funerary practices, lives, and deaths of the ancient Egyptians.

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