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A Wooden Statue and Early Bronze Objects? A Critical Review of Tomb 1052 in the Necropolis of Abusir el-Meleq

Between 1905 and 1906 the German Egyptologist G. Möller excavated about 900 tombs in the Pre- and Early Dynastic necropolis of Abusir el-Meleq, a project financed by the Deutsche Orient-Gesellschaft (DOG) (Möller 1906; Möller 1907; Scharff 1926). Möller died in 1921 without finishing the publication. It was than his successor at the Museum in Berlin, A. Scharff, who was carefully studying the notebooks and notes left by G. Möller. Even-though A. Scharff published his manuscript in 1926 including a tomb catalogue, a full and detailed analysis of the whole necropolis is still lacking.

It is one of the main objectives for the next years to revise critically the known information provided in the field diary and tomb lists, as well as apply new approaches and techniques of natural sciences to get a somehow new view on certain aspects of this important Predynastic necropolis.

In the following I will focus on some context problems of the feature numbered as 1052 by G. Möller and uncovered during his second season in Abusir el-Meleq in 1906.

The so-called tomb no. 1052 was a 60 cm deep pit measuring 1,8 m x 1,2 m, having quite vague borders, which seem to be not very clear in the moment of

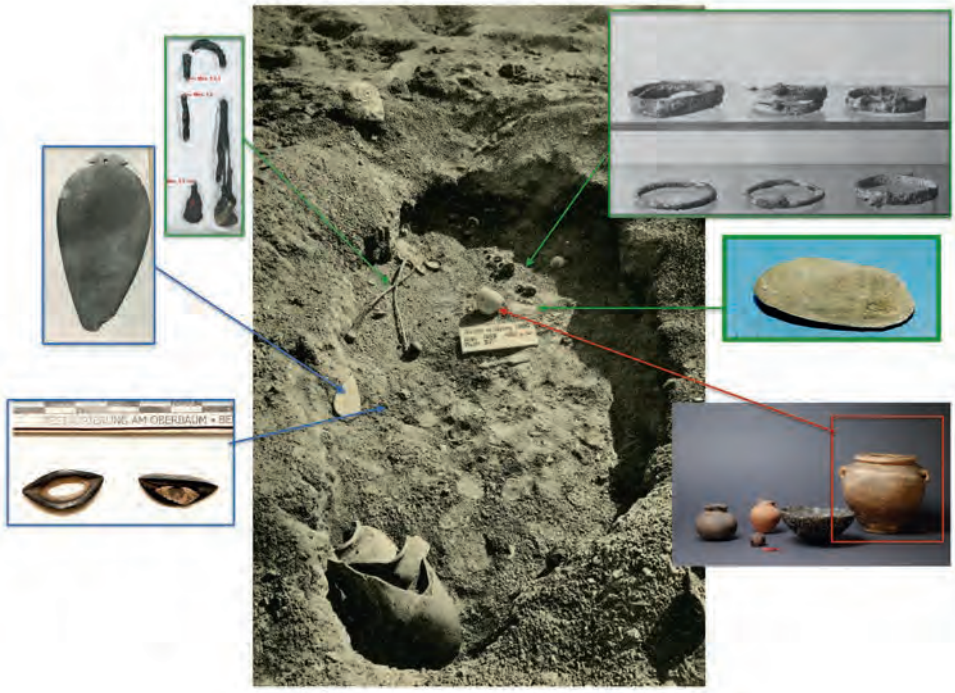

Fig. 1. Photograph of context 1052 at Abusir el-Meleq and finds in the collection of the Berlin Museum (after: Scharff 1926, pl. 2)

excavation. In this context, at least 37 objects were recovered (cf. Scharff 1926: 154–155; Kuhn and Hertel 2017). Furthermore, 4 stone vessels, 7 pottery vessels, 1 miniature mace-head, several cosmetic items and jewellery made of molluscs and diverse stones, a large number of metal objects were also documented. Uncovering of the whole context took at least two days and was then photographed with all the objects again in their „original" position (Fig. 1).

So far it is believed that the feature 1052 of Abusir el-Meleq is an example of an archaeological closed find. A further look on the objects as well as the still ongoing investigation using natural sciences created some doubts concerning the previous interpretation.

A slate palette (ÄM 19048) and two eye inlays (ÄM 19051) made of a black stone were uncovered near a badly corroded ca. 70 cm long copper stick recurved in the middle (ÄM 19046; For a first examination see: Di Matteo *et al.* 2015). In the so-far unpublished diary it is also stated that G. Möller found a lot of charcoal,

which he could not save by virtue of bad preservation. Furthermore, he assumed in his diary that these pieces could belong to a burnt wooden statue (Möller 1906). Interestingly, A. Scharff, in his publication was much more vague and wrote very short in his tomb catalogue: „rest of burnt wood with inlayed eyes" (Scharff 1926: 155). Even though we don't know the exact position of the wooden fragments and none of them survived until today, it is an important find. Reviewing the metal objects from context 1052 we could now also ascertain some tiny pieces of burnt wood at the copper stick – fragmented yet still preserved. Albeit we don't have any hint on the appearance of the whole statue, Tell el-Farkha figurines come into one's mind, which might also have had a wooden core (Ciałowicz and Chłodnicki 2007: 1-15; Ciałowicz 2012: 201-243). It has to be stated, that the reconstruction is highly speculative, and no foils and metal coverings were found during the excavation of context 1052 at Abusir el-Meleq. Bearing in mind that slate palettes are often found near the head of the dead (Regner 1996; Kuhn 2013), we might reconstruct the position of the burnt statue oriented along west-east axis and lying parallel to the recurved copper stick (Fig. 2; cf. Kuhn and Hertel in press).

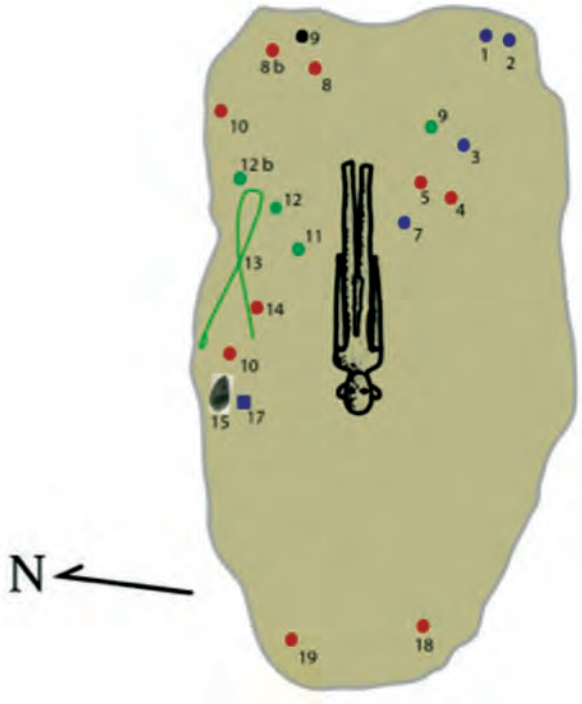

Fig. 2. Assumed Reconstruction of context 1052 at Abusir el-Meleq (drawing: R. Kuhn)

The figurine was destroyed by fire but very little damage and discolorations can be observed. The remaining pottery and stone vessels, as well as the palette show just scarce traces of soot and discolorations. In any case this figurine shows a fascinating aspect of the necropolis of Abusir el-Meleq. Their possible parallels are so far the two Tell el-Farkha figurines coming from a probably cultic or hidden deposition in the settlement of the Eastern Kom and another figurine bought by C. T. Currelly in Thebes (Ciałowicz 2012: 204).

The most remarkable are metal objects found in „tomb" 1052: 3 vessels made of copper[1], metal beads, the recurved copper stick, and nine bracelets. All these objects weigh together about 2 kg, contrary to low percentage of Predynastic tombs containing metal objects at Abusir el-Meleq, among which maximum of 1-2 copper objects were found (cf. Scharff 1926; Kuhn and Hertel 2017).

As some analysis of other metal objects are still on-going, I will focus in the following on bracelets. These were already classified by G. Möller during the excavation as being made of bronze. All the bracelets were badly corroded, most of which could be cleaned and exposed by I. Hertel, restorer at the Berlin Museum. The cross-sections of five examples are round, or flat and rectangular. Four bracelets are quite remarkable: despite corrosion, G. Möller has already seen that two bracelets had figurative applications. ÄM 19033-1, with a long-rectangular cross-section, shows 3 figurines of crocodiles and ÄM 19034 shows the application of a snake (Fig. 3). A third bracelet (ÄM 19035-2) seems to be a ring made of two twisted wires, but actually the whole is made by casting in *cire-perdue* technique[2]. The same production method can be assumed also for the other bracelets[3]. For a long time these objects were regarded as marvellous examples of the know-how of the early Egyptian metallurgists (e.g. Möller 1924: 51; Scharff 1926; Baumgartel 1960: 21; Dębowska-Ludwin 2014: 113). Indeed these objects are real beauties, but are they also early Egyptian?

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[1] ÄM 19043-ÄM 19045. One of the objects, the highly corroded vessel ÄM 19045, was examined at the Rathgen-Laboratory to find out its composition. XRD and μ-RFA analysis showed that the piece consists of almost pure copper. I thank Dr. I. Reiche and S. Schwerdtfeger from the Rathgen-Laboratory for their kind support and collaboration.

[2] The imitation of the "strip-twist-technique" is especially known from Roman times: Ogden 1982: 56; Andrews 1990: 97 – some earlier examples were found in the tomb of Tut-Ankh-Amun: cf. Ogden 1982: 51.

[3] For the ones with zoomorphic applications, already G. Möller assumed a connection with the *cire-perdu* technique: Möller 1924: 16.

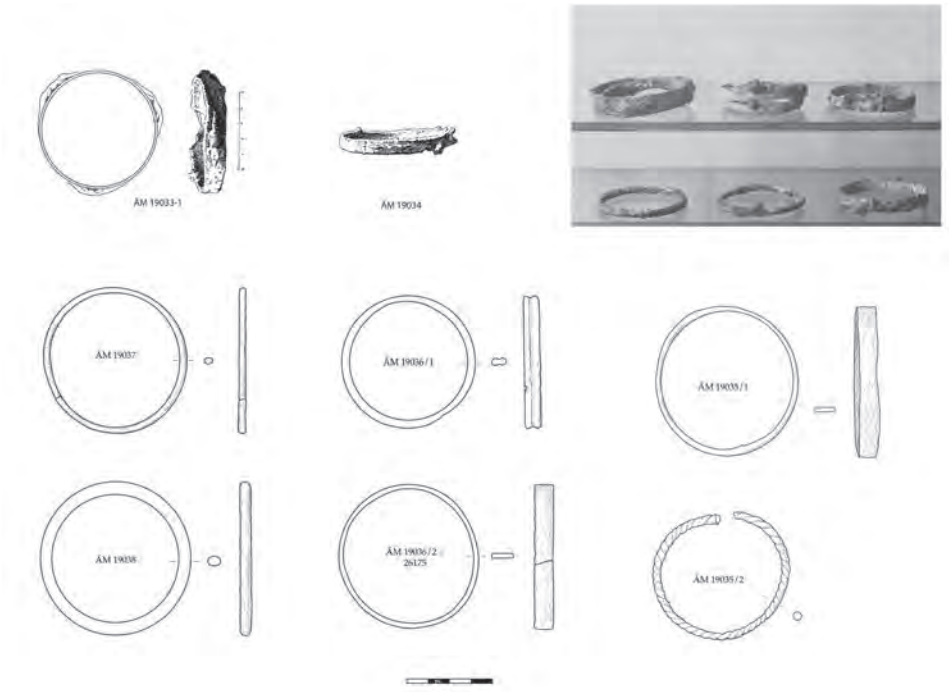

Fig. 3. Bracelets from context 1052 from Abusir el-Meleq (after Scharff 1926, fig. 20); photograph from the archive of the Ägyptisches Museum und Papyrussammlung Berlin; drawings: R. Kuhn)

The first doubts appear when looking at the production technique. Until today it is very difficult to define, when actually the *cire-perdue* process was used for the first time in Egypt. Even though most of the scholars argue for an invention during the Middle Kingdom (Vassilika 1997: 291–302; Hill 2004: 9–16; Fitzenreiter 2014: 86), the artefacts found in different necropolises such as Minshat Abu Omar, Kafr Hassan Dawood as well as Tell el-Farkha, suggest alternative solutions (Czarnowicz 2012; Rehren and Pernicka 2014: 245; 250; Hassan *et al.* 2015: 84-85). Lead-rich alloys for bracelets can surely just be explained by the innovation of the melting process. The *cire-perdue* process might have been already used, perhaps on a smaller scale, for applications of knobs like the one known from Minshat Abu Omar (cf. Wildung and Kroeper 2000: 170, pl. 52). Nevertheless the so far known early Egyptian objects possibly made with the *cire-perdue* technique consist mostly of copper.

In 1978 J. Riederer from the Rathgen-Laboratory in Berlin analysed several metal objects from the Berlin Museum with the Atomic Absorption Spectroscopy (AAS). In this study, he also studied the bracelet with the crocodile (Riederer 1978). This research confirmed G. Möller observations: it is a real bronze with a very high amount of lead – (68,97% of copper and almost 24,61% of lead; cf. Riederer 1978; tab. 1). Already in the late 1990's other bracelets were tested as well, using X-Ray Fluorescence (XRF). The analysis showed again that also the rest of the bracelets consist of bronze and again a very high proportion of lead could be found. The highest amount of 28,12% of lead was identified for bracelet ÄM 19038 (see Fig. 4). This is of course a very remarkable result, as it allows us to speak of lead-bronzes or lead-rich-alloys (along the terminology cf. Riederer 1987: 108). For the very small number of early Egyptian metal objects analysed so far, the highest weight-percentage of lead ranges usually between 4 and 5%

Objekt	Cu	Sn	Pb	Zn	As	Fe	Ag	Ti	Bi	Ni	Mn	Sb
	Kupfer	Zinn	Blei	Zink	Arsen	Eisen	Silber	Titan	Wismut	Nickel	Mangan	Antimon
19033-1	68,97	0,31	24,61	0,03	2,82	-	0,06			0,02		3,18

AAS (Riederer 1978)

Objekt	Cu	Sn	Pb	Zn	As	Fe	V	Ti	Bi	Ni	Mn	Sb
19033-1	69,803	-	22,861	0,039	0,537	-	0,047	0,152	0,069	-	-	6,151
19033-1	62,886	-	27,333	0,037	1,591	-	0,032	0,204	0,145	-	-	7,366
19033-2	93,041	0,03	4,716	0,087	1,26	0,122	0,065	0,091	0,097	-	0,051	0,242
19034	83,213	-	12,096	2,764	-	0,088	0,015	0,077	0,12	-	0,049	0,984
19035-1	69,962	-	22,495	1,828	0,49	-	0,031	0,123	0,413	0,077	-	4,133
19035-2	73,358	0,547	22,095	-	0,806	0,439	0,44	0,971	0,158	-	-	0,862
19036-1	90,32	-	6,179	0,438	0,434	0,122	0,076	0,083	0,233	-	0,108	1,769
19036-2	85,993	-	11,336	0,482	1,058	0,065	0,078	0,079	0,344	-	-	0,313
19037	84,072	-	11,583	-	2,87	0,068	0,098	0,19	0,049	-	0,04	0,747
19038	65,828	-	28,12	-	3,299	-	0,051	0,084	0,245	-	-	1,784

XRF (Ecclestone)

Fig. 4. Results of the AAS Analysis undertaken by J. Riederer in 1978; 2) XRF-Analysis of the bracelets made by M. Ecclestone using Niton XL3t GOLDD

(cf. Rehren and Pernicka 2014: 242-245), but for most of the objects a much lower amount of 1–2% is recorded (e.g. Spencer 1980: 88; Cowell 1987: 96-118). In his overview of Egyptian metallurgy J. Ogden showed that such a high percentage of lead in Egyptian bronze objects is rarely to be found in the New Kingdom and is much more common in Greco-Roman Period (Ogden 2000: 154-155; Martinot and Weber 2009: 444).

The metal analyses and the technical aspects lead us to the hypothesis that the bracelets are not of early Egyptian date. Interestingly, the necropolis of Abusir el-Meleq was re-used during the Hyksos-Period as well as during the Late Period and Greco-Roman Times (Rubensohn and Knatz 1904; Scharff 1926; Kuckertz and Schmidt 2013: 45–49). During the excavation, Möller found indications of Hyksos, as well as Greco-Roman disturbances in several of the Predynastic burials (Möller 1907; Scharff 1926: 12–13; 84–105).

The two bracelets in discussion fit well into the Greco-Roman Period. Even though a detailed comparison of the casted figurines (crocodiles and the snake) is not possible by virtue of corrosion, the visible details are very typical of the Fayum region during this time period (cf. Verner 1927). It is usually a crocodile connected to the god Sobek as well as snakes that are found on bracelets made of gold and bronze (CG 52094; 52123; cf. Verner 1927), in addition to objects in the form of votive figurines and statuettes (Kakosy 1965: 116–120; Brovarski 1984; Aubert and Aubert 2001: pl. 48).

Summarizing the above mentioned aspects, the so far accepted interpretation for the context 1052 as an archaeologically closed find and a tomb has to be questioned. Both Möller and Scharff stressed the fact that no human remains were found during excavation (Scharff 1926: 155). Instead, presumably a wooden statue embellished with inlayed eyes was deposited with several objects of the material culture such as pottery, stone vessels, small knives made of carnelian, a slate palette made of greywacke, copper vessels and a copper stick. The whole arrangement is of course tomb-like, as it is characteristic for the period of early Naqada IIIA/B. The dimension and outline of the original deposit isn't clear and seems to have been vague already during the excavation. In comparison with the other tombs found in the Predynastic necropolis the pit might have been also rectangular in form (Fig. 4).

On a stratigraphically higher level, where the bracelets were found – albeit – no measurement was recorded. Möller reports in his field diary the find of the bracelets for the first day, while most of the inventory reported for the tomb was found during the second working day, presuming they were also stratigraphically

in the lower layer. Therefore it is highly likely that the bracelets can be connected with a younger occupation of the necropolis during the Greco-Roman Period. During this time the outlines of the former Predynastic tombs were surely not visible anymore and so it is possible that while digging a new burial pit, the Predynastic context of 1052 was disturbed. So far it appears that the younger material was found mostly in the south-eastern corner of the context. The latter might indicate just a partial disturbance of the Predynastic context in this area. This later disturbance could be also a reason for the „washed" outlines of the „tomb".

Obviously this interpretation and different possible scenarios are highly speculative and still leaves us with a lot of questions. Considering the whole Predynastic inventory the 1052 feature has a tomb character – even though a very well equipped one and might be interpreted as a ritual deposit of a votive figurine for the temple. It is not clear whether the Greco-Roman disturbance can be connected with the fire or whether it goes back to the early phase. I would rather suggest that destruction of the statue took place during the Predynastic times.

At the end, there are much more questions and speculations than answers – but this shows also the potential of reviewing this site and re-examination of old archaeological materials, stored for almost 100 years in our museums, with the help of new methods.

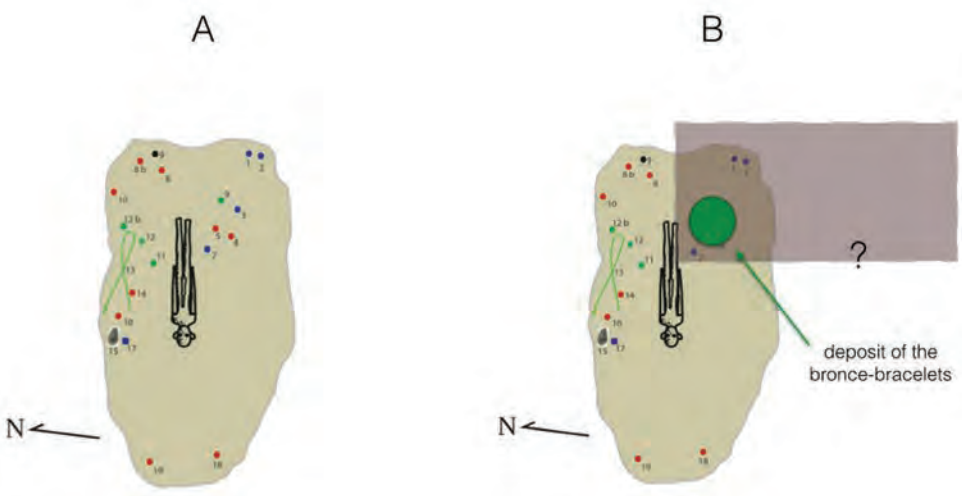

Fig. 5. Hypothetical Reconstruction of the context 1052 at Abusir el-Meleq: A – Predynastic deposit; B – disturbance in Greco-Roman Times (In-Lay R. Kuhn)

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