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Invisible connections. Early Dynastic and Old Kingdom Egyptian metalwork in the Egyptian Museum of Leipzig University

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ABSTRACT

An assemblage of ancient Egyptian metalwork from the Early Dynastic and Old Kingdom periods, currently in the Egyptian Museum of Leipzig University (Germany), has been studied using a wide range of available archaeometallurgical methods. The 3rd millennium BC Egyptian copper metallurgy is known only superficially until now. The data are interpreted in the framework of the known and reconstructed distribution networks of ancient Egyptian society. The production technology of the objects has been examined. The lead isotope analyses have made it possible to discuss the origin of the ore used for the production of Old Kingdom metalwork for the first time. A rather surprising presence in the Early Dynastic assemblage of object similar in isotopic ratios to Anatolian Early Bronze Age metalwork is discussed.

1. Introduction

A glance at a modern map might be misleading. The Eastern Desert and the Sinai Peninsula, now administrative parts of the Arab Republic of Egypt, were outside of the core area of the country for ancient Egyptians. Each bit of copper ore needed to be brought to the Nile Valley, each metal object found within the historical boundaries of Egyptian nomes was made from imported material. The potential hidden in this fact is clear: if all the objects found were analysed, it would be possible to identify all resources entering Egypt and describe their circulation within the system. The research has been hindered on one hand by a lack of understanding of archaeometallurgical aspects of metals research by the Egyptologists, and on the other hand by a lack of understanding of the particular and peculiar Egyptian evidence by the archaeometallurgical specialists.

More difficulties are caused by the limited possibilities of analyses in Egypt combined with the fact that exporting samples of newly excavated material from Egypt is next to impossible. A possible solution to this problem lies in detailed studies of ancient Egyptian material with documented archaeological contexts in museums outside Egypt. However, most such studies in the past did not go beyond the X-ray fluorescence method (Michel, 1972; Hours and Michel, 1974; Eaton and

McKerrell, 1976). Notable exceptions are e.g. projects focused on Late Period statuary by J. Riederer (1978, 1982; 1983; 1986; 1988), on axe blades in the British Museum (Davies, 1987; Cowell, 1987) and on 19th dynasty metallurgy at Qantir (Rademakers et al., 2017). A project based in Belgium is currently researching similar material to ours from Egypt.¹ Moreover, the archaeological and social contexts of the finds have seldom been taken into consideration during the evaluation (with the exception of e.g. Davies, 1987).

Our study focuses on the objects from the collection of Egyptian Museum – Georg Steindorff – of Leipzig University in Germany, mostly with detailed archaeological provenance. We have sampled objects ranging from the Early Dynastic period to the end of the New Kingdom (for a preliminary report, see Kmošek et al., 2016). In this paper, we will focus on the earliest part of the corpus, on objects from the Early Dynastic period and the Old Kingdom, periods that are by far the most understudied in Egyptian history from the archaeometallurgical point of view. The quality of data was preferred to the quantity of analyses. We will demonstrate how the information obtained by archaeometallurgical methods can be combined with the archaeological and historical sources to provide a detailed interpretation of the past. Archaeometallurgy can throw much light on the functioning of ancient Egyptian economy and the use of the resources within it.

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¹ Project EACOM is currently researching Early Dynastic metalwork in the Royal Museum in Brussels (Rademakers et al., 2016; 2018). According to the preliminary presentation of data, the ore for the objects in Brussels came from the Eastern Desert and Sinai.

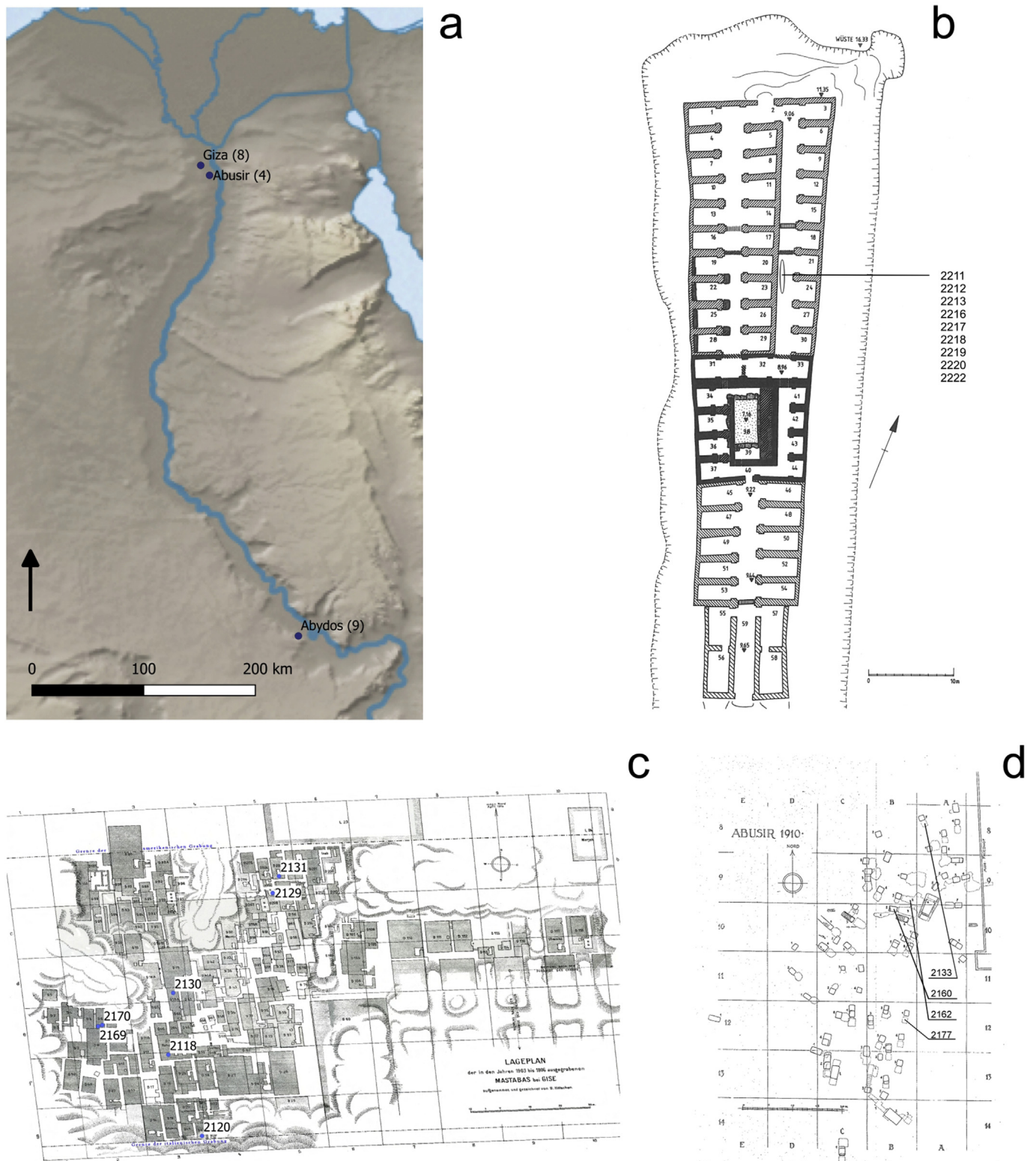


Fig. 1. a: Map of Egypt with the location of sites and in brackets number of analysed artefacts (map in QGIS by Martin Odler, made with Natural Earth); modified site plans with the location of finds: b: Abydos, Tomb of Khasekhemwy, location of main deposit of copper objects marked by oval (after Dreyer et al., 2003, Abb. 16; published with kind permission of German Archaeological Institute, Cairo); c: Abusir, Bonnet cemetery (after Bonnet, 1928, Taf. I); d: Giza, West field (after Giza-Projekt: http://www.giza-projekt.org/Plan/Steindorff/Plan_Westfr.html; Archive of the Egyptian Museum Georg Steindorff, University of Leipzig).

Located even further beyond the borders of ancient Egypt, the Eastern Mediterranean world was also interconnected in the 3rd millennium BC, yet we are lacking a significant body of written sources. When studying links between past societies, we have to rely heavily on archaeology and its

means. Archaeometallurgy has not been used sufficiently and there is a lot to be done to clarify the circulation of metal within Egypt and in the whole Eastern Mediterranean, especially in the 3rd millennium BC, the period of the first territorial states. Regarding our corpus, a single object has provided

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