INTRODUCTION

This book presents a fascinating but little known body of evidence that is vital for the reconstruction of trade contacts in Roman and late antique Northeast Africa, the time of intensive maritime trade contacts in the Indian Ocean region. Beads, next to pottery, are the most abundant archaeological material in Nubia, often constituting the only evidence for direct and indirect trade contacts in archaeological records. The Nubian part of the Nile Valley has always been one of the most developed African regions and its link with the Mediterranean world is well recognized. The link of Nubia with Asian cultures is less recognized (e.g., Haaland 2014).

The aim of this research is to facilitate an understanding of the importance of beads by highlighting the various techniques and groups of raw materials used to make personal adornments, namely glass beads and pendants found in Meroitic and post-Meroitic Nubia. Combining a morphological approach and chemical compositional analysis, this work examines the contribution which beads and pendants can make to trade studies, and puts this body of data within the wider context of the overseas trade contacts of Northeast Africa in both the Roman and Late Antique period.

A short history of Meroitic and post-Meroitic Nubia is given in Chapter 1. Additionally, an iconographical and contextual overview of how the beads were displayed and deposited is provided in Chapter 2 to emphasize their exceptional role in Meroitic and post-Meroitic cultures in the Middle Nile region. Chapter 3 presents the collections used in this research and the burial sites at which large groups of beads have been found in the main regions of Nubia (Lower Nubia, Dal Cataract region, Fourth and Fifth Cataract regions). The database, comprising almost 200 beads and pendants was used in a morphological and chemical compositional study. For each site, a brief description is outlined and the information on the find contexts of given objects is assembled from the excavation reports and archival material. Chapter 4 presents a morphological description of the beads. It examines techniques of production, which are often vital for their provenance studies. Analogies drawn from literature and museum collections, as well as distributions are given for every type. Many of the presented beads are illustrated for the first time.

In Chapter 5, beads and pendants are examined through the results of their chemical compositional studies, using the laser ablation-inductively coupled plasma-mass spectrometry (LA-ICP-MS) method. Major, minor and trace elements in ancient glass can be diagnostic of their geographic origin and period of manufacture. The elemental analysis of glass beads from Nubia, involving 41 elements, gives us our first insight into the sources of the glass used to manufacture the beads from Nubia between the 1st and 6th centuries AD. It provides the first scientific evidence for the presence of Egyptian and Levantine glass in Nubia and also the first evidence for the presence of Sri Lankan/South Indian glass beads in Nubia. The combination of the glass groups and the beads produced is given in Chapter 6.

The work introduces a new technique to enhance cultural analysis in the study of long-distance trade contacts in Northeast Africa. The results confirm strong links between Nubia—that is, sites north of the confluence of the Blue and White Nile—and the East Mediterranean in the Meroitic and post-Meroitic periods. Furthermore, the results provide evidence for the circulation of both Egyptian and

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Levantine glass in Northeast Africa. One of the outcomes of the combined macroscopic and laboratory studies used in this research is the discovery of the large-scale import of ready-made Sri Lankan/South Indian objects into Northeast Africa in late antiquity. Their source had never been identified in Nubia until the present study. Their presence in Nubian graves stimulates reflection on the extensive trade between Nubia and the Red Sea coast. Finally, the results provide the first evidence of the direct or indirect involvement of Nubia in the Asian maritime trade.

A list of museums and site collections (with abbreviations) consulted for the purpose of this study is given here for the reader's convenience.

•	The British Museum, London (www.britishmuseum.org)	BM
•	Brooklyn Museum, New York (www.brooklynmuseum.org	
	and personal observation)	Brooklyn Museum
•	Berber bead finds (personal observation)	BMC
•	Berenike bead finds (personal observation)	BE
•	Gdańsk Archaeological Museum (personal observation)	GAM
•	The Egyptian Museum in Cairo (personal observation)	JE
•	Museo Arqueológico Nacional, Spain (personal observation)	MAN
•	Museum of Archaeology in Poznań (personal observation)	MAP
•	Museum of Archaeology University of Stavanger (personal observation)	MAUS
•	Metropolitan Museum of Fine Arts, New York (www.met.org)	MET
•	Museum of Fine Arts, Boston (www.mfa. org and personal observation)	MFA
•	National Museum in Warsaw (personal observation)	MNW
•	Oriental Institute Museum University of Chicago (personal observation)	OIM
•	Peabody Museum of Archaeology and Ethnology at Harvard University,	
	Cambridge (www.peabody.harvard.edu)	Peabody
•	University of Pennsylvania Museum of Archaeology and Anthropology	
	(www.penn.museum.org)	PENN
•	Scandinavian Joint Expedition in Museum of Archaeology	
	University of Stavanger (personal observation)	SJE
•	Section française de la Direction des antiquités du Soudan,	
	Khartoum (personal observation)	SFDAS
•	Sudan National Museum, Khartoum (personal observation)	SNM
•	Petrie Museum, University College, London (www.petrie.ucl.ac.uk)	UC
•	University of California Santa Barbara and Arizona State University	
	excavations at El-Ginefab School bead finds (personal observation)	UCSB/ASU
•	el-Detti bead finds (personal observation)	D
•	el-Zuma bead finds (personal observation)	Z

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