

ABSTRACTS

15th International Conference for Nubian Studies

29 August–4 September 2022

Warsaw



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1. ABOUT THE CONFERENCE

Every four years the International Conference for Nubian Studies brings together archaeologists, epigraphists, historians, and other scholars working on the ancient and modern history of Sudan and Nubia. This year, the Polish Centre of Mediterranean Archaeology of the University of Warsaw has the pleasure of hosting the 15th ICNS.

It is the third time this largest scientific event in Nubian Studies is held in Warsaw. Fifty years ago, in 1972, the second edition of the conference was organized at the National Museum of Warsaw, and in 2006, the 11th ICNS took place at the University of Warsaw, drawing almost 200 scholars from all over the world.

We are very happy that this summer we will also be able to meet many distinguished colleagues and fledgling scholars in Nubian Studies in person after the disturbances in academic life caused by the Covid-19 pandemic. Participants will present over 200 papers organized in four parallel sessions taking place on five full days. Workshops or round tables will further the exchange of knowledge and ideas on specialist subjects, while keynote lectures at the end of each day will highlight some of the most relevant research questions. We hope that the 15th ICNS will turn out to be a celebration of Nubian Studies and will play its role in the advancement of this field.

ORGANIZING COMMITTEE:

Heads of the organizing committee:

Adam ŁAJTAR Faculty of Archaeology, University of Warsaw

Artur OBŁUSKI Polish Centre of Mediterranean Archaeology, University of Warsaw

Members of the organizing committee:

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Dobrochna ZIELIŃSKA Faculty of Archaeology, University of Warsaw

CONFERENCE ORGANIZER AND FINANCING:

The conference was organized by the **Polish Centre of Mediterranean Archaeology, University of Warsaw**.

The conference was financed by the Ministry of Education and Science of the Republic of Poland for the task "Internationalization of research of the University of Warsaw Archaeological Research Centers".

The organization of the conference was also supported by a grant from the University of Warsaw program "Excellence Initiative – Research University" (IDUB).



ABSTRACTS

50TH ANNIVERSARY OF THE SOCIETY FOR NUBIAN STUDIES: WARSAW 1972–2022. PHOTO EXHIBITION

The first International Conference for Nubian Studies in Warsaw took place in 1972. It marked two important events in the development of Nubian Studies. One was the creation of the International Society for Nubian Studies (ISNS) with Prof. Kazimierz Michałowski as its first president. The other was the opening of the Faras Gallery in the National Museum in Warsaw, housing the largest collection of Nubian wall paintings outside Sudan. As the ISNS celebrates its 50th anniversary, the exhibition presents pictures from its inaugural conference.



EXHIBITION and ALBUM

“From Faras to Soba. To the rescue of Sudan’s archaeological heritage”



An open-air poster exhibition “From Faras to Soba. To the rescue of Sudan’s archaeological heritage” has opened in Krakowskie Przedmieście Street, in front of the University of Warsaw Museum. It showcases the story and results of 60 years of work by Polish archaeologists and conservators in Sudan. The exhibition will be on display throughout the conference, until 10 September.

The title “From Faras to Soba” refers to two capital cities of medieval Nubia. Faras is almost 1400 km down river from Soba, going by the Nile. The two sites are also at two ends of a time spectrum: 60 years ago, in Faras in 1961, Kazimierz Michałowski and the Centre of Mediterranean Archaeology in Cairo led the first Polish excavations in Sudan. Today, Soba is one of the newest archaeological projects run by the Polish Centre of Mediterranean Archaeology of the University of Warsaw. In the meantime—as well as physically in between—is Old Dongola, the third great medieval Nubian kingdom, where Polish archaeological investigations have been going on uninterrupted for more than half a century.

Civilization emerged and developed in Nubia much earlier, in the 3rd millennium BCE. For 60 years now Polish researchers have been involved in the challenging task of discovering, studying and protecting the remains of these cultures, in order to save them from oblivion and destruction.

The exhibition was prepared by the Polish Centre of Mediterranean Archaeology of the University of Warsaw. It was financed by the Ministry of Education and Science of the

Republic of Poland for the task "Internationalization of research of the University of Warsaw Archaeological Research Centers".

15th International Conference for Nubian Studies

OD FARAS DO SOBA

FROM FARAS TO SOBA

Na ratunek archeologicznemu dziedzictwu Sudanu

To the rescue of Sudan's archaeological heritage



Internationalization of research of the University of Warsaw Archaeological Research Centers

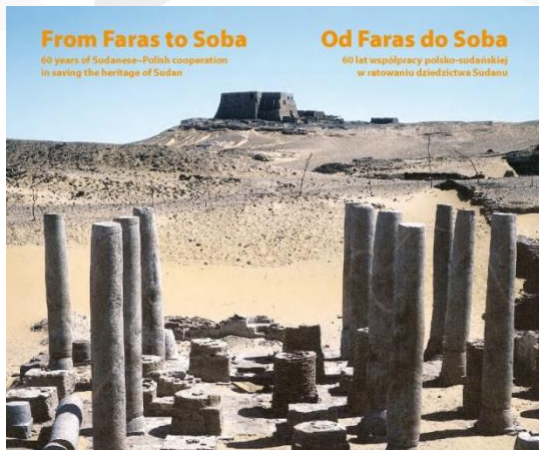


UNIVERSITY OF WARSAW



OF MEDITERRANEAN
ARCHAEOLOGY

15th International Conference for Nubian Studies



From Faras to Soba. 60 years of Sudanese–Polish cooperation in saving the heritage of Sudan / Od Faras do Soba. 60 lat współpracy polsko-sudańskiej w ratowaniu dziedzictwa Sudanu, ed. Henryk Paner, Artur Obłuski, Mahmoud El-Tayeb, PCMA UW, Warsaw 2022.

A richly illustrated companion volume showcases the achievements of Polish Nubiology: the discoveries made by archaeologists, the research of specialists from a variety of sciences, the restoration projects undertaken by art restorers and conservators. Prime among these are the great surveys covering long stretches of the Nile river valley and large expanses of the inhabited desert regions on either side. Such work in Sudan often took on a salvage dimension, preceding major dam- and road-construction works.

The book presents discoveries from many different periods and cultures: the oldest hominin traces in the region, the development of Kerma culture in the 3rd and 2nd millennia BCE in the Bayuda Desert, the burial rites in the kingdoms of Kush and Meroe (1st millennium BCE and 1st millennium CE) and the mysterious Early Makuria (4th–5th centuries CE) directly before the rise of the Christian kingdoms of Nubia. An extensive section of the book is devoted to archaeological and conservation work at the medieval Christian sites of Old Dongola, Banganarti, Selib, Ghazali and Soba.

Some of the comprehensive research on various categories of finds has also been presented in the volume: studies of the textual heritage of Christian Nubia, of cultural identity and trade contacts based on personal adornments, of the natural environment as seen through the history of livestock breeding in the Middle Nile Valley, and the bioarchaeology of the Nubian elite.

There is also a story about the people living today among the historic monuments. Collaborative archaeology is an approach that develops the role of local communities in archaeological projects, so that the discoveries made by archaeologists become more than just textbook content. It shows how the forgotten heritage can be woven into the fabric of modern life to make it live again.

This book was financed by the Ministry of Education and Science of the Republic of Poland for the task “Internationalization of research of the University of Warsaw Archaeological Research Centers”.

The volume has been prepared in the form of an Open Access publication available for download: <https://pcma.uw.edu.pl/en/2022/08/12/from-faras-to-soba/>

Virtual Nubia

Participants of the 15th ICNS will get a full virtual reality experience of a visit to medieval Nubian monasteries using VR sets. These will be made available during the Welcome Ceremony at the National Museum in Warsaw on Monday, 29 September.

“Virtual Nubia” allows you to walk into medieval monasteries in Sudan without leaving home. Archaeologists from the Polish Centre of Mediterranean Archaeology of the University of Warsaw have digitally reconstructed monastic buildings at two important Nubian sites: Ghazali and Old Dongola.

One is the Monastery on Kom H that lies 1.5 km northeast of the center of Dongola, the capital of Makuria, one of three medieval kingdoms in ancient Nubia. The reconstruction allows for a glimpse of the interiors in the two annexes, including the climatic Chapel of Archangel Michael with wall paintings lit up by oil lamps, and the Crypt of Bishop Georgios.

In Ghazali, a cenobitic monastery has been reconstructed with all the distinct areas that served different purposes of communal monastic life: churches, dormitories, refectories, washrooms, and a separate area for food production, with a mill and an oil press.

The monasteries can also be visited at leisure on your computer at www.virtualnubia.uw.edu.pl An offline VR app with enhanced graphics is available upon request.



SESSIONS AND EVENTS IN SHORT

SUNDAY 28.08.2022

14.00 – 18.00 **REGISTRATION**, Old Library of the University of Warsaw, Main Hall

MONDAY 29.08.2022

Old Library of the University of Warsaw, Main Hall

8.00 – 9.30 REGISTRATION

8.00 – 9.30 COFFEE

9.30 – 10.20 **WELCOME**

10.20 – 11.20 **OPENING LECTURE**

Artur Obłuski

11.20 – 11.50 COFFEE BREAK

Tungul the Afropolis – a biography of an African capital city

11.50 – 16.40 Parallel sessions

11.50 – 13.30 Preliminary reports on recent projects 1, ROOM 1

African interconnections 1, ROOM 2

Traditions, customs, spirituality 1, ROOM 3

13.30 – 15.00 LUNCH

Bioarchaeological perspective 1, ROOM 4

15.00 – 16.40 Preliminary reports on recent projects 2, ROOM 1

African interconnections 2, ROOM 2

Traditions, customs, spirituality 2, ROOM 3

Bioarchaeological perspective 1, ROOM 4

ROUND TABLE: Different complexities: empires, states and nomads, ROOM 5

17.00–20.30 **The National Museum in Warsaw open for conference participants**

17.45 **Group photo in front of the National Museum in Warsaw**

18.00–20.30 **Welcome ceremony and cocktail at the National Museum in Warsaw**

TUESDAY 30.08.2022

9.15 –16.40 Parallel sessions

9.15 – 11.20 Preliminary reports on recent projects 3, ROOM 1

African interconnections 3, ROOM 2

Traditions, customs, spirituality 3, ROOM 3

Bioarchaeological perspective 3, ROOM 4

11.20 –11.50 COFFEE BREAK

WORKSHOP: Shaped by hand, ROOM 5

11.50–13.30 Preliminary reports on recent projects 4, ROOM 1

African interconnections 4, ROOM 2

Traditions, customs, spirituality 4, ROOM 3

Bioarchaeological perspective 4, ROOM 4

WORKSHOP: Shaped by hand, ROOM 5

13.30 –15.00 LUNCH

15.00–16.40 Preliminary reports on recent projects 5, ROOM 1

African interconnections 5, ROOM 2

Traditions, customs, spirituality 5, ROOM 3

Community archaeology 1, ROOM 4

16.40 –17.00 COFFEE BREAK

ROUND TABLE: Publishing Nubian studies, ROOM 5

17.00–18.00 **KEYNOTE LECTURE**, Old Library

Vincent W.J. van Gerven Oei

WEDNESDAY 31.08.2022

No more miracles: on the origins and futures of Nubian Studies

9.15-16.40 Parallel sessions

9.15-11.20 Preliminary reports on recent projects 6, ROOM 1

Borderspaces 1, ROOM 2

Traditions, customs, spirituality 6, ROOM 3

Community archaeology 2, ROOM 4

11.20 –11.50 COFFEE BREAK

ROUND TABLE: Arts and crafts, ROOM 5

11.50-13.30 Preliminary reports on recent projects 7, ROOM 1

Borderspaces 2, ROOM 2

Urban & rural landscapes 1, ROOM 3

Community archaeology 3, ROOM 4

ROUND TABLE: Arts and crafts, ROOM 5

13.30 –15.00 LUNCH

15.00-16.40 Preliminary reports on recent projects 8, ROOM 1

Borderspaces 3, ROOM 2

Urban & rural landscapes 2, ROOM 3

Community archaeology 4, ROOM 4

16.40 –17.00 COFFEE BREAK

WORKSHOP: Digital technologies, ROOM 5

17.00-18.00 **KEYNOTE LECTURE**, Old Library

Marc Maillot

THURSDAY 01.09.2022

Damboya: a royal city of the Meroitic empire

- 9.15-16.40 Parallel sessions
- 9.15-11.20 Future perspectives & technological advances 1, ROOM 1
 Identity 1, ROOM 2
 Urban & rural landscapes 3, ROOM 3
 Community archaeology 5, ROOM 4

11.20 –11.50 COFFEE BREAK

- 11.50-13.30 WORKSHOP: Approaching the Eparch of Nobadia, ROOM 5
 Future perspectives & technological advances 2, ROOM 1
 Identity 2, ROOM 2
 Urban & rural landscapes 4, ROOM 3
 Oldest chapters: prehistory 1, ROOM 4
 WORKSHOP: Approaching the Eparch of Nobadia, ROOM 5

13.30 –15.00 LUNCH

- 15.00-16.40 Future perspectives & technological advances 3, ROOM 1
 Identity 3, ROOM 2
 Technologies & resources 1, ROOM 3
 Oldest chapters: prehistory 2, ROOM 4
 ROUND TABLE: Nubian bioarchaeology: community consultation, ROOM 5

16.40 –17.00 COFFEE BREAK

- 17.00-18.00 **KEYNOTE LECTURE**, Old Library
Geoff Emberling
The City and Dynasty of Napata (Jebel Barkal): current research questions

FRIDAY 02.09.2022

ABSTRACTS

9.15-16.40 Parallel sessions
9.15-11.20 Power & authority 1, ROOM 1
Everyday life, ROOM 2
Technologies & resources 2, ROOM 3
Oldest chapters: prehistory 3, ROOM 4
ROUND TABLE: Origins of the Meroitic dynasty, ROOM 5

11.20-11.50 COFFEE BREAK

11.50-13.30 Power & authority 2, ROOM 1
Everyday life 1, ROOM 2
Technologies & resources 3, ROOM 3
Oldest chapters: prehistory 4, ROOM 4
ROUND TABLE: Origins of the Meroitic dynasty, ROOM 5

13.30-15.00 LUNCH

15.00-16.40 Critical historiographies 1, ROOM 1
African interconnections, ROOM 2
Technologies & resources 4, ROOM 3
Memory 1, ROOM 4
ROUND TABLE: Perspectives on Alwan graffiti, ROOM 5

17.00-18.00 **KEYNOTE LECTURE**, Old Library
Andrea Manzo

Feasting, funerals and alliances. Paths to complexity east of the Atbara and beyond

19.00-24.00 **GALA DINNER**, The UW Library garden

SATURDAY 03.09.2022

Old Library of the University of Warsaw
10.00-11.00 **KEYNOTE LECTURE**
Mahmoud Suliman Bashir

ABSTRACTS

Managing Meroe Pyramids World Heritage Site: efforts, achievements and challenges

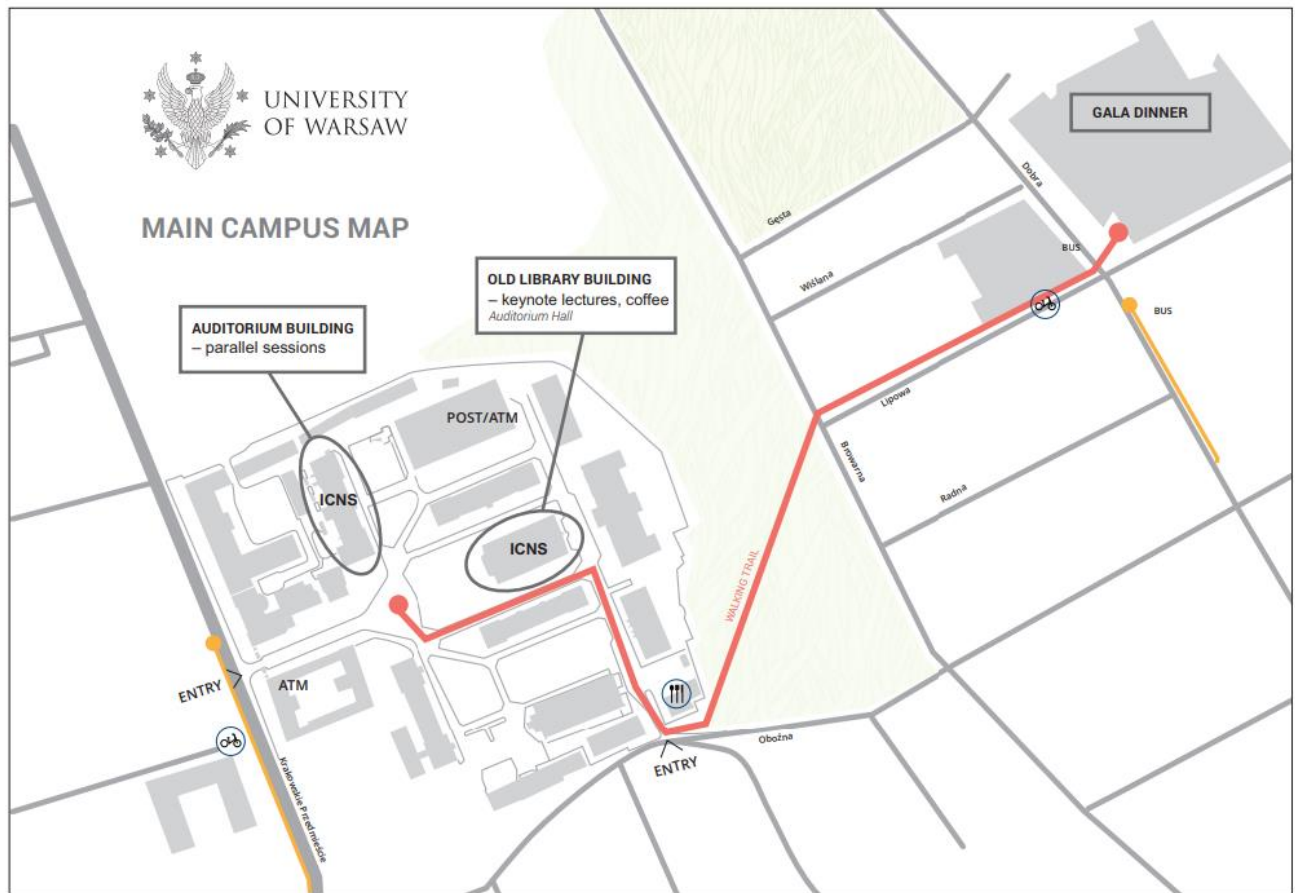
11.00–11.15 **Mohammed Faroug Ali**

Announcement of the Sudanese Archaeologists Union

11.15–13.15 **ISNS MEETING**

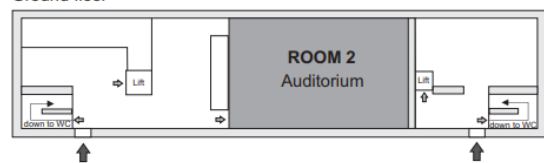
SUNDAY 04.09.2022

VISITING WARSAW'S MUSEUMS



FACULTY OF POLITICAL SCIENCE AND INTERNATIONAL STUDIES

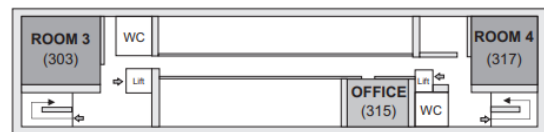
Ground floor



Second floor

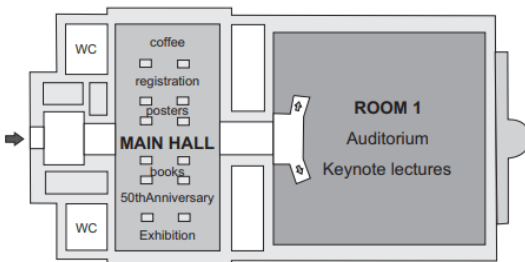


Third floor



OLD LIBRARY OF THE UNIVERSITY OF WARSAW

Ground floor



2. KEYNOTE LECTURES

OPENING LECTURE

Artur OBŁUSKI

POLISH CENTRE OF MEDITERRANEAN ARCHAEOLOGY
UNIVERSITY OF WARSAW

Tungul the Afropolis – a biography of an African capital city

The paper narrates the biography of Tungul (Old Dongola), the capital of Makuria, one of the mightiest and most important medieval African states. However, the narrative omits its prime years, which have been elaborately presented during previous conferences, focusing on the early years of the city, its midlife crisis and revival, and bringing the story up to modern times.

The biographical approach, combined with new archaeometric methods, allows us to look at the settlement from a new perspective: identify research gaps and challenge paradigms created during almost 60 years of excavations at the site.

Mahmoud Suliman BASHIR

UNIVERSITY OF KHARTOUM

Managing Meroe Pyramids World Heritage site: efforts, achievements and challenges

The pyramids of Meroe are one of Sudan's most important archaeological sites. The remarkable cemeteries, with more than 100 pyramids, attract thousands of Sudanese and international tourists each year. Situated in an almost unspoiled landscape and based on its outstanding universal value (OUV), the site, together with the sites of Naga, Mussawarat, and Meroe Royal City, has been included in the UNESCO World Heritage List since 2011 as part of "The Archaeological sites of the Island of Meroe".

Site management and tourism was among the main concerns of the Qatari Mission for the Pyramids of Sudan (QMPS). The mission developed a sustainable tourism concept and proposed plans for site management at Meroe and its surroundings with the general policies for the management of all three sites included in the World Heritage Serial nomination.

This major achievement can be seen in various well-established infrastructural elements of the site, including the Meroe visitor centre and the new entrance to the site that provides visitors with information for a safe, comfortable, enjoyable, and instructive visit to the archaeological sites in the area. However, we are currently facing difficulties in running these facilities and implementing the sustainable management plan for the site.

The royal pyramids at Meroe are well known as the burial ground of the Candace, therefore, the site has become a symbol of identity among people of Sudan after the revolution. The infrastructure at Meroe, introduced in recent years by the QMPS, facilitates an important means of community engagement in the form of direct contact with the site, its protection, and the hosting of a number of events and celebrations.

Geoff EMBERLING

KELSEY MUSEUM OF ARCHAEOLOGY, UNIVERSITY OF MICHIGAN

The city and dynasty of Napata (Jebel Barkal): current research questions

Despite well over a century of research and writing on the city and dynasty of Napata, entire areas of archaeology and history remain unexplored, and other issues remain unresolved. This lecture will highlight what we do not know about the city and its region and will bring a comparative perspective to ongoing debates on a series of research questions relevant to understanding the site and its role in ancient Kush. These debates include “Egyptianization”, the raid of Psamtik II and the supposed move of the capital to Meroe, the “Second Dynasty of Napata” and the supposed Roman sack of the city.

Marc MAILLOT

FRENCH ARCHAEOLOGICAL UNIT, SUDAN ANTIQUITIES SERVICE

Damboya: a royal city of the Meroitic empire

The archaeological site of Damboya identified by Friedrich W. Hinkel and prospected in 2002 by Patrice Lenoble and Vincent Rondot, is located 270 km north of Khartoum, near Shendi, into the concession of El-Hassa (1.7 km) of which it is a component. Marc Maillot, director of the mission, had expressed the wish to open an archaeological excavation in Damboya, as part of his program as director of the SFDAS (French Archaeological Unit in Sudan).

The results obtained following the magnetometric survey carried out in 2008 on the central part of the site were promising for an in-depth study of urban settlements on the banks of the Nile in central Sudan, in connection with one of the major sites of the Meroitic period, El-Hassa. This partial survey extended over an area of 2.35 ha. The results obtained enabled the SFDAS archaeological team to select the most promising sectors for a long-term study of the settlement of Damboya, after a final survey on site. Several sectors have been opened, three of which (B, C, D) show only residual vestiges and culturally sterile soil very close to the surface. However, the two major sectors, A and E, are very rich and were chosen for their position framing the main hill of the site. This hill, G, was opened during the last season and revealed a monumental building determining the city layout. The results obtained on the

main hill of the city will allow us to expand the scope of the lecture on Meroitic urbanism in the Shendi Reach.

Andrea MANZO

UNIVERSITY OF NAPLES "L'ORIENTALE"

Feasting, funerals and alliances. Paths to complexity east of the Atbara and beyond

This presentation will outline and discuss the available evidence on the social trajectories in the region east of the Atbara in light of the results of the investigations carried out in that area since the 1980s. The talk will focus on the site of Mahal Teglinos, on the outskirts of Kassala, where excavations have been conducted since 1981. In particular, the Gash Group cemeteries and the non-funerary sectors of Mahal Teglinos will be described. The features occurring there will be discussed, pointing out elements related to funerary traditions and food preparation and consumption activities. The hypothesis that Mahal Teglinos may have been a "special place" in the social landscape of the region in the 3rd and 2nd millennia BC will be suggested and possible insights into the paths to complexity that may have characterized the area will be proposed. Finally, these remarks will be placed within the frame of a broader debate on "different complexities" now emerging in Nubian studies, which will also be the topic of a round table organized by the speaker and Julien Cooper.

Vincent W.J. VAN GERVEN OEI

INDEPENDENT RESEARCHER

No more miracles: on the origins and futures of Nubian studies

In recent years, medieval studies have become increasingly aware of how enmeshed they are in fascist ideologies as medieval imagery is weaponized and scholarly discourse appropriated for political ends. These developments have brought into view how medieval studies as a discipline have its origins in the epistemic frameworks of 19th-century scholarship. In order to better integrate the study of the Makuritan period with these broader theoretical discussions in medieval studies, from which it has remained somewhat removed thus far, this keynote will address the genesis of Nubian studies by way of the rediscovery of the Makuritan period and the discourses through which these origins continue to determine the present field in numerous ways, and provide perspectives on how to mitigate these issues in the future.

3. PAPERS

Suzan Adil ABDALRAHMAN

UNIVERSITY OF KHARTOUM

Black pottery in the Meroitic and post-Meroitic periods

This paper aims to shed light on one of the popular types of Meroitic and post-Meroitic pottery that is common at most sites of these periods. This pottery type is known from a very large number of Meroitic sites, especially so-called Black Beer Jars. The Black pottery in question was mainly handmade, being crafted according to very traditional methods that remained unchanged since the start of the Stone Age in the Nile valley. Such pottery was also manufactured for a long time after the Meroitic period, not only in Sudan, but also in many other African countries. Black pottery was always made of secondary local clays, based on Nile clays with some other types of clays coming from nearby wadis. This kind of pottery has been found in different contexts and sites, including towns, cemeteries and temples and was made in a variety of shapes for different purposes (e.g., cups, bowls and jars). We conclude that Black pottery was made by women in their homes for daily use as much as for use in burial practices.

Zakarya Ragab ABDEL MAGUID and Reham ZAKY

FACULTY OF AFRICAN POSTGRADUATE STUDIES, CAIRO UNIVERSITY

Common features between Neolithic burials in the Western Desert and the Middle Nile region

The study of human remains is considered one of the most remarkable archeological resources during Prehistoric periods, especially the Neolithic era in the Sahara and the Nile Valley. This remarkable importance is not only related to the funeral aspect, but also the economic and social aspects. Through analysis and detailed study of the human burials during the Neolithic in the Western Desert (in Egypt and Sudan) and the Middle Nile Region (Upper Nubia and Central Sudan), some common materials/features can be defined specially related to the funeral goods accompanying the deceased (e.g., raw materials or as worked tools). The existence of these common materials/features may refer to their importance to these societies during the Neolithic. This presentation aims to highlight some of these common features between Neolithic burials in the Western Desert and the Middle Nile Region.

Sudan's world heritage: cultural and natural properties

The Republic of Sudan has inscribed two groups of cultural sites of the Kingdom of Kush as World Heritage properties, namely Gebel Barkal and the Sites of the Napatan Region (Gebel Barkal, Kurru, Nuri, Sanam and Zuma) inscribed in 2003 (Ref. 1073) and the Archaeological Sites of the Island of Meroe inscribed in 2011 (Ref.1336). This second property consists of the royal city of the Kushite kings at Meroe, near the River Nile, and the nearby religious site of Naqa and Musawwarat es Sufra. Both properties were inscribed due to the high degree of their intactness of the attributes expressing Outstanding Universal Value which gives the serial site's great integrity. This was in part due to the archaeological buildings being only very slightly affected by modern urban extensions.

In 2016, Sudan inscribed the Sanganeb Marine National Park and Dungonab Bay–Mukkawar Island Marine National Park as the first Natural World Heritage Property along the Red Sea Coast. It includes a highly diverse system of coral reefs, mangroves, seagrass beds, beaches and islets as well as provides a habitat for populations of seabirds, marine mammals, fish, sharks, turtles and manta rays. Dungonab Bay also has a globally significant population of dugongs.

In early 2022, Sudan updated its tentative list of cultural, natural and mixed sites. The cultural sites: Al Khandaq Village, Banganarti, Kerma, Old Dongola, Sai Island, Suakin, The Monuments of the Kingdom of Kerma and Dokki Gel, The Temple of Soleb Mixed; the mixed site: Wadi Hower National Park – Gala Abou Ahmed; the natural sites: Al Hassania National Park, Al Radom National Park, Dinder National Park, Jebel Al Dair National Park, Jebel Marra / Deriba Caldera (crater lake) and Wadi Howar National Park.

The monuments of the Greater Darfur (Shoba, Jebel Uri, Ayan Farah) are under preparation to comply with the operational guidelines of the world heritage convention. This will be aided by the results of the Darfur Heritage Survey. On the other hand UNESCO, NCAM and the Polish Expedition are working to advance the nomination of Old Dongola to be inscribed on the World Heritage List.

Asaad Abdelrahman Awadallah ABDELRAHMAN

NATIONAL COUNCIL FOR CULTURAL HERITAGE
AND PROMOTION NATIONAL LANGUAGE

The palm in the cultural heritage of the Merowe region in northern Sudan

This paper aims to examine the symbolism, customs and traditions associated with date palms within the cultural context of the local communities of Merowe province in Northern Sudan. The focus in analyzing this topic will concentrate on cultural and historical background, as the date palm has been connected to the regional populations for centuries, serving both as the source of numerous associated crafts, professions and social and cultural traditions, customs and practices, and as a key form of nutrition helping communities to face the challenges of living in a harsh desert environment.

The inscription of the Date palm, knowledge, skills, traditions and practices in 2019 on the UNESCO Representative List of the Intangible Cultural Heritage of Humanity has increased the essentiality of studying the multiple date-palm related activities, numerous festive rituals, traditions and customs. The primary data for this research was collected during twelve months of fieldwork, via direct observation and interviews among the local communities of the Merowe region.

Among the most important findings of this study is that the people of Merowe region apply and use all the parts of the date palm tree as raw materials for producing several traditional handicrafts. Furthermore, the palm tree has a long and continuous history throughout the successive historical periods of Northern Sudan up to today. All this was linked with the habits, traditions, traditional beliefs and knowledge and oral history of the Merowe region.

Ahmed Hussein Abdelrahman ADAM

DEPARTMENT OF ARCHAEOLOGY, UNIVERSITY OF KHARTOUM

Diverse landscapes, intersecting histories: new discoveries from the Sudanese Red Sea coast

The Red Sea has typically been viewed as a barrier to early human movement between Africa and Asia. However, more recently the Red Sea region has been regarded rather as an important link in the movement between Africa, Asia and the Mediterranean Sea in all periods, with an environmental diversity that is likely to have varied with long-term changes in paleogeography and climate, in turn having influence on archaeology. The Red Sea region is the most obvious and most probably the only transit region for hominins and later humans. These reasons encouraged us to start new investigations in the area under the umbrella of the archaeological project of the Red Sea coast and some of its islands in the far south of the Sudanese borderlands. The work has focused on the survey and investigation of

the archaeology, history and landscape of the region. The results of this research have shown the importance of the region and its sites from prehistory up to the Islamic periods, besides which the landscape is particularly diverse when we compare it with areas of the archaeological sites in the Nile region. We hope that this study will open new prospects and new scientific approaches to know the nature of the types of sites in different locations within the varying topography and changes in local climate over time within this region more clearly, and hence to know how they compare with sites of similar date in the Nile Valley region.

Hanaa Ibrahim ADAM

UNIVERSITY OF KHARTOUM

Islamic pottery in the Suakin site, eastern Sudan

The study deals with pottery of the Islamic period found at Suakin, Eastern Sudan and seeks to address two particular aspects of analysis: to identify the characteristics and diagnostic features of the Islamic pottery found at the site, and to illustrate its characteristics and the contemporary trading relations between Suakin and neighboring regions, Suakin being one of the main ports of Sudan. The study adopts several interrelated methodologies, namely descriptive, analytical, comparative, laboratory, and chemical analysis. This study reached several conclusions regarding commercial links between Sudan and the outside world as reflected in the abundance of imported pottery. The pilgrimage route to Mecca played a crucial role in strengthening regional links, as various pottery forms specifically for pilgrims were recovered. Among the results, too, is that the local pottery in Suakin is simply represented in its types and forms. The study recommends the need for further examination of pottery found at different Islamic sites in Sudan, as well as establishing a historical and chronological sequence for Islamic pottery.

Ayat Abdelkader Mohamed AFIFI

INDEPENDENT RESEARCHER

Artistic influences on the Meroitic pottery of Lower Nubia during the Roman era

The Meroitic pottery of Lower Nubia is part of the ancient Egyptian heritage of the region, where the people of Nubia inherited various crafts and arts, including the pottery industry, which were influenced by the rich civilization interactions of this region at that time. The topic of this paper aims to identify artistic influences that existed for the Meroitic pottery of Lower Nubia during the Roman era. The pottery samples selected for this paper come from several excavations of various international and Egyptian archaeological missions that participated in the UNESCO campaign to save the monuments of Lower and Upper Nubia from sinking, which took place during the 20th century. All of the pottery samples utilised for

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this study are unpublished and are preserved at the Egyptian Museum in Tahrir-Cairo. This study focusses on elements of artistic decoration on these pots to determine the nature of Egyptian, Roman, and Meroitic influences, if any.

**Abdelrahman Mohamed Fahmy Sayed AHMED,
Javier MARTÍNEZ-LÓPEZ, Ángel SÁNCHEZ-BELLÓN, Salvador
DOMÍNGUEZ-BELLA, Eduardo MOLINA-PIERNAS**

UNIVERSITY OF CÁDIZ

Durability assessment of archaeological sandstone in the Osiris temple, Philae (Aswan, Egypt)

The ancient Osiris Temple at Philae/Aswan, was considered one of the most sacred and mysterious temples in Egypt. In 1960, UNESCO rescued the Philae temples because the rise of the water level after the construction of the Old and New Dams at Aswan caused the submerging of all of the temples underwater. The rescue campaign had been perfectly done to protect all of the Aswan temples. Unfortunately, the Osiris Temple was not rescued and was forgotten in its original place at Bigeh Island, being subjected to the effects of the Nile and partially submerged underwater. This study aims to unravel and assess the durability state of the temple construction material through advanced diagnostic techniques (X-ray diffraction and fluorescence, Raman spectroscopy, and polarizing, binocular, and scanning electron microscopes). Furthermore, *in situ* degradation maps have been sketched to elaborate the decay patterns of the Osiris Temple construction materials. Results showed that blackening, soiling, and disintegration are the dominant decay patterns in the construction materials of the temple, and Nile water as an extrinsic factor affected the sustainability of the temple severely due to continuous exposure to water force. In addition, the mineralogical composition of sandstone, as an intrinsic decay factor, played an important role in its degradation due mainly to dispersion of clayed and/or calcitic matrix dissolution, quartz hydrolysis and feldspar alteration, respectively.

Eslam Ali AHMED

GEOGRAPHICAL INFORMATION SYSTEMS

Use of GIS techniques at archaeological sites in Sudan (Mountains of Kordofan – Al-Abyad)

The spread of geographic information systems (GIS) has brought about the need for huge amounts of data and information. GIS is nothing but advanced information systems that specialize in processing information of a spatial or geographical nature. GIS contributes to, and supports archaeological work in its various topics, including facilitating better fieldwork—especially site planning—archaeological excavation, inventory and

documentation of archaeological sites, in addition to the high spatial analytical ability provided by integrating spatial and descriptive information into a single database. GIS is used to study many environments in many regions, to track changes in a specific area and to estimate neighbouring effects by comparison, which helps to generate clear, complete and accurate data before making decisions in the field for undertaking archaeological work. This presentation focuses on the importance of managing archaeological sites using the case study of the Kordofan Mountains, through making maps linking archaeological sites, their classification and geographical distribution. The study area is of historical importance and includes evidence of different historical periods. The application of GIS in the field of archaeology faces many obstacles ranging from a lack of laboratories and the scarcity of trained cadres to apply it, to the complete absence of the application of GIS in the curricula for the field of archaeology. There is presently a need to establish a centre for GIS within the General Department of Antiquities of the Ministry of Tourism and Universities. Since GIS is a tool for complex knowledge patterns, its success depends on its correct understanding; the success of any archaeological attempt to benefit from GIS is linked to realizing the limits of GIS, the most important of which is database management.

Habab Idriss AHMED

NATIONAL CORPORATION FOR ANTIQUITIES AND MUSEUMS, SUDAN

Cultural heritage and its impact on cultural resource management: Kassala Museum as a case study

This presentation will talk about the richness of the cultural heritage in Sudan, particularly in terms of archaeological work, which covers a vast area of the county, and how such cultural heritage documentation activities have functioned in the community. What role does excavation play in increasing awareness within local communities about the importance of cultural heritage? In which ways do materials from these excavations become tools to connect the community with their Identity and culture? In which ways can cultural heritage be engaged, particularly in light of the recent situation of the country, to be a part of government strategies, such as the planning and constructing of museums?

This presentation will focus on the Kassala Museum project (currently under construction) and its importance as part of a community archaeology strategy for enhancement of the management of cultural heritage in the region.

Hwida Mohammed Adam AHMED

UNIVERSITY OF KHARTOUM, DEPARTMENT OF ARCHAEOLOGY

Apedemak in the Temple of Amun in the Royal City: Excavations of 2019

The paper sheds light on the lion deity and what was later called Apedemak. Do they represent two sides of the same coin, or do they differ in concept over time? The study relies

on finds from recent excavations in the Temple of Amun in the Royal City, including a lion's face carved in the enclosure wall of the city (west wall of the temple), and a lion's head uncovered during excavations, as well as a stela that shows the head of the god Apedemak with the god Horus and above them a sun disk.

Examining the archaeological and historical sources on this god's path in the civilization of Meroe, we are able to identify two stages of his development: The first was associated with the lion as simply an animal, which, as a result of Meroitic admiration for its qualities and ability, was adopted as a popular deity. This stage is considered to have significantly preceded the god's coronation. As for the second stage, it was associated with Apedemak's divinity after he became a crowned deity. From then on, his appearance and form differed. This is the stage of declaring his official divinity. Before and after achieving divinity, this deity was characterized by prestige resulting from his strength and ability to impose control. The finds from the temple of Amun in the Royal City represent two periods of his occurrence, each of which has its own characteristics.

Sara Mohamed Mamon AHMED and Yahia Fadl TAHIR

COLLEGE OF ART, DEPARTMENT OF ARCHAEOLOGY, UNIVERSITY OF KHARTOUM

Geoarchaeology in Sudan: a study of Paleolithic stone tools in the El Ga'ab Depression, west of Dongola

Studies of stone tool raw material in prehistoric sites in Sudan have provided evidence of tool-production techniques and raw materials consistent with the technology and cultural exchange of tool-making and the ancient environment during the Paleolithic in Sudan. Although geoarchaeological studies in Sudan did not begin until the second half of the twentieth century. This presentation aims to study the Paleolithic stone tools and their raw materials in El Ga'ab in order to determine the relationship between the technology and the raw material and to know the sources of the raw material. It also aims to investigate the technological and cultural impact of tool production in the Paleolithic sites in the El Ga'ab depression and the areas adjacent to the depression.

The study identified different types of raw material sources in the El Ga'ab depression near the Paleolithic sites and determined the relationship between the availability of raw materials and the technique of toolmaking, as it determines the type of technology and tools. The study suggests that there was an influence on the cultures and techniques of stone toolmaking in the neighboring regions, the most important of which are the Aterian culture and the Sangon industry.

Nimat Mohammed ALHASSAN

NATIONAL CORPORATION FOR ANTIQUITIES AND MUSEUMS, SUDAN

The role of Community Museums in the Sudanese peace process

This presentation focusses on the Community Museum, an entity accessible to all groups of society in all areas, their happiness and culture, seeking to show the nature of life in given regions, upholding, preserving, and maintaining unique aspects of regional heritage. The preservation of such venues and the creation of seminars to highlight such museums, to reflect their value in all axes of society, must be embraced and exemplified by the politician, the clergyman, cultural heritage experts, economists, and scientists, and not downplayed or discarded. Additional concern is also needed to address the need for maintaining local museums and not simply taking recovered materials to distant museums that are often inaccessible to local communities from which materials were recovered. If each of us adheres to a policy where cultural legacy does not seek conflict with others, peace is achieved, and where each party is concerned with the development of what it possesses, where the spirit of honest competition prevails among all segments of society. The researcher to be presented used different methods to highlight several local museum case studies, namely the Khalifa House Museum, Shaikan, and Nyala in western Sudan. The results of this study have raised awareness in these areas where the communities have built good relationships with their cultures and the human past through the establishment of local museums in conjunction with a series of workshops held during 2021–2022.

Fatima Idris ALI⁽¹⁾ and Abd Elrahman Ebrahim SAED⁽²⁾

⁽¹⁾ FACULTY OF TOURISM AND ARCHAEOLOGY
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Archaeological survey north of the Third Cataract region on the eastern bank of the Nile (Abu Sara area)

From the beginning of organized archaeological work in the 1920s until now, archaeological sites of various cultural periods have been discovered centered on the banks of the Nile and the watercourse and ancient valleys and on the highlands and slopes. The Abu Sara area, which is located on the eastern bank of the Nile and north of the Third Cataract region, is an area with many archaeological sites, making it an important region. In particular, the area has been devastated by the indiscriminate gold mining that has been active in the past few years. The area was surveyed by the Al-Mahas Archaeological and Heritage Survey project of the Department of Archaeology, University of Khartoum.

The results of the survey revealed a number of archaeological sites belonging to different cultural periods from prehistory to historical periods; Christian period sites made up the

largest share. Research has focused on destroyed sites in an effort to document them and preserve this important cultural heritage landscape from extinction.

Mohamed ALI

INTERNATIONAL UNIVERSITY OF AFRICA

Sociopolitical structure and movement networks in ancient Meroe

The Merotic ruling class was able to establish power and control a large area along the river Nile and the hinterlands. Beside control of the main source of the Merotic economy and long-distance trade, the Meroites structured movement and communication strategies in the ancient landscape to enhance and maintain their sociopolitical power in the region. The computer-based modeling of pathways and movement networks in archaeology is used here to highlight the state management structure, communication and movements between Meroitic places. This study presents interpretations to better understand the overall structure of communication in ancient Meroitic landscapes and the extent to which the central power was able to integrate urban and suburban centers and the public in the Merotic sociopolitical structure.

Nosiba Maghoub ALI

INDEPENDENT RESEARCHER

The royal Napatan *shawabtis*

This paper talks about the royal *shawabtis* of the Napatan kings discovered in Sudan, shedding light on their religious beliefs, their main role and their benefit to the deceased kings in the afterlife. The presentation will deliver information on the royal Napatan *shawabtis* stored in the Sudan National Museum and in several American museums. This study will focus exclusively on their types, material, size and the number of *shawabtis* of each king. The paper mentions data on the royal Napatan *shawabtis* exhibited in Sudanese museums; these data could form the nucleus of a very useful database, helping to protect these objects from being lost or stolen, and at the same time make the research and study of these types of objects effortless. This paper asks that more attention should be given to the *shawabtis* for their artistic shape, attractive, beautiful appearance and for their light weight, which has made them a target for theft and international trade.

Amel Hassan Gismallah ALSAEED

NATIONAL CORPORATION FOR ANTIQUITIES AND MUSEUMS

Mograt Island minorities arts and culture

Sudan is a large country consisting of over 500 ethnic groups. These ethnically various civilizations and cultures have assimilated with each other and bring our splendid Sudanese culture forward. This paper is an attempt to present the preliminary work on major heritage sites threatened with obliteration. The main task is to provide a report of an investigation of Mograt Island and the steps required to conduct a preliminary assessment of its archaeological sites. I wish to present a new method of heritage documentation and offer guidelines for Sudanese archaeologists, encouraging them to conduct more research and studies during their fieldwork, engaging with the local communities to involve them in the ongoing research, especially in areas that were not fully investigated.

The sagia is a magnificent tool that constituted the main source of human life since the mid-6th century AD (its earliest beginnings), used as a water source and for agricultural purposes. After the last survey that I conducted as part of the community project carried out in 2017–2018 on the site of Abu Hamad and on Mograt Island, I managed to identify several important issues associated with essential cultural components that need to be documented and that aid in the process of writing our history. The sagias presented on the external ethnographic exposition and in the Sudan National Museum in 1970 are brought from Mograt Island. I conducted personal interviews with local communities in order to collect relevant data about the sagia, the transformation of the environment and human adaptation during that time. A further aim of this survey was to document heritage and show appreciation for the effort of the local people that made this valuable legacy.

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Violent death in Kadruka–23 Neolithic cemetery

The Kadruka-23 burial ground in Upper-Nubia (Sudan, Northern State, Dongola Reach) is being excavated since 2014. It counts, up to now, 158 burials, organized as a genuine cemetery, and is dated from the second quarter of the 5th Millennium BCE. The overall mortality profile is pointing to a natural, "attritional" mortality: The burial-ground includes every age-group and both sexes, without any kind of selection, and is consistent with a typical ancient mortality. Yet three of the buried individuals are showing clear marks of violence. Two women and one man, all middle-aged, show perimortem fractures and they died because of those blunt-force traumas related to interpersonal or organised violence. Those lethal blows are located on the cranium (several blows in one case), inside the pelvis

(inner part of the ilium of os coxae), and inside the abdomen (reaching the last thoracic vertebrae and damaging abdominal aorta). In most of the cases, we can reconstruct the edge of the blunt instrument which seems to have been a stone hand axe very similar to those that can be found in other tombs as grave goods. Those subjects are clearly part of the group : As far as funerary practices are concerned, those three assaulted individuals are fully integrated within the cemetery, with the same grave-goods and burial practices as all the others.

Johannes AUENMÜLLER

MUSEO EGIZIO

Revisiting Ellesiya: craftspeople and goldworkers in the ‘secondary epigraphy’ of the Lower Nubian rock-cut chapel of Thutmose III

The Ellesiya speos is one of the most important monuments in the collection of the Museo Egizio, Turin. It was originally cut into the eastern sandstone cliff facing the Nile a little north of Aniba, the seat of Egyptian power in Lower Nubia during the New Kingdom. Since its inauguration in year 51 of king Thutmose III, the chapel was an important place in the local ritual landscape and was thus visited during certain festivals and on other occasions. Many of the visitors left traces of their presence in the form of rock-stelae, ex-voto tableaux and graffiti. This presentation will focus on selected cases among these secondary epigraphical interactions with a focus on craftspeople and goldworkers. Their graffiti can not only be found on the façade of the chapel, but also in its interior. Besides addressing the owners and/or beneficiaries of those graffiti, the different contexts of their presence at the chapel as well as their local attachment to Aniba will also be discussed. The considerations presented are based on all pertinent sources, from early drawings of the chapel to its reconstructed state in the Museo Egizio in Turin.

Abdelmonim Ahmed Abdalla BABIKER

INDEPENDENT RESEARCHER

Sudan and southern Africa: cultural contacts in antiquity

The primary aim of this study is to investigate the principles of cultural contacts between Sudan and Southern Africa. The origins of these principles can be traced back to “Ancient Ethiopia”, Napata and Meroe in Ancient Sudan. Ancient Sudan and Southern Africa share many cultural and religious concepts. These concepts stretch from the Cape, throughout Africa south of the Sahara, and beyond. The principles are rooted in an African spiritual cosmology that embodies the African philosophy of origins, identity, culture and traditions, which are resurfacing in various forms. In this study, the origins of these principles are traced back to the Ancient Sudan and Medieval Africa to show the common origins of both, in

lessons that may be understandable to modern contacts between Sudan and Southern Africa. It is hoped, therefore, that this study can contribute to a better understanding of the social contacts among many societies of the African continent both in antiquity and modern times.

Dobiesława BAGIŃSKA

INDEPENDENT RESEARCHER

The Napatan and Meroitic pottery from the East Mound at Jebel Barkal

The ceramics discovered in excavations on the East Mound during the 2019 season date predominantly to the Meroitic period (Areas A17, A18, A26 and A27). The author studied 22,961 pottery sherds. A few sherds from surface cleaning date to the Napatan and Christian periods suggesting nearby occupation or activities belonging to these periods. As most excavated deposits were related to dumping of the trash either in or next to Building 1, the ceramic assemblage is varied. It includes early Meroitic (3rd to 2nd century BC) Classic Meroitic (1st century BC–1st century AD) vessel types, though sherds from the latter period are the most common. Vessels were mostly wheel-made: decorated kraters and storage jars as well as fine ware bowls. A few fragments of imported storage jars from Egypt, dating to the 6th century BC, were also recovered. Ceramics from soundings in Room 3 of Building 1 and on the outside of the building date mainly to the Classic Meroitic period. The AMS samples show dates from the mid-2nd century BC to the early 1st century AD.

During the 2020 season, the mission continued excavation at the East Mound of Jebel Barkal (Areas A16–A48), where many fragments of wheel-made and handmade pottery were recorded, from the Napatan through the Meroitic periods, between the 8th century BC and 3rd century AD. Thousands of sherds were noted, but only 1746 particularly interesting pieces studied. In Room 2 of Building 2 (Area A18), below the floor, excavations yielded 290 fragments of wheel-made bowls, imported jars from Egypt, handmade plates, bread molds, pots and a hydria for water in the Cypriot Archaic style I, dated to BC 700–600, obviously imported from Cyprus,. The pottery from Area A48 was from the topsoil, including wheel-made bowls and a shallow Eastern Sigillata B plate, manufactured at the workshops near Tralles in western Asia Minor, with rouletting decoration in the center, dated to AD 25–50.

Brenda J. BAKER

ARIZONA STATE UNIVERSITY

Dental hygiene practices in ancient Nubia

Cultural modifications of teeth include unintentional wear patterns arising from their use as tools and intentional alterations such as avulsion or filing. Grooves found between posterior

teeth (premolars and molars) develop from fibers regularly drawn between the teeth or through repeated use of toothpicks. These interproximal grooves are typically located near the juncture of the tooth crown and root (the cemento-enamel junction or CEJ), providing evidence of dental hygiene practices. Among the 33 adults with observable dentition recovered from five Kerma to Napatan cemetery sites in the BONE project area west of Abu Hamed, six (18%) show interproximal grooves consistent with inserting fibers or toothpicks between the teeth. Many of these individuals also show severe wear of the extant teeth. Another individual with extreme wear but no evident interproximal grooves displays polishing on a premolar, suggesting possible toothbrushing with fibrous matter. Of the six individuals with interproximal grooves, four are males and two are females, indicating that both sexes were involved in this practice. These individuals range temporally from Early-Middle Kerma to Late Kerma (graves date from approximately 2100–1100 BCE). Additionally, at least one adult male from the Qinifab School site, a large late Meroitic to Christian period cemetery, shows interproximal grooving, indicating continuity of similar dental hygiene practices in ancient Nubia. This study demonstrates how systematic analyses of human remains may reveal often overlooked aspects of daily life among ancient Nubians.

Vince Lee BANTU

FULLER THEOLOGICAL SEMINARY

**“Christians of Takrur”:
the spread of Christianity through trans-Saharan interconnections between
Nubia, Egypt, Central and West Africa**

The medieval Nubian kingdoms of Makuria and Alwa are identified as active participants in the trans-Saharan trade by travelers such as Benjamin of Tudela, Al-Idrisi and Ibn al-Faqih. Material evidence corroborates the narrative that the medieval Nubian kingdoms engaged in extensive trade not only with the Nile Valley, Near East and Mediterranean regions, but Central and Western African civilizations as well. This trade resulted in a multi-directional exchange of cultural, economic, political and religious influences. This paper will survey evidence for the spread of one specific Nubian influence in Central and West Africa: Christianity. In addition to the witnesses for Christian Nubia’s involvement in trade with the Central and West African kingdoms, sources such as Ibn Sa’id, Ibn Hawqal and Ibn al-Dawadari indicate the presence of Christians much further west of Nubia. This paper will survey the sources relevant to this question and evaluate their strength in confirming the spread of Christianity between Nubian and the Central and West African civilizations. The role of the Egyptian Church in the spread of Christianity across Africa will also be considered as it is presented in sources such as the *Arabic History of the Patriarchs of Alexandria* and the *Churches and Monasteries of Egypt and Surrounding Countries*.

New Arabic documents from Old Dongola: preliminary report on the written sources from the Funj period

More than 30 paper documents were recently found in Old Dongola during the fieldwork of the UMMA ERC research project carried out by the Polish Centre of Mediterranean Archaeology, University of Warsaw. Many of them are preserved fragmentarily but some texts have survived in their entirety. They are a significant addition to just a few documents that were excavated earlier. All require careful reading and further research to provide as much information as possible about this particular period when Old Dongola balanced between the Ottoman Empire and the Sultanate of Sennar. There are letters mentioning historical figures and legal texts concerning hitherto unknown persons. Most of the documents, however, are amulets quoting various Quranic *suras*, sometimes accompanied by magic symbols. These documents seem to be products of a literate elite of Islamic Old Dongola who may be identified with Muslim holymen (Ar. fuqarā'). Next to religion, they exercised considerable power in many different areas such as education, jurisdiction and economy. Their active role has influenced the traditional Nubian community that embraced Arab identity and as a result created a new social structure which became the backbone of the pre-modern Sudanese society.

In my presentation I would like to investigate this larger process based on the documents with the aid of other written sources, especially Kitāb al-Ṭabaqāt composed by Muḥammad al-Nūr b. Ḍayfallāh in the early 19th century. I will refer to the accounts of European travelers, such as Theodoro Krump and James Bruce, as well as the oral tradition preserved by the local community living today next to the archaeological site of Old Dongola.

**Amani Yousif BASHEER,⁽¹⁾ Neimat MOHAMED⁽²⁾
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⁽¹⁾ NATIONAL CORPORATION FOR ANTIQUITIES AND MUSEUMS, SUDAN
⁽²⁾ KHALIFA HOUSE MUSEUM, ⁽³⁾ NYALA MUSEUM

The Western Sudan Community Museums: a new approach to heritage protection and community peace building in Sudan

The National Corporation for Antiquities and Museums Western Sudan Community Museums Project, sponsored by the British Council and the ALIPH foundation, is a new Sudanese approach to heritage protection and peace building between communities. The project was initiated in three museums: Darfur Museum, Nyala and South Darfur; Sheikan

Museum, El Obeid, North Kordofan; and Beit El Khalifa, Omdurman, Khartoum. All of these museums celebrate a common Western Sudan heritage. The restoration of the historic buildings and creation of community spaces around the idea of “What do you want to do in your museum” has stimulated an exciting living museum space in which communities not only come and participate in their living culture, but also in giving meaning to their past heritage. The project has created surveys of heritage in each area to illustrate their diverse intangible and tangible heritage, and most recently created a Green Heritage Project to look at the impact of climate change on the living heritage of Sudan. The approach includes new workshops to create education programmes in each museum for all the different communities, age groups, and abilities, as well as open access to a wide range of groups. This presentation celebrates the achievements of these museums written by each community museum director, and shows the way forward for developing more community museums throughout Sudan.

Mohamed Albdri BASHIR

UNIVERSITY OF KHARTOUM

The Meroitic afterlife: new insights from Kedurma, Third Nile Cataract region

Kedurma is located in Nubia, about 600 km north of Khartoum. It has long been known as a major Meroitic town with elite residences, industrial areas, residential quarters and a cemetery. The Meroitic cemetery of Kedurma has not been completely investigated. However, limited excavations were conducted in the cemetery. New systematic excavations started in 2021 with support of the National Geographic Society for one season. This paper presents the data for 17 graves that were investigated at the time, revealing new details of the burials that characterized the site of Kedurma and showing that a changing form of funerary practices. The excavated graves reveal practices and attitudes about burials and how mortuary practices can express social identities.

Firew Terefe BEKELE

INDEPENDENT RESEARCHER

Ancient Egypt and Oromo

The association between ancient Egypt and the Oromo nation of Ethiopia has been completely forgotten. Stories of the Oromo nation’s might did not survive in the history of its successor kingdoms, possibly because of the influences of Christianity and Islam. It was not until the early 20th century that the Oromo nation received its place in ancient history with the works of the well-known Egyptologist W.F. Flinders Petrie.

A scientific examination of the ancient Oromos reveals that they were closely related culturally, historically, genealogically, linguistically and in many other ways to the ancient Egyptians, who built sphinxes, tombs, stelas and ruled ancient Egypt as pharaohs, queens and higher government officials, predominantly during the 12th, 18th and 25th Dynasties. They produced a civilization and philosophy that had many of its own unique attributes and was far more advanced than in many other regions of the world at this time.

Ancient Egypt and the Oromo examines the amazing history and legacy of one of the most interesting places in the world. Along with pictures of important people, places, and events, you will learn about an association between ancient Egypt and the Oromo nation, the largest ethnic group in the horn of Africa, with a total population of more than 50 million.

Przemysław BOBROWSKI and Maciej JÓRDECZKA

INSTITUTE OF ARCHAEOLOGY AND ETHNOLOGY
POLISH ACADEMY OF SCIENCES

Early and Middle Holocene Societies in the southern part of the Egyptian Western Desert in light of research conducted in the area of Bargat el Shab and Nabta Playa

For nearly 50 years, the Combined Prehistoric Expedition (CPE) and the associated missions organized by the Institute of Archeology and Ethnology of the Polish Academy of Sciences have been conducting excavations in the Western Desert of Egypt. Among the most important achievements of the CPE in the Western Desert is the confirmation of intensive Neolithic settlement in the Gebel Nabta, Gebel Ramlah, Bir Kiseiba and Bargat el Shab regions, based on the breeding of cattle, sheep, and goats, growing and gathering wild millet, and the discovery of megalithic complexes. Moreover, long-lasting-research has given rise to a general scheme of cultural development in the Western Desert. It is related to climatic fluctuations and settlement changes observable in the sequence of wet and dry periods. Each wet period had its specificity with regard to precipitation, fauna, flora, etc. Changing conditions required cultural adaptations reflected in lifeways and social organization. Can we, in light of the latest research, speak of a full Neolithic packet in each of the outlined principal phases in the region? In our presentation, we wish to show the complexity of issues of Neolithic genesis and development in the Western Desert, from the early Holocene settlement in the Desert, through the Holocene Optimum, until the end of prehistoric settlement in the area at the end of 4.5 ca cal. BP.

Issues in identifying a possible Middle Nubian mining settlement at Site 21, Wadi el-Hudi

Site 21 at Wadi el-Hudi, 35 km southeast of Aswan, presents an archaeological conundrum. The Wadi el-Hudi Expedition's recent 2021 season surveyed a site with features typical of a small Middle Kingdom mining settlement, including a starter mine (a test trench to investigate the quality of mineral deposits) and several dry-stone one- and two-room buildings. The buildings at Middle Kingdom mining settlements are typically clustered together, yet at Site 21 the small structures are scattered around the site and spaced far apart. The pottery on the surface of the site is overwhelmingly Middle Nubian (C-Group) with very few early Middle Kingdom sherds. Further, almost every open form (i.e. bowl) at the site are Middle Nubian pots and all closed forms are early Middle Kingdom Egyptian. The substantial quantities of Middle Nubian pottery and atypical arrangement of dry-stone structures raises questions about who lived and potentially worked at Site 21. This issue is central to current methodological and theoretical debates over how we recognize identity in the archaeological record. Site 21's pottery, and to a lesser extent architecture and starter mine, will be explored in this talk in order to address how we recognize and understand Middle Nubian settlements in Egypt. This site is particularly important because, if Site 21 is indeed a Middle Nubian settlement, it could indicate that Nubians were active in mining in the Eastern Desert at the same time as Middle Kingdom mining operations.

Abigail M. BREIDENSTEIN

BINGHAMTON UNIVERSITY

The growing utility of paleogenetic studies in ancient Sudan: best practices from the field

For decades, the field of paleogenetics has progressed rapidly, facilitating major advances through the development of baseline genomic datasets and blending with the social sciences to develop a more robust, holistic research approach. As a window to the past, ancient genetic data can build upon archaeological and historical research by characterizing the genetic landscape of past individuals and populations. To date, paleogenomic research in Africa has lagged behind its equivalent in other regions of the world, particularly Europe, which is largely neglectful given the genetic diversity that arises from the continent having cultivated modern humanity and our global diaspora. As the Nile Valley's history stretches back 12,000 years, there is a great potential to further our understanding of the complex demographic events, environmental changes, and cultural shifts via utilization of paleogenomic technologies. When properly paired with archaeological, anthropological, and historic data, ancient genetics can serve as a valuable source of information for investigating

patterns of human variation and reconstructing the ancient past. The focus of this presentation will demonstrate the utility of paleogenetics as a new lens through which to examine Nubian history and contribute to the growth of accessible datasets for the region. As new scientific methods continue to be incorporated into anthropological research, there must continue to be a greater call for its users to optimize methodologies, encourage responsible practices, and facilitate wide-spread data-sharing for all scholars to benefit from the application of paleogenetics. This talk will introduce current technologies and best methods in use, then discuss the impact and future directions of paleogenetic work in Nubian studies.

Julia BUDKA

LUDWIG MAXIMILIAN UNIVERSITY OF MUNICH

The Munich University Attab to Ferka Survey Project 2018–2022: towards a contact space biography

The area which is the focus of the Munich University Attab to Ferka Survey Project (MUAFS) is a stretch along the Nile including various islands between Attab and Ferka in northern Sudan. Throughout the ages, the area has been a contact zone between various cultural groups and either the northernmost realm (e.g. for the Kerma Kingdom) or the southernmost region of influence (e.g. for the Egyptians in the early New Kingdom).

The MUAFS concession was previously surveyed by the Sudan Antiquities Service together with the French Archaeological Research Unit under the direction of André Vila in the 1970s and multiple sites, comprising settlement and funerary remains as well as rock art, fortresses and churches, spanning from the Palaeolithic to post-Medieval periods were documented.

The MUAFS project applies a landscape biography approach, investigating encounters of humans and landscapes in a peripheral borderscape with a *longue-durée* perspective, considering all attested finds from Palaeolithic times until the Islamic age. The major goal is to evaluate the specific living conditions in this contact space with a special focus on humans, human activities, technologies, materiality as well as animals.

The paper will give an overview of the activities and results of the MUAFS project from its start in 2018 until 2022, with a special focus on the ongoing subproject ERC DiverseNile focusing on the Bronze Age remains.

Scratching the surface: handling and quantifying pottery from surface clearance – a finds office at Jebel Barkal East Mound

Here we present a first quantified overview of the topsoil pottery recovered during the extensive surface clearance activities of the UM-NCAM project on the East Mound of Jebel Barkal during the 2022 campaign. The activities resulted in a large assemblage of ceramics, representing the later stages of occupation and use of the site, as well as later periods of activity. The material is often mixed, can lack chronological or use context, or have only shallow subsurface stratigraphic contexts. This, plus the fact that such material typically only represents the later life of a site means it is typically of low analytical priority or overlooked entirely in favour of earlier or fully stratified material recovered via excavation.

However, finds from surface clearance, when analysed, can be a significant prospection tool, providing a vital glimpse into the later chronological and cultural life of a site, and therefore constitutes an important analytical resource. Processed and handled correctly, such material has the potential to yield important chronological marker types, helping to differentiate different periods of activity, as well as identifying the function of different parts of the site, especially within urban multi-phased settlements.

Quantification of this material has therefore focused on form and function as the primary basis for classification, and the chronological representation of these aspects across the site. Initial analysis of material from the 2022 season suggests dates primarily between the 4th/3rd century BC down to the 1st/2nd century AD, with some residual earlier and later material. This assemblage represents a so far rare, but important pottery corpus from a domestic site dating to the late Napatan/early Meroitic transition, and into the classic Meroitic period.

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Examining domestic pottery from iron production debris at the City of Meroe

Archaeometallurgical research at the City of Meroe has been ongoing since 2013 and has so far revealed much about Kushite iron production technology and how this evolved during the course of a thousand years.

The role iron production played in the social, economic, and political landscape of Kush is becoming clearer as research progresses. However, the results can be greatly enhanced via a consideration of other aspects of material culture excavated within the metallurgical

deposits. Here we examine the domestic pottery found during the archaeometallurgical excavations, exploring the quantity and type of pottery evident in the metallurgical debris and what this data contributes to our understanding of Meroe and iron production, during the Kingdom of Kush.

Stanley M. BURSTEIN

CALIFORNIA STATE UNIVERSITY

Greek accounts of Kushite kingship: a reconsideration

Classical knowledge of Kush and its environs expanded greatly in the 3rd century BCE. The cause is not in doubt. It was the need of the Ptolemies to find an African source of war elephants to counter their Seleucid rivals' monopoly on the supply of Indian elephants that motivated Ptolemaic exploration of Nubia. The increased knowledge of Nubia and its peoples was ultimately based on the reports of Ptolemaic explorers and elephant hunters that were preserved in the royal archives at Alexandria. Although the original reports are lost, much of their content is preserved in Greek and Roman historical and geographical works like those of Agatharchides, Diodorus, Strabo, and Pliny the Elder. Particularly important is the evidence such texts provide about the Kushite royal succession, especially the importance of the queen mother in establishing the legitimacy of a king. While scholarship on these texts is extensive, its principal focus has been their possible relevance for identifying possible rules of royal succession that would help establish the chronology of Kush. Less attention has been devoted to the question of why Greek ethnographers were so interested in the female basis of Kushite royal legitimacy. Napatan and Medieval parallels occur in the context of disputed royal successions, and it is the purpose of this presentation to suggest that a similar legitimacy crisis occurred in the 3rd century BCE, one that is reflected in Diodorus' account of the unsuccessful attempt to dethrone Ergamenes/Arqamani I.

Michele R. BUZON

PURDUE UNIVERSITY

Tumuli at Tombos: exploring identity and variability

The recent expansion of excavated tumulus graves at Tombos provides an opportunity to explore the connections of these tombs to other areas of the site and region. These tumuli date to as early as the late New Kingdom and continue through the Third Intermediate Period. This cemetery is located in a separate area to the east of the Egyptian-style tombs at Tombos. 35 tombs were excavated. Superstructures consisted of irregular drystone circles of

granite, though some were very minimal or nearly absent due to wind erosion and site disturbance. Under the superstructure was a rectilinear shaft consistently oriented east-west, which lead to a north facing side chamber/niche in nearly all tombs. Several graves contained more than one individual, often with obvious disturbance caused by the second or third burial. The vast majority of individuals were buried in an extended position with head to the west; two individuals were in flexed positions. Several graves revealed evidence of beds and coffins. While many burials were only found with loose pottery sherds, some individuals were quite richly provisioned with beads and other jewelry, amulets, intact vessels, and figurines. The mortuary structures and practices share some similarities with aspects of graves in the region during earlier, contemporary, and later times, though identical structures at other sites have not been identified. Bioarchaeological analyses indicated that the people buried in the tumulus cemetery fit within the local strontium isotope signature and are skeletally variable from the other people buried at Tombos suggestive of differences in lifestyle and possibly origin.

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Strontium isotopes ($^{87}\text{Sr}/^{86}\text{Sr}$) and dental calculus provide new insights on life in prehistoric eastern Sudan

Since 2010, the field activities of the IAES led to the discovery of different cemeteries in the region of Kassala, yielding 182 graves dated between the 5th and the 2nd millennia BCE. The human skeletal sample here analyzed includes 41 individuals from the 5th-millennium-BCE site UA50, 16 from the 4th-millennium-BCE site UA53, 114 from the 3rd–early 2nd millennia BCE site K1XII–XIII, and 33 from the early 2nd-millennium-BCE site K1XIV. The large sample permitted a comparative analysis to trace diachronically the biocultural impact of the Mesolithic–Neolithic transition, dated to the 4th millennium BCE, and of the transition to an increasingly mobile pastoral adaptation, taking place from the 2nd millennium BCE, on the lifestyle of human groups in the region.

The sex and age-at-death profiles showed that all age classes, including infants, were included in access to formal burial for both the Mesolithic and Neolithic periods, regardless of the profound changes in funerary rituals.

Strontium isotope ($^{87}\text{Sr}/^{86}\text{Sr}$) analyses of human dental enamel in individuals from the four sites showed that during the Mesolithic, mobility was likely to be more pronounced, while during the Neolithic, most individuals show homogeneous, most likely local $^{87}\text{Sr}/^{86}\text{Sr}$ ratio values, fitting with the archaeological evidence that suggests diachronic differences in the dynamics of human settlement during late prehistory.

In accordance with the globally reported decline in oral health during the Neolithic, in eastern Sudan an increase in the incidence of oral pathologies is recorded. This trend can be correlated with an increase in the consumption of agricultural-based carbohydrates. Indeed, from the 4th millennium BCE domesticated plants are evident in the archaeological record.

Ongoing analyses of the microfossils trapped in human dental calculus will add new data to better understand the evolution of subsistence strategies in the study period.

Aneta CEDRO and Roksana HAJDUGA

INSTITUTE OF MEDITERRANEAN AND ORIENTAL CULTURES
POLISH ACADEMY OF SCIENCES

Living and crafts in the Meroitic settlement of Selib

The archaeological site of Selib 2, located in the Dongola Reach, is one of the few Meroitic settlements recognised between the Third and Fourth Nile cataracts. Research, which began in 2010, has so far revealed a large administrative/storage building along with four residential units considered as domestic quarters. The stratigraphy of archaeological remains indicates at least two habitation phases and an irregular settlement layout, although, its total extent is still an open question.

In this presentation, we will expound on the daily life of Meroitic villagers, a topic which is still not well recognized. The study of finds to date, in particular of ceramic materials, allows us to draw preliminary conclusions about life in the Meroitic settlement, local technologies and craft organisation. The households of Selib were engaged in multiple types of activities, including large-scale food preparation, the manufacture of textiles, as well as the making of clay objects. The distribution of pottery and its quantitative analysis revealed a relatively high percentage of fine wares and imported vessels, mostly Egyptian amphorae, not expected at a site located in the cultural periphery of the Meroitic kingdom. The foreign pottery as well as numerous fragments of clay vessel sealings indicate that Selib was enmeshed in a Meroitic exchange network. As such, the material culture of Selib provided a rare opportunity to shed more light on the daily life of Meroitic villagers and also the status of the settlement itself.

Gabrielle CHOIMET

SORBONNE UNIVERSITY
& FRENCH ARCHAEOLOGICAL UNIT, SUDAN ANTIQUITIES SERVICE

Rectangular casemate buildings on the Island of Meroe and in Upper Nubia: the case of Building E at Damboya

After three years of work, the excavations of sector E at Damboya are now complete. They revealed the presence of a rectangular edifice built on a foundation platform, which is most likely to be reconstructed as a single storey building with a central courtyard. The implementation of several test pits in and around the edifice enabled us to understand the different steps of its construction history and to highlight a change of layout, with the discovery of several walls and features that were never completed. The building construction stages will be presented, describing in particular the sometimes stratified rubble fill of the various casemate rooms. In an attempt to understand its function, this structure will be compared with similar Meroitic edifices, including a foundation platform. We will conclude with a short presentation of the medieval burials of sector E, which is actually part of a much larger necropolis comprising sectors A and G, currently under study.

Emanuele M. CIAMPINI

UNIVERSITY CA' FOSCARI VENICE

Thutmosis III, Semna and Kumma and beyond. Models of kingship on the border of Kush

Thutmosis III's activities in Kush are celebrated in a ceremonial apparatus that includes both monumental foundations and a group of epigraphic sources. One of the most important foundations of the period is represented by the pair of temples erected at Semna and Kumma: the two New Kingdom sanctuaries were erected in the heart of the defensive system planned by Sesostris III, who set the boundary of the Egyptian state at these locations. In these sanctuaries, the decoration sees the pharaoh legitimised by the divine Kushite world, well represented for example by Dedun, together with the deified Sesostris III himself. The ideological model of these coronation scenes picks up on a tradition that is widespread in the land of Kush, where the power of Thutmosis III is consecrated by the local divine world. Together with these figures linked to the Kushite tradition, an important role in the legitimation of Thutmosis is given to the king's own family, which becomes an active component in the ideology of the time, both in the land of Kush and in Egypt. The analysis of the documentation thus makes it possible to outline the role of the land of Kush in the more celebratory apparatus of the Thutmositid period.

Joanna A. CIESIELSKA

UNIVERSITY OF WARSAW

Social inference from mortuary remains in medieval Nubia: a multidisciplinary approach to the analysis and interpretation of Christian cemeteries at Ghazali in northern Sudan

While the commonly accepted concept of egalitarianism in Christian burial practice is generally true, material evidence collected in Nubia so far attests to great diversity within the framework of general uniformity. This in turn suggests further dimensions of differentiation determining the layout of funerary structures, such as the social identities of the deceased. This paper presents the results of research forming the basis of a doctoral thesis investigating various aspects of the mortuary record as an attempt at extracting information on the social identities of the deceased and socio-cultural makeup of the medieval Nubian population based on an analysis of data from the cemeteries at Ghazali in northern Sudan.

The funerary sphere of Ghazali is composed of three extensive burial grounds (Cemeteries 1, 2, and 3) and a somewhat isolated cluster of tombs of unknown nature (Cemetery 4). Cemetery 2 is believed to be the burial place of the monks living in the Ghazali monastery, while Cemeteries 1 and 3 were probably for the local lay population. Various features of the excavated burial units were cross-referenced for the investigation of social identities of the deceased. First, the distribution of architectural features was investigated within all burial grounds, followed by the investigation of differences between populations using isotopic analysis of diet and mobility. Resource accessibility draws an economic divide between entire groups undertaking various adaptations and modes of living. Meanwhile, variability in burial provisions within Cemetery 2 appears to suggest that status in medieval Nubia was tied to wealth and proclaimed through economic means.

Joanna A. CIESIELSKA

UNIVERSITY OF WARSAW

Women in medieval Nubia: Spiritual leaders

Not much is known about women and their roles in medieval Nubian society, especially in terms of their participation in religious rituals. Royal women of the 25th Dynasty were famously adopted to become the God's Wives of Amun, amongst the most powerful religious and political offices in Egypt. Women's ministry grew even further in Napatan and Meroitic times in association with the role of queens as guarantors of stability in the matrilineal line of succession, which continued into Christian times. Painted decoration at the medieval monastery on Kom H in Old Dongola contains a dance scene with an invocation to the Virgin Mary asking for her intercession in the labour of the king's sister. The scene is suspiciously reminiscent of earlier Hathoric rituals, celebrations of femininity and fertility. As transmitted by Egyptian hieroglyphic accounts and funerary depictions, during the Middle Kingdom, Nubian women were employed as dancers in Egyptian Hathoric rituals; women wearing attires reminiscent of those depictions, equipped with elaborate tattoos, possibly associated with local spirituality, were recorded in both Kerman and C-group graves.

The *ksks*-dance depicted in pharaonic paintings and reliefs is sometimes likened to the *rakaba* dance, often performed at contemporary *zaar* rituals, intended to appease and celebrate invisible anthropomorphic beings of the mortal world, who can take possession of

the human bodies, producing or intensifying human ailments. Women performing *zaar* are invoked when there is no other recourse to help the afflicted. Women take on the roles of doctors, psychotherapists, counsellors, and spiritual leaders. They are thus considered healers, appreciated as magical guardians and protectors of home and community from malevolent influences.

Throughout Nubian history, women appear in ritual contexts on the fringes of official cults. While Christianity clearly deprived women of participation in the liturgy, it might have left some space for magico-religious practice within the sphere of popular beliefs.

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From the field to the website and back.

The archaeological activities of the Sapienza University in Sudan

A survey conducted in January 2020 in the area of the Fourth Nile Cataract, under the auspices of the Sudanese National Corporation for Antiquities and Museums (NCAM), was aimed at identifying a potential site for an archaeological project. The mission was set within the framework of a new programme of fieldwork that found, in the recovery of operations in Sudan, an extraordinary opportunity to give continuity to the 'historical' presence of Sapienza in this country as much as to develop a fruitful research agenda.

Despite the unexpected difficulties raised by the spread of the Covid pandemic, the planned renewal of activities in Sudan has been moving along two interlaced tracks: first, the organisation of a virtual exhibition was aimed at reconstructing, illustrating, and disseminating the most salient aspects of the long history of Sapienza commitment to the safeguarding of the Sudanese archaeological heritage, and second, providing a relevant background for the upcoming joint mission of NCAM and Sapienza, which will work at Hujair Gubli and the area of Magal. First identified by a Polish mission in the early 2000s, the temple site was never investigated on a larger scale. In this perspective, the research project aims at a qualified understanding of the site within its local context, regional landscape, and diachronic transformation, thus addressing multiple issues and combining different strategies of investigation (archaeology, topography and historical geography, conservation and musealisation).

While the virtual exhibition was successfully inaugurated in May 2021 and is permanently available online (<http://mostrasapienzainsudan.saras.uniroma1.it/en/>)—it was also physically displayed in Khartoum as part of the Integration Promotion Project funded by the Minister of Foreign Affairs and International Cooperation (Italy)—the first season of fieldwork is expected to start in autumn 2022.

ABSTRACTS

The present paper will present these two recent lines of investigation and cooperation, discussing both preliminary results and perspectives of research.

Excavations at the pyramids and necropolis of Nuri, 2018–2022

Since 2018, the Nuri Archaeological Expedition has excavated at and studied the site of Nuri, near the Fourth Nile Cataract. This presentation discusses the fieldwork undertaken, summarizes our findings to date, and covers the methods used in the field and analyses. Included will be the tomb of queen Yeturow and a newly discovered late 1st millennium CE cemetery, among other interesting finds. Environmental considerations will also be discussed as rising groundwater has submerged many of the tombs cut into the bedrock and wicked into features closer to the surface. These phenomena are most noticeable in our excavations of the tomb of king Nastasen. Likely the last Kushite king interred at Nuri, his burial monument suffers from poor location, among other issues, sitting lower on the plateau and thus more easily flooded. While not yet completed, underwater excavation of his tomb has been significant and will be discussed within the framework of Nuri as a whole and the site's great potential to inform us about the people of Nuri through the generations and environments in which they lived.

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CHARLES UNIVERSITY, PRAGUE

Evidence of opportunistic use of a fire-modified bone artefact as a weapon at Jebel Sabaloka (Early Khartoum culture, Central Sudan)

The site of Sphinx (SBK.W-60) in the western part of the Sabaloka Mountains constitutes one of the largest hunter-gatherer burial grounds known to date in Northeast Africa. During the 2011 to 2015 excavation campaigns of the mission of the Czech Institute of Egyptology, remains of more than 40 individuals, in differing states of preservation, were unearthed. They are associated with the Early Khartoum culture (about 11–7 ka).

Among these, skeleton B.14 has revealed evidence of interpersonal violence and use of a bone fragment as weapon. The skeleton was directly dated by radiocarbon analysis of enamel bioapatite to 8,637–8,463 cal BP. The B.14 individual was found in contracted position on the left side and had several ground stones (grinders) and pieces of local granite deposited over some parts of the body. The remains that belong to a robust adult, probable male, were cemented to various extent by calcitic concretions. During the cleaning of the scapular girdle in the laboratory, a triangular shaped fragment of a faunal bone was found between the right scapula and the rib cage. The subscapular fossa was perforated and bulging posteriorly following the axis of the apex of the bone tool at the level of its contact with the scapula. Micro-computed tomography of the cemented remains allows for a three-dimensional segmentation of the artefact and a better understanding of its relation to the human remains. All these observations are consistent with peri-mortem trauma occasioned by the probable opportunistic use of a fire-modified bone artefact. Evidence of interpersonal violence is not uncommon in the Nile Valley, notably in Nubia during the Late Pleistocene and the Early Holocene periods, however, it is the first time that this type of behaviour has been documented in Central Sudan during the Early Holocene.

Ewa CZYŻEWSKA-ZALEWSKA

POLISH CENTRE OF MEDITERRANEAN ARCHAEOLOGY
UNIVERSITY OF WARSAW

What the Soba pottery says...

The pottery assemblage from the medieval Kingdom of Alwa

An assemblage of pottery from the recent PCMA UW archaeological project at Soba (NCN grant “The spatial organization of Soba: a medieval capital on the Blue Nile?”) contributes new material for the study of medieval pottery from Sudan. This interesting collection is comparable with the finds from the excavations of the British Institute in Eastern Africa at Soba in the 1990s, offering at the same time an opportunity to examine the technological aspects of pottery making in the context of the early results of the author’s ethnoarchaeological research into the pottery tradition in modern Sudan. Such research is intended to increase understanding of ancient ceramic production techniques and regional patterns of pot distribution. The assemblage will be presented in the context of earlier finds from Soba, discussing the homogeneity of this pottery tradition. The main focus will be on attestations of the technical processes involved in potmaking and decoration, such as impressed textile patterns and pebble-beating, which give insights into production techniques used in the medieval period when compared with recent ethnoarchaeological observations.

The ancient and historical sites in greater Omdurman

This study contributes some new information on Omdurman, which is known as a hub between the center and other parts of Sudan, especially the west, in the early centuries. During the period of the Mahadiya state, from 1885–1898, the city was the capital of Sudan. Many historical sites from the Mahadiya era still exist in the city: the Mahadi domed tomb, Khalifa house and mosque, defense wall and some gates like Abdalgaym gate and the western gate, defensive forts, the Salatin Sabeel “non-profit drinking-water building for common people”, the historical Omdurman market (*sug*), and the Quarrari mountain (*gebel*).

Rachael J. DANN

UNIVERSITY OF COPENHAGEN

Reinvigorating Scandinavian research in African archaeology

The Scandinavian Joint Expedition to Sudanese Nubia (1960–1964) was part of the UNESCO-coordinated international campaign to salvage sites threatened by construction of the second Aswan High Dam in southern Egypt. Uniquely, the expedition involved researchers from Sweden, Norway, Denmark, and Finland, generating a wealth of data and a series of nine major excavation reports. Many of the finds, including human osteological material, were exported from the Sudan and are now housed in museum and institutional repositories in all four countries, and most are accessible for further study. Several Scandinavian archaeologists who participated in the fieldwork or worked on some of the materials recovered during the project, went on to develop careers in African archaeology or Egyptology, while others gained prominence in osteoarchaeology or Scandinavian archaeology. However, despite the great success of the SJE and its impact on the careers of several individuals, Nordic country researchers today are poorly represented in the related fields of Nubian studies (especially archaeology), African archaeology, and Egyptology. With generous support from the joint committee for Nordic research councils in the humanities and social sciences (NOS-HS), the Reinvigorating Scandinavian Research in African Archaeology programme of workshops and online meetings, launched in May 2019, has sought to explore the legacies of the SJE, the continuing research potential of the SJE collections and archives, and the opportunities these provide for a new generation of researchers based in Nordic countries to (re-)engage with Nubian materials and African archaeology more generally. This presentation will provide a summary of these activities, the accomplishments, legacies, and interconnections established by the work of the Scandinavian Joint Expedition to Sudanese Nubia, their degrees of entanglement, and the affordances they offer for a new comparative, integrated analysis.

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Economic space of population groups on the Fourth Nile Cataract and beyond, evidenced in the transfer of pottery and technological know-how

Since 1991, laboratory analyses have been carried out on 1245 ceramic fragments dating from the Mesolithic to the Christian period and recovered from the area of the 4th Nile Cataract and beyond. The vast majority of the analysed sherds were found at various sites located in the Fourth Nile Cataract region (mainly from sites where excavations were carried out by the Archaeological Museum in Gdańsk). Results from most of these analyses have been published in articles about the individual sites. At this juncture, the authors would like to present an analytical-synthetic study of all of the analyses. The aim of this study is to examine issues concerning the economic space of various population groups. The results of the study attest to change and continuity in raw material use and pottery technology in the Fourth Nile Cataract region as well as to barter/trade on both a regional and long-distance scale. A change in technology and the transfer of technological know-how across a wide territorial expanse during the Meroitic period are also attested.

This study is based on the results of chemical analysis by WD-XRF, MGR-analysis, K-H analysis and thin-section studies.

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Assessing the impact of locally available raw materials on pottery technology: a case study from Musawwarat es-Sufra

Musawwarat es-Sufra was one of the most important centres of religious life during the Meroitic period (c. 300 BC–AD 350) and the first of its kind to be built beyond the Nile Valley.

The pottery discovered at Musawwarat was subjected to various analyses. The results of this work revealed the presence of wares made from wadi clays tempered with crushed grains of kaolinitic sandstone and from alluvial clays tempered with organic matter. Analysis results point to the use of higher temperatures for firing vessels made of wadi clay (mullite detected by X-ray diffraction) compared to vessels made from alluvial clay.

Did pottery made of wadi clay lack organic temper and have to be fired at higher temperatures on account of the functional properties and mechanical parameters of the ceramic bodies made from wadi clays? In order to answer this question an experiment was performed: local raw materials were obtained, pots were made from them and fired in a variety of ways. The experimental firing, carried out at Hamadab in 2017, showed that in a bonfire fuelled by cow dung a temperature of 1050°C can be reached in 30 minutes (mullite was detected by X-ray diffraction in vessels fired this way). Functional properties were also analysed, revealing that slip was not only applied for aesthetic purposes but also played an important functional role.

As expected, the results of the analyses confirmed the hypothesis that there was a strict relationship between the type of raw material and the technology used by ancient potters.

Methods used: chemical analysis by WD-XRF and pXRF, MGR-analysis, SEM-EDX, K-H analysis, analysis of mechanical properties (tensile strength by Brazilian test), functional properties analysis (thermal shock resistance, water permeability).

Lorenzo DE LELLIS

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Medieval settlement and population dynamics in the Dongola Reach: an analytical approach

The Dongola Reach region is an area of paramount importance in the history of Nubia, especially for the medieval period when it became the seat of the capital of the Makurian kingdom. The constraints imposed by the linear nature of the riverine settlement system, stretching on a narrow strip along the course of the Nile, did not inhibit the foundation of a significant urban centre and the development of an extensive settlement system, partially inherited by the Islamic communities of the post-medieval period. The present paper introduces the preliminary results of an effort directed at the re-evaluation of the published data, produced during the last half century by the various survey efforts that concentrated on this area. The available data have been consolidated into a database connected with a Geographical Information System, which enabled the use of spatial analysis and analytical methods for the examination of the data. The resulting investigation revealed phenomena of continuity/discontinuity, transformations, adaptation and the presence of focal points that shaped the settlement strategies and population dynamics of the Dongola Reach through the medieval period and beyond.

**Nubia in Transition:
pottery indicators of the metamorphosis
between Christian and Islamic societies in Old Dongola**

This paper aims to examine the borderscape of Christian and Islamic Nubia through the lens of pottery from Old Dongola. The ongoing ERC Starting Grant “UMMA” investigates the urban metamorphosis between the Christian Kingdom of Makuria and the Islamic Kingdom of Dongola Town, related to the Funj Sultanate. This research has brought to light new data indicating the character and dynamics of transition between the Christian and Islamic occupation of the city. The undertaken studies of the pottery from this period established a new methodology, as well as phasing based on a seriation approach to vessels coming from well-stratified deposits supported by a series of ^{14}C dates. This analysis collected new data and placed them in narrow chronological frames where the transition between the Makurian and Funj periods could be tracked. The pottery metamorphosis of this borderscape signifies continuation and innovation entwined together within the chaîne opératoire. Application of the Great and Little Tradition approach also helped to understand the dynamics of such changes. For instance, one of the decorative motifs of the Terminal Christian and Funj periods, crosshatching, remained unchanged although techniques of execution shifted from painting to incising. The metamorphoses also concern the general functions of vessels and their use in domestic spaces that could be noted due to well-defined contextualizing and phasing of finds. Moreover, the Dongolese finds shed additional light on the evolution of dining habits in the borderscape of Christian and Islamic inhabitants of Nubia.

Matteo DELLE DONNE and Alessia CESARO

UNIVERSITY OF NAPLES “L'ORIENTALE”

**Plant use in Kassala region (Eastern Sudan)
during the 5th millennium BC**

Recent archaeobotanical research carried out in Eastern Sudan provided useful evidence regarding the interactions between man and environment for the period between the 4th and 1st millennium BC. The main focus of these investigations has been the definition of the process of sorghum domestication from the 4th millennium BC (Butana group, Kassala Phase) onwards, through the study of ceramics and burned clay fragments with plant impressions. Conversely, archaeobotanical studies carried out on the 5th millennium Mesolithic sites (Malawiya Group, Saroba Phase) were scarce. In 2015, the Italian Archaeological Expedition to the Eastern Sudan of the University of Naples “L’Orientale” and ISMEO started the excavation of the site UA50, where previous field surveys showed the presence of Pre-Saroba materials.

The main goals of this excavation were to obtain information on this still little-known Mesolithic phase and to provide insights into the lifestyle and adaptive strategies of the human groups inhabiting the region in the 6th (Amm Adam Group, Pre-Saroba Phase) and 5th (Malawiya Group, Saroba Phase) millennia BC.

For this purpose, environmental samples were collected routinely during the excavations conducted yearly until 2019 when, during the exploration of the excavation units UA50 IX and X, a new pilot archaeobotanical research project was launched. Soil samples from different layers of the shell middens investigated were collected, representing more than 100 litres. They were dry-sieved in nested sieves (0.8, 0.4, 0.25 mm) and bagged separately. More than 100 baked clay lumps were collected to be used for the search of plant impressions. The preliminary examination suggested generally low plant remains and impressions. The first results pointed to the exploitation of sorghum, millets, other grasses, and some wild fruits, underscoring the widespread practice of utilizing a range of edible wild plants.

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Wadi Halfa: developing a border city

Wadi Halfa was a city in Northern Sudan that developed at the beginning of the last century. Located at the border with Egypt, its area was, not only in antiquity but also in more recent times, the theater of important events and an open-air museum of fine, interesting and impressive monuments. The construction of the Aswan High Dam, in the 1960s, submerged the city and its surroundings. Although people were resettled in the Kassala area, some of them, challenging destiny, remained and today form the population of the new city of Halfa built on the shores of Lake Nasser / Lake Nubia. This presentation analyzes how this apparently isolated, but strategic border city could, through the creation of the planned Nubia Museum of Wadi Halfa, become a cultural, scientific, and tourist hub for the entire border area and beyond.

Aaron DE SOUZA

AUSTRIAN ARCHAEOLOGICAL INSTITUTE

Circles and squares: looking again at 'Nubian' habitation sites of the Second Millennium BCE

It is no secret that understandings of ancient Nubian history and culture during the Second Millennium BCE have been largely skewed by two biases, namely a reliance on Egyptian written sources and the dominance of mortuary data. While we know a great deal about ancient Nubian burial practices, we know little about everyday life in the region. What we do know is shaped by certain assumptions: Middle Nubian habitation sites are temporary, circular, and constructed using drystone, and by contrast, Egyptian domestic architecture is rectangular, built of mud brick, and designed for longevity. But how correct are these old assumptions?

Through its investigation of non-urban 'Nubian' habitation sites, the ongoing "Living Nubia" project has found that 'Nubian' habitation sites are difficult to identify and define, and that the differences between Nubian and Egyptian settlements are indistinct. This becomes especially clear when architecture is considered together with associated material culture; sites that appear architecturally 'Nubian' might be materially 'Egyptian', and vice versa. These contrasts raise questions about the identities of the people who built and inhabited these places, and about the character of the socio-cultural environment in which they existed.

By integrating new examinations of legacy data from long-overlooked habitation sites along the length of the Nile Valley together with more recent discoveries, the project challenges us to rethink fundamental questions: What actually is an ancient 'Nubian' settlement during the Second Millennium BCE? Can such a thing be defined? And ultimately, can we continue to draw clear divisions between what is 'Nubian' and 'Egyptian' at settlement sites?

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Greek manuscripts from Qasr Ibrim: an announcement of a new project

Archaeological work carried out by the Egypt Exploration Society expedition at the site of Qasr Ibrim brought to light the richest collection known of textual sources from medieval Nubia. Excavators discovered 70 complete manuscripts and over 1000 fragments written in all three languages of Christian Nubian literacy, namely Greek, Coptic, and Old Nubian. The goal of the recently launched project is to prepare a complete publication of the Greek part of this material. The collection comprises about 70 items mostly discovered within and around the cathedral of Qasr Ibrim, and considered to be remnants of the cathedral library. Only selected items of this collection have been published so far and those already edited require revision. Among the unpublished manuscripts one can identify already at this initial stage of the project fragments of Biblical books, hagiographic compositions, and texts for liturgical use, including unique examples of wooden tablets with liturgical hymns. The Qasr Ibrim manuscripts are important for reconstructing various aspects of cultural and religious life of Christian Nubia, especially the liturgy of the Makurian Church.

Remarks on B2500 (Abasseya, Jebel Barkal)

In February 2019, the archaeological project at the Abasseya site was completed. This was an interdisciplinary project where different types of interventions were carried out beyond the strictly archaeological. Among these, the architectural restoration work *in situ* and the reconstruction of one of the columns from the site in the Karima Museum stand out. The project ended with the preparation for exhibition of Abasseya's main building: B2500. At the archaeological level, the study of specific aspects sheds light on the meaning of the remains found. This, together with the analysis of the materials, allows a chronological framework to be established, as well as a historical and geographical context. Architecturally, the type of construction and the materials used are aspects that reveal the relationship of the remains found in Abasseya, identified as a religious complex, with the area of Barkal. On one hand, B2500 and the other remains associated with this building would be extending the known limit of Barkal's religious area. On the other hand, this complex shows a whole series of similarities that bring it closer to the religious complexes in the Meroe area and would make it the only one of its kind present in the Napata area.

Elena D'ITRIA

UNIVERSITY OF NAPLES "L'ORIENTALE"

The role of personal ornaments in shaping Kerma identity

Writing a history of the Kerma Empire relies on an interpretation of archaeological data because the Kerma culture is without a written tradition and indirect Egyptian sources give a biased view. This presentation will focus on the collections of personal ornaments of the Kerma culture currently stored in the MFA of Boston, the NMS of Khartoum, and the MAH of Geneva. These collections, digitalized and examined in detail, consist of necklaces, circlets, and several amulets.

The focus of this work will be turned towards material culture, considered as a crucial source to describe Kerma's identities, social behaviours, and practices. Within the set of material culture, ornaments hold particular importance because they reflect access to, and distribution of, natural resources as well as shaping technologies. This presentation will focus on this little-explored material and manufacturing technique, as well as the function of beads and their possible role and meaning in the context of the Kerma culture. The study of ornaments may also contribute to personal body decoration, related to group identification or differentiation, and individual identity.

These small finds not only showcase the skills of ancient craftsmen, but must also be considered as products of complex interactions between the Kerma people and other communities, such as Egyptians, C-Group, Pan Grave, and people of Punt. To try to explain

the impact of ornaments on shaping Kerma society, the finds will be regarded as constitutive factors that shape human action, society, and history through their affordances. Thus, the ornaments will no longer be considered only the result of human intentions, but as also having agency as subjects in their own right. In this framework, the study of ornaments also aims at elucidating the social role of these objects in local contexts and may contribute to the exploration of cultural variety at Kerma.

Faïza DRICI,⁽¹⁾ Camille LABIA,⁽²⁾ and Vincent RONDOT⁽¹⁾

⁽¹⁾ LOUVRE MUSEUM
⁽²⁾ SORBONNE UNIVERSITY

Digging in databases: an inventory of Meroitic and post-Meroitic objects in Egyptian collections

The Répertoire d'Iconographie Méroïtique (RIM) project, which was launched in 2018, aims at compiling and analysing the images produced and used in the material culture of the Meroitic civilization.

Due to the geographical position of Nubia as a frontier land, and to the impact of the rescue missions surrounding the Aswan dam construction, the Egyptian collections are of great importance to the RIM. During the past years, a tentative directory of the Meroitic and post-Meroitic ("X-group") objects was established, using the Egyptian Museum's database and the Journal d'Entrée copies.

This presentation aims at summarizing the collected information, its possible uses and the interrogations it raises. More than 3000 objects were listed, with their *Journal d'Entrée* data, and their last known locations and photographic status were compiled. This provides a vue d'ensemble and brings to light interesting groups of artefacts, from seals to bronze bowls, carved ivory plaques and (unpublished?) ostraca. Besides their obvious interest for researchers in Nubian studies, they can provide insight into the collections' histories, and also benefit from the expertise of specialists who will be able to recognize those which have lost their context. Moreover, this work raised methodological questions, namely, what information, in what shape, is pertinent, and how it can be disseminated in the most cost-effective way.

By sharing our results, we attract attention to those artifacts and to augment the volume of the shared corpus upon which this community bases its research. Furthermore, the resulting file provides both a different way to access the Egyptian Museum's collections and a snapshot of its long history, which made this a work of database and Journal d'Entrée archaeological digging, if such a comparison is possible.

New research in Soba East: results and challenges

This presentation is an overview of the multiple research tasks undertaken by the Soba Expedition between 2018–2022, the focus being on the results and the challenges faced by the team. A large-scale geophysical survey, in tandem with archaeological excavations to verify various types of magnetic anomalies or radar readings, has covered the entire ground area available for research at the site (approx. 50 ha), yielding new data on the spatial organisation of the Alwan metropolis, such as identification of unknown city districts, a street network, cemeteries and traces of a garden within the city. Small finds and samples obtained during the excavations have opened new paths of scientific enquiry. Ethnological interviews and consultations with the local community have helped to understand various approaches to archaeological heritage and to initiate discussion on the future of the site in the context of a rapidly developing suburb of Khartoum. Extensive training programs tailored to early-stage researchers (one-month field schools) as well as experienced researchers (one-week workshops) have continued to build capacity. Last but not least, the building of a storage room for archaeological finds from Soba has launched a project to establish facilities for research and education. Summing up these activities will be a reflection on the opportunities and challenges for further fieldwork and on ways in which our actions should and/or can develop.

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Preliminary investigation of mortuary ceramic material from Nuri, Sudan

Recent fieldwork conducted at Nuri, Sudan (located in the Northern State near the Fourth Nile Cataract), as part of the Nuri Archaeological Expedition, has uncovered multiple cultural horizons (i.e. cemeteries) indicating further occupation of this sacred plateau following the Napatan period (c. 760–310 BCE). Material culture including ceramics recovered from these

burials serves as a primary means to date and contextualize these cemeteries. Here we present preliminary work conducted on the ceramics recovered from eleven tumuli excavated in 2019–2020. Burials consist of large earthen superstructures over a shaft tomb with niches containing skeletal remains and typically two to three vessels placed alongside the body. While most burials show signs of disturbance, the sherds of more than 47 intact or broken vessels were examined to characterize vessel type, macroscopic fabric, design type and motif, surface treatments, and measure and/or reconstruct vessel shape and form. Collectively the burials contained handmade beer jugs, globular storage jars, burnished bowls, a wheel-made drinking cup, redware bowls, closed mouth jars, and shovel sherds or scoops with similar construction, fabric, and decoration to material dating to the Meroitic and Late Meroitic periods. This conclusion is bolstered by radiocarbon dates from the skeletal remains of three separate tombs dating this cemetery to approximately 400 BCE through 240 CE. Comparatively, the impressed, stamped, and/or painted designs that decorate these vessels have several parallels from the 4th Cataract area and beyond, however those documented from Nuri show a unique character not found in published works. This is a first look at the material culture excavated from mortuary contexts at Nuri, excluding the pyramids, allowing us to better understand and address large questions about the occupational history of this significant Napatan site.

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Overseas imports on the Blue Nile: chemical compositional analysis of glass beads from Soba, Nubia

Archaeological evidence as well as textual sources leave no doubt about Alwa's (Alodia's) intense transcultural connections, which are further corroborated by understudied overseas glass bead imports found there. This paper presents the results of an analysis of 23 glass beads from Soba, a most prosperous capital of mediaeval Nubia. Compositional analyses using laser ablation–inductively coupled plasma–mass spectrometry (LA-ICP-MS) have identified glass belonging to a number of broad compositional groups. Three samples were made of soda-lime low-alumina glass produced in the Middle East (v-Na-Ca) and the East Mediterranean (m/v-Na-Ca). The remaining beads were made of two types of mineral-soda high-alumina glass (m-Na-Al), being West Indian and North Indian in origin. The results of this study provide new evidence for the provenance and chronology of glass beads marketed in Soba and Northeast Africa between the 9th century and the 14th, and they also contribute new data to the research on trade routes of that time.

**Francesco D'UVA,⁽¹⁾ Alberto DE BONIS,⁽¹⁾ Massimo D'ANTONIO,⁽¹⁾
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Archaeometric study of pottery production from the Southern Atbai Plains (eastern Sudan)

History has recorded, through the remains of the civilizations of the Eastern Sudan, events that testify to the presence of different enduring sites, long regional cultural sequences and developed trading networks in this territory. In this context, an archaeometric study of the ceramics of the area can provide new knowledge in support of archaeological research about the past of Northeast Africa. In a preliminary phase of a larger research study, 90 ceramic samples coming from 15 different sites in the Southern Atbai Plain and covering a time span from 6000 BC to 1800 BC, were analysed via a multi-analytical approach (MO, XRF, XRD, SEM-EDS, TIMS). The raw materials used correspond to immature sediments attributable to alluvial deposits of the Gash and Atbara rivers. Gash sand derives mainly from the weathering of the ANS Shield, while Atbara sand derives from weathering of the Ethiopian Plateau flood basalt. Seven sediments involved as raw material were recognized, which are respectively characterized by inclusions deriving mainly from the weathering of epidote-amphibole orthogneiss, muscovite-biotite orthogneiss, epidote-amphibole orthogneiss with the addition of sedimentary calcareous rocks, quartzite, amphibolite, meta-orthopyroxenite and basalt. Even though the wide diffusion of the different lithotypes of ANS, similar in lithology and chemistry, gives a common character to different parts of the shield, local differences may exist in the isotopic contents. The first results of the isotope analyses states that most of the ceramic samples provide $^{87}\text{Sr}/^{86}\text{Sr}$ isotope ratios values typical of the mantle source material (0.70418–0.70700), however, some samples show $^{87}\text{Sr}/^{86}\text{Sr}$ isotope ratios that diverge towards higher values (0.71078–0.71523). In this context, a study of provenance that exploits the Sr–Nd isotopic analysis may confirm local supply of raw material and define the supply sites in the Southern Atbai Plain.

Dorota DZIERZBICKA

FACULTY OF ARCHAEOLOGY, UNIVERSITY OF WARSAW

Preliminary remarks on the economy of Old Dongola in the Funj period

Ongoing excavations of the ERC UMMA Project at Old Dongola have brought forth a wealth of information on life in the city during the Funj period, from the revival of the settlement at the turn of the 16th century to its decline in the 18th century. Thus far, initial analyses of

household assemblages comprising pottery, basketry, woodwork, leatherwork and textiles have begun to shed light on daily economic activities at and around the site. First results of studies on faunal and archaeobotanical remains have provided new data on agriculture and husbandry. Imported objects, including beads, bangles and smoking pipes have shown connections of the city with the wider world. Among the highlights of the assemblage are also coins and Arabic documents, which bring new, important information on the city's social and economic history. The presented study, launched as the ERC UMMA Project approaches its final season, aims to integrate this information and conduct in-depth research on the economy of Old Dongola during the Funj period. The collected data will be placed in a broader context, showing key actors on the economic scene and resources vital for feeding a precolonial African city.

Salah Abselaziz Mahgoub EDRIS

CAIRO UNIVERSITY

Christian Nubia between Byzantium and the Orient

In the Nile Valley, from the First Cataract south to the area around Khartoum, is located the region formerly known as Nubia. Around AD 350 the area was invaded by the Ethiopian kingdom of Aksum and the kingdom collapsed. Eventually three smaller kingdoms replaced it: the northernmost was Nobatia, between the First and Second Nile Cataracts, with its capital at Pachoras (modern day Faras); in the middle was Makuria, with its capital at Old Dongola; and the southernmost was Alodia, with its capital at Soba, near Khartoum. King Silky (Silko) of Nobatia crushed the Blemmyes, and recorded his victory in a Greek inscription carved on the wall of the temple of Talmis (known today as Kalabsha) around AD 500. Bishop Athanasius of Alexandria consecrated one Marcus as bishop of Philae before his death in AD 373, showing that Christianity had penetrated the region by the 4th century AD, indicating that there was a considerable Christian community from the late 6th century AD to at least the 15th, with the distinct possibility that there may have been Christians in northern Nubia in the 4th century AD.

Jana EGER-KARBERG and Tim KARBERG

UNIVERSITY OF MÜNSTER

Northern Kordofan as a crossroads: interregional linkage and entanglement between Nubia and sub-Saharan Africa

Being largely an archaeological *terra incognita* for a long time, the desert region along the border between Northern Kordofan and the Shimaliya states saw intensive archaeological survey in the past 10 years. For instance, the research activities of the University of Münster

revealed roughly 1500 so far unknown archaeological sites in that area. A first structural analysis of the material culture of the region indicates that the old (but then still very speculative) idea of the role of Northern Kordofan and adjacent Darfur as crossroads between the riverine-centered Nubian kingdoms and the south-west, especially the chain of sub-Saharan African states emerging along the Sahel belt in late antiquity and the early medieval period, might be reconsidered in the light of actual archaeological data.

Different methodological approaches, from classic ground-based survey to the advanced use of satellite data analysis, combined with the application of geo-statistical data analysis, show the close interconnections of parts of Northern Kordofan with the riverine cultures of the Great Nile Bend, as well as continuities and entanglement with the material culture of Western Kordofan (i.e. Zankor) and Darfur. Additionally, different material indicators demonstrate close diachronic interconnections between intensified agricultural and extensive pastoral production systems, and therefore the important role of socio-economy based micro-migration processes within the general patterns of entanglement and cultural contacts.

This paper is intended to present the actual state of research concerning the material culture of the study area between Northern Kordofan and Shimaliya, its role within the wider cultural as well as economic history of Western Sudan, and the socio-economic base of these entanglement processes.

**Iglal EL MALIK, Khalid BABIKIR, Safaa HUSSEIN,
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NATIONAL CORPORATION FOR ANTIQUITIES AND MUSEUMS, SUDAN

Western Sudan Community Museums: the Khalifa House, Baggara House and Mudeira Gateway Conservation projects

The NCAM Conservation Department has been working on the historic fabric of three important monuments in Darfur, Kordofan and Omdurman for the Western Sudan Community Museums Project funded by the British Council Cultural Protection Fund and the ALIPH Foundation. Conservation of the historic Beit El Khalifa built in the 1880s, the Mudeira Gateway, the first modern building in Sudan, built in the 1840s, the Bramble House built in 1898 and the Baggara House built in the 1920s, mark important moments in the administration of Sudan and their restoration has revealed stories about their construction and significance. This paper will reveal the process of restoration that uncovered this history and the significance of this history to Sudan. In addition, collections of the museums have been studied and restored, making the new exhibitions of the museum displays significant to the histories of the museums.

Scholars, the media and structural racism in archaeology: Sudan as a case study

This presentation will discuss three sources of structural racism in archaeology in Sudan from the perspective of a Sudanese archaeologist. The first source is foreign archaeologists, from the first pioneers and continuing until today. Most of the pioneers and recent archaeologists are Egyptologists or worked in Egypt before coming to Sudan and that fundamentally affects their perspective on Sudanese civilization. The second source is the media, particularly foreign documentary films and social media in Sudan. Foreign documentaries often use terms relating to ancient Sudan that have racist meanings and are specifically connected to the Egyptian civilization. This paper will also shed light on an unexpected aspect and will show it is not only the pioneer archaeologists who worked in Sudan or the media that are the only sources behind structural racism, but that a third factor is also involved, being when Sudanese social media itself becomes racist in the argumentation between different Sudanese ethnic groups and their relationship to ancient cultures.

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Detecting settlements: using optical and radar satellite imagery in the Tawkar District, north-eastern Sudan,

Discoveries of lithic tools along the western coastline of the Red Sea suggest the occurrence of archaeological sites of unknown age, mostly concealed under thick layers of sand due to climate changes. Recently, remote sensing proved to be efficient in discovering buried archaeological sites based on the integration of radar readings and optical satellite imagery. This presentation demonstrates the potential of remote sensing in identifying sites and in providing insights into their structure on the example of the Tawkar district in north-eastern Sudan, on the western Red Sea coast. Optical (Sentinel2) and Radar (Sentinel1) data were processed, and the results were extracted using Snap, ArcMap, and Envi software, besides using the Google Earth Engine platform. Also, some remote sensing indices were used to detect features signifying the existence of a site. The preliminary results of this research showed some possible settlements of unknown age characterized by features, possibly structures (a series of circular and sub-circular shapes). Such results shed new light on construction techniques, on the size and function of the settlement, and can give some first

insights into the ancient lifestyle in this region as well as help in archaeological survey and excavation missions in this region.

Ahmed Elameen ELHASSAN

NATIONAL CORPORATION FOR ANTIQUITIES AND MUSEUMS, SUDAN

Water management in the vicinity of the Church at Miseeda

The Miseeda church archaeological site is located in the northern Dongola Reach, on the edge of Wadi Farga. The name of the site comes from the name of the modern village located in the vicinity. The site was identified during a survey of the Mahas region between 1991 and 2002 under the direction of Ali Osman and David Edwards. During the survey, as well as the first works of a new project of the University of Warsaw, a number of wells in the close vicinity of the church were recorded and documented. This presentation will discuss the location of the wells and their building techniques. The possible dating of these constructions will be provided by presenting comparable objects showing similar constructions from Kerma and Mussawarat es-Sufra. The archaeological material will be confronted with the early travelers' records that provide some additional information, helping to better understand local water management.

Abdelgadir ELKHAZIEN

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Archaeological and geomorphological attributes in the Fifth Nile Cataract zone

This paper presents a model based on geo-archaeological mapping for tracking and clarifying the correlation between archaeological and geo-morphological attributes on the eastern bank of the Nile and the neighboring islands in the Fifth Nile Cataract Zone. Benefiting from satellite remote sensing and GIS facilities, the cartographic map "Sudan 1:250,000, Sheet NE-36-G", and the first-hand physical environmental data acquired by ground surveys, the entire target landscape has been classified into 'geo-morphological landforms' represented in the islands, the eastern flood plain, the higher adjacent cultivation land, and the mountainous hinterland and tributaries. The procedure allows for the division of the 'geo-morphological landforms' into 'geo-morphological units' represented in low lands including tributary beds and banks; high lands, including hills; ridges and plateaus; geological structures and distribution; and soil types and distribution. The contextualization of archaeological attributes (as manifested in cemeteries of different periods, sites and features of defensive nature, rock art, and habitation sites) within relevant physical environmental settings shows that certain 'geo-morphological units' represent areas of suitability for certain types of archaeological sites and features.

The territorial network of Lower Nubia during the Graeco-Roman period

During the Graeco-Roman period, Lower Nubia can be considered as a buffer zone disputed by Egypt and by the kingdom of Meroe. In order to exercise better control over this border region, the Ptolemies and their successors, the representatives of the Roman emperor, as well as the Meroites relied on the territorial network. They not only developed some pre-existing settlements, but also founded some new urban and/or defensive sites on the banks of the Nile and in the eastern desert. Nowadays, different sources can be used to understand the role of these settlements and the reasons why some of them were newly founded or reactivated during this late period. Classical authors, papyri, inscriptions and graffiti (in Greek, Egyptian and Meroitic languages) constitute the majority of the corpus, while archaeological evidence and maps drawn up before the filling of Lake Nasser help to build up a complete picture. What can we say from the sources and the archaeological remains? Do they shed some light on the purpose of these settlements (economic, military, religious)? Can we define more precisely the level of control and territorial appropriation of the Egyptian and Meroitic states over this highly strategic region? How was the frontier actively shaped in Lower Nubia? This paper will present the first results of my project about the territorial network of Lower Nubia and the Egyptian and Meroitic governance of this region during the Graeco-Roman period.

Nowadays different sources can be used to understand the role of these settlements and the reasons why some of them were newly founded or reactivated during this late period. Classical authors, papyri, inscriptions and graffiti (in Greek, Egyptian and Meroitic languages) constitute the majority of the corpus, while archaeological evidences and maps drawn up before the filling of Lake Nasser help to build up a complete picture.

What can we say from the sources and the archaeological remains? Do they shed some light on the purpose of these settlements (economic, military, religious)? Can we define more precisely the level of control and territorial appropriation of the Egyptian and Meroitic states over this highly strategic region? How the frontier was actively shaped in Lower Nubia?

This paper will present the first results of my project about the territorial network of Lower Nubia and the Egyptian and Meroitic governance of this region during the Graeco-Roman period.

Elmontaser Dafaalla Mohamed Elamin ELMOUBARK

Governmental protection of archaeological heritage: Soba East as a case study

The Sudanese National Corporation for Antiquities and Museums (NCAM) is the official governmental institution responsible, among others, for identifying archaeological heritage and providing expertise in official, legal enquiries according to the Sudanese Ordinance for the Protection of Antiquities 1999. This paper seeks to explain some of the phenomena that have always bothered many researchers in relation to protection of archaeological heritage in Sudan, especially in regard to the management of archaeological sites constantly threatened with damage and disappearance. This information will help to understand the urgent need in developing new strategies to reduce negative phenomena and modern encroachment on archaeological sites in Sudan.

The country is going through political complications and a severe economic crisis, which may lead to unimaginable consequences. Therefore, it is important to confront the risks associated with political changes, such as exploitation of influences in the absence of proper implementation of the law or through unregulated development and uncontrolled investment projects.

During the 2019–2020 season, I was appointed the NCAM inspector for the Soba Expedition. I had to face many challenges and issues associated with encroachment on the archaeological site. I was taking part in court hearings during which the local landowners were disciplined and stopped from grabbing more land covered with archaeological remains. In this regard, I would like to point out the usefulness of satellite imagery and other remote sensing methods which, in the view of the court, were able to prove the dynamics of the ongoing land grabs in relation to the location of archaeological remains.

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Impact of local community identities on community engagement modes at Gebel Elbarkal

Identity is fluid, subjective and multi-dimensional. As our sense of belonging centres not only on the ways we may (or may not) prompt and present our cultural identities and affiliations but is also concerned with articulating and figuring out a range of other cultural, social, and political experiences. Identity and its impact within the context of this research (“The influence of local communities’ identities towards community engagement modes at Gebel Elbarkal”) refers to the ways in which markers such as ethnicity, gender, nationality, religion, and shared interpretations of the past are used to construct narratives of inclusion and

exclusion that define communities. These narratives produce a set of symbols or lifestyle choices from which individuals make their own selections. The key identity categories that will receive coverage and be in focus within this contribution are ethnicity, gender, class, and age.

The research questions to be answered within this study divide into two main questions. Firstly, how does intangible cultural heritage for the local communities around Gebel Elbarkal maintain, manage, and facilitate them in building their sense of identity? Secondly, how does ethnicity, gender, class, and age identity shape the local communities' engagement mode and affect the nature of their relationship with the site in question? To do so, gender, age, ethnicity, class, and religious identity will be the central dimensions of identity under investigation. This will serve to have a better understanding of how the identity discourses of the local communities and other socially salient categories of identity socially and culturally construct ways of interaction and engagement with Gebel Elbarkal and the Napatan region.

Research on communities has a general assumption of linking a communities' concept with locality and geographically based factors. However, there are communities that define themselves by their social and cultural experience and by their political views and aspirations. Within this study, the community concepts refers to social groups who have a shared set of values, beliefs, and interests. These shared sets of values and shared experiences, as influenced by ethnicity, class, gender, age, religion and political belief, focus around how communities may define themselves. Community engagement, conversely, refers to the ways in which people engage with archaeological sites at specific times, in specific places and historical conditions.

Accepting that heritage is about the construction and expression of identity and that there is a strong link between peoples' engagement motivation with heritage and the symbolic conception of their identity, this section aims to explore how identity construction shapes and influences local community engagement modes with Gebel Elbarkal and what are the consequences and the role of identity construction impact on the site/place uses. This research works towards understanding the connection between archaeology and identity, by paying particular attention to social and cultural constructions and boundaries in terms of interpretation of the past, access to the place, the rights and its negotiation process, and cultural uses of Gebel Elbarkal and the Napatan region archaeological sites among local communities.

Ismael Mohamed Tom ELSANOSI

MINISTRY OF TOURISM

National cultural policy and archaeological practice in Sudan

The interrelation of national cultural policy and archaeological practice increasingly fills the academic discourse and practitioner debates. An examination of how national cultural policy works within the diverse practice of archaeology in its varied types and forms provides an integrating factor in protection, management, and promotions of the archaeological sites.

Throughout a theoretical examination and archaeological practice evaluation, this paper aims to highlight the impact of national cultural policy on archaeological research and practice methods. The need to do so stems from long-held recognitions of the influence of past societies on living ones.

Therefore, the goal of this paper is to emphasize the power of national cultural policy on directing archaeological practice and research in informing and enriching Sudan's ongoing social and political movements. This presentation seeks to investigate routes through which the national cultural policy can implement a comprehensive and sustainable form of administration for archaeological research and practice in order to define, prioritize, and integrate the social into archaeological work.

Asmaa Sayed EL-SAYEGH and Zakaria RAGAB

CAIRO UNIVERSITY

Voices from the Christian past in Nubia: Interpretation of Christian additions in Nubian temples

The 6th century AD saw the rise of Christianity in Nubia. At that time, several Nubian temples in upper and lower Nubia were either totally turned into a complete church design or some Christian architectural installations built and Christian mural paintings added. Later, Nubian temples were relocated by the Nubian salvage campaign, which was undertaken by UNESCO in the early 1960s during the construction of the Aswan High Dam and the reservoir lake behind it. During the process of salvage, the Christian parts collapsed. Thus, since the Christian additions were no longer visible, the management of these temples should be viewed as a part of the monument's intrinsic value. From this perspective, the best management practice is one that reflects the strategy that has returned the Christian parts back to light. This paper is an attempt to visualize how those parts could be presented again *in situ*.

Mahmoud EL-TAYEB

POLISH CENTRE OF MEDITERRANEAN ARCHAEOLOGY
UNIVERSITY OF WARSAW

Early Makuria Research Project. Excavations at Tanqasi: The long-forgotten tumuli field

Tanqasi village lies on the left side of the river Nile, about 17 km downstream of Merowe city. This large tumuli field is located some kilometres south-east of the village towards the

edge of the Bayuda Desert. It contains not less than 250 tumuli superstructures of various size and construction, varying from the very large to the very small.

The Early Makuria research program resumed excavation on the site after a short break of investigations there in the years between 2018 and 2022, excavating 15 tombs located in different parts of the cemetery. The objective was to explore some of the tumuli which are located near the northern and eastern boundaries of the site to determine the chronology and possible patterns of cemetery development. The work which has been conducted so far has identified a broad chronological sequence, from the Late-Meroitic period (3rd–4th centuries AD) down to the Terminal Meroitic culture (5th–6th centuries AD, mistakenly called post-Meroe). It should also be mentioned that the substructures of these burials took on various forms, from a simple beehive shape, conical with descending ramp oriented east–west, and vertical rectangular shaft pits, terminating in more complicated types of U- and L-shaped burial pits. Despite the limited scope of the work conducted so far, it can be said that the research has shed important light on the history of this enigmatic period in Meroitic culture.

Mahmoud Ahmed EMAM

INSTITUTE OF AFRICAN STUDIES, CAIRO UNIVERSITY

Meroitic funerary amulets: further remarks on interpreting meroitized beliefs

The construction of the Meroitic Kingdom was testified by many indigenous traditions. Amulets are considered among the characteristic artefacts of the Meroitic period, but a general comprehensive study of them has never been attempted. Despite the heavy looting of cemeteries in ancient and modern times, they survived in substantial quantities from the royal burials of Begrawiya and Gebel Barkal cemeteries, not to mention non-royal contexts in provincial cemeteries in the Meroitic territory along the Nile Valley.

Studying Meroitic amulets has been neglected in the field of Meroitic studies in the past. This is perhaps because of the fact that studying the Meroitic religion is still in progress and many religious aspects are still not understandable.

The aims of this study are, first of all, to present a typological study for 1762 Meroitic funerary amulets in diachronic and synchronic distribution in spatial configuration from multiple aspects (e.g. shapes, production techniques and materials, regional distribution, and contexts). Second, to identify the distribution of these amulets at an intra-site and more general regional level. Third, to ascribe and determine their method of manufacture from a variety of materials and surface characteristics in order to try and identify production areas and specific typological workshops. And finally, to try to shed light on their indigenous and external influences.

ABSTRACTS

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Complexities of collaboration in postcolonial archaeology: The Community Heritage Center at El-Kurru

Decolonizing archaeological practice is exhilarating but also challenging, as it requires recognition of the many ways in which excavation, archaeological analysis, and museum display are structured by and implicitly reinforce inequalities. It is a process that requires honest self-evaluation and also the willingness to recognize the mistakes that we all undoubtedly make along the way.

This paper presents the process of developing the Community Heritage Center at El-Kurru from 2016 to its planned opening in winter 2023. Its authors represent three of the constituencies for the center: foreign archaeologists, the National Corporation for Antiquities and Museums, and the local community in El-Kurru village. As El-Kurru is part of a UNESCO World Heritage site, the interests of international heritage professionals are also invoked. We discuss development of the conception for the Center as a space to be used by visitors to the site as well as local residents, describe exhibitions and programs that we developed with support from the Humanities Collaboratory project at the University of Michigan, and present different architectural conceptions of the scale and location of the center.

It has been encouraging to see the growing number of community engaged field projects working in Sudan over the past 5–10 years. Presentations of these projects tend to be self-congratulatory rather than self-critical (as is usually true of presentations of more traditional archaeological research). Our self-critique focuses on the challenges of collaboration across inequalities of access to funding, education, local knowledge, and cultural capital

Elgazafi Yousif ESHAG

NATIONAL CORPORATION FOR ANTIQUITIES AND MUSEUMS, SUDAN

Survey at Jebel Dajou: new archaeological sites in South Darfur

The survey was held between 2003 and 2006, it covered the southern part of Jebel Dajou, east of Nyala town; it also covered some sites west and south of Nyala. The survey was conducted by the National Corporation for Antiquities and Museums, Local Ministry of Cultural and Social Affairs and the Tourism Administration Office in the southern Darfur state.

The survey covered 17 sites in general; some of them were visited by A. J. Arkell during the 1930s.

As a result of this work, therefore, we discovered very rich sites with a density of archaeological remains (ornaments, hand axes, ceramics, and iron objects). Some samples have been collected from the eroded graves and settlement sites in order to make a preliminary attempt to evaluate the archaeological materials. As well, we also recorded some rock painting sites at Jebel Dajou and cemeteries with a different type of stone superstructures.

The discovery of new sites in the southern part of Darfur will give an indication about the distribution of some objects and opens a new issue concerning the links between the Nile Valley and the eastern desert.

Mohammed El Toum Mohammed FADLELMOLA

NATIONAL CORPORATION FOR ANTIQUITIES AND MUSEUMS , SUDAN

Fresh look at archaeological discoveries in North Darfour

North Darfur State is located in western Sudan. The state covers an area of 296,000 km². The Greater Darfur Region is considered as one of the archaeologically richest Sudanese regions, with sites spanning from the Stone Age through to the Islamic Funj Kingdom. Many archaeologists have visited the area since the mid-twentieth century and they wrote about the archaeological sites in the region. The war in the region (2003) stopped all of these research endeavours, with very few projects continuing to be carried out in North Kurdufan and in lower Wadi Howar.

An archaeological survey was carried out by a team from NCAM in February 2022 in Northern Darfur. The survey was conducted in the area of Kutum province in Ain Farah region and the Uri Mountains region, in the Mellit province, in the Tagbo Mountains region, as well as Malha, where four interesting archaeological sites have been discovered.

This presentation will discuss the archaeological contents and compare them with general Sudanese archaeology. The preliminary results of the study depended on the following: Stone tools on the surface; pottery on the surface; and stone buildings. Finally, we can say that probably some stone buildings and tools may date back to the Stone Ages (Palaeolithic–Neolithic?), while others date to the medieval era and early Islamic period. The pottery probably dates back to the Neolithic and medieval periods or maybe to a different local culture in the past. The large and unique fortifications indicate the importance of those who inhabited these areas in the past.

Eugenio FANTUSATI and Marco BALDI

INTERNATIONAL ASSOCIATION FOR MEDITERRANEAN AND ORIENTAL STUDIES

Abu Erteila in progress

In the course of the last 12 years our knowledge of Abu Erteila has greatly increased. Once ascertained, a long period of life lasting from the classic Meroitic epoch, the study of its strategic geographical position, of its architectural structures, of the materials employed and the comparison with well-known coeval Meroitic models, now allow for the placing of Abu Erteila among the most meaningful satellite centers of the ancient Kushite capital.

The finding of four altars referable to Natakamani in K 1000, whose replicas have been very recently exhibited in Rome, demonstrate how the king, even during the last years of his reign, updated his kingship ideology and constructive traditions in this center. Moreover, the engraved cartouches on one of them, containing both the proper and coronation names of prince Shkror, written in Egyptian hieroglyphic characters, can probably be considered as the main discovery till now identified at the site.

This presentation will concern a summary of all these aspects and the experiences held in the course of fieldwork at Abu Erteila.

Salim FARAJI

CALIFORNIA STATE UNIVERSITY DOMINGUEZ HILLS

Ancient Kush and the Sudanic kingdoms of West Africa: examination of trans-Sahelian tumuli in Kerma, late antique Nubia and the valley of the Niger River

This paper seeks to provide an overview of key West African tumuli sites as a preliminary discussion for future archaeological and anthropological research by scholars in Nubiology, Egyptology, Africana Studies and Africanist research. Archaeological research on both West African and Middle Nile Valley tumuli has been well reported since the early 20th century. Except for Kevin McDonald's recognition of the affinities between ancient Kerma tumuli and Sahelian tumuli in West Africa there has been minimal research that has studied such tumuli comparatively or viewed them as part of a Sahelian continuum. Nubian archaeology and even Egyptology are silent regarding the Sudanic-Sahelian earthen pyramids and conversely scholars of West African archaeology have excavated savanna tumuli without any mention of ancient Kush or late antique Nubia. The goals of this paper are modest: I seek to reintroduce an arena of scholarship that was proposed a century ago and is now today ripe for transdisciplinary engagement.

New insights from the settlement area of Mahal Teglinos (eastern Sudan)

An important contribution to the history of Eastern Sudan and its relations with the Nile Valley comes from recent studies of the Gash Delta region. Since 2010, the research project of the University of Naples "L'Orientale" (IAEES) collaborating with the National Corporation for Antiquities and Museums investigated several archaeological sites in this area. Particularly, the archaeological investigations of the site of Mahal Teglinos revealed some interesting aspects for the reconstruction of historical processes at the local, regional and interregional scale. Mahal Teglinos (K1) is located East of Kassala in the northern part of the Jebel Taka complex in a small valley. It includes the occupation phase of the Gash Group and Jebel Mokram culture from the 4th millennium BC to the 1st millennium AD.

The goal of this presentation is to highlight some remarks on the settlement area and the westernmost fringes of the site, identified by intensive investigations that have brought to light several living floors and materials. The ongoing studies of this sector provide information on the organization of the settlement areas during two cultural phases and clarify the transition from the Gash Group to the Jebel Mokram culture and its chronology. The integration of the data, coming from the other archaeological sectors of the site and the different sites investigated in the Kassala region, can support the reconstruction of lifestyle and social organization through time. Several finds from K1 highlight the relations between these human groups and Egypt, Upper Nubia as well as the Red Sea coast, including Mahal Teglinos, in an inter-regional network.

Vincent FRANCIGNY

FRENCH NATIONAL CENTRE FOR SCIENTIFIC RESEARCH

New Kingdom Sai: what archaeology says

The Egyptian presence at Sai during the New Kingdom has been the focus of many projects and excavations from the 1950's until now. As a new program is being launched there under the auspices of the CNRS and the Sorbonne University, an opportunity is given to reassess what has been done on a variety of sites on the island belonging to that period, and what can be expected from future missions. Whereas our attention is focused on studying architectural remains, funerary practices, religion and material culture, Sai offers a unique historical context compared to other sites in the region, as it was the scene of the first major Egyptian victory against a large Kerma stronghold, and a strategic place where they decided to establish their first colonial town.

Misinterpretations in the past have occasionally led to erroneous conclusions; this paper aims at presenting our current knowledge of the New Kingdom phase at Sai based on

archaeological sources, putting the remains in perspective with older and more recent periods.

Bogusław FRANCIK

FACULTY OF ARCHAEOLOGY, UNIVERSITY OF WARSAW

Technological choices in the 17th–21st century handmade pottery from Old Dongola

Changes in a chaîne opératoire can be perceived also as changes in a community of practice. Therefore, they can influence (in various ways) the other members of society. The main aim of this presentation is to reconstruct the chaîne opératoire of pottery forming techniques and to present some of the technological case studies observed thanks to applying a specific research approach. This approach allows for a deeper analysis of handmade pottery technology from the late Islamic period in Old Dongola and vicinity.

The majority of handmade pottery material was obtained during archaeological excavations on the Old Dongola citadel, conducted within the ERC Starting Grant project “UMMA – Urban Metamorphosis of the community of a Medieval African capital city”. A second part of the pottery material was collected during ethnographic research in the vicinity of the archaeological site.

The abovementioned research approach is based on the use of thick-section analysis with ethnographical, traceological and petrographic support. By these methods I will outline the problem of the transfer of knowledge and technological choices and their influence on the intended function of the clay vessels. I will discuss the changes in a clay mass composition through the difficulties in access to the raw material and the slow disappearance of knowledge. At the end, I will focus on the problem of mistakes during the clay mass preparation stage.

Tomomi FUSHIYA

POLISH CENTRE OF MEDITERRANEAN ARCHAEOLOGY
UNIVERSITY OF WARSAW

Three years on: evaluation of community engagement at Old Dongola

The DIALOG community engagement project at Old Dongola was instigated in 2019 to establish a rapport and collaborate with local communities on issues relating to archaeology, heritage and development. The three archaeological seasons saw many activities and discussions take place between the archaeologists and local people, and has produced tangible outcomes, such as a heritage and sustainable development plan. While these

successful results are important to acknowledge, the collaborative work has only begun. For collaborative archaeology, Alison Wylie argues “it is crucial to... attend to the qualities of process that make productive partnership possible” (Wylie 2019, 583). What is necessary to maintain or even improve the collaboration process at Old Dongola? As the initial phase of the project—defined by the funding period—has been completed, an evaluation has been carried out to measure the quality of the process so far, and to determine what is to be done in the next phase. The study was conducted by a survey and through interviews with Ghaddar residents, Polish and Sudanese archaeologists and an NCAM inspector. This paper presents the results of the study and discusses how the process of collaborative archaeology at Old Dongola should come about based on them.

Hadia Mohammed Shawgi GAMAL

DEPARTMENT OF ARCHAEOLOGY, FACULTY OF HUMANITIES SCIENCES
UNIVERSITY OF BAHRI

Wood species and their uses in the Meroitic kingdom (based on the SNM collection)

From prehistory into the Islamic period, using wood in various manufacturing capacities was common in ancient Sudan. Manufactured wood products were clearly available during the Meroitic period, in different forms and for different purposes. However, no scientific studies have been conducted to determine the species of wood considered to be very important.

This presentation focuses on studying wood species during the Meroitic kingdom (based on the SNM collections). According to the results, it is evident that from very ancient times wooden objects in Sudan were made of native trees as well as imported timber. Many species were in use during this era. Ebony wood was widely used, it was used to make cosmetics containers such as kohl tubes, in addition to making some types of furniture, such as chairs. Mahogany was also frequently used for making furniture and bowls. Ebony and mahogany are hard woods which are frequent in Sudan today and are known by their solidity and thickness, making them good for fabrication. Many other species were used, but on a more limited scale: Ficus Sycamore, a softwood, and Doum palm were not usable during the Meroitic kingdom. Softwood species do not grow in Sudan, so such wood products may have been imported from abroad or grew in Sudan during the Meroitic kingdom.

**Bordering Nubia:
Egyptian border-making in the First Cataract region
and its impact in Lower Nubia**

The process of state formation has been of paramount importance in the history of ancient Egypt. It led to the creation of the earliest form of territorial polity worldwide, defined by geopolitical borders of some sort. Ancient Egypt bordering practices and resulting borderscapes are often discussed in the frame of inward dynamics and for the dynastic and post-dynastic periods only. The original process of border-making and its impact on neighbouring communities are less acknowledged. This presentation draws on the work of the BORDERSCAPE Project (Polish Academy of Sciences), which investigates how Egyptian state formation impacted and transformed the socio-spatial landscape of the First Nile Cataract region in the fourth and third millennia BCE. It aims at addressing changes in settlement patterns and social scenery in the northern part of Lower Nubia between the fourth and third millennia, interpreting them in the frame of local socio-cultural and political dynamics and the interplay with Egypt.

Enrico GIANCRISTOFARO

UNIVERSITY OF NAPLES "L'ORIENTALE"

**Phasing pottery from Gash Group sites
(eastern Sudan, 3rd–2nd millennia BC)**

The phasing of Gash Group culture, in Eastern Sudan, has been well known since the late 1980s. This was outlined based on the assemblages from Mahal Teglinos, a 10 ha site with a well-preserved stratigraphic sequence, not far from Kassala. At Mahal Teglinos, several phases of Gash Group (Early, Middle and Classic/Late), dating from about 2700 to about 1800 BCE, were defined.

So far, the ceramic collections from Gash Group sites recorded in the surveys conducted in the 1980s were generically labelled as "Gash Group" sites, without further specifications on their phasing. In the framework of the resumption of the study of the collections from these sites, presently kept in the University Museum "Umberto Scerrato" (Naples), sponsored by the Shelby White and Leon Levy Program, it was now possible to propose a phasing for these assemblages. It was also possible to integrate these data with the ones obtained from the study of the ceramics from the sites recorded in the 2010 survey of the region conducted by NCAM, which also yielded Gash Group materials. Moreover, also the materials from Jebel Hawra, a Gash Group site recorded in 2019 east of Kassala, could be considered for this study.

This resulted in the phasing of Gash Group sites, making it possible to outline the diachronic changes in the distribution of the sites in the region between about 2700 and 1800 BCE. On this basis, some preliminary remarks on the Gash Group settlement pattern and its changes through time, as well as on its relations with the earlier Butana Group and the later Jebel Mokram Group settlement patterns will be proposed.

Armgard Gudrun GOO-GRAUER

TECHNICAL UNIVERSITY OF BERLIN

The design of Nubian wedding rooms

The paper presents the decoration of wedding rooms in Egyptian Nubia before the resettlement of the Nubian population due to the construction of the Aswan High Dam in 1964.

In the former Nubian villages, it was the task of a bride to decorate a wedding room before her marriage. This activity was part of the extensive house-decoration, consisting foremost of wall paintings, which the women painted with earth colors on their home's outer and inner walls.

Their rich and often opulent adornment with three-dimensional objects made the Nubian bridal rooms particular. Homemade handiwork hung up on the walls or suspended from the ceilings formed the main feature of the room's interior design. On top of this, a mixture of peculiar items was displayed. These could be anything the brides considered valuable and composed inventively into an artistic design, whether as an assemblage or as "objects trouvée".

The custom to furnish a bridal room in this manner was discontinued after the Nubians were involuntarily moved to the new villages north of Aswan. The spacious and individual vernacular architecture of former Nubia was there replaced by uniform, narrow dwellings, equipped now with contemporary furniture.

The material of this paper was collected during fieldwork in former Nubia. It will form a segment in the publication "Colors of Nubia, remembering the lost Art of Women's House Decoration before the High Dam flood of 1964", scheduled to appear in 2023.

Lesley A. GREGORICKA⁽¹⁾ and Brenda J. BAKER⁽²⁾

⁽¹⁾ UNIVERSITY OF SOUTH ALABAMA

⁽²⁾ ARIZONA STATE UNIVERSITY

Evaluating community and residential mobility among Kerma-period pastoralists using strontium isotopes

While the Kingdom of Kush is often depicted as secondary to the Pharaonic Egyptian state, outdated models of development necessitating sedentism and agricultural surplus have been increasingly contested in favor of African-based frameworks, where state authority amongst pastoralists stemmed from control of herds, exchange networks, and powerful alliances. Nevertheless, patterns of mobility among Kerma-period pastoralists and their impact on community structure remain poorly understood. In this study, we analyzed the strontium ($^{87}\text{Sr}/^{86}\text{Sr}$) isotope ratios of 50 teeth from 27 individuals dating from the Early/Middle, Classic, and Late Kerma periods (about 2500–1100 BCE) interred across five cemetery sites around al-Qinifab in northern Sudan to investigate diachronic shifts in mobility tied to state development.

Kari A. GUILBAULT,⁽¹⁾ Anne AUSTIN⁽²⁾ and Brenda J. BAKER⁽³⁾

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⁽³⁾ ARIZONA STATE UNIVERSITY

Multispectral and digital enhancement evaluations of Meroitic-period tattooed Nubians

Early archaeologists in the Nile Valley region tended to consider tattooing practices as unimportant. Recent scholarship focused on tattooing practices reveals that body modification has much to contribute to understanding ancient cultures, identity, and embodiment. Documenting tattoo stylistic expressions is an essential step for exploring how tattoos informed past experiences, yet discerning tattoos on preserved skin is challenging. Tattoos on desiccated tissue may not be noticed during visual inspection. Previous studies have used infrared (IR) imaging, multispectral imaging, and digital enhancement techniques, respectively, to improve the resolution of inked designs adorning skin and objects. The efficacy of these methods has not been evaluated previously for recognition of tattoos on human remains. A broad spectral range of capture can account for variability in the material composition of ancient tattoo ink, which is understudied.

This project used a full spectrum converted camera for creating multispectral images of known tattoos on two Meroitic period Nubian individuals from Semna South. Corresponding images were also created with externally mounted IR and visible light filters. Images taken in all three capture spectra were then enhanced with the DStretch plugin for the open-source software ImageJ. Photo composites showing IR, full, visible light, and DStretch enhanced

images for each tattoo ($n=5$) allowed side-by-side comparative analysis to assess the different methods on naturally desiccated skin. The results demonstrate that images produced in IR did not consistently increase tattoo visualization. Full-spectrum imaging increased observations for one individual's tattoos, while IR distinctly captured tattooing on another individual. Tattooing applied to forearm skin photographed well across each spectral dataset. Further, the findings show DStretch enhanced pigmented features in all three spectra. Differential observation of tattoo detail observed across the images indicates a multispectral imaging and DStretch enhancement approach will improve discerning and recording capabilities.

Hanaa HAFIZ

ARCHAEOLOGY DEPARTMENT, UNIVERSITY OF BAHRI

The varied usages of pottery in funerary practices – a case study based on the El Kurru royal cemetery

Pottery is one of the most common artefacts recovered from archaeological sites as it survives well in the archaeological record, usually does not decay easily, is one of the earliest inventions of mankind, and reflects variation over time, space, functionetc.

Pottery played a major role in Kushite funerary practices. its appearance was documented in two locations: beside being grave goods, it apparently also served other functions, such as digging tools and ritual ceremony vessels. This study aims to examine the role of the pottery recovered in a sample from a Kushite cemetery, using the pottery collection revealed in graves at El Kurru royal cemetery, by identifying types through certain variables: features, functions, and contents (the content has been identified by chromatography analysis).

This study considers a simulation of funeral practices, a process which starts by preparing the grave as the first stage, and is followed by funerary rituals till the end of the burial process and looks at the use of pottery in every stage.

Atika Abdalla HAJALAMIN

NATIONAL CORPORATION FOR ANTIQUITIES AND MUSEUMS, SUDAN

Wood conservation in the Sudan National Museum

Wood artefacts in the gallery and stores of the Sudan National Museum are important because of their rareness and susceptibility to many deterioration factors. The aim of this study is to specify the reason beyond the wood artefacts, focusing on damage to artefacts and the environment of storage, in order to help identify the areas and historical periods

which the artefacts belong to. The other aim of this study is to focus on how to restore some wood artefacts in the Sudan National Museum gallery and stores. The methods used in this study comprise description, practical and experimental approaches, using physical and chemical methods of archaeological restoration, grouting, filling and replacing. It is worth mentioning that dust and dirt are the main factors of deterioration of wood artefacts and string, along with cracking, insects, sand, and mice.

Hamad Mohamed HAMDEEN

DEPARTMENT OF ARCHAEOLOGY, AL-NEELAIN UNIVERSITY

**More than just rock art!
Archaeological survey in Wadi Gorgod
in the western Third Cataract region**

Wadi Gorgod is located on the western bank of the Third Cataract region in northern Sudan. Archaeological research in Wadi Gorgod was undertaken from the early 1960s until the beginning of the 21st century. These studies divided the rock art in the wadi into three main areas of about 10 km each, designated A, B and C. This constituted 36 rock art sites. This still remains a valuable source, but they focused on specific rock art types (typically animals) and did not document other drawings and archaeological sites associated with these pieces, which are vital in interpreting these sites. Furthermore, the GPS coordinates of the sites were not recorded, while photographic records were limited, and pieces were typically drawn without a scale. Regular fieldwork in this region is needed, prompting the first season of archaeological survey for the Western Desert of the Third Cataract Region Project. The results of the first season showed that there are more than three thousand pieces of rock art, some of which were reported by Allard-Huard but others were discovered and reported for the first time. Also the results of this season showed that the archaeological features in Wadi Gorgod comprise not just rock art but also Palaeolithic workshops, Neolithic and Christian settlements, and tethering stones, with wadi wall and stone structures reported in this Wadi. These sites have not previously been documented or monitored, with the primary research foci among projects undertaken in the region to date being on rock art alone, despite the importance of such associated sites for contextualising interpretations of identified rock art.

Ibrahim Musa HAMDON

DEPARTMENT OF ARCHAEOLOGY, AL-NEELAIN UNIVERSITY

**Stone masonry settlements on mountaintops
in 1st-millennium CE Darfur**

Archeological research in Darfur is rather patchy due to many circumstance, the most important of which is the wars between the government and Darfur armed protesters. As a result, the area has rarely seen any new field research, except casual visits, during the last three decades. On the basis of the data collected by previous authors, including the present author, this presentation will analyze stone masonry settlements found on many mountaintops in the region. These settlements are so great in number to the extent that they almost represent a cultural phenomenon in their own right. They are composed of large settlements with different house units, public and industrial areas. Most such structures were built with stone masonries on mountaintops with man made defensive structures encompassing all activity areas. This suggests that the region was under a cumulative defense system including the whole community. An analysis of the layout of these settlements and the types of their components was undertaken to examine for similarities and differences between them to help detect their origin and to reveal the reasons behind their construction in the 1st millennium AD. It is hoped that the results of this study will provide insights to the identities of the people of the area and their relationship with neighboring zones, namely the Nile and Chadic Basins.

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Western Sudan Community Museums Darfur Heritage Survey

The Western Sudan Community Museums Project team carried out an Intangible Heritage Survey of all five States of Darfur in 2020–2021, in conjunction with the University of Khartoum Dept. of African and Asian Studies, and the University of Nyala Darfur Heritage Centre. The five teams, led by a WSCM team member and volunteers from each state, spent three months conducting interviews and recording heritage techniques which were displayed in an exhibition in the WSCM Darfur Museum in Nyala. Subsequently, the results of this analysis were presented at a conference in Khartoum. This first ever comprehensive intangible Heritage Survey of Darfur showed the diversity of handcrafts and how they were shared by a wide variety of different groups in the region. This paper illustrates these various crafts and how, by sharing in this intangible heritage, an understanding between the people of Darfur can be developed, which can encourage peace building and shared cultural values. This paper illustrates the importance of community participation in the recording and presentation of cultural heritage and shows a way forward for further research in the community museums of Sudan and also in developing new exhibitions for the new Sudan Life exhibitions in the National Ethnographic museum in Khartoum.

Restoration works on wall painting in the El Laqia Church in the El Ga'ab Depression, Western Dongola

This presentation will discuss the restoration works of the wall painting in the Ga'ab El Laqiya Church at El Ga'ab depression in western Dongola, northern Sudan. This church was excavated by a team from the Department of Archaeology, the University of Khartoum in 2018-2019, and restoration work was carried out by the Polish mission. The damage factors to these murals included heat, wasps, termites, bat remains, as well as rain, and wind erosion. Many materials and equipment were used in the restoration of these murals, including alcohol, barrel solution, carbonate, restoration mortar, water, and equipment such as brushes, scalpels, and others. The results of this presentation conclude that the restoration of murals is very important and has an important role in preserving them from various factors of damage, with the additional recommendation for the necessity of follow-up and periodic monitoring of these murals to assess for any changes or the emergence of factors of damage to them in the future as a kind of preservation and preventive maintenance of the restoration process that was carried out on these murals.

Bashier Negood HASSAN

INDEPENDENT RESEARCHER

Building materials at the site of West Dargab

The presentation discusses the results of the excavations conducted by the Russian archaeological mission in the West Dargab region, where I was working in 2019–2021. Excavations in West Dargab revealed various elements belonging to a temple complex, however, the questions of whom it belonged to and what was its date remain open. In this regard, the study of the material used for construction and the type of masonry structures is of great importance. According to the available data, one might assume that the governor's palace was located somewhere not far from the site, including the living quarters, heated kitchens, and the reception hall. The results of the archaeological excavations leave no doubt regarding the existence of a temple complex in West Dargab, which would have been built at the beginning of the Meroitic period. High technology was used in the construction of the temple, where red bricks were used in different sizes and shapes; they consist of a mix of sand, silt and clay taken from the Nile, located a short distance away, and straw chaff, which served as a strengthening and binding material that helped them endure the ravages of nature through time. Red bricks with rounded ends, found at the site, were used for corners or to indicate the end of walls or the beginning of entrances to other rooms or exits to the outside. This type of angle was used also in construction of the Natakamani temple in Abu Ertela, where almost the same building materials were used.

Mohammed Alfatih HAYATI

DEPARTMENT OF ARCHAEOLOGY, UNIVERSITY OF KHARTOUM

Diversity of stone implements in the center of the Gezira Reach

An intensive survey and excavation has been conducted from 2017 to 2020 in the center of the Gezira Reach, west of the Blue Nile. Several types of stone tools have been unearthed in that area. The implements were discovered at several sites of Mesolithic and Neolithic date lying near palaeochannels along the Gezira Reach. A diversity of sizes and shapes were represented among the recovered tools, consisting of grinding stones, mace heads, polished hand axes, gouges, adzes and microliths. This presentation will discuss the context and environment of the tools, as well as the execution technique, in addition to the raw material of industry. As well, the study will attempt to make a comparison with implements from central Sudan because there are similarities evident in the techniques, especially with the artifacts collected from Jebel Moya located in the South of this area. In addition, this presentation will try to go through the variety and differences. Finally, tools with evidence of high technological skills and craft specialization will be discussed. The area needs more attention, this study being among the first to shed light on such archaeological materials.

Nahid Adam HDOB

DEPARTMENT OF ARCHAEOLOGY, UNIVERSITY OF KHARTOUM

Kingdom of Fazoghli

The kingdom of Fazoghli emerged from a cultural heritage that initially developed around the 15th century in the region between Sennar and Ethiopia, where remnants of various materials dating back to the Kingdom of Soba were found. The continuity of Soba culture in the region of Fazoghli is indicated by the presence of ceramics similar to those of Soba and the dominance of Christianity among inhabitants of the Fazoghli region which, as Spaulding mentioned, remained Christian for at least a whole generation before turning to Islam in the middle of the 18th century. According to oral histories, the inhabitants of Fazoghli, namely the Anaj and Aljal tribes, had ancestral links to the inhabitants of Soba. The aim of this paper is to investigate similarities between Soba and Fazoghli through the lens of gold production, as mentioned by travelers. This paper concentrates in particular on Fazoghli and its archaeological remains, which have yet to be scientifically studied. The overarching goal of this study is to assess connections between the evidently inter-related histories of Fazoghli and Soba to assess if the end of Soba was gradual or if it was the result of an attack on and/or sabotage of its capital, and, if so, can Fazoghli be seen as a logical continuation of Soba after some of the residents of Soba moved there?

New pot in the kitchen – a case study of a cooking pot from Wad Ben Naga and a reconsideration of a group of Meroitic bowls

The re-excavation of the so-called Small Temple (WBN 400) at the Meroitic site of Wad Ben Naga in 2010 yielded among other finds several sherds of a ceramic bowl. The reassembled torso preserved an almost entire profile of the original vessel. During its life-course, it was exposed to fire and distinct patterns of sooting and carbonisation could be observed both on its outer and inner surfaces. Recent re-examination of the vessel confirmed the original assumption that it was used for cooking. Moreover, it also offered further insights into the particular mode of its use. Besides providing valuable inferences about food preparation as such, the present case study serves also as a starting point for reconsideration of function and origin of other vessels of similar form, namely bowls with rounded base, carinated body and collar rim (Wad Ben Naga pottery form B3). Overall, these vessels are rather uncommon in the Meroitic archaeological record. Further evidence from Wad Ben Naga and beyond is considered to determine if other such bowls could have served for cooking as well and whether it happened only in the course of their reuse or represented their intended prime use. Possible formal and functional links are also established between these Meroitic bowls and vessels produced in Roman Egypt, in particular so-called casseroles. If indeed, based on Egyptian patterns, the Wad Ben Naga bowl and other similar pots may represent further evidence for better understanding the northern influences on Meroitic foodways.

Jane HUMPHRIS⁽¹⁾ and Thomas SCHEIBNER⁽²⁾

⁽¹⁾ BRITISH INSTITUTE IN EASTERN AFRICA, UNIVERSITY OF CAMBRIDGE

⁽²⁾ ARCHAEOLOGICAL RESEARCH AND CONSULTANCY, BERLIN

From industrial area to sacred urban space: The “Lion Temple” of Meroe

Situated on top of a large slag mound at the eastern edge of the City of Meroe, this temple was partly excavated by John Garstang in 1910, and as a result, since has been referred to as the “Lion Temple” of Meroe. Our paper presents new results obtained during seven field seasons conducted between 2013 and 2019. The investigations, originally focused on the metallurgical remains contained in the slag mound MIS3, have revealed outcomes concerning the temple which show divergences to Garstang’s results as well as significant new data. We offer here a revised interpretation of the appearance and layout of the temple and its vicinity. Furthermore, for the first time, information on the development of the underlying metallurgical deposits is provided, demonstrating the formation of this slag mound and its transformation into a temple complex. The chronology of the overall process

spans more than 500 years, which will be illustrated on the basis of Bayesian analysis of ninety radiocarbon dates.

Wafa Sharif Dawod HUSSEIN

LANGUAGES AND CULTURES OF AFRICA (LLACAN, UMR8135)

Neolithic pottery from the sites EDAR11 and EDAR47 in the Eastern Desert on the lower Atbara River

This paper is a summary of research undertaken as part of a Master's Thesis, defended at the University of Al-Neelain, focusing on Neolithic pottery. The study was conducted as part of EDAR, a Stone Age archaeological research project in the eastern desert of the Lower Atbara River, one of the most recent joint research projects in eastern Sudan between University of Al-Neelain, the University of Wrocław, and NCAM. The researcher undertook the project for two seasons from 2016–2017 to work on Neolithic pottery. Several archaeological sites were documented in the area, 35 archaeological sites contained Neolithic artefacts. This study subjectively examined the characteristics of Neolithic pottery in two different areas of the EDAR concession, from sites EDAR11 and EDAR47.

The methodology is based on the description and categories of pottery sherds, manufacture, shape, thickness and decorative, surface treatment. The information resulting from the classification was compared with the Sudanese Neolithic traditions. The study revealed that the Neolithic pottery in EDAR is like the so-called Atbai tradition in eastern Sudan, dated between 5000 BC and 750 BC.

Hassan HUSSEIN IDRIS AHMED

NATIONAL CORPORATION FOR ANTIQUITIES & MUSEUMS, SUDAN

Material culture perspectives on Nubian society in the Funj period. The impact of the material culture of Sennar (Funj period, 1504–1821) on Nubian society

Archaeological research in Sudan has passed through many stages, yielding very important information and collections, and has enormously increased our knowledge of the history of the Sudan. Such research has resulted in the development of Nubiology and Sudanology as distinct disciplines, providing correct nomenclature for Sudan studies and not simply envisioning the field as an extension of Egyptology.

Sennar, Capital of Islamic Culture 2017, has played a prominent role in the history of Sudan, having a significant cultural and socio-economic impact on Nubian society; a site that highlights the richness and diversity of Sudanese cultures and fosters understanding about the contributions of the Islamic Kingdom of Sennar to Nubian society.

In 1504, after the collapse of the Christian Kingdom of Alwa, an alliance between the Funj under Amara Dungus, and the Abdallab, led by Abdallab Gama, established the first Islamic Kingdom in Sudan, known as Sennar Islamic Kingdom, the Blue Sultanate, or the Funj Sultanate. With the establishment of the capital in 1504, Sennar became the first Islamic Kingdom in Africa after the fall of the al-Andalusia Islamic Kingdom in 1492.

The material culture of Sennar Islamic Kingdom has an impact on Nubian society in the design elements of architecture, particularly mosques and domes or *gubba*. Nubian and Sennar's archaeological and historical monuments and collections have been used in studying the material culture perspectives on Nubian society during the Sennar Islamic Kingdom. The mud building, the *gibab* or *gubbas* (domes) appeared before the Islamic Kingdom of Sennar and spread during the Sennar Kingdom to different regions in Sudan. The technique of dome structural support was used in Sudan during Sennar Islamic Kingdom in different parts. Numerous conical-shape *gibab* remain today, reminding observers of the contribution of Funj architecture to Nubian society.

In 1762, al-Hamaj overthrew the king (sultan) and subsequently installed another member of the royal family as a puppet king. It was the beginning of a long conflict between the Funj sultans and the Hamaj tribes, weakening the kingdom, and was finally brought to an end by the Turkish and Egyptian conquest led by Mohammad Ali Pasha in 1821.

Kristina HÜLK

HUMBOLDT UNIVERSITY OF BERLIN

Frontality as an indicator of meaning in Meroitic visual communication

Within Nubian studies, the outstanding nature of Meroitic art has been the subject of several works so far. Previous analyses mostly highlight the concurrent dichotomy of similarities with and otherness to its Egyptian neighbour. Principally focussing on iconography and style, formal, compositional and design elements are mostly neglected. One of these design features—both in rendering and within art historical discussion of Meroitic visual communication—is the frontal representation of figures in two-dimensional visual communication.

In my presentation, I will discuss the formal and functional characteristics of frontality in Meroitic relief. By means of selected examples, I will demonstrate the use and assignment of frontality and also the meaning potential of this way of rendering in relief representation. Besides formal criteria, such as position and salience, I will also consider how frontality works on the potential beholder. With my study I will show that this kind of formal configuration is a purposive strategy used in representations of specific thematic areas within specific (recurrent) communicative situations pursuing a specific function and intention with regard to both the customer and the visiting viewer.

**The latest outfit of Taharqo and his gods.
A new look at the iconography and epigraphy of the Mut Temple
at Jebel Barkal after the ICR-NCAM restorations**

The restoration and conservation activities carried out in the Temple of Mut at Jebel Barkal by the Institute of Restoration (ICR)—National Corporation for Antiquities and Museum of Sudan (NCAM) Joint Mission have also allowed for some archaeological preliminary investigations and for a review of the iconographic and epigraphic apparatus of the main chamber.

In the 19th century, Richard Lepsius had already seen and drawn a large part of the temple decorative programme, which must have been quite recognisable at the time. His publication, although dated, remains today a milestone for studies in the field. Almost a century later, Christian Robisek published the text of the temple, with a very brief description of the iconographic evidence, unfortunately without remarkable illustrations.

The conservation work undertaken from 2013 to 2020 (and still in progress) not only brought back the original colours of the wall paintings of the main chamber, but also made the related texts almost completely and clearly legible. A number of features that were previously difficult to recognise—for example in the characterisation of clothing and symbolic apparatus (both royal and divine)—have become apparent, and gaps in the reading of the inscriptions can now be filled more confidently.

The aim of this presentation is therefore to show the results of this iconographic and epigraphic research, highlighting the positive role of restoration work in updating and integrating earlier data.

**Francesca IANNARILLI,⁽¹⁾ Federica PANCIN,⁽²⁾
Silvia CALLEGHER⁽²⁾ and Martino GOTTARDO⁽²⁾**

⁽¹⁾ CA' FOSCARI UNIVERSITY OF VENICE

⁽²⁾ INDEPENDENT RESEARCHER

**Natakamani and beyond.
The latest discoveries and new results
from the Meroitic district at Jebel Barkal**

The most recent excavation seasons (2018–2019) and research activities (2020–2022) of the Italian Archaeological Mission in Sudan at Jebel Barkal have provided interesting information on the development of the archaeological site during Meroitic times, not only related to the reign of king Natakamani (1st century CE), but also to an earlier period. Of special interest

were the investigations conducted in the areas of buildings B2100 and B2200—hitherto interpreted as a kiosk (the former) and a ritual building (the latter). Between the two, an apparently older structure came to light, following the pre-Natakamani evidence already revealed under the foundations of the Royal Palace.

The analysis of pottery and some selected small finds, together with several elements of decoration of the structures (mainly plaster and stone capitals), can shed new light on the architectural development of the newly investigated area. This paper therefore intends to present the archaeological work of the last seasons—with particular attention to the material culture surfacing from the western area of the Italian concession—and the site management activities, including new and ongoing projects on conservation, dissemination and community engagement.

Rifal IMAM

NEW YORK UNIVERSITY ABU DHABI

Oral storytelling from Kandaka to Aala Saleh: Sudanese women's resistance

Through the case study of Sudan, with a focus on Nubia, I study its impacts on society, particularly revolution. Nubia's constant interaction with colonial forces, namely Egyptian, Arab, and British intervention, throughout much of its history has been lost or reworked due either to the destruction of documents or manipulation of its oral traditions. Under British occupation, documentation was emphasized, and forcefully institutionalized, and consequential structures from this era persist. As the world globalizes in this structure, an emphasis on documentation persists, particularly the synonymizing of documentation as truth/reality and the primacy of such for making decisions. I study the interaction of oral transmission as the primary form of communication within communities in contrast with the document-reliant postcolonial world and the consequential political impacts on these communities resulting from these different forms of communication. Through a creative retelling of the Kandakas (Nubian queens), I reach to the modern day Kandaka: Aala Saleh of the 2019 Sudanese Revolution. Sudanese women traditionally use oral storytelling and oral poetry in times of revolution as political opposition, particularly during the Anglo-British colonial occupation (1882–1956). I focus on women's use of storytelling (in the symbolic dress of the white thawb or in literal poetry) in times of resistance. Through an ethnographic exploration of female resistance through storytelling, I study the importance of storytelling in Sudan to the cultural and social structures of the people. I then take this and analyze my findings in the lens of the unescapable "post-colonial" reliance on documentation. I argue for, and try to creatively push for, the use and reclamation of folklore and storytelling as a historical and legitimate form of documentation. I aim to argue for restructuring and widening definitions of both literature and documentation to include oral components. Countries with power, from the UK to Egypt to the UAE, still use Sudan's reliance on oral tradition to manipulate and control political power in the country, from rewriting the

country's history to influencing its political transition. Widening documentation to include oral recounting as a valid form is not a solution but a potential beginning, albeit a small part of much bigger issues, to resistance against these powers.

Karel INNEMÉE

UNIVERSITY OF AMSTERDAM

The images of power and authority in Christian Nubia

Byzantium can be seen as a source of inspiration for the costumes that express the authority of State and Church in Nubia. These are mainly known from wall paintings in churches. But how visible were these authorities in other respects? In Byzantium the image of the emperor was present on coins, in the form of statues in public places, painted panels. These manifestations of royal authority are absent in Nubia and in this respect the Byzantine example was not followed. The paper deals with the visual and textual ways in which Nubian authorities, worldly and ecclesiastical, manifested themselves in everyday life.

Mohammad JADALLAH

INDEPENDENT RESEARCHER

Cross-commentary on science and power, a case study on Sudanese museums as an instrument of power

This presentation questions the nature of the link between science and power, the use of this power and the question of the transmission of science before tackling more specifically the case study of museums in Sudan as an instrument of power. This study aims to reveal the study of other cultures of knowledge and to make known a subject, very little discussed so far, namely, the history of museums in Sudan. In the first part of the presentation, three Western European historical documents from the 17th century to the 19th illustrate how new scientific discoveries have raised the question of the link between science and power. What is the nature of this power? Should it remain in the hands of the scientists, or should it be used for the greater good of all? The second part of the presentation tries to answer questions concerning the nature of museums in terms of usage, the myth of superiority, and the instrumentalization of science using the example of museums in Sudan. As the first museum in Sudan was constructed under the British colonial period, this raises the question as to the Sudanese archaeological findings and the risk behind their displacement from their place of origin. What role do museums play in the unification of the Sudanese nation? Finally, this presentation handles the role of Sudanese museums in the unification of the Sudanese nation. Through our work we have been able to see that museums and the artefacts they contain are used as instruments of power for scientific, social, economic and/or political purposes.

Friederike JESSE

INSTITUTE OF PREHISTORIC ARCHAEOLOGY, AFRICAN ARCHAEOLOGY
UNIVERSITY OF COLOGNE

Darfur type axes: What they tell us about cultural interconnections in the eastern Sahara?

Darfur type axes—or more generally, necked axes—were described for the first time in the southern Libyan desert of Sudan, as well as in the central Sahara, about one hundred years ago. This special type of stone axe is marked by a wide hafting groove and a knob or mushroom-shaped neck. In the eastern Sahara, numerous such axes are known from sites of the Leiterband Complex, but also from areas where the Leiterband Complex is not attested, which makes them an interesting object for the study of interactions between different cultural groups. The Leiterband Complex dates to the 4th and 3rd millennia BCE. This is the time of pastoral groups with a particular focus on cattle herding. A mobile way of life is inferred for these groups, with contacts and exchange. This paper will take a closer look at the Darfur type axes and their significance with regard to cultural interconnections in the Eastern Sahara.

**Jacek KABACIŃSKI,⁽¹⁾ Karina APOLINARSKA,⁽²⁾
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Current research on hunter-gatherer and pastoral societies in Gebel Ramlah, Egyptian Western Desert

Gebel Ramlah is a pronounced rocky massif located approximately 150 km west of Abu Simbel. A fossil lake adjacent to the southern slopes of the gebel attracted different human groups since at least the last Interglacial. Since the beginning of the 21st century the Combined Prehistoric Expedition has been conducting a project concentrated on recognizing prehistoric occupation of the area, concentrating first of all on the Early Holocene hunter-gatherers and the Middle Holocene pastoral Neolithic groups.

This presentation provides an overview of recent results on the Middle Palaeolithic settlement patterns and burial practices in the Gebel Ramlah area.

Fayrouz Ossama KADDAL

THE AMERICAN UNIVERSITY IN CAIRO

Migration and becoming Nubian: Who are the Nubians living today in the displaced villages of Kom Ombo?

Nubians faced multiple waves of migrations and mobility, people moving into the Nubian region and/or out of it, which has contributed in the shaping and ever changing understandings of who the Nubians are. Moreover, in 1964, due to the construction of the Aswan High Dam, an estimated 113,000 Nubians and other groups living by the Nile valley at the time had to be relocated to Kom Ombo, 20 km away from the Nile.

In this presentation, and based on my fieldwork (2018–2019) in the displaced villages of Nubia, particularly the village Touthka, I work on deconstructing and understanding who are the Nubians living today in the displaced villages of Nubia. I lay out the different ethnic groups living there today: Fadekka, Kenouz, Arabs of Olaikat, Saidis and the Ashraf, using historical literature and interviews where interlocutors self-identify themselves as part of these groups, sharing stories their ancestors passed down orally from one generation to another. Departing from Deleuze & Guattari's (1987) notion of rhizome, I argue that Nubians and Nubianness is not one fixed category, nor a cluster. Nubianness is ever changing and in constant flux, that can have different becomings, grow from "multiple roots" and in various forms that can be "broken or shattered at a given spot" (Deleuze & Guattari, 1987); the "rhizome" is a multiple, non-hierarchical, non-organisational structure. I use Deleuze's notion of "deterritorialization" and "reterritorialization", to think about how one gets detached from a given geographical milieu and gets attached to another, where they form new ties and connections. I follow Deleuze to trace Nubians' constant movement, as well as the different thoughts, feelings and understanding of "Nubianness".

On migration and music: a critical listening to Nubian music

For centuries, Nubians have faced multiple waves of migrations and mobility, people moving into the Nubian region and/or out of it, which has contributed in the shaping and ever-changing understandings of who are the Nubians and what their music might sound like.

In this presentation, and based on my fieldwork (2018–2019) in the displaced villages of Nubia, particularly the village of Tushka, I studied what contemporary Nubian music sounds like today in the displaced villages of Nubia, taking into consideration the different ethnic groups living in the area, today, as well as the different histories of migration related to these different ethnic groups. The Fadekka, Kenouz, Arabs of Olaikat, Saidis and the Ashraf, practice music differently. That is why I argue that Nubian music is not always a pentatonic music. In fact, departing from Deleuze & Guattari's (1987) notion of rhizome, I argue that Nubians and Nubian music are not one fixed category, nor a cluster. Nubian music is ever changing and in constant motion, such that it can have different becomings, whether or not it is due to the migration of people, that brings with it inspirations from different parts of the world, or the movement of instruments along with travellers. Movements of people as well as musical instruments form a strong part in shaping Nubian sounds and music.

Tim KARBERG and Jana EGER-KARBERG

UNIVERSITY OF MÜNSTER

Advanced geo-analysis tools as archaeological methods in western and central Sudan: radar, multi-spectral, and panchromatic satellite data sensor fusion and geo- statistical analysis of landscape archaeological material in Northern Kordofan and the Bayuda

During the archaeological survey projects of the University of Münster in the Bayuda (Wadi Abu Dom Itinerary) and Northern Kordofan (Interregional Linkage Investigations in Northern Kordofan), different advanced and innovative methodological approaches were applied and further developed. Two important aspects of these methodological innovations are the wide use of satellite data analysis, which combines the specific advantages of high-resolution panchromatic, multi-spectral, and radar-based imagery, as well as geo-statistical methods further strengthening the general 'spatial turn' within archaeology and cultural history.

Specific cases from both archaeological projects illustrate the deployment and application of these methodological approaches. In Northern Kordofan, spatial clustering and classification

of spectral signatures of different soil and land cover classes in a diachronic perspective allow the reconstruction of the entanglement of different agricultural and pastoral modes of production, and their interconnection with different concepts of social mobility. Their quantified contextualisation of the archaeological record (both derived from ground survey data as well as analyses of high-resolution panchromatic satellite imagery) using GIS-based collocation and spatial kernel density analysis leads towards the identification of different categories of the material cultural record as socio-economic indicators. In the lower Wadi Abu Dom, satellite imagery based diachronic land use reconstruction in sub-recent times can be extrapolated for longer chronological ranges by the fusion of these land use patterns with datable aspects of the archaeological record. The categorisation of land use changes, exemplified at the fluctuating cultural landscape of El Rum oasis, forms a first step towards a structured diachronic land use model, a main focus of our planned future research activities.

Osman Khaled Elawad KARRAR

UNIVERSITY OF KHARTOUM

**Between the Nile and the Desert:
the early Stone Age of the eastern hinterland
of the Third Nile Cataract**

This presentation reports on the Early Stone Age sites discovered by the Kedurma Archaeological Project (KDRAP), which took place in the eastern hinterland of the Third Nile Cataract Region. The survey yielded several assemblages of Early Stone Age artifacts, alongside exceptionally well-preserved rock art sites, rock shelters, many tethering stones, and cemeteries. A provisional lithic classification includes: hand axes (over 80% of the entire assemblage) and hammer stones. Thus, the study demonstrated the importance of the region far from the present-day Nile during the Early Stone Age, its richness and potential.

Fatma KESHK

FRENCH INSTITUTE FOR ORIENTAL ARCHAEOLOGY
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**Open spaces as essential functional areas in ancient Egypt
and Nubia: an ethno-archaeological study**

Due to the arid climate and daily life needs, open spaces such as courtyards and terraces have always acted as essential and integral activity areas in Nubian villages. This paper aims to present the results of field research carried out by the author between 2015 and 2017 at the village of Bigge, located south of the Aswan Dam, to study the layouts and functions of open spaces. This research also included a survey of open spaces at other villages in Aswan,

namely at Tingar, Gharb Seheil and Elephantine. By using the outcome of the field research on open spaces in these Nubian villages, the author proposes a methodological approach that allows a clearer understanding of the use of open spaces in ancient Egyptian settlement sites through ethno-archaeological approaches. As a result, this interdisciplinary research provides initial groundwork for elaborating more methodological tools for current and future studies of the use of domestic spaces in ancient and modern settlements. By using the outcome of the field research on open spaces at these Nubian villages, the author proposes a methodological approach that allows a clearer understanding of the use of open spaces at ancient Egyptian settlement sites through ethno-archaeological approaches. As a result, this interdisciplinary research provides an initial ground to elaborate more methodological tools for the current and future studies of the use of domestic spaces in ancient and modern settlements.

Fawzi Hassan Bakhiet KHALID

AL-NEELAIN UNIVERSITY
& NATIONAL CORPORATION FOR ANTIQUITIES AND MUSEUMS, SUDAN

Personal adornment in the Blue Nile region of Sudan

This paper aims to study personal adornments in the area endangered by the re-heightening of the Roseris Dam on the Blue Nile during the Roseris Dam Archaeological Salvage Project (RADASP). The research problem is that there is very little interest in studying ancient customs and cultures in Sudan, especially in the research area, as there are no previous ethnographic or archaeological studies that can be used for comparison. It was noted that the ornaments discovered at the various sites analysed were made from different materials, both organic and inorganic, including different types of stones, ostrich eggshells, shells and mica. Many sites have been documented, from which various different varieties of personal ornaments have been identified, such as lip studs, nose-studs, beads, *rahat*, necklaces, and bracelets. The descriptive analytical method was used in this study to highlight the archaeological artefacts that were recovered. As a result of this study, it was found that a considerable proportion of personal ornaments were made of stone (65.8%), with ostrich eggshell beads being the second most common type (32.5%). The rest comprised small numbers of burned clay, glass and shell (1.7%) objects. These ornaments were made in different ways, which clearly attest to the richness of the local culture, for which several ethnographical studies mention that there is continuation of customs and traditions in this region and the neighbouring region.

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Settlement in the heartland of Napata: a synthesis of survey research around Jebel Barkal

In many regions of the world, archaeological survey shows complex relationships between cities, their surrounding rural landscapes, and longer-distance connections. Cities are centers of administration and economy as well as political and religious activity.

Despite the long history of salvage and survey archaeology in Sudan and Egyptian Nubia, however, there has been relatively little analysis of the broader context of settlement and land use within which important settlements have developed. This gap is particularly pronounced around Jebel Barkal—in the hinterland of this imperial capital; there have been at least six different survey projects that have investigated portions of the region. This paper presents the results of an attempted synthesis of these projects.

In keeping with the scale of the Napatan empire, the area under consideration was large, essentially a 50 km diameter around Barkal, with a focus on the Nile valley from the Merowe Dam to Mansourkatti. Taking a landscape archaeology approach, we compiled recognition of all observable traces of activity, and documented archaeological settlements and burial sites ranging from the Neolithic to the Islamic period.

Developing a GIS database and plotting these sites suggests a dense network connected to the Nile and to Barkal, with changes in different periods. Further survey work will improve our understanding of these historical patterns.

Loretta KILROE

THE BRITISH MUSEUM

Far along the Nile: Differences in medieval practices across the Middle Nile Region

Medieval Sudan was a vast landscape encompassing a multitude of practices. Archaeology across this region shows that while individuals were ostensibly following the same religion, people were living and dying in a non-uniform way. Local practices remained essential while new ones evolved in tandem.

Using material from two strategic sites at opposite ends of the Makurian kingdom—Faras in Lower Nubia, once capital of Nobadia, and Kurgus, a fortress on the Abu Hamed Bend—I will discuss evidence for shared and divergent practices across these two fortified areas, via unpublished excavations at Kurgus and artefacts from Faras in the British Museum. The

repertoires indicate a shared Christian identity and numerous parallels with the capital at Old Dongola, whilst also demonstrating unique regional practices and behaviours, pointing to multiple identities in sites on the fringes of Makuria.

I will discuss the available repertoires at both sites, including ceramics, structural remains and graffiti, which offer an invaluable opportunity to compare and contrast medieval practices across settlement and cemetery remains in Makuria. In particular, a keen interest in the cult of the Archangel Michael can be observed in common with much of Christian Sudan, while burial practices were clearly heterogeneous. This deeper study of two sites on the fringes of Makuria will allow insights into contemporary ideology to complement the many literary sources known, and will enhance our understanding of the disparate communities that formed this large kingdom.

Cornelia KLEINITZ

GERMAN ARCHAEOLOGICAL INSTITUTE, KAAK
& HUMBOLDT UNIVERSITY OF BERLIN

Experiencing Musawwarat es-Sufra: A multisensory approach to the archaeology of ancient Kush

Musawwarat es-Sufra is one of the best preserved monumental archaeological sites of the later Kingdom of Kush. Due to its extensive architectural remains this ancient ceremonial centre lends itself to the incorporation of multi-sensory approaches into the study of its archaeology. Hence, a current project is investigating sensory effects that may have been sought, for example, by: 1) the placement of built structures in the valley of Musawwarat; 2) the choice of architectural solutions that would have permitted, directed or restricted views and movement within and between structures; 3) the utilisation of the interplay between light/shadow/darkness and form/colour in respect to buildings and their architectural decoration/sculpture; 4) the selection of materials with specific sensory properties for built structures and (cult-related) objects; or 5) the exploitation of the soundscape of the valley of Musawwarat and its built components in a seasonal perspective. These choices will have influenced how building, supply, maintenance and ceremonial practices at the site were experienced, understood and remembered. In conclusion, this presentation highlights the potential of multi-sensory approaches to enrich our understanding of the unique site of Musawwarat, and of the Kushite world more generally.

Reflections on some Demotic graffiti at Dakka, Dendur and Philae

A large number of graffiti in different languages were applied on the walls of temples or on rock in the Dodekaschoinos, the area south of the First Nile Cataract at Elephantine and Philae up to Maharraqa/Hiera Sycaminos. The area in Ptolemaic and Roman times was administered by the powers in Egypt; the local population nevertheless visited the temples and venerated its deities and was in time integrated into the temples' running. Besides that, many pilgrims from around the known world visited the temples at Philae and its related sanctuaries in the Twelve-Miles-Land. In the 1st and 3rd century CE a number of Demotic graffiti can be ascribed to Nubians of the area or to Meroites responsible to the king of Meroe who visited especially the Isis-temple at Philae. Six graffiti of the Nubian group mention the plural term nA pr-aA.w "the kings" instead of the title "pharaoh" in singular form. The plural form is often considered as referring jointly to the Roman Emperor and the Meroitic king. These graffiti are investigated and a different opinion is put forward including some corrections on their dating.

Jan KUPER

UNIVERSITY OF COLOGNE

Early Holocene reoccupation of Sudan's Western Desert

At the beginning of the Holocene, Northeast Africa experienced one of the major population movements of prehistory—the post-glacial peopling of the Sahara. A northward shift of the monsoon rain belt caused increased precipitation during the Early Holocene, which, for thousands of years, transformed the Saharan desert into a savannah landscape. How did the process of colonising this unfamiliar region proceed? What role did innovations in the sphere of technology and subsistence play? And where did the people who populated the previously inhospitable area come from? While it would seem reasonable that people should have advanced with the rains from the south, the current evidence surprisingly points to an initial reoccupation of the Eastern Sahara in its northern part—the Western Desert of Egypt. However, emerging evidence from the western desert of Sudan indicates that the region was also colonised during the Early Holocene / Epipalaeolithic period, although the discovered sites could not be precisely dated so far. This issue, as well as the other questions raised above, will be addressed within the framework of a forthcoming research project, entitled "Selima: Studies on the Post-Glacial Peopling of the Sudanese Sahara". Based on geo-archaeological fieldwork in the vicinity of the oasis of Selima, the project aims to contribute to the understanding of the process of Early Holocene colonisation of the Eastern Sahara. This presentation will, on the one hand, outline the current state of research on the recolonisation, and, on the other hand, introduce the planned research project in Sudan's western desert.

Anthropology of ruins: current dystopias, future utopias in the context of the Soba archaeological site

There is a growing interest in the anthropological potential of ruins and post-disaster spaces. Quite often in postcolonial contexts the notion of so-called ‘difficult heritage’ can be extended to archaeological sites. Ruins and traces of the past are lost objects shipwrecked in the present. In my opinion, this is exactly the case of Soba Archeological Site (‘Past Soba’) which is a kind of ‘disruption’ or ‘thing left behind’ in the modern Soba, a rapidly developing suburban area of Khartoum. ‘Past Soba’ and ‘today Soba’ are two intertwined space-time continuums, whose relations are complex, especially since the renewing of archaeological research in 2019. Permanent archaeological research usually leads to transformation of the local societies in which archaeologists live and work. Researchers let the ruins speak. “Past Soba” is linked to the number of stories—the site is a story itself. But what can we learn from these stories; to what extent do they embody a haunting past, dystopias present or hopeful future? This presentation aims to discuss the results of research on the relations between an archaeological site and today’s population. The ongoing ethnographic research is part of a project entitled “Soba – the heart of the Kingdom of Alwa”.

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The 4th millennium BC gap in the Northern Dongola Reach sequence (Upper Nubia, Sudan): a false gap to fill?

With the multiplication of archaeological excavations and radiometric dates, the Northern Dongola Reach and more generally the Upper Nubia sequence were discovered to include a gap that covers a large part of the 4th millennium BC, namely between the Middle Neolithic B (4500–4000 cal. BC) and the Pre-Kerma period (locally 3100–2500 cal. BC). This gap was recently considered to be a settlement hiatus. Nonetheless, research conducted on domestic sites in the Kadruka concession over recent years has permitted the discovery of a site dated to the first half of this phantom millennium. More generally, this work casts doubt on the very existence of this hiatus which, given human settlement patterns and the erosion that

can be deduced from data obtained, might be only due to different factors, notably deflation, which seems to have particularly affected the levels of this period. This pattern also makes it possible to define contexts that are more conducive to the preservation of 4th millennium BC contexts, and it is hoped that other discoveries will contribute to filling this supposed hiatus even further, thereby documenting this crucial period of this regional sequence, where the Late Neolithic gives way to the pre-Kerma culture. But, because of the tremendous agricultural expansion that, for decades now, focuses along the Wadi el-Khowi course, it is to be feared that the last domestic Neolithic and pre-Kerma domestic sites that are still well enough preserved to be studied will soon be destroyed.

**Rennan LEMOS,⁽¹⁾ Kate FULCHER,⁽²⁾
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Revisiting the canopic jars of Pa-itsy/Djehutyhotep found in the tomb of Amenemhat in Debeira

Canopic jars were rare objects in New Kingdom Nubia and were mostly restricted to elite cemeteries such as Aniba and Sai. A set of four Thutmoside canopic jars were excavated in the tomb of Prince Amenemhat on the east bank of Debeira, three of which are now kept at the Gustavianum Museum in Uppsala. The inscriptions on these objects name Pa-itsy-her, or Djehutyhotep, Amenemhat's older brother whose tomb was located on the other bank of the Nile in Debeira. These canopic jars have been considered as evidence for beliefs related to the preservation of the body according to Egyptian funerary religion. However, no actual artificially preserved bodies have been excavated at New Kingdom cemeteries in Nubia, despite evidence that points towards the contextual adoption of specific parts of Egyptian mortuary ritual, e.g. the pouring of black resinous liquids onto coffins and other objects. This paper shares preliminary results of analysis of residues sampled from the inside of the canopic jars of Pa-itsy/Djehutyhotep in Uppsala. In the absence of actual mummies, we aim to shed light on local concepts and uses of Egyptian canopic jars in New Kingdom Nubia.

Mortuary archaeology in the cracks of empires: Bronze Age evidence from the region between Attab and Ferka, northern Sudan

Mortuary data comprises most of the information we have about life and death in ancient Nubia in general, and Bronze Age Nubia more specifically (which roughly covers the Kerma–New Kingdom period). This is the result of a long history of archaeological explorations in Sudan, where large-scale surveys and salvage excavations revealed extensive cemeteries, smaller burial clusters and isolated tombs spanning various social strata and geographical areas. Beyond cemeteries associated with major centres of power in the Nile valley, recent fieldwork in areas such as the third and fourth cataract regions uncovered interesting features that help us shed light on the Kerma presence outside of Kerma. Evidence from the Batn

el-Hajar also offers us a starting point to understand Kerma and New Kingdom activity in the social and geographical cracks of expanding Nubian and Egyptian empires in the Middle Nile. Drawing from recent scholarship on ‘peripheral’ areas of Nubia in the Bronze Age, combined with newly produced information by the ERC DiverseNile project, this paper revisits mortuary evidence from the region between Attab and Ferka, which comprised the outskirts of the main centres of power at Sai and Amara West. This paper aims to understand how creativity—in the form of adaptations to extreme social and material conditions—takes shape in those cracks or peripheries, which then become the centres of “other” human experiences of society, culture and the landscape.

**Alice LEPLONGEON,⁽¹⁾ Maxence BAILLY⁽²⁾
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Stone Age occurrences in the Wadi Abu Subeira (Aswan region, Egypt): some preliminary results

In this presentation, preliminary results of surveys carried out in the Wadi Abu Subeira (Aswan region, Egypt) are reported. Surveys for stone age localities took place as part of the 2022 field season of a Franco-Egyptian project directed by Gwenola Graff in a section of the wadi located between 15 km and 25 km away from the Nile Valley, in the Eastern Desert. In the Wadi Abu Subeira, one Middle Stone Age locality was reported by Fred Wendorf (Wendorf, 1989) and several Late Palaeolithic rock art stations are known (Storemyr et al.,

2008; Kelany, 2012; Graff and Kelany, 2013), but these are all located at the entrance of the wadi. Very few Stone Age sites are documented in the Eastern Desert of Egypt (Vermeersch, 2012) and it is particularly true for its south-eastern part, which remains virtually unexplored for Stone Age human occupations. Here, we report preliminary results on several Earlier and Middle Stone Age occurrences documented during the 2022 field season. Occurrences take the form of isolated finds, concentrations of artefacts in secondary contexts and in situ surface workshops. We then discuss their potential significance and contribution to a better understanding of the North-Eastern African Stone Age.

Rachel Titilayo LESLIE

THE AFRICAN HISTORICAL SOCIETY

A new examination of the Old Nubian “Nicene Canons”

Since its original publication in 1983, the Old Nubian version of the Nicene Canons has rarely been re-examined. Perhaps one of the most indicative aspects of these “Nicene Canons” is that there is no extant Greek Vorlage and that the Nubians had no attested presence at the Council of Nicea. The Old Nubian Nicene Canons appear to be, in effect, an attempt at the legitimization of the authority of the priesthood and the Old Nubian Church as an institution, as it was establishing itself as a new religion with a new temple cult. The study of the influence of Byzantium on Nobadia and Makuria has to a great extent determined the study of Nubian church practices during the medieval period. This paper explores textually based evidence for potential interaction with other polities in greater proximity, providing a re-examination of this text within the literary and liturgical context of surrounding Nilotic cultures. It explores how the epistemological systems of Nilotic institutions may serve to illuminate the text anew, providing novel possibilities as to how such systems can lend nuance and insight into the syntax and semantics of the Old Nubian text.

Nadia LICITRA

GRENOBLE NATIONAL HIGHER SCHOOL OF ARCHITECTURE

The Nile’s Earth Project: a study of materials and building techniques for the conservation of Nile Valley earthen architecture

In November 2021, thanks to a French National Research Agency grant, CRAterre and the Grenoble National Higher School of Architecture (ENSAG/UGA) have launched the Nile’s Earth project (2021-2024). This interdisciplinary undertaking focuses on the study of ancient earthen architecture (materials and building techniques) along the Nile valley to develop

conservation protocols in line with the international recommendations that can adapt to the peculiarities of each archaeological site under study.

Kerma-Dukki Gel and Sai are among the seven—along with five others in Egypt—archaeological sites used by the project as “windows” in the field to examine the issues addressed by our work in specific environmental and chronological contexts. As places illustrating cultural mixing over time, they are both of great interest to investigate how architecture and building techniques have been influenced by the different cultural (and social) groups settled there.

The exploitation of local resources (identification of soil sources) and the builders’ *savoir-faire* are also questions addressed by the project by means of geomorphological studies and materials analysis. Qualitative (on the field) and archaeometric analysis will be used to characterise soils, cob, mud bricks, and mortars samples to try to trace the original recipes, including potential additives employed by ancient builders to improve local soil qualities or to modify its properties.

Conservation tests will be implemented on the basis of this detailed knowledge of building techniques and materials. They will also take into account condition assessments of the archaeological remains (identification of risk situations and processes) and the impact of current climate and ecological changes on them.

This presentation provides an overview of the project’s scope and objectives and presents the first results of material analysis carried out on mud bricks from Dokki Gel and the Deffufa.

Kate LISZKA

CALIFORNIA STATE UNIVERSITY SAN BERNARDINO

The complexities of various Nubian groups at Wadi el-Hudi

Wadi el-Hudi is a large, geologically rich region in the Eastern Desert, 35 kilometers east of Aswan. This is the area where pharaohs sent large expeditions to mine amethyst to be made into royal jewelry during the Middle Kingdom and late Ptolemaic to early Roman Period. Since the publication of some of the inscriptions from Wadi el-Hudi in 1952, we have known that Egyptian expeditions often brought Nubians from specific parts of Lower Nubia to Wadi el-Hudi as workmen. However, recent archaeological work has demonstrated a much more nuanced and multicultural tale in the desert. Since 2014, as the Wadi el-Hudi expedition has explored and documented this area, we have paid particular attention to the question of who is in the desert, how they were interacting with the landscape, and how they had a role in the mining expeditions. We have discovered evidence for at least three different types of Nubians in the desert: those working with the Egyptian expeditions, pastoral nomadic groups, and small groups of Nubians perhaps engaged in their own mining operations at Site 21. Moreover, the archaeology demonstrates that the Nubians who worked directly with the Egyptian expeditions had much more nuanced interactions with the Egyptian administrators

than the bellicose inscriptions would lead us to believe. This talk will share our recent discoveries, discussing Nubians and multicultural peoples via their evidence in texts, archeology, and architecture. The desert presents a multicultural landscape of peoples exploiting its natural resources, as well as a border zone where various groups came in contact; these observations are apparent in the archaeology at Wadi el-Hudi.

Magdalena ŁAPTAŚ

HISTORY OF ART INSTITUTE
CARDINAL STEFAN WYSZYŃSKI UNIVERSITY

Nubian kings and their regalia in medieval wall paintings

Christian Nubia, unlike medieval Egypt, was ruled by kings. The patronage of Nubian kings definitely shaped the landscape of Nubian art. Their images were painted in several Nubian ecclesiastical buildings. Identification of these portraits with particular Nubian kings is difficult as the *tituli* have been lost for the most part. Additionally, some paintings are preserved so fragmentarily that only the attributes, the regalia, allow the kings in the paintings to be recognized as such. Nevertheless, Nubian regalia merit interest in view of their evident relation to Byzantine models on one hand and their derivation from an earlier pre-Christian local tradition on the other. This concerns the regalia of both kings and queens.

The aim of my presentation is to systematize the Nubian regalia in the context of their genesis and functioning in the Nubian Christian and pre-Christian rituals. I will also examine the 'horned crown', which has been attributed to eparchs only in some earlier publications. Finally, I intend to show the impact of Nubian regalia on a later, Ethiopian royal tradition.

Carlos MAGNAVITA⁽¹⁾ and Sonja MAGNAVITA⁽²⁾

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Kanem-Borno and the East: archaeological evidence of trans-Sudanic connections, 12th to 14th centuries AD

Since 2019, a new research project has been investigating the unexplored archaeological evidence of the Kanem-Borno sultanate (8th–19th centuries) in Chad. The main goal of this project is to reveal the currently unknown connections that the state may have had with near and distant African regions prior to the 15th century. Whilst documentary sources attest Kanem-Borno's early and late contacts to North Africa and some West African areas, secure data on possible eastern connections, historical or archaeological, are missing. In late

2019, the very first excavations on a Chadian fired-brick site related to Kanem-Borno brought to light an assemblage of glass beads dated from the 12th century to 14th. Color and morphology already pointed out that most of these beads probably originated from the Indian Ocean trade system. More recent LA-ICP-MS analyses corroborate those conclusions. Based on chemical comparisons with contemporary and earlier glass bead assemblages from West and East Africa, we argue that the Chadian finds were conveyed through trans-Sudanic rather than trans-Saharan trade routes. The question that remains open, however, is whether the beads arrived in the region via the Nile Valley, Kordofan and Darfur or via a more southern route that may have included the Horn and the Ethiopian highlands.

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The Western Sudan Community Museums Darfur and Kordofan Green Heritage Surveys – Nubia lost and found?

The NCAM Western Sudan Community Museum team, as part of the Green Heritage Project, has carried out heritage surveys into intangible and tangible heritage in Darfur, and Kordofan. These surveys carried out over the last four years have created a new perspective on the living heritage of Western Sudan as well as established links between populations in South Kordofan and North Darfur. The studies have shown the incredible density of archaeology in the Darfur hills in the late medieval period, and how these sites still have a living dimension as part of intangible heritage. The studies were initiated under the BC Cultural Protection Fund and aimed at protecting this heritage against climate change, and also the impact of conflict in the regions. The surveys were possible only through the peace-building process in Darfur and so represent an important step for communities to share their heritage and start to begin to build a shared cultural understanding to promote peace. NCAM staff were a key component in both leading and conducting the surveys, alongside the Darfur Heritage Centre of the University of Nyala. This sharing of the project with the Curators of the Western Sudan Community Museums has allowed the research to be shown to the local communities in Darfur and Kordofan in exhibitions opening this June in the Darfur, Sheikan and Khalifa House Museums.

Séverine MARCHI

FRENCH NATIONAL RESEARCH CENTER / UMR 8167

Back to Zankor data: the medieval period in Kordofan

For the past 20 years, thanks to easier access to satellite images particularly, the archaeology of western Sudan has been the subject of renewed interest from the scientific community. The recent research carried out downstream of the Wadi el-Milk (Wadi el-Melik), in the Jebel el-Ain and the Jebel Haraza areas, leads us to propose a re-examination of the data collected by the French archaeological mission of Gism el-Arba at the beginning of this wadi, during the Zankor survey.

The surveyed region is located near the administrative border between Darfur and Kordofan, 560 km as the crow flies from the Nile. Exploration of several mountain ranges around the citadel of Zankor have yielded signs of a dense occupation during the medieval period. This presentation is an opportunity to focus on the archaeological remains potentially assigned to that period and to discuss the organisation of human settlement in a still poorly known territory linking sub-Saharan Africa to the Nile Valley. A better understanding of the history of Sudan certainly requires a good knowledge of these geographical areas, and it seems essential to pay more attention to the many sites endangered by the development of mining activities and climatic degradation.

Jenail MARSHALL

PURDUE UNIVERSITY

Braided lives: arrested memories in archaeological spaces

Archaeology is inherently a community-facing project. The decisions that are made during archaeological excavations have an impact on the local communities where we work. What is often left out of the conversation concerning archaeological work is how much of a social process knowledge production is. Memory and oral studies are vast fields of inquiry that supply valuable perspectives on collaborative and community-oriented archaeology. Collaborating with local groups to understand memories of spaces and places is a way to combat arrested histories, stories deliberately left untold until an undetermined time in the future that fit within the normative versions of history and community of the nation. This presentation focuses on how memories erupt through archaeological practices and how recognizing the strength of community collaboration is just one way diverse voices and datasets overlap and intersect to create a fuller, richer, and more diverse account of a site, a history, a people.

Szymon M. MAŚLAK

POLISH CENTRE OF MEDITERRANEAN ARCHAEOLOGY
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The brick industry in the region of Tungul/Old Dongola over the centuries: organization and trends

Excavations at Tungul/Old Dongola as well as on sites in its immediate vicinity have provided evidence of an impressive brick production carried out during the city/region's heyday. By treating "bricks" as archaeological artifacts, it is possible, with the support of ethnographic research and other sciences, to partly reconstruct the economic aspect of this production and, in turn, the distribution of bricks in this particular region. The processes of making sun-dried and baked bricks in pre-industrial societies are well-known and have been described many times. However, it is rarely mentioned that each step of brick production and distribution, similar to other economic enterprises, also generated costs. Everything from the acquisition of raw materials, through the labor of unskilled workers and craftsmen making the bricks and firing them as needed, to the transportation of finished bricks to the construction site, was seldom done for free. A surprising amount of insight into some of the economic aspects of these production/distribution stages can be gained from analyzing the bricks themselves. Certainly, even macroscopic analyses of bricks are very helpful in this respect. However, bricks cannot be considered in isolation from local natural resources as their availability, together with the presence of labor on hand, had a major impact on the entire brick industry. By assessing the extent of brick production for the needs of individual buildings in the region of Tungul/Old Dongola, one can speculate on how much economic effort the state, communities, and individuals put into each building project.

Steven MATTHEWS and Ulrike NOWOTNICK

GERMAN ARCHAEOLOGICAL INSTITUTE

Ceramic griddle plates, past and present: everyday African foodways in Meroe and beyond

Ceramic griddle plates and their modern equivalents, typically used for the baking of flatbreads, are found widely throughout sub-Saharan northern Africa. Morphologically similar cooking implements have also been recovered from a number of Early Iron Age settlements across Sudan, attesting to their common use in the culinary traditions of the Middle Nile valley and beyond.

The recovery of a large number of ceramic griddle plates from primary use contexts from the Meroitic settlement of Hamadab provided a basis for re-evaluating the known evidence for this cooking technology, their chronology, distribution and use in Sudan and neighbouring

regions. This includes scientific analyses of samples and associated botanical remains, providing new insights on Meroitic foodways. These have been supplemented by observations on food practices and culinary choices gathered by means of ethno-archaeological study of traditional griddle cooking in Sudan. As part of the study of ancient culinary traditions by the Connecting Foodways project (DAI, Berlin), the study of ceramic griddle plates helps place Kushite cuisine in the context of wider Sub-Saharan food traditions.

Katarzyna MICH

ADAM MICKIEWICZ UNIVERSITY IN POZNAŃ

Cult of saints in Christian Nubia

The study of the canon of saints in Nubia is very difficult due to a number of research problems. The main difficulty is the reliance mainly on epigraphic and iconographic sources. The names of saints are known primarily from depictions on the walls of churches and monasteries, votive inscriptions containing private prayers, inscriptions on olive lamps, and hagiographic literature. Liturgical attestations of the cult of the saints are also very scarce.

Despite the development of research in the field of Christian Nubia, so far no one has undertaken a comprehensive study of the canon and cult of saints in Nubia. There are, however, some publications that deal more or less with this issue.

Numerous images of saints and prayers addressed to them show that this Church drew strongly from the treasury of the Eastern Churches. Both Byzantine and Coptic saints, who enjoyed varying degrees of popularity, are attested. However, local models of sainthood are necessary for Christianity to take root in local culture. Despite the residual sources, we can draw some general conclusions about both their very veneration and their canon in Nubia. In light of the current state of the sources, we can attempt to reconstruct the development of the canon in Lower Nubia, for most of them were attested in this area.

ABSTRACTS

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Kerma Culture and beyond.

New data on the history of settlement in the Bayuda Desert

The project “Prehistoric communities of the Bayuda Desert in Sudan – new boundaries of the Kerma Kingdom”, implemented by the Gdańsk Archaeological Museum in cooperation with the University of Wrocław is financed by the National Science Centre under grant no. 2016/23/B/HS3/00845. The main research assumption is that the Bayuda, located at the crossroads of important communication and trade routes in Africa, was a significant economic base for the prehistoric communities inhabiting the Nile banks in the area between the Third and Sixth Nile Cataracts. The project, implemented in 2017–2018, was discontinued due to the Covid-19 pandemic. Nevertheless, the research conducted as part of the ongoing project has already brought a vast amount of significant new data about the prehistoric communities inhabiting the Bayuda Desert and the transformations that occurred in the network of settlements in the area over the past several thousand years. So far, excavations have been carried out at more than 50 sites. The new data may also contribute to research on climate changes in North-East Africa. The current resumption of the research raises hopes for its completion in 2023.

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**Looking at medieval Soba.
The use of the eye-tracking method for understanding
archaeological object search strategies
on archaeological magnetic data**

In the work “Experience and prediction: An Analysis of the Foundations and the Structure of Knowledge”, Hans Reichenbach introduced the concepts of the context of discovery and the context of justification as the main elements describing the process of creating scientific knowledge (1938). According to this, the essence of knowledge is not only the methods that enable checking its correctness (the context of justification), but also the psychological factors leading to scientific discoveries (the context of discovery). Although both contexts are equivalent, in contrast to the context of justification, the issue of the psychological aspects of making archaeological discoveries has not yet been widely addressed in the field of archeology. The presented study is an attempt to fill this gap.

In this presentation we will discuss the results of eye-tracking research on detection of archaeological objects from archaeological magnetic data from the site of Soba in Sudan. A key aspect of the study was the recognition of the differences and similarities between three groups of people when analyzing the same magnetic images (laity, archaeologists without experience in magnetic survey, and specialists in the magnetic method). Thanks to the use of eye-tracking technology, it was possible to gain insight into where and how long the subjects were looking during the analysis of the images. The obtained results indicate that eye-tracking can be an important method in understanding the work of specialists who often rely on unconscious processes during the analysis, and also an important element in education. In addition, the research allowed for the identification of objects that have a low entry threshold (are noticed by people with a low level of knowledge) and those that are more difficult to interpret. The collected knowledge can help to improve the interpretation of images from complex urban sites such as Soba in Sudan.

**Cearra L. MIHAL, Brenda J. BAKER
and Sidney G. REMPEL**

ARIZONA STATE UNIVERSITY

**Grave re-entry in ancient Nubia:
A case study from Kerma period cemeteries near al-Qinifab**

Anthropogenic postmortem disturbance of graves typically is attributed to looting. A growing body of literature, instead, considers culturally sanctioned reasons for grave re-entry. In this study, patterns of grave disturbance in 48 fully excavated graves from five cemeteries dating between the Early Kerma and Napatan periods (radiocarbon dated about 2200–430 BCE) in the Bioarchaeology of Nubia Expedition (BONE) project area west of Abu Hamed were analyzed to distinguish sanctioned cultural practices from unsanctioned acts of plundering. We hypothesized that small re-entry holes targeting specific areas of the grave and corpse, with limited disarticulation and disturbance, represent a culturally sanctioned practice that occurred within memory of the burial. Alternatively, large re-entry pits, extensive disturbance, and substantial skeletal disarticulation represent unsanctioned grave re-entry. To test these hypotheses, field photographs, contextual documentation, georeferenced drawings of burials, and presence/absence of skeletal elements from the BONE project area were used to estimate re-entry pit dimensions in relation to overall grave dimensions, extent of grave disturbance, and percentage of skeletal disarticulation (<25%, 25–75%, and >75%) scores for three separate zones representing different areas of the body and for overall disarticulation. Correspondence analysis was used to assess the relative relationship between zones and the percentage of disarticulation, revealing that the highest percentage of disarticulation is correlated with two zones, the neck and hands. These results suggest that valuable items, such as jewelry, were the primary target during grave re-entry. A scatter plot matrix shows a slight correlation between entry pit dimensions and the percentage of disarticulation scores ($r = .55$). The results demonstrate an association between re-entry pit size and skeletal disarticulation, supporting the existence of two different forms of grave re-entry. Distinguishing these two patterns illuminates a seldom recognized practice of visiting the dead that may be linked to heirloom retrieval and ancestor veneration.

**Elizabeth MINOR,⁽¹⁾ Sarah SCHELLINGER⁽²⁾
and Ahmed El-Ameen Ahmed EL-HASSAN (Sokhari)⁽³⁾**

⁽¹⁾ WELLESLEY COLLEGE

⁽²⁾ OHIO STATE UNIVERSITY

⁽³⁾ NATIONAL CORPORATION FOR ANTIQUITIES AND MUSEUMS, SUDAN

Building a community from the start: the Es-Selim R4 Archaeology Project

This paper will discuss the first phase of our community archaeology project at the Kerma settlement site of Es-Selim R4 (ESR4). The site is located in the Northern Dongola Reach, in which the wide floodplain was braided with Nile palaeochannels, supporting a dense network of Kerma Period settlements, and was first documented by the Sudan Archaeological Research Society during the Northern Dongola Reach Survey (Welsby 2001). This Kerma settlement site presents the opportunity to investigate how factors of environmental, social, and political change intersect to affect one of the provincial population centres over the course of 1000 years. During the 2020 field season, the team worked to establish relationships with members of the local community. Our initial

community engagement has provided insight into how people living in the area relate to past remains of human activity in the landscape and what they would like to better understand about past human occupation and environmental conditions. We found that residents identified questions about the ancient environment and subsistence strategies as a high priority, as our research results have strong potential for informing their choices as they face climate change today. Through a remote study season in 2021–2022, the team continued to build relations with the residents through surveys disseminated with the assistance of NCAM collaborators. Our initial findings and future goals presented here are based on the results of these surveys, and include insights into the level of public interest in the ancient Nubian past, how residents and tourists interact with ancient sites today, and how they hope to learn more in the future.

So MIYAGAWA⁽¹⁾ and Vincent W.J. VAN GERVEN OEI⁽²⁾

⁽¹⁾ NATIONAL INSTITUTE FOR JAPANESE LANGUAGE AND LINGUISTICS

⁽²⁾ INDEPENDENT RESEARCHER

Developing an interlinear Old Nubian text database

This presentation describes an on-going project to produce a digital web corpus of the Old Nubian language. Part of the corpus was first transcribed in LaTeX format by Vincent W.J. van Gerven Oei. His LaTeX files contain interlinear glosses for each word in Old Nubian texts, enabled by a style file named `gb4e.sty`. So Miyagawa, a computational linguist, created an XSLT file to convert this LaTeX file into TEI XML format, the de facto standard of text mark-up used in the digital humanities field. He subsequently created a converter to translate the TEI XML corpus into an HTML file using modern CSS, enabling the responsive interlinear glosses on the browsers through `leipzig.js`, a JavaScript program for interlinear glossed text corpora. This presentation will discuss the current state of this project and the future prospective of utilizing `Vue.js` for the front-end and `Flask` for the back-end to develop a more contemporary user interface and search function for the web corpus. The project team members are currently developing a data fetching system directly from TEI XML corpus to the website using a JavaScript program called `CETELcean`. The glosses are written in the Leipzig Glossing Rules, the de facto standard for linguistic glossings; however, the web corpus will provide more basic information on Old Nubian grammar. As such, it is anticipated that the study will yield a user-friendly corpus for both linguists and individuals with Nubian cultural heritage.

ElAbbas SidAhmed MOHAMED-ALI

UNIVERSITY OF MEROWE

El-Kurru, Royal Cemetery – post Reisner

A whole century has elapsed since G. Reisner's survey and excavation of the royal burial ground of the Kushite ruling family (of the 25th Dynasty) and their ancestors at Kurru, 15 km south of Gebel Barkal in northern Sudan. The royal family has played a long, remarkable and significant role in the history of the Nile and beyond. Ever since Reisner (1919), the site was subjected to continual natural and human plunder, bringing it to a state screaming for attention. Thanks to the Qatar-Sudan Archaeological Project (QSAP), what was once a dream has come true, helping to turn site degradation around. Other than a part of the site allocated to another mission, we conducted five seasons of fieldwork (2014–2019) within the concession assigned to us under the conditions of the funding body. The aim was to survey, excavate and re-excavate, clean and clear the site components to protect and preserve the site heritage and turn it into a place for recreation and inspiration. The work undertaken resulted in the identification of new major features, along with the recovery of a significant volume of artefacts from sifting and sampling of the older spoil heaps from the 1918–1919 excavations, revealing over 40,000 potsherds among other artefacts. The work has also identified sandstone quarries, utilized for the construction of features and defending the site through the construction of a mud-wall and cement pillar fence, along with cutting rain water channels. Site management also facilitated building pass-ways, installing solar-system lighting and constructing additional visitors' facilities. Beyond this, light was shed on some other major issues regarding Napatan dating, ethnicity, cultural inter-relations, among other areas of inquiry.

Eslam Salah Hassan MOHAMED

INDEPENDENT RESEARCHER

Ambiguity of the status of Nubians in Egypt upon their displacement

This paper reflects on the history of the displacement of Nubians in Egypt that resulted from the construction of the Aswan High Dam in 1963 under the Nasserist Pan-Arabist regime. I argue that, in Nubian consciousness, the Dam represents a border barrier separating them from their ancestral lands in Nubian consciousness. This presentation explores the reaction of Nubians toward the discriminatory treatment they face from the government of ordinary Egyptian people. This paper examines the defense mechanisms developed by Nubians of forming several Nubian associations in Cairo and Alexandria and abroad, for representing them and saving their community from isolation by the Egyptian hegemonic culture. These associations provide charity for the displaced Nubians in their resettlement villages in southern Egypt. This paper argues that the associations demonstrate how Nubians occupy an ambiguous position as the Egyptian government neither treats them as citizens nor as immigrants.

Faisal Abdallah Omer MOHAMED

DEPARTMENT OF ARCHAEOLOGY, DONGOLA UNIVERSITY

Recent excavations at Eastern Barkal site: Season 2022

The discovery of archaeological materials dating to the Kushite era in Barkal site date back to the many field seasons that have been implemented at this site during the period of 2003–2020. This presentation addresses only the last seasons of the excavations which were carried out in the eastern area of the site. The most important reason that led to this topic is our understanding of the nature of this cultural region, and the nature of Napatan and Meroitic culture around the Barkal site. The goals of this presentation concentrate on the preliminary classifications for some materials and documentation for archaeological materials in their places, as well as understanding and observation of the uses of pottery in the archaeological site. One of the goals for which fieldwork was carried out in eastern Barkal was to shed light on the ancient environment with its various components of flora, fauna and climate, as well as knowledge of human movements during the early and late Kushite periods up until the Christian period.

Ibrahim Mohamed Ahmed Ali MOHAMED

AL-NEELAIN UNIVERSITY

Manifestations of richness and cultural diversity in the Al-Sabaloka East area in light of excavations in 2020

The excavations of Al-Sabaloka East since 2013 have revealed numerous archaeological sites. This reflects the cultural richness of the region, on the other hand, it turns out that there is a difference in material culture. Some sites belonging to the Stone Ages, late Meroitic period in addition to the effects of Christianity and Islam. The most characteristic features of prehistoric culture in Al-Sabaloka east are the presence of burials with stone mounds, which are uncommon in Sudan. As for evidence of the late and post-Meroitic periods, there are differences in sizes, funeral furniture, and the way of burial. All these factors motivated us to intensify field work to reveal the cultural depth of the region and its relation with other parts of Sudan.

Murtada MOHAMED BUSHARA and Loai Shamsalola IBRAHIM

NATIONAL CORPORATION FOR ANTIQUITIES AND MUSEUMS, SUDAN

Current archaeological excavations at Gebel Barkal cemetery

Since the excavations of Harvard University and the Boston Museum of Fine Arts at the royal cemetery of Barkal, the archaeological work in the cemetery, including the work of the Spanish archaeological Mission, has been limited. Recently, the Qatari Mission for the Pyramids of Sudan (QMPS) conducted geophysical surveys in the area between the two groups of Royal Pyramids in the Barkal cemetery and the area between the pyramids and the agriculture area along the Nile, which resulted in the discovery of several different types of burials. More than 11 burials located north of the pyramids Bar. 26 and Bar. 27 were excavated following the geophysical surveys. The presence of this largest cemetery in the area of the Royal Pyramids may shed light on Napatan and Merotic funerary architectural characteristics.

**Murtada MOHAMED BUSHARA, Babiker ELHASSAN
and Mehira HASHIM**

NATIONAL CORPORATION FOR ANTIQUITIES AND MUSEUMS, SUDAN

Belonging or not: The concept of the Gebel Barakal archaeological site for the local communities

The archaeological site of Gebel Barkal is located on the right bank of the river Nile in the northern state, about 400 km north-east of Khartoum. The site is characterized by its unique shape and location near the city of Karima and the two villages of upper and lower Barkal, which has led to different concepts about the archaeological value of the site to local communities.

Gebel Barkal was and still is sacred to the communities, but, nonetheless it is the most mysterious area of the communities, with many legends and folktales being associated with the environs of the site. Although Gebel Barkal is the main destination for most of the inhabitants of the area, the majority refer to it either as the mountain of El-Karsani or simply, the mountain, without mentioning the antiquities; the concept of antiquities at Gebel Barkal is mostly associated with the ram statues, located at the entrance of B500, which are referred to as horses, the Mut temple as the house of Nesaira (the daughter of the mountain) or Abo-Elkolaan, and the cave. Differences or contradictions of concepts between the local communities, archaeologists, and the criteria for registering the site as world heritage site; the concepts of life and death (river and desert) and the concept of Belonging to ancestral groups of the area will be examined in this presentation.

Islamic archaeology in Sudan from the perspective of cognitive archaeology

The religion of Islam has produced certain symbols in Sudan, the most prominent of which is reflected in architecture as an expression that has risen out of the way of Islamization of Sudan. A coexistence occurred after the coming of Arab-Islamic culture, resulting in a mixing with local cultures, namely traditions that developed during the Christian period, leading to a slow transition responsible for producing many important features reflected in different antiquities with varying purposes and functions. Such a gradual transition over an extended period has made the study of Islamic religious symbols an urgent matter for gaining a better understanding of this period in Sudan, the study of which can benefit from the application of various new approaches. This presentation utilizes an application of cognitive archeology which aims to study ancient ways of thinking through material culture which hopes to reveal the values of Islamic thought manifested in artefactual evidence.

Omima Abdel Rahman MOHAMMED and Nuha ABDELAZEZ

INDEPENDENT RESEARCHERS

Meroitic religious beliefs in light of material remains: insights from Meroe Island

Religious beliefs are an important topic for studying ancient civilizations. They are one of the basic 'pillars' of society and many aspects of life in Kushite civilization were based on them. A core trait of religion in Meroitic society was a belief in the afterlife. This belief is attested through material remains found at cemeteries, mainly in the form of artifacts and objects interred with the deceased. In addition to the material data from funerary contexts, insights into Kushite beliefs are also provided through textual and imagery data in temple reliefs. Were all these remains of religious or spiritual significance? This paper seeks to investigate by exploring religious beliefs in Kushite civilization through the material culture from temple and burial contexts at Meroe Island. Additionally, it seeks to better understand the endurance and continuity of ancient Meroitic religious beliefs in the history of Sudan in order to reveal the local roots of some aspects of religious belief which still exist in Sudanese society.

Elephants through the colonial lens

This presentation will explore the way in which the Meroitic era has been exoticised through scholarship, using the example of the role of elephants in Sudan. To do this, this presentation will draw upon case studies ranging from Lepsius' fieldnotes in the 1840s, the translation of Pliny the Elder's *Natural History* by Detlefsen and more contemporary writing, which Hofmann and Tomandl successfully catalogued as part of a wider book examining the depictions of all animals in Meroitic art. This presentation will seek to compare the treatment of elephant imagery in Sudan with that of Egypt, advancing the position that the two parallel collections should be treated and compared as a larger whole in order to decolonise the historical narrative surrounding this fascinating topic.

Khalid Shamboul Musab MUSAAD⁽¹⁾
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⁽²⁾ MALLINSON ARCHITECTS

Green heritage: Has archaeology skewed the record?

Climate change poses challenges to most disciplines and their activities. There are many archaeological sites in Sudan that are at risk, for example, from flooding or desertification. But are there new priorities to consider, and how may they be met? Sudan is a Sahelian country particularly vulnerable to climate change. One of its enduring features is, and has been for thousands of years, nomadic pastoralism. It is still key to its economy, food production and culture today. Khartoum, like Meroe before it, is perched on the edge of the rain belt, just in reach of the vast herds of livestock that walk to its western corrals. En route are settlements—farms, markets, centres of crafts—and cheese. This presentation will look at three settlements in North Kordofan that illustrate some connections: Kazgeil, Soudari and Sumayha. It will thereby raise the question of whether archaeology skews the record if it does not provide an understanding of the cultural landscape that fed its erstwhile inhabitants—then and now.

Kushites in Karnak: The Chapel of Osiris-Ptah Neb-ankh in light of recent discoveries

The chapel of Osiris-Ptah Neb-ankh ('Lord of Life'), lies to the south of the Tenth Pylon of the Amun-Re precinct at Karnak Temples, and east of the ram-headed avenue of sphinxes that runs from the Tenth Pylon to the Mut precinct. This somewhat isolated monument is one of a series of Osirian chapels built by the Kushite pharaohs. Both kings Taharqo and Tantamani, are represented in the scenes of the chapel. This presentation will aim to shed light on the chapel of Osiris-Ptah Neb-ankh and its surrounding context in the light of the recent discoveries by the Egyptian archaeological mission conducted under the Chapel of Osiris-Ptah

Neb-ankh Research Project (OPNARP), implemented to study the chapel and its surrounding area. This presentation will also highlight the importance of the Osiris-Ptah Neb-ankh chapel in the context of Karnak and ancient Thebes and will discuss the architectural monuments reflecting the kingship of the Kushite kings.

Mohammed NASRELDEIN

INSTITUTE OF ARCHAEOLOGICAL SCIENCES, UNIVERSITY OF TÜBINGEN

Economy and subsistence strategies of the Funj period: Preliminary archaeobotanical evidence from Old Dongola

This research aims to investigate the archaeobotanical remains from Old Dongola. The town site of Old Dongola was the capital of the kingdom of Makuria (AD 500–1300). And a major centre of power – the capital of the Northern Province – in the time of the Islamic kingdom of Sennar (Funj period, AD 1300–1600). In spite of all research conducted on the site, none of these efforts focused on the cultural aspects of subsistence regimes and cash crops. This research will provide secure data that should enable us to shed new light on the history of agriculture, as well as economic and social conditions in the region. It should clarify the impact of the town site of Old Dongola as a major residential town and a hub controlling the desert/Nile trade routes and caravans. A systematic sampling strategy was employed, with an aim to collect soil samples (1–20 litres) from each excavated context. As a result, 17 contexts from the Funj period allowed for identification of about 36220 seeds belonging to 17 families and 36 genera. The results show the continuity of sorghum (*Sorghum bicolor*, *Sorghum halapense*, and *Sorghum sudanense*), barley (*Hordeum vulgare*), and wheat (*Triticum aestivum*) as major food crops, as well as the palm date fruits as a major cash crop. Furthermore, the Funj period introduced new economic food and cash crops for the first time in Nubia, such as radish (*Raphanus sativus*), black mustard (*Brassica nigra*), tobacco (*Nicotiana tabacum*), and Egyptian henbane (*Hyoscyamus muticus*). Also, the results have shown that the diet of the Funj period was based on legumes, such as cowpea (*Vigna*

unguiculata), grass pea (*Lathyrus sativus*), and lupine (*Lupinus albus*). The significant output of this research is answering some important questions: for instance, how much percentage of crops production, and whether were they local or indigenous. Moreover, this research will present explanations for social and cultural interrelations between humans, plants, and animals. The archaeobotanical investigations will contribute a great deal to the issue of considering the region as a meeting point for different people, as well as interrelations between the locals and indigenous people.

José Pérez NEGRE

UNIVERSITY OF ALCALÁ DE HENARES

Egyptianization and Nubianization – two sides of the same coin? Exchange of mentalities and consumer goods between Egypt and Lower Nubia during the reigns of Akhenaten and Tutankhamun

One of the most outstanding aspects in the study of the interrelation between the country of the Two Lands and Nubia, especially Lower Nubia, has focused fundamentally on the control developed by Egypt in Nubian territory, with the establishment of an administrative system at the service of the Egyptian state. The present paper analyzes this mutual relationship in a very specific period of time, the end of the 18th Dynasty, between the reigns of Akhenaten and Tutankhamun, from a double perspective, namely the exchange of ideas and of consumer goods. On the other hand, this nexus at the same time reveals a diversity of behavior in the official and private spheres. Thus, although it is true that there is a process of Egyptianization of the Nubian territory, with cultural and social models that imitate Egyptian paradigms, it is also true that, in a way, a Nubianization of the Egyptian landscape is taking place, since the flow of “consumer goods” entailed the exchange of social models and behaviors originating from Nubia, already tangible since the early Middle Kingdom. Good examples of this complex system of cultural exchange are, for example, the parietal representation of some scenes depicted both in Nubia and in Egypt, or the presence of Nubian ceramic material in Egyptian lands, even with imitation processes of some typologies. The road system of the oases and the network of desert wadis became the backbone of both processes, Egyptianization and Nubianization, in addition to the Nile River itself through Elephantine. This mobility occurred in both directions, in a northerly direction, towards the country of the Two Lands, and towards Nubia in the south.

Serena NICOLINI

UNIVERSITY OF BOLOGNA

Border on the move: The First Cataract region from the third millennium BCE to the sixth century CE

With Egyptian state formation, the First Nile Cataract region became the border between ancient Egypt and Nubia. The way the border was defined, physically and ideologically, changed through time, but how?

This presentation aims at discussing long-term settlement patterns and land exploitation in the region broadly comprising the section of the Nile Valley from Kom Ombo to Bab el-Kalabsha and its surrounding deserts. The time frame considered goes from the 3rd millennium BCE to the 6th century CE. For the aims of this conference, changes in settlement patterns and land use will be interpreted primarily from a Nubian perspective.

GIS-based spatial analyses and remote sensing methods, used in combination with historical sources, archaeological and epigraphical records, are at the base of the research. The integrated use of different datasets proves to be extremely useful for addressing the main research questions which are part of a larger PhD project, the preliminary results of which will be analysed and discussed.

Martin ODLER⁽¹⁾ and Jiří KMOŠEK⁽²⁾

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ACADEMY OF FINE ARTS VIENNA; NUCLEAR PHYSICS INSTITUTE
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Was Nubian copper ore used in the Bronze Age?

The answer to this question appears to be simple in most literature, all copper and copper alloy objects found in Nubia are supposed to be imports, i.e. the objects themselves were made in Egypt and brought to Nubia. Taking a closer look at the evidence reveals many problems. The main one being, of course, the existence of independent Upper Nubian Kerman and Napatan metalwork. These had a distinct typological set of artefacts, indicating local development of technological innovations and even tastes. Further down the Nile stream, in Lower Nubia, the situation appears to be much more complex.

The Old Kingdom town at Buhen provided evidence of local copper metallurgy, as well as the site of the Middle Kingdom Buhen fortress, and the New Kingdom settlement at Amara West. Ceramic moulds for tools and weapons were found, for example, in the Middle Kingdom fortress of Askut and the Second Intermediate Period cemetery at Aniba. C-Group contexts provided evidence for local forms of some artefacts. The sealings from Middle Kingdom Mirgissa tell us about a local metalworker and one specific official, the “overseer of the house of counting copper”. Mirgissa also offers peculiar Middle Kingdom weighing stones of copper and crucial evidence for the existence of separate weighing units for copper and gold in the Egyptian Early and Middle Bronze Age. Regarding the copper mining sites, the Umm Fahm was identified, with a malachite mine, while recent discoveries of the Middle

Kingdom fortresses, el-Hisnein West and Dihmit South, also uncovered copper ore mining pits. With the help of this evidence and selected unpublished data, it is time to address the question anew, whether the Nubian sources of copper were used in the Bronze Age of Egypt and Nubia.

Manal Elamin Elshikh OMER

ARCHAEOLOGY DEPARTMENT, UNIVERSITY OF BAHRI

Meroitic weapons as reflected in finds and iconography (4th century BC–4th century AD)

For their survival, since the beginning of humanity, hunting and security have combined with nature to form a major activity for humans along the road of time. To strengthen the body and increase physical abilities, humans went seeking more in the surrounding environments, extracting rich and variable materials including, stone, wood, bone, horns, ivory, shell, and later metal. Inscriptions and paintings have been found depicting Kushite (Napatan and Meroitic) military battles and conflicts, showing the use of arrows and bows during the era of the Egyptian Old Kingdom (2686–2181 BC). This will be supported here in relation to the Kerma culture (2500–1500 BC). Furthermore, Napatan (900–664 BC) cemeteries also include a number of weapons. Those of the Meroitic (664 BC–AD 350) and the post-Meroitic (AD 350–543) phases yielded fighting artefacts including lances, axes, arrowheads, spearheads and other items in different shapes and sizes.

This presentation attempts to trace the origins, raw materials, manufacturing, types, function, and trends of change among these weapons, as well as factors that contributed to their spread across the territory of kingdom. This presentation also aims to analyse their cultural constituents, studying the weapons recovered from the cemeteries concerned in light of concomitant ideas and symbolic beliefs that unveil their funerary system. This study adopts a historical descriptive approach in combination with the analytical method in order to combine scientific findings that are consistent with the objectives of the study. The researcher allocated all the weapons deposited in the Sudan National Museum dated to the Napatan and Meroitic phases. In function, the data under study are expected to reveal insights to religious and funerary utilization, along with variation in burial type, economic, social, and political aspects, and interrelations with other entities or regions.

Pavel ONDERKA

NÁPRSTEK MUSEUM OF ASIAN, AFRICAN AND AMERICAN CULTURES

Altars and bark stands from the Isis Temple at Wad Ben Naga

During the past excavation seasons (2018–2021), the Archaeological Expedition to Wad Ben Naga (National Museum – Náprstek Museum, Prague) has been exploring the so-called Isis Temple (WBN 300), partly unearthed by the Royal Prussian Expedition already in 1844. The current works uncovered a multi-roomed temple which was inspired by the architecture of the Great Temple of Isis at Philae and built by King Natakamani and Queen Amanitore in the mid-1st century CE. Despite its modern name, the temple was primarily dedicated to the cult of a Meroitic Deified Queen, whose cultic image was discovered in the temple's main sanctuary. Cults of other gods, or more precisely goddesses, worshipped in the temple are primarily attested through inscriptions on bark stands, traditionally termed as 'altars', discovered in various parts of the temple. The Royal Prussian Expedition discovered three bark stands in the Isis Temple: The so-called Altar A was taken to Berlin, while the other two disappeared from record. Fragments of Altar B were rediscovered recently, while the fate of Altar C remains obscure. The Archaeological Expedition to Wad Ben Naga discovered a lion altar (Altar D), the type of altar which had previously been known only through epigraphic evidence. A fragment of Altar E, a counterpart of Altar A, was found during the most recent excavation season. At least one more bark stand is expected to be discovered during forthcoming excavation seasons. This paper shall present individual specimens of bark stands unearthed in the temple, analyse them in the context of other cultic equipment found there and compare them to specimens found at other Kushite sites.

Ali Salih OSMAN

INDEPENDENT RESEARCHER

The archaeology of Nauri on the Third Nile Cataract in the ancient, medieval and post-medieval periods

Nauri is a village in the Mahas region. It is one of 27 large villages of the third cataract of the Nile, in the district of Faraig, the locality of Delgo, in the northern state of Sudan. Nauri's greater lineage is Mashakila, which lies to its east. The major land marks of Nauri are two mountains nicknamed by early visitors as twins. Nauri and its environs are very rich in archaeological sites dating from the Egyptian Old and Middle Kingdoms to the Christian period. Sites from this later period are extensive and varied, and extend in a wide area covering most of the third cataract region which makes it fair to call the major part of the region "greater Nauri". Especially so as most medieval Christian sites are connected and interrelated. This presentation gives detailed descriptions of the sites of greater Nauri and traces their importance in the wider scale of medieval Nubian archaeology and history.

Abdel Meguid Abdel Wareth OSSAMA

CHILDREN'S MUSEUM IN CAIRO & NUBIAN MUSEUM IN ASWAN

Nubian soldiers in the Egyptian army

“When His Majesty took action against the Asiatic sand dwellers, His Majesty made an army of many tens of thousands from all of Upper Egypt ... from Irtjet-Nubians, Medjaw-Nubians, Yam-Nubians, Wawat-Nubians, Kaau-Nubians...”. From the tomb of Mesehty, a monarch of Assiut, we have two very impressive groups of wooden figurines, fixed on bases, each representing a regiment of soldiers on the march. One group shows Egyptians and the second group of soldiers represents Nubians. There is no doubt that the organization of the Egyptian army was still based on unpaid military service, unlike the mercenaries; this is particularly evident among the Nubians loyal to the Pharaoh and to the state, as we shall see later.

Representations of Nubians appear scattered throughout Egypt, but a large series of stelae from Gebelein, just south of Thebes, record their presence as an organized community. They are generally represented in simple style with their bows and arrows in their hands, often accompanied by their dogs. The Nubians were recruited into the Egyptian context, operating in and on behalf of Egypt, without, however, losing their own identity.

Regarding the Egyptian military organization, the manner in which these armies were organized and led and their activities beyond the natural frontiers of the homeland, it will be shown how it increased since the era of the Old Kingdom, reaching a climax during the New Kingdom. It will also be shown how the role of the Nubian soldiers in the Egyptian army grew in importance based on the use to which the army was put.

In this presentation, I will give a tentative account of the Nubian soldiers within the Egyptian army organization as recruited permanent elements, not mercenaries, and as they existed during the great historical phases of the Old Kingdom, Middle Kingdom and the New Kingdom wars.

Piotr OSYPIŃSKI

INSTITUTE OF ARCHAEOLOGY AND ETHNOLOGY
POLISH ACADEMY OF SCIENCES

The PalaeoAffad Project and beyond – focus on Southern Dongola Reach prehistory

After a decade of research in Affad (Northern Province, Sudan), the scope of the investigations has been broadened to include prehistoric settlement landscapes of the whole Southern Dongola Reach. The new project, directed by Piotr Osypiński (Unearthing Pan-African crossroads... UMO-2020/37/B/HS3/00519), is focused on some key areas: the Letti Basin, Argi (adjacent to Affad) and the outlets of Wadi el-Melik and Wadi Howar. The first fieldwork in Letti (March 2022) produced unique data complementing current knowledge of early Holocene settlement and burial practices, and contributing to the debate on regional cattle domestication and early pottery production (Tergis Group, according to the previous classification). The presentation will include new data for an absolute chronology in the region and will discuss research prospects.

The project works out from the Banganarti Archaeological Station (established by Bogdan T. Żurawski), a new facility for archaeological projects in the region, encompassing storerooms, offices and comfortable living quarters. We have thus inaugurated a centre for prehistoric studies of northern Sudan.

Christian PERZLMEIER

STATE MUSEUM OF EGYPTIAN ART IN MUNICH

News from the field at Naga

Numerous buildings and structures have been uncovered in Naga these last years. With the buildings Naga 2100, 2200, 3400 and 6200, four more structures can now be added to the on-going mapping work which has been the goal of the mission since 2015. The purpose of this communication is to present these recent discoveries.

In the supply and storage building Naga 2200, adjoining building 600, a large kitchen was discovered. East of temple 200, a neighbouring building N6200, which had not been documented before, was also found and most likely served to supply the temple. In the lower city, the building N2100, built on a podium, was also the focus of our work. To the southwest, N3400, a structure that appears to have functioned as a viewing platform, was unearthed. In addition, a little to the south, a city gate, N6300, was found for the first time, located in the wall surrounding the city and providing a western access.

The different nature of these structures and the associated material discovered allow us to go further in the understanding of the city.

Jacke S. PHILLIPS

CENTRE OF AFRICAN STUDIES
SCHOOL OF ORIENTAL AND AFRICAN STUDIES

Two large basins at Kurru

George Reisner's excavations at Kurru in 1919 unearthed more than the Napatan royal cemetery that he and, later, Dunham published. The International Kurru Archaeological Project (IKAP) co-directed by Geoff Emberling, Rachael Dann and Abbas Sidahmed Mohammed Ali re-located and continued excavation of Reisner's unpublished sites in 2013–2019. They exposed a mostly intact large 'bathtub'-like basin in his K1500 site (now IKAP's Area C 'Mortuary Temple') that, on examination of his unpublished records, had been exposed and very briefly noted just before Reisner's departure a century earlier. Another

document revealed he also had found—although did not otherwise record—a second, similar basin in the chapel of Pyr. Ku. 1, the anomalous pyramid more fully cleared and dated by IKAP to about 325 BC. IKAP did not recover this second basin and its current whereabouts are unknown, but it appears to be of a generally similar large scale and form.

Reisner's documentation of these basins consists of only two 1919 field photographs and a single descriptive note. These, together with the existing IKAP records and limited comparanda elsewhere, serve to raise multiple questions and possibilities concerning their existence, use, date and presence at Kurru.

Paweł POLKOWSKI

POLISH CENTRE OF MEDITERRANEAN ARCHAEOLOGY
UNIVERSITY OF WARSAW

Beyond the church: rock art research in the surroundings of Miseeda village

Built on and wedged between some dark volcanic rocks in the Third Nile Cataract region, the small mud-brick church of Miseeda is the focus of a new archaeological project of the University of Warsaw. The church stands out from other Nubian churches due to a feature not attested elsewhere: in the place where the apse is expected, it incorporates petroglyphs of a life-size anthropomorphic figure and two rams, all predating the foundation of the edifice. This rock art composition, possibly of Kushite origin, seems to have been reinterpreted by the Christian builders of the church and likely equated with the figure of Christ, since the rock-face itself has become the eastern wall of the building.

Previous research in the region showed that the area of Miseeda village, especially on the island and along the river, and the Wadi Farja where the church is located contain other rock art sites, datable to various periods. The known sites include, for instance, depictions of wild animals, executed with rarely attested skill, as well as less refined copies of the church petroglyph. One of the current Project's aims is a thorough exploration of an extensive area with the church in its centre, in order to record other archaeological remains, including rock art sites.

Although the Project has already commenced the initial fieldwork, a proper survey has not yet been conducted. Nevertheless, based on the already known images and a few new ones discovered during preliminary reconnaissance, this presentation aims to synthesize our knowledge of the local rock art and define some principal questions for the forthcoming research. Among them is the issue of a transition of the Kushite/Meroitic landscape into a Christian one, and the potential role of rock art in this process. While the pre-Christian petroglyphs indicate a special significance of the area directly surrounding the later church, a wider survey should enhance our understanding on a larger scale. Rock art research in this area appears thus not only as an inquiry into a Christian-period relationship with the landscape, but also investigates similar pre-Christian relationships, in which rock art seems to have played a significant role.

Rainwater management in Kordofan: a challenge for urban development

Since the beginning of the 21st century, research carried out in western Sudan has provided a new perspective on the archaeology of Kordofan. Excavations and large-scale surveys offer a sample of new cultures. Important settlement areas have been identified, with cities dating back to ancient and medieval periods, revealing a whole new facet: Kordofan is not just a transit area between the Nile valley and Darfur, it developed its own cultures and forms of urbanism. Work in the Wadi Howar region (*inter alia*) demonstrates an increasing aridity west of the Nile basin. Humans are present in the area from prehistory to the present day, and their cultures developed despite the lack of running water. Towns and villages succeeded each other for centuries. How did these societies manage to survive in this climate of increasing aridity? If water shortage must be taken into account, violent climate events are a real challenge, in the past as well as today, due to climate change. We will propose an overview of water management strategies in this region not irrigated by any sustainable waterway.

Sébastien POUDROUX

FRENCH ARCHAEOLOGICAL UNIT, SUDAN ANTIQUITIES SERVICE

Sudan Archaeological Heritage Protection Project (SAHPP): a survey point, a technical point

The topographer profession is constantly evolving and is increasingly making use of UAVs and photogrammetry. These two technologies are at the heart of the topographic work carried out by the SAHPP, allowing for quick and efficient acquisition of field data. Funded by the ALIPH Foundation and initiated in 2019, this five-year project aims to protect endangered archaeological sites in Sudan and to record them in a Geographic Information System (GIS) with the support of the National and Corporation for Antiquities and Museums (NCAM) and the help of international archaeological missions. It also aims to pass on topography know-how and to make young people aware of their archaeological heritage. We offer here an overview of our working method, illustrated by some field operations.

I. Collecting

- Topographic survey with a GNSS solution: presentation of techniques allowing positioning with centimetre accuracy in official coordinate systems;
- Aerial photography by drone with automated flight

II. Processing

- Photogrammetry: creation and georeferencing of orthomosaic, Digital Terrain and Digital Terrain and Surface Model (DEM/DSM);

- Development of a Geographic Information System (GIS): Storage, georeferencing, digitisation, manipulation and data analysis
- III. Developing
 - Automation of certain processes (vectorisation, atlas and maps creation), extraction of georeferenced stratigraphic sections from photogrammetry;
 - 3D restitution of monuments
- IV. Protecting
 - Presentation of the actions undertaken by the SAHPP in the field to fend off threats to archaeological heritage
- V. Passing on
 - Setting up a topographic workshop with NCAM inspectors and archaeologists and Sudanese archaeologists from Sudanese universities: use of a GNSS solution and a total station, use of a geographic information system (GIS), overview of the photogrammetric process with aerial drone capture;
 - Professional training of an NCAM inspector;
 - Intervention of volunteers in schools to sensitise the younger generation to the importance of preserving cultural heritage.

Aleksandra PUDŁO⁽¹⁾ and Henryk PANER⁽²⁾

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⁽²⁾ POLISH CENTRE OF MEDITERRANEAN ARCHAEOLOGY
UNIVERSITY OF WARSAW

Living conditions of the population of the Bayuda Desert in Sudan during the Old Kush period (2500–1600 BC)

The Bayuda Desert is located between the Fourth and Sixth Nile Cataracts, in a bend of the Nile River. This area, between 2500 and 1500 BC, was under the influence of the Kingdom of Kerma, which became a high-level civilization and successfully competed with Ancient Egypt. The aim of this research is to describe the living conditions of the desert population on the basis of paleodemographic analyses, reconstruction of body height and paleopathological lesions.

The subject of this study are human bone materials derived from graves which were discovered by the GAME project in the Bayuda Desert, from the Old Kush period. It was found that during the Old Kush period, small cemeteries were situated on hilltops. The analysis of the subjects ($n=58$) shows that males predominated among the dead (40%), dying mainly as adults (20–30). The highest mortality among females (20%), who were half as many, occurred in adulthood (20–30), too. Low paleodemographic parameters and measures of natural selection of the study group were obtained. The average body height of men was 166.7 cm, while that of females was 152.1 cm. Many paleopathological lesions were noted on all of the skeletons studied. Interestingly, there were overload lesions on the children's skeletons.

In conclusion, the research indicates that the population of the time lived in rather difficult conditions, despite the streams and stagnant water that sustained the vegetation and animals in the area. However, compared to those near the Nile valley, and especially in the capital of the Kingdom, they were the least convenient for the population of the time.

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Crucible technology at Dangeil: new insights into Kushite copper alloy metallurgy

This paper presents the results of a comprehensive study of copper alloy production remains uncovered at the Kushite Amun temple precinct of Dangeil as well as metal artefacts excavated from its cemetery. It offers the first detailed examination of crucible technologies for Upper Nubia during the kingdom of Kush and provides a unique insight into the *chaîne opératoire* of Nubian copper alloy manufacture. Furthermore, it affords a rare opportunity to map the diachronic and regional development of copper-based metallurgical practices along the Nile Valley as a whole, where notably few examples of production waste have been discovered and studied in detail so far. As such, this paper highlights the potential of crucible assemblages towards significantly improving our understanding of Nubian production systems. Building on macroscopic technological and typological examination, the results of detailed scientific analysis of the crucible remains (cross-section analysis by optical microscopy and SEM-EDS) illuminate the technological choices made by craftspeople at Dangeil. This provides insight into the metallurgical processes and materials employed towards copper alloy manufacture and reveals variations in technological practices within a single site or workshop. Crucible studies complement artefact analysis to identify local production as well as potential imports at Dangeil. Furthermore, these results illuminate broader systems of production and exchange of both raw and finished materials, leading to an understanding of Kushite pyro-technologies as integrated in local and regional economies. Finally, comparisons to regional and contemporary examples of crucible assemblages allow us to start reconstructing metallurgical developments and exchanges along the Nile, which remain poorly understood.

Francesco M. REGA

UNIVERSITY OF NAPLES, "L'ORIENTALE"

Socio-economic developments in Eastern Sudan between the end of the 5th millennium BCE and the early 1st millennium CE: the macro-lithic tools point of view

The investigations of the Italian Archaeological Expedition to the Eastern Sudan (IAEES) are constantly highlighting, and defying with each campaign, the social and economic dynamics of this peculiar area of Sudan. From the hunter-gatherer groups up to the agropastoral communities, this zone provides interesting insight into the evolution of the exploitation of local natural resources. Furthermore, it offers an overview of how wild and domesticated plant species have been included in the diet, providing one of the earliest attestations of domesticated sorghum consumption (early 2nd millennium BCE). Cultural manifestations have been brought to light too, especially those related to funerary practices. Macro-lithic tools seem to have played a role in all these features, siding the socio-economic developments, and possibly influencing them.

A general overview of the evolution of these lithic artifacts will be provided with this presentation. Examples will be shown, to expose some socio-economic evaluations connected with stone tools. These tools have been collected from specific contexts dating from the hunter-gatherer period to the agropastoral and nomadic phases, respectively corresponding to the Malawiya Group (5th millennium BCE), Gash Group (early 3rd–early 2nd millennium BCE) and Jebel Mokram Group (2nd–early 1st millennium BCE), and the Hagiz Group (1st millennium BCE–1st millennium CE). Morpho-technological characteristics, information about raw materials and residues, as much as diachronical and synchronical considerations will be shown, too, to present how these implements were possibly made and used, and how they changed or remained unvaried with the different cultural groups.

Claude RILLY

FRENCH NATIONAL CENTRE FOR SCIENTIFIC RESEARCH
/ ECOLE PRATIQUE DES HAUTES ETUDES

The Meroitic inscriptions of Sedeinga: A glimpse of society in a provincial city

Since the beginning of excavations in 1963, a great number of funerary texts in Meroitic were found in the Kushite necropolis. The French archaeological mission discovered no less than 22 inscribed lintels, stelae, and offering-tables in the recent excavations of Sector II, between 2016 and 2019. Most of them can be dated to the 2nd/3rd centuries AD.

Thanks to recent advances in the understanding of the Meroitic language, these inscriptions—some of them of considerable length—offer insight into the social organisation of a provincial city in the Kingdom of Meroe. Several members of the Sedeinga elite boast family links with important urban centres of the kingdom, including the capital.

Many inscriptions are of priests and priestesses, evidence that a large number of deities had official cults in the city. It was chiefly Isis, whose special connection with Sedeinga resulted from the presence of the Egyptian temple of Queen Tiye on the site, but unexpected names

such as Masha, the sun god, Taleya, goddess of war, and even a deified king Takka (Taharqo?), are also mentioned.

Among the most spectacular artefacts recently unearthed in Sedeinga is a large *ba*-statue in an excellent state of preservation, a rare depiction of a *sem*-priest wearing the usual leopard skin. The associated funerary stela gives his name as Pawarite-wada (Pwritewd), literally “he who pours life”. This is a definition of the role of the *sem*-priest and certainly not a birth-name. Renaming of people in consideration of their social role seems frequent in Meroitic anthroponomy.

Katarzyna ROSA

UNIVERSITY OF WARSAW

Local traditions and external inspirations.

Preliminary inside view of pottery workshops in the Miseeda region

Near the village of Miseeda, in the Mahas region, close to the Third Cataract, there is a medieval church, probably built in the 7th century. The region was surveyed recently and the new project concerning the church and its vicinity gives an opportunity for a closer look at the local pottery tradition.

At the beginning of this year, in January and February 2022, conservation and archaeological works were carried out in the church and its surroundings. As a result, a large quantity of pottery was found, including transport, utility, kitchen and table wares. The aim of this paper is to present the material and to compare it with material from other production centers, resulting in a preliminary set of observations concerning the extent to which local production is based on a wider Nubian pottery tradition of this period and what its regional characteristics are.

Robert S. RYNDZIEWICZ⁽¹⁾ and Tomasz MICHALIK⁽²⁾

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⁽²⁾ POLISH CENTRE OF MEDITERRANEAN ARCHAEOLOGY
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Geophysical research and archaeological feedback. Interpreting large-scale datasets from Soba, the capital of the medieval kingdom of Alwa

Non-invasive geophysical prospection used to test archaeological hypotheses offers a powerful and time-efficient way to study the human past. Simultaneously, the geophysical data is limited to measurable physical parameters, containing the proxy record of natural

and anthropogenic past processes. The effectiveness of data analysis is thus closely related to the principles and limitations of the methods. Therefore, archaeological interpretations based solely on geophysical data may turn out to be deficient and questionable, despite a very suggestive imagery at first glance.

In this presentation we will show selected results of large-scale geophysical surveys performed at the archaeological site of Soba. High-resolution methods, that is, magnetometry (fluxgate gradiometer) and ground-penetrating radar (450 MHz central frequency antenna), used for the survey supplied comprehensive datasets. The survey was carried out on more than 50 hectares, making Soba one of the most extensively surveyed archaeological sites in the entire Nile Valley.

We will also discuss the impact of excavation data on the interpretation of geophysical maps. While it is difficult to upscale conventional archaeological excavations to solve broad research problems in large urban contexts, the excavation results significantly broaden interpretation possibilities in the case of geophysical data, making them in effect more holistic.

Agnieszka RYŚ-JARMUŻEK

FACULTY OF ARCHAEOLOGY, UNIVERSITY OF WARSAW

Grinding technology in medieval Sudan: a new research perspective

Grinding tools are an essential part of the archaeological record, especially in the case of settlement sites where they constitute a fundamental component of food production or craftsmanship. Despite the significance of this subject for a better understanding of everyday life in the past, little research on grinding implements has been conducted in Sudan, especially with regard to medieval times. This paper presents an analysis of the grinding tools assemblage from Soba, the capital of the Kingdom of Alwa (from the 5th/6th century to the early 16th), and from Funj-period Old Dongola (16th–18th centuries). The comparison of technological attributes, such as the choice of raw material, design, manufacture, maintenance and disposal, along with an analysis of use contexts leads to an understanding of how grinding technology was perceived and practised within two different communities in medieval Sudan. Furthermore, ethnoarchaeological observations from Misedda (Mahas region), where grinding technology is still present, will broaden the perspective and allow a glimpse into the traditions and practice of the use of these implements.

Mohamed SAAD ABD ALLA

NATIONAL CORPORATION FOR ANTIQUITIES AND MUSEUMS, SUDAN

The health of the people of Meroitic Berber based on a study of human remains from the cemetery

This study aims to investigate the health condition of the inhabitants of the Berber site by studying the human remains from the cemetery, dated to the Meroitic period (from the 3rd century BC to the 3rd century AD). The excellent preservation of the skeletal remains from the Berber cemetery enabled an analysis of the health condition of the inhabitants of Berber. The sex, age-at-death and stature of the individuals were determined and a record was made of observed pathologies. The relatively small size of the sample allows for only preliminary insights into this community. The population of Meroitic Berber appears to have been a prosperous one, in relatively good health, with limited signs of pathological. Despite no older adults being represented in the sample, it is clear that the people of Berber suffered from diseases connected with their sex and age. When comparing Berber with Gabati, a site with similar cultural practices, social status and environment, it was observed that Berber was more settled and wealthier. However, the data set from Berber is small, and additional excavations may help to establish a more detailed understanding of life in this region during the Meroitic period.

Aminata SACKO-AUTISSIER

DEPARTMENT OF EGYPTIAN ANTIQUITIES, LOUVRE MUSEUM

An intaglio in Khartoum: case study

The SNM 613 intaglio preserved in the Khartoum Museum stores was found by Garstang at Meroë sometime in 1909–1914. It is decorated on the recto with an iconography combining borrowings from Greco-Roman and Egyptian styles. The presentation discusses a group of rings with intaglio of Roman age from the same site.

Azhari Mustafa SADIG

KING SAUD UNIVERSITY

The Late Neolithic of Sudan based on excavation results from the es-Sour site located north of Meroe

The site of es-Sour is located about 35 km from Shendi and 1.5 km from the right bank of the modern Nile channel. The site has been excavated by the Department of Archaeology of the University of Khartoum since 2005. The results of these excavations were extremely positive, demonstrating the existence of Neolithic occupation deposits up to 80 cm deep in some places, although affected by water and wind erosion and by some later graves (Meroitic and medieval) which were cut into the site. Material from the site is similar to that recovered

from el-Kadada, which lies about 30 km upstream, but no associated cemetery has yet been identified at es-Sour. However, as at el-Kadada, burials of infants contained in large pots were found within the settlement site.

The settlement debris included large quantities of shells, domestic and wild animal bones, lithics, sandstone and granite grinder fragments, pottery sherds, as well as a small number of bone and ivory tools and some human figurines. The first radiocarbon dates for the site placed it between 5330±54BP and 5180±48BPB.

In this presentation, further data are presented on the excavation results and the place of es-Sour within the central Sudan Neolithic map, and its importance beyond the first Nubian state in the north.

Abdelhai Abdelsawi SAEED

NATIONAL CORPORATION FOR ANTIQUITIES AND MUSEUMS, SUDAN

The impact of recent goldmining on Sudanese archaeological heritage

Gold mining in Sudan is returning to levels unseen since the pharaonic times, namely since the Middle Kingdom period (1900 BC). During the New Kingdom and Kushite times gold mining continued, and again saw renewed activity during the Ptolemaic period and Islamic era in the 9th century AD. The extraction of gold once again occurred during the Turkish and, to some extent, British periods. During this time, mining was concentrated in the Nubian and Eastern deserts, where exploitation has been primarily of quartz veins bearing gold ore; these quartz veins cut into and intrude upon the meta sediments and meta-volcanic rocks of the Nubian shield, which represent an extension of the so-called Hejaz magmatic belt.

Recently, extensive gold mining activity has been conducted in Sudan; officially it started in 2011, when the Sudanese government introduced several foreign companies for investment in gold mining. As a result of the increasing economic crises, this introduction was followed by waves of gold mining all over the country by hundreds of foreign and national companies, along with an unlimited number of natives, who are working in poorly organized minor scale mining operations. This presentation seeks to shed some light on the threats caused by this activity to archaeological heritage and associated environments, giving examples of heritage sites in northern and eastern Sudan reported by NCAM officials. It is hoped that such threats to Sudanese heritage can be mitigated through making local communities more aware of the importance of heritage, leading to revised strategies for archaeological work by researchers in Sudan.

Thomas SCHEIBNER

ARCHAEOLOGICAL RESEARCH AND CONSULTANCY, BERLIN

Water management and water-intensive technologies in the hinterland of the Nile Valley

Based on a reconstruction of ecological conditions during the Kushite period, particularly in relation to natural water resources, this presentation will discuss the fundamental role of water management and artificial local water resources in the hinterland of the Nile valley. Whereas crop production in the form of seasonal wadi cultivation could have taken place under natural conditions, any pastoralism required artificial water resources. Thus, it is possible that hafirs were initially invented and erected by local (agro?)pastoral populations and only later were partially enlarged and economically, perhaps also politically, utilised by the Kushite state. It can be suggested that especially large hafirs like at Musawwarat or Basa, were intended to support and intensify wadi cultivation by “supplementary irrigation”. In addition, the erection and maintenance of ancient monumental sites per se required an artificial water surplus, but also often involved the use of further water-intensive technologies, e.g., the production and application of lime mortar and other construction materials such as red or mud brick. In this respect, the relationship between the Nile valley and the hinterland will be discussed with regards to potential raw material sources, places of production, and the delivery of raw material vs. finished products.

Sarah SCHRADER⁽¹⁾ and Stuart Tyson SMITH⁽²⁾

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⁽²⁾ DEPARTMENT OF ANTHROPOLOGY, UNIVERSITY OF CALIFORNIA SANTA BARBARA

Status and diet in ancient Nubia: new insights from Abu Fatima

The potential for dietary reconstruction via stable isotope analysis in archaeological materials has been illustrated. By assessing isotopic ratios of carbon ($^{13}\text{C}/^{12}\text{C}$ or $\delta^{13}\text{C}$) and nitrogen ($^{15}\text{N}/^{14}\text{N}$ or $\delta^{15}\text{N}$), archaeochemists are able to infer, broadly, what types of foods ancient individuals and populations consumed. These data can be highly informative when considering the biosocial context of food.

Marie-Kristin SCHRÖDER

GERMAN ARCHAEOLOGICAL INSTITUTE, CAIRO DEPARTMENT

A re-evaluation of C-Group culture chronology

The current chronology of C-Group culture is still based on M. Bietak's 1968 study, in which he distinguished five phases in the development of the C-Group (phases Ia to III) and proposed a time frame from the Egyptian 6th Dynasty to a very early 18th Dynasty. This

dating was based mainly on the internal development of various cemeteries in Lower Nubia, with a special focus on Nubian ceramic grave goods, like incised bowls, and furthermore on sealings found within the tomb contexts. However, the numerous Egyptian-style pottery goods were neglected due to the state of research in the 1960s. Thanks to the work conducted on Egyptian pottery from well-stratified settlement contexts in Egypt since Bietak's chronology, the Egyptian pottery cannot be neglected anymore. In this paper, I want to present the results of my dissertation project "Nachbarschaft im Wandel. Untersuchungen zu Siedlungs- und Nekropolenbefunden in Oberägypten und Unternubien (2300–1700 v.u.Z.)" (2021). Based upon new studies on Egyptian ceramic development such, as at Elephantine Island, the Egyptian-style inventories from the cemeteries of Kubanieh-Nord, Aniba N, Dakka cem. 101 and Adindan T were re-evaluated. As a result, the archaeological record of the C-Group ceases already during the late 12th Dynasty, parallel to the reign of Senwosret III, and not in the early 18th Dynasty. The archaeological and ceramic evidence as well as the implications for this new chronology proposal are presented and discussed in this paper.

Anette SCHULZ,⁽¹⁾ Thomas BAUER⁽¹⁾ and Pawel WOLF⁽²⁾

⁽¹⁾ REPLICART BERLIN

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Completely fake – but very useful

Worldwide cases of important works of art irretrievably lost due to armed conflicts, terrorism and vandalism show that digital documentation of cultural heritage is an important task, and will increasingly become so in the coming decades. When combined with traditional craftsmanship, digital imaging develops a particular strength: when ancient works of art are precisely recreated and reconstructed in close collaboration between high-tech specialists, restorers and archaeologists using digital documentation, 3D printers and traditional crafts methods. The results can be genuine, high-precision replicas that are virtually indistinguishable from the originals, or reconstructions that illustrate the original state of the artworks.

The advantages are obvious: such replicas can be touched to make history tangible and understandable. They can be adapted to meet building specifications or curatorial necessities. They are less expensive to transport than the original works for traveling exhibitions or as loans. Not least, they are useful alternatives that can be exhibited in European museums in the course of returning cultural monuments to the countries from which they originated.

Through the case study of the royal Kushite statues, discovered in Dokki Gel by the Archaeological Mission of the University of Geneva in 2003, we illustrate the techniques involved in the production of such replicas. In 2015/2016, the statues were digitally documented in the Museum of Kerma using a "white stripe scanning system". Based on the virtual models, exact 3D replicas were produced for display in the *Pharaoh of Two Lands* exhibition held in 2022 at the Louvre in Paris. The high-precision replicas were reconstructed

ABSTRACTS

according to the content specifications of the Louvre's Sudan experts. Missing and damaged sculpture parts were remodeled, the stone surface was faithfully reproduced, and individual parts, such as crowns and bracelets, were gilded using traditional crafts techniques.

Naoyo H. SEKIHIRO

KYOTO CITY ARCHAEOLOGICAL RESEARCH INSTITUTE

Historical significance of ancient iron in Sudan

This presentation aims to develop a reconsideration of the historical significance of iron-making and artifacts in Ancient Sudan. Meroe was linked to ‘Birmingham’ previously by A.H. Sayce with ‘many black mounds’ on the site. The excavation and research of P. Shinnie and R. Tylecote, initiated in the late 1960s, showed these black mounds to be the remains of slag from ironworking. Shinnie excavated six furnaces in the Royal City, on the north mound in 1969–1970 and in 1973–1975. Tylecote studied smelting and smithing furnaces, tuyeres and crucibles and divided the tuyeres into seven types. T. Rehren analyzed a limited number of samples of iron slag and ore and, in 2001, attempted to determine the date for the introduction of this technology and the course of its development. B. Abdu and R. Gordon discussed differences in artifact production between the Classic and Late Meroitic periods in Arminna West and Toshka. M.S. Bashir classified the iron artifacts in the collection of The Sudan National Museum in Khartoum and discussed the relation with the indigenous Lion god, Apedemak. In the 2010s, the UCL Qatar team directed by J. Humphries excavated in Meroe and conducted experimental smelting in collaboration with the local community.

These research and analyses showed that all of the manufacturing processes from ore sampling to refinement and smithing were undertaken in Meroe, though many aspects of the introduction and crafting of iron objects, the processes of technological innovation and the distribution system remain unclear. Consideration of historical iron production methods and morphological aspects of iron products will provide insights into the typical methods utilised in Meroitic Nubia, offering opportunities for effective reconstruction and a more comprehensive understanding of iron production and use in ancient Sudan.

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Gathering the dead and reusing the tombs: Burial practices and funerary chaîne opératoire in Kadruka–23 Neolithic cemetery

Excavated since 2014 (8 seasons), the Kadruka-23 burial ground in Upper-Nubia (Sudan, Northern State, Dongola Reach) counts, up to now, 158 individuals, mostly dated from the second quarter of the 5th Millennium BCE (4700–4500 cal. BCE). The burials are spread over

110 m² but do not occupy the whole surface of the mound (*kôm*), which is of natural origin and was surrounded, in Neolithic times, by the paleo-channels of the Nile River, forming a kind of "island of the dead". The distribution of the graves is quite irregular with a restricted and dense occupation of only a portion of the mound, including a special zone for younger infants. The whole surface is organized as a genuine cemetery and the areas of high burial density are distributed in parallel rows. The whole funerary chaîne opératoire can now be reconstructed, including the phases of transportation of the corpses, the wrapping of the bodies, the deposition of the corpse with grave-goods, and the intentional gathering of some individuals; many burials are cut or reopened to increase the burial density in the very same area, in order to associate or connect different dead individuals. This gathering of subjects who died at different times is part of what we can name a "funerary programme".

Fatima Elbashir SIDDIG

SUDAN UNIVERSITY OF SCIENCE AND TECHNOLOGY

An analytical chemistry approach to the characteristics of ancient Nubian cosmetics

An analytical chemistry approach in cultural heritage uses measurements and detection of inorganic elements as well as organic compounds to investigate and identify objects and their characteristics. The analysis of ancient cosmetics residue, from cultural heritage contexts, is more delicate since they are precious samples. Therefore, their study requires non-destructive techniques, with high directivity, high lateral perseverance, and high chemical sensitivity. Cosmetic containers have regularly existed in burials from Egypt and Ancient Sudan (Nubia), emphasising the importance of such objects and the daily usage of make-up during these periods. The main practice of these make-ups served several functions: aesthetic, the pursuit of attractiveness; hygienic; therapeutic; and for religious purposes or religion worship expression. Studying ancient cosmetic and remedy recipes reveals the intensive use of metal salts, like lead-based, arsenic-based, and mercury-based, which are currently considered as potentially toxic. The presence of lead in ancient cosmetics and pharmaceutical products excavated in burials from Ancient Nubia and Egypt proves the significance of these metal salts in medicine. In the research of ancient Nubian cosmetics, the characterizing of ancient cosmetics and, mainly kohl and pigments, are a true challenge for analysts. As well, applying, studying, and discussing different analytical techniques, for the investigation of ancient cosmetics and the evolution of beauty remedies to establish well-matched identification and characterization of the structural composition of these substances. Several non-destructive and micro-destructive analyses will be accomplished.

Wall-scapes: reevaluating the Aswan-Konosso and Semna-Uronarti wall systems

Monumental walls play an outsized role in our imagination of contemporary borders, but were also instrumental in fashioning past “borderscapes” near Elephantine and Konosso. Drawing on the Borderscape Project’s theoretical analyses of the First Cataract region, I will re-evaluate the role and purpose of two of the longest wall constructions known from Pharaonic Egypt: a 12th-Dynasty wall stretching roughly 7 km along the Nile’s east bank from Aswan to Konosso and the nearly 5-km-long section of wall stretching north from Semna towards Uronarti. Specifically, I will locate the importance of these features in managing and channeling migration and trade through very specific corridors: they were primarily efforts to shape economic boundaries. In part through the reification of particular circuits of economic transactions/praxis, such economic boundary-making efforts influenced subsequent conceptions of an ideological boundary at Elephantine.

After reviewing the archaeological evidence for these monumental walling projects, I will discuss some of the evidence furnished by recent survey work around the Second Cataract near Semna and Uronarti. Following this discussion, this material will be analyzed in conjunction with the textual and archaeological evidence for robust surveillance of these boundaries during the Middle Kingdom and New Kingdom, while contrasting the “afterlives” of the Aswan-Konosso wall and its counterpart at Semna during subsequent periods. The concluding section will address the role of these architectural features in defining particular patterns of economic activity, and the broader consequences of this standardization for the political and physical landscape of Lower Nubia.

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Rediscovering the lost city of Napata. First results of the Jebel Barkal Archaeological Project (JBAP)

Cities played important roles in ancient societies. They were loci for aggregation of people, performance of political authority, accumulation and display of wealth, and were centers of regional economic systems. Jebel Barkal (ancient Napata) has been the focus of documentation and excavation for over 200 years, but there has been no systematic attention to understanding the site as an urban center, rather than as a collection of monumental structures.

This paper presents initial results of investigations in a recently identified area of settlement at Jebel Barkal conducted by the Jebel Barkal Archaeological Project (JBAP), a collaborative project of the University of Michigan and the National Corporation for Antiquities and Museums. This area had previously been excavated by Italian teams in the 1970–1980s, and had revealed Meroitic public buildings, but the broader urban context had not been investigated further. JBAP began its investigation in this area, which we have termed the East Mound, in 2016, and we have now completed a geophysical survey, three seasons of excavation, and have begun a program of geomorphological coring to investigate the local environment of the site.

The JBAP explorations demonstrate that the East Mound itself was a densely settled area of 10–15 hectares that was a part of the broader urban center at Jebel Barkal that must have covered over 100 hectares. Our studies suggest that the East Mound settlement was complex and comprises a wide range of types and sizes of structures of varied functions. Evidence also shows that the buildings were neatly organized around alleys, roads, and plazas. The areas excavated date from the Late Napatan to the Classic Meroitic period, indicating that, despite the move of Kushite royal burials from the region of Napata to Meroe in the 3rd century BCE, significant settlement expansion took place in Napata.

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Maintaining and transcending social boundaries at Tombos

Archaeological research on the cemeteries associated with the “temple towns” of Upper Nubia tend to focus on the tombs of elite colonial administrators, providing a very top down view of society and interactions within the context of Egypt’s New Kingdom empire. This presentation reports on the results of recent fieldwork at Tombos, deploying broad exposure excavation to identify a larger sample of the more modest tombs and burials that shared the cemetery with colonial administrators. Individual and communal burials reflect a broad range of social status, including a variety of tomb types from small pyramids akin to those at Deir el Medina to simple individual shaft and pit tombs, as well as burial treatments including individuals wrapped in reed matting similar to the modest practices within the large cemetery at Amarna. Evidence for cultural entanglement reflects an increasingly diverse community over the course of the New Kingdom and into the Third Intermediate Period. Material culture and practices document interactions and entanglements and innovation at Tombos in a localized pattern of intersecting identities, in particular status, gender, and culture/ethnicity, that extend beyond the wealthy elite to decisions made about burial practice by people of Egyptian, local (Nubian) and mixed ancestry within the colony who both supported and perhaps resisted Egyptian domination. The excavation of a small cemetery of modest burials across the river at Hannek adds to this picture by documenting the penetration and limitations of Egyptian cultural influence in the vicinity of the colony. The more complete view of colonial society at

Tombos produced by this new evidence provides a more nuanced perspective on the social dynamics and complex and intersecting constructions of identity during and after the empire.

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Beyond the “temple-town”: changing lifeways and production at Amara West (1300–1000 BC)

The term “temple towns” has long defined modern understanding of the settlements founded by the pharaonic state in Kush/Upper Nubia during the late second millennium BC rule of the region, encouraging a reductive and homogeneous approach to these sites. Recent fieldwork, at a number of sites, is providing more nuanced understandings of the distinct nature and development trajectories of the individual settlements, the lived experience of colonialism, and the role of “Nubian” cultures, identities, styles, and technologies in shaping these places. The fieldwork conducted by the British Museum’s Amara West Research Project provides datasets of great potential for exploring these themes. This paper, drawing on ongoing analysis of field data, will present a case study tracing how storage facilities within the walled town—whether originally intended to service the maintenance of the community or part of the architecture of resource extraction and control—were converted into houses, but also a pair of small workshops set between those houses. These workshops presumably met changing community needs as the nature of the settlement changed. Set within the context of complementary data providing perspectives on the changing urban plan, the geographic origin of the community, funerary practices and craft and production activities in houses themselves (including pigment preparation), new insights emerge on the shifting balance between state and community needs across two centuries of inhabitation.

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Biological background and the Bayuda: Initial insights from aDNA analyses of the lay and monastic communities at medieval Ghazali (c. 680 to 1275 CE)

The medieval Makurian site of Ghazali (c. 680 to 1275 CE) is located within the Wadi Abu Dom region of the Bayuda desert, about 15 km from the Nile river. The defining feature of Ghazali is the presence of a large monastery, with associated adjacent iron smelting and lay settlement components located in close proximity to the monastery. As part of this settlement area, four cemeteries developed, with Cemetery 2 being evidently utilised by the monastic community, while Cemeteries 1, 3, and 4 were used by the associated lay community and potentially by other communities in the area. As part of ongoing bioarchaeological research at Ghazali a sub-sample of 60 individuals was subjected to DNA analyses to gain broader insights to the biological backgrounds of individuals interred at this site. This presentation focuses on the results of DNA analyses from Ghazali and the contextualisation of such within the wider framework of medieval Nubia and the deeper history of Nubia more broadly.

Yahia Fadl TAHIR

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Archaeology of stone pillars in the El Ga'ab Depression, Sudan

Stone pillars or megalithics are large stone structures, planted vertically in ancient times; they vary in shape, size, rock type, stonemasonry, architectural design and function. Their functions include astronomical, ritualistic, human burials, cattle burials, spiritual, and monumental architecture. This study, carried out in El Ga'ab Depression, sheds light on stone pillars in the area by archaeological surveying, registering, classifying and comparing them with different stone pillars of the world. The stone pillars in El Ga'ab Depression are classified into four types: stone pile, stone pile with standing stone in the center, megalithic and circular standing stones. According to their locations and archeological contexts they belong to the prehistoric (Mesolithic–Neolithic), Pre-Kerma and Kerma periods. Most of them are correlated with graves as has been found in Africa, Asia and Europe. An astronomical purpose is also suggested to have been, in part, served by stone pillars in El Ga'ab Depression, among other known functions.

Pieter Carel Andreas TESCH

SUDAN ARCHAEOLOGICAL RESEARCH SOCIETY

Post-Meroitic or early Nobadia, Makuria and Alwa? The transition from Late Antiquity to the early Middle Ages along the Middle Nile Valley, 300–600 CE

This paper intends to see what recent scholarship on the question of the transition from Late Antiquity to the early Middle Ages, such as the emergence of 'successor states' replacing the Roman Empire and its peripheries in the wider Mediterranean, Eurasian, and West Asian, can add to our understanding of developments along the Middle Nile.

The period from 300 to 600 CE has been chosen for by 300 the revitalised Roman Empire was going into a phase of reinventing itself as a Christian empire, but by 600 the East Roman Empire was on the eve of losing almost all of its Asian and African provinces and their peripheries due to the Arab invasions and the subsequent rise of Islam.

It is also the period during which matters of cultural and ethnic changes are still strongly debated, if not an ongoing source of controversy. This study will also refer to similar developments within wider Saharan and Sahelian spaces during this period in the context of developments along the Middle Nile.

Maira TORCIA

INTERNATIONAL ASSOCIATION FOR MEDITERRANEAN AND ORIENTAL STUDIES

Egyptian kings at Buhen: Dynasties 0, I, II

About three years ago I studied most of the cretulae from Buhen, Lower Nubia. They comprise a group of 200 pieces, kept at the Petrie Museum and the British Museum in London, that soon turned out to be extremely interesting.

The settlement was, until now, dated to the Chefredjefa age but these cretulae have changed the chronology of the site as they show seal impressions of Egyptian kings from Dynasties 0, I, and II. In fact, among these materials, I have found cretulae presenting the seal impressions of Iri Hor (Dynasty 0), Djer, Andj-ib (1st Dynasty) and Neb Ra (2nd Dynasty). Furthermore, two pieces present a particular type of *serekh* beside some important archaic offices under which is inscribed the catfish Narmer. Only one of these two pieces shows the White Crown and other royal symbols of Upper Egypt, indicating the presence of an unknown king of Upper Egypt. The royal symbols are cancelled on the second cretula: truly "puzzling" elements suggesting conflict for power.

By considering the importance of this material, I believe it is basic to study the last group of about 30 cretulae kept at the Sudan National Museum in Khartoum, to complete the whole picture of the site. Therefore, a request to the curator for permission to access this material has already been made in the hope that, later on, they could be part of the collections of the planned Nubia Museum of Wadi Halfa.

Burkart ULLRICH,⁽¹⁾ Rudolf KNISS,⁽²⁾ Gregory TUCKER⁽²⁾ and Pawel WOLF⁽²⁾

Geophysical prospection at Jebel Barkal and beyond

Napata was the political and sacral center of the early period of the Kushite kingdom. It is commonly located at the foot of Jebel Barkal near Karima, where temple buildings are attested as early as the Egyptian New Kingdom. A century of archaeological research, from George Reisner's extensive excavations to the fieldwork of archaeological missions in recent decades, has brought to light at Jebel Barkal many sacral buildings and (mostly representative) civil structures of both the Napatan and Meroitic periods of the Kushite kingdom. However, the urban layout of the town is still far from being completely understood.

The application of geophysical prospection techniques has become a significant part of archaeological field research in Nubian studies in recent decades. The choice of a certain geophysical method or combination of survey techniques depends on the research goal and the specific measuring conditions on site. Nevertheless, specific aspects, like the location of ancient Nubia (relatively) near to the magnetic equator, and the type of landscapes encountered, characterized by desert sands and Nile sediments, are more general and have a significant impact on prospection results.

In our presentation we briefly introduce the most commonly used non-invasive geophysical techniques—magnetometry and ground penetrating radar—and their application at various archaeological sites in Sudan. We then focus on the results of geophysical surveys at Jebel Barkal, undertaken by multiple teams under the direction of Tim Kendall and Geoff Emberling from the University of Michigan (UM), as key case studies. The geophysical data are discussed in relation to the known archaeological structures and their material properties. The results allow the reconstruction of a significant part of Napata. Based on our experience we can make recommendations for further archaeological investigation of the entire urban layout of the town.

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Prehistoric rock art of Jebel Shaqadud, north-western Butana

Renewed field research in Jebel Shaqadud recorded five rock-art locations which concentrate in the area or immediate vicinity of the Shaqadud site complex, the most significant prehistoric settlement site of the region. All five locations feature only

petroglyphs, with three containing pecked non-figurative designs and the other two showing animal figures, cupules, and grinding hollows. The largest and the most complex occurrence of petroglyphs is located at the Giraffes' Rock, which is a sandstone hillock at the upper plateau of the mountain with an excellent view of the surrounding savannah. The site contains more than 60 groups (panels) distributed in several clusters, showing giraffes and other wild animals as single figures or in simple compositions. The panels are distributed on blocks and boulders and in corridors between them; the blocks are crumbled and sometimes displaced, the entire complex is thus not easy to survey and document. In addition, all figures have been affected by patination and by surface weathering, with a great majority of them quite difficult to record using the means commonly used in field rock-art research. In this paper we present and compare the results of different documentation procedures used at this site, including 3D photography and documentation by a hand-held optical scanner. Our findings may be useful for future field research in Nubian sandstone environments.

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New evidence of plant resource exploitation during the Mesolithic: archaeobotanical analysis from Al Khiday, Sudan

The area surrounding the village of Al-Khiday (south of Omdurman, Sudan) is well known for its rich archaeological evidence. The cluster of sites uncovered by the Italian mission led by D. Usai and S. Salvatori lies on the west bank of the White Nile on sandy soils. Evidence so far collected attests to the frequentation of this area from the pre-Mesolithic to the post-Meroitic periods. Previous analysis on carbon stable isotopes from pre-Mesolithic and Neolithic individuals buried at the site (16-D-4) point to the presence of a mixed diet with consumption of different percentages of C3 (wheat and barley) and C4 (millets) plants.

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Mineralogical and microstructural analysis of Egyptian flint aimed at understanding seasonality in the Nile Valley and Western Desert (Egypt)

Seasonal mobility of ancient populations during the Early Holocene in the area of the Second Nile Cataract (Northern Sudan) and the Western Desert region (south-western Egypt) is attested by pottery and lithic assemblages. A distinct lithic assemblage confirming this hypothesis is that found at Wadi Karagan site 11-I-13. In this context, the Egyptian flint, a specific type of flint macroscopically characterised by a dark and pale grey colour, represents an additional element proving the relationship between the two regions. This rock type outcrops mainly in the Western Desert within the Eocene limestones and it is not present in the geological formations around the Second Cataract area. The lithic industry most commonly associated with earlier or contemporaneous sites in the Second Cataract is from chert-cobbles found in the fluvial sedimentary deposits. To establish whether a common dark grey/grey flint-source for both Western Desert lithic assemblages and that found at the Wadi Karagan site was used, a multianalytical study was performed. It is based on a set of 22 flint pieces of debitage from 11 sites of the Western Desert region (Egypt) and near the Second Cataract (Sudan), sampled from two lithic collections (Wendorf and Colorado) stored at the British Museum (London, UK). Moreover, a set of chert (13 samples) from the fourth cataract, the Letti Basin (Hambukol) and the Nile Delta were also analysed for comparison.

A multianalytical approach was used, consisting of microstructural analysis by scanning electron microscope (SEM), mineralogical analysis by micro-XRD, synchrotron through-the-substrate microdiffraction (tts- μ XRD), and microchemical analysis by micro-PIXE.

On the basis of the microstructural evidence, the flint found at the Second Cataract and in the Western Desert are consistent with the cherty materials hosted in the Thebes formation outcropping in the Western Desert region in Egypt. From an archaeological point of view, these results confirm the hypothesis that ancient populations seasonally moved from the Western Desert to the Second Cataract during the Early Holocene, bringing with them their stone tools and the raw material to produce new tools.

Crossing boundaries between Egypt and Nubia: a rock art perspective

Archaeology and rock art studies conducted in the past 25 years have deeply changed our perception of human occupation of the Lower Nile Valley during the Neolithic, Predynastic and Early Dynastic periods (6000–2600 BC). The fundamental function played by the deserts as highways for goods and people, although demonstrated by archaeology in the recent past regarding both the Western and Eastern Desert, still needs further investigations from a socio-ecological perspective. As far as southern regions are concerned, Upper Egyptian and Lower Nubian communities shared common origins and cohabited for several centuries before entering into conflict by the time of the formation of the Egyptian State. The nature of this cohabitation, the often-suggested regionalisms regarding material and iconographic cultural manifestations, the use of strategic desert entry routes to the valley but also the discovery of archaeological structures belonging to exogenous people both in the Egyptian Nile Valley hinterland and the deserts, are all pending issues.

Crossing data recently obtained by the Aswan-Kom Ombo Archaeological Project in Wadi Rasras—a highly engraved eastern desert route connecting Lower Nubia with Egypt—but also in the Sudanese Eastern Desert and in Egypt at Wadi Shatt el-Rigal and el-Hosh, this paper aims to demonstrate the potential of rock art as an archaeological source able to highlight the strong interculturality of the Lower Nile Valley prior/concomitantly to the formation of the Egyptian State and to inform about the evolution of its socio-ecology. Moreover, when considered inside its larger Nilotic context, which we would call Egypto-Nubian although these terms are to a certain extent meaningless when it comes to Prehistoric times, rock art is a major source to discuss the transformations of the socio-spatial landscape during these critical times for the whole region.

ABSTRACTS

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Away from rivers and lakes: 2021 and 2022 field seasons at Jebel Shaqadud

Jebel Shaqadud preserves important archaeological relics that in the territory of today's Sahel best illustrate prehistoric cultural adaptations that did not depend on aquatic food resources. The region is famous for what has been known as the Shaqadud site complex investigated for the last time 40 years ago by the Sudanese-American expedition (Anthony Marks, Abbas Muhammed-Ali, and their colleagues). This expedition documented prehistoric stratigraphies up to 7 m thick and dated between roughly 6200 and 2000 cal BC. In 2021, an international inter-disciplinary team directed by the first author of this paper resumed archaeological investigation of this area. Here we present the first findings of the 2021 and 2022 field campaigns and pilot AMS radiocarbon dates that shed new and surprising light onto the occupation of both this area and the eastern Sahelian hinterlands.

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Current research into early Holocene occupation in central Sudan

The early Holocene occupation in central Sudan is represented by the Early Khartoum culture, also known as the Khartoum Mesolithic. The culture is attested mainly along the Nile and is characterised by hunter-gatherer subsistence, increased reliance on aquatic resources, reduced residential mobility, systematic production of decorated pottery, and the presence of human burials within settlements. Since 2012, more than 60 AMS radiocarbon dates have been obtained on ostrich eggshell, charcoal, molluscs, and human and animal tooth enamel from different archaeological and environmental contexts in the western part

of Jebel Sabaloka. These dates attest to a continuous four-millennia-long sequence of occupation of central Sudan by Early Khartoum foragers, beginning around 8800 cal BC and ending after 5000 cal BC. In this paper, we discuss the implications of the dates from the western part of Jebel Sabaloka for the origin of the Early Khartoum culture, phases of Mesolithic settlement, and environmental conditions in early Holocene central Sudan.

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KERMA, a new type of furnace. Production of metal plates to decorate the temple and furniture of Kerma

The material culture of Kerma reflects foreign influences but also represents strong local traditions. During the Middle Kerma period, a furnace was built in the middle of the religious quarter. It was discovered by Charles Bonnet in 1986 and identified as a structure dedicated to metallurgy. Based on the new archaeological campaign of 2018, the research in experimental archaeology from 2018 to 2021 and the analyses carried out *in situ* in 2018 and those conducted at the KULeuven Earth and Environmental Sciences in 2021, a new interpretation of this furnace is proposed. The hypothesis is to integrate its operation into the copper alloy production chain, which offers exciting new insights into the technological know-how in the region. It is the first ancient example (currently known worldwide) of an integrated structure functioning as a mould for the production of very large metal plates.

Vlastimil VRTAL

NATIONAL MUSEUM IN PRAGUE

Newly discovered sandstone chapel WBN 1100? Archaeological research at the northern limit of kom A at Wad Ben Naga

Archaeological research on kom A at Wad Ben Naga has been focused in the past decade mainly on the exploration of the so-called Typhonium, a temple dedicated to the goddess Mut. Remains of other Meroitic structures were recorded to the west and north of the temple. Despite being presumably of a profane nature, some of these were likely an integral part of the Typhonium Complex. During the recent excavation seasons, remains of another religious structure were uncovered at the northern limit of the kom. It was built—untypically for Wad Ben Naga—exclusively of sandstone blocks. Although the walls of the structure were in a poor state of preservation, a large number of architectural elements and fragments of rich relief decoration were retrieved from the debris scattered over the surrounding area. While the archaeological examination of the structure still awaits its completion, the analyses of the architectural and iconographical motifs and of their spatial distribution already provide a basis for discussions of the original architectural form of this cultic structure, its setting in the religious landscape of the site, its chronology, and on the topicality of the iconographical program. Attested figural and floral motifs, such as lions, god Bes, or frequent lotuses, remind viewers of concrete thematical analogies from other Meroitic shrines, while some architectural elements employed in the structure remain entirely unique in the Kushite context. Through a comparative approach, it was also possible to attribute several finds and records from previous surveys and excavations at the site to the structure, thus enlarging the informational dataset.

Carl Robert WALSH

BARNES FOUNDATION

Exchanging beauty: kohl-wearing practices in second millennium Nubia

This paper examines the context of the use of kohl, a black eye cosmetic, during the Classic Kerma (c. 1650–1550 BCE) period in Upper Nubia. It is argued that these practices were introduced from Egypt as part of an assemblage of material culture and courtly habitus that were facilitated through diplomatic relations between Kerma and contemporary Egyptian courts. Kerma agency in consuming these forms of habitus were negotiated through personal relationships and interactions with Egyptian diplomats that worked to create shared forms of interregional court identities. Building from these findings, a new collaborative and scientific study of Nubian kohl is also introduced. This study will perform residue analysis of kohl equipment found in Lower and Upper Nubia and dating from the Kerma to New Kingdom periods. The results will work to determine possible kohl recipes and will be diachronically compared to better understand patterns of consumption and use in identity construction across second millennium Nubia.

Cultural heritage, historical narratives and memory connected to archaeological sites and historical periods

The Anglo-Egyptian colonial period but also the post-colonial periods of dictatorship left their traces in the local perception of archaeological sites and historical periods as cultural heritage in Sudan. And so did colonial practices in archaeology. Based on the results of several years of cultural anthropological and ethnohistorical research in different parts of the middle Nile Valley and among several different groups I discuss patterns in local perceptions of the past and its archaeological remains, and the rationale and reasoning behind that perception. Moreover I will discuss the partial strategic loss of memory of the past that was probably practiced as an answer to the dictatorship pressure on the memory culture and the possible danger that lies in it given the current political uncertainties.

Bartosz WOJCIECHOWSKI

ANTIQUITY OF SOUTHEASTERN EUROPE RESEARCH CENTRE
UNIVERSITY OF WARSAW

Varia Nubica: some (not so) secondary remarks on two Old Nubian documents

The presentation will focus on two Old Nubian documentary texts, which I had the opportunity to come across some time ago during my studies. First, Griffith's so-called "Old Nubian Sale", an act of sale of land written on parchment, of unknown provenance, first published in 1913 and now in the collection of the Staatliche Museen in Berlin. It is dated tentatively to the second half of the 12th century. A prosopographic study has identified the persons appearing in the text with a high degree of probability, which makes it easier in turn to specify the dating of the document and its place of origin. The other text is an official legal contract found by chance by a resident of Nauri, a small village in the Third Cataract region. This contract has been known since the 1920s under the rather unpretentious appellation of the "Nauri Document". Published twice so far, most recently more than 90 years ago, it includes, *inter alia*, an interesting protocol, which, upon a closer reading, contributes to a more accurate dating of its content.

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⁽²⁾ MUSEUM OF KING JAN III'S PALACE AT WILANÓW

Decorated wool textiles from the Funj period at Old Dongola

Polish archaeologists working in Old Dongola since the end of the 1960s have explored an extensive area, with a particular focus on religious and palatial buildings from the Christian period. The long occupation of the site has confronted archaeologists with the need to document before removing the Funj-period structures overlying the medieval settlement. However, the Funj remains have not benefitted from dedicated studies as yet. The UMMA Project (ERC STG 759926) fills this gap and offers a unique opportunity to examine the life of the city's inhabitants during the last centuries of its occupation. In particular, the textile perspective provides room for discussion about gender, status and identity expression through sartorial practices. In our presentation, we would like to discuss a group of decorated wool textiles. Their preliminary examination shows that they can be divided into two different groups, based on type of décor (small geometric patterns vs. almond-shaped patterns) and technique (brocade vs. tapestry). European travellers mentioned brown wool mantles, sometimes decorated at their edges, as the winter clothing of Nubian women. The fact that the two types of décor are systematically executed in two different techniques is an interesting feature which may reveal the belonging of the weaver and/or wearer to two different cultural traditions.

Maciej WYŻGOŁ

POLISH CENTRE OF MEDITERRANEAN ARCHAEOLOGY

UNIVERSITY OF WARSAW

Shared work in shared domestic space.

The identity of the dwellers of Funj-period Old Dongola

During the Funj period (16th–19th century) the so-called Citadel in Old Dongola, the centre of royal power of the Makurian Kingdom, was overbuilt by houses of the later inhabitants of the Kingdom of Dongola, a vassal state of the Funj Sultanate. Domestic compounds consisting of several houses clustered around a courtyard seem to form basic socio-economic units. The compounds were inhabited by extended families, whose relationships were shaped largely by shared work, forming communities of practice. Identified domestic activities comprised mostly tasks related to food preparation.

This presentation aims to analyse the process of identity creation among house dwellers through their engagement in household activities. It will investigate the creation of gender roles, family relations and distribution of power within households. The discussion will focus on the work undertaken by household members, its visibility and the accessibility of workspaces. The investigation of domestic floors with the application of geochemical analyses provides fine-grained data to complement the planigraphy of artefacts and to identify with greater precision architectural features in association with activity areas. The

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presented analyses are meant to nuance the notions of the multifunctionality of domestic space. Moreover, the reconstruction of identity-shaping processes helps to assess the influence of Islam on society, especially on household organization in Funj-period Old Dongola.

Sara Ahmed Al Mustafa YOUSIF

INDEPENDENT RESEARCHER

Archeological survey of sites east of the Nile, south of the town of Shendi, between Wad Banga and Al-Basabir

The aim of this presentation is to study and inventory the archeological sites east of the Nile in an area south of Shendi town, located between the villages of Wad Banga and Al Basabir. The archeological survey will result in a recoding of the archeological evidence in order to improve the understanding of cultural succession in the region by identifying types of localities and forms of occupation.

This study relied on the survey method and the historical, descriptive and inferential method to arrive at the results. Based on the diversity and distribution of tools and archeological finds, consisting of pottery sherds, stone tools, faunal remains, ornamental tools and other evidence, the study concluded that there was stable settlement on the east bank of the Nile, as indicated by the number of archeological sites discovered is six sites from the Neolithic period, the Meroitic period and burials from the post-Meroitic period, the Christian period and the Islamic period. Some gaps in the settlement record are evident for such periods as the Palaeolithic, Middle Stone Age, Kerma and Napata periods. This study proves the variety and diversity of human settlement in the region.

In order to obtain more detailed results and a more comprehensive understanding of the area, the study recommends carrying out urgent rescue excavations for some sites threatened by human and natural factors.

Michael ZELLMANN-ROHRER

INSTITUTE FOR THE HISTORY OF KNOWLEDGE IN THE ANCIENT WORLD
FREE UNIVERSITY OF BERLIN

The Old Nubian “horoscope” (P.QI II 20) and its traditional context

A codex-fragment from Qasr Ibrim was published by G. Browne under the title “Horoscope” (P.QI II 20; further discussion in A. Łajtar, V.W.J. van Gerven Oei, “An Old Nubian Lunary with a Greek Addition from Gebel Adda”, *Le Muséon* 133 (2020) 23–24), but as Browne already pointed out in the notes to his edition, there are more apposite parallels among the so-called *zodiologia*, systematic presentations of astrological forecasts for natives of each of the 12 zodiac signs. The tradition of the *zodiologia*, which are best known in medieval and early modern Greek and Latin versions, are considered in detail in

this presentation. On the basis of the author's work on a corpus of astrological treatises as part of the ERC project "Zodiac – ancient astral science in transformation", possible pathways of knowledge-transfer will be proposed by which the underlying technology of zodiacal astrology reached medieval Nubia from probable origins in Graeco-Roman Egypt.

Dobrochna ZIELIŃSKA

FACULTY OF ARCHAEOLOGY, UNIVERSITY OF WARSAW

CHRONICLE: CHRistian images Of Nubia – an IConographica LEXicon

This presentation concerns almost 20 years of a project devoted to the most characteristic and colourful artifacts of Christian Nubian culture, namely, wall paintings, representing in overwhelming manner many aspects of the culture of the Christian Nubian kingdoms. In the face of still scarce textual sources, wall paintings are not only unique works of art, but also, or maybe foremost, invaluable sources of knowledge about this chapter of the Nubian past.

The idea of the project was initially announced in 1994 by Karel Innemée as a "Handlist of Nubian Wall Paintings". The first volume contained murals from the Central Church at Abdallah-n Irqi from the Dutch excavations conducted during the UNESCO International Campaign to Save the Monuments of Nubia. The work was continued from 2010 by Alexandros Tsakos and Dobrochna Zielińska, under the auspices of the Union Académique International (project no. 40/A).

Currently the project has evolved into a complex "space – text – image" concept and is under preparation for the final open-access online publication. It has exceeded the formula of a corpus and will provide, in the form of a complex database, not only a dossier of the preserved material but also individual entries on every iconographical element of the murals, creating a kind of visual lexicon of the culture of Christian Nubia.

**Dobrochna ZIELIŃSKA,⁽¹⁾ Yask KULSHRESHTHA⁽²⁾
and Henk JONKERS⁽²⁾**

⁽¹⁾ FACULTY OF ARCHAEOLOGY, UNIVERSITY OF WARSAW

⁽²⁾ TECHNICAL UNIVERSITY IN DELFT

A bio-based liquid impregnation system. First results of the consolidation of adobe bricks from the church at Miseeda

Bio-based impregnations are already successfully implemented on concrete structures. In order to investigate the possibilities for consolidation of mud brick (adobe) in general and

specifically of the church at Miseeda, laboratory tests were carried out in the laboratory at the Technical University in Delft in which adobe blocks from Miseeda were treated with a bio-impregnating agent. Three adobe bricks went through a multistage impregnation process and water erosion test. The first promising results of these test will be presented, as well as plans for further tests and method of implementation on archaeological sites, which can offer new possibilities for the conservation of Nubian monuments.

Gretchen Emma ZOELLER,⁽¹⁾ Fakhri Hassan ABDALLAH,⁽²⁾ Meghan E. STRONG,⁽³⁾ Pearce Paul CREASMAN⁽⁴⁾ and Abigail BREIDENSTEIN⁽⁵⁾

⁽¹⁾ UNIVERSITY OF PITTSBURGH

⁽²⁾ NATIONAL CORPORATION FOR ANTIQUITIES AND MUSEUMS, SUDAN

⁽³⁾ CASE WESTERN RESERVE UNIVERSITY

⁽⁴⁾ AMERICAN CENTER OF RESEARCH

⁽⁵⁾ INSTITUTE OF EVOLUTIONARY MEDICINE, UNIVERSITY OF ZURICH

Life and death at Nuri: a preliminary bioarchaeological analysis

As an African corridor, the Nubian archaeological record stands to elucidate aspects of a collective social memory which has continued to connect peoples and their communities in the Nile River Valley for millennia. As people and ideas continued to move across the landscape, the region became characterized by a rich and dynamic history of cultural entanglement. Embodying this past, Nuri, located in the Fourth Cataract region, was first established as the royal Kushite necropolis during the kingdom's heyday and served as the final resting place for over 60 successive kings and queens (c. 635–320 BCE). While largely recognized for its striking pyramid burials, focus on these monumental signatures of Kush has overshadowed the presence of subsequent cultural groups that continued to utilize this space and bury their dead at the site, illustrating the innovative ways in which ancient Nubians negotiated and manipulated an unceasing influx of diverse cultural traditions. Our current bioarchaeological investigation at Nuri considers why these groups, with culturally unique displays of mortuary practice, continued to align themselves in eternity alongside ancient Kush. Though in its initial phases, preliminary field research at Nuri exploring these biocultural relationships has uncovered glimpses into unique histories of lived experience in ancient Nubia. We present these findings as an introduction to our ongoing bioarchaeological research at Nuri, expounding upon our efforts to disentangle the environmental and sociopolitical forcing mechanisms driving observed transitions in ancient Nubia's burial practices.

Salomé ZURINAGA FERNÁNDEZ-TORIBIO

CENTRE FOR HUMAN AND SOCIAL SCIENCES
SPANISH NATIONAL RESEARCH COUNCIL

Where were the women during the Nubian Campaign?

The presence of women working in the field during the Nubian Campaign within the framework of the UNESCO Rescue Campaign, in advance of the construction of the Aswan High Dam, has scarcely been recognized. Due to the passage of time—60 years have passed—the general public knows hardly anything about the Campaign or the work it entailed. Even less is known about the women conducting fieldwork in Sudan and Egypt. The presentation highlights the presence of women at archaeological excavations sent by the different countries, which lent technical and human support by sending professionals to investigate the sites, save the remains of so many monuments, rock inscriptions, etc. .. before the waters flooded the entire territory. The assumption that women were on equal terms and conditions with their male colleagues was soon found not to be the case.

The recognition that has been expressed so many times to well-known male participants, such as William W. Adams, Torgny Sâve-Söderbergh, Hans-Åke Nordström, Keith Seele, Manfred Bietak, Fred Wendorf, Martín Almagro Basch, and a long list of other men, has often overshadowed the names and contributions made by women working as part of the salvage campaign. This presentation seeks to bring back into the limelight the names of, among others, Fayza Haikal, Anna María Roveri, Edda Bresciani, Nettie Adams, Diane Nelson, Lucia Millet Edlund, Helen Jacquet-Gordon, Lena Evert, Jean Keith-Bennet, Věra Štovíčková, Nawal El Messiri, Sohair Mehanna, Charo Lucas, Alicia Simonet.

Bogdan ŻURAWSKI

INSTITUTE OF MEDITERRANEAN AND ORIENTAL CULTURES
POLISH ACADEMY OF SCIENCES

Βαλανευτική τέχνη. Baths and water installations in early Christian Banganarti

The circular structure built on the inner side of the southern curtain wall at Banganarti, described in early reports as a silo, was built at the same time as the settlement's perimeter wall, probably on the site of its predecessor, which burnt down, leaving clear traces of burning in the stratigraphy. In shape, age and perhaps also function, the Banganarti tholos has much in common with the waterwheel found near the church of St Menas in Selib 7 km upstream. Both date from the late 6th/early 7th century AD. However, they differ significantly in context. While the *saqiya* from Selib fed a rectangular pool accessed by a staircase on the shorter side, its presumed counterpart from Banganarti may have supplied water to a multi-spaced bathhouse located in the south-western corner of the settlement. The baths at Banganarti were built long before the local *katholikon* and monastery were

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established. It was a communal complex, entered through a massive arched gate leading to the main hall. Stratigraphy recorded in the westernmost part of the complex shows that water pipes, collectors, etc. were laid on culturally sterile sand, and the perimeter wall was built after the destruction of the baths. Small finds, such as the glass perfume bottles found in the main hall, are typical of the Greco-Roman baths known from Egypt's Nile Valley. The destruction of the south-western baths marks a reorganisation of the entire bathing and cleansing system obligatory for pilgrims wishing to enter the holy site. The communal baths were replaced by a system based on individual ablutions in rectangular booths attached to the outside of the perimeter wall. These booths were entered from above. Bathers stood in stone or ceramic tubs. The water that remained after washing was absorbed into the sandy floor of these booths. Such a system was the norm in the eastern *xenodocheion* at Banganarti, which has been under excavation since 2018.

4. POSTERS

Rajaa Abualgasem ADAM

INDEPENDENT RESEARCHER

Heritage management and archaeology in the community of Old Dongola

Old Dongola was the Capital of Makuria, a kingdom which extended from the Third to the Fifth Nile Cataracts, and was one of the most important centers of medieval Nubia. The national importance of the site is recognized by its inclusion on the tentative list of the UNESCO World Heritage programme.

Archaeological work is usually conducted to answer questions, uncover the unknown and/or to complete projects began by previous researchers. Consequently, on 23 March 2021, a new training course was started by Tomomi Fushiya, on behalf of the current director Artur Obłuski. The goal of the workshop was to teach young archaeologists about heritage management and community archaeology. As one of the workshop participants, I will talk from my perspective about the research process. My presentation focuses on the questions of “how does site management work” and “what makes culture heritage important to preserve?” In addition, this presentation will address how to raise awareness within local communities through site visits, discussions, meetings, lectures and presentations.

Katherine ASHLEY

SUDAN MEMORY

Digitising and promoting cultural heritage in Sudan: An Introduction to the Sudan Memory Project and Suakin 3D Interactive

Throughout Sudan, many collections are at risk due to extreme weather conditions, lack of appropriate storage, neglect and conflict, and many archives are not easily accessible. Sudan Memory’s mission has been to help preserve this unique heritage, and make it accessible for current and future generations, through the digitisation of cultural heritage collections and stories. More than 100 team members, from the various collections, worked tirelessly to digitise thousands of images, pages, films and photos of content dating from 4000 BC up to the present day. Capacity building has been integral to this process, and staff in partner organisations and private collections have been trained in the fields of scanning, data description and data management. As part of Sudan Memory and featured on the Sudan Memory website, a 3D model was developed of Sudan’s historic coral port town of Suakin.

Sadly, most of Suakin's historic buildings are now gone, but through providing an interactive portal, users can engage with Suakin Island as it was in 1900 AD and access some of the wealth of archival resources that document the site throughout its history. The project has been running since 2017, funded by the British Council's Cultural Protection Fund and by the ALIPH Foundation. The principal partners include the Sudanese Association for Archiving Knowledge (SUDAAK); the National Records Office, Sudan; the Rift Valley Institute in South Sudan; King's College London. These partners have worked alongside numerous Sudanese and international contributors.

Diego CAPRA

INSTITUT CATALÀ DE PALEOECOLOGIA HUMANA I EVOLUCIÓ SOCIAL (IPHES)
UNIVERSITAT ROVIRA I VIRGILI

Preliminary techno-typological analysis of Mesolithic stone artefacts from UA 50, Eastern Sudan

The site of UA 50 is located between the Atbara and Gash rivers, to the southwest of the modern town of Kassala, in Eastern Sudan. The site was located during the survey lead by National Corporation for Antiquities and Museums (NCAM) members in 2010. From 2014 to 2019 the site was systematically investigated by the Italian Archaeological Expedition to the Eastern Sudan of the University of Naples "L'Orientale" and of the ISMEO. The site is characterized by the occurrence of mounds, shell middens and human burials, spanning from the Mesolithic period in the 6th millennium (Pre-Soroba) to the 2nd millennium (Jebel Mokran Group) BCE. Here we present the preliminary techno-typological studies of lithic artefacts coming from archaeological contexts dated to the early phase of the site occupation.

Giacomo CAVILLIER

CAIRO UNIVERSITY

Amun of Thebes and Amun of Napata: comparing two high-priests organizations in the New Kingdom

The cult of Amun at Napata constitutes one of the most interesting aspects of the final process of 'Egyptianisation' of Nubia in the New Kingdom. Two Amuns, two theological and political profiles and two priestly classes symbolised power in Upper Egypt and Nubia. The session will highlight the differences and similarities between the two cults and between the two ways of conceiving the exercise of power in the domains of the god in both Thebes and Napata. In Nubia, this event will gradually lead to the Kushite renaissance and the subsequent conquest of Egypt.

The Nubian War of Payankh and Panehesi: an unsolved question?

During the Rebirth era, there was a war between the high priest of Amun, Payankh, and the Viceroy of Kush, Panehesi. It is the final act of the civil war that began in year 19 of the reign of Ramesses XI and saw a military incursion by Payankh into Nubia. In one or more military campaigns, the high priest attempted to re-establish Egyptian rule over Lower Nubia. The documents in our possession allow us to assume that the Egyptian advance was based in Aniba. We presently know nothing else of the succession of events, nor what impacts the outcome of the war may have had on both sides. Also, the fates of Payankh and Panehesi after the conflict are not known, nor if the empire was able to regain the territories lost during the civil war. In this presentation, an attempt will be made to formulate useful considerations about this important historical event.

Krzysztof CHMIELEWSKI⁽¹⁾ and Magdalena SKARŻYŃSKA⁽²⁾

⁽¹⁾ ACADEMY OF FINE ARTS

⁽²⁾ POLISH CENTRE OF MEDITERRANEAN ARCHAEOLOGY, UNIVERSITY OF WARSAW

Conservation work at the NB2 Church in Old Dongola, Sudan

This poster is a presentation of the conservation work conducted in the NB2 Church between 2018 and 2022. Conservation work has accompanied the discovery of paintings from the beginning. The NB2 Church was discovered in 2018 in the northeastern part of Kom H in Old Dongola by the expedition of the Polish Centre of Mediterranean Archaeology, University of Warsaw (PCMA UW). Having analyzed the extent of the damage, a delegation from the Department of Conservation and Restoration of Works of Art of the Academy of Fine Arts in Warsaw developed a conservation work program. Over the following years, conservation work was carried out in the church as part of several students' thesis work. The paintings were cleaned and strengthened, protective putties and bands were applied, and the colors were integrated wherever necessary. This work has become a canon for the conservation of the whole interior.

Krzysztof CHMIELEWSKI⁽¹⁾ and Magdalena SKARŻYŃSKA⁽²⁾

⁽¹⁾ ACADEMY OF FINE ARTS

⁽²⁾ POLISH CENTRE OF MEDITERRANEAN ARCHAEOLOGY, UNIVERSITY OF WARSAW

Conservation works at the Church of Archangel Raphael in Old Dongola, Sudan

This poster presents the conservation work undertaken at the Church of Archangel Raphael carried out between 2018 and 2022. The monument is located in the southern part of the Citadel, located on the eastern bank of the Nile at Old Dongola. The church was discovered in 2011 by the expedition of the Polish Centre of Mediterranean Archaeology, University of Warsaw (PCMA UW). Conservation works began right after the discovery of wall paintings in the church. The church is in a very poor state of preservation and requires special conservation care. The current work, which has been preceded by research and testing, consists mainly of preserving and securing the historic substance from further destruction.

Stephanie DENKOWICZ

RUTGERS UNIVERSITY

Nuri 15: Nastasen's pyramid revisited

Between 1916 and 1920, George A. Reisner conducted the first systematic archaeological investigation of the Napatan necropolis of Nuri. No further research was conducted at Nuri for the next 100 years until the Nuri Archaeological Expedition (NAE), directed by Pearce Paul Creasman, began work there in 2018.

Among the first monuments selected for re-examination by the NAE was the pyramid of Nastasen, one of the last kings of the Napatan Period and the last to be buried at Nuri. Designated by Reisner as Nu. 15, it was only partly excavated at the time.

This poster will explore the design and construction of the superstructure of Nu. 15, compare the NAE's recent findings to Reisner's and based on this data, draw conclusions regarding pyramid construction in the Late Napatan Period. The design of Nu. 15's superstructure, that is, the pyramid, will be examined along with the materials and techniques used for its construction. The accuracy of Reisner's findings will be assessed based on the new archaeological research. Additionally several features of Late Napatan Period pyramid construction will be addressed including the unlikely use of the shaduf in construction, the reasons for the rubble core and the use of builders' marks.

Restoration of the historic monuments of Sudan in Darfur, Kordofan and Omdurman for the Western Sudan Community Museums and their hidden histories

The NCAM Conservation Department has been working on the Historic Fabric of Three Important Monuments in Darfur, Kordofan and Omdurman for the Western Sudan Community Museums Project funded by the British Council Cultural Protection Fund and ALIPH Foundation. The conservation of the Historic Beit El Khalifa built in the 1880s; the Mudeira Gateway, the first modern building in Sudan, built in the 1840s; the Bramble House built in 1898 and the Baggara House built in the 1920s, mark important moments in the administration of Sudan and their restoration has revealed stories about their construction and significance. This presentation will reveal the process of restoration that uncovered this history and the significance of this history to Sudan. In addition, collections of the museums have been studied and restored making the new exhibitions of the museums and associated displays significant to the histories of the museums.

Maria Carmela GATTO,⁽¹⁾ Mindy PITRE,⁽²⁾ Madeleine MANT,⁽³⁾ Celine SCHREIBER⁽²⁾ and Antonio CURCI⁽⁴⁾

⁽¹⁾ POLISH ACADEMY OF SCIENCES

⁽²⁾ ST LAWRENCE UNIVERSITY

⁽³⁾ UNIVERSITY OF TORONTO

⁽⁴⁾ UNIVERSITY OF BOLOGNA

Evidence of probable neurogenic paralysis and obstetrical death at Sheikh Mohamed, West Bank Aswan, Egypt

Little is known of the Nubian Pan-Grave culture, a group of semi-nomadic desert dwellers who entered Egypt from southern regions during the political crisis of the Second Intermediate Period (c. 1800–1500 BCE). In 2018, the Aswan–Kom Ombo Archaeological Project (AKAP) discovered a Pan-Grave cemetery (SM14) in Sheikh Mohamed, Gharb Aswan dating to about 1750–1550 BCE. In this poster we describe a rare bioarchaeological case of probable neurogenic paralysis and obstructed birth of a 30–34-year-old female individual and her fetus, both of whom were recovered in the cemetery. They appear to have died shortly before or during delivery, as the fetal skeletal remains were full-term. The female individual exhibits several pathological conditions including severe anteversion (torsion) of both femora and new reactive bone on the left pubic symphyseal surface (suggesting malalignment of the pelvis) that may relate to complications shortly before or during the birthing process. With our analysis of the skeletal remains and grave inclusions, we hope to offer insight into the ancient life of a pregnant woman of the Nubian-related Pan-Grave

culture with a probable motor disability and stress the precariousness of childbirth and the experience of maternal mortality in populations in the past.

Fawzi KHALID

AL-NEELAIN UNIVERSITY /
NATIONAL CORPORATION FOR ANTIQUITIES AND MUSEUMS, SUDAN

Southern Kordofan Archaeological Survey (SKAS)

A team from the National Corporation for Antiquities and Museums (NCAM), made an archaeological survey in the northeast, southeast and south of Abbassiya (south Kordufan) in two visits during the summer of 2021. Nine archaeological sites were registered, four of them around Jebel Termi. The sites were classified as a settlement and cemeteries. We think that the area of Jebel Termi is supposed to have been one of the Tagali Islamic Kingdom centers. Some of these sites could date to the Islamic period. Moreover, a museum will be on go in Abbassiya city.

Sanada SAKURA

TOKYO METROPOLITAN UNIVERSITY

Resource scheduling in Upper Nubia, Central Sudan, and the Western Desert of Egypt in the early and middle Holocene

Pottery vessels had already appeared in North Africa by the Early Holocene. Climatic amelioration, including increasing precipitation, led to the northward shift of the savannah belt during 8500 to 7000 BC, which turned the Eastern Sahara into a habitable region.

It is also known that retreating monsoonal rains caused the onset of desiccation of the Egyptian Sahara at around 5300 BC. Prehistoric populations were forced into the Nile Valley or the Sudanese plains where rainfall and surface water were still sufficient. The event caused by this environmental change is called an “exodus” event.

Based on published reports I will draw detailed pictorial charts to show what kinds of resources people used throughout a year in Upper Nubia, Central Sudan, and the Western Desert of Egypt in the early and middle Holocene. Using the pictorial charts, how the diets of people changed between the early Holocene and middle Holocene (i.e., before the exodus event and after that) will be shown visually. It will be also considered how pottery vessels changed at the time and within the regions considered. Together with an ethnoarchaeological approach, this study is expected to lead us to clues about what kinds of pottery were spread and how they were spread, especially along the Nile.

Oren SIEGEL,⁽¹⁾ Serena NICOLINI,⁽²⁾ Louise RAYNE⁽³⁾
and Maria Carmela GATTO⁽¹⁾

⁽¹⁾ POLISH ACADEMY OF SCIENCES

⁽²⁾ UNIVERSITY OF BOLOGNA

⁽³⁾ NEWCASTLE UNIVERSITY

Reassessing ancient landscape and human settlement of the First Cataract region through digital methodologies

Archaeological research in the First Cataract Region and northern Lower Nubia is affected by a number of landscape reconstruction and analysis issues which prove difficult to resolve. Extreme changes both in the environment and the landscape of the area must be taken into consideration, such as the construction of the two Aswan dams (completed in 1902 and 1965), the expansion of agricultural fields and infrastructures in the Aswan and Kom Ombo regions (second half of the 20th century), as well as extensive urban development (beginning of the 21st century). Thus, it is hardly possible to reconstruct the ancient territory and detect the characteristics of archaeological sites in relation to their setting and location from a diachronic perspective.

How can we study an area which has completely changed and whose archaeological sites are hardly recognizable? Is it possible to use data from excavations and surveys that are nearly one century old? How can we compare them and put them together?

Modern technologies offer the chance to explore new ways and fields of research in a multidisciplinary and digital environment. The combined use of remote sensing techniques, GIS databases and geospatial analysis applied to the landscape archaeology data will be discussed in this presentation, which will focus on some of the methodologies that can be applied. Historic data from on-field research, cartographic and photographic archives can be, in fact, re-analysed as part of larger datasets together with satellite imagery. Geospatial analysis on accumulation flows and inundations can be performed using ancient river records as base-data. Databases and raster datasets can be interrogated and viewshed and least cost path analysis can also be integrated.

The authors will present some of the methods they are currently applying to the region of the First Cataract for answering multi-layered research questions about the paleoenvironment and past land usage. The aim of the paper is to discuss these techniques and critically analyse their results in order to propose future perspectives.

First Cataract Region, landscape archaeology, remote sensing, geospatial analysis, flow accumulation, LCP analysis

Smoking pipes at Suakin

This presentation focuses on smoking pipes which form a small but distinctive part of the pottery recovered from investigations at Suakin. Almost all are represented only by the bowl or a partial bowl, together with a few fragments of pipe stems. The pipes came both from excavations and from clearance of partly-standing buildings. Although only a few have been found, three distinct styles can be recognized: relatively wide-diameter bowls with out-turned rims; those with relatively narrow diameter and lacking out-turned rims, with red burnished exterior and one lacking an out-turned rim in white fabric. At present, the former two types are considered likely to be in the Ottoman style, while the third type is considered to be of European origin. All are at present thought to be of 18th–19th century date. This poster will present these different types, and comparative published material, to propose dating for the pipes and to attempt to confirm the current hypotheses about their origins. The means by which they came to be deposited at Suakin will also be considered.

Sam TIPPER

ANGLIA RUSKIN UNIVERSITY & UNIVERSITY OF LINCOLN

The need for standardization in the recording of pathological lesions

The study of spinal pathology can provide useful information on the health, well-being, environmental and occupational stresses of past populations. During a project analysing and recording spinal pathology and trauma in over 500 individuals from ancient Nubia from 300 BC to AD 1500, the lack of comparable data became apparent, and this was due in part to the lack of studies on spinal pathology in Nubian populations, but also a result of the lack of methodological standardisation in the collecting, analysing and presentation of data. This paper aims to address this issue and present a standard that should be adhered to in future projects to ensure data can be shared and used for comparative studies. This in turn will build on our knowledge and help provide a clearer picture of the health and daily life of the people living in ancient Nubia.

5. ROUND TABLES

Organizers: Michele BUZON⁽¹⁾ and Robert STARK⁽²⁾

⁽¹⁾ PURDUE UNIVERSITY

⁽²⁾ POLISH CENTRE OF MEDITERRANEAN ARCHAEOLOGY, UNIVERSITY OF WARSAW

Nubian bioarchaeology community consultation

This open discussion aims to provide a forum to devise a set of best practices in working with and publishing research on Nubian human remains. Suggested topics include consultation with local communities and governmental entities as well as expectations for journal publication required statements for community consultations, legal status, and permission.

Participants: Abigail BREIDENSTEIN, Michele BUZON, Tomomi FUSHIYA, Kari GUILLBAULT, Sarah SCHRADER and the Organizers

Organizers: Julien COOPER⁽¹⁾ and Andrea MANZO⁽²⁾

⁽¹⁾ YALE UNIVERSITY

⁽²⁾ UNIVERSITY OF NAPLES "L'ORIENTALE"

Different complexities: Empires, states, and nomads in Nubia and the Middle Nile

Historians and archaeologists have long recognized that the cultures of ancient Sudan and Nubia challenge dominant models of state formation and social complexity so commonly espoused for ancient cultures of the Mediterranean and Eurasia. Questions of social stratification, vertical and horizontal hierarchies, and the subsistence and economic basis for 'Sudanic' states and polities are far from straightforward and require us to problematize and rethink just how, when, and why polities developed in various periods and regions.

From the hinterlands of the Kushite state in the Butana and Bayuda, to agropastoralist economies of the Atbara and Darfur, to the nomads of the Red Sea and the Gezira, this panel will discuss the 'different complexities' of desert and riverine regions and how these manifest in the archaeological and historical record.

Participants: Geoff EMBERLING, Maria Carmela GATTO, Friederike JESSE, Angelika LOHWASSER, Séverine MARCHI, Aaron de SOUZA and the Organizers

Organizers: Angelika LOHWASSER⁽¹⁾ and Janice YELLIN⁽²⁾

⁽¹⁾ INSTITUTE FOR EGYPTOLOGY AND COPTOLOGY, UNIVERSITY OF MÜNSTER

⁽²⁾ BABSON COLLEGE

Origins of the Meroitic dynasty

The goal of this round table is to create a robust discussion among participants as to the origins—related to space, subsistence, or ethnicity—of the Meroitic dynasty. Therefore, we are asking that each participant give a short (7–10 minute) overview based on past and current research, and field work as to where the Meroitic Dynasty might have originated, e.g. was it a successor dynasty of the Napatans in the Nile valley, did they originate in the Keraba or perhaps some other region?

The different research backgrounds and perspectives of participants on the sources are intended to illuminate the problem from as many angles as possible. Throughout this round table, all participants will be asked to consider and discuss the ideas and materials offered in the individual presentations; thus, we want to create a fruitful discussion generated by our multiple viewpoints instead of a series of single lectures.

Participants: Murtada BUSHARA, Tim KARBERG, Cornelia KLEINITZ, Karla KROEPER, Josefine KUCKERTZ, Andrea MANZO, Ulrike NOWOTNICK, Christian PERZLMEIER, Claude RILLY, Pawel WOLF and the Organizers

Organizer: Magdalena ŁAPTAŚ

HISTORY OF ART INSTITUTE, CARDINAL STEFAN WYSZYŃSKI UNIVERSITY

Christian iconography of art and crafts in Nubia and their pre-Christian sources

Nubian art is often referred to as “provincial Byzantine art”. Although this term reflects the geographical location of Nubia, on the outskirts of the Byzantine Empire, it nevertheless bears a pejorative meaning, implying the art’s secondary character in relation to Byzantine art.

The uniqueness of medieval Nubian art and crafts results from the fact that they grew from earlier traditions flourishing in the Nile Valley. To exemplify this one may cite the use of Kushite *spolia* in Christian churches and the reinterpretation by Christians of some “pagan” iconographic motifs. The purpose of this Round Table is to discuss the continuity of art that developed in the Nile Valley since pre-Christian times. Nubiologists, like other scholars, use the chronological and geographical terms and divisions that were coined to systematise knowledge of the past. However, these divisions are usually contractual.

Can a secondary time division be a barrier separating motifs rooted in a multi-generational tradition?

Can religion be such a barrier, or is the continuity of tradition stronger?

The subject is commented on and written about from time to time, yet a broader, multi-directional approach, as proposed for this Round Table, is justified. Specialists in the fields of art, pottery, architecture, conservation, epigraphy, and all to whom this issue is important are invited to take part in the discussion. Let us hope that it will be possible to highlight the extensive spectrum of the pre-Christian tradition in Nubian Medieval art. On top of this, we will have the opportunity to look at Nubian art and crafts as independent phenomena and not only as reflections of the splendour of Byzantine art.

Participants: Katarzyna DE LELLIS-DANYS, Tania TRIBE, Bruce WILLIAMS, Dobrochna ZIELIŃSKA and the Organizer

Organizers: Vincent W.J. VAN GERVEN OEI⁽¹⁾
and Alexandros TSAKOS⁽²⁾

⁽¹⁾ INDEPENDENT RESEARCHER

⁽²⁾ UNIVERSITY OF BERGEN

Perspectives on Alwan graffiti

The papers of the four participants in this Round Table (in alphabetical order) will serve as a frame for the discussion.

Cornelia KLEINITZ

GERMAN ARCHAEOLOGICAL INSTITUTE, KAAK
& HUMBOLDT UNIVERSITY OF BERLIN

Christianising places of the Kushite past in the Kingdom of Alwa: medieval graffiti at Musawwarat es-Sufra and in the Meroe region

This presentation will focus on medieval graffiti from Musawwarat es-Sufra and the Meroe region, which once belonged to the realm of the Christian Kingdom of Alwa. The study asks how the images and texts that were incised into human-made sandstone surfaces at Musawwarat and Meroe were employed in Christianising these places and monuments of the Kushite past, and how these ancient structures may have been perceived and understood during the Middle Ages.

An overview is given of: 1) the types of graffiti that characterize the medieval graffiti corpora of the three study sites: the Great Enclosure of Musawwarat, the pyramids and the quarries

at Meroe, 2) the (technical) processes of medieval graffiti drawing and writing, and 3) the choices in their placement in relation to landscape and architectural features as well as older, Meroitic, graffiti. The presentation concludes with a comparison between Meroitic and medieval graffiti-making and consumption.

Grzegorz OCHAŁA

UNIVERSITY OF WARSAW

Mary, archangels, and saints: local cults at the monastery of Ghazali through wall inscriptions from the northern church

The outer façade of the northern church at the monastery of Ghazali (Wadi Abu Dom) has preserved numerous wall inscriptions left by visitors to and/or residents of the cloister. While many of them are difficult to decipher due to their state of preservation, they bear witness to the writing practices of the region and, coming from a site located on the main road between Makuria and Alwa, constitute interesting comparative material for graffiti found in the southern kingdom. In this presentation, I will provide an overview of the form and contents of the material and try to assess their significance for our understanding of local cults. Here, a joint analysis of both textual and pictorial graffiti (studied by Julia Maczuga) will certainly bring interesting results.

Alexandros TSAKOS

UNIVERSITY OF BERGEN

Christian graffiti from Alwa

The kingdom of Alwa has produced the smallest number of textual finds among the Christian kingdoms of medieval Nubia. Moreover, the bulk of these finds consist of textual graffiti on the walls of buildings, of both Kushite and Christian date.

The importance of the textual graffiti in the Alwan textual record was made evident from the publication of the excavations at Soba, where this type of material dominated the textual inventory. Studies of the Soba graffiti have provided an important corpus for comparison with the graffiti that have been recorded on the walls of the Kushite monuments at Musawwarat and the pyramids at Meroe. Together with the quarries in the vicinity of the latter site, this corpus of graffiti provides very useful insights for apprehending important aspects of Christianity in the kingdom of Alwa.

The overview of this material, which consists of both longer texts and religious symbols based on letter forms, will be form the basis of this presentation.

Vincent W.J. VAN GERVEN OEI

INDEPENDENT RESEARCHER

Alwan, a Nubian Language?

In this presentation I will take a closer look at what is conveniently called “Alwan Nubian”, which describes the language or languages occurring in a number of inscriptions found in Soba and Musawwarat es-Sufra, dating from the period of alphabetic writing developed in the post-Meroitic state of Alwa, also called Aroua or Alodia. This discussion will be couched in a wider linguistic history of the Middle Nile Valley between the First Cataract near present-day Aswan and the confluence of the White and Blue Niles, at present-day Khartoum and the former location of Soba, the presumed capital of Alwa. I will consider materials published around the turn of the 20 century as well as relatively recent archeological finds.

Participants: Cornelia Kleinitz, Grzegorz Ochała and the Organizers

**Organizers: Vincent W.J. VAN GERVEN OEI⁽¹⁾
and Alexandros TSAKOS⁽²⁾**

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⁽²⁾ UNIVERSITY OF BERGEN

Publishing Nubian studies

Over the years the community of Nubiologists has established several platforms to publish its scholarly advancements. Some of these platforms are uniquely dedicated to Nubian studies, while others overlap with adjacent fields such as Egyptology, Coptic studies, and archeology. At the same time, Nubian studies remains little known or integrated into wider fields such as classical and medieval studies, Black studies, or African studies. Similarly, these platforms remain little accessible to scholars from Nubia, Egypt, and Sudan publishing in Arabic or Nubian languages. This roundtable proposes a discussion of these issues of dissemination, accessibility, and equity in order to find collective ways to move Nubiological research forward.

Participants: Julie ANDERSON, Nada Babiker Mohammed IBRAHIM, Angelika LOHWASSER, Magdalena ŁAPTAŚ, Iwona ZYCH and the Organizers

6. WORKSHOPS

Organizers: Elena D'ITRIA and Gilda FERRANDINO

UNIVERSITY OF NAPLES "L'ORIENTALE"

The opportunities offered by digital technologies for Sudanese Cultural Heritage

Advancements in methods and technology are opening up fresh opportunities to digitize cultural heritage for preservation, conservation, restoration, and research, as well as for broader online access and re-use by citizens and various sectors, such as tourism. More recently, the coronavirus pandemic and the physical distancing measures taken across the world have underlined once more the need for and importance of improving online access to digitized cultural material and enhancing their use/reuse and the advantages of having these digital tools in place. Our workshop will propose a discussion concerning a more appropriate policy instrument to support the digital transformation of cultural heritage, namely: digitizing archaeological material and archiving and digital preservation.

The workshop focuses on future policy in the area of digitization and online accessibility of cultural material, as well as digital preservation of Sudanese heritage:

- to better reflect the huge potential of advanced digital technologies (e.g., 3D digitization, virtual and/or augmented reality)
- to focus on the quality of digitized cultural material.
- to adopt common standards and approaches for digitized content, removing several obstacles of interoperability.
- to publish data according to the FAIR principles, which improve Findability, Accessibility, Interoperability, and Reuse of digital assets. This facilitates the work of cultural heritage institutions, researchers, and scientific communication;

To increase collaboration with cultural heritage institutions at an international level for helping in finding shared responses to common challenges and exchanging best practices, as well as showcasing and promoting Sudanese culture.

The aim is to discuss the opportunities offered by digital technologies for Sudanese cultural heritage and to share ideas across the Sudanese archaeology community.

**Participants: Julie ANDERSON, Denise DOXEY, Friederike JESSE,
Aminata SACKHO-AUTISSIER and the Organizers**

Organizer: Katarzyna DE LELLIS-DANYS

POLISH CENTRE OF MEDITERRANEAN ARCHAEOLOGY, UNIVERSITY OF WARSAW

**Shaped by hand:
traditions and interconnections of handmade ceramics in Nubia**

The aim of this workshop is to discuss the phenomenon of handmade pottery from Nubia in a diachronic perspective. Continuity or discontinuity of fabrics, shaping techniques, surface treatments, decoration and functions from prehistory to the Funj period may provide a basis for further discussion on indigenoussness of handmade ceramics in Nubia and their significance for communities, as well as their interconnections with other handmade pottery manufactured beyond the Middle Nile Valley.

Participants of the workshop will also discuss the role of handmade pottery in the “Great” and “Little” tradition as a socio-historically determined phenomenon. The debate will be supported by the study collection of pottery held in the Polish Centre of the Mediterranean Archaeology, University of Warsaw. Participants will have the opportunity to study and discuss the technological aspects of Funj-period handmade pottery on the basis of thin-sections of fabrics and will have access to an optical microscope.

Participants: Ewa CZYŻEWSKA-ZALEWSKA, Jiri HONZL, Marie-Kristin SCHRÖDER, Aaron de SOUZA and the Organizer

Organizers: Robin Seignobos⁽¹⁾ and Magdalena M. Woźniak⁽²⁾

⁽¹⁾ UNIVERSITY LYON 2

⁽²⁾ POLISH CENTRE OF MEDITERRANEAN ARCHAEOLOGY, UNIVERSITY OF WARSAW

Approaching the Eparch of Nobadia: a multidisciplinary perspective

This workshop aims to gather scholars active in different disciplines (archaeology, art history, history, philology, papyrology, linguistics, archaeozoology...) to share their views on the crucial, but still understudied figure of the Eparch of Nobadia. We would like to address such topics as:

- The title(s) of the eparch (in Greek, Old Nubian, Coptic, Arabic), their meaning/etymology, their models (e.g., the eparchate in Byzantine Egypt);
- Fasti and prosopography of eparchs: pictorial representations of the eparch (costumes, regalia, the debated issue of horned headgear, the links between pictural representations and animal horns, the importance of cattle and its role in the exercise and display of authority in medieval Nubia);
- Eparch status in the administrative structure of the Makurian/Dotawan state. The eparch is often presented as second in command after the Makurian/Dotawan ruler, but what was the nature of his relations with the kingly office? With other officers and dignitaries? With bishops and ecclesiastics? Can we detect the influence of earlier administrative structures (post-Meroitic, Meroitic or even older) and elements of continuity in the post-medieval period?;
- What exactly was the extent of the territory where his authority was recognised? This also raises the issue of the eparchal residence(s), well documented at Ibrim but also attested in other major urban centres in Nobadia (Faras, Gebel Adda, Meinarti...). Was it an “ambulatory” office? Roles/functions/activities: we know that the eparch acted primarily as a mediator between Nubian authorities and Muslims (diplomacy and trade) but what other duties were expected of him? The eparch was evidently at the heart of different complex networks, both private and public, as exemplified by his crucial role in the local agrarian economy (as shown in G. Ruffini’s works) but what other resources did he have at his disposal to carry out his tasks (scribes, translators, other agents)?;
- How was his rule exerted and felt by the Nobadian subjects? How was he perceived from the outside and by his non-Nubian subjects (merchants, travelers, Muslims settled in Nobadia)?

We are convinced that such a collective approach is a key to a better understanding of this important Nubian office and this workshop aims at setting the proper framework for a more in-depth study of the figure of the Eparch.

Participants: Joost HAGEN, Geoffrey KHAN, Aleksandros TSAKOS and Vincent W.J. VAN GERVEN OEI and the Organizers

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