

Book of Abstracts, ICNS 2026



Abstracts by Session at the ICNS 2026 (according to programme order)

Keynotes

Diverse Nubias: Challenging the monolithic understanding of New Kingdom Nubia

Julia Budka (LMU Munich)

New Kingdom Nubia has hitherto been regarded as a homogeneous entity, marked by a strong influence from Egypt and so-called “Egyptianisation”. Recent concepts employing theories of cultural entanglement have modified this approach and represent a significant advancement, yet they partly exhibit an elite and centre bias. The most recent results from new fieldwork, incorporating a novel method developed by the ERC-funded DiverseNile Project, provide a solid foundation for comprehensively addressing the intricacies of cultural dynamics in the Middle Nile.

This keynote provides a synopsis of a case study in the Middle Nile, specifically the Attab to Ferka area. This region is a dynamic contact space south of the Dal cataract in the hinterland of the New Kingdom urban sites of Sai Island and Amara West. The region's extensive archaeological record offers novel insights into the ancient dynamics of social spaces. This keynote will expand upon these findings through a discussion of other archaeological sites and regions across Nubia.

Approaches are presented that go beyond centre-oriented narratives and focus on internal cultural factors, individual decisions and the careers of various groups of Nubians and Egyptian settlers. New Kingdom Nubia is characterised by heterogeneity among its constituent groups and actors, in contrast to the long-held view of it as a static landscape with a homogeneous society.

Diverse Nubias in the Napatan Phase

Angelika Lohwasser (Institute for Egyptology and Coptology, University of Münster)

Despite the heterogeneous nature of the source material – texts are only available from the royal sphere, temple buildings date almost exclusively to the 25th Dynasty, cemeteries mostly date to the early Napatan period and little is known about settlements – it is possible to gain some insight into Napatan culture writ large. This enables us to

recognise the wide diversity of the society that inhabited the Middle Nile Valley between the 9th and 4th centuries BCE. Texts tell us of various tribes invading the Nile Valley, and material culture also provides evidence of foreign practices. Scientific analyses also point to a variation in the origin of people. Social stratification is particularly evident in cemeteries, where the kings are buried separately from the elite, who in turn are buried differently than the lower classes. Differential mortuary treatment based on age and gender are also apparent.

One area that remains largely unexplored is the religious dimension of society. We have little knowledge of practices associated with communicating with the supernatural because temple cults are dominated by Egyptian influences, and there is no evidence from the lower classes. In the funerary sphere, however, we see a broad spectrum of beliefs about the afterlife and their material relics. Royal burial practices differ from non-royal ones, and even within the ordinary population of Napata, small differences testify to individual ideas. All of these elements point to a highly diverse society during the Napatan period.

Beyond the Monolith: Examining Meroitic Cultural Diversity and Social Dynamics through Mortuary and Urban Landscapes

Mohamed Bashir (Department of Archaeology, University of Khartoum; Institute of Egyptology and Coptology, University of Münster)

The Meroitic period (c. 350 BC–AD 350) represents an enigmatic yet vital chapter in Sudan's cultural history, often oversimplified by archaeological traditions that prioritise royal chronology and elite material culture. Moving beyond "phase-archaeology", this research explores the vast, sophisticated, and profoundly diverse landscape of the Meroitic State, spanning approximately 1,500 km of the Nile valley and its hinterlands, and encompassing varied environmental zones and communities.

Drawing on emerging settlement data and detailed analyses of mortuary practices, particularly from sites such as Kedurma and through comparative urban studies including recent excavations on the island of Meroe, this talks critically re-evaluate the Meroitic state as a dynamic mosaic rather than a monolith. Evidence from Kedurma and other riverine sites – in particular diverse tomb architecture and grave goods – reveals a rich spectrum of social organisation, highlighting heterarchy: interdependent and dispersed power dynamics, and active identity negotiation independent of strict sex or age stratification. These sites demonstrate significant interplay among indigenous, Lower, and Upper Nubian burial customs, shaped by regional exchange and cross-cultural interactions, including Egyptian influences.

A comparative analysis of urban centres further illustrates the state's regional variability and intricate network of communities. While exhibiting shared urban planning, daily life, and craft production (such as textile and pottery industries), these sites display differing degrees of external cultural impact and administrative control. Kedurma, for instance, as a northern frontier settlement, reveals Mediterranean influences through imported artefacts. Distinct high-status buildings in urban centres underscore complex social stratification and the presence of local authorities, ranging from directly royal-administered centres to provincially governed ones.

This research posits that comprehending Meroitic civilisation necessitates a shift from isolated objects and dates to analysing the complex human networks, fluid social identities, and regional specificities that flourished across its expansive domain. By integrating multidisciplinary insights from mortuary practices and settlement archaeology, this talk illuminates the adaptive administrative and social mechanisms that fostered cohesion within such a pluralistic and geographically extensive state.

Multiple Nubias. A Linguistic Perspective. *Varietas* in Meroitic scribal practices

Claude Rilly

The diversity that can be observed in many aspects of Meroitic civilisation is also found in texts. *Varietas*, one of the required skills of Latin eloquence – alongside *copia dicendi*, i.e. the richness of the argumentation – was a quality particularly prized by Meroitic scribes. This diversity of expression has long been an obstacle to understanding of Meroitic texts. Funerary inscriptions, for example, include final formulas, known as "benedictions", whose extraordinary variety, both in the mode or number of verbal forms and in the use of conservative or updated spellings, has been a real challenge for philologists. This desire for variety even led some scribes to deliberately juxtapose different spellings of the same word in the same text. Furthermore, a characteristic

of Meroitic and related modern languages is the optional use of markers that are obligatory in Indo-European languages, such as case suffixes. The presence or absence of these markers was used by scribes to reflect the social status of the deceased in their epitaphs. The rare instances of dialectal diversity known in Meroitic have also been exploited to vary the expression in invocations to the gods in the epitaphs. All these variations have long been interpreted as instances of negligence in a culture considered less advanced than that of ancient Egypt. In reality, they were sought after and bear witness to an approach to writing based on inventiveness and language play.

1. General Session

Filling the Gap: Nubia during the First Half of the Third Millennium BC

Marie Bourgeois (Université Lumière Lyon 2 – HiSoMA)

Lower Nubia has long been considered as being empty or unoccupied after the presumed “disappearance” of the Nubian A-Group (c. 2900 BC) until the presence of the C-Group is confirmed in the region (c. 2400/2300 BC). This dominant hypothesis, now outdated, is based on several research biases that must be broached if we are to explain this formative period in Nubian history. While the first half of the Third Millennium is well-known in Egypt, there is little archaeological evidence for this period in Nubia. Indeed, excavations have long focused on the Nile Valley — where no remains have been confirmed for this period, except for pre-Kerma granary sites, a few campsites and even fewer tombs. This approach, however, does not consider population movements toward the deserts and to the south, or changes in lifestyle, mobility, and subsistence patterns. Today, new archaeological data from desert margins and inner deserts, and the re-evaluation of previously published sites, finally makes it possible to compare archaeological data in a more effective and meaningful way. Using this method, it is possible to ascribe more sites to this ‘interim’ period and ‘fill the gap’. On close analysis, this period therefore does not seem to correspond to the disappearance of a population, but rather to a turning point in the history of Nubia and its relations with Egypt. The aim of this research is to explain the apparent phenomenon of population change in Nubia, and model various reasons for these transformations in the material record. This research provides a new context for the origins of the Middle Nubian period and human adaptations to a complex desert-river environment.

New Agencies on the 3rd–2nd millennia BCE Networks between the Nile Valley and the Red Sea: Fresh Insights from the Southern Atbai and the Red Sea Coast

Andrea Manzo (University of Naples Orientale and ISMEO – Associazione Internazionale di Studi sul Mediterraneo e l'Oriente)

Until recently, the reconstruction of interaction networks in the regions east of the Nile valley only took into consideration few actors, typically the ones mentioned in ancient internal (i.e. produced by themselves) or external (i.e. produced by other actors) textual and iconographic sources. These were ancient Egyptians, South Arabians, Aksumites, Greeks, Romans and Arabs. Only recently are some discoveries throwing light on the plurality of the actors involved in the networks since the earliest times, as well as on their active role, despite the fact they are often based in apparently marginal regions, without evidence for urban and monumental centres.

This presentation will discuss the issue of the complexity and plurality of agencies in the regions east of the Nile valley from this “peripheral” perspective with a specific focus on the 3rd–2nd millennia BCE. This will be made possible by the fresh evidence made available by the ongoing archaeological research projects of the Orientale University and ISMEO in Mersa/Wadi Gawasis (Egypt) and Eastern Sudan. A specific focus will be placed on the different actors involved in the circulation of commodities along the maritime and land routes between the Nile valley and the Red Sea as well as on their role in the exploitation of resources, transformation and management of the traded commodities. In particular, the active agency of the groups from the two studied regions in broader dynamics will be shown, and a reconstruction of the interactions of these so far almost completely silent actors with better-known ones will be attempted. The contribution that archaeological investigations on these groups can provide to the interpretation of some passages of the few textual and iconographic sources available for the studied period will be also discussed.

Sustainable Development and its Role in Preserving World Heritage Sites in the Shendi Archaeological Region: The Case of Naga

Mohammed Khair Mohammed Alatta Ahmed

This presentation examines the role of sustainable development in preserving World Heritage Sites in the Shendi Archaeological Region, with particular emphasis on the site of Naga. The study investigates the natural and human-induced threats that contribute to the deterioration of archaeological heritage in the region and explores how sustainable development strategies can support its long-term conservation.

The research is based on the assumption that numerous environmental and anthropogenic factors threaten the integrity of archaeological sites in the Shendi region. A descriptive and analytical methodology was employed, incorporating field observations, interviews, and content analysis.

The findings indicate that the Shendi Archaeological Region has significant potential to become an important cultural tourism destination and a valuable economic resource capable of contributing to Sudan's national economy, provided that its archaeological heritage is effectively protected and sustainably managed. Furthermore, the study highlights the urgent need to develop a comprehensive and integrated sustainable development plan for the region. Such a plan should be implemented through close cooperation and coordination among governmental institutions, heritage organizations, local communities, and national and international stakeholders involved in cultural heritage conservation.

Burial Customs at the Site of Kirma (Upper Blue Nile Region)

Abdelhai Abdelsawi (NCAM)

This presentation discusses burial traditions in the upper Blue Nile region. The work was conducted during the salvage campaign of the Roseris dam heightening project. It included digging many sondages across archaeological sites recorded by NCAM teams. This presentation will focus on burials excavated on the southern limit of the village of Kirma on the eastern bank of the Blue Nile. The location of the site was signalled by the local population, when water from a stream eroded a grave and exposed the lower part of a human burial. A small square trench was excavated to reveal the rest of the burial which was labelled T1. The area to the east of the stream is flat and sandy with no visible features on the surface.

The excavation of further burials showcased similarities in the type of grave pit and grave goods used, suggesting they belong to the same group. Although the orientation of the buried individuals varied. Overall, the burials find parallels with early Meroitic examples in other regions.

Before the Nile Water Rose: Revisiting Nubia's Early Excavation Records from the Reisner (1907–1911) and Emery (1929–1934) Surveys

Mahmoud A. Emam (Faculty of African Studies, Cairo University)

Andrea Manzo (Department of Asian, African, and Mediterranean Studies, University of Naples "L'Orientale")

The early archaeological surveys of Lower Nubia, first conducted by George Reisner between 1907 and 1911, and later by Walter Bryan Emery from 1929 to 1934, played a foundational role in documenting and safeguarding the region's cultural heritage during the construction and subsequent heightening of the Aswan Dam. Reisner's pioneering efforts established the first comprehensive understanding of the archaeological landscape of Lower Nubia, while Emery's systematic documentation and excavation ensured the preservation of invaluable material that would otherwise have been lost. Together, these rescue missions created the core body of evidence upon which much of our current knowledge of ancient Nubia is built.

More than a century later, and in light of major advancements in archaeology, conservation, archaeometry and digital documentation, there is a renewed imperative to revisit and reassess the results of these early surveys. The original publications were limited to preliminary reports that presented only selected findings, constrained by the urgency, logistics, and scale of the rescue operations. Yet the archival record of these collections contains far richer and more detailed information. A comprehensive restudy and republication of these materials now has the potential to substantially enhance our understanding of Nubian history.

This presentation introduces the first results of an interdisciplinary project dedicated to conserving, documenting, and studying the Nubian collections housed in the basement storerooms of the Egyptian Museum in Cairo. The project unfolds through several integrated phases, including condition assessment, conservation planning, prioritised restoration, systematic recording and photography, and the development of a detailed digital database.

Sealing Practices in Colonial Zones of Lower Nubia during the late Middle Kingdom

Katherine Consola Carmichael

Sealing practices in ancient Egypt were used in a variety of administrative and religious contexts. Though evidence for the use of seals can be found across all periods of ancient Egyptian history, seal impressions found at Middle Kingdom sites indicate a significant expansion of the administrative sealing system during the early second millennium B.C.E. This expansion was, in large part, a result of colonial expansion into Lower Nubia, and was accompanied by the establishment of fortresses along Egypt's new southern border between the Second and Third Cataracts. This paper presents an exploratory comparative analysis of iconography and a qualitative analysis of the physical and spatial properties of seal impressions, including physical size, distribution across the site, and provenance, from domestic and administrative contexts at two contemporary Egyptian colonial sites: Elephantine and Askut. The goal of this analysis is to gain further insight into sealing practices in colonial zones during the late Middle Kingdom (ca. 1850–1680 B.C.E.), which can potentially tell us about individual status, administrative activities, and production of goods at, and potential interaction between, both sites. These data provide key insights into regional trends and variation of sealing practices, as well as expressions of identity within the confines of imperial bureaucracy.

Scratching the Surface: Analysis of Faience from Nubia

Juliet Spedding (Department of Scientific Research, British Museum)

Ancient faience was the first man-made non-clay ceramic, comprising of a silica core and a shiny glaze. Faience was fashioned into many different artefacts such as amulets, beads, vessels, shabtis, and even architectural features. The history of faience production in Egypt stretches back 6000 years and extensive study has allowed for the identification of different glazing techniques employed by the ancient craftspeople. By comparison, the examination of faience found in Nubia (Ancient Sudan) is still underrepresented.

This talk will present the results of scanning electron microscopy with energy dispersive spectrometry (SEM-EDS) on 30 samples of faience (bead and vessel fragments) from sites in Lower Nubia (Faras) and Upper Nubia (Kerma, Kawa, Sanam, Meroe) dated from the C-Group to the Meroitic Period (c.2160BCE–350CE). The findings show the varied quality of the production of faience from Nubia and the potential identification of ‘glassy faience’ at Kerma. These results highlight the need for further examination of this vitreous material when found in Nubia and how it might have developed alongside – and separately from – faience found in Egypt.

Shamanic Figures, Cattle–Human Rock Drawings in Nubia: Ritual and Belief Landscapes from Prehistory to the C-group and Kerma Periods

Yahia Fadl Tahir (University of Khartoum, Department of Archaeology)

Human interaction with stone extends back to the Palaeolithic period, when stone was primarily used for tool production. Over time, however, stone also acquired symbolic and ritual significance, leading to the creation of rock art and other marked features in the landscape. This paper examines Shamanic Figures and cattle–human rock drawings as possible expressions of ritual practices and belief systems in Nubia from the Prehistoric to Kerma period and C-group (2500–1550 BC).

Archaeological and ethnoarchaeological investigations were conducted in two regions of northern Sudan: the Third Nile Cataract and the El Sikkot region. Numerous rock drawings were documented, often located in close spatial association with archaeological sites dating from the Neolithic (5000–3000 BC) extending to the Kerma (2500–500 BC) and C-group (2500–1550 BC) periods. Many of the drawings depict animals and anthropomorphic figures, including possible shamanic representations. Some scenes show anthropomorphic figures holding cattle tails interacting with animals, which may reflect ritual practices related to animism, cattle symbolism, or shamanic beliefs. Ethnographic evidence collected from the study area suggests that local populations still regard boulders with prominent rock art at Jeddi-Sabu and Misedda as places inhabited by supernatural beings. Meanwhile, in Kajbar and Serikenmato, such locations continue to serve as settings for wedding-related rituals.

Comparisons with Saharan rock art, South Africa and ethnographic data from African hunter-gatherer societies, and some Sudanese tribes suggest that some of these images may represent ritual performances or trance-related practices. The concentration of such imagery in specific locations as Jeddi-Sabu and Serikenmato also indicates that certain boulders and landscapes may have functioned as sacred places within the ritual geography of Nubian

communities. The study therefore suggests that rock drawings formed part of a broader ritual landscape reflecting symbolic relationships between humans, animals, and the spiritual world.

An African Civilization in Kerma

Charles Bonnet (Geneva University)

After some forty-five years of excavations in the city of Kerma and nearly thirty years in that of Dukki Gel, in addition to work on the necropolis and the discovery of the pre-Kerma settlement, it is essential to review the main advances that have been made. We are at the origins of African history. There has indeed been a considerable contribution to our knowledge of the Kingdom of Kerma and the African states with which it had relations. The existence of this twin city, perhaps a prototype of those known in West Africa for more recent periods, highlights the striking contrast between the predominantly orthogonal buildings of Kerma, linked to Egypt, and the orthocentric circular buildings of Dukki Gel, which evoke later African models. It is relatively easy to trace the evolution of the connection between the two cities through inscriptions and the importance of fortifications to both cities. Dukki Gel, in particular, suggests the existence of a system equivalent to that built by the Egyptians on the second cataract from the reign of Sesostri I onwards. On the other hand, the absence of comparable remains identified for the latter and their practice of oral culture require the development of archaeological research in other parts of Sudan and sub-Saharan Africa.

Every Bed Should be a Throne and Hold a King: Beds as Status Markers in Nubian Tombs

Manon Y. Schutz (University of Münster)

Throughout ancient Sudanese history, beds and bed-like structures (including e.g. wooden frames without legs, stone ‘benches’) occur in tombs, often standing in the very centre of the burials. The bodies of the deceased were usually placed in a crouched, sideways position on top of these platforms, that is, in a position that likely imitates that of a sleeper. In some cases, depending on the geographical area and the time, a coffin was used as well. Contrary to nowadays – a world in which beds seem nearly omnipresent – these pieces of furniture were luxury goods and, hence, status markers in antiquity. Besides the cost of the material and craftsmanship, the fact that beds elevate their owners above everyone else in a literal as well as figurative sense certainly added to this symbolic meaning as well.

This paper aims to analyse the use and significance of beds in Nubian tombs, especially their potential function as a ‘throne’. For this purpose, several examples from the Classic Kerma and Napatan Periods shall be presented. On the one hand, the appearance and, in particular, decoration of these pieces of furniture are examined. Does the ornamentation follow a specific pattern? Do the motifs express a shared afterlife belief? Or do they (perhaps additionally) convey a portrait of the deceased and highlight their status in this as well as, by extension, the next life? On the other hand, the general position of the bed within the tomb is considered. What is the relationship of this furniture item with the body of the departed as well as the other objects? Could its place within the tomb reveal more about the position of their owners during their lifetime? In other words: does the bed characterise the deceased as the king or queen of their own tombs?

Reshaping Divine Kingship. Ramesses II Models of the Royal Icon in the Land of Kush

Emanuele M. Ciampini

The iconographic language used in the celebration of divine kingship underwent a particular development during the 19th dynasty, and the reign of Ramesses II offers detailed evidence, above all in the statuary. In Kush the representation of the king takes on more distinct divine connotations and is linked to celebratory models known in Egypt, as is the case of the temple of Luxor. Here, a model of a divine royal icon seems to be particularly “productive”, given its replicas in the south. The use of statuary thus becomes an essential factor in the development of the decorative programme of sacred buildings in Kush, as confirmed by the dromos at Wadi es-Sebua.

However, a more significant celebration is evident at Abu Simbel, where the royal icon becomes a defining element. The epigraphy here allows us to recognise the correspondence between the Luxor model and the local reproductions: the name of the ka-statue of Ramesses in Luxor returns in several forms at Abu Simbel, where the divine kingship of Ramesses is also celebrated in the four statues of the sanctuary (Ptah, Amun-Re, deified Ramesses and Re-Harakhti), ‘projected’ outside in the four colossi of the façade and in the cryptographic statue of the coronation name.

The statuary of the divine kingship seems to specialise a particular model, called *ḥnty*, identifying a statue that embodies the divinity of the sovereign. The use of this divine icon of the king is probably also linked to the interpretation of the southern regions of Egypt during the New Kingdom as setting for the origin of those performative elements of the cosmos (see the Nile Flood or the same Amun-Re).

Two Names, Two Coffins, One Family? Reassessing the Theban–El-Hibah Connection through Maternal Onomastics and Priesthood Networks

Hend Elfiky (Faculty of African Postgraduate Studies, Cairo University)

This paper re-examines the potential kinship connection between *Tariri*, whose coffin Cat. 2220/02 was discovered in Thebes and is now housed in the Turin Museum, and *Khonsoutefnakht*, owner of the Brussels Coffin E 586 from El-Hibah, by integrating onomastic, historical, and geographical evidence. Both individuals share the maternal name *ʿIrj* – attested for *Tariri* and, in one instance, for *Khonsoutefnakht*’s mother, otherwise known by the longer form *C(s)p-immn-tAj=s-Hrj.t*. The recurrence of this rare feminine orthography suggests a deliberate naming continuity rather than coincidence, reflecting the well-attested custom among women of the Twenty-Fifth Dynasty to bear both a formal and a familiar name.

Beyond onomastics, the historical context reinforces this hypothesis. Around 512 BCE, a prolonged dispute – lasting nearly 150 years – erupted between a prominent Amun priestly lineage and the broader Theban clergy. Originally based in Thebes, this family migrated to El-Hibah during the reign of Psamtik I (663–609 BCE), where they established a sanctuary of Amun under authorisation from a Heracleopolitan official. This administrative transfer of priestly privileges subsequently provoked a lasting conflict with the Theban hierarchy.

Moreover, the text known as the Petition of Pediese (P. Rylands Demotic 9) provides direct evidence of such tensions and of the administrative mediation of Heracleopolis in the affairs of provincial temples (Vittmann trans.). In this context, the Theban origin of *Tariri* and the El-Hibah affiliation of *Khonsoutefnakht* may represent successive generations of one extended priestly family, whose movements mirrored the shifting centres of Amun’s religious authority along the Theban–Heracleopolitan corridor.

Thus, these intertwined genealogical and geographical patterns raise an intriguing question: could *Tariri* and *Khonsoutefnakht* have been siblings after all?

In the Shadow of the God Amun: New Thermal Imagery from Jebel Barkal

Katherine Rose (University of Chicago)

This paper explores urbanism in Northern Sudan through remote sensing methods. The site of Jebel Barkal is located 400 km from Khartoum, near the Nile. The site served as the royal capital of Kush from the 8th century BCE and remained a major urban and religious centre throughout the Meroitic Period. Since 2018, the Jebel Barkal Archaeological Project and the National Corporation for Antiquities and Museums of Sudan have been excavating and surveying areas of the East Mound where a dense settlement was identified. Here, I present an analysis of thermal imagery legacy data collected in 2023 by National Geographic before the onset of the civil war. The thermal imagery extends beyond the East Mound and covers much of the known site. The data allows us to more accurately map the settlement’s spatial extent and situate it within its broader landscape context. We also identify additional features such as architecture, activity areas, paleochannels, and holloways. This work contributes to our understanding of how major Kushite cities grow, evolve, and respond to environmental factors throughout their life histories. This paper also ruminates on the impact of spatial legacy data on archaeological inquiry in Sudan.

Archaeological Ambiguity and the Use of Oral Tradition in Interpreting Kushite Royal Cemeteries: King Taharqa and the Legend of the Wise Stranger

*Murtada Bushara
Muhammed Alnour*

Recent archaeological investigations in the royal cemeteries of ancient Kush have largely concentrated on reopening tombs first excavated by George Reisner or on limited work conducted in their immediate surroundings. However, the discovery of additional cemeteries in adjacent districts – such as the Et-Tameer cemetery near Sanam and newly identified burial grounds around Gebel Barkal – has renewed long-standing questions concerning the origin and early development of the Napatan Kingdom. These discoveries also highlight the unresolved issue of why multiple cemeteries served single royal centres, a phenomenon observed at both Meroe and Sanam.

Many aspects of Napatan history, particularly its formative phases, remain archaeologically ambiguous due to the scarcity or complete absence of contemporary written sources during the first Kingdom of Kush. This situation suggests a strong reliance on oral narratives to preserve historical memory, while written documentation appears to have been limited to specific royal or elite contexts. The lack of inscriptions in many royal tombs – including those at Napata and Meroe – should therefore not be interpreted as evidence of illiteracy, but rather as a reflection of cultural priorities in which lineage, memory, and ritual outweighed textual commemoration.

This paper argues that the marginalisation of local communities and their intangible heritage has contributed to persistent interpretive gaps in Sudanese historiography. Integrating oral tradition as an archaeological methodology – alongside analysis of burial architecture within its geological and environmental context – offers new explanatory frameworks. Oral narratives have already proven effective in identifying cemeteries lacking visible surface markers and in clarifying the spatial organisation and relational sequencing of graves.

Within this context, the legend of the Wise Stranger is proposed as a theoretical model for addressing archaeological ambiguity in the early Napatan and Meroitic period. Although often associated with Islamic-era traditions, the legend may reflect much older Sudanese mechanisms for legitimising authority through knowledge, marriage into ruling lineages, and dynastic succession. Applied to the case of King Taharqa, this model provides a culturally grounded interpretation of royal accession and state formation, while also offering broader implications for heritage interpretation, community engagement, and inclusive historical narratives.

Who Was Natemakhora and Where Was He Buried?

Vincent Francigny (CNRS – UMR 8167 / Sorbonne University)

Outside the royal family, most of the Meroites whose names have come down to us belonged to the elites who controlled, during the first centuries of our era, the vast territory of Lower Nubia. Among them, certain local dynasties can be traced over several generations, as is the case, for example, with the Wayekye family. Others entered the historical record because of the offices they held, the important titles they bore, their affiliations with members of the royal circles or the spectacular remains of their funerary material.

Far less is known about the rulers of the region extending south of the Second Cataract down to the area of the Gebel Barkal, largely because the Meroitic cemeteries of some major centres such as Kawa and Kerma have not yet fully been investigated.

However, the publication in 2013 by Claude Rilly of a collection of funerary texts from the West Cemetery at Sedeinga has shed light on one of them: Natemakhora. More recently, a review of the complete archives of the project carried out in the 1960s has revealed new information that helps to better understand the significance of this prominent figure.

“Diagnosticating the weak points thereof”: A Calculated Evaluation of the Soundness of Meroitic Art History Reasonings

Camille Labia (Sorbonne Université, Paris)

One of the important frameworks when working on the Meroitic culture is its royal chronology. It usually gets published, in exhibition catalogues’ appendices, as something akin to Egyptian kings lists. As László Török remarked in 1989 (*Meroitica* 10, p. 536), this is the complex result of work by successive researchers, each one revising their predecessors’ version. Which led to his question: “how and where could one find an ‘exact’ and independent means, to diagnose the weak points thereof?”

In the interest of open science, the author of this paper worked during her PhD research on a means of showing the strong and weak points of an argument derived from archaeological objects, layers of previous dating, and kings lists. A simple experiment was proposed: what if artefacts had an “archaeological score” value, akin to the “Nutri-score” green-yellow-red stickers seen on food products in several European countries? An artefact without any context would be “red”, a well-documented one would be “green”, an encouraged staple in the art historian’s diet.

This presentation proposes a way to calculate such an index, and proceeds to apply it bluntly to a demonstration. This allows us to easily see whether the information diet leading to our conclusions is “healthy”, but also shows the methodological pitfalls of an “archaeological Nutri-score”.

Despite its limitations, this evaluation also provides a way to display the certain, the inferred and the assumed, in successive versions of the Meroitic kings list. This results in a visual display that could be useful to future students to get a better understanding of the basis on which interpretations are formed in the papers they are reading.

Archaeology of Dress along the Middle Nile. Four Years into the *Fashioning Sudan* Project

Elsa Yvanez (Saxo institute, School of Archaeology, University of Copenhagen)

In 2022, the *Fashioning Sudan** project set out to build the tenets of an archaeology of dress practices in the ancient Middle Nile valley. Chiefly based on preserved archaeological remains of garments made of textile and animal skin, the project aims at articulating new approaches and methods to better understand individual and group identities from a *longue durée* perspective, from Kerma to the Medieval period.

This presentation will outline the theoretical constructs developed through the first work package – Recognising identities, new paradigms for dress as identity markers. In particular, I will present the new terminology elaborated as the backbone of our database and garment repertoire. Departing from previous studies, this new framework is not based on pharaonic imagery but on Sudanese material and body conceptions. I will also share the results accrued through work package 2 – Crafting identities, manufacturing dress in context. Here, I will particularly focus on the characterisation of animal products. Data from palaeoproteomics, microscopy, and strontium analyses have been merged with textile and animal skin analyses to provide new knowledge on the exploitation of animals and their importance in fashioning personal appearance. Finally, I will illustrate parts of our work package 3 – Performing identities, dressing the individual and social body. I will show how the archaeology of dress can help us access information about a large but little-studied group of the ancient Sudanese population: children.

Four years into the project, I would like to use the opportunity offered by the Nubian Studies conference to present an overview of our results and reflect with colleagues upon advances and challenges.

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Training New Specialists in Academic Research on Nubian and Sudanese Cultures. A Priority, Despite the Current Impossibility of Continuing Fieldwork

Dominique Valbelle (Sorbonne University)

The numerous cultural events organised by the main centres of Nubian studies, the relevant museums and the main archaeological missions that were excavating in Sudan when the war abruptly interrupted their work have, since May 2023, demonstrated the determination of specialists to continue their research by focusing on archives and accessible funds. It is essential to continue training new students in Sudan and abroad so that they may be ready to go back to the field when the political situation will allow it again. Several examples currently being studied by various doctoral students will be provided to demonstrate the potential available from the collections and the documentation already gathered and accessible, whether it has already been printed or still unpublished. More specifically, as one case study, the issue of coalitions united around the Kingdom of Kerma, raised by the recent discoveries of the architecture at the site Dukki Gel, will be discussed.

2. Recent Fieldwork: Preliminary Reports

Late Prehistoric Settlement at Wadi El-Humar Eastern Bank of the Fifth Nile Cataract

Abdelgadir Elkhazien (Department of Archaeology, Faculty of Arts, Al Neelain University, Khartoum, Sudan)

The *Space and Ground Surveys for the Eastern Bank of the Fifth Nile Cataract and El-Usheir Island* is an ongoing project focusing on a largely understudied sector of the Middle Nile Valley. The research area lies between longitudes 33°41'–34°47' E and latitudes 18°21'–18°33' N, encompassing several islands (most notably El-Usheir Island) as well as cultivable lands situated above the floodplain, where the mouths of wadies and khors are located. The eastern portion of the area, extending c. 12 km from Khor Abu-Sideir in the north to Wadi El-Humar in the south, is a rugged mountainous landscape dissected by wadies and khors that drain westward toward the Nile.

Despite environmental conditions favorable for prehistoric settlement, such sites have been absent from the existing archaeological record. Addressing this gap, a systematic pedestrian survey conducted in March 2023 identified a substantial late prehistoric site at Wadi El-Humar area. This paper presents a preliminary assessment of the site, focusing on its strategic riverine location on flat terrain between two khor mouths – a setting well suited to both hunter-fisher-gatherer groups and early agro-pastoral communities – its spatial extent (c. 850 m along a north–south axis); its apparent internal organization into lithic workshop, habitation, and burial areas; and the surface finds, which include lithic assemblages and manufacturing debris indicative of on-site tool production, as well as ceramic material. The presence of burials suggests sustained occupation, while preliminary ceramic typological analysis points to a prolonged occupational sequence. Precise chronological placement, however, awaits stratigraphic excavation and absolute dating. The paper also draws attention to site's vulnerability, as ongoing agricultural expansion poses an immediate threat to its preservation.

Further investigation of this site will significantly enhance our understanding of Late Prehistoric settlement dynamics along the eastern bank of the Fifth Nile Cataract.

Archaeological Excavation of Goz El-Shor – Second Season, 2020

Mohammed Alfatih Hayati (University of Khartoum)

Goz El-Shor is located in the Hassahissa District, an administrative division, to the northeast of the village of Wad El-Hilaio and to the west of the village of Sheikh Kamal Al-Din (latitude 14°28.711'N, longitude 33°02.035'E). It lies about 46 km west of the Blue Nile, on the northern border of the Manqil District. The site is on a slightly elevated *goz* (sandy rise) situated in the centre of agricultural land and extends over an area of more than 700 m². Dense stands of *Acacia nubica* trees are found on the outskirts of the site.

It is a substantial Neolithic site consisting of numerous archaeological finds visible on the surface, including a particularly dense concentration of small grinding stones. These are distinctive in their manufacture, being made of sandstone and gneiss. There is also a high density of pottery sherds of various shapes, with numerous decorative motifs scattered across the surface.

According to the excavation strategy, work during this season began with the re-excavation of the three squares opened in the season of 2019 (Squares 1000, 2000, and 3000), as they had not yet been completed. Therefore, we resumed excavation in these same squares to reach the lower levels. It was observed that the stratigraphy of the site became richer and more interesting toward the bottom, although the soil in the lower layers was harder and more compact, yet showed greater variability.

During the season of 2020, a number of skeletons were uncovered in all the excavated squares, which are likely to date back to the Neolithic period. The positions of these skeletons varied in terms of their geographical orientation and the side on which the body was lying. It was also noted that no grave goods were found with the skeletons. However, scattered artefacts were recovered within the squares, varying in their material composition. It is evident that all of these remains belong to the Neolithic period.

Rock Art in Magal: An Update on the Latest Survey of Sapienza in Sudan

Angelo Colonna (Sapienza University of Rome)

In 2022, the Sapienza-NCAM joint mission to Hujair Gubli and Magal surveyed some previously undocumented sites in the desert plateau of Magal. The fieldwork identified a cluster of petroglyphs and rock art motifs showing cattle, wild fauna and boats. Archaeological evidence in the area also included a set of stone tumuli that were unfortunately looted and disturbed by modern gold-mining activities. This paper will present the rock art recorded, discussing the overall iconographic repertoire within its chronological and cultural context, and will also assess its presence and distribution in relation to possible local routes.

The Cemetery of Ancient Napata Rediscovered

Sami Elamin (National Corporation for Antiquities and Museums, Sudan)

Pawel Wolf (Jebel Barkal Archaeological Project, University of Michigan)

Jebel Barkal has long been known for its monumental temples and pyramids. A recent reassessment of the site conducted in collaboration with the Jebel Barkal Archaeological Project has reconsidered whether there was an

urban settlement beyond the elite monumental core of the site. As it has become clear that there was a substantial city around the base of Jebel Barkal, the question has arisen: where was the cemetery for the city?

Excavations by George Reisner identified a number of royal tombs to the south of the Jebel as well as a few that were rock-cut but not clearly royal. The Spanish mission working further to the south of the Jebel in the 90s identified an elite Late Napatan tomb with a painted ceiling along with five smaller rock-cut tombs of uncertain date.

This paper presents evidence from magnetometry, recent salvage excavation, and remote sensing to propose that there was in fact a large cemetery covering much of the area south of the Jebel. Christian and Muslim communities have also used the site for their cemeteries showing a long tradition of using Barkal as a burial ground for ordinary people. This paper also discusses implications of this find for understanding the growth and functioning of the city itself.

The Es-Selim R4 2023 Field Season: Investigating Community Resilience Under Climate Instability in the Kerma Period

Elizabeth Minor (California Polytechnic State University)

Sarah Schellinger (Ohio State University)

Christopher Sevara (Newcastle University)

Ahmed El-Ameen Ahmed El-Hassan (Sokhari) (NCAM)

Hannah Herrick (Simon Fraser University)

The Es-Selim R4 (ESR4) 2023 field season successfully evaluated the Kerma Period occupation sequence at a location in the western edge of the settlement site. After assessing the post-pandemic hiatus site preservation status, we concentrated excavation in an area of dense surface finds which had been partially disturbed by well digging. The deep well cut had approximately two metres of exposed stratigraphy that provided a benchmark for our expanded unit. Evidence for occupation in the area ranged from the Middle Kerma to Classic Kerma Periods. There was a concentration of subsistence activities, including butchering and hearths, as well as crafts production. In particular, we found multiple stages of univalve shell and ostrich eggshell bead production, as well as yellow and red ochre pigments. The earliest period of occupation at this location held evidence of butchering and hearths, as well as ritual activities with a clay bovine figurine. Further site management activities included surface collection from a highly concentrated Classic Kerma fineware scatter. Extended aerial documentation was undertaken to facilitate linking ESR4 cultural sequences to the larger-scale Adaptations in Human Landscapes Along the Nile (AHLAN) project (Newcastle University). Community outreach was integrated into our daily activities, and included expanding community input on our research questions. Research activities continue through a combination of museum-based and remote hybrid activities.

Project AHLAN: New Perspectives on Landscape Changes in the Dongola Reach

Christopher Sevara (Newcastle University)

Ahmed El-Hassan (National Corporation for Antiquities and Museums)

Ahmed Mahmoud (University of Leicester)

Elisabeth Niklasson (University of Aberdeen)

Louise Rayne (Newcastle University)

Sam Turner (Newcastle University)

Project AHLAN is a multidisciplinary landscape research project examining long-term interactions between climate change and human adaptation in the Dongola Reach, south of the Es Selim basin. Communities there have reshaped their landscapes in response to cultural, environmental, and political changes. They have faced challenges including aridification, access to water, industrialisation of the landscape and sand dune movement. A central aim of the project is to evaluate the effects of these processes through analysis of historical and current remote sensing data for archaeological prospection, palaeoenvironmental reconstruction, and threat assessment.

Recent agricultural expansion has accelerated the pace of landscape transformation and has intensified pressures on archaeological resources, particularly along the banks of ancient Nile palaeochannels. Center-pivot irrigation systems now modify broad areas of desert pavement, making buried palaeochannels visible as cropmarks across the desert surface. Meanwhile, mobile sand dune fields pose complex and ongoing risks to both ancient sites and modern communities.

In this paper, we present current results from our remote sensing study, focusing on the use of Synthetic Aperture Radar together with historic and modern optical satellite imagery to document and interpret past and present landscape change. We demonstrate how this information allows us to reconstruct palaeoenvironmental features, unravel land-use histories, identify and monitor threats to heritage resources, and assess environmental impacts affecting both archaeological landscapes and contemporary communities.

Holocene Fluvial Dynamics of the Wadi el-Khowi and Implications for Human Occupations. Preliminary Results from the Coring Survey at Kadruka (Upper Nubia, Sudan)

Clara De Clercq (INRAP Hauts-de-France)

Gilles Durrenmath (Université Côte d'Azur, CEPAM)

Sébastien Poudroux (SFDAS, Khartoum; Kheper 3D)

Michel Dubar (Université Côte d'Azur, CNRS, CEPAM)

Hisham Khidir Ahmed Karrar (Khartoum State, Department of Tourism and Antiquities)

Hassimi Sambo (Université Yaoundé I)

Olivier Langlois (Université Côte d'Azur, CNRS, CEPAM)

Field campaigns conducted on the Kadruka concession until 2022 have enabled the characterisation of the relationship between human settlements and the palaeochannels of the ancient course of the Nile, leading to the proposal of an occupation model (Langlois *et al.*, 2023). According to this model, the settlements are concentrated along the edges or within the alluvial fill of the Wadi el-Khowi channels, which cross this territory. In order to further describe and understand the patterns of occupation of the area from the Middle Neolithic to the Pre-Kerma Period, our work focused on identifying and characterising the palaeochannels in a zone where we conducted intensive archaeological surveys. Combined with a Digital Terrain Model established to provide information on the microtopography of the area, a first coring transect was carried out along a cross-sectional line through the known channels. The resulting data were used to generate stratigraphic logs, allowing us to assess the extent, both on the surface and at depth, of palaeochannels whose existence was suspected but whose dimensions were not precisely known, as well as to identify new ones that were invisible on the surface. These observations contribute to the ongoing debate concerning the correlation between paleochannels and surface features, including traces of human activities and "burnt-features" that are regarded as evidence of ancient riparian forests.

Scattered Remains: How to Solve the Puzzle of Pan-Grave Cemetery WT1 (Wadi el-Tawil, Aswan)

Carla Gallorini (University of Birmingham)

Erasmus di Fonso (Sapienza University of Rome)

Julian Bogdani (Sapienza University of Rome)

Nicholas Ray (University of Southampton)

Sara Roma (Archaeological Museum, Civici Musei di Udine)

Serena Nicolini (University of Bologna)

Antonio Curci (University of Bologna)

Maria Carmela Gatto (Polish Academy of Sciences)

In 2022, the Aswan and Kom Ombo Archaeological Project (AKAP) excavated a small Pan-Grave cemetery (WT1) in Wadi el-Tawil, on the west bank of the Nile north of Aswan. WT1 occupies a slightly elevated area of ground situated between two occasional water channels (on its north and south sides) draining from the gebel. Unfortunately, all the tombs had been thoroughly robbed, leaving almost nothing in situ, and all artefacts and human remains were found scattered across the site, making it very difficult to establish even tenuous links to their original place of deposition. To address these challenges, the AKAP and LAD (Laboratory of Digital Archaeology, Sapienza University of Rome) teams collaborated to develop a GIS-supported relational database that includes all relevant information on archaeological features, associated archaeological layers, and materials uncovered during the excavation and survey campaigns at the site. This paper will illustrate how the database assists in analysing distribution patterns and the clustering of artefacts, thereby linking objects, however fragmentary, to specific areas of the cemetery and enhancing our understanding of the site's development.

Technical Function of the Cylindrical Kilns from the “Castle of Gold” at Doukki Gel: A Hypothesis of Faience Production

Georges Verly (SNSF Swiss Postdoctoral Fellowships ARCAN – Université de Genève and Associate Researcher at KU Leuven, Université Sorbonne, IRAMAT)

Séverine Marchi (Co-director Swiss-French-Sudanese mission at Kerma-Doukki Gel; Director of SFDAS – MEAE / CNRS-UAR 3336 [Afrique au sud du Sahara] and UMR 8167 [Orient & Méditerranée])

Frederik W. Rademakers (British Museum, Scientific Research; KU Leuven, Earth and Environmental Sciences)

Charles Bonnet (Co-director Swiss-French-Sudanese mission at Kerma-Doukki Gel – Académie des Inscriptions et Belles-Lettres)

Patrick Degryse (KU Leuven, Earth and Environmental Sciences)

Xavier Droux (Co-director Swiss-French-Sudanese mission at Kerma-Doukki Gel – laboratoire ARCAN Université de Genève)

Abd el-Hay Abd el-Sawy (Co-director Swiss-French-Sudanese mission at Kerma-Doukki Gel – NCAM)

Three cylindrical installations were discovered in the area known as the “Castle of Gold” at the site of Doukki Gel (Twenty-fifth Dynasty – Meroitic period) which display a series of distinctive construction features. These clay-based structures, integrated within an enclosed space adjoining the eastern temple, are characterised by an independent open cylindrical chamber separated from a primary hearth, a forced ventilation system passing through the base, impressions suggesting the presence of a second raised floor, and traces indicating an oxidising firing zone in the upper part of the structure.

These elements rule out a metallurgical function: there is no evidence of vitrification, crucibles, or metal residues, and the layout precludes the existence of a central high-temperature heating zone. By contrast, the structure closely recalls the operation of faience kilns documented at Memphis, in particular the use of a protected indirect firing space comparable to a *saggar* system.

The configuration of the draught system, combined with the presence of a double floor, suggests a setup optimised for controlled thermal cycles, well suited to the firing of glazed objects. The hypotheses proposed on the basis of field observations and analyses, already confronted with the results of previous experimental work, will require validation through an experimental study. Such a study will make it possible to model the thermal behaviour of the structure and to reproduce faience-firing processes.

This research contributes to the identification of original technological practices in a Napatan–Meroitic context and proposes a renewed interpretation of craft interactions between Egypt and Nubia.

Excavating Jebel Barkal amid Conflict: Urban Questions, Collaboration, and Archaeological Practice

Tohamy Abulgasim (McDonald Institute of Archaeological Research, University of Cambridge)

In April 2025, the Jebel Barkal Archaeological Project (JBAP), based at the University of Michigan’s Kelsey Museum of Archaeology, conducted an excavation season at the UNESCO World Heritage Site of Jebel Barkal, Sudan. This presentation examines the practice of archaeological research amid ongoing armed conflict, political instability, and deepening humanitarian crises. Drawing on recent on-the-ground excavation experiences, it reflects on both the scientific objectives of the project and the practical and ethical challenges of working in an active conflict zone.

The 2025 season focused on investigating the relationship between the so-called “Temples Area” and the East Mound, questioning whether the modern road separating these areas represents an arbitrary contemporary division or reflects an earlier, historically meaningful boundary within the ancient landscape. A second research objective was to assess the presence or absence of a city wall in the eastern part of the site, contributing to broader debates concerning urban organization, boundaries, and defensive architecture at Jebel Barkal.

Beyond its research goals, the project placed strong emphasis on collaboration with Sudanese colleagues, continuing long-standing partnerships through shared decision-making, professional support, and educational engagement. Capacity building formed a central component of the season, with on-site training and the distribution of responsibilities aimed at strengthening the skills of local archaeologists and workmen. The presentation highlights how archaeological fieldwork at Jebel Barkal functions not only as a research endeavour, but also as a platform for resilience, knowledge exchange, and heritage stewardship during wartime.

Recent Discoveries from Rescue Excavation during Conflict: Al Gambarat North Berber and Begarawiyah Sites in the River Nile State

Mahmoud Suliman Bashir (General Director of NCAM)

Recently, and since the start of this ongoing war in the country, we have received at the regional antiquities office at Meroe large numbers of reports and information about finding archaeological materials while digging foundations for new houses or extensions of existing houses. This information has significant archaeological research potential, but the identified sites are under great threat due to the construction of new buildings by people who need places to live. Therefore, conducting rescue excavation during the current war in Sudan became one of the highest priorities in the management of antiquities.

At Begarawiyah village we have two examples of the identification of archaeological materials inside houses as a result of building activities, both burials. The first example is the uncovering of a large number of broken pottery vessels during digging for a new well. The second example shows a discovery of about 53 complete pottery vessels found in a tomb cut by a well being dug inside a house in Begarawiyah north. Both disturbed tombs are nearby and indicate the location of an unknown cemetery in an important archaeological area close to Meroe royal city and within the region of Meroe.

At Al-Gambarat, archaeological investigation showcased the importance of the site. The data reflect occupation and cultural continuity across multiple periods in the Fifth Cataract region. The site of Al-Gambarat is considered an addition to a series of recent discoveries that were made in the Berber region during the work of NCAM.

Naga – Analysis of Building Typology

Christian Perzlmeier

Karla Kroeper

The interesting urban layout of Naga, with its 62 buildings, raises many questions regarding its development. In most areas, there was a flurry of building activity during the reigns of Amanitore and Natakamani. Open spaces were a key feature of the planning, particularly around the most important buildings, as can be seen around the temples and storehouses. No chronological pattern of development has yet been identified in these areas.

Only in one sector, in the north-west, are the buildings situated close together, and some overlap between the structures has been observed. Although only a few archaeological investigations have been carried out in this area to date, an attempt is made here to shed more light on the development of this zone.

The Chapel of Osiris-Ptah Neb-anekh: Archaeological Research, Conservation, and Kushite Religious Contexts

Essam Nagy (Director of Osiris-Ptah Neb-anekh Research Project [OPNARP]; Ministry of Tourism and Antiquities [MoTA])

The Chapel of Osiris-Ptah Neb-anekh is located beyond the Tenth Pylon of the Temple of Amun-Re at Karnak, along the sphinx-lined processional avenue leading towards the Mut Temple complex. Constructed during the Twenty-Fifth Dynasty under the reigns of Kings Taharqa and Tanutamun, the chapel represents a significant yet understudied component of the late Kushite religious landscape at Karnak.

This paper presents the results of an Egyptian archaeological mission and ongoing research project dedicated to the comprehensive documentation, conservation, excavation, and study of the Chapel of Osiris-Ptah Neb-anekh and its immediate surroundings. Building upon the initial restoration undertaken in 1921–1922, the mission has implemented a series of systematic conservation, restoration, excavation, and architectural reconstruction activities aimed at stabilising the monument and clarifying its original layout and function within the broader temple complex.

In addition to outlining the recent fieldwork and conservation achievements, this study explores the political and religious significance of the chapel's decorative programme. Particular attention is given to the royal and divine representations preserved on its walls, which shed light on Kushite strategies of legitimacy, theological syncretism, and ritual practice within the Amun-Re cultic sphere. By integrating archaeological data with iconographic and historical analysis, the paper seeks to contribute to a more nuanced understanding of the role of Osirian chapels in the late Third Intermediate and early Late Period sacred topography of Karnak.

New Light on the Christian Nubian Kingdoms: New Evidence of the Kingdom of Alwa in the Butana Region, Central Sudan

Nuha Abdel Hafiz Abdel Aziz (University of Khartoum)

This paper presents preliminary findings from a recent field study conducted in the Abu Deleig area, Khartoum State, which revealed new archaeological evidence potentially linked to the Christian Kingdom of Alwa (6th–16th centuries CE). Although the main centres of Alwa, most notably the site of Soba, are well documented in existing literature, the eastward reach of the kingdom's influence into the Butana region has been a subject rarely addressed in previous studies. Most of these studies refer to the medieval period without details. The archaeological survey documented several sites containing scattered pottery sherds decorated with motifs and displaying decorative and morphological features comparable to those of pottery recovered from Soba. These finds suggest possible settlement activity or transit points connected to the social and political network of the medieval Kingdom of Alwa. These findings offer new insights into the extent of the kingdom's reach and underscore the significance of Butana as a sphere of economic interaction and movement during this period. This data contributes to a reassessment of the Alwa kingdom's geopolitics and underscores the need for further archaeological studies, including limited excavations and pottery analysis, to gain a more precise understanding of the kingdom's eastern boundaries.

3. History of Nubia and Sudan

El-Kurru Royal Cemetery: Addressing Remaining Issues and Attaining New Results

Hanaa M Hafiz (University of Bahri)

Mohamed Fathelrhman (University of Dongola)

Abbas S. Mohamed-Ali (Heritage Studies Center, University of Merowe)

The kingdom of Napata is believed to have emerged from a chiefdom located south of Jebel Barkal in northern Sudan during the first half of the first millennium B.C., evolving over time into a kingdom and later an empire. The burial ground of the royal family was excavated at El-Kurru, just a few kilometres south of Jebel Barkal, by a Boston-Harvard mission (1918–1919). Although the mission focused on specific matters, such as identifying the cradle of Napata, locating royal burials, and collecting materials for museums, it established a tentative chronological order for the royal tombs.

A century has passed since, during which many questions have arisen, demanding attention. The University of Dongola planned a project to survey, test, and re-excavate certain sites. Four fieldwork seasons were conducted (2014–2019) with substantial funding support from the Qatar-Sudan Archaeological Project (QSAP).

This paper demonstrates how the integration of contemporary archaeological methodologies with renewed examination of El-Kurru has yielded crucial insights into the formation of Napatan statehood and cultural identity. By challenging the prevailing Egyptocentric interpretation of the Napatan-Kushite civilization, the findings reveal a more nuanced understanding of indigenous cultural development and the unique conditions that facilitated state formation in this region. The results not only refine the chronological framework established a century ago but also provide substantive evidence for recognising the Napatan kingdom as a distinctive civilization with its own cultural trajectory.

Again, Who Destroyed the Kushite Statues at Jebel Barkal, Dokki Gel and Dangeil?

El-Hassan Ahmed Mohamed

This paper will re-examine the endlessly controversial topic: “who deliberately destroyed the Kushite statues in the Amon Temples at Jebel Barkal, Dokki Gel and the newly discovered ones in Dangeil?” For different reasons, scholars have either accepted or rejected the answers proposed for this question. To date, three main explanations have been offered: 1) that the statues were destroyed as a result of the military campaign launched against Kush by the Egyptian king Psammetichus II in about 594 B.C; 2) that they were destroyed as a result of a civil conflict between opposing factions of the royal family in Kush in the early sixth century B.C; and 3) that they were destroyed as part of a focused attack on Aspetla's monuments in particular, owing to a general discontent with his reign.

This paper looks at these theories individually to try to discover the most logical explanation according to the available historical and archaeological evidence. The answer comes down to what is known of the political reality in the Nile Valley at that time, on the reasons that would have led to the launching of a campaign by Egypt against Kush, how far an invading army might reasonably have reached within the territories of Kush, how we interpret the places named in the documents related to this campaign, and the analysis of the archaeological record at sites where destruction levels have been found.

While taking into account the disagreements among researchers, the ambiguity of some aspects of the narration of its events and the contradiction in the geographical description of the locations of the military battles, as well as exaggerations of the results of the victory achieved by the soldiers of King Psammetichus II (notably their killing of the Kushite king), this paper highlights the differing opinions of scholars between the occurrence of this campaign and its results. The most important being the transfer of the Kushite capital south to Meroe, and the extent to which these results are correct.

Ashurbanipal's Campaigns against Egypt in Word and Image

Danel Kahn

The reliefs in Room M of Ashurbanipal's Northern Palace at Nineveh provide a rare visual narrative of the Assyrian conquest of Egypt during the 25th Dynasty. Carved between 646–643 BCE, these reliefs depict episodes from Ashurbanipal's campaigns against Egypt in 667 and 664/3 BCE, targeting the Kushite pharaohs Taharqa and Tanutamun. The lower register of slabs M21L–M15L illustrates the siege and capture of Egyptian cities, showing Assyrian forces attacking fortifications along the Nile, employing assault ladders and siege ramps without battering rams. The reliefs depict distinctive Kushite defenders with African features and single feathers, suggesting battles in southern Egypt. Notable scenes include the conquest of a large Delta city (possibly Memphis) and a smaller fortress with pylon-like fortifications (possibly Medinet Habu in Western Thebes). The reliefs also show deportation of civilians and warriors, with auxiliary troops from vassal states participating alongside Assyrian forces. These visual narratives complement the textual accounts in Ashurbanipal's royal inscriptions, though they present a generalised representation of the Egyptian campaigns.

Glimpses of a Lost Site – Qurta and its Temple(s)

Josefine Kuckertz (Staatliche Museen zu Berlin)

The now submerged site of Qurta in Lower Nubia, once lying c. 5 km south of Dakka, was inhabited from Predynastic times up to its complete flooding by the mid-1970s. Paintings, sketches and plans by travellers and scholars in the 19th century show what the fragmentary remains of the temple looked like at the time. The stone structure diminished over time, with the blocks most likely reused elsewhere and the area was gradually submerged due to the First Aswan dam and its subsequent heightenings in the beginning of the 20th century, followed by the completion of the High Dam in 1971.

Blocks bearing the cartouche of Thutmose III used in the construction of the sanctuary, presumably built during the reign of Augustus, have led to the assumption that the location previously held a temple of the 18th Dynasty king. However, the blocks, instead, may have come from another temple of Thutmose III, perhaps at Quban on the opposite east bank of the Nile. Demotic graffiti and a Meroitic text from the 1st and the 4th century CE provide information on agreements and connections between the people of Qurta and the temples at Dendur, Dakka and Philae, and priestly titles refer to the priesthood of Qurta. In the late Meroitic and early post-Meroitic of the 5th century CE, Qurta must have been an important place and, alongside Maharraqa/Hiera Sycaminos, part of the border zone between the (former) Roman *Dodekaschoinos* to the north and Meroitic Lower Nubia to the south. Its importance is revealed also in the Middle Ages when an episcopal see existed at Qurta.

Commemorative Notes of the Cathedral Bishops of Faras

Lech Kościelak

The so-called List of Nubian Bishops recorded in the cathedral in Faras is a valuable source for learning about the religious history of the episcopal city. For a historian, the important questions are who, what, and when. We have names, years of bishopric service, and dates of death. It is worth asking further questions related to prosopography.

A collective analysis of the list of bishops from Faras will allow us to discover the length of their episcopal careers and the related lifespans of bishops, the canon of names (patterns of adopted names), and to build a "collective biography" for the Bishops' group. This analysis will also allow us to understand the network of relations of the Nubian episcopate in its social context.

4. Text and Languages in Nubia and Sudan

Egyptian Texts from the so-called Isis Temple at Wad Ben Naga (WBN 300)

Pavel Onderka (National Museum of the Czech Republic)

Excavations of the so-called Isis Temple at Wad Ben Naga (WBN 300), constructed under the Meroitic rulers – King Natakamani and Queen Amanitore – have yielded an exceptional corpus of inscriptions in the ancient Egyptian language and script, surpassed only by that from the Lion Temple at Musawwarat es-Sufra. Previous studies have demonstrated that the theologians responsible for these texts drew extensively on the temple libraries of the Great Temple of Isis at Wad Ben Naga (and possibly other temples in Upper Egypt and Lower Nubia). More recently, direct parallels have been identified between the royal funerary chapels in the royal cemetery of Meroe and the Isis Temple at Wad Ben Naga (WBN 300), suggesting a possible funerary function for the latter.

This paper will elaborate on the architectural, functional, and textual similarities between the funerary chapels and the Wad Ben Naga temple (and their respective decorations), with particular emphasis on the interpretation of Egyptian inscriptions from the funerary and mortuary shrines built by Natakamani, Amanitore and their direct predecessors and successors.

Nubian Kinship Terms and the Kinship System

Angelika Jakobi

The Nubian language family comprises a western branch, composed of Midob, Birgid, and Kordofan Nubian, and an eastern branch comprising the Nubian languages of the Nile, in particular Old Nubian, Nobiin, Andaandi, and Mattokki. In some of these languages, kinship terms are not well documented. This presentation focuses on kinship terms that can be reconstructed at the level of Proto-Nubian, Proto-Western Nubian, and Proto-Eastern Nubian. It also examines the social system underlying the reconstructed lexical units. One question to be answered is whether the Nubian languages possess lexical units that reflect the Sudanese kinship system.

Aspects of Discourse Grammar in Andaandi Nubian

Marcus Jaeger (Köln University) & Kamal Hussein (Independent local researcher)

Andaandi/Dongolawi Nubians older than 50 fondly remember the time when oral stories were told, especially in the evenings and when the moon was shining. While the grammar of Andaandi sentences and clauses has been frequently analysed (e.g. Armbruster 1965), the discourse grammar giving these oral stories their special blend has remained mainly undocumented. Therefore, in this paper we want to look at some aspects of Andaandi grammar at the discourse level:

- idiomatic expressions at the beginning and the end of stories
- discourse markers and lexemes structuring a discourse
- connecting of sentences (not clauses) so that a text is recognised as a unit
- introducing new actors and new topics
- foregrounding and backgrounding through indirect and direct speech
- usage of personal pronouns, especially the 3rd singular pronoun

Andaandi oral stories used in this presentation are stories collected by Massenbach (1962), by Kamal Hussein (unpublished) and one further unpublished story collected by Andaandi speaker Mohamed Hasan. The results may also be an incentive to do similar studies of discourse grammar in Old Nubian.

Arabic Documents from Post-Medieval Dongola: Function, Material, and Preservation

Tomasz Barański (Polish Centre of Mediterranean Archaeology, University of Warsaw)

In this presentation, I will discuss the results of my research on Arabic documents – including texts written on paper and on ostraca – comprising a total of 83 items dated to the post-medieval period, a timeframe in the history of Nubia situated between the disintegration of the Kingdom of Makuria in the fourteenth century and the Turco-Egyptian conquest of Sudan in 1820–1821. The documents were discovered over a period of sixty years during excavations conducted by the Polish Centre of Mediterranean Archaeology, University of Warsaw, at the archaeological site of Old Dongola, particularly within the fortified citadel. Among these finds are well-preserved private letters, administrative and legal documents, as well as fragments of magical texts commonly referred to as amulets. The items have survived in various locations and conditions across the site. This assemblage represents a unique research opportunity, as the documents are known together with their archaeological context rather than having been recovered from museum collections or archival holdings.

This talk addresses general questions concerning the identity of the individuals who produced these documentary sources and those who received them and later discarded them. I examine three aspects of each item using a quantitative approach. The first is textual and relates to the functional type of the document (e.g., letter, legal text, amulet). The remaining two are non-textual features: the type of material (e.g., paper, pottery sherd) and the state of preservation (e.g., complete, fragmentary). Alongside the spatial visualisation of the results, this analysis provides deeper insight into document production practices, the identities of authors and recipients, and patterns of preservation – areas that have received limited scholarly attention.

Pleading for a Revision of the Kenzi-Nubian Gospel, Translated by Samuel Ali Hussein

Gottfried Spangenberg

The 1912-printed edition of the four Kenzi-Nubian Gospels was written in the Latin script at a time when the Nubian people had not used their own alphabet (following the Nubian script) for centuries. There were various obstacles to revive an, so far, only spoken dialect, and to transform it into a written language. Among others, these included obstacles caused by the First World War, the rejection of the apostate Samuel Ali Hussein (SAH), missing readers, missing reading courses, and local idiosyncrasies.

However, after more than 100 years, it seems that a new era has started: there is a new Nubian generation who at least acknowledges the linguistic achievements of SAH. Although, there are also linguistic problems within the Kenzi-Gospels (too many Arabic words, changed grammar, Christian theological terms not thoroughly explained, or too much assimilated Islamic wording). A revision of the four Gospels and other translated – but yet not printed – parts of the New Testament has become necessary. Nubian women or men, who know their mother language well, are invited to find the proper balance between the need for a modern and understandable text – even with Arabic loan-words – and attempts to purify the Nubian text to the extent that nobody understands it anymore.

Daju Word Borrowing from Nubian: A Case Study on Daju Dialects in the Nuba Mountains

Suleiman Ibrahim Omar (Somali National University)

This paper explores the phenomenon of lexical borrowing from the Nubian language into the Daju dialects spoken in the Nuba Mountains of Sudan. Through fieldwork and comparative linguistic analysis, the study aims to understand the nature of this linguistic interaction, its causes, types, and its impact on the linguistic and social structure of the Daju community. The findings indicate that historical and cultural interaction between the two groups has led to the emergence of a hybrid linguistic system that reflects the dynamics of coexistence and cultural exchange in the region.

The Current Effects of Learning and Using the Mahas Nubian Language in Sudan

Nemat Abdalrahman

The ongoing war in Sudan has displaced many communities, prompting people from the Mahas area of Northern Sudan to return [from Khartoum] to their ancestral homelands along the Nile. This paper explores whether this return migration has affected the learning and use of the Mahas Nubian language, especially among children. Through community interviews and observations, the study investigates how displacement, return, and identity reconstruction interact to shape language practices and attitudes. Rather than assuming a positive or negative impact, the research asks whether returning to ancestral lands has created meaningful opportunities for

intergenerational transmission and revitalization of the Nubian language. The paper contributes to broader discussions on language maintenance, migration, and cultural resilience in post-conflict Sudan.

5. Museums & Collections

Whose Sealings? A Forensic Perspective on Administrative Sealing at the Egyptian Middle Kingdom Forts in Sudan

Siobhan Shinn (Barca Archaeology)

The research presented in this paper begins to address the lack of data and analyses on demographics in archaeological sealing studies. Specifically, it applies palaeodermatoglyphics (i.e. ancient fingerprint analysis) to retrieve the mean ridge density of fingerprints from Middle Kingdom clay sealings excavated at Shalfak fortress in Sudan. The mean ridge density is used to calculate the ancient sealers' biological sexes. Such knowledge is then used to discuss the people involved in administrative sealing at Shalfak and other Middle Kingdom forts, demographic patterns among sealers, and more broadly, demonstrate the potential of palaeodermatoglyphics for archaeological sealing studies.

The clay sealings examined in my study and presented in this paper are currently housed in storage in the department of Ancient Egyptian, Nubian, and Near Eastern Art at the Museum of Fine Arts, Boston. I am greatly indebted to Dr Denise Doxey and Dr Larry Berman for giving me the opportunity to analyse them and present the results of my analysis at this conference.

C-Group Archaeological Materials in the National Archaeological Museum of Madrid Sixty-Five years later: Challenges and Prospects

Salomé Zurinaga Fernández Toribio (Centre for Social Sciences and Humanities. Spanish National Research Council [CCHS-CSIC]. Madrid. Department of Humanities: History, Geography and Art. Carlos III University of Madrid [UC3M])

More than six decades have passed since their excavation, yet the question remains: what has become of the assemblage of materials from the C- Group cemeteries of Argin in Sudan? While the easy answer is that the materials remain unpublished, the truth is that any work with the collection would face considerable methodological challenges and require adequate funding and rigorous research protocols.

The available documentation presents significant deficiencies: field diaries are absent, whilst preliminary reports offer fragmentary and, at sometimes, contradictory information. Despite these limitations, we consider that a systematic and exhaustive analysis of the material culture can yield substantial information.

The absence of chronological consensus between preliminary reports and data in museum records, together with initial terminological confusion on the part of the Spanish team, raises fundamental questions regarding their reliability and scientific value, thereby necessitating critical revision. Moreover, the lack of contextual data – precise location, site plans, topography, stratigraphy, tomb typologies and detailed descriptions – limits the available documentation to sketches, record cards, inventories, photographs and drawings of the material from Argin.

The primary objective of the suggested research project is to conduct a comprehensive study of the funerary assemblages – such as ceramics, necklace beads – in order to reconstruct the content and context of the tombs. Additionally, this analysis will enable comparison with grave goods from other sites in the Middle Nile Valley.

Next steps would incorporate archaeometric investigation: petrographic analysis of ceramic fabrics and thin sections for mineralogical characterisation, determination of firing processes and provenance of raw material, analysis of seeds impressions documented on the internal surfaces of bowls, and characterisation of malacological, bone and ivory remains, amongst others, as well as the study of ornamental elements (necklaces, bracelets), stylistic study of decorative patterns on ceramic wares; typological study, and epigraphic analysis of graffiti on amphorae vessels.

New Light on the so-called ‘Western Palace’ at Meroitic Faras (Lower Nubia)

Henry Cosmo Bishop-Wright (British Museum)

In the Meroitic period, the site of Faras in Lower Nubia is best known for the enormous Meroitic cemetery that comprises over 2200 graves. Excavated by Francis Llewellyn Griffith between 1910 and 1912, this cemetery produced a wealth of finds that continue to attract research. Lesser known, but also of the Meroitic period, is an isolated structure 1km west of the cemetery known as the ‘Western Palace’ or ‘Meroitic House’.

This ‘Palace’ was briefly described by Griffith in a 1926 preliminary report but never reached full publication. The field records were thought to have been lost and the dispersal of its objects amongst various museum collections was not recorded. Owing to these constraints, retrospective study of this enigmatic structure has been problematic.

On the 100-year anniversary of Griffith’s preliminary report, this paper offers a fresh assessment of the Western Palace based on objects in the collections of the British Museum (London), Ashmolean Museum (Oxford), Ägyptisches Museum (Berlin) and Sudan National Museum (Khartoum). It also utilises fieldnotes describing Griffith’s original excavation of the structure that were recently rediscovered by the author in the archive of the Oxford Griffith Institute.

Combining the study of these ‘lost’ field notes and objects, this paper reassesses the date and function of the Western Palace. It also considers how it relates to other palatial structures in Meroitic Kush and draws upon the author’s wider work to contribute a broader understanding of Faras in the Meroitic period.

New Insights into Selected Meroitic Pottery from the Second Archaeological Survey of Nubia (1929–1934)

Aya Abdel-Rahman (Cairo University)

Andrea Manzo (Department of Asian, African, and Mediterranean Studies, University of Naples “L’Orientale”)

The Second Archaeological Survey of Nubia (1929–1934), directed by Walter B. Emery, represents a significant phase in the documentation of Nubian material culture during the large-scale rescue operations associated with the construction and heightening of the Aswan Dam. Although the survey produced extensive ceramic assemblages, including a substantial body of Meroitic pottery, much of this material has remained only selectively published and interpreted within the methodological limitations of early twentieth-century archaeology.

This presentation offers new insights into selected Meroitic pottery from the Second Archaeological Survey of Nubia through a reassessment of archival records and understudied collections. Moving beyond traditional typological approaches, the study explores technological and functional aspects of ceramic production and use, with particular emphasis on the economic, religious, political, and environmental dimensions of decorative practices. The analysis considers how ceramic motifs may reflect systems of production and exchange, ritual beliefs, expressions of power and identity, and visual connections with the natural environment of the Meroitic civilisation. By situating Emery’s material within a broader interpretive framework, this contribution highlights the enduring value of early survey collections and their potential to enhance our understanding of regional traditions, social dynamics, and the relationship between material culture, landscape, and society in Nubia.

Where are they now? John Garstang’s Meroe Excavations and the Fate of the Artefacts

Michael Zach (University of Vienna)

From 1909 to 1914, Liverpool University based John Garstang conducted excavations in the royal city of Meroe. However, he concentrated his work on temples and the so-called royal residence, while the vast area of the city as well as the adjacent cemetery were only selectively investigated.

According to the Antiquities Ordinance issued in 1905, partition of archaeological finds was prescribed, leaving only a minor part in Sudan, while the bulk of the objects unearthed by Garstang was taken to Britain. Since funders were not only from the United Kingdom but also other European countries, the objects were distributed to various institutions as well as private collectors or even sold at auction.

As a result of the partial destruction of Liverpool Museum during World War II, only one division list is preserved in the SAOS archives, which relates to the second excavation season. Given the rather weak documentation of Garstang’s Meroe excavations (containing mostly illustrations of “attractive” artefacts), an important resource for locating objects of minor art or pottery are the images taken during the excavations, mainly produced by the Germano-Russian photographer Horst Schliephack. They form an invaluable resource for identifying and documenting the whereabouts of Sudan’s dispersed cultural heritage.

Meroe in the Collections of Louvre Museum: History and Understanding of Find Context

Aminata Sackho-Autissier (Département des Antiquités égyptiennes, musée du Louvre)

The Department of Egyptian Antiquities of the Louvre Museum houses a collection from Garstang's excavations at Meroe (1909–1914). This group of artefacts was acquired between 1909 and 1915 through gifts and purchases. The majority is composed of fine ware ceramics and faience objects, as well as two sandstone offering tables. Thanks to the available documentation (archives, field notes, photographs from Garstang's excavations), combined with the study of the collection housed in the Louvre Museum, it is possible to reconstruct the precise find context for the majority of these artefacts.

Hidden Lives – Looking at Medieval Nubia through the British Museum Collection

Loretta Kilroe (The British Museum)

The British Museum has a unique collection of provenanced daily life material from the medieval period in Nubia, particularly from the sites of Qasr Ibrim, Faras, and Kulubnarti. Such objects, which unusually include organic materials such as wood and leather that rarely survive in the archaeological context, can give a remarkable insight into the ordinary habits of non-elite communities, who are rarely a focus in archaeological study.

This lecture will present an outline of a new project aiming to document and research this material, towards the aim of exploring typically more 'invisible' aspects of life in medieval Nubia. It will discuss the potential this material holds to reveal information about diverse practices such as cooking and manufacturing, as well as choices around the reuse and disposal of objects.

The increased study of such museum collections is particularly important in light of the current crisis in Sudan, coupled with the historic loss of sites due to urban expansion, gold mining, and the construction of dams. This project will emphasise the need for increased studies of such museum collections, that can successfully combine with new fieldwork projects to enhance our understanding of the ancient world.

In Full Colour: Current Works on the Ellesiya Rock-Cut Chapel in Turin

Johannes Auenmüller (Museo Egizio Torino)

The rock-cut chapel of Ellesiya – dismantled and relocated to Italy as part of the UNESCO Nubian Salvage Campaign – is one of the major exhibits of the Museo Egizio in Turin. For the museum's bicentenary in November 2024, the chapel received a new presentation featuring, among other things, a video projection on its façade that recounts its history and significance.

Prior to this new installation, a comprehensive restoration and cleaning campaign was undertaken, including multispectral imaging of the monument's surfaces. This imaging campaign detected previously unknown or uncertain traces of plaster and pigment on the interior relief decoration, providing evidence of the chapel's original polychromy.

These findings triggered a public-oriented digital project to recreate the original colours of the chapel's reliefs. The digital recolouring, which will be presented in the paper, adds a new layer to how this Egyptian monument from ancient Nubia can be presented and experienced, both within the museum and beyond – through virtual tours or other digital means.

Bestiary of Ancient Nubia

Marc Mailliot (ISAC Museum; Sorbonne University; Institute for the Study of Ancient Cultures, The University of Chicago)

The ISAC Museum is organising an exhibition in the spring of 2026 (16th April – 17th August) focused on a Bestiary of Ancient Nubia. In parallel, we will publish a synthesis on animals in ancient Nubia, from the A-group to the end of the Meroitic period (3800 BCE – 340 CE). The show will be tailored as an exploration of the animal world of Nubia. While studies of Egyptian animals have received prominent attention, this will be the first-ever exhibition and publication focused on the Nubian perspective. Ancient Nubia indeed lived in symbiosis with animals. Throughout West Asia and North Africa, Kushites were renowned as suppliers of animals or animal by-products (skins, ivory, etc.). They were also represented as such (whether in the context of tributes or diplomatic

gifts). Wild or fantastic, domesticated, hunted or feared, we find animals depicted in temples and tombs, on the walls of palaces, on ceramics and in the niches of houses. Companions of daily life, sources of artistic and religious inspiration, subjects of trade in the ancient world, familiar even in the afterlife, animals have their place at the top of society and power.

Featuring 60+ ISAC-excavated artefacts, along with loans from US and Canadian museums, the exhibition will explore the role animals played in Nubian art: depicting everyday life (food/commerce); symbolising danger; illustrating religious themes; and serving as decorative motifs in a changing climate. In parallel with the special exhibition, the catalogue will be an original take on the history of the Nubian civilisation with unparalleled information and a keen sense of storytelling. The illustrations selected for the essays will not be limited to the objects displayed in the exhibition, so as to offer a comprehensive anthology of Nubian animal art and to make this catalogue the perfect companion to the museum special exhibition. A world first, the *Bestiary of Ancient Nubia* will become a reference book for scholars and amateurs alike on Nubian civilisation.

From the Original Site to the Exhibition Hall: Recontextualisation of Nubian Temples in Western Museums *Asmaa El-Sayegh (Cairo University)*

The relocation of Nubian temples during the UNESCO Nubian Salvage Campaign (1960–1980) is considered one of the most significant heritage preservation efforts of the twentieth century. While the campaign successfully saved these monuments from flooding caused by the High Dam, it displaced them from the environmental, spatial, and cultural contexts that gave them meaning. Today, many of these temples are displayed in Western museums, where new curatorial approaches and interpretive frameworks shape how audiences understand them.

This study explores the recontextualisation of Nubian temples by comparing their original site-specific contexts with their current museum presentations. It examines display strategies such as spatial layout, lighting, reconstruction methods, interpretive texts, and the use of digital tools. The research highlights how these strategies affect visitors' perception of authenticity, symbolic meaning, and narrative coherence, particularly in relation to the temples' original connection to the Nile, ritual pathways, and architectural orientation.

The paper also discusses the potential of immersive technologies – Virtual Reality (VR), Augmented Reality (AR), and projection mapping – to enhance the museum experience. These tools can help recreate aspects of the original environment, architectural details, and ritual experiences that are otherwise difficult to convey, allowing visitors to engage with the temples in a more contextual and meaningful way.

This research contributes to discussions on relocated heritage, museum ethics, and interpretation. It provides a practical framework for presenting Nubian temples in Western museums in a way that is both accessible and academically sound, while maintaining respect for their historical and cultural significance.

Classifying Scarab-Shaped Seal Amulets from the Napatan Period in a New Seal Database

Vanessa Boschloos (Johannes Gutenberg University Mainz)

Alexander Ilin-Tomich (Heidelberg University)

Scarab-shaped seal amulets are well represented at Napatan archaeological sites. Previous studies of this material, including by Bertrand Jaeger, Bruce Beyer Williams and Angelika Lohwasser, focus on scarab bases and their inscriptions and designs. Scarabs associated with the 25th Dynasty were divided into two types, “Kushite fine style” and “Kushite bold style” (terms by Williams; other authors adopt different terms for same groups) based on the style and execution technique of inscriptions and decorations on the seal face. Sculptural features have so far attracted little attention; yet they can be no less symbolically laden than designs. Among 1st Millennium BCE scarabs from Sanam and other sites in Sudan, one notices deliberate references to Bronze Age scarabs expressed through sculptural features.

A classification of sculptural features and designs under development by the project “Past and present in scarab seal-amulets in ancient Egypt and Sudan in the Third Intermediate Period and beyond” provides standards for the description and analysis of sculptural features of Napatan scarabs (and contemporary Egyptian scarabs) which match the ones used for scarabs from other periods and regions. Whereas previous scarab classifications, such as the one Olga Tufnell and William Ward designed for early 2nd millennium BCE scarabs, use composite types for heads, backs, and profiles, the new approach is atomistic and comprises hierarchically organised vocabularies describing single elements. Cryptic codes are replaced by terms in a controlled natural language, and, for example,

a single profile type is replaced by a dozen parameters, each associated with its own vocabulary. The vocabularies, which follow the Simple Knowledge Organisation System (SKOS) – an established standard in Linked Open Data – will ultimately be made multilingual and will be provided alongside detailed explanations and examples. This approach remains compatible with earlier classifications, while aiming to avoid their ambiguity and improve comprehensibility – a key reason for their rejection.

Italy-Sudan round trip: Napatan and Meroitic material culture from Jebel Barkal and Meroe to Italian museums

Francesca Iannarilli (Ca' Foscari University of Venice)

Some Italian museum collections hold artefacts from Sudan that have never been properly researched or brought to public attention. Some of these objects come from well-documented sites, such as Jebel Barkal or Meroe; others, however, lack a clear provenance, having been donated by private collectors.

For this reason, a few years ago I undertook the study of some of these materials, leading to the creation of the MERIT Project: MERoe in Italy. A Catalogue of Meroitic Materials from Italian Museums, which is currently ongoing. The project aims to publish a comprehensive, open-access catalogue of Meroitic finds in Italian museums and collections, exploring their provenance as well as the material, cultural, and ideological contexts of their production. The artefacts under study are housed in the Egyptian Museum of Turin, the Archaeological Museum of Florence, the Museum of the Near East, Egypt and the Mediterranean of Sapienza University of Rome, and the Civic Archaeological Museum of Bologna.

Although the research was intended to focus on Meroitic material culture, older artefacts have also come to light, equally interesting and deserving of attention. The project further seeks to clarify the historical and cultural dynamics that led to the dispersal of these objects into the Western, and particularly Italian, museum landscape.

Disseminating this knowledge is crucial, now more than ever, as Sudanese heritage has been severely threatened by the ongoing conflict since 2023. Scientific research and the open sharing of results are essential to safeguarding Sudan's history, its cultural heritage, and the broader narrative of how these objects have been dispersed worldwide.

Sudan Living Cultures at the Petrie Museum

Anna Garnett (Petrie Museum of Egyptian and Sudanese Archaeology, UCL)

The Petrie Museum of Egyptian and Sudanese Archaeology, University College London, cares for an internationally important collection of around 4,000 Sudanese objects, each of which hold stories about the history of ancient and modern Sudan. Many of these objects are linked with the work of archaeologist and colonial administrator Anthony Arkell (1898–1980) and his excavations at the important Prehistoric sites in Shaheinab and in the grounds of Khartoum Hospital in the 1940s. Arkell went on to become Honorary Curator of the Petrie Museum collection from 1948–1963, during which time he integrated the display and teaching of ancient Sudan into his practice at UCL.

Sudan Living Cultures is a multi-phase programme spotlighting and offering new creative interpretations of the Petrie Museum's Sudanese collection, building hopeful futures through Sudan's material past. This is a collaborative knowledge-exchange project between the Petrie Museum and artists, academics, independent researchers and members of the London Sudanese community. Drawing upon existing collections data, this project seeks to enhance our understanding of Sudanese material heritage by embracing indigenous ways to learn about and to interpret the past. This paper will explore key aspects of the history of the Sudan collection at the Petrie Museum and highlight recent updates from the ongoing Sudan Living Cultures project.

Archaeological Looting and Digital Response: A First Assessment of the Sudan Virtual Museum Initiative

Faiza Drici (Head of the Sudan Virtual Museum Project; Section Française de la Direction des Antiquités du Soudan [SFDAS])

In December 2025 in Cairo, the National Corporation for Antiquities and Museums (NCAM) and the Section Française de la Direction des Antiquités du Soudan (SFDAS) officially presented the Sudan Virtual Museum. This initiative was conceptualised following the outbreak of the war in 2023, and its development accelerated in the wake of the official announcement of looting of the National Museum in April 2024.

Since 2019, NCAM had been engaged in efforts to rehabilitate the physical museum; however, these significant undertakings were halted due to the outbreak of war. Consequently, facilitating access to these invaluable collections has become critically imperative. In response, NCAM and SFDAS are collaborating on an unprecedented initiative designed to internationally promote Sudanese collections: the establishment of this Virtual Museum.

This digital project will provide, for the first time, online access to one of the most significant African museum collections, alongside access to crucial archival documentation. This platform is also poised to become an essential tool for competent authorities in their efforts to fight the illicit trafficking of cultural property. National treasures are presently the subject of growing concern within the international scientific community, which fears their potential deterioration or illicit sale.

The initial phase successfully brought the museum's first galleries – from Prehistory to the Kingdom of Napata – online in early 2026. The second phase, scheduled for launch in mid-2026, will feature the Meroitic and Medieval galleries, as well as a temporary exhibition highlighting French-Sudanese archaeological excavations conducted in the twenty-first century. This presentation will showcase the initial results of the project and underscore the impact of the archaeological community's contributions to its ongoing enrichment.

The National Ethnographic Museum in Khartoum: The Assassination of Sudan's Folk Memory

Huyam Khalid Madani (National Corporation for Antiquities and Museums [NCAM]; Cardinal Stefan Wyszyński University in Warsaw [UKSW])

The National Ethnographic Museum stands as a fundamental pillar of Sudan's cultural landscape, acting as the custodian of the diverse society's memory by documenting the tangible and intangible heritage of its various components. With the outbreak of conflict in April 2023, this institution found itself in the crosshairs of the war, suffering direct and indirect damage to both its infrastructure and collections.

This presentation assesses the catastrophic impact of the war, moving beyond physical destruction to analyse the escalating risks of looting and the paralysis of research activities. More profoundly, it addresses the "socio-cultural erasure" resulting from this damage, asserting that the loss of these collections represents, in essence, an assassination of the collective national identity of Sudan.

The study concludes with practical recommendations to enhance the resilience of cultural institutions, emphasising the urgent need to develop emergency response mechanisms. It underscores that protecting these museums is not merely about preserving artefacts, but serves as a cornerstone for ensuring the continuity and survival of the nation's memory.

The Impact of War on the Sudan National Ethnographic Museum

Omima Abdelrahman Mohammed Elsnosi (National Corporation for Antiquities and Museums-Sudan; Member of the Committee for Inventory, Damage and Risk Assessment, and the Securing of Museums and Archaeological Sites in Khartoum State)

Sudan is home to one of the world's richest tapestries of ethnic and cultural diversity, comprising more than 500 distinct groups whose traditions collectively shape the country's social identity. Established in 1956, the Sudan National Ethnographic Museum in Khartoum was founded to document, preserve, and present this diversity through its collection of traditional clothing, musical instruments, ritual objects, local belief systems, marriage and birth customs, healing practices, dance traditions, and traditional weaponry. As a central institution for safeguarding both material culture and intangible heritage, the museum plays a crucial role in representing Sudan's living cultural history before the recession of the Southern Sudan.

The outbreak of conflict in 2023 placed the museum at the epicentre of active fighting. This resulted in severe infrastructural damage due to artillery shelling and strikes, widespread looting and the loss of collection items and equipment. The museum's vulnerability has exposed broader threats facing cultural institutions across Khartoum State, underscoring the fragility of heritage preservation during armed conflict.

This paper assesses the extent and nature of the damage inflicted on the museum's building and collections, drawing on field observations, photographic documentation, and risk-assessment methodologies. It also highlights the emergency efforts undertaken by the committee for Risk and Damage Assessment and the protection of Museums and Archaeological Sites in Khartoum State – formed by the Ministry of Culture and Information and National Corporation for Antiquities and Museums to document losses, secure the remaining collections, and mitigate further deterioration under highly constrained conditions. Finally, the paper proposes an urgent phased

recovery plan detailing the essential resources and equipment to stabilise the museum, restore core preservation operations, and support its long-term rehabilitation in the post-conflict period. A rapid yet structured recovery plan for the Sudan National Ethnographic Museum should prioritise stabilising the damaged building, securing, inventorying and relocating at risk collections, and restoring essential environmental controls to prevent further deterioration. Immediate actions include conducting a full condition assessment, documenting all losses, and implementing emergency conservation for vulnerable objects. Finally, the recovery process should aim, not only to repair war-related damage, but to modernise the museum's preservation capacities and ensure long-term resilience against future crises.

6. Archives and the History of Archaeology in Nubia and Sudan

Reconstructing Nubian Past through Archival Excavation: Preliminary Results from a Research Project on Monneret de Villard's Archive at INASA

Marta Addessi (Sapienza University of Rome)

Annalaura De Santis (Independent Researcher)

Elisabetta Falduto (Independent Researcher)

Ugo Monneret de Villard (1881–1954) was one of the most important Italian archaeologists of the 20th century. Trained as an engineer, he became influential in the fields of Christian and Islamic art history and archaeology, devoting much of his career to the investigation of Africa's medieval past. Between the 1920s and the mid-1930s, he was appointed by the Reale Istituto di Archeologia e Storia dell'Arte—now Istituto Nazionale di Archeologia e Storia dell'Arte (INASA)—to survey archaeological sites and monuments in Egypt, Ethiopia, and Nubia. As a result of these investigations, he collected a large amount of data and produced extensive photographic documentation. Among Monneret's most notable achievements are his fundamental studies on medieval Nubia, including his monumental four-volume work *La Nubia medioevale* (1935).

After Monneret's death, his archive (including both photographs and documents) was donated by his siblings to INASA, where it is still preserved today. In 2024, a joint research project involving INASA, Sapienza University and the University of Warsaw was launched with the aim of studying, digitising and documenting this archive. Conceived as a form of “archival excavation,” the project is approached from multiple disciplinary perspectives (archival, historical, archaeological, philological), highlighting the exceptional significance of this collection. Acting as a guardian of memory, Monneret's archive proves to be essential for the preservation of contexts that have since been lost, while also exemplifying the crucial role of archives in the present, especially in regions where archaeological research is now severely at risk.

This paper presents the results of this ongoing project. In addition to outlining the structure of the database resulting from the archival investigation, the presentation then focuses on an analysis of Monneret's archive as a source for reconstructing both a changed and changing landscape, as well as the history of archaeological research during the Fascist period.

From Fieldwork to Archives: The Archaeological Legacy of Lille University in Sudan facing Contemporary Challenges

Faiza Drici (Head of the Sudan Virtual Museum Project Section Française de la Direction des Antiquités du Soudan [SFDAS])

Sylvie Donnat (Université de Lille)

The “Sudan” archives of the *IPEL – Institut de Papyrologie et d'Égyptologie de Lille* – constitute a primary documentary collection for the study of Nubia and ancient Sudan. This corpus reflects the long-standing commitment of the University of Lille to Sudanese archaeological research since the 1960s. The preserved documentation is hybrid in nature, comprising administrative, scientific, and iconographic records. It includes manuscript field notebooks, material inventories, original topographical surveys, and a photographic library containing thousands of images (prints, negatives, and slides).

The archival collection is organised into two distinct sets. The first brings together data from fieldwork conducted by its prominent members – most notably Jean Vercoutter, Francis Geus, and Brigitte Gratien – whose work has left a lasting impact on the study of the sites of Sai, Mirgissa, and Aksha. The second set consists of the Patrice Lenoble collection, bequeathed by his legal successors, which documents the excavations carried out at the site of El-Hobagi.

These documents represent an indispensable source for the re-evaluation of field data in light of contemporary methodologies. Furthermore, they provide essential documentation of archaeological contexts that are now altered or inaccessible, especially in the wake of the armed conflict in Sudan since 2023. Currently, the *IPEL* archives are undergoing systematic digitization and scientific cataloguing under the auspices of the *HARTIS* research unit – *Histoire, Histoire de l'art, Archéologie, Textes, Images, Sociétés* – at the University of Lille. This project aims to ensure the long-term preservation of these materials, contribute actively to the safeguarding of Sudanese heritage and Middle Nile cultures, and facilitate access for the international community.

Nubian & Sudanese Archaeological Heritage within Egypt's National Archives (1805–1952)

Hend Mohamed Abdel Rahman (Tourist Guidance Department, Faculty of Tourism & Hotels Management, Minia University)

Nubia was an important destination frequently mentioned in the Firmans (official decrees) of Egypt's rulers, which granted foreign visitors permission to travel, document, and sketch its monuments, and in some cases, to collect antiquities. These decrees can be traced in the Egyptian National Archives, the most significant repository for documents related to the history of modern Egypt.

This study examines official decrees issued by rulers and administrative bodies concerning Nubian antiquities, with the aim of tracing the evolution of state perspectives, priorities, and levels of interest across different reigns and historical phases. It explores how decisions were made regarding excavation concessions, the implementation of the antiquities division system (*le partage*), and the broader administrative treatment of Nubian heritage within the framework of the *Service des antiquités de l'Égypte*.

By the 1940s, attention to Nubian heritage culminated in a decree establishing a museum dedicated to preserving artefacts from Nubia, alongside an institute for the study of Nubian archaeology. This initiative may be interpreted as an effort to mobilise archaeological heritage in support of Egypt's political influence in the south. Ultimately, this study seeks to provide orientation to the processes of decision-making related to Nubian archaeological heritage, as reflected in the Egyptian archival record.

From World Exhibition Fair to Save Nubia: A Genealogy of European Attachment to Nubia

Fayrouz Kaddal (Duke University)

Since the nineteenth century, Nubia has captured European imagination. Travellers, missionaries, anthropologists, and archaeologists repeatedly turned to Nubia as a landscape of beauty, antiquity racial inquiry and religion.

Drawing on the concept of attachment as an affective theoretical lens, this paper seeks to argue that UNESCO's Save Nubia campaign (1959) did not emerge from a spur of an urgent moment. Instead, the campaign reflects a much older fascination with Nubia. This paper traces a genealogy of European *attachment* to Nubia by examining how different layers of engagement – travel writing (Burckhardt, 1829; Edward William Lane, 1833), World Exhibition Fair (Hagenbeck, 1878), missionary encounters (Sudan Pioneer Mission, 1900), and classic anthropological and archaeological work (Schäfer & Junker, 1911; Hohenwart-Gerlachstein, 1963) – collectively produced Nubia as an object of desire, study and later salvage. By situating the 1960s salvage project within this longer arc, this paper demonstrates how post-colonial heritage interventions remained entangled with older colonial, racial epistemologies and affective investments.

This paper draws on a range of primary and secondary materials – including field notes, and sound recordings – to critically examine Nubia as an object of desire. Through this study, the paper demonstrates how UNESCO's Save Nubia campaign (1959) was not a moment of political and temporal rupture, but as part of a persistent and a systematic European attachment continued across centuries to serve the colonial project.

Beyond Illustration: Problematizing Ethnographic Photography in the Archaeology of Nubia and Sudan
Magdalena M. Wozniak (Saxo Institute, School of Archaeology, University of Copenhagen)

Archives and the history of archaeology are increasingly recognised as central to archaeological knowledge production, particularly within post-colonial and reflexive research frameworks. Visual archival materials – especially ethnographic photography – however, are still often treated as illustrative supplements rather than critically examined sources. This paper argues for the meaningful integration and problematisation of ethnographic photography within archaeological research design, using the photographic work of Hugo Bernatzik in Sudan as a case study in the frame of the *Fashioning Sudan* project.

Bernatzik's photographs from Sudan (1925–1927) are frequently framed as ethnographically sensitive, particularly in contrast to controversial figures such as Leni Riefenstahl. Drawing on scholarship on the representation of African pastoralists and on “rescue anthropology,” this paper demonstrates that Bernatzik's images were nevertheless embedded in colonial epistemologies and post-war European visual economies. His photographs simultaneously documented Sudanese communities and produced marketable images of an imagined, vanishing Africa that circulated widely in European popular and scientific contexts.

By situating Bernatzik's photographic archive within its historical, economic, and ideological contexts, this paper highlights the need to treat ethnographic photographs as active agents in the production of archaeological and anthropological knowledge rather than as transparent records of the past. Finally, the paper reflects on the ethical and methodological challenges of working with such visual archives today, particularly given the ongoing war in Sudan and the increasing reliance on legacy data, arguing for a more reflexive and critical use of photographic archives in Nubian and Sudanese archaeology.

Tracing Nubian Magazines across Time: Reconstructing Forgotten Archival Networks through Digitization and Cultural Memory

Khaled Hafiry (Nubian Geographic)

This paper examines one of the earliest and least-documented printed heritage collections from southern Egypt: a set of rare early 20th-century Nubian magazines that circulated among local intellectuals, community leaders, and cultural associations along the Nile Valley. Although modest in appearance, these magazines constitute a dispersed and fragile archive that preserves indigenous Nubian perspectives on language, identity, community life, and socio-political change during a transformative historical period.

Building on fieldwork undertaken through Nubian Geographic, the study traces the “object biographies” of eight surviving magazines, exploring how they migrated across households, villages, and generations, and how their meanings evolved as communities experienced displacement due to the construction of the Aswan High Dam. Today, these materials survive in fragmented and scattered forms, often outside institutional repositories and unknown to museum collections.

By combining cultural documentation, oral testimonies, and digital archiving methods, the paper reconstructs the networks through which these magazines were produced, circulated, and preserved. It highlights the potential of digitisation and community-based archiving to restore visibility to marginalised printed heritage and reconnect dispersed documentary collections to the communities that created them.

This research contributes to broader debates on provenance research, heritage ethics, and the role of digital tools in mapping dispersed cultural archives. It also demonstrates how printed materials – often overlooked within museum narratives – offer valuable insight into Indigenous knowledge systems and cultural memory in the Nubian context.

A Bibliography Inventory and Evaluation of Scientific Books by Sudanese Archaeologists between 2000–2025

Suhaila Gafer Ahmed Mohammed (Department of Library and Information Systems, Al Neelain University)

Ibrahim Mohamed Ahmed Ali (Head Department of Archaeology, Al Neelain University, 2019 -2022)

Early archaeological work and writing in Sudan emerged with European researchers. Due to their association with early archaeological missions and campaigns, these writings provided knowledge of Sudanese civilisation and represent an important part of the history of archaeological research in Sudan.

Sudanese researchers from universities and the National Corporation for Antiquities and Museums have made important contributions to this body of work, particularly during the second half of the twentieth century. These works, by the first generation of Sudanese archaeologists, remain important references in Arabic for academics interested in Sudanese archaeology and civilisation.

Our ongoing study aims to inventory and evaluate the scientific books written by Sudanese archaeologists between 2000–2025, this will include the archaeological intellectual output of higher education institutions and the National Corporation for Antiquities and Museums. The goal is to identify sources of information on archaeology and prepare a comprehensive bibliography to make them more accessible. This will contribute to providing scientific material of interest to archaeology specialists by facilitating access to, and increasing knowledge of, resources which were originally scattered in various locations and published at different times.

To achieve the study's objectives, the researchers will use a theoretical framework and methods based on bibliographic and historical approaches.

7. Community Archaeology in Nubia and Sudan

Leaving Our Mark: Community Archaeology and Children's Heritage Narratives at El-Kurru, Sudan

Anwar Mohamed (Department of Anthropology, Purdue University)

Geoff Emberling (University of Michigan)

Heidi Hilliker (University of Michigan)

Shannon Ness (University of Michigan/Kelsey Museum of Archaeology)

Children's books have become a popular deliverable for community-engaged archaeological projects, especially in Sudan. These products are executed in a variety of ways, but often the intended purpose, focus, and audience for such books is ambiguous. At El-Kurru, we chose a different approach. As with other projects at El-Kurru, the decision to develop a children's book grew organically from the ideas and needs of the community members. In addition to classroom resources, some teachers wanted age-appropriate books they could read with their students that discussed the importance of ancient Kush and the archaeological monuments in their village. Although the initial inspiration was to create a book about archaeology, this project has grown into something more. Titled *Leaving Our Mark: El-Kurru Past, Present and Future*, the book follows two children living in El-Kurru as they learn about their village's archaeological monuments and the stories behind ancient, medieval, and modern graffiti. The text of the story is largely sourced from interviews of local residents and contributions from members of the International Kurru Archaeological Project. In addition to offering young people an opportunity to learn about archaeology, this story aims to preserve local voices and traditions, and what heritage means to people in El-Kurru village today. Through this process *Leaving Our Mark* has developed into an extended narrative-driven story for middle-grade readers, the age at which students often begin learning about ancient cultures. Rather than self-publishing, we are working with an independent press to publish the book in both Arabic and English.

Strengthening Community Stewardship through Tour Guide Training in Post-2023 Sudan

Tohamy Abulgasim (Kelsey Museum of Archaeology, University of Michigan; McDonald Institute of Archaeological Research, University of Cambridge)

Rebecca Bradshaw (Kelsey Museum of Archaeology, University of Michigan; McDonald Institute of Archaeological Research, University of Cambridge)

In late 2025 and early 2026, the Jebel Barkal Archaeological Project (JBAP) project – based out of the University of Michigan's Kelsey Museum of Archaeology – implemented a trial tour guide training programme in Sudan to address the urgent demand for qualified local guides following the dramatic rise in domestic visitation to the site after the outbreak of conflict in 2023. As mobility and leisure patterns shifted, the site became an important place of safe recreation, resulting in an unprecedented influx of Sudanese visitors. Recognising both the opportunity and the strain this placed on existing site management, JBAP designed a programme to equip Sudanese students with the skills necessary to interpret the site's archaeological, cultural, and environmental significance. The training combined traditional instruction with practical field exercises, covering core topics such as site history, storytelling techniques, visitor management and safeguarding heritage resources. Emphasis was placed on empowering

participants to develop guiding approaches rooted in local knowledge and lived experience. This talk will explain the programme's approach, discuss its strengths and weaknesses, and explore pathways for the future.

A New Perspective of the Archaeology, Landscape and Community Engagement at Jebel Moya

Ahmed Hussein Abdelrahman Adam (Department of Archaeology, University of Khartoum)

Jebel Moya is one of the most significant prehistoric archaeological sites in Sudan and the wider Nile Valley, located in central Sudan within the Gezira region. The site has long been recognised for its exceptional archaeological value, particularly due to its extensive burial grounds and material culture that date back to the prehistoric periods. Jebel Moya provides crucial evidence for understanding social organisation, burial practices, and cultural developments in central Sudan. Its strategic location between the Blue Nile and the savannah zones further highlights its importance as a crossroads for human movement, interaction, and cultural exchange during prehistory.

Beyond its archaeological significance, the archaeological mission at Jebel Moya between UCL, UofK and NCAM have played a vital role in revitalising archaeological research and strengthening the relationship between archaeology and local communities. The mission has actively engaged with the surrounding communities through a wide range of outreach activities, including cultural festivals, public lectures, educational workshops, and heritage celebrations held at or near the site. These events have helped raise awareness of the site's historical importance and fostered a sense of pride and ownership among local residents. A key aspect of the mission's approach has been the direct involvement of the local community in fieldwork activities. Local residents were employed and trained in excavation techniques, site documentation, and basic conservation practices. This hands-on participation not only enhanced the efficiency of archaeological work but also contributed to building local capacity and promoting sustainable heritage management. By encouraging community members to take an active role in protecting and preserving Jebel Moya, the mission has helped create a collaborative model in which archaeological research and community development are mutually reinforced. In this way, Jebel Moya stands not only as a landmark of Sudanese prehistory but also as a successful example of community-based archaeology. The site demonstrates how archaeological missions can contribute to both academic knowledge and social engagement, ensuring the long-term preservation of cultural heritage through local involvement and shared responsibility.

Integrating Values into Management and Conservation Practices at Old Dongola

Magdy Mohammed Ahmed Abdalbakhit Hissin (NCAM)

Old Dongola is a significant location in Sudan, reflecting a range of historical eras. It was the capital of the Christian Makurian Kingdom. The site features many churches, structures, homes, and mosques. Some buildings are adorned with beautiful murals. The presence of both Christianity and Islam in one place can lead to tensions, particularly because archaeological research since the 1960s has predominantly centred on Christian relics. The archaeological restoration of the churches could be interpreted as attempts to re-Christianise the Nubian population. Therefore, it is essential to engage in discussions with local communities and to pay more attention to the Islamic architecture found throughout the site. All these initiatives will result in a fresh interpretation of the site, grounded in the values cherished by the local community. Engaging in communication and dialogue with the local community helps resolve many existing challenges.

A descriptive-analytical framework was employed, along with a review of earlier studies that emphasised a values-driven conservation strategy. An online survey was carried out, and its findings were presented. As a result, actionable recommendations were created that demonstrate how to implement values-based conservation within the management and conservation strategies for Old Dongola.

Tensions between Dominant Knowledge Frameworks and Local Knowledge Systems in the Nile Valley in Northern Sudan

Widad Mustafa El Hadi (University of Lille)

Drawing on information science, heritage studies, digital humanities, and the ethics of knowledge organisation, this paper examines the tensions between dominant knowledge frameworks and indigenous knowledge systems in the Nile Valley of northern Sudan. The region's rich cultural landscape—shaped by Nubian and Kushite civilisations, Islamic and Ottoman histories, colonial administrations, and contemporary Nile-based livelihoods—provides a compelling context for exploring how digital heritage practices influence the recognition, representation, and preservation of local knowledge.

While digital technologies offer new opportunities for documenting and disseminating cultural heritage, they also raise critical ethical questions concerning whose knowledge is considered legitimate, archivable, and worthy of preservation. Current documentation standards, metadata schemes, and classification systems are largely rooted in Western epistemologies and often fail to capture the relational, contextual, and spiritual dimensions of indigenous knowledge. As a result, local knowledge risks being reduced to cultural information rather than recognised as an autonomous epistemic system.

The paper argues that the digitisation of historical archives—including colonial administrative, engineering, and archaeological records—may unintentionally reproduce historical epistemic inequalities if these materials are integrated into digital platforms without critical reinterpretation. Digital accessibility alone does not ensure decolonisation or epistemic justice.

Focusing on indigenous ecological knowledge in northern Sudan, the paper discusses participatory approaches to documentation, community-based governance, and the development of metadata and ontologies capable of accommodating local categories of knowledge. It argues that local communities should be recognised not merely as information providers but as co-curators and epistemic authorities.

The paper addresses the following questions: How are indigenous cultural and ecological knowledges recognised—or marginalised—within heritage and information practices? What are the implications of digitisation for local knowledge systems? It concludes by arguing that sustainable digital preservation requires supporting epistemic diversity and cognitive justice through more inclusive and collaborative heritage practices.

The Role of Digital Tools in Documenting Endangered Languages - Nubi app example

Momen Talosh

Today there are no organisations – governmental, corporate, or non-profit – dedicated to teaching or developing Nubian Language. Nubi has an urgent and time-sensitive mission to protect the Nubian language, connecting young Nubian generations with their heritage before it is lost. Nubi is the first initiative teaching the Nubian language in its two dialects Kenzi and Fadicca using the Nubi App – now with more than 10,000 downloads. Based in Alexandria, Egypt, Nubi has 5 dedicated volunteers who connect to the Nubian Community through informal networks and have expanded the app's reach to the 10M+ Nubians in Southern Egypt, Northern Sudan, Africa, and worldwide. This talk presents the results of a study on the impact of digital tools on language documentation practices in under-resourced communities. The aim was to evaluate how technology can support the preservation of endangered languages. A mixed-methods approach was employed, combining field interviews with corpus analysis. The findings reveal that digital platforms significantly improve data accessibility and community participation. These results highlight the potential of technology-driven approaches in strengthening language preservation efforts and informing future documentation projects.

Link to Nubi app :<https://play.google.com/store/apps/details?id=nobi.nobi>

8. Religion & Beliefs

Non-Elite Funerary Amulets during the 25th Dynasty and Early Napatan period (c. 750–580 BCE)

Victoria Arroyo (University of Münster)

Cultural exchanges between Nubia and Egypt, occurring since the fourth millennium BCE, were transformed by Egypt's New Kingdom imperial expansion and colonisation of Lower Nubia (c. 1550–1069 BCE). Archaeological evidence indicates that this period was marked by the presence of Egyptian immigrants, intercultural marriages, and circulation of foreign objects in local contexts. Following the withdrawal of the Egyptian state, the rise of the Napatan dynasty marked a shift in power, with Nubian rulers eventually controlling Upper Egypt for almost a century. This reversal in power dynamics presents a rich opportunity to analyse local material culture.

Traditionally, the presence of Egyptian-style grave goods in Nubia was interpreted as an “Egyptianisation” of the population. However, recent scholarship reveals a complex process of cultural entanglement, selective adoption and adaptation. Funerary amulets are ideal for studying these dynamics, as their personal nature as well as their motifs, point towards the active agency of Nubians in re-contextualising Egyptian motifs. Data from non-elite cemeteries of the 25th Dynasty and Early Napatan period (Mirgissa, Qustul, Sanam, Meroe West and South) reveal the coexistence of both Egyptian-style amulets with unique Nubian motifs. Therefore, this presentation employs

both a quantitative and qualitative approach in order to move beyond the top-down models of “Egyptianisation” to reveal the nuanced religious practices of non-elite Nubians.

A Detailed Look at the Decoration of the Funerary Chapels of the Nubian Pyramids

Montserrat Díaz-de-Cerio (Wahat Projects)

When exploring existing research on Nubian pyramids, we generally find publications about their architecture or about the decoration in the burial chambers and its value in understanding funerary beliefs during the Meroitic Kingdom. Other publications present specific studies on other objects found in the royal necropolis, such as sarcophagi, ushebtis and pottery. However, few have focused on the decoration of the funerary chapels of the Nubian pyramids. While some studies are available on specific aspects, such as changes in certain decorative elements that can help establish relative chronologies of the monuments, there is a lack of more general studies on the decorative themes of these funerary chapels. In this presentation, I propose a comprehensive approach to the decoration of funerary chapels, considering their relation to the world of beliefs. The presentation will examine which ceremonies are described, how they are presented, and what changes occurred in decorative themes over time. Some of the questions considered through an overview of the documented decoration are: How does the presentation of the scenes change? What could explain these changes in the decorative themes? Could these changes be due to artistic or cultural influences, or to shifts in beliefs?

Smoking Flowers – “Lotiform” Ceramic Cups and their Use as Meroitic Cultic Equipment

Jiří Honzl (National Museum – Náprstek Museum of Asian, African and American Cultures, Prague)

Recent excavations at the Meroitic site of Wad Ben Naga have yielded a considerable number of well-contextualised finds from cultic structures, which may be identified either as votives or cultic equipment. These artefacts provide an opportunity to confront the world of myth and idealised ritual, as represented in monumental textual and iconographic evidence, with vestiges of the actual cultic practice.

Amongst the finds from the sacred spaces at Wad Ben Naga, a group of small, white-washed, out-flaring cups stands out. This kind of pottery appears to be hitherto little known from other Meroitic sites. By their shape, and rarely also the polychrome painting applied to the white ground, they seem to imitate (lotus?) flowers. They often bear traces of burning.

The considerable number of well-contextualised finds of these “lotiform” cups documented to date allows for a comprehensive assessment of this pottery form, with a focus on its intended and actual modes of use. To this end, the paper discusses the manufacturing characteristics of the “lotiform” cups, their variability, and their distribution at Wad Ben Naga and elsewhere in Meroitic Nubia, together with the nature of residues preserved in them, possible parallels, as well as relevant iconographic and textual evidence.

On this basis, the “lotiform” cups can be identified with confidence as specifically made for use as cultic equipment. While multiple lines of evidence strongly suggest their function as censers, they may also have served other purposes as well. While the fragrant substances burnt in them likely included incense, this need not always have been the case.

Christian amulets from Qasr Ibrim

Adam Lajtar

During excavations conducted at Qasr Ibrim by the EES between 1963 and 2008, approximately thirty Christian amulets were discovered. These are usually sheets of paper that, after being inscribed on one or both sides, were folded and inserted into leather cases resembling modern higabs. The amulet's texts usually consist of a series of names (of Divinity, angels, and saints), magical signs, and prayers for the protection of an individual bearer. This paper gives a general presentation of the material in anticipation of its future publication.

The Role of Women in Religion and Authority in the Kingdom of Makuria

Magdalena Woźniak (University of Warsaw; University of Copenhagen)

Dobrochna Zielińska (University of Warsaw)

The significant role of women in religious life and concepts of power in Nubia has attracted increasing scholarly attention, particularly in relation to the Napatan and Meroitic periods. This paper shifts the focus to the medieval period, examining how religious and political transformations shaped the long-term social position of women, especially members of the royal family, in the kingdom of Makuria.

These enduring traditions are reflected in the so-called “*dance scene*” from the north-west annex of the Monastery on Kom H in Old Dongola, as well as in the representations of the Virgin Mary within the monastery complex. The iconography of these images reveals a distinctive phenomenon: the depiction of the Virgin Mary endowed with the attributes and costume of Royal Mothers. The protective ritual represented in the *dance scene* further attests to the survival of local religious practices and beliefs, highlighting the plural and layered religious landscape of medieval Makuria, which is often perceived as a monotheistic Christian state.

The strong visual parallels between images of the Virgin Mary and Royal Mothers can be understood as a means of negotiating women’s presence and authority within the Christian religious sphere, which was traditionally and liturgically reserved for men. Although women were excluded from performing formal liturgical rites, these visual strategies allowed royal women to assert their status, agency, and authority within sacred spaces otherwise dominated by male ecclesiastical power.

Harpokrates and the Elephant: Decoration from Musawwarat es Sufra and Faras

T O Moller (Wolfson College Oxford)

This paper untangles the complicated iconography associated with representations of elephant and anthropoid figures in Meroitic art. Previous work on this subject has identified rows of prisoners (at Musawwarat es Sufra) as well as deities including Sebiuameker (at Musawwarat es Sufra); Bes (at Qasr Ibrim) and Herakles (at Meroe). In tandem, scholarship concerned with Graeco-Roman Egypt shows that the elephant was there associated with representations of Nubia, as well as with the gods Dionysos; Eros; Bes; and Harpokrates.

By studying the imagery of these deities, this paper will examine two scenes depicting elephants and gods, from the Lion Temple at Musawwarat es Sufra, and the Meroitic cemetery at Faras, identifying the god Harpokrates in this decoration. It will argue that symbolism of the elephant and Harpokrates acted as an invocation of good health and fertility.

Ancestral Rites of Immortality: Themes of Resurrection in the Tumuli of Nubia and West Africa

Salim Faraji (Department of Africana Studies, California State University Dominguez Hills)

This paper explores the enduring legacy of ancestral rites and beliefs in immortality as manifested in the tumuli of Nubia and West Africa. Drawing on archaeological evidence from the Middle Nile Valley, northern Ghana, Mali, and Niger, the study examines burial mounds that contain human skeletal remains, animal sacrifices, weaponry, pottery, jewellery, and food bowls – paralleling similar mortuary traditions across the savanna zone. These tumuli, often constructed as elite burial sites and ritual centres for regional chiefs and monarchs, served not only as tombs but also as ancestral shrines, reinforcing a communal eschatology centred on resurrection and the continuation of life in the spirit world. The inclusion of coregents, servants, food, and weaponry in royal interments underscores the expectation of postmortem resurrection and the enduring service of the royal court in both life and death. Studies, particularly among the Asante monarchs of the 19th century, reveal that these practices were less about propitiating the gods and more about affirming concepts of immortality and ancestral veneration. By comparing Nubian and West African tumulus traditions, this paper highlights the shared cultural frameworks that shaped funerary architecture and the meanings of death and immortality across the region.

9. Bioarchaeological Perspectives & Recent Research

A Small Island of the Nile Turned into a Cemetery in the 5th millennium: KDK 23 (Kadruka, Northern State)

Philippe Chambon (CNRS-UMR 7206 Eco-anthropologie, ABBA, Paris)

Olivier Langlois (CNRS-UMR 7264 CEPAM, Nice)

Louiza Aoudia (CNRPAH, Alger)

Gilles Durrenmath (Université Côte d'Azur-UMR 7264 CEPAM, Nice)

Sébastien Poudroux (SFDAS, Khartoum)

Pascal Sellier (CNRS-UMR 7206 Eco-anthropologie, ABBA, Paris)

The excavation of the KDK 23 Neolithic cemetery (Kadruka, Northern State) was started in 2014. Suspended after nine field seasons, it uncovered 202 archaeological features, including 164 burials comprising a total of 170 individuals, in addition to the scattered remains of about ten others. The complete lack of collagen, together with the digging of the graves in a compact clayey silt within a *kôm* cracked during the driest climatic phases, led to field protocols involving a large amount of anthropological observations and measurements taken *in situ*. While these protocols, in part, reflect the respect due to ancient anthropobiological remains, they also ensured the preservation of information that would now be out of reach.

The identified boundaries of the cemetery outline an oval area located on a natural Nile terrace that was probably an island at the time of use. Radiocarbon dates indicate the cemetery was used in two separate phases in the 5th millennium. The high horizontal density of the burials (more than one per square-metre) does not account for the many differences in the vertical distribution: the deepest burials are around one metre below the surface in the central area, while those closest to the surface lie in the thin sand layer covering the *kôm*.

The distribution of individuals, according to age groups, was determined through excavation: the youngest individuals (foetuses, new-borns and infants) were most numerous near the surface and became scarcer the deeper the excavation. Burials further below the surface were more complex with many individuals buried together both contemporaneously and over time.

Our presentation will discuss the three-dimensional structure of the cemetery, in accordance with the age and sex distribution of the buried population, the clustering of some of the individuals, and the absolute and relative chronological data available.

Diachronic Growth Trajectories in Prehistoric al-Khiday: New Insights from Dental Enamel

Giusy Capasso (Dipartimento di Scienze Odontostomatologiche e Maxillo Facciali, Sapienza Università di Roma)

Jessica Bergamini (Dipartimento di Scienze dell'Antichità, Sapienza Università di Roma)

Alessia Galbusera (Dipartimento di Scienze Odontostomatologiche e Maxillo Facciali, Sapienza Università di Roma)

Martina Trocchi (Istituto dei Sistemi Complessi (ISC) – CNR, Roma)

Luca Bondioli (Institute of Geological Sciences, Polish Academy of Sciences, Kraków),

Alessia Nava (Dipartimento di Scienze Odontostomatologiche e Maxillo Facciali, Sapienza Università di Roma)

Donatella Usai (Centro Studi Sudanesi e Sub-Sahariani - ETS, Treviso)

Archaeological excavations at al-Khiday (Khartoum, Central Sudan) uncovered a multi-stratified cemetery (site 16-D-4) with burial phases spanning from the Late Pleistocene to the 2nd century CE. The current study advances the bioarchaeological investigation of the site, previously based mainly on traditional anthropological approaches, by integrating new evidence from dental enamel histomorphometry.

Thanks to its appositional growth and lack of remodelling, dental enamel preserves a high-resolution temporal record of early life. Analysis of enamel microstructures provides insights into growth trajectories and non-specific physiological stress experienced during early life, enabling the reconstruction of individual life histories. Histomorphometric analysis of 17 teeth from Late Pleistocene/pre-Mesolithic and Neolithic individuals from cemetery 16-D-4 was conducted to determine Daily Secretion Rate (DSR), Crown Formation Time (CFT), and Accentuated stress Lines (ALs).

In the Late Pleistocene/pre-Mesolithic subset, deciduous upper canines (n=2) show higher DSRs than modern standards. Similarly, first (n=3) and second (n=12) permanent molars display faster DSRs compared to modern

references, with a slight decrease recorded during the Neolithic. Interestingly, the Late Pleistocene/pre-Mesolithic subset shows longer CFTs despite faster DSRs compared to the Neolithic subset, likely reflecting larger crown dimensions.

All adults exhibit at least two ALs, with stress peaks around 7–10 months and 3–4 years, suggesting that children at al-Khiday experienced physiological stress during early life, possibly linked to critical transitions such as weaning. Ongoing high-resolution biogeochemical analyses aim to reconstruct breastfeeding and weaning practices, as well as mobility patterns.

Overall, compared to modern populations, children at al-Khiday grew faster, consistent with long-term evolutionary trends toward slower growth. Preliminary data suggest that the Neolithic transition was accompanied by reductions in enamel secretion rates and tooth size, in line with established microevolutionary trajectories.

This study highlights the potential of enamel histomorphometry in reconstructing growth trajectories and health status during infancy in past populations, complementing traditional bioarchaeological methods.

Patterns of Growth and Maturation in a Meroitic Preadult Sample from Abri, Sudan

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Hugo Cardoso

Salomé Zurinaga Fernández-Toribio (Centro de Ciencias Sociales y Humanidades. Consejo Superior de Investigaciones Científicas-CSIC, Madrid; Departamento de Humanidades: Historia, Geografía y Arte. Universidad Carlos III de Madrid)

Víctor Fernández (Departamento de Prehistoria, Historia Antigua y Arqueología, Facultad de Geografía e Historia, Universidad Complutense de Madrid)

Mohamed Saad (National Corporation of Antiquities and Museums – NCAM)

Luis Ríos (Unidad Docente de Antropología Física, Facultad de Ciencias Biológicas, Universidad Complutense de Madrid)

The study of child growth and maturation is a sensitive tool for the assessment of biological living standards in living and past populations. We studied a sample of 70 well-preserved skeletons, ranging in age from 0.125 to 19 years, from the Nubian cemetery of Amir Abdallah (Abri, Northern Sudan), dated to the Early Meroitic Period (3rd – 1st century BCE). Age was estimated from dental maturation, and sex was determined through peptide analysis of enamel when possible. The maximum lengths of the humerus, radius, femur and tibia were measured. Skeletal maturation was scored for those epiphyses associated with adolescence in skeletons with dental ages older than ten years. When compared to a modern, healthy sample of children, between 30% (tibia) and 60% (femur) of the sample is under two standard deviations. When assessing the skeletons in the second decade of life, a delay in entering the adolescent stage was observed. These observations point to a relatively low biological standard of living of the children and adolescents in this Meroitic site. Growth and maturation in Nubian samples from other periods have been studied at the sites of Wadi Halfa, Kulubnarti, Mis Island and Tombos, and the present research represents a valuable addition that will be discussed in this relation to broader work.

Research on the Nubian Skeletal Collections Curated at Universidad Complutense de Madrid (Spain): A Work in Progress

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Mohamed Saad (National Corporation of Antiquities and Museums – NCAM)

Luis Ríos (Unidad Docente de Antropología Física, Facultad de Ciencias Biológicas, Universidad Complutense de Madrid)

Between 1960 and 1981, Spanish archaeological missions worked at a number of Nubian sites and human skeletal remains from the Kerma, Meroitic and X-Group periods were transported for study to Spain. The X-Group human remains come from the sites of Mirmad (also termed SAX, south Argin group X) and Nag el Arab (also termed

NAX, north Argin group X), excavated during the 1960s Nubian Salvage Campaign. The Kerma and Early Meroitic remains come from the Amir Abdallah site in Abri, excavated in 1978–1981. These human remains are currently curated at Universidad Complutense de Madrid, Spain, and the skeletons from Amir Abdallah, both Kerma and Meroitic, are currently the subject of a research project. We have previously described the history of the excavation and transport of these skeletons, and here we briefly summarise the project and present preliminary results on the main topics of research: growth and maturation of the children, isotopic analysis for mobility and diet, patterns of physical activity and mortuary patterns. We present these collections and the initial findings to promote discussion in accessibility and data sharing in accordance with FAIR scientific principles, and to discuss ways to promote collaboration between Nubian scholars, particularly Sudanese colleagues.

Subadult Health and Mortality in the Archaeological Survey of Nubia (1907–11): A Case Study from Cemetery 2

Alexandra CJ Warwick (University of Manchester; Bioarchaeology and Biomedical Egyptology Research Group)

Antony Payton (University of Manchester)

Jenefer Metcalfe (University of Manchester; Bioarchaeology and Biomedical Egyptology Research Group)

Background: NU528 is one of eleven subadults out of 133 individuals in the Duckworth Collection, University of Cambridge, retained from Cemetery 2 of the Archaeological Survey of Nubia (1907–11). Excavated during the first season, Cemetery 2 yielded nearly 2000 individuals. Although initial excavation reports remark upon the high subadult mortality rate, surviving collections do not reflect these figures. NU528 therefore provides a valuable opportunity to study the health of subadults in Lower Nubia during the early Christian Period.

Methods: Age-at-death was estimated using dental eruption and wear alongside established epiphyseal fusion standards rates (established age ranges at which specific growth plates fuse). Sex estimation was based on sexually dimorphic features of the innominate and skull. Dental health was assessed through macroscopic examination of the dentition, mandible, and maxilla for caries, abscesses, and calculus. Skeletal pathology was recorded through visual assessment of osteolytic and osteoblastic activity, vascular changes, congenital variation, bone density, and colour. Differential diagnosis was informed by comparison with published archaeological case studies.

Results: NU528 was female and aged around 15–20 years. She had anatomical variations in both dentition and the spinal column which would have likely been asymptomatic and may have been influential in her being retained for collection. Widespread osteolytic lesions and evidence of remodelling indicate the presence of a chronic health condition, though there is no indication it led to her death. Evidence of a fracture resulting in possible osteomyelitis was also observed.

Conclusions: This study centres on NU528 as an individual rather than a statistical representative of subadult mortality. The analysis highlights the lived experience of NU528, revealing an individual who survived chronic health conditions and injury into adolescence. NU528's remains provide a rare insight into subadult health beyond mortality statistics, emphasising the importance of the individual for understanding health in early Christian Lower Nubia.

Shifting Mobility and Dietary Patterns in the Abu Hamad Reach during the Kerma Period

Lesley A. Gregoricka (Department of Sociology, Anthropology, & Social Work University of South Alabama)

Brenda J. Baker (Center for Bioarchaeological Research, School of Human Evolution & Social Change, Arizona State University)

Around 2500 BCE, the first Kingdom of Kush began to coalesce, incorporating nomadic pastoralist groups. Among these groups, herd management and trade brought authority and power, while alliances among nomadic pastoralists may have held more importance than control of agricultural surplus. Today, however, we still know little about how pastoralists were incorporated into the Kerma culture. Prior strontium isotope analyses revealed a potential transformation in social organisation in the region upstream of the fourth cataract as early communities engaged in a more mobile lifestyle than later groups. This shift was possibly associated with Kushite state coalescence, followed by Egyptian colonisation, and increasing reliance on agropastoralism. To explore this transition further for both mobility and diet, we analysed stable oxygen ($\delta^{18}\text{O}_{\text{ap(VPDB)}}$) and carbon ($\delta^{13}\text{C}_{\text{ap(VPDB)}}$) isotopes from the dental enamel of 61 teeth from 30 Kerma-period (ca. 2500–1100 BCE) individuals interred within cemeteries around al-Qinifab, west of Abu Hamad.

Oxygen isotope results demonstrated no significant temporal changes; nevertheless, $\delta^{18}\text{O}$ ranges suggest multiple water sources were likely in use. Additionally, females exhibited more than double the variance of males by the Late Kerma phase and appeared clustered into two groups. This finding might indicate the emergence of

patrilocality alongside a more sedentary way of life, perhaps as part of these communities' incorporation into the Kushite state. As with strontium, however, non-local grave artefacts were associated with individuals exhibiting both local and non-local $\delta^{18}\text{O}$ values and revealed no clear preference for patrilocal customs. Carbon isotope values shifted from a largely C_4 -based diet centred around secondary animal products to more heterogeneous foodstuffs derived from both managed herds and C_3 -based domesticated plants. The addition of more C_3 resources to diet fits with prior strontium results in which communities became more sedentary over the course of the Kerma period.

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Beyond Health and Wealth: Integrating Osteological and Mortuary Perspectives on Inequality at Kerma, Bronze Age Sudan (1750–1550 BCE)

Aida Tadesse (Faculty of Archaeology, Leiden University)

Sarah Schrader (Faculty of Archaeology, Leiden University)

Mortuary studies have long centred on questions of inequality and social organisation in the ancient world, often relying on one-dimensional approaches that primarily focus on material expressions of status. In recent decades, however, research has shifted away from hypermaterialist paradigms, increasingly recognising the value in approaches that integrate material and experiential dimensions of wealth and social differentiation. The methodological framework proposed by Beck and Quinn (2016) exemplifies this shift, offering a means to explore ancient forms of inequality by assessing the degree of coherence or dissonance between 'performed' inequalities that materialise in mortuary spaces and 'lived' inequalities that preserve in the osteological record.

The present study applies this framework to the Bronze Age necropolis of Kerma (Classic Kerma: 1750-1550 BCE), the capital of the Nubian Kingdom of Kush, a context in which interpretations of social structure have traditionally centred on monumental architecture and material disparities. Including a sample of 133 (non-)adults, we compare skeletal and mortuary data to assess the extent to which embodied inequalities, as reflected by six osteological indicators of diet and oral health (e.g., caries, periodontitis), correspond with funerary expressions of status (e.g., material accompaniments, treatment of the body). The results indicate a dissonance between lived and performed experiences, with mortuary data exhibiting considerable heterogeneity, while osteological evidence points to broadly comparable dietary practices and oral disease burdens across burial groups. These findings bring long-standing interpretations into question, urging us to reconsider how material disparities are understood and interpreted in relation to status at Kerma. In doing so, this research highlights the value of employing multi-method analytical frameworks, providing more holistic and nuanced reconstructions of inequality and social dynamics in past societies.

Gender-Related Work Distribution in Early Medieval Nubia: Preliminary Investigation of Human Remains from Sayala, Egyptian Nubia

Joanna A. Ciesielska

This study presents the first comprehensive bioarchaeological analysis of activity patterns among the medieval inhabitants of Sayala (8th–10th century AD), a Christian-period community excavated during the UNESCO Nubian Campaign and curated at the Natural History Museum in Vienna. Focusing on adult individuals from Cemeteries I, J, and K, the research examines enthesal changes (ECs) and osteoarthritis (OA) to reconstruct habitual biomechanical stress while critically addressing the multifactorial nature of musculoskeletal remodelling. The emerging patterns reveal a nuanced picture of musculoskeletal adaptation in this population. While remodelling is generally mild, differences across joints and between individuals suggest structured variation in physical demands and life-course experiences. Some joints show clearer demographic associations than others, pointing toward a complex interplay between aging, biological sex, and localised mechanical loading. By integrating multiple skeletal markers, this study refines our understanding of daily activity and labour organisation in medieval Nubia. The results highlight both the potential and the limitations of using enthesal changes and osteoarthritis to reconstruct past lived experience, offering new insights into community lifeways while opening avenues for further investigation.

Building the Future of Sudanese Bioarchaeology: Training Strategies amidst War

Remah Abdelrahim Kabashi Ahmed (Al Neelain University)

Jenail Marshall (Purdue University)

Research on human skeletal remains in Sudan has long been shaped by uneven access to training, laboratory infrastructure, and analytical resources, conditions that become acutely visible during periods of political

instability and armed conflict. While Sudanese scholars remain central stewards of archaeological heritage and primary contributors to field documentation, opportunities for specialised bioarchaeological training and independent analysis continue to be constrained by externally controlled research infrastructures.

Drawing on bioarchaeological data documented in Sudan in early 2023, immediately prior to the outbreak of war, this paper examines how conflict intensifies existing training inequities while simultaneously underscoring the need for adaptable, locally grounded research models. It argues that training accessibility must be treated as a core methodological concern rather than a post-conflict objective. In response, the paper highlights the potential of digital and remote methodologies, including photogrammetry, 3D skeletal documentation, and virtual osteological workshops to sustain analytical practice, mentorship, and scholarly collaboration when physical laboratories, travel, and in-person instruction are disrupted.

These approaches enable high-resolution analysis, shared interpretation, and skill transfer without reliance on extractive data removal or prolonged foreign laboratory access. By positioning digital training tools as infrastructures of sustainability rather than temporary substitutes, this presentation advocates for a Sudan-centred, collaboratively designed bioarchaeological framework that remains viable during crisis while strengthening long-term scholarly leadership. Integrating scientific data with an ethical reorientation, this work contributes both to reconstructing ancient Sudanese lifeways and to sustaining the future of bioarchaeology under conditions of ongoing uncertainty.

10. Anthropological Perspectives on Sudan

Photographic Exploration of Contemporary Nubian Life

Michael Nelson (The Documentarian)

Mona Sherif (The Nubian Foundation)

Through photographs taken by documentary photographer Michael Nelson and with explanations and narratives by Nubian cultural expert Mona Sherif, we will explore how Nubians have adapted to life after the displacement caused by the construction of the Aswan High Dam. With unique access to being a part of the Nubian family, Nelson has documented facets of Nubian life from wedding customs and celebrations to cuisine, musical events and family gatherings. The journey will take us from Abu Simbel in the far south of Nubia to desert displacement villages near Kom Ombo, to glimpses of traditional life along the Nile which still exist in Gharb Suheil and Aswan, to Nubian integration in Egyptian society in cities such as Cairo and Alexandria. Everywhere Nubians have settled after being displaced by the creation of Lake Nasser, they have maintained their traditions and family connections. This visual journey will take us into their homes and lives. We will witness close family bonds manifested through music, stories, genealogical lineage, food and language.

Mona Sherif will provide background narrative and storytelling to bring the imagery to life and provide telling observations of how Nubians are preserving their heritage and unique customs, culture, history and language. While much of the existing visual record of Nubians comes from institutional archives, this presentation seeks to read those histories against the grain by recentring the Nubian experience, memory, and agency through long-term access to Nubian family life, paired with cultural knowledge. This photo lecture offers an alternative, more progressive, archive, grounded in lived experience. By documenting weddings, celebrations, daily life, and community traditions across both ancestral and resettled Nubian spaces, the presentation helps create a visual record that restores Nubians as authors of their own narrative. In doing so, it enables a richer, more truthful understanding of Nubian identity and preserves the cultural continuities that have sustained the community through displacement and change.

Traditional Nubia in the Swirl of Modern Trends

Robert Dvorak

In recent decades, Nubia has experienced profound changes driven primarily by the construction of tarmac roads, the influx of new goods and the adoption of modern fashions. This paper aims to explore the impact of modernisation on Nubian traditional heritage, presenting photographic evidence collected from twenty-eight villages during field research conducted between 2009 and 2017.

The issues addressed include:

- The endangered state of traditional fortresses, threatened by intentional destruction and weather conditions. Rare examples of still inhabited “diffi”.
- Modifications to traditional Nubian houses, including the shift from natural colouring and ornamental facades to modern chemical paints and decorative patterns, as well as changes in roof, portal and window designs.
- Alterations to interiors: Transformation in furniture styles and kitchen equipment.
- Changes in the construction of village mosques.
- Decline of traditional sailing boats: the last remaining examples of their construction and use.
- The vanishing of traditional artisan skills.
- Further challenges to preserving Nubian heritage, including the impact of extensive gold mining, the desertification of the countryside, rural depopulation/influx of war refugees.

Nubian Nile Intangible Heritage: What Can We Learn from the Past?

Ossama A.W. Abdel Meguid (Chair, ICOM Egypt)

This paper examines the intangible cultural heritage of the Nubian people in Egypt, with a specific focus on the profound and multifaceted relationship between Nubian communities and the Nile River. Following a concise historical and geographical contextualisation of Nubia, the study ethnographically details a series of ritual practices embedded within the lifecycle – marriage, birth, and death – as well as annual observances such as Ashura in alignment with ancient rituals and myths. These practices consistently position the river not merely as a physical resource but as a sacred, animate entity, inhabited by benevolent “river angels” (*malayket-al-bahr*). The analysis demonstrates how the Nile functions as the central axis for social cohesion, spiritual belief, and ritual purification. The construction of the Aswan High Dam and subsequent displacement of communities underscore the urgent vulnerabilities facing this heritage. The paper concludes by arguing that documenting these river-centric beliefs and practices is crucial for their preservation. It advocates for the development of more effective strategies to safeguard this intangible heritage, which offers critical insights into human adaptations to environmental sanctity and the resilience of cultural memory in the face of radical geographical and social transformation.

An Ethnoarchaeological Study of the Material Culture of Contemporary Communities in Kabkabiya, Northern Darfur

Ibrahim Mohamed Ahmed Ali (Al-Neelain University)

Kabkabiya possesses a rich cultural heritage and historically played an important political and economic role in the Darfur Sultanate. Despite its significance, limited anthropological and archaeological research has been conducted in the area in the past century.

This study deal with material culture of the communities in Kabkabiya by addressing traditional industries, with particular emphasis on pottery production and metal tool manufacture, which continue to be practiced and retain both cultural and economic importance. The study aims to explore their cultural continuity by linking them to the archaeological discoveries in the area. Furthermore, the study seeks to provide interpretations of certain aspects of past activities and social life patterns reflected in the material record.

The research is based on fieldwork, including ethnographic surveys, direct observation, and documentation of the stages of pottery production and traditional tool-making. In addition, archaeological surveys were conducted to identify and register sites containing material evidence related to the ethnographic data collected from present-day communities.

Sudan in Crisis: Cultural Relief Action in Wadi Halfa

Abdelnaser Ser Al Khatim (Nubia Museum in Wadi Halfa Project Team)

Ashraaf Alaa El Din (Nubia Museum in Wadi Halfa Project Team)

Maria Costanza de Simone (Nubia Museum in Wadi Halfa Project Team)

As part of the planned Nubia Museum initiative in Wadi Halfa, the Gerda Henkel Foundation funded the *Sudan in Crisis: Cultural Relief Action* project. Aimed at revitalising the cultural vitality of the community, the project documented the region's past and present through the lens of "popular science". The two main objectives were:

1. To conduct a comprehensive survey among survivors from the submerged region of Wadi Halfa, to document the lost social, cultural, economic, and urban aspects of their lives.
2. To address the psychological challenges faced by communities in conflict zones, engaging all genders, with large participation of women and, in particular, young people, through creative workshops and activities that fostered strategic thinking, artistic and sporting talents, heritage protection awareness, resilience, and hope for the future. Activities also involved IDP (Internal Displaced People), promoting dialogue, mutual understanding, and social cohesion.

Additionally, the initiative highlighted the importance of emotional well-being, particularly through the role of "Humanitarian Clowns". Drawing inspiration from *Clowns Without Borders*, the project used clown performances to bring joy and laughter to both children and adults affected by conflict, offering moments of respite from the harsh realities of war.

Through these diverse activities, the project provided both immediate relief and long-term cultural impact, fostering unity and healing within the community.

Ethnography of Ruins: Archaeological Heritage and Contemporary Sudan's Crises. Voices from Blue Nile, 3rd Cataract and Eastern Desert

Maciej Kurcz (Jagiellonian University, Kraków)

Rapid urbanisation, climate change, economic crisis, and recent paroxysms of violence have left a deep mark on the attitude of local communities towards the visible material remains of past generations. From sacred spaces reserved for spirits, ancestors or mystical rituals, they have become "things left behind", problematic for various reasons. These transformations force us to ask new questions about the relationship between people and material heritage. By this relationship, I mean building, cultivating the soil, extracting precious minerals or destroying "ancient ruins". Although these activities are treated as breaking taboos, they have significantly accelerated recently and are met with general understanding. What consequences does this have for memory, identity or the practice of specific cults and rituals? How do ordinary people cope with the change in the paradigm of thinking about the remains of the past? How does this impact the behaviour and commemoration of material cultural heritage? This paper is based on fresh ethnographic material from fieldwork at Soba, Misedda and the Red Sea coast, which is integrally linked to ongoing archaeological projects in Sudan.

Heritage Weaponisation and Identity Crises in Sudan's Current Conflict: The Politics of Historical Memory

Ismail H. M. Elnour (Heritage Consultancy Centre, UK)

Sudan's ongoing conflict between the Sudanese Armed Forces (SAF) and the Rapid Support Forces (RSF), which erupted in April 2023, extends beyond a military power struggle to encompass a profound crisis of national identity rooted in contested interpretations of heritage and historical memory. This study examines how competing factions instrumentalise Sudan's diverse cultural heritage – spanning Arab, African, Nubian, and Islamic traditions – to legitimise their political positions, mobilise supporters, and construct exclusionary or inclusionary identity frameworks.

Drawing on heritage studies, memory politics, and conflict analysis, this research investigates three interconnected dimensions of heritage weaponisation: first, the strategic destruction, appropriation, and protection of cultural sites and historical narratives as tactical instruments of war; second, the deployment of competing historical memories – including colonial legacies and the Darfur genocide – to justify contemporary violence and deepen ethnic, regional, and tribal divisions; and third, the fragmentation of Sudanese national identity as heritage becomes a contested terrain where questions of belonging, authenticity, and political legitimacy are violently negotiated.

Through analysis of propaganda materials, documentation of heritage destruction, and examination of identity discourse across different Sudanese communities, this study reveals how heritage is not merely collateral damage in armed conflict but an active battlefield where the very meaning of “Sudan” is being contested. The deliberate targeting of museums, archaeological sites, and cultural institutions, alongside the manipulation of historical narratives, demonstrates that cultural heritage destruction constitutes a form of identity warfare aimed at erasing alternative visions of Sudanese nationhood.

This research contributes to broader scholarly understanding of how heritage becomes weaponised in contemporary conflicts and offers critical insights for post-conflict reconciliation, heritage preservation, and the reconstruction of inclusive national identities in deeply divided societies. The findings underscore the urgent need for international protection of cultural heritage in conflict zones and highlight the political, social, and psychological consequences of heritage destruction that extend far beyond physical ruins to encompass the erasure of collective memory and the fracturing of national consciousness.

The Cost of Institutional Neglect: Cultural Heritage Management and National Identity in Sudan

Mohamed Faroug Ali (Global Studies University, UAE; International University of Africa, Sudan)

This paper examines the structural failures of Sudan's cultural institutions in preserving and promoting national heritage and collective identity. It argues that cultural institutions in Sudan, particularly the National Corporation for Antiquities and Museums (NCAM), have operated without coherent vision or strategic frameworks, instead functioning primarily as extensions of successive political regimes and personal agendas. This subservience to shifting governmental agendas has prevented the development of cultural heritage management as an effective instrument for fostering economic development and political stability.

The analysis demonstrates that NCAM's institutional inadequacies—stemming from insufficient resources, expertise, and autonomy—have resulted in the systematic degradation of Sudan's tangible heritage. Archaeological sites remain unprotected, museum collections deteriorate without proper conservation, and cultural artefacts continue to be lost to looting and neglect. More critically, this failure extends beyond physical preservation to encompass the erosion of Sudan's multicultural foundations and the weakening of a cohesive national identity. By neglecting their custodial responsibilities and failing to engage diverse Sudanese communities in heritage narratives, these institutions have undermined the very cultural pluralism that constitutes the bedrock of Sudanese nationhood. The paper concludes by proposing a comprehensive institutional restructuring centered on redefining NCAM's mission, objectives, and operational capacity.

Songs of Nubia. A Communal Language for a Life that Once Was, and a Persisting Struggle for Identification

Armgard Goo-Grauer

Alia Mossallam

This paper looks at songs as both a language and an archive for a Nubia that was lost and drowned with the building of the Aswan High Dam in 1964, and the experience of the displacement itself, which was barely documented from a Nubian perspective at the time. It conveys a glimpse into our project, “Soundscapes of Nubia”, exploring songs and their transformation as both ‘intimate everyday communal languages’ in the 1960s, and as a means of mobilising Nubian language and identity in the present.

We are two women taking a transgenerational approach, having both done ethnographic field work in Nubia; Armgard Goo-Grauer in the former villages during the early 1960s, and Alia Mossallam for her research in greater Aswan in 2011. We met to listen together to the songs we documented and to exchange, amongst ourselves and with Nubian colleagues and friends, what these songs preserve that has been lost with the building of the High Dam.

Many of the songs sung in the 1960s as folk songs, love songs, songs relating to the Nile and surrounding nature, can help to understand Nubian life and culture before the Dam. They reflect aspects of the everyday world, while women did housework, while children played and while men migrated away from home for work. With the introduction of the transistor radio into Nubian villages, details of the Aswan High Dam and Nasser's Arab Nationalist project trickled into the songs, making them vehicles for communicating state propaganda in relation to the Dam. These songs reflect the emotions linked to this critical event: disbelief, sorrow, compliance, hope for a better life and, later, also bitter disappointment and anger that resulted from the move.

In this paper, we present four songs in Kenzi, Fadija and Arabic that hold historical significance and ask what notions, lifestyles and understandings of the world lie within the folds of these songs? While the songs document

the history and experience of Nubia, displacement and perseverance over the last six decades, how are they presently linked to the compelling question of what it means to be Nubian?

The Impact of Nubian Song on the Culture of Resistance

Khalid Massa

This paper focuses on examining the cultural and political role of Nubian songs in the context of struggle and resistance, exploring how music and songs became a means of expressing the concerns of Nubian society and conveying revolutionary messages in times of social and political upheaval. Through an analysis of selected examples of Nubian singing, the paper highlights the militant voice that resounds in the revolutionary street, embodying the interaction between art and resistance, between artistic creativity and collective consciousness.

The research is based on a cultural and linguistic approach, analysing song lyrics from two complementary perspectives – the language and artistic style of the song, and its political and social content – while monitoring the Nubian cultural symbols used to express identity and resistance. The paper also addresses the contribution of Nubian artists to the revolution and change, highlighting the efforts made to preserve Nubian heritage and convey its message across generations.

The study concludes that Nubian songs were not merely an artistic tool, but rather a means of cultural resistance that reflected the Nubian community's aspirations for freedom and dignity. It also points out that the active participation of Nubian artists in protests and revolutionary demonstrations gave the song a dual symbolic value, both artistic and national, and contributed to building a collective consciousness in support of justice and social change.

11. Perspectives on Nubian Art

A Broader International View of Fourth-Millennium Nubian Glyptic Iconography

Emma Glenister

The world of the late 4th millennium BCE was rich with exchange of goods and ideas. Scholars have long noted and studied the connections between Egypt, Syria-Palestine, Iraq, and Iran as documented in shared artefact types and iconographic motifs. However, other parts of Northeast Africa – particularly Nubia and the Sahel – have long been left out of this story, either treated as subsidiary to Egypt or ignored entirely. The glyptic and iconographic evidence available from Nubia during the Chalcolithic and Early Bronze Ages shows us that subordinating Nubia's involvement in international affairs to Egypt is a mistake. Nubian iconography of power during this period, expressed primarily through seals and incense burners, is better understood not primarily as Egyptianising. Instead, we should regard it as part of an international language of authority with which Egypt, Nubia, Syria-Palestine, Iraq, and Iran (and places further afield) were fluent. Moreover, seals and sealings with designs found in Nubia but not in Egypt (Shinn 2021, 60) can be understood as influenced by wider regional motifs. One featuring a design of an animal procession closely resembles examples from Choga Mish at the Iranian Plateau, while others bear designs that may draw on wider Sahelian motifs. This paper will view Nubian iconographic art and particularly its glyptic tradition through this international, rather than Egyptocentric, lens to arrive at a better understanding of late fourth millennium Nubia's role in the wider world.

Rhomboids on the Leather Girdle: Some Thoughts on 'the C-Group Rhomboid Design', and the Body as a Means to Visually Communicate Social Agency and Identity Amongst the People of Lower Nubia During the Late 3rd and Early 2nd Millennia BCE

Uffe Steffensen

At C-Group burial sites in Lower Nubian areas, such as Serra East, Aniba Noth, Tumas and Adindan, there are cases of leather girdles adorned with embroidered beads in rhomboid patterns using ring-beads of ostrich egg-shell, carnelian and faience, which were placed around the pelvis of the deceased. The preferred colours for the beads used in these embellished rhomboid-designs were mostly blue, red, green and white. Similar decorative themes of rhomboids were used as incised decorations on C-Group clay figurines and on their pottery, as well as

tattoo marks – the latter found on individual bodies in a number of C-Group burial grounds in Lower Nubia and Upper Egypt, for example at Kubban and at Hierakonpolis.

In the ethnographic records of pastoral populations in East Africa, it is well established that certain decorative themes serve not just as ornaments but, in addition, often have symbolic meaning. Thus, the person wearing the garment is visually communicating her or his social agency and wider identity and, by doing so, establishing, maintaining and reproducing specific social positions, such as age and gender, to both other members of hers/his own community and to people from outside the community.

In viewing these representations of ‘rhomboid designs’ in the C-Group material through an ‘ethnographic prism’ – whether as beadworks applied on leather girdles, as tattoo marks, or as incised designs on ceramic objects – we may come closer to understand the body as a means to display symbolic and social agency in bronze age Nubia.

Reassessing Kushite ‘Archaism’

Carl G. Elkins (LMU Munich)

Kushite art of the Twenty-fifth Dynasty has long been characterised as ‘archaizing’, a label that implicitly frames it as backward-looking and ideologically conservative. This paper challenges that narrative by re-situating Kushite sculpture within a continuous archaizing tradition that had already taken shape in the late Libyan Period, and by reframing this tradition as a distinctly modern phenomenon. Over the course of the eighth century BC, Egyptian artists and patrons fused elements drawn from the Old, Middle, and New Kingdoms into newly configured visual languages that articulated contemporary identity rather than mere nostalgic revival. The Kushite rulers did not seek to resurrect a dormant past, as the traditional narrative would suggest, but rather adopted a living artistic vocabulary that was already widely understood as current throughout Egypt. Their engagement with earlier styles reflects not only historical consciousness but also an acute sensitivity to audience perception within a competitive monumental landscape. Under conditions of foreign rule, appearing recognisably modern was essential to political legitimacy: visual continuity signalled belonging, while selective innovation articulated contemporaneity. By examining Kushite art as part of a seamless, evolving tradition rather than a stylistic rupture, this paper argues that ‘archaism’ in the Twenty-fifth Dynasty functioned less as an act of retrospection than as a creative strategy of modernity. The Kushite case thus invites broader reflection on how foreign rulers deploy historical depth not to retreat into the past, but to assert relevance, authority, and cultural fluency in the present.

Anchoring Past and Present. Statues, Space, and Memory in Thebes

Patrizia Heindl (LMU Munich)

The statues of Monthemhat, mayor of Thebes and a central figure of the Twenty-Fifth Dynasty, form an exceptional corpus for exploring strategies of presence and memory in a Theban landscape shaped by Nubian rule. Nineteen statues have been identified from contexts both inside and outside the Karnak temple complex, varying widely in type, scale, and material. Although many are regarded as canonical works of Late Period art, their significance lies less in formal analysis than in their spatial, textual, and ritual contexts.

This paper examines the distribution of Monthemhat’s statues within the Theban cultic landscape, focusing on their placement in sacred space, the intertextuality of their inscriptions, and the modes of interaction they were designed to elicit. Reconstructions of the find contexts point to a close relationship between the installation of these statues and the building activities at Karnak during the Twenty-Fifth Dynasty. At the same time, Monthemhat’s sculptural presence extended beyond Karnak into the wider Theban area, reaching as far as Deir el-Bahari.

A comparative analysis of titulary and display strategies across different locations reveals a deliberate modulation of visual and textual elements in response to specific cultic settings. These observations invite a reassessment of Monthemhat’s role in Theban ritual life and raise new questions concerning the performance of Sokar rites under Nubian rule, highlighting the statues’ function as enduring agents of presence and cultural memory.

Eternal Faces: Reading So-Called Meroitic Ba-Statues

Jalina Tschernig (University of Münster; Gustav-Lübcke-Museum Hamm)

So-called Ba-statues of the Meroitic period represent a well-known, but so far only insufficiently researched, phenomenon of Meroitic burial practices. Characteristic of this type of statue is the depiction of a human being with bird wings, although in rare cases the torso and lower extremities are also rendered as those of a bird. Despite

numerous archaeological finds, the question of their specific function and meaning remains uncertain: did they primarily serve as individual soul representations (ba), as intermediaries between the living and the deceased and/or the afterlife, or did they have an entirely different function? Previous interpretations often rely on analogies to Egyptian examples, while local innovations and their socio-religious relevance have been systematically neglected.

This presentation is based on the results of a comparative analysis of the iconography of all known finds of so-called Ba-statues, both complete statues and fragments, which was conducted as part of an ongoing doctoral thesis. Although local sandstone was the predominant material used, the so-called Ba-statues exhibit remarkable variability in quality and design. The focus is therefore on formal characteristics such as posture, gestures, clothing, hairstyle, jewellery, and specific attributes, as well as their variation depending on the find context and chronology. However, a detailed analysis also raises new questions: what meanings can be derived from recurring gestures and symbols? To what extent do they reflect social hierarchies, ritual roles, or political ideology? The reliability of these interpretations is also a central question, since contextual information and sometimes even the objects themselves are only available in fragmentary form. Finally: what conclusions can be drawn from this regarding the question of the function of the statues?

Gifts for the Kings: Allegiance, Diplomacy and the Exchange of Precious Materials in post-Meroitic Nubia

Axel Martin (École Pratique des Hautes Études)

Post-Meroitic sources provide accounts of gifts exchanged between the entities that succeeded the Kingdom of Kush. These accounts are part of the broader context of relations between the principalities that shared the Middle Nile Valley.

These relationships could be between neighbours, enemies, or between a tributary and their overlord within a confederation. Gifts are mentioned in the context of post-conflict negotiations. The first example dates back to around AD 350, during the campaign of King Ezana of Axum, when Nubian ambassadors – who were ultimately considered spies and executed – brought gifts to the Axumite ruler. Around AD 450, in Lower Nubia, the Blemmyan king Phonen attempted to recover his lost lands through negotiation. His letter to his Nobadian counterpart, Abourni, mentions gifts such as cattle, camels, and also silver sent to the Nobadian king at his request. As evidenced by the artefacts from the royal necropolis of Ballana, this metal was valued by the Nobadians.

Other gifts are mentioned in the context of relations between a tributary and his overlord. The oldest evidence is the inscribed bowl of El-Hobagi (c.AD 350-400). The Meroitic hieroglyphic text indicates that this object was presented by a Nubian lord (mek) to his king (qore). In the early fifth century AD, the inscription of the Blemmyan monarch Kharamadoye shows how this ruler reorganised Lower Nubia. It mentions the gifts bestowed upon his allies and tributaries to secure their support.

In light of this information, connections can be made with material from post-Meroitic aristocratic, but not royal, necropolises. Some precious objects can be considered as potential gifts or donations. This research aims to understand the diplomatic and political relations in Late Antique Nubia. It provides information on the taste, style, and materials valued at this time. This allows us to understand the importance given to certain types and techniques of local or imported artefacts. Art history and object studies allow us to develop a perspective on the post-Meroitic period, complementing the paucity of written sources.

Power and Public Space

Karel Innemée (University of Warsaw)

Dobrochna Zielinska (University of Warsaw)

Religion in ancient times, unlike today, was not a matter of personal conviction and piety, but a binding element in society. Religious dissidence placed an individual outside this society and in this respect was similar to political opposition. This communal cohesion was manifest in participation in religious festivals and the venues would be temples, and later, churches. The unity of the community was not just a religious matter, but an important instrument for rulers to keep control over society, especially in the case that this ruler presented himself as appointed by or even representing (a) god. For this reason, temples were important venues and the iconography of their decoration was an important medium of communication between religious and civil authorities on one hand and the community on the other hand. After the collapse of the Meroitic empire, temples may have continued to function, but not anymore in the context of a central state authority. The conversion to Christianity implied that divine kingship and state-controlled religion returned, albeit under another guise. One of the main differences

between the cultic practices of Christianity and the Meroitic religion was the fact that a temple was not accessible for the common citizen, while the church building is the meeting place *par excellence*. Where the outer walls of a temple carry images as a medium of communication concerning power and authority, this function is taken over by the interior walls of churches. This paper deals with the iconography of power in public space, comparing the Meroitic and medieval periods.

Architectural Detail in Nubian Churches

Maria Czarnecka (Polish Centre of Mediterranean Archaeology, University of Warsaw)

This research presents a comprehensive analysis of the architectural detail of churches in medieval Nubia (modern-day Sudan and southern Egypt) between the 6th and 14th centuries, based on selected architectural examples.

The research focuses on the typology of architectural detail and the symbolism of sculptural motifs. Various types of Nubian churches were analysed to capture changes in the type and quantity of stone details used, as well as changes in the motifs used. The research also includes an analysis of the range of different interior decoration methods in Christian churches. An interdisciplinary approach was adopted to obtain a comprehensive picture of the specificity of detail in Nubian architecture.

The presented results are part of the research project “Kyriakósoikos? Diachronic conceptualisation of the space and function of Medieval Nubian churches” which aims to answer questions about the form, function, and concept of the church in Nubia between the 6th and 14th centuries AD, as well as to understand how liturgical and social changes influenced the development of sacral architecture in this region.

From Excavation to Care: Building a Conservation Care System at Old Dongola, Sudan

Magdalena Skarżyńska (Polish Centre of Mediterranean Archaeology, University of Warsaw)

Old Dongola, the medieval capital of the Kingdom of Makuria, is one of the most significant archaeological sites in Northeast Africa, investigated for over sixty years by the Polish Centre of Mediterranean Archaeology, University of Warsaw. Excavations have revealed an exceptional concentration of mudbrick architecture and richly decorated churches, monastic complexes, and monumental buildings with wall paintings preserved in situ. These discoveries, while of outstanding historical and artistic value, expose the site to complex conservation challenges.

The presentation addresses the development of a conservation care system at Old Dongola from 2018, understood not as a set of isolated interventions but as an integrated framework embedded in archaeological practice. Particular attention is given to preventive conservation, interdisciplinary documentation, material analysis, and condition monitoring conducted alongside excavation. Case studies include conservation works in the Church of the Archangel Raphael, the NB2 church, the Throne Hall, and uncovered painted complexes such as the apse of the Great Church of Jesus.

The discussion highlights how climatic factors: extreme temperatures, humidity fluctuations, and episodic heavy rainfall combine with logistical constraints and political instability to accelerate material degradation. Against this background, the Dongola experience is used to critically examine the relationship between conservation and archaeology and to question whether an “ideal” conservation model can exist, or whether sustainable heritage protection must always be shaped by site-specific, environmental, and institutional realities.

Symbolic Elements in the Arts in the Christian Sudanese Nubia: Case Study (Paintings Displayed at Sudan National Museum)

Sabah Ahmed Elsadig

Art is one of the ‘ABCs’ of human nature. It is a human activity emanating from mental actions which crystallised in activities that rely on the aesthetic elements characteristic of specialists who are more often than not working in a certain social situation.

This paper aimed to shed light on murals which represent one of greatest artistic phenomena in the Nubian Christian era and bear symbolic implications used by the Nubian artist to simplify abstract philosophical ideas in the Christian doctrines. The paper adopts a historical, analytical and descriptive approach, availing itself of Arab and foreign references on the painting under study at the Sudan National Museum.

The study concludes that the Nubian artist used several symbols such as the fish, the dove and the cross, a symbol of Christianity, which has turned into a tool of salvation instead of being a tool of torture. The cross was depicted as triumphant on all paintings in the Nubian churches. Furthermore, the painting of Christ in the middle of the cross surrounded by the creatures of revelation is one of the rare painting with no match outside the Christian Nubia.

The murals also highlighted that Nubian art was affected by expatriate arts, but stuck to Nubian customs and traditions and is thus considered a realistic form of art. In this paper I will discuss some of the symbols in some paintings.

12. Inventory Damage and Risk Assessment of Museums

From Assessment to Action: Protecting Museum Collections amid Instability in Khartoum

Rihab Khider Elrashed Taha (Antiquities Inspector, NCAM)

Gamal Mohammed Zein Elabdeen Hamza (Senior Museum Technician)

Following the liberation of Khartoum, the Damage, Risk, and Museums Security Assessment Committee undertook an urgent mission to secure and evaluate the condition of Khartoum's museums.

The Sudan National Museum was found in severe disarray. Artefacts were scattered across the garden and main hall, multiple shells and unexploded ordnance were present on the grounds, and projectiles had impacted and penetrated the galleries, shattering glass display cases.

The main storage area was in a critical state with hundreds of objects displaced and obstructing movement, while the gold storage had been completely looted. Additional destruction affected storage magazines that suffered fire damage. The roofs and surrounding glass of the temples in the outdoor garden were shattered, leaving them exposed to heavy rains that caused further deterioration of their walls.

The Committee's response unfolded in three phases:

Phase I- Emergency protection and initial assessment: entrances were secured, displaced objects were retrieved and moved inside, the tourism police were called to provide immediate security, and unexploded ordnances were removed.

Phase II- Organisation, stabilisation and further protection: extensive efforts were dedicated to identifying and returning objects to their areas, outdoor temples were stabilised using temporary zinc-sheet coverings (supported without causing structural harm) to protect exposed monuments from rain.

Phase III- Documentation, inventory and conservation (ongoing): This includes object-by-object condition assessments, verification against surviving registers, updating official records and the creation of a new database to support conservation, recovery and restitution efforts.

The methodology includes defining the scope of work, identifying surviving artefacts, cross-checking with available inventories and archival photographs, documentation of each object digitally with precise location and condition, and producing a provisional list of missing items. This paper presents the Committee's methodology, field experience, challenges, and ongoing efforts to protect and document the museum's collections in the midst of conflict and instability.

Post-Conflict Inventory of a War-Affected Museum Collection

Altaieb Abdelsalam Abdalla (National Corporation for Antiquities and Museums, Department of Museums)

Saddam Hassan (National Corporation for Antiquities and Museums, Department of Museums)

This paper presents the results of a post-conflict inventory of a museum collection that survived war-related destruction and looting. The study documents the condition, provenance, and completeness of the remaining

objects, identifying losses, damage, and post-war alterations to the collection. Using systematic inventory methods, archival comparison, and object-level assessment, the research highlights the challenges of reconstructing museum records in the aftermath of armed conflict. The paper also discusses ethical, legal, and practical issues related to missing objects, undocumented transfers, and the long-term preservation of vulnerable collections. This paper examines a post-war inventory of a museum collection affected by destruction and looting during armed conflict. It documents surviving objects, assesses losses and damage, and analyses the methodological challenges of reconstructing incomplete museum records. The study emphasises the importance of systematic documentation in post-conflict heritage recovery and museum accountability. By analysing inventory process, the study contributes to broader discussions on cultural heritage protection, post-conflict recovery, and the role of museums in documenting loss and resilience after war.

The Importance of Paper Records in Protecting Museum Collections: Khalifa House Museum as Case Study

Nimat Mohammed El Hasan (National Corporation for Antiques and Museums; Member of Committee for Inventory Damage and Risk Assessment Securing of the Museums and Archaeological Sites in Khartoum State)
Osman Alfadel Babikr Basheer (National Corporation for Antiques and Museums; Curator of Khalifa House Museum; Member of Committee for Inventory Damage and Risk Assessment Securing of the Museums and Archaeological Sites in Khartoum State)

This paper examines the crucial role of paper records in safeguarding museums and heritage collections during periods of conflict, with a focus on the losses that occurred during the April 2023 war, using the “Khalifa House Museum” as a case study. While digital documentation provides valuable support, paper inventories remain an essential tool for tracking the movement of artefacts, verifying collection, and identifying missing items when electronic access is interrupted.

Through an analysis of collection management practices before and after the conflict, the study demonstrates how well-maintained paper records enabled rapid assessment of damage, accurate identification of displaced or stolen objects, and informed planning for post-war recovery. The paper calls for integrated documentation strategies that prioritise the maintenance, copying and regular updating of paper inventories as a key element of risk preparedness for cultural institutions operating in fragile environments.

Financial Insurance and Risk Management for Antiquities and Museums in Sudan

Balsam Abdelhamed Ahmed Shukal Elgarih (National Corporation for Antiques and Museums)

This paper examines the critical role of financial insurance in safeguarding Nubian antiquities, museum collections, and heritage workers in Sudan, particularly under conditions of conflict, theft, and institutional fragility. Unlike general risk management, the study focuses on direct financial protections, including compensation for losses, emergency response, and occupational safety for heritage staff.

Using a comparative analytical approach, the study reviews international practices in Italy, France, Iraq, Syria, and the United Kingdom, emphasising practical measures for ensuring that museums, archaeological sites, and personnel are financially and institutionally protected. The Sudanese context is then analysed, highlighting major vulnerabilities: looting of Nubian archaeological sites, fragile museum infrastructure, inconsistent preservation systems, and absence of legal or contractual insurance for staff.

The paper proposes an integrated, finance-focused insurance model for Sudan that prioritises: financial protection for artefacts and museum infrastructure, health and occupational coverage for heritage workers, emergency response planning, and financial compensation mechanisms. Additional measures include digital documentation of collections, establishment of an emergency cultural fund, and engagement with insurance providers and civil society to ensure sustainability.

By centring on tangible financial protections, this study demonstrates how financial insurance can secure Nubian heritage, support the workforce, and strengthen institutional resilience, offering actionable recommendations for policymakers, museum administrators, and heritage professionals in Sudan and similar contexts.

13. Cultural Heritage Protection in Conflict Situations: The Case of Sudan

Bridging Archives: Digital Strategies for Preserving and Advancing Sudanese Cultural Heritage in Times of Crisis

*Gilda Ferrandino
Elena D'Itria*

Ongoing armed conflicts result in unprecedented devastation to cultural heritage worldwide. This crisis has necessitated a fundamental re-evaluation of archaeological and heritage preservation priorities, shifting focus from traditional fieldwork to emergency conservation and digital documentation strategies.

This paper examines the critical role of digital archives and research infrastructures in safeguarding Sudanese archaeological heritage during periods of armed conflict. Drawing from the ITSERR (Italian Strengthening of the ESFRI RI RESILIENCE) project, we present a comprehensive review of existing digital archives related to Sudanese antiquities, analysing datasets maintained by European and non-European institutions, international archaeological projects, and Sudanese heritage organisations. Our survey reveals significant heterogeneity in the production, management, and accessibility of these archives, with substantial datasets remaining isolated on individual researchers' hard drives or embedded within larger institutional collections without standardised formats.

The research identifies key challenges in locating, integrating, and sharing archaeological data across platforms, while proposing solutions through the aggregation of diverse datasets within unified research infrastructures. We explore how establishing interoperability between disparate archives can enhance accessibility, facilitate cross-platform analysis, and enable continued scholarly work despite restricted physical access to sites and materials.

Digital humanities methodologies and research infrastructure development can provide essential support to heritage preservation in conflict zones, ensuring a form of continuity of archaeological knowledge and facilitating post-conflict reconstruction initiatives. The aggregation and digitisation of Sudanese cultural heritage may be important for reconstruction efforts, creating a foundation for tracing looted artefacts and reconstructing the fragmented narrative of Sudan's rich historical legacy.

Funded by the European Union- Next Generation EU, Mission 4 Component 2 CUP B53C22001770006. Click for website: [ITSERR – ITSERR \(Italian Strengthening of the ESFRI RI RESILIENCE\) is an interdisciplinary and distributed Research Infrastructure for Religious Studies, designed to support the existing European RESILIENCE-RI and national infrastructures and bring it to a higher level of maturity.](#)

From Site to Nation: Digital Strategies for Emergency Protection of Sudanese Archaeological Heritage

Intisar Soghayroun

Sudan's ongoing conflict has resulted in the loss, dispersal, and inaccessibility of archaeological objects, archives, photographs, and libraries, creating an urgent need for comprehensive digital safeguarding strategies. This presentation is a continuation of the discussion held during my research fellowship at Napoli L'Orientale between April and May 2025. Using the archaeological site of Al Khandaq as a case study, this presentation introduces digital documentation methodologies applied before and after the outbreak of war. These include photogrammetry, spatial recording, and mobile phones, as tools for heritage resilience under crisis conditions.

Building on this experience, the presentation proposes the creation of a centralised, conflict-resistant digital portal for Sudanese archaeology. The platform would gather dispersed archives, museum collections, exhibition records, photographs, and academic publications held by museums, universities, and research institutions worldwide. By consolidating existing and newly generated data, the portal aims to mitigate irreversible loss, support emergency research and conservation, and ensure access for Sudanese scholars and displaced communities. The proposal emphasises collaborative governance, ethical data sharing, and international cooperation as foundations for sustainable, transferable emergency heritage protection.

The Role of Shendi University's Department of Archaeology in Protecting Cultural Heritage in the Shendi Region amid Armed Conflict

Fatima Idris (Department of Archaeology, Faculty of Tourism and Archaeology, Shendi)

This paper reviews the experience of the Department of Archaeology, Faculty of Tourism and Archaeology, Shendi University, in safeguarding cultural heritage sites in the Shendi region of central Sudan amid the exceptional circumstances posed by the ongoing armed conflict. The study examines the department's integrative approach, which combines academic research community engagement, digital documentation, and institutional collaboration. This approach is reflected in targeted media campaigns, educational programmes, student-led initiatives, and participation in national and international workshops on risk assessment and heritage protection and the opening of the West Bank Archaeological Museum, inaugurated in 2025, which provides a physical platform for preserving and displaying archaeological collections in the region.

The paper highlights how these combined efforts have contributed to developing an effective local model for heritage preservation despite limited resources and security challenges. It also examines the department role in enhancing public awareness of cultural heritage, advancing scientific and technological tools for documenting at-risk sites, and proposing context-appropriate strategies for heritage management during conflict. The study concludes by emphasising the importance of supporting local academic initiatives and expanding partnerships to ensure the long-term preservation of Sudan's cultural heritage.

Digital Preservation of Sudanese Heritage: Emergency Database, Strategies for Conflict Zones

Niama Kamal Adam Sabel (National Corporation for Antiquities and Museums)

The ongoing conflict in Sudan has placed the country's archaeological heritage in unprecedented danger, requiring urgent and innovative solutions to protect its material cultural heritage. This paper examines the establishment of a comprehensive database to document and protect Sudanese archaeological sites in the midst of war, while the documentation serves as a fundamental cornerstone of scientific research. By integrating geospatial mapping, historical records, and artefact inventories, the database provides a robust tool for monitoring the condition of sites, assessing threats, and coordinating emergency response. Collaboration with international stakeholders, including ICCROM FAR and institutions such as the German Archaeological Institute (DAI), strengthens this initiative by providing technical expertise, advocacy and capacity-building support. The project emphasises digital archiving, real-time data collection and community engagement as critical pillars for promoting resilience and preserving cultural heritage. This study contributes to the global discussions on cultural heritage management in conflict zones by proposing a scalable and collaborative framework for cultural heritage protection in times of crisis.

14. Multi-Stakeholder Comprehensive Safeguarding of Cultural Heritage during Times of Conflict and Climate Change

The Plan of el-Khandaq. The History of the Town Layout

Isabella Welsby Sjöström

One of the focal points of the work at el-Khandaq has been creating a plan of the town, using rectified Google Earth imagery. The oldest standing buildings (apart from the fort) may date back as far as the late 18th century AD, but the settlement has grown organically over generations, up to the present. Over several short seasons the satellite imagery has been turned into a digital plan and this has been ground-truthed extensively. Every effort has been made to mark the older walls, identifiable by the use of different brick sizes and building styles, thus gathering information on the layout and its development over time. To better understand the buildings and the development of the architecture, the accounts of travellers have been consulted. This has included a sketch by Linant de Bellefonds from the early 19th century and photographs, mostly held in the Sudan Archive at Durham University, from the late 19th and early 20th centuries. Such imagery and the plan itself are particularly important in view of the vulnerable nature of the mudbrick architecture and modern redevelopment. The information gathered will eventually be combined with the ethnographical and historical information collected by Prof. Intisar Soghayroun and other members of the team.

Safeguarding Al Khandaq: Heritage, Displacement, and Climate Risk

Intisar Soghayroun

The archaeological site of Al Khandaq (UNESCO Tentative List) in northern Sudan illustrates the complex challenges of safeguarding cultural heritage in times of conflict and climate change. Recent displacement has led *Khanadqa* (people of Al Khandaq) to look for shelter within their home land, where most of the buildings are built of mud and earth plastered by *Jaloos* and have remained intact for centuries under arid conditions. At the same time, intensified rainfall and flooding associated with climate change now pose an unprecedented threat to these fragile remains, which were never designed to withstand prolonged exposure to water.

This presentation explores the tension between preserving the authenticity and integrity of Al Khandaq's historic fabric and addressing the urgent humanitarian needs of displaced populations who rely on traditional buildings for housing and survival. While heritage professionals highlight conservation and minimal intervention, local communities view these structures as living architecture essential for resilience and continuity. Thus, their need to shelters during war has led to dismantling some buildings and walls to use mud in mud brick manufacture, as well as climbing high areas of the fort looking for internet connection, and cutting trees to produce charcoal adding more to environment degradation.

Using Al Khandaq as a case study, this paper highlights the need for multi-stakeholder collaboration involving local communities, heritage authorities, humanitarian actors, environmental specialists, international partners and, above all, cultural heritage diplomacy in facilitating access, coordination, and international support. It argues for adaptive safeguarding approaches that integrate traditional knowledge, climate-responsive restoration techniques, and community participation, ensuring that cultural heritage protection does not come at the expense of human self-respect and survival, but rather supports both.

Better Utilisation of UNESCO's World Heritage Convention for Protection of Sudan's Cultural Heritage and Mobilising Support for that Objective

Futagami Yoko (Tokyo National Research Institute for Cultural Properties)

This presentation aims to discuss the potential of utilising the mechanisms of the World Heritage Convention, with a focus on Sudan-related topics at the 47th session of the World Heritage Committee.

The most important of these mechanisms should be reactive monitoring. In July 2025, at the 47th session of the World Heritage Committee, Sudan's archaeological sites—the Island of Meroe and Gebel Barkal and the Sites of the Napatan Region—were discussed among the state of conservation reports for 248 properties. Sudan's report on Meroe highlighted challenges; then, the Advisory Body of the Convention acknowledged Sudan's efforts, but emphasised the urgent need for financial support. Although no recent report was submitted for Gebel Barkal, UNESCO relied on consultations with Sudan's Permanent Delegation to UNESCO. However, given the urgent need to protect these sites, the Committee recognises that extensive support is required, including inscription on the List of World Heritage in Danger.

The Secretariat and the Advisory Bodies may provide Sudan with concrete guidance on how to better protect and utilise resources if they obtain sufficient information through the reactive monitoring mechanism. This will help Sudan understand how to allocate the World Heritage Fund to implement projects that mitigate the impacts of climate change and recent conflicts. The mechanism also provides guidance on how to share information among experts and stakeholders in Sudan. The reactive monitoring mechanism also provides Sudan with an opportunity to identify existing issues regarding the protection of its World Heritage sites by drafting state of conservation reports. The role of diplomats in Paris as mediators is also emphasised, with them playing a key part by sharing the insights they've gathered from experts with the Secretariat.

Diplomacy and Cultural Heritage Protection in Times of War: Reflections on Japan–Sudan Collaboration

Ali Mohamed (Deputy Head of Mission, Embassy of Sudan in Tokyo)

Naoyo H. Sekihiro (Senior Archaeological Director at Kyoto City Archaeological Research Institute)

Since the outbreak of the war in Sudan on 15th April 2023, cultural heritage sites and institutions have suffered extensive damage. Sudanese heritage professionals, including staff from the National Corporation for Antiquities and Museums (NCAM), began emergency protection efforts both within Sudan and abroad following their evacuation from war zones such as Khartoum.

Additionally, Sudanese diplomats have expressed their apprehension regarding the looting and destruction of heritage sites and have implemented measures to address the issue. It is important to consider this factor. For instance, after the RSF militia destroyed and looted priceless Sudanese heritage sites and artefacts, the Embassy of Sudan in Japan met extensively with cultural heritage related departments in Japan, such as the Tokyo National Research Institute for Cultural Properties and the related organisation, to request their kind assistance in protecting Sudan's cultural heritage.

In 2024, an online conference on living heritage took place. This was followed by another workshop in 2025 that brought together diplomats and cultural heritage safeguarding professionals. Furthermore, a high-level meeting is planned for February 2026 in Tokyo.

In July 2023, NCAM held a Situational Update meeting, where the emergency committee based in Cairo reported a visit to the Japanese Embassy in Egypt. Later, in February 2024, the Symposium on Museum Policies in Sudan: Challenges and Opportunities Amidst Conflict highlighted the importance of diplomacy in strengthening cultural heritage protection frameworks. However, delays in establishing communication channels and limited understanding of diplomatic working conditions remain challenges.

Drawing on long-term efforts to build collaboration between heritage experts and diplomats since 2007, this presentation reflects on Japan's experience in Sudan, including JICA-supported training for Sudanese museum professionals since 2018. It aims to clarify the current state of cooperation, identify key obstacles, and propose more effective models for international collaboration in post-conflict recovery.

Kassala Community Peace Garden to Promote and Understand Sudan's Intangible Cultural Heritage

Nobuhiro Shimizu (Hokkai-Gakuen University)

Amani Noureldaim (National Corporation for Antiquities and Museums; Minister of Culture and Information)

Elnzeer Tirab (National Ethnographic Museum)

Michael Mallinson (Mallinson Architects)

Helen Mallinson (Mallinson Architects)

Naoyo Sekihiro (Kyoto City Archaeological Research Institute)

Kassala Community Peace Garden is a significant and meaningful project undertaken to celebrate Sudan's diverse communities amidst the harsh realities of conflict. The project, which was implemented with involvement of multi-stakeholders such as national ministries, state government, and architects, displays traditional houses of several communities of Sudan and plan to create workshops and event spaces to promote Sudan's living heritage. It is expected that this project will be developed from both practical and research perspectives to revitalise Sudan's living heritage going forward.

Traditional houses have values as tangible structures, yet they also embody intangible values such as techniques and wisdom. Understanding traditional houses as intangible cultural heritage reveals how community peoples adapted to their local environment and climate, and also illuminates their lifestyles and social structures: technique, environment, society, and lifestyle are key concepts for understanding a community's traditional houses as intangible cultural heritage.

Consequently, Kassala Community Peace Garden possesses the potential to develop museum activities that utilise traditional dwellings to strengthen community bonds and promote mutual understanding among Sudan's diverse communities. Furthermore, the insights gained through this experience are essential for advancing research activities aimed at documenting and compiling an inventory of Sudan's intangible cultural heritage. This presentation serves as the kick-off for a project aiming to advance practical museum activities and academic research collaboratively.

Documenting Cultural Symbolism in the Heritage Peace Garden, Kassala, Sudan: Toward Sustainable Heritage Preservation in the Face of Climate Change

Elnzeer Tirab Abaker (Sudan Ethnography Museum – National Corporation for Museums and Antiquities)

This paper seeks to document and analyse the cultural symbolism embodied in the Heritage Peace Garden as an innovative model that combines the preservation of cultural heritage with the promotion of environmental awareness amid current climate challenges.

The study explores how the garden employs cultural symbols and heritage elements in its architectural and environmental design to convey meanings of peace, diversity, and coexistence. It also illustrates how systematic

cultural documentation can contribute to safeguarding local heritage from the impacts of climate change by reviving traditional knowledge systems that are environmentally adaptive.

The paper adopts a descriptive-analytical methodology, drawing on field observations and interviews with participants involved in the garden's design, alongside the analysis of vernacular architectural symbols, native plants, and environmental components that express the human–nature relationship.

15. Heritage Under Siege: War, Looting, and the Fate of Vulnerable Communities

Looted Heritage: Contested Values and Return Ethics

Ismail H. M. Elnour (Heritage Consultancy Centre, UK)

This paper examines the complex interrelationship between archaeological artefact looting, contested ownership claims, professional archaeological values, and community engagement in repatriation processes. The study investigates how different social groups – including source communities, archaeologists, private collectors, and institutional stakeholders – construct divergent frameworks for valuing archaeological materials and asserting ownership rights over looted artefacts. By analysing these competing perspectives, the research explores how such differences complicate ethical assessments of looting and shape varying levels of community participation in repatriation efforts.

Central to this investigation is the role of private buyers operating within global auction markets, whose acquisition practices perpetuate demand for illicitly obtained archaeological materials while operating within legally ambiguous commercial frameworks. The paper examines how the private art market intersects with issues of cultural heritage, revealing tensions between commercial valuation systems and archaeological, cultural, and community-based value frameworks.

Through comparative analysis of stakeholder perspectives, this research demonstrates that conflicts over archaeological values and ownership claims are not merely legal or administrative disputes, but represent fundamental disagreements about cultural authority, historical interpretation, and the right to determine the fate of material culture. The study further reveals that engagement levels in repatriation processes vary significantly across different social groups within affected communities, influenced by factors including power dynamics, access to legal resources, cultural proximity to disputed objects, and the perceived legitimacy of competing claims.

By illuminating these multifaceted conflicts, the paper contributes to ongoing debates surrounding cultural property rights, heritage management ethics, and the social responsibilities of collectors, institutions, and markets in addressing the legacy of archaeological looting.

The Emergency and Response Committee, A First Step Towards Resilience

Niama Kamal Adam Sabel (Coordinator, NCAM Emergency Database)

Rehab Ismail El Faki Ismail (NCAM Emergency Response Committee)

Amid the escalating challenges facing the Sudanese heritage and museum sector in recent years, the need for an effective mechanism for emergency response and cultural heritage protection has become increasingly urgent. With the expansion of armed conflict and the direct threats posed to museums, archaeological sites, and heritage collections, operating from outside Sudan became essential to ensure the continuity of institutional work in documentation, monitoring, and coordination with international partners.

In this context, the establishment of the Emergency Response Committee – Coordination Office in Cairo – emerged as a critical operational platform affiliated with the regional offices in ground in Sudan. The office plays a central role in supporting national efforts to safeguard Sudanese cultural heritage by providing a secure environment for work, coordinating heritage relief activities, and facilitating communication between specialists, regional and international bodies. The office represents a strategic step towards strengthening the preparedness of Sudanese heritage institutions in crises and ensuring the continuity of monitoring, documentation, awareness-raising, and capacity-building activities despite the complex conditions inside Sudan.

This scientific paper examines the origins of the office, its operational structure, and documenting its activities from 2023 to 2025. It also assesses its impact on the cultural heritage emergency management system, challenges and key lessons learned, and discusses future prospects for enhancing its role in safeguarding Sudanese heritage during and after periods of conflict.

From Casualties of War to Pillars of Peace: A Community-Centric Framework for Post-Conflict Heritage Recovery in Sudan

Mohamed Bashir (University of Khartoum)

Since the outbreak of conflict on 15th April 2023, Sudan's cultural heritage has faced existential threats, including systematic looting, physical destruction, and the displacement of heritage professionals. The current crisis has exposed the limitations of centralised, top-down conservation models – such as the 1999 Antiquities Ordinance – which lack the ethical guidelines and community integration necessary to withstand the chaos of war. This paper presents the “Sudan Cultural Heritage Post-War Recovery” initiative, a comprehensive roadmap aimed at transitioning the sector from devastation to sustainable recovery.

Drawing on a forthcoming series of scholarly analyses and community assessments, this presentation argues that the physical protection of tangible assets is insufficient without empowering vulnerable communities. In this talk, I propose a paradigm shift from global, external values to local interests, asserting that recovery must be community-led to be effective. This includes practical strategies such as establishing a “Heritage Rangers” corps to professionalise local stewardship, and integrating folklore and oral narratives with scientific data to preserve cultural identity.

Furthermore, the urgent need to restructure the academic landscape of Sudanese archaeology will be addressed, including advocating for resilient educational methods and a new code of ethics that prioritises respect for human remains and community custodianship. By redefining heritage preservation not merely as conservation, but as a mechanism for social healing and peacebuilding, this framework seeks to transform the grief of loss into a shared commitment to rebuilding Sudan's identity and future.

Indirect Impacts of the War in Sudanese Nubia, The Case of Tombos

Stuart Tyson Smith (University of California, Santa Barbara)

The village of Tombos and the archaeological sites nearby have (thankfully) been spared the direct impacts of military activity, with the exception of objects placed in the Sudan National Museum in Khartoum that were likely looted by RSF forces. Instead, pressure on archaeological resources comes in the form of refugees from the fighting in Khartoum and central Sudan, primarily relatives returning to their ancestral home and being (re)incorporated into existing extended families. This development in turn has spurred more construction of houses and expansion of cultivation to meet the needs of a growing population that threatens cultural heritage. Western archaeologists can play an important role at sites like Tombos by remaining engaged with local communities and being willing to assist by providing resources (mainly financial) to ensure that sites are monitored. In this way, reasonable accommodations can be made that meet the needs of local communities while protecting cultural resources. This paper will discuss the ongoing efforts of the UCSB-Purdue University Archaeological Mission from before and after the beginning of hostilities aimed at protecting the archaeological resources at Tombos and adjacent sites, as well as thoughts about the looting of objects from our excavations at the National Museum.

Archaeological Sites in Sudan After and During the April 2023 War. Natural and Human Factors – Threats, Solutions and Future Outlook. A Case study from the Zuma Site, Northern State

Mohammed Eltoum Mohammed (National Corporation for Antiquities and Museum)

The civil war that erupted in Sudan in April 2023 created a new reality marked by the displacement of millions of Sudanese people, both internally and externally, as they searched for safety and stability and fled the conflict. This situation introduced new dynamics that have directly and indirectly affected archaeological sites across Sudan, including Darfur, Kordofan, Blue Nile State, White Nile State, River Nile State and Northern Sate in the area where I lived now.

Most of these archaeological sites have been subjected to looting and vandalism. In addition to attacks by the local population, many sites have been damaged or destroyed by armed forces who used some of these sites as military training barracks, such as Zuma, and have used anti-aircraft missiles at the Tangasi site. The war has led to

internally displaced people seeking refuge, and one of the most pressing challenges facing these sites is the urgent need of millions of families for shelter for themselves and their loved ones, in addition to the shortage of designated burial grounds for the large number of deaths resulting from the ongoing violence.

The archaeological site of Zuma is among those affected by this new situation. Individuals began using parts of the site to bury their dead, prompting some to consider converting part of the site into an Islamic cemetery. The site also faced another issue involving the Polish archaeological mission working there. Although the mission submitted a plan to register the site and received approval, a full perimeter wall was never constructed, with only part of the site was fenced. This partial protection led to a section of the site being allocated as residential land. However, this was insufficient for the increased demand owing to the war, as encroachments on the site continued due to the lack of a complete boundary wall.

Another serious issue is the use of the site's open spaces by the Sudanese Armed Forces as training grounds for troops participating in the ongoing war. Additionally, the site's protective zone has been frequently violated, adding to the growing list of concerns. Climate change presents yet another challenge, with rainfall levels increasing beyond normal, posing a new threat that must be addressed to safeguard the site.

This study is not only about the Zuma site but aims to propose a vision and new plans to manage and preserve archaeological sites in Sudan during and after the end of the April 2023 war, suggesting both short-term and long-term strategies to address the current situation and the direct and indirect impacts on archaeological heritage. Moreover, it highlights the necessity of a comprehensive conservation plan developed in cooperation with foreign missions in Sudan that hold rights to archaeological survey, excavation and restoration, under the supervision and management of the Sudanese National Corporation for Antiquities and Museums.

Protecting Cultural Heritage and Supporting Affected Communities During the War in Sudan: Experiences, and Facts from Meroe Pyramids Site

Mahmoud Suliman Bashir (General Director of NCAM)

The pyramids of Meroe stand as one of the most significant monumental sites in Sudan and serve as a profound symbol of Sudanese identity. The pyramids site is the most attractive site for domestic and international tourists, and the site that welcomed the most visitors before the start of the war on 15th April 2023.

The current conflict in Sudan has both direct and indirect impacts on the archaeological sites of the Island of Meroe UNESCO World Heritage Site, and on Meroe pyramids site in particular, as well as the community around it which relies economically on providing services at the site.

Several appeals were sent to both the national and international community to urgently draw the attention to the dire situation facing these archaeological sites. Positive response to our appeals from international society and committed individuals allow the implementation of urgent safeguarding measures at the site, and assisted the protection, conservation, and management of antiquities in the region.

Considering the current circumstances in Sudan, the preservation condition at the Meroe pyramids remains perilous and presents a clear problem facing managing the site. It is important to note that all the most recent management programmes and activities were funded by the Qatari Mission for the Pyramids of Sudan (QMPS). Then, at the end, or postponement, of the project all the uncompleted achievements have become serious problems, with the site now faced with real challenges. In fact, the running and maintenance of what has been done by QMPS has now become one of the main problems to be addressed.

The Impact of War and Mining Projects on Tangible Heritage in the Central Butana Region of Gadarif State Eastern Sudan

Fakhri Hassan Abdallah Hassan (National Corporation for Antiquities and Museums)

Ammar Abkar Mohamed Idris (University of Gezira)

Gadarif State in the central Butana is rich in cultural heritage, with a wealth of archaeological and historical sites, while its diverse ethnic traditions also showcase important intangible heritage among its modern communities. However, this region has received limited archaeological, anthropological, and historical attention. Several archaeological surveys were conducted in this region between 2010 and 2011, By the Department of Antiquities, Gadarif State which identified numerous ancient settlement sites and cemeteries, in addition to researching local cultural beliefs and practices. This heritage is now at particular risk from the destruction and looting of sites and

monuments as well as the disruption of cultural practices, traditions, and crafts, due to the current war and the expansion of mining projects.

This lecture will present these surveys, which previously have only been published briefly, and outline a new project to study and document the materials recovered during this fieldwork. We will review the NCAM excavations in 2022 in this area, and also explore the potential for strategic opportunities to protect the collective memory and cultural identity of the region's people. This is the first integrated academic work at the intersection of humanities and social studies to address the complex impacts of war and mining on tangible and intangible heritage in the Central Butana, making it a valuable source of original research in the field of heritage studies in the context of armed conflict. This project will ultimately highlight the archaeological and cultural significance of the central Butana region, and present a new strategic vision for protecting heritage in this important but little studied region.

The Impacts of War on Archaeological Sites and Historical Buildings in Khartoum State

Hisham Khidir Ahamed Karrar (Committee for Inventory, Damage and Risk Assessment and Securing the Museums and Archaeological Sites in Khartoum State)

Musa Elfdul Abdulla Eltayeb (Committee for Inventory, Damage and Risk Assessment and Securing the Museums and Archaeological Sites in Khartoum State)

Historical buildings and archaeological sites are among the most prominent archaeological units in Khartoum State. A historical building is defined as any structure left by previous civilisations and generations, and is considered an archaeological site according to the Antiquities Act of 1999. The archaeological buildings and sites in Khartoum State date back to different historical periods, with the oldest being the Khour Abou Anga, followed by the temples at the National Museum. Other ruins date back to the Christian period, the Funj Kingdom, the period of Turkish rule, the Mahdist period, and the Anglo-Egyptian Condominium.

This research aims to present the damage caused to these archaeological units during the war that broke out in April 2023, as well as clarifying the negative impacts on these buildings. Additionally, it seeks to identify the main causes of damage, whether direct or indirect. It is clear that some archaeological sites and historical buildings in central Khartoum were completely or partially destroyed due to bombing and clashes. They were also looted of cultural properties, and some deteriorated due to neglect and lack of maintenance, leading to the loss of cultural identity and a decline in the tourism environment. Therefore, specialised field studies have been conducted to preserve these sites and historical buildings, including colonial-era buildings and archaeological domes.

Due to the misuse of these archaeological units, they have been vandalised and destroyed as part of the conflict. Therefore, the damage should be addressed, and solutions should be sought from relevant authorities to preserve them and highlight the need for their protection.

Strategies to Protect Cultural Heritage and Support Local Communities in Conflict

Mohamed Faroug Ali (The Africa Institute, Global Studies University, UAE; International University of Africa, Sudan)

In this presentation, I propose and discuss a strategy that can be implemented to protect cultural heritage during the ongoing conflict and thefts in Sudan. Generally, local communities are integral in cultural heritage management and cannot be separated from the heritage. However, during conflict, governmental institutions became absent from the scene; economic decline and the need for alternative subsistence strategies make local cultural heritage vulnerable to looting.

Illicit trafficking and the international market and demands for cultural objects increase the risk of not only looting but also destruction of tangible cultural heritage, especially archaeological sites. Other factors include community displacements and mobility that have reshaped the demography of various regions in Sudan.

Drawing on the current turmoil in Sudan, I outline a community-centred strategy that links heritage protection with local support mechanisms. This includes not only emergency employment for safeguarding heritage but also placing looting and destruction of cultural heritage within the broader context of political instability and economic pressure in Sudan, rather than confining the ethical responsibility solely to local communities. This strategy is presented to protect cultural heritage and support vulnerable communities in current and future crises.

16. Sudan: Post-War Strategies for Cultural Heritage Preservation & Archaeology

Preventive Archaeology in Sudan: An Urgent Need for the Protection of Cultural Heritage

Roberto Murgano (T.R.A.E.S. Archeologia SRL)

Preventive archaeology is an essential discipline, though sometimes underestimated, for ensuring the protection and enhancement of a country's cultural heritage. In light of the current crisis, and future reconstruction, in Sudan, this contribution aims to emphasise the importance of introducing preventive archaeology practices in the country, through a regulatory and methodological framework that enables the identification, protection, and monitoring of archaeological sites threatened by urban and infrastructural developments.

The presentation will provide an overview of existing archaeological regulations in other countries, such as Italy, where the Ministry of Cultural Heritage has developed specific laws for the protection of cultural assets during construction and development works. It will discuss the scientific methodologies used for archaeological risk assessment, which allow for the identification of areas of potential interest and the definition of necessary protection levels. Furthermore, the importance of archaeological monitoring will be highlighted, as it should accompany any large-scale project, whether public or private, in order to prevent irreversible damage to historical heritage.

A Practical Model for Cultural Heritage Preservation and Conservation in Post-War Sudan

Elmontaser D. M. E. Elmoubark (National Corporation for Antiquities and Museums)

This paper was prepared in response to the challenges faced by the National Corporation for Antiquities and Museums (NCAM), in particular the Conservation and Restoration Department, with regard to the ongoing conflict and its repercussions for Sudanese heritage. To address these needs, I designed a new model for current and post-war conservation projects. I will present the model and thoroughly describe its most important components. Currently, NCAM requires the establishment of a framework for the implementation of any projects that aim to preserve and maintain monuments endangered or damaged as a result of the armed conflict in Sudan. The base for all the projects is laid out in national (particularly the 1999 Sudanese Antiquities Ordinance) and international law (e.g. The Venice Charters, The Valetta Conventions, Charters issued by UNESCO, ICOMOS).

In my presentation I will particularly emphasise the parts of the model that will be crucial in restoring Sudanese heritage after the war.

The first action that ought to be undertaken in post-war Sudan is damage assessment and documentation as well as establishing a conservation digital database. I will discuss how we should approach damage assessment appropriately and what the ideal digital database should contain (e.g. proposed restoration, maintenance, conservation projects, etc.).

I will also highlight the issue of conservation, presenting my recommended approach for NCAM and discussing possible solutions to ensure the preservation of gathered archaeological materials (adopting the newest approaches to managing restoration, preparing guidelines for national and international missions, tightening relationship with UNESCO).

A further crucial matter is storage. I will focus on steps that NCAM should undertake to ensure appropriate storage for Sudanese artefacts (e.g. developing and adopting a storage and documentation strategy, establishing new depositories adapted to the various types of archaeological materials, etc.).

Moreover, I will draw attention to the key factors in preserving our heritage in post-war Sudan, namely museums, public archaeology and social issues. The task that is awaiting NCAM and Sudanese Archaeology, will require precision, mindfulness and skill. I believe my model can ensure the proper framework, facilitate a professional approach and accelerate actions to achieve the common goal which is preserving Sudanese heritage – directly after the war and for years to come.

17. Adaptability and Sustainability: Climate Change from the Past to Present in Nubia and the Middle Nile Valley

Reconstructing the Holocene Landscape of Napata: Fluvial Dynamics, Floodplain Development and Surface Expression at Jebel Barkal

Jan Peeters (Jebel Barkal Archaeological Project)

Tim G. Winkels (WSP; Jebel Barkal Archaeological Project)

Pawel Wolf (Jebel Barkal Archaeological Project)

Tim B.B. Skuldbøl (House on the Hill; Jebel Barkal Archaeological Project)

Elizabeth L. Chamberlain (Wageningen University)

Saskia Büchner-Matthews (Jebel Barkal Archaeological Project)

Sami M. Elamin (National Corporation for Antiquities and Museums; Jebel Barkal Archaeological Project)

El-Hassan A. Mohamed (National Corporation for Antiquities and Museums)

Geoff Emberling (University of Michigan)

Climate-driven environmental change played a defining role in shaping the physical and cultural landscapes of the Middle Nile Valley. Yet for key Nubian centres such as Napata at Jebel Barkal, the long-term landscape evolution that conditioned settlement location, land use, and adaptability remains poorly constrained. This paper presents a high-resolution reconstruction of Holocene landscape development at and around Jebel Barkal, grounded primarily in subsurface stratigraphic evidence.

The reconstruction is based on sedimentological analysis of c.25 drill cores, combined with optically stimulated luminescence dating, radiocarbon ages, and ceramic typology, to document changes in Nile channel behaviour, floodplain aggradation, and wadi–floodplain interactions through time. These data provide a detailed record of valley-floor evolution against which surface geomorphology can be assessed. Multispectral satellite imagery and declassified CORONA photographs are used in a supporting role, to provide spatial context and to explore the surface expression of key geomorphic units identified in the subsurface record.

Results show that during the Early–Middle Holocene, the Nile at Jebel Barkal formed a deeply incised, multi-channel system responding to wetter regional conditions associated with the North African Humid Period. Following increasing aridification after c.4 kya, the river underwent a major transition to sustained aggradation, infilling the valley floor by up to c.12 m. Owing to the narrow confinement of the valley and sediment backfilling enhanced by the nearby Fourth Cataract, the Jebel Barkal reach developed an unusually stable Late Holocene floodplain compared to wider Nile reaches.

This geomorphic stability created predictable floodplain environments that underpinned the development of Napata between 1070 BCE and 350 CE. Elevated wadi-fan surfaces and steadily widening floodplains offered secure and fertile grounds for temples, palaces, and residential areas, while proximity to the river maintained economic and ritual connectivity. The study provides a landscape-scale framework for understanding settlement formation and resilience at one of Nubia's most important cultural centres.

Climate Change and the Collapse of the Meroitic Kingdom: Adaptability, Sustainability and Mobility Evidence Based on Isotopic Studies

Iwona Kozieradzka-Ogunmakin

Arkadiusz Soltysiak (University of Warsaw)

The collapse of the Meroitic kingdom (c.300 BCE – 350 CE) in the Middle Nile Valley has largely been investigated through a focus on socio-political and economic factors, traditionally considered as the main causes of the state's collapse. Recently, the research focus has been shifted towards investigating the link between the state's collapse and the role of climate change in the first centuries CE. Adding to the growing body of research concerning climatic and environmental changes as a contributing factor, this paper will present the results of isotopic studies of strontium, carbon ($\delta^{13}\text{C}_{\text{ca}}$) and oxygen ($\delta^{18}\text{O}_{\text{ca}}$) in human and animal samples from 24 archaeological sites located between the First Nile Cataract and the Blue Nile, with the majority of the sites located in the area of the Fourth Cataract. The results of strontium isotope analysis show evidence of population mobility, whereas increasing $\delta^{18}\text{O}_{\text{ca}}$ values towards the end of the Meroitic through to the Post-Meroitic period combined with less negative $\delta^{13}\text{C}_{\text{ca}}$ values are suggestive of an environmental shift towards more arid conditions. Environmental changes in the region influenced a wider range of land use for cultivation, herding and subsistence strategies, and likely exacerbated trends towards regionalism and formation of independent polities. This study

contributes to the debate on past climate-society interactions by adding to the limited body of isotopic data from the Meroitic and Post-Meroitic periods.

New Light on Holocene Climate Change and Nile Flow from the Nubian Archaeological Archive

Matthew Dalton (University of Oxford; University of Western Australia)

This presentation discusses the results of a digital reinterpretation of archival aerial photographs, maps and archaeological records from the mid-20th century Nubian Salvage Campaign. Photogrammetry allows the topographic reconstruction of large parts of Sudanese Nubia now lost beneath the Aswan High Dam reservoir, in turn enabling hydraulic modelling of the River Nile and comparison to varied sources of published and archival data including early 2nd millennium BCE pharaonic flood level inscriptions and survey-derived site records. These sources provide a compelling new proxy for climate-driven variations in Holocene Nile flow and a valuable source of evidence for the effects of climate change on the diverse inhabitants of the Nile Valley in Nubia and Egypt.

Past to Present Perspectives on Locally Resilient Crops in Nubia and the Middle Nile Valley

Philippa Ryan (Royal Botanic Gardens, Kew)

Maha Kordofani (University of Khartoum)

Mohamed Saad (National Corporation for Museums and Antiquities)

Mohammed Hassan (Supreme Council of Tourism, Northern State)

Several crops that were important in northern Sudan during the mid-twentieth century have become minor crops in recent decades. Changes have been related to commercialisation, mechanisation and attitudes towards crops. This paper compares the advantages or disadvantages of the local crops versus newer cash crops. Whilst some of these ‘minor’ crops have less market value, they are more low-input and heat tolerant than the newer cash crops. These local crops also have a long history in the archaeological record further suggesting their environmental suitability. Farmer interviews were conducted as part a project ‘Subsistence and sustainability in a changing Sudan’ which combined ethnographic information with archaeological datasets to better understand the long-term histories of today’s crops. A connected project ‘Lessons from the past; Nubian agricultural knowledge and agricultural resilience, crop choices and endangered cultural heritage’ co-produced a book with local communities to document and preserve this endangered local knowledge for future generations. Fieldwork also explored the impact of agricultural development on wild plant uses within traditional agroecosystems. Local crops are an important part of local agricultural and food heritage as well as for resilience to climate change.

Building Materials and Technologies of Medieval Nubian Sacred Architecture in their Environmental Context

Agnieszka Wujec (Polish Centre of Mediterranean Archaeology, University of Warsaw)

Nubian architecture from the 6th to the 14th centuries AD is often described as careless and provisional. This view stems mainly from comparisons with other regions that used different materials and technologies, and operated in different climates. When examined through the lens of local building techniques, raw materials, and environmental conditions, Nubian architecture reveals a high level of intentionality and adaptation. This perspective also highlights the craftsmanship and skills of builders who, despite limited resources and a harsh climate, created durable and functional structures suited to local needs.

My presentation discusses the materials and technologies used in Nubian sacred architecture between the 6th and 14th centuries. I focus on their relationship to local resources and the climatic conditions of Upper Egypt and Sudan. Church construction relied on mudbrick, stone, and fired brick. I will outline their properties, production methods, and the reasons these materials were chosen for monumental buildings.

The presentation centres on sacred architecture, understood as structures with major social and symbolic importance and requiring significant resources. This focus allows for a detailed look at the deliberate material and technological decisions made by Nubian builders.

Post-Rainfall Damage Mitigation in Old Dongola: Preserving Nubian Heritage through Protective Interventions

Zaki Eldeen Mahmoud (Deputy Director of PCMA Old Dongola Expedition)

Magdalena Skarżyńska (Polish Centre of Mediterranean Archaeology, University of Warsaw)

Old Dongola constitutes a large, multi-period archaeological site where long-term conservation must respond simultaneously to environmental pressures, material vulnerability, and political instability. The site comprises extensive mudbrick architecture and painted surfaces whose preservation depends on continuous monitoring, preventive measures, and the capacity to adapt conservation strategies to rapidly changing conditions. Research and conservation activities have been carried out since 1964 by the Polish Centre of Mediterranean Archaeology, University of Warsaw, generating a substantial body of archaeological and conservation data.

In recent decades, conservation approaches at Old Dongola have shifted from reactive emergency responses toward structured recovery planning. The increasing impact of climate change including episodes of intense rainfall, rising temperatures, humidity fluctuations, and sandstorms has accelerated the decay of fragile mudbrick structures and wall paintings. These processes have been further exacerbated by the armed conflict in Sudan, which, despite not directly affecting the site, has restricted permanent supervision and disrupted standard conservation workflows.

The paper discusses how conservation and reconstruction measures have been adapted both before and during the conflict to address rain-induced damage and progressive material loss. Particular attention is given to the protection and stabilisation of key monuments, including the Church of the Archangel Raphael and the historic mosque, as well as to the role of documentation, emergency construction, and risk preparedness. Climatic factors contributing to deterioration are analysed alongside practical responses, demonstrating how continuity of planning and targeted recovery measures can support the safeguarding of archaeological heritage under conditions of prolonged crisis.

Climate Change and Its Impact on Cultural and Natural Heritage in the Northern Sudanese Region (The Half, Sakut and Mahas Region Area as a Case Study)

Shadia Abdrabo Abdelwahab (NCAM)

The region of northern Sudan is renowned for its rich legacy, diverse tangible and intangible cultural heritage, and significant natural landscapes, characterised by arid climatic conditions.

In recent decades, these areas have begun to experience unusually heavy rains and recurrent flooding, posing significant risks to both cultural and natural heritage, such as archaeological sites and historic architecture, as many were not designed to withstand prolonged rainfall or flooding. Cultural practices are rooted in long-standing relationships with a dry climate. Today, the region faces accelerated damage to traditional construction materials, threatens the preservation of traditional knowledge and practices, which are linked to long-established customs within the environmental conditions as communities have adapted to unpredictable environments.

These emerging climate-induced challenges highlight the vulnerability of heritage in formerly dry regions and underscore the need for adaptive conservation strategies, improved risk assessment, and climate-responsive heritage management to ensure long-term protection.

This paper highlights the interconnected effects of climate change on cultural and natural heritage in northern Sudan, particularly the Half, Sakut and Mahas region area. It stresses the urgent need for integrated adaptation strategies, sustainable management, and policy frameworks that safeguard heritage while supporting local communities in the face of a changing climate.

History of Conservation and Climate Change in the Anglo-Egyptian Condominium Sudan (1898-1956)

Tomomi Fushiya (Polish Centre of Mediterranean Archaeology, University of Warsaw)

This paper explores the impacts of climate on cultural heritage in Sudan, using archival records of disasters as evidence of contemporary climate risk. Drawing on colonial administrative archives, Sudan Antiquities Service reports, and archaeological records, it examines how floods, heavy rainfall, and changing Nile regimes have repeatedly affected Sudanese landscapes, settlements, and heritage sites. The 1946 Nile flood—the most severe in Sudan’s modern history—serves as a key reference point, illustrating how a single extreme climate event, compounded by heavy rains and flash floods, disrupted social systems and caused widespread damage to built and archaeological environments.

By tracing conservation responses during the Anglo-Egyptian Condominium period, the paper demonstrates how early heritage management in Sudan dealt with climate-related risks and damages. Though limited, the historical records provide rare longitudinal data on climate impacts, adaptation attempts, and recovery measures across different regions of northern Sudan.

The paper connects these past experiences to recent floods, demonstrating that climate-related risks are increasing in frequency and intensity and now intersect with armed conflict and social instability. It argues that archival evidence of past climate disasters offers critical insights for understanding present and future climate impacts on heritage. More broadly, the study positions cultural heritage as a valuable climate archive and emphasises the need to integrate historical knowledge into climate adaptation, disaster planning, and resilience strategies in Sudan and comparable arid regions.

18. Old Finds, New Frameworks: Recent Research into Prehistory of North-East Africa

Rethinking Prehistoric Archaeological Research in Wartime Sudan: The El-Ga'ab Depression as a Case Study

Sara Mohammed Mamon Ahmed (University of Khartoum)

Prehistoric archaeology preserves the earliest evidence of human occupation in Sudan and forms a fundamental component of the country's cultural heritage and Africa's deep human history. The ongoing war, however, has profoundly affected the ways prehistoric research is conducted, documented, and interpreted, requiring researchers to rethink established research strategies under conditions of prolonged conflict.

With fieldwork suspended across much of the country, access to prehistoric sites has become severely restricted, halting the collection of new archaeological data. Researchers increasingly depend on surface lithic assemblages, archival records, and previously documented evidence, all of which provide only limited potential for reconstructing cultural and chronological sequences in the absence of stratified archaeological contexts. Unlike Sudan's major historical monuments, prehistoric sites receive comparatively little institutional protection despite their exceptional scientific value. Their low visibility, lack of monumental architecture, and high sensitivity to environmental and human disturbance make them especially vulnerable to destruction during conflict and ongoing development.

The El-Ga'ab Depression in northern Sudan provides a compelling example of these challenges. As one of Sudan's richest prehistoric landscapes, it has become increasingly inaccessible because of the current conflict, placing fragile archaeological evidence at risk of irreversible loss before it can be adequately documented. At the same time, archaeological archives held by the National Corporation for Antiquities and Museums (NCAM), the Sudan National Museum, and university repositories in Khartoum have suffered looting, dispersal, and damage, while universities, laboratories, and academic training have been severely disrupted.

Using the El-Ga'ab Depression as a case study, this paper examines how armed conflict is reshaping prehistoric research in Sudan and discusses methodological responses to these challenges, including digital documentation, archival safeguarding, interdisciplinary collaboration, and stronger engagement with local communities to ensure the long-term preservation of Sudan's prehistoric heritage.

Preliminary Results of the Wear Analysis on Large Cutting Tools (LCTs) from site SHA-A1, Atbara, Sudan

Hamad Mohamed Hamdeen (Al-Neelain University; Czech Academy of Sciences; Natural History Museum, Berlin)

Anne Delagnes (Université de Bordeaux)

Faysal Bibi (Natural History Museum, Berlin)

This study reports preliminary findings from a wear analysis of 142 large cutting tools (LCTs) recovered from the SHA-A1 site in the Atbara region, Sudan. The assemblage, primarily composed of handaxes, cleavers, and shaping flakes, was manufactured using locally sourced tertiary basalt and rhyolite, Hudi Formation chert, vein quartz, and Precambrian basement rocks, predominantly quartzite and silicified sandstone. This site represents a notable concentration of late Acheulean-period artefacts within the Atbara region. By employing a combined low- and high-magnification approach, utilizing a Leica Z16 APO microscope (5–100× magnification), the investigation

identified patterned edge damage, micro-polishes, and striation orientations indicative of repeated contact with both soft and hard materials. SEM and EDS analyses confirmed the presence of plant fibre residue on three tools. These initial results suggest greater use diversity within the SHA-A1 assemblage than previously recognised, implying flexible tool use within the Acheulean technological system. Ongoing research, including expanded sample analysis, experimental studies, and regional comparisons, is anticipated to refine these functional interpretations and contribute to a more thorough understanding of hominin behaviour along the Atbara River and in Sudan during the Pleistocene.

Characteristics of Aterian Palaeolithic Stone Tool Production in the El-Ga'ab Depression (90,000-45000 BP), Northern Sudan

Rayan Mahjoub Jarelnabi Abdallah (University of Khartoum)

The Aterian culture represents a major component of the Middle Palaeolithic of North Africa, dating approximately between 90,000 and 45,000 BP. This paper presents evidence of Aterian lithic industries from the El-Ga'ab Depression in the Western Desert, highlighting the region as an important area of human activity during the Middle Palaeolithic and as part of broader human dispersal corridors within Africa. The study is based on the analysis of lithic assemblages collected through two sampling strategies. Previously recovered random samples from earlier archaeological surveys include 886 stone tools, among which 37 are Aterian artefacts, distributed across 11 locations. In addition, systematic sampling from the sites HBJ-04-024, UH-05-008, and BAB-06-027 yielded 2,694 stone tools, including 108 Aterian artefacts. The assemblages were manufactured from diverse raw materials, dominated by chert and sandstone, with minor use of quartz, silicified wood, and basalt.

Typological analysis indicates that projectile points constitute the majority of Aterian tools, with triangular forms being the most common, while corner-notched tangs prevail among tanged pieces. Technological characteristics place the El-Ga'ab assemblages within the classical Middle Aterian tradition, marked by Levallois–Mousterian techniques, basal tangs, and a wide range of scrapers and projectile implements. The distribution of sites and technological traits suggests that the El-Ga'ab Depression functioned as a zone of cultural interaction, likely connected to multiple routes of Aterian dispersal across North and Northeastern Africa. The absence of stratified deposits reflects high mobility patterns and adaptation to arid environmental conditions that characterised later phases of the region.

Settlement Development Across the Bayuda Desert in Sudan in the Light of Research Results on Absolute Chronology (OSL, C14)

Henryk Paner (Polish Centre of Mediterranean Archaeology University of Warsaw)

Miroslaw Masojć (University of Wrocław)

The Bayuda Desert, located in what is referred to as the Great Bend of the Nile, covers an area of about 140,000 km². With only a few exceptions, it only became an object of interest for archaeologists and a place of systematic research in the first decade of the twenty-first century. Since 2017, we have been conducting intensive research in the Bayuda Desert aimed at identifying the nature of its prehistoric settlements. Excavations were conducted at 88 archaeological sites dating from the Palaeolithic to the modern period, including 36 cemeteries and 55 settlements. During this project, absolute dates were obtained using physicochemical methods – including thermoluminescence (TL), optically stimulated luminescence (OSL) and infrared stimulated luminescence (IRSL) dating – for sites from the Old Stone Age (several dates) and radiocarbon dating, yielding a total of 114 results from sites dating from the Mesolithic and Neolithic periods, through the Old Kush, New Kingdom, Napata, and Meroë periods, to the Middle Ages and the modern period. The oldest dates were obtained using luminescence methods (IRSL) at the Palaeolithic site BP 177, where the Middle Stone Age (MSA) assemblages dominated by Nubian Levallois Complex (NLC) as well as with centripetal Levallois and discoidal core-reduction strategies were present – the lower cultural horizon is estimated as younger (*terminus post quem*) than 322 ± 106 ky, pointing to the early phases of the MSA. This chronology is supported by the presence of large, bifacial leaf points and Nubian type I cores. Regarding radiocarbon dates, 69 of these dates come from graves, 41 from settlements, and 4 from fortresses. In this paper, the authors compare the obtained ¹⁴C dates with archaeological materials obtained during research, which also yielded valuable data for research on environmental (climate) changes, as well as important information on the transformation of the natural and cultural landscape, particularly in the context of communication routes related to the export of natural resources from Nubia to Egypt.

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Radiocarbon Chronology of Shaqadud: New Results of 2021–2023 Field Campaigns

Ladislav Varadzin (Institute of Archaeology of the Czech Academy of Sciences)

Lenka Varadinová (Charles University)

Stanley H. Ambrose (University of Illinois at Urbana-Champaign)

Jebel Shaqadud (northwestern Butana, central Sudan) contains exceptionally deep archaeological deposits. Here we present the results of a chronometric (^{14}C and OSL) dating project on samples obtained from test pits at three sites in this area between 2021 and 2023. Together with dates obtained by Butana Archaeological Expedition in the early 1980s, these results show the longest and most complete Holocene archaeological sequence in the Sahelo-Saharan region. It spans from the very beginning of Holocene until the early Late Holocene. Although it contains gaps, this sequence and related settlement and burial remains allow us to tentatively outline the main phases of settlement in an area lying at the cultural interface between the central Sudanese Nile Valley and eastern Sudan.

The Landscape of Holocene Foragers Archaeology in Northern Butana and Lower Atbara River, Sudan.

Ahmed Nassr (University of Ha'il; University of Al Neelain)

Forager archaeology of Late Prehistory in Sudan is characterised by the diversity in landscape and characteristics. Our archaeological surveys and excavations conducted from 2013 to 2022 in the lower Atbara River region and northern Butana revealed a series of Late Stone Age sites. Based on stratified excavations, ^{14}C , and artefact characteristics, human groups occupied the area from early to late Holocene times. The archaeological sites' characteristics presented a Microlithic, Early Neolithic, and Terminal Neolithic chronology. Some of the archaeological sites bear a resemblance to Late Prehistory elsewhere along the Nile, while others were more akin to Prehistoric groups in Butana and eastern Sudan. Some of these archaeological sites were found in the desert, far from the Nile and Atbara rivers, situated on the margins of Atbara Paleo-Lake, while others were located near permanent water sources (Nile and Atbara River).

This study aims to shed light on the cultural landscape of these sites, settings, and archaeological find variabilities. It also examines the occupation patterns, characteristics of each type, and their chronological sequence to gain a more comprehensive understanding of the role of landscape in defining the boundaries of archaeological sites, human activities, and the scope of the Holocene climate changes affected the archaeological site expansions and shrinkages.

Beyond the Site: Landscape, Mobility and Adaptation in the Early and Middle Holocene of the Fifth Cataract, Sudan

Hassan Alkhidir (Shendi University; University of Cologne)

The study of the Early and Middle Holocene in Sudan has long relied on a site-centric paradigm, generating rich stratigraphic sequences but offering limited insight into the broader spatial systems of human adaptation. This paper argues that landscape archaeology provides the essential framework to overcome this interpretive gap. By shifting the analytical scale from discrete sites to integrated cultural-ecological contexts, this approach enables the modelling of mobility, resource use, and social interaction across a dynamically changing environment.

The paper first establishes the core theoretical and methodological tenets of landscape archaeology. It then presents a critical review of its application, and notable underutilisation, within Sudanese Late Prehistoric research. This historical analysis reveals how a reliance on excavation-focused methodologies has constrained archaeological narratives, particularly concerning the complex interplay of foraging, fishing, and early pastoral lifeways.

To demonstrate the framework's transformative potential, the paper proposes a methodological framework designed for the Fifth Cataract area of the River Nile. This approach employs geospatial survey, ethnoarchaeology, and targeted excavation explicitly conceived as interconnected strands within a landscape paradigm. The paper concludes by contending that only through such an integrated landscape approach can we advance from documenting cultural sequences to explaining the spatial logic of human resilience and adaptation during one of North-East Africa's most formative periods.

Widening Horizons over the Egyptian Eastern Desert's Early Holocene Peopling and Palaeoenvironment

Stefano Costanzo (Università degli Studi di Milano)

Andrea Manzo (Università degli Studi di Napoli "L'Orientale")

Starting in October 2023, the Italian-Egyptian Mission to Mersa/Wadi Gawasis has been carrying out research across a concession covering roughly 400 sqm and stretching as far as 32 km from the Red Sea coast within the Eastern Desert interior (Safaga, Red Sea Governorate). Building on the experience matured in reconstructing east Sahelian Holocene palaeoenvironments by exploring the natural and archaeological proxies from the Southern Atbai region of Sudan, core geoarchaeological activities in Egypt are unveiling complex scenarios of polycyclic pedostratigraphies currently dominated by dryland erosional processes. Therein, traces of past, slightly more humid environments persist as occasional diagnostic sedimentary units, osteological and malacological record and, most crucially, are testified by newly found Holocene hunter-gatherer stations characterised by projectile point production for the hunt of long-gone mobile fauna. Local data corroborates known trends at several levels, nurturing frameworks calling for enhanced temporal and spatial resolution: at the meso-scale, their proximity with other archaeo-environmental sites like Sodmein Cave, Sodmein Playa, and Tree Shelter testify regional mobility of human groups conditioned by physiographic settings and raw material availability. At the mega-scale, reaching outside the regional physiographic boundaries and human group definitions, the emerging paleoenvironmental reconstructions fill gaps and provide a picture of the nuanced latitudinal climatic and cultural transition between the Egyptian Eastern Desert and the Sudanese eastern lowlands, fitting the hot discourse of Holocene climatic and societal shifts in deserts and bordering semi-arid biomes.

Three Unknown Sites in Lower Nubia

Adel Kelany (Ministry of Tourism and Antiquities, Egypt)

Between 2007 and 2009 The Ancient Quarries and Mines Department of the Supreme Council of Antiquities surveyed three sites located in Lower Nubia. These sites were to be developed, one for tourism and the other two for agricultural purposes. The three sites yielded diverse archaeological evidence, some dating back to the Stone Age and others to the Dynastic and late Egyptian periods.

In this presentation, these sites will be presented along with the archaeological evidence they uncovered, linking them to their geographical context. Furthermore, this presentation will shed light on the management strategy of the Ancient Quarries and Mines Department in Egypt on the remote archaeological sites that fall within the scope of development projects in southern Egypt.

From Legacy Collections to Virtual Anthropology: New Approaches to the Nile Valley Prehistoric Population Dynamics

Nicolas Martin (Natural History Museum, London; University of Bordeaux)

Petr Velemínský (Natural History Museum, Prague)

Isabelle Crevecoeur (University of Bordeaux)

The Late Pleistocene to Mid-Holocene was a pivotal period in northeastern Africa, characterised by pronounced climatic fluctuations and major cultural transformations. In the Nile Valley, this interval also saw substantial biological variation, most notably in craniofacial morphology during the emergence of food production. To account for these patterns, scholars have long debated whether they reflect population discontinuity or morpho-functional adaptation.

This presentation synthesises recent advances in these debates through an integrated comparison of high-resolution 3D virtual biological data and archaeological evidence derived from both museum collections and recently excavated skeletal material. The analysis draws on (re)assessments of remains excavated over the past 50 years (n = 171 individuals), representing fifteen Middle Nile Valley assemblages dating from the Late Pleistocene to the Mid/Late Holocene, supplemented by comparative data from 121 individuals across northeastern Africa, the broader continent, and Eurasia. High-resolution imaging and morphometric analyses of dental and bony labyrinth structures—two anatomical regions with strong phylogenetic signals—enable robust tests of biological affinities across time and space.

Results reveal strong biological continuity and homogeneity among Late Pleistocene and Early Holocene hunter-fisher-gatherers, indicating deep regional roots. Evidence was also found for prolonged isolation of the Nile Valley's last forager populations. In contrast, the Neolithic transition is associated with pronounced morphological discontinuity, consistent with the arrival of new groups around 8,000 years ago. Nevertheless, evidence for

admixture and the persistence of forager-related populations, particularly in peripheral zones along the Nile, highlights the complexity of demographic processes during this transition. Together, these findings underscore both continuity and intricate population dynamics in the regional deep biological history, reinforcing the Nile Valley's significance as a key reference point for reconstructing late prehistoric demography across northeastern Africa.

Towards a Regional Approach to Epipalaeolithic Rock Art Around the First Cataract of the Nile

Gwenola Graff (French Institute of Research and Development)

Adel Kelany (Ministry of Tourism and Antiquities, Egypt)

This proposal concerns rock art from the Epipalaeolithic period. An indisputable feature of the eastern and western deserts and the valley in Upper Egypt and Lower Nubia, these engravings have only been dated once using absolute dating methods, at the site of el-Hosh. However, they cover at least six millennia, from the Holocene reoccupation of the Nile Valley and its surroundings to the Egyptian Badarian period. Epipalaeolithic rock art is not only chronologically unsettled, it is also regionally undifferentiated. However, the exclusive presence of certain motifs (such as fish traps) in certain areas suggests that regional groups may have been distinguishable.

Based on an exceptional and unprecedented collection, remarkable both for the number of panels and the complexity of the decorations, located at the end of a lateral branch east of Wadi Abu Subeira (WAS; Eastern Desert, north of Aswan), we propose to outline an initial approach aimed at mapping and characterising certain collections around the WAS, between Upper Egypt and Lower Nubia in Egypt and Sudan.

Ostrich Eggshell Beads in Early Holocene Sudan – Patterns of Use and Interaction Networks

Lenka Varadinová (Charles University)

Ladislav Varadzin (Institute of Archaeology of the Czech Academy of Sciences)

Yulia V. Erban Kochergina (Czech Geological Survey)

In sub-Saharan Africa, ostrich eggshell (OES) beads are used as a proxy for investigating connectivity and mobility among past hunter-gatherers and herders. In northeastern (NE) Africa, however, the potential of these finds for such type of study remains underexplored even though they have been known since the 1940s to occur in Prehistoric contexts in the region. OES bead technology appears in NE Africa on a larger scale only at the onset of the Holocene when improved climatic conditions allowed for human reoccupation of previously uninhabitable areas. Some of the earliest hunter-gatherer sites across the region preserve evidence of robust OES bead production, suggesting an adaptive role of these artefacts in the newly settled and still precarious environments. We examine this hypothesis through a comparative study of OES bead technological and morphometric variability as evidenced on selected Holocene hunter-gatherer sites across the Sudan. The interim results, combined with the results of pilot Strontium isotope analyses of OES assemblages from sites in Jebel Sabaloka and Jebel Shaqadud, show different spatio-temporal patterns of use and exchange of OES beads across the region, suggesting changing social strategies and demographic and environmental conditions in NE Africa during early Holocene.

Coupled Human–Cattle Mobility Shaped the Socioeconomical Landscapes of Holocene Northeast Africa

Marta Osypińska, Piotr Osypiński, Zdzisław Belka, Carlos Magnavita, Sonja Magnavita, Friederike Jesse, Nadja Pöllath, Louis Chaix, Patricia Chiquet, Olivier Langlois & Lionel Gourichon

In this talk, we present the synthesis of strontium isotope data ($^{87}\text{Sr}/^{86}\text{Sr}$) from human and cattle dental enamel for northeast Africa. Our dataset, which includes newly acquired and published measurements, reveals a complex history of human and cattle mobility linked to ecological gradients and socio-cultural changes in this part of the continent. During the early Holocene (8,000–4,000 BCE), isotopic concordance in human and cattle remains supports the thesis of early and correlated mobility of humans and *Bos*, extending beyond floodplains to adjacent plateaus. In the mid-Holocene (4,000–1,000 BCE), isotopic data from Wadi Howar suggest bidirectional corridors of mobility between the Middle Nile and the Western Desert. This model correlates with the formation of civilisations in the Middle Nile characterised by the significant cultural and economic role of cattle. From the first millennium BCE, a radical change can be observed, correlated with the progressive desertification processes in the Sahel. Cattle import routes, although still running through wadis, shifted south of the now dried-up Saharan lakes to Kordofan. The long-term perspective adopted in our research for the first time emphasises the continuous adaptation of societies to environmental changes in northeast Africa, aimed at maintaining permanent access to cattle, a resource that was crucial for the communities of the Middle Nile throughout the Holocene.

Research supported by NCN grant UMO-2020/37/B/HS3/00519

19. From Settlement Archaeology to Studying Urbanism in Nubia

Urbanism as a Process: Measuring the Growth of the City at Jebel Barkal

Geoff Emberling (University of Michigan)

Studying urbanism in Nubia is not simply a question of identifying settlement sites. It is thinking about processes – about why cities are located where they are, about how and why they grow in population, about how they are connected to smaller agricultural settlements and more mobile populations. It is about considering what political, economic, and social impacts urban processes have on societies, both elites and non-elites. It requires raising new questions, applying new methods, and taking a comparative approach to understanding what is distinctive about Nubian cities by looking at examples of cities that grow in other environments and cultural traditions.

This paper will provide an overview of the growth and decline of the settlement at the base of Jebel Barkal – ancient Napata. It will discuss the methodological challenges of working on a large multicomponent site and the necessity of finer-grained chronologies than are normally used in Nubian archaeology. As a case study, it will analyse royal construction activity in the city as an index both of the importance of the city and of imperial economic investment in Napata.

Relationship Between the City of Kerma and its Hinterland Through the Study of its Eastern Cemetery

Matthieu Honegger (University of Neuchâtel)

Agathe Chen (Hadès, Archaeological Investigations Office)

The Kerma region brings together major sites of Kerma culture, including the city excavated over more than two decades by Charles Bonnet, the associated Eastern Cemetery, and a fortified site located on the edge of the desert. However, a vast irrigation project developed in the 1940s contributed to the disappearance of smaller settlements that must have been located near the city, which is less the case further north towards the Third Cataract or further south in the Kadruka and Kawa regions. It is therefore quite difficult to clearly identify the city's economic and social relations with its hinterland which, in any case, remain difficult to determine in the absence of written documents. In this paper, we propose to use the Eastern Cemetery as a basis for highlighting certain phenomena that show a broad connectivity between Kerma and a part of the country controlled by this culture. To do this, we will use quantified estimates to reconstruct the demographic evolution of the buried population and the number of cows sacrificed for funeral rites. These two criteria clearly show that the population and livestock cannot be the result of local evolution and are based on a significant influx from regions outside the Kerma basin.

Occupation and Adaptation: Egyptian Impact on Kerma's Supply Centres

Séverine Marchi (SFDAS)

Lauriane Miellé (Halma-Université de Lille)

This paper examines the transformation of Kerma's supply centres and the exchange networks linking the capital to its hinterland between the end of the Kerma period and the Egyptian colonisation of Upper Nubia. Drawing on archaeological evidence from the sites of Gism el-Arba, it focuses on the evolution of rural settlements, and more specifically of storage facilities, as essential components of the regional economic system. Through an integrated analysis of architectural remains and material culture, the study explores how villages – key supply hubs and central elements of the administrative and commercial system of the Kerma kingdom – were deeply restructured during the occupation of the territory by Egyptian authority.

By comparing data from the sites of Gism el-Arba and Kerma-Doukki Gel, this study also addresses the economic consequences of Egyptian pressure on the region, including changes in resource management and exchange mechanisms, as well as the redefinition of relationships between the hinterland and the political centre. The replacement of the Kerma capital by a powerful *menenou* under Thutmose I represents a decisive turning point in the organisation of space and power, revealing new dynamics of control and integration. By combining settlement archaeology with the study of material culture, and especially the study of ceramics, this contribution aims to shed light on the transformation of Kerma's economic and logistical systems during a period of profound political and economic upheaval.

Napata, A Multi-Centric City on the Middle Nile. New Insights from Jebel Barkal, Northern Sudan

Tim Skuldbøl (House on the Hill)

Geoff Emberling (University of Michigan)

Jebel Barkal (ancient Napata) is a major urban settlement in northern Sudan. Founded in the New Kingdom period, the site is also known to be the capital of the first Kushite empire. Although the royal capital later moved to Meroe, Napata remained an important and flourishing urban centre.

Jebel Barkal has been the focus of archaeological investigations for over a hundred years. Much of this research centred on the elite remains at the expense of the more ordinary components of the city. Thus, the site was never studied in terms of site formation, settlement development and intra-site organisation. Likewise, little attention was given to Napata's relationship with contemporary sites of the region despite that they play an important role in the understanding of the economic and political organisation of the empire.

This paper will discuss urban formation and development in the region of Napata. The discussion will depart from new research and recent archaeological investigations at Jebel Barkal by the Jebel Barkal Archaeological Project (JBAP).

Our work suggests that Napata was organised in ways that differs from many other cities of the ancient world. On the local level, excavations in a newly discovered area of the city show that this part of the city was engaged in production and serving of food on a community organised level giving new insights into the functional organisation of Napata.

On the regional level, evidence points to a complex organisation of sites that each had diverse economic and societal functions. Together, these sites (Jebel Barkal, Hillat-el-Arab, El-Kurru, Nuri and Sanam Abu Dom) formed a conglomerate of closely interrelated functional segments of a city – a conglomerate which we define as a multi-centric city.

Our work exemplifies the importance of addressing the whole city and not just its major institutions or life of the elite when interpreting and reconstructing ancient cities, their organisation and functional roles.

The “Western Palace” of Faras: Market, Elite Residence, Warehouse, or Military Barracks?

Gabrielle Choimet (Paris I Panthéon-Sorbonne University)

Excavated by the British scholar F.L. Griffith in the early twentieth century, the “Western Palace” of Faras is situated on a rocky terrace slightly over one kilometre to the north-west of the city. The building consists of a quadrangular outer enclosure measuring approximately 36-38 metres per side, composed of around forty small rooms arranged around a colonnaded courtyard. At the centre of this courtyard stood a second, square-plan structure measuring approximately 11 metres per side. Dated to the first centuries BC and AD, the site has yielded a varied assemblage of material culture, including objects made of glass, faience, ebony, and metal, as well as ostraca.

Interpreted successively as a market or caravanserai, as the seat of the *peseto* of Lower Nubia, and later as a storage facility, the Meroitic “Western Palace” exemplifies the challenges inherent in functional interpretation, particularly when archaeological and architectural evidence is fragmentary and written documentation is virtually absent. This paper therefore seeks to reassess the functional interpretations proposed to date and to compare the building with analogous structures, while advancing a hypothesis that has largely escaped scholarly attention: that of a military function, possibly connected with the surveillance of Faras's hinterland.

Polycentric Soba

Mariusz Drzewiecki (Polish Centre of Mediterranean Archaeology, University of Warsaw)

Moving beyond traditional ‘city-as-capital’ models—which assume a dominant political core defined by palaces, cathedrals, or administrative monuments—the most recent project in Soba (2019–2022) applied an integrated program of large-scale geophysical survey and targeted excavation across approximately 50 hectares to reveal a complex spatial organisation of the city with a polycentric urban landscape in the first centuries (5th/6th–9th centuries) and centralised structure emerging from the 8th/9th century onward. From the beginning, Soba was not organised around a single monumental centre, but rather functioned through a constellation of spatially distributed nodes. These nodes likely accommodated overlapping political, economic, ritual, and residential activities, suggesting a form of urban governance and social organisation that was negotiated, dispersed, and dynamic.

This interpretation situates Soba within a growing body of African urban theory that critiques inherited, state-centred models of premodern cities. Polycentric African cities are increasingly understood as open and relational landscapes, where authority, identity, and urban belonging were articulated through movement, neighbourhoods, and institutions embedded in social and environmental contexts rather than through centralised planning alone. In this framework, Soba emerges not simply as a royal or ecclesiastical capital, but as an evolving urban system shaped by multiple communities and practices over time.

Mapping Medieval Nubia: A GIS of the Christian Kingdoms' Settlements

Marie-Paule Jung (Université Toulouse II Jean Jaurès; Eveha International)

From the large-scale surveys of the 1960s to the recent meticulous excavations of major medieval urban sites, data relating to settlement archaeology during the period of the Christian Kingdoms are both abundant and diverse in nature.

Within the framework of a doctoral dissertation (supervised by François-Xavier Fauvelle), settlement sites from this period are being integrated into a Geographic Information System (GIS), which serves as the basis for producing a new synthesis of patterns of territorial occupation in Egyptian and Sudanese Nubia and their peripheral regions. This database brings together the results of published research and unpublished archival material in order to compile the widest possible range of information, in the absence of direct access to the field.

The use of sources of varying nature raises methodological issues regarding the exploitation of a highly heterogeneous corpus: both the extent of documented areas and the recording strategies are uneven across the territory. While remaining mindful of the biases inherent in this type of research, it is nevertheless possible to highlight initial results at both a regional scale and at the level of individual settlements.

Church and the City: Spatial Integration of Ecclesiastical Architecture in Medieval Nubian Urbanism

Adrian Chlebowski (Polish Center of Mediterranean Archaeology, University of Warsaw)

The transition to Christianity in the Middle Nile Valley brought significant changes to the Nubian urban landscape. However, the exact nature of this spatial transformation is difficult to reconstruct. Although urban studies are present in Nubian archaeology, there remains a notable scarcity of wide-scale excavated urban sites from the medieval period, particularly regarding domestic contexts as opposed to monumental architecture. This imbalance has resulted in a lack of complete street grids and associated public spaces, such as squares or circulation nodes, at major multi-period sites. This presentation aims to explore the dynamic between “Church and the City” by utilising available archaeological data to model potential spatial relationships.

The study focuses primarily on Old Dongola (Tungul), examining how such architecture could have redefined the spatial organisation of the medieval capital of Makuria. Instead of traditional axial analysis, which is often difficult in fragmentary contexts, the presentation applies adapted spatial analysis techniques, especially Visibility Graph Analysis (VGA) and Visual Integration mapping, to the existing plans and survey data. Additional observations from other major sites, such as Faras, Soba, and fortified settlements like Ikhmindi are discussed separately to provide broader context for understanding urban ecclesiastical patterns across Medieval Nubia.

The discussion emphasises intramural and extramural churches and their connection to the urban fabric, exploring their positioning within particular areas and in the surrounding landscapes. By analysing spatial configurations for particular examples, the presentation seeks to examine the role of ecclesiastical architecture as a structuring element of urban centres.

A Bottom-Up Perspective on a Nubian City: Explaining Urbanity Through Households in 16th–18th Century Old Dongola

Maciej Wyzgoł (Polish Centre of Mediterranean Archaeology, University of Warsaw)

Archaeology of the household helps to understand the human dimensions of metanarratives such as urbanity and urbanisation. This bottom-up perspective on cities explores the relations between households and wider social contexts, showing cities as emerging from situated social relations. Microhistories of households can also highlight how their heterogeneity results in variegated forms of urbanity.

Old Dongola is a well-researched example of a Nubian city with a history spanning almost 1,500 years. During the Funj period, between the 16th and 18th centuries, it consisted predominantly of house compounds covering

almost the entirety of its space. As a result, the city diverged from functionalist definitions of urbanity, and the distinction between the rural and the urban appears to have been blurred. In this context, houses were the primary settings in which social relations among city dwellers were situated. They were key spaces in which multiple identities and relations of labour, gender, and power were negotiated.

In this paper, I will argue that the interplay of multiple identities and power relations at the household level was central to the functioning of this Nubian city, shaping its social fabric and modes of becoming. I will also discuss how households may have defined the role of the city of Old Dongola and constituted its distinctive characteristics as a settlement lacking many features conventionally ascribed to urban centres.

A Case for Low Density Urbanism in the Middle Nile? The View from Attab

Julia Budka (LMU Munich)

Chloë Ward (LMU Munich)

Panos Kratimenos (LMU Munich)

The ERC-funded DiverseNile Project was initiated with the objective of providing a contextual framework for the New Kingdom temple town of Sai, utilising the findings of the ERC-funded AcrossBorders Project as a foundation to explore Sai's rural hinterland. In accordance with Michael E. Smith's (after Anthony Leeds) definition of urban and rural, we consider contemporary sites in close proximity to Sai, such as the district of Attab West, as an integral part of the urban fabric of New Kingdom Nubia.

The settlement evidence in the Attab-Ferka region includes many ephemeral sites, such as campsites, which leave limited traces in the archaeological record and may only have been used seasonally. But it also includes more permanent structures of mud-brick, dry-stone, or a combination thereof which may have functioned as outposts or supply points for expeditions into the desert. Their proximity to what is now a dried-up river channel indicates that they may have been situated on small, seasonal islands during the period of occupation. The location of these sites on prominent mounds suggests that they would have been highly visible from the surrounding area.

In a recent article, we proposed that certain smaller sites in the Attab West district, which form a mosaic of dispersed habitation across the region, suggest a broader pattern of low-density urbanism. This form of urbanism, which differs from standard urban forms seen in Europe, the Near East and traditional interpretations of Egypt, is well attested in other parts of the world including south-east Asia, Central America, and sub-Saharan Africa. The suitability of this model to understanding settlement patterns in the Attab-Ferka region will be explored in this presentation.

Landscape Investments in Wadi Farja and Surrounding Areas: Revisiting Urban-Rural Dynamics through Regional Landscape Archaeology

Nahid Mohammed (University of Bahri)

This study examines the long term dynamics of urban and rural interaction in northern Sudan, with a focus on Wadi Farja and its surrounding Nile Valley villages, valleys, and islands. This paper situates Wadi Farja within broader regional processes of environmental investment, social reorganisation, and spatial reconfiguration across millennia.

Using Geographic Information Systems (GIS) to create accurate illustrative maps, the research documents the geographical distribution of archaeological sites and relevant natural features (floodplains, islands, old river, channels), and analyses the relationships between settlement distribution, environmental resources, and landscape investments. Archaeological evidence from recorded sites including habitation remains, settlement mounds, and infrastructural traces is used to reconstruct how ancient communities actively modified and capitalised on the landscape.

The results demonstrate that Wadi Farja functioned as a strategic nodal area within a broader network of human environment interactions in Upper Nubia. The patterns of settlement, resource exploitation, and infrastructural adaptation point to recurrent investments in landscape and a fluid interplay between sedentary and semi mobile or rural populations. These findings underscore Wadi Farja's significance as a microcosm for studying the evolution of urban rural dynamics and human adaptation strategies in northern Sudan.

By linking detailed local data with regional models of Nubian landscape use and settlement transformation, this study contributes to a growing understanding of how ancient societies in Upper Nubia reshaped, and were shaped

by, their environment, challenging static notions of cultural and ecological boundaries and adding nuance to the narrative of landscape investments in Nubia and the wider Nile corridor.

Sensing a Nomadic Heartland: Landscape and Remote Sensing Workflows of the Atbai Survey Project

Julien Cooper (Macquarie University)

The Atbai Survey Project is designed to map the archaeology of the vast deserts of Eastern Sudan, known locally as ‘the Atbai’. From vast tumuli cemeteries to goldmines, this landscape has been poorly surveyed and explicated, rarely entering historical narratives of ancient Nubia. To remedy this situation, a systematic remote sensing campaign is endeavouring to comprehensively map the archaeology of the region, creating a dataset for use by heritage officials and also scientists. So far, the project has systematically mapped over 100,000 structures, hundreds of ancient nomadic camps and goldmines, as well as many other surface features from prehistoric burials to fortresses.

Using this data in a study area of the central Atbai around Wadi Amur, this presentation will comment on the most exceptional archaeological profile of this sub-region, namely a prominent First Millennium CE occupation of the ‘Blemmyes’. This includes the remains of large settlements and cemeteries spread along fertile wadi courses. Subjecting this material to various clustering and environmental analyses (NDVI, topographic, moisture), this presentation advances a model for Blemmyean agropastoralism in the core desert, while allowing for a new pattern of Blemmyean ‘semi-urbanism’ c. 250–900 CE. Various reasons are suggested for this exceptional settlement pattern, including trade opportunities, introduction of the dromedary, connection to the Blemmyean capital at Nubt, and conducive ecological settings.

20. Sensory worlds of Nubia: Advances in Research on Multisensory Experience in Ancient Sudan and Egypt

Developing a Sensory Archaeology of Ancient Sudanese Cloth Cultures

Elsa Yvanez (University of Copenhagen)

Garments are undoubtedly at the very nexus of human sensory experiences, mediating a very large part of our daily interactions with the world. They are highly sensorial artefacts because they are, first and foremost, laying directly upon our skin, which is the largest muscle of the body and the location of millions of sensory receptors. For a vast majority of humans, it is through garments that the skin detects sensations of touch, pressure, vibration, temperature, and pain. Constraining or freeing our bodies in different ways, clothing is also key to our vestibular and proprioception senses. Garments also function as visual intermediaries between ourselves and others, conveying non-verbal messages about our personal identity or daily occasions. Finally, constant movement in our garments and their combination with other material such as personal accessories, perfumes, or sweat, create a range of sensory experiences involving sound and smell.

In archaeology, the sensorium of ancient garments was conceptualised by Susanna Harris in the early 2010s, and since expanded in European contexts on the basis of iconography and rare remains of fragmented garments. However, Sudanese archaeology, with its hundreds of well-preserved garments and rich cloth culture, offers the unique opportunity to go beyond theoretical interpretations and build a true method to study sensory experiences linked to dress practices. This paper will present the ongoing efforts of the Fashioning Sudan* project towards this goal, merging detailed experimental and testing protocols with a solid body of material sources. To illustrate our workflow, we will use two examples of reconstructed outfits: a female leather skirt based on Kerma examples, and a male loincloth and front panel ensemble based on Meroitic sources. The audience will be invited to interact with our newly developed sensory box to gain first-hand experiences of the sensory landscape of cloth cultures in ancient Sudan.

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Dress to Impress — Be Like a Nubian Ruler

Agnieszka Jacobson-Cielecka (SWPS University in Warsaw), Paulina Matusiak, Dorothee Roqueplo, Katarzyna Schmidt-Przewoźna, Karel Innemée, Magdalena Woźniak-Eusebe & Dobrochna Zielińska

This paper presents the process and discoveries of reconstructing, photographing, and publicly showcasing five robes of Nubian authorities, undertaken as part of the project *Costumes of Authority: The Image of Royalty and Clergy in Christian Nubia*. Through analysing depictions of Nubian rulers and clergy, the project interprets their garments as forms of nonverbal communication. This transdisciplinary collaboration between designers from SWPS University and archaeologists from the University of Warsaw expanded traditional archaeological analysis by integrating expertise in movement ergonomics, garment construction, and dyeing techniques. Five garments – two royal, two royal mothers', and one bishop's – were meticulously recreated based on the best-preserved wall paintings from Faras and supporting archaeological evidence.

Using their visual expertise, the design team interpreted and decoded partially preserved murals to understand the materiality and construction of the garments, the embodied experience of the wearers, and the impression these costumes created. Archaeological evidence, including chemical analyses of dyes, textiles, and decorative techniques, provided crucial insights. The reconstructed robes were crafted from natural linens, silks, cottons, and wools, and dyed with turmeric, madder, acacia, logwood, and indigo. Patterns were applied through stamping, while decorative features such as stoles and *mappae* were hand-embroidered.

Models representing Nubian communities in Germany and the Netherlands, and later Poland and the UK, wore the reconstructed costumes, which were then photographed at the Pastoor van Ars Church in The Hague. These images vividly revived the splendour and authority depicted in medieval murals. The costumes were subsequently presented live at the Louvre, the Bode Museum, the Copernicus Centre, and the SOAS Brunei Theatre, highlighting the transformative impact of dress. The vibrant colours, intricate decorations, and voluminous layers of the costumes brought to life the embodied presence of kings and royal mothers, regardless of the models' own identities.

The project's impact on local communities has been significant. Amid ongoing discussions about rights and obligations in post-colonial societies, we observed genuine interest and gratitude for our efforts to restore Nubian heritage to its descendants.

Ancient Sudanese Make-Up: Multi-Analytical Insights into Ingredient Diversity for Cosmetic and Medicinal Uses

Fatima Siddig (University of Münster)

This paper presents ongoing doctoral research at the Institute of Egyptology and Coptology, University of Münster, on the multi-analytical investigation of ancient Sudanese cosmetic and medicinal substances. It examines organic and inorganic components preserved in archaeological containers, such as kohl pots and vessels associated with perfumed oils. The analysed material spans the Kerma period (2000–1550 BC), the Egyptian New Kingdom (1550–1077 BC), the Napatan period (750–330 BC), and the Meroitic period (330 BC–AD 330). Several selected sites in Sudan have not previously undergone scientific analysis of cosmetic or therapeutic materials.

The research reveals a significant diversity of raw materials, ingredients, and preparation practices across regions and time periods. The primary dataset consists of samples curated at the National Corporation for Antiquities and Museums (NCAM) in Khartoum, as well as some samples from Nubian contexts housed at the Ägyptisches Museum und Papyrussammlung (ÄMP) in Berlin. Analytical results are interpreted in close dialogue with archaeological context, enabling the reconstruction of ancient formulations and shedding light on their cultural and functional significance within Sudanese societies.

A combination of chromatographic, spectroscopic, and elemental analytical techniques is used to identify both organic compounds and inorganic components within the residues. In addition to the earlier analysis of visible residues, a newly implemented sampling phase focuses on the careful collection of micro-residues from the interior surfaces of ancient burners and related vessels, where biomolecular traces may persist even in the absence of visible deposits. This methodology aims to minimise surface contamination and specifically target preserved compounds for biomolecular analysis to be conducted in Bonn. By integrating these new data with existing results, the project broadens the analytical scope and provides deeper insight into the composition, use, and technological knowledge of aromatic, cosmetic, and medicinal substances in ancient Sudan.

“To Gladden the Heart”: A Preliminary Analysis of Embodiment and Alcohol-linked Affective Experiences within the Middle Nile

Emily K.D. Smith (University of California, Santa Barbara)

Alcohol is ranked as one of the most ubiquitous, dynamic materials known to humankind. They are, themselves, comprised of a wide variety of disparate substances categorized together via the critical presence of ethanol – the primary producer of alcohol’s psychoactive effects. As an affective technology, alcohol provides broad sensory experiences based on the level of ethanol content within a particular mixture that classifies it as a form of embodied material culture. These embodied experiences serve to inform relationships across multiple material and social categories. What is known about ancient Nubian alcohol consumption is tragically limited; previous research has attempted to define alcohols in Nubian contexts via simple presence/absence identification of pots historically linked to alcohol distribution. This reliance on ceramic typology to identify the distributions of alcohols within an archaeological context presents several interpretive problems – including, but not limited to, the assumption that the presence of a pot must directly equate to the presence of a particular substance. This problem of defining presence for archaeological alcohols has led to homogenisation into two distinct categories, wines and beers, in both the Egyptian and Nubian pasts, irrespective of known Egyptian historical documentation that suggests that the affective experiences of alcohols varied widely within and across both categories. The best records that document Nilotic contemporary multivariate experiences with alcohols presently come from Egypt’s rich historical record, but ethnographic parallels of Nubian Bouza brews provide a good launch-point for discussing the affective features of past beer presence across the Nile Valley. To this end, I present preliminary theoretical work on alcohols as a dynamic, social material within Sudanese Nubia and suggest, via preliminary archaeological work at the sites of Askut and Tombos in Sudan, future directions for exploring the meaningful sensory-linked social experiences for consumption along the Middle Nile valley.

21. Plants of the Nile Valley: Archaeobotanical Perspectives on Nubian Cultures, Economies and Landscapes

Vegetation Succession in Different Phases of the Holocene Revealed by a Multiproxy Environmental Study at the Shaqadud Archaeological Site, Butana, Sudan

A. Pokorná (Institute of Archaeology of the CAS in Prague; Charles University), K. Hošková (Charles University), I. Madani Ahmed (Institute of Archaeology of the CAS in Prague; University of Khartoum), L. Juříčková (Charles University), J. Novák (Charles University), P. Pokorný (University of South Bohemia), J. Hošek (Czech Geological Survey), L. Varadinová (Charles University), M. Jones (University of Oxford), L. Varadin (Institute of Archaeology of the CAS in Prague; Charles University) & D. Q. Fuller (UCL Institute of Archaeology)

This paper brings an insight into ecosystem dynamic at the Pleistocene–Holocene transition and during the Early and Middle Holocene in North-Eastern Africa. Current knowledge of the onset of the African Humid Period (AHP; c.15-5 ka) is largely based on indirect evidence; however, little is known about the species composition and ecological succession of local biocenoses during this transition. The archaeological site of Shaqadud, Sudan offers one of the largest known continuous anthropogenic sedimentary sequences in Africa, spanning from approximately 11,700 to 4,700 cal BP. The site yielded multiple environmental proxies – plant macro-remains, charred wood, phytoliths, and mollusc shells. Our preliminary results suggest that a short-grass savanna ecosystem might have already existed at the site prior to the onset of the Holocene. A gradual increase in species richness followed between the 12th and 10th millennia cal BP. The high precipitation allowed the growth of humidity-demanding plants and therefore probably a shift of vegetation zones far to the north compared to today's situation. However, the combined use of various complementary proxies showed that the process of vegetation development during the AHP was complex: The response of grass species to environmental changes was much faster than that of woody species, both at the beginning and at the end of the AHP. Moreover, permanent springs probably allowed growth of an extra-zonal vegetation in certain local diversity hotspots (narrow canyon-like valleys called *shataibs* cut into the escarpment at the beginning of wadis). The period of maximum humidity lasted from 10th to 7th millennia cal BP, followed by a gradual decline of humid-adapted ecosystems.

Plants in the Lives of Fisher-Hunter-Gatherers: An Archaeobotanical Study in Al-Khiday, Sudan

Monika Jovanović (Universitat Pompeu Fabra), Carla Lancelotti (Universitat Pompeu Fabra; ICREA), Marco Madella (Universitat Pompeu Fabra; ICREA; University of Witwatersrand), Juan-José García-Granero (Institutió Milà Fontanals for Research in the Humanities–Spanish National Research Council) & Donatella Usai (Centro Studi Sudanesi e Sub-Sahariani - ETS, Treviso)

Lifeways of the Mesolithic fisher-hunter-gatherers in the Nile Valley were greatly shaped by the river and its environment. The site of al-Khiday, located in central Sudan, depicts Mesolithic (ca. 7000 – 5500 BC) communities which relied heavily on fishing and, to a lesser extent, hunting as their subsistence. This paper presents the results of an integrated archaeobotanical study that reveals additional aspects of the subsistence strategies of local communities. Macrobotanical remains were recovered across the site by means of bucket flotation and residue samples for phytoliths and starch were recovered from ground stone tools of Mesolithic date. As a result, it was possible to understand that the community gathered a variety of panicoid grasses (*Andropogon* sp., *Rottboellia* sp., *Setaria* sp.), fruits (*Celtis* sp., *Ziziphus* sp., Phyllanthaceae) and flowering dicotyledonous plants (including Amarantaceae, Fabaceae etc.). Panicoid grasses were further processed using ground stone tools, while pulses seem to have been processed in a different manner (i.e. cooking, boiling). These results further confirm the importance of plant input in an otherwise predominantly fishing community and highlight the potential of integrated study on plant related subsistence strategies.

Regional Diversity in Meroitic Agriculture: Archaeobotanical Evidence from Hamadab and Selib in Comparative Context

Dorian Q Fuller (UCL Institute of Archaeology)

Lara Gonzalez Carretero

Louis Champion

Agriculture provides a key support for craft production, trade and local settlement growth. The Meroitic period was one of broad geographic integration in a state that stretched from the Roman frontier to the savannas near the confluence of the two Niles, but how similar or diverse were agricultural practices across this vast state, and how they supported population growth and trade economies, are empirical questions that can be addressed through archaeobotanical evidence. Systematic flotation at the central Meroitic site of Hamadab and the Dongola reach site of Selib provide evidence for regional contrasts in cereal and pulse production, as well as the cultivation of fruits or commodity crops. Hamadab show a strong emphasis on savanna-adapted summer cereals, sorghum and pearl millet, alongside lentils, whereas Selib had more evidence for barley, similar to the wheat and barley emphasis of Napatan Kawa, further north. Charred commodity production of cotton is evident at Hamadab only, whereas more fruits, such as date and doum palms are evident at Selib. Both sites also have evidence for a foxtail millet, currently referred to as *Setariasphaceleata*, a lost millet cultivar of ancient Nubia. These will be considered in comparison to the longer-term trends such as the expansion of millets and cotton northwards in post-Meroitic times.

Agriculture, Cuisine, and Connectivity: A Regional Synthesis of Archaeobotanical Evidence from Sudan

Mohammed Nasreldein (University of Gezira; University College London)

Over the past several decades, archaeobotanical research in Sudan has generated an increasing body of data on plant use, agriculture, and food practices across a wide range of sites and periods. However, these results have largely remained dispersed in site-based publications, and a comprehensive regional synthesis has yet to be undertaken. This paper presents a general review and synthesis of archaeobotanical investigations in Sudan from the second half of the twentieth century to the present, with the aim of assessing the current state of the field and identifying broader regional and subregional patterns. Drawing on published data from the Middle Nile Region and adjacent regions, the paper explores variations in crop choice, food practices, and agricultural strategies, as well as areas of continuity and shared traditions. These patterns are discussed in relation to environmental conditions, political contexts, and shifting economic networks. By placing Sudanese evidence within a wider comparative framework that includes Nubia, Egypt, and Sahelian exchange zones, the study highlights the region's role as an intermediary between sub-Saharan and Mediterranean agricultural worlds. The presence of imported species and changing cultivation practices reflects participation in regional and trans-regional networks of knowledge and exchange. By integrating archaeobotanical evidence with regional and interregional perspectives,

this synthesis demonstrates that ancient Sudan was embedded within dynamic systems of agricultural and cultural interaction. The paper aims to provide a foundation for future comparative research on food systems and agricultural transformation across Northeast Africa.

Revisiting the Butana Group: Africa's Earliest Evidence for the Domestication of Sorghum, through the Lens of Lithic Production and its Indications on Cultivation

Frank Winchell (WSP USA)

This paper reexamines an unpublished dissertation (now in press with British Archaeological Reports) completed in 1991 by the now deceased Stephen MButu (Southern Methodist University, under the supervision of Antony E. Marks), which focused on the lithic assemblages associated with the Butana Group in eastern Sudan, in particular, the Southern Atbai region of the far eastern Sahel. Although MButu's work predated the confirmation of domesticated sorghum in Africa, his analysis of lithics anticipated the significance of cultivation practices associated with the Butana Group during the 4th millennium BC. Recent archaeobotanical investigations, particularly those identifying domesticated sorghum through macrobotanical remains in the ceramics, have established the Butana Group as a critical locus for early cultivation in northeast Africa. In light of these findings, MButu's dissertation acquires renewed relevance: it not only documents lithic technologies but also indirectly underscores the broader subsistence strategies that were emerging in the region. This retrospective review highlights how lithic evidence, when contextualised with archaeobotanical data, enriches our understanding of the interplay between cultivation practices and material culture in this part of northeast Africa.

Subsistence Practices in Napatan-Meroitic Jebel Barkal

Anna den Hollander (UCL Institute of Archaeology), Bailey Franzoi, Saskia Buechner-Matthews, Dorian Q Fuller, Sami Elamin, Ahmed Hassan, Tim Skuldbøl & Geoff Emberling

This paper presents partial results of three excavation seasons at the UNESCO world heritage site of Jebel Barkal, co-led by the University of Michigan and the National Corporation of Antiquities and Museums, Sudan (NCAM). As part of the wider project, this paper focusses on culinary practices through a multi-disciplinary approach that integrates archaeobotany, zooarchaeology, ceramic typology, SEM analysis of charred food remains, and lipid/residue analysis of pottery sherds. The study adopts a multi-proxy framework concentrated on Early Meroitic contexts that show evidence for food production on a non-domestic scale. This allows for a detailed reconstruction of subsistence practices, one of the first projects in the region to provide such an in-depth analysis.

Findings highlight Jebel Barkal's position at a cultural crossroads during Meroitic times, and provide important insights into the practices of non-domestic food production. Imported cereals such as wheat and barley were identified, yet only processing waste of millets were found, suggesting the importance of these locally grown and processed staples. Residue analysis of ceramics reveals high levels of C₄ plant use consistent with millet-based products; a pattern reflected in the SEM analysis of charred food remains that reveal a high proportion of millet components. The zooarchaeological assemblage returned over 90% of identifiable bones as cattle, with 60% of elements from the feet. This distribution suggests animals were butchered and processed close to their deposition in the excavated city blocks. Together, these lines of evidence underscore the value of integrated approaches for reconstructing subsistence and culinary traditions that supersede the household level in the wider Meroitic city.

Infestation Pathways and Pest-Control Possibilities: Plant–Insect Interactions at the Christian-Period Site of Banganarti

Hamad Mohamed Hamdeen (Al-Neelain University; Czech Academy of Sciences; Natural History Museum, Berlin)

Karolina Resnerová (Czech University of Life Sciences Prague)

Maha A. Kordofani (University of Khartoum)

Michał Dzik (University of Rzeszów)

Jakub Dušek (Czech University of Life Sciences Prague)

Alena Říhová (Czech University of Life Sciences Prague)

Archaeobotanical and archaeoentomological evidence from the Christian period site of Banganarti provides new insights into subsistence practices, storage systems, medicinal plant use, and pest activity in medieval Nubia. The plant assemblage reflects intensive agriculture and a mixed exploitation of cultivated crops and wild flora, indicating a landscape shaped by diversified resource use. Particularly notable is the high concentration of *Vachellia* seeds and pods in storage and food-processing areas, highlighting the species' medicinal importance; its documented bioactive properties, combined with its ubiquity at the site, suggest its integration into daily provisioning and potentially into therapeutic routines at the Raphaelion healing sanctuary. Archaeoentomological analysis shows selective infestation by *Bruchinae* beetles, which targeted *Vachellia* taxa but not other *Fabaceae*, revealing taxonomically specific pest–host relationships and implying that infestations were introduced through the collection and storage of fresh pods. Although direct evidence for pest-control strategies is limited, associated archaeological features – including ash deposits, aromatic plant combustion, oil use, covered vessels, and mud silos – suggest a combination of methods comparable to those known elsewhere in the Nile Valley. Together, these findings illuminate the role of plant resources and medicinal knowledge, in the daily life, subsistence economy, and healing functions of this major Nubian Christian centre.

Beyond Cotton and Flax: A New Microscopic Reference for Fiber Plants in Sudan

Mohammed Nasreldein (University of Gezira; University College London)

Elsa Yvanez (Saxo Institute, University of Copenhagen)

Textile production has long been central to cultural life along the Middle Nile, yet systematic archaeological fiber identification remains limited in Sudan. Thus far, archaeological finds of plant fibers from Sudan consist almost exclusively of cotton and flax. However, it is not yet known whether this represents their true historical dominance or the constraints of preservation and the lack of comprehensive reference collection for other fiber-producing plant species, a recurring issue in African archaeology. This presentation introduces the “Middle Nile Fiber Bank”, a new reference initiative developed within the framework of the *Fashioning Sudan project* (ERC 10139416). Through an extensive review of botanical literature and ethnographic documentation, we identified 40 plant species; mostly native to the region, that have been historically or traditionally used for fiber production. Reference fibers for nearly 30 of these species were sourced from international ethnobotanical and legacy collections, including Kew Gardens and the Natural History Museum of Denmark. These fibers were processed into permanent microscopy slides and examined under transmitted light microscopy to document diagnostic anatomical features. The resulting micrographs form the first visual database of Sudanese fiber plants, which will be made publicly accessible online. Preliminary results demonstrate clear morphological distinctions among the documented taxa, offering a solid foundation for future archaeological fiber identification. This pilot study establishes the methodological basis for integrating archaeobotanical, ethnographic, and historical data to reconstruct textile traditions in Sudan and opens new avenues for collaboration and future fiber analyses across Sudanese archaeological contexts.

22. Archaeometallurgy: A Multidisciplinary Approach and *chaînes opératoires*

A Review of Recent Archaeometallurgical Analysis of Kerma Copper Alloys and Production Waste

Frederik W. Rademakers (British Museum; KU Leuven)

Georges Verly (British Museum)

Patrick Degryse (KU Leuven)

Séverine Marchi (SFDAS)

Charles Bonnet (Académie des Inscriptions et Belles-Lettres)

The Kerma fieldwork season of 2018–2019 has enabled a reassessment of metallurgical activity through excavation of the exceptional cross-shaped furnace, alongside the analysis of metal objects and metallurgical production waste. In the past years, two major analytical studies have been conducted to assess the composition of copper alloys produced and used at Kerma over time, and to consider the possible exchange networks underlying them. This has illuminated close parallels to metallurgical practices in contemporaneous Egypt, as well as the early adoption of tin in ternary arsenic alloys. Beyond this, however, detailed examination of crucible fragments from Kerma shows the first evidence for the intentional alloying of copper with an arsenic component in Nubia (and the Nile Valley as a whole). Furthermore, this research highlights variability in melting and alloying practices during the Middle Kerma period, as well as shared technological approaches with Middle Kingdom Egypt. This paper presents and reviews these results against the growing body of metallurgical studies in Egypt and Sudan, including new discoveries obtained through archival research within the Swiss-French-Sudanese archaeological mission at Kerma.

Archaeological, Archaeometric and Experimental Approaches on a Unique Copper-Alloy Plate Production in the Nile Valley 4000 Years Ago

Georges Verly (ARCAN – Université de Genève; KU Leuven; Université Sorbonne; IRAMAT)

Frederik W. Rademakers (British Museum; KU Leuven)

Johannes Auenmüller (Fondazione Museo delle Antichità Egizie di Torino)

Séverine Marchi (SFDAS)

Charles Bonnet (Académie des Inscriptions et Belles Lettres)

The paper presents a unique metallurgical complex discovered in the ancient town of Kerma, capital of the Kingdom of Kush, and dated to the Middle Kerma period (c.2050–1750 BCE). At its core lies an exceptional cross-shaped furnace (2.6 m x 5.6 m), first uncovered in 1980 by the Swiss-French-Sudanese archaeological mission led by Charles Bonnet. Re-excavations conducted in 2018–2019 suggest that this furnace was used to cast large ornamental metal plates, approximately 1.8 x 1.2 m large and 5–8 mm thick, intended to adorn the monumental Western Deffufa. These plates were cast from a ternary alloy of copper, arsenic and tin, seemingly produced intentionally for this purpose, with characteristics essential to the success of such large-scale casting undertakings. The extraordinary scale of the operation raises fundamental questions about the socio-economic capabilities of Kerma, its resource management, supply networks, and technical expertise. This paper showcases an integrated approach combining archaeology, archaeometry, and experimental archaeology applied to reconstruct the *chaînes opératoires*, assess the function and structure of the furnace, understand alloy properties, and explore possible technological transfer within the Nile Valley. It also aims to contextualise this unique metallurgical phenomenon within the broader cultural history of ancient Nubia, contributing to discussions on innovation, expertise, and long-distance interactions. Ultimately, this research seeks to illuminate a forgotten technological accomplishment in ancient Africa and the conditions that made it possible, while supporting the valorisation of Sudanese heritage in a period of ongoing conflict.

C-Group Metalwork of Aniba. A Reassessment

Martin Odler (Newcastle University)

Jiří Kmošek (Academy of Sciences of the Czech Republic)

Marie-Kristin Schröder (German Archaeological Institute, Cairo Department)

Jan Dahms (State Museum of Egyptian Art, Munich)

In this paper, we would like to revisit a published dataset on the C-Group metalwork from Aniba, based on the new chronology and typology of this archaeological group, as well as introducing some new analytical data, previously not considered. Moreover, we would like to comprehend C-Group metalwork in the context of the wider Eastern Mediterranean background of metal circulation in the Middle Bronze Age. In 2025, Marie-Kristin Schröder published her monograph *Nachbarschaft im Wandel: Untersuchungen zu keramischen Inventaren aus Siedlungen und Nekropolen in Oberägypten und Nubien (ca. 2300–1700 v. Chr.)*, which significantly reassesses the chronology and typology of C-Group ceramics in Nubia and Egypt, convincingly lowering their absolute dating to the Middle Kingdom period. In light of this revised chronology, our study of the Aniba metalwork corpus, published in 2020 under the title *Invisible Connections: An Archaeometallurgical Analysis of the Bronze Age Metalwork from the Egyptian Museum of the University of Leipzig*, can now be updated.

Furthermore, we have analysed additional provenanced metalwork from Aniba held in the collection of the State Museum of Egyptian Art, Munich. These new samples include silver from the site and a distinctive alloy with a confirmed presence of zinc, which was absent from our initial Leipzig corpus. The trace-element and lead-isotope compositions of these new samples allow us to re-evaluate the interpretations proposed earlier in this decade and to compare them with recent analyses of metalwork from Kerma and Middle Kingdom Egypt, represented by specimens in the Museum of Fine Arts, Boston, also presented at this conference.

The revised dating of the C-Group contexts enables the identification of more precise parallels in alloy composition and lead isotopes across Nubia, Egypt, and the Eastern Mediterranean, including comparisons with metalwork from Lebanon. This paper will situate the C-Group metalwork within the broadest possible interregional framework.

Access to Metals in New Kingdom Colonial Nubia: How pXRF Analysis Can Help our Understanding of Subaltern Populations

Matei Tichindelean

Rennan Lemos

This paper examines the material dimensions of subaltern agency within the colonial landscape of New Kingdom Nubia (1550–1070 BCE) focusing on copper-alloy and gold artifacts from mortuary contexts at Debeira. pXRF analysis of artefacts excavated by the Scandinavian Joint Expedition campaign reveals significant variation in alloy composition across elite and subaltern burials, allowing us to more precisely and confidently identify patterns of material access. These patterns reflect differential access to metallurgical resources structured by colonial hierarchies and shifting administrative regimes. By integrating compositional data with burial architecture, object typologies, and chronological indicators, the analysis foregrounds how subaltern communities engaged with restricted materials in contextually specific ways. Rather than passive recipients of colonial imposition, these groups navigated material constraints with discernment, offering insights into the complex interplay between colonial power, access to resources controlled by colonial structures, and local social interactions.

Metalworkers in New Kingdom Nubia: A Prosopographical Perspective

Johannes Auenmüller (Museo Egizio Torino)

Prosopography – the systematic ‘study of persons’ (Eck 2012) – is a scholarly method that compiles and analyses biographical data from groups of individuals to understand their professions, social status, networks, and local connections. This paper applies prosopographical analysis to metalworkers (gold, bronze) attested in Nubia during the New Kingdom. The study aims to illuminate the presence of these craft specialists at various sites established as centres of Egyptian colonial administration and resource exploitation. By examining both people and places, this research investigates the spatial and social dynamics of metalworkers within Egyptian-controlled Nubia. The prosopographical evidence will also be compared with material culture remains to explore apparent discrepancies

between textual attestations and archaeological evidence, revealing potential gaps in our understanding of craft production and organization in New Kingdom Nubia.

23. Reimagining Photographic Archives of Nubia

Recovering Lost Voices: The Photographic Archive of Nabil Abdelrahim Hamza and the Memory of Halfa Sami Saif Sirelkhatim (Sudanese Filmmaker)

On 30th October 2024, Sudanese-Nubian photographer Nabil Abdelrahim Hamza passed away, one month after recording his final testimony for my documentary *Halfa: The Lost Paradise*. His death marks the near-loss of an irreplaceable archive: photographs taken between 1962-1972 documenting Wadi Halfa and the villages of Akasha, Dakka, and surrounding communities during and after the Aswan High Dam displacement. Held privately in his family home in Casablanca, this collection represents what institutional photographic archives of Nubia systematically exclude—Nubia photographed by Nubians, for Nubians.

While UNESCO's Nubian Campaign archives focused on monuments and salvage archaeology, rendering the region as an unpeopled archaeological landscape, Hamza photographed what he called “pictures that must be documented”: his cousin Shawqi's wedding, women making clarified butter in leather bags, the "Journey of Doom" trucks traveling 180 kilometres through desert sand, seasonal flooding of the Nile channels, community gatherings on the eve of displacement. Born in Akasha, he documented his mother's villages with intimate knowledge and insider agency, creating a counter-archive to the colonial gaze.

This presentation examines *Halfa: The Lost Paradise* as an act of biographical recovery and archival intervention. Filmed during Hamza's final months while battling cancer, his voice-over narration re-centres Nubian experience and challenges the erasure of Nubian photographers from the historical record. The film and its underlying archive raise urgent questions: How do we honour family ownership while making such collections accessible to displaced Nubian communities and researchers? What ethical frameworks should guide filmmakers mediating between private family archives and public memory? With Sudan's cultural heritage under siege from ongoing conflict, what alternative models of preservation can emerge from diaspora communities?

The roundtable discussion will explore pathways for community-centred accessibility and decolonial archival practice.

Materials: Film screening (excerpts) + 2-3 exemplary photographs

A Community Photographic Archive of Sudanese Nubia Before and During Flooding

Abdelnaser Seralkhatim Hassan (Director of Republican Palace Museum, Sudan)

The Aswan High Dam submerged 150 km² of Nubia: people lost their homes, farms, schools, places of worship, and cultural heritage. While the Nubian Monuments Rescue Campaign (1959-1970) represents a significant contribution to archaeological knowledge and provides valuable material – now held mostly in European institutional archives – for studying these areas of northern Sudanese Nubia submerged by the High Dam, the residents of these areas were also keen to document their lives and memories before, during, and after the flooding. These photographs preserve a living memory of communities and enable future generations to develop a relationship with now submerged lands, lifestyles, and heritage. Photographs cover village landscapes, the participation of local communities in archaeological surveys and excavations, and the documentation of the tangible and intangible heritage used by these societies.

These Nubian communities now seek to collect, document, preserve and display such memories in public cultural institutions, such as museums, galleries, and cultural clubs, offering an opportunity to balance institutional archiving and its focus on the unpeopled landscapes and monuments of Nubia. Making this material available to researchers and scholars helps revive, activate, and circulate their cultural heritage to ensure transmission across generations, and in turn help the preservation of indigenous communities. Through this vision, I will present my

contribution to highlighting the importance of photographic documentation of the Nubian community in the Wadi Halfa region. This documentation will help them reclaim some of their lost heritage, which was submerged by flooding, and utilise it in research and studies related to the region's cultural heritage. It will also facilitate the establishment of exhibitions and various activities to revive, disseminate, and perpetuate their heritage. Furthermore, it will inform them about the efforts undertaken in the campaign to rescue their antiquities, the participation of foreign missions, and the role of the local community in the campaign, whether through direct participation or by facilitating the work of these missions.

Visualising Nubia: From Colonial Gaze to Local Representation

Fatma Mohamed Amin Fowzy (College of Archaeology and Tourism Guidance, Misr University for Science and Technology)

European photographic representations of Nubians in the late nineteenth and early twentieth centuries were profoundly shaped by colonial power and orientalist visual works. These images frequently reduced Nubian men and women to rigid and repetitive stereotypes—most notably as exotic dancers, submissive servants, or anonymous ethnographic “types.” Such visual practices stripped Nubian subjects of individuality, historical depth, and social agency, reinforcing colonial narratives that framed Nubians as marginal, timeless, and culturally inferior. Photography thus functioned as a colonial tool that naturalised unequal power relations between the European photographer and the Nubian subject.

This presentation critically examines these colonial visual constructions and contrasts them with the photographic work of Nubian photographer Fathi Hussein, whose images offer a radically different perspective. Hussein’s photographs document the lived realities of Nubian communities, with particular attention to the trauma of displacement, loss of homeland, and cultural rupture caused by the construction of the Aswan High Dam. Through a close visual analysis of composition, subject positioning, and thematic focus, the presentation highlights a significant shift from the external colonial gaze to forms of self-representation. It argues that Nubian photography serves as an act of visual resistance, a means of preserving collective memory, and a powerful tool for reclaiming Nubian historical and cultural identity.

German Archaeological and Ethnographic Research and Photography in Nubia, 1900–14: Local Involvement and Scientific Context

Maximilian Georg (Institute of Culture Studies, Austrian Academy of Sciences)

Between 1900 and 1914, several German researchers performed archaeological and ethnographic work in Nubia before it was partly flooded upon the construction of the Old Aswan Dam. Major projects were Georg Steindorff’s expedition in 1900 and excavations at Aniba in 1912/14; Heinrich Schäfer and Hermann Junker’s expeditions in 1908–10 and 1911; and Junker’s excavations, on behalf of Austria, at Arminna and Toshka in 1911–12. The research also produced numerous photographs, both of monuments and inhabitants. There was even a professional German photographer, Friedrich Koch, who served not only on many of the German/Austrian projects but also on U.S. archaeologist James Henry Breasted’s Nubian expedition in 1905–6. However, the photography and other aspects of the research also depended on the assistance and knowledge of Nubians and Egyptians, although most have remained hidden or anonymous. My paper traces them in the records of the German researchers and other sources available. Moreover, I analyse and compare the Germans’ published and archival photographs from Nubia, and discuss the photographs’ scientific purposes in Egyptology, ethnography, and the combination of both – as archaeologists saw Nubians as authentic descendants of the ancient Egyptians, who still practiced the latter’s customs depicted on ancient monuments.

Erbab Hassan Hafez, Amara West and the Antiquities Service: Archaeological Labour and Knowledge Production in Sudanese Nubia

Neal Spencer (Fitzwilliam Museum, University of Cambridge)

Research into the contributions of indigenous experts to archaeological knowledge production within both the late colonial and postcolonial era is a flourishing field, notably on the historiography of excavations in India, Turkey

and Egypt. The role of Sudanese experts, however, remains under-appreciated and under-researched in historiographies of archaeology.

This paper contributes to addressing that imbalance. I present a fragmentary biography of one individual – Erbab Hassan Hafez (1933-2010) – to signal the potential of an intersectional reading against the grain of archaeological archives in European institutions, complemented and trembled by oral histories in both regional communities and family diasporas in the United Kingdom. A boy employed by the Egypt Exploration Society project at Amara West (1948-49), Erbab would later become a Sudan Antiquities Officer, working with William Y Adams, Anthony Mills and André Vila, before finishing his career as photographer for the Sudan National Museum.

This biography provides insights into how individuals negotiated the transition from a British colonial Antiquities Service to a Sudanese-led organisation, and the roles of image makers within the archaeology of Nubia. It also highlights the fragility of such biographical data due to institutional hierarchies in archival practice, documentary elisions (Sudanese contributions remain unattributed in most excavation archives), ongoing conflict in Sudan, and the passing away of those with lived memories of such individuals.

A Crowfoot Connection: Photographs of Sudan and Nubia at the Palestine Exploration Fund

Elisabeth Sawerthal (British Museum)

The Palestine Exploration Fund, London, specialises in Levantine history, and yet it houses a small photographic archive with images from Sudan and Nubia. These photographs were taken and later donated to the Fund by Elisabeth Grace Crowfoot, the British textile historian known amongst other contributions for her work on materials from Qasr Ibrim. Not only was Crowfoot a renowned scholar in her own right but she also came from a family of archaeologists, following in the footsteps of her mother, the textile historian Grace Mary Crowfoot. Her father John Winter Crowfoot served as Director of Education in Sudan until leaving for Mandate Palestine where he served as the first Director of the newly founded British School of Archaeology in Jerusalem and excavated at sites such as Samaria-Sebaste.

This contribution will introduce and provide an overview of Elisabeth Crowfoot's photographs at the Palestine Exploration Fund. It also seeks to explore the journey of how these images became part of a Levantine collection in order to highlight how photographic archives of Nubia were created within the wider archaeological and scholarly networks of the British empire.

Fragments into Power: Reassembling Nubian Heritage

Yasmin Elnour (Independent Researcher)

This paper presents an ongoing visual practice, primarily in collage, exploring Nubian and Sudanese heritage through archival material and visual storytelling. As a Nubian architect and artist working from within the diaspora, I respond to what the session organisers identify as archival representations of Nubia as “unpeopled space” – where living Nubians appear only as anonymous representatives of labour or village life – by creating works that re-centre Nubian experience, agency, and beauty.

My engagement with these questions began during my architectural studies, where I became fascinated by Nubian vernacular architecture as visual markers of identity and repositories of communal knowledge. The loss and dispersal of this heritage through successive dam constructions and the displacement of Nubian communities became a catalyst for exploring how memory and imagery carry identity forward through time.

I draw from Nubian archival photographs, architectural documentation, archaeological imagery, and fragments of material culture now dispersed across international collections. I layer these sources with Nubian visual vocabularies, geometric motifs and patterns that honour both continuity and transformation. The resulting works extract subjects from their original framings and place them within compositions that assert power and cultural presence, part of a wider methodology of visual reassembly.

This practice seeks to educate, empower, and reconnect – revealing identity as something living and still unfolding.

From Cultural Anthropology to Visual Heritage

Tobias Mörike

Nubian landscape, material culture, architecture as well as individuals and families are depicted in the books and papers of social and cultural anthropologists and form a specific photographic record. By looking at published photos, this talk addresses three questions: first, it investigates how images were used as documents in the arguments about Nubians; second, it asks if the agency of Nubians can be reconstructed; and, third, if the material selected for publication offers clues for unpublished archives and materials, which could in the future be revisited with the Nubian heritage community.

The talk aims to connect the rich published material with current approaches in photographic history.

24. GIS, WebGIS and EOS for Heritage Monitoring in Sudan: The IMAHP Project in Focus

Development and Preliminary Results of a GIS for the Centralisation of Archaeological Data in the IMAHP Project

Juliette Laroye (SFDAS collaborator)

The GIS presented here constitutes the first module of the IMAHP project, dedicated to the processing and organisation of archaeological data from multiple sites in Sudan. It is developed to provide a solid and coherent foundation, enabling the centralisation, structuring, and visualisation of field-collected information while facilitating collaborative work among teams. Designed for researchers and Sudanese heritage authorities, this GIS offers a tool to organise and exploit spatial and archaeological data, while preparing for its future integration into a multi-site WebGIS.

The GIS architecture integrates multiple spatial levels – from the site scale down to the finest archaeological units – and combines a relational database with a geospatial component to allow cartographic visualisation, spatial querying, and thematic analysis. A standardised graphic charter, based on symbology rules structured by geometry, ensures representation consistency and facilitates data integration by different teams. Automation tools are currently being finalised to streamline collaborative workflows.

Two pilot sites were selected to test the methodology and confront the system with large volumes of data as well as diverse data types. These experiments have helped refine georeferencing, digitisation, object integration procedures, and the structuring of links between spatial, stratigraphic, and material data.

This presentation will outline the GIS architecture, the underlying methodological choices, and currently operational tools, as well as provide an overview of ongoing uses and future development perspectives. It will demonstrate how this tool can be used by teams to organise and visualise data, and will serve as an introduction to the following presentations, which will cover EOS (Advanced Spatial Analyses) and the WebGIS modules.

Modelling Multiple Risk Exposure Archaeologic Heritage Sites by GIS-Remote Sensing Based Monitoring: The Case study of Saï Island

Sébastien Gadal and Qacem Khezami (Aix Marseille Université, Université Côte d'Azur, Avignon Université, CNRS, ESPACE, UMR 7300, Technopôle de l'Environnement Arbois Méditerranée)

Sahelian Sudan is undergoing rapid geographic changes that renders the preservation of archaeological heritage sites under acute pressure. Along the Nile River, as is the case with Saï island, where the main risks are concentrated, territorial dynamics such as demographic pressures, urban growth, shifting agricultural practices, Nile floodings, and climatic stress threaten the integrity of archaeological heritage spaces. Because of the civil war and the large area of the Sahelian portion of the Nile River in Sudan, space-based remote sensing has emerged as an effective approach to monitoring exposure to geographic risks, whether anthropogenic or environmental.

Satellite imagery, including the Landsat MSS/T/OLI-TIRS image series, dating back to 1973, and more recent Sentinel 1 SAR C, Sentinel 2 MSI, and Pleiades archives, dating back to 2013, also enables the implementation of spatio-temporal models for monitoring exposure to geographic risks. The satellite imagery combines multi-satellite-sensors, multi-temporal and multi-scalar approach based geo-modelling with high-resolution digital elevation models (DEM). Multi-scalar temporal risk exposure modelling is built on five geographic factors integrated within a GIS to produce a complex cartography of various assessment maps relating to geographic, anthropogenic and environmental issues. These comprise geo-simulation of flooding events based on 40 years of observations, demographic and urban growth, agricultural development, and the impact of climate change on the revegetation of archaeological sites. The example of Saï island in Nubia is presented as a case study for the potential of this geospatial framework in modelling and mapping environmental and anthropogenic risks to Sudanese archaeological heritage sites.

The IMAHP WebGIS Platform: A Shared Tool to Connect the Archaeological Community

Sébastien Poudroux (SFDAS collaborator)

To share the data produced by the two other components of IMAHP – GIS and EOS (Advanced Spatial Analyses) – with the widest possible audience, the project team is developing a WebGIS, the primary purpose of which is to facilitate the collaborative work required by our discipline.

This work, and access to information, often become more complex due to the geographical distance between the various actors involved in the same archaeological project – a distance made even more significant by the armed conflict currently devastating Sudan.

A WebGIS makes it possible to overcome this constraint. Beyond being a simple cartographic visualisation tool, it is a genuine geospatial database, accessible online and modifiable in real time by those with authorisation. Its major advantage lies in the fact that it requires no software installation on the user's side, making data sharing even easier.

It therefore represents a key development in the evolution of post-excavation methods and the dissemination of archaeological data, as will be illustrated by the presentation of the IMAHP WebGIS during this communication.

This presentation aims to demonstrate the functioning of this open-source, scalable and modular tool by outlining its architecture, essential components, and the main features it provides for the visualisation, access, and collaborative editing of archaeological data.

From Archives to GIS: Integrating Sixty Years of Swiss Archaeological Data in Sudan

Xavier Droux (Fondation Gandur pour l'Art, Genève; University of Geneva)

Noémie Monbaron (Museum of Art and History, Geneva)

Aurélié Quirion (Fondation Gandur pour l'Art, Genève ; University of Geneva)

Séverine Marchi (University of Geneva; Section Française de la Direction des Antiquités du Soudan [SFDAS])

Initial excavations led by a team from the University of Geneva took place at Tabo in northern Sudan in 1965. Nine successful campaigns followed, with fieldwork later extending to Kerma and Dukki Gel, predominantly under the direction of Charles Bonnet. Over the past six decades, a vast archive has been assembled, including excavation notebooks, maps, plans, artefact lists and descriptions, slides, and photographs. This archive attests to Switzerland's significant involvement in both Sudanese archaeology and the inception of modern excavation in the region, representing a crucial resource for enhancing our understanding of these important sites and artefacts.

Currently, this material is housed across several institutions in Geneva and Sudan. In close collaboration with the current Swiss-French-Sudanese mission at Kerma–Dukki Gel, our primary goal is to conserve and digitise these archives, making them accessible for both research and the public. By consolidating this material into a single, coherent resource, we aim to establish clearer connections between archaeological objects, remains, and archival data. This approach complements existing publications by providing a durable reference framework that integrates previously dispersed documentation.

This work is strengthened through collaboration with the IMAHP project, which provides a methodological and technical framework for the spatial structuring of archaeological data. Within this partnership, integration of archival documentation into a geospatial environment enables systematic recontextualisation of plans, field records, photographs, and material data within their original spatial framework. For Tabo, this approach facilitates the coherent articulation of long-standing archival datasets, supporting a more integrated reading of excavation data while establishing the foundations for reuse within a shared digital infrastructure.

Combining archival digitisation with geospatial analysis and sound documentary standards, this project aims to create a unified and sustainable research tool. This approach enhances interoperability and long-term conservation, while opening new perspectives for the study, monitoring, and protection of Sudan's archaeological heritage.

Threatened Heritage and GIS-Based Control Strategies: The Post-Meroitic Burial Ground near al-Khiday, White Nile

M. Khaled Magzoub (National Corporation for Antiquities and Museums)

Stefano Costanzo (Università degli Studi di Milano)

Donatella Usai (Centro Studi Sudanesi e Sub-Sahariani - ETS, Treviso)

The White Nile region is exceptionally rich in archaeological heritage. Evidence of human occupation spans from the Early/Middle Palaeolithic to the Islamic period. From small scatters consisting of single or few lithic handaxes to extensive areas yielding evidence of habitations, burial grounds, workshops with concentrations of pottery, bone tools, grinding stones and many other products of cultural material, the Pleistocene to Middle Holocene history of this region is becoming increasingly well understood. By contrast, our knowledge of the region during the historic period, from the Meroitic and Post-Meroitic onwards, remains much more limited.

The al-Khiday Italian Archaeological Project, working on the left bank of the White Nile and primarily focused on the prehistoric evidence, was confronted, like many other salvage projects, with the urgent need to document this heritage. In doing so, it became clear that this archaeological record represents an extraordinarily rich component of the region's past, whose investigation may significantly enhance our understanding of the role played by the area after the collapse of the Meroitic political entity.

Vast areas of earthen tumuli, some of remarkable size, are visible in the floodplain west of the White Nile. A small group of these was investigated by the Italian Project in 2007; however, limited funding represented a major constraint to the continuation of fieldwork. In recent years, as the area near Khartoum has been severely affected by the conflict, forcing the population to abandon it, the cultural heritage has most likely been targeted by the Rapid Support Forces, who controlled it, and the tumuli, which are particularly visible because of their superstructure, have consequently been extensively looted. In response, a project based on the use of GIS tools was developed to analyse the distribution of the tumuli, their inter and intra-site relationship, and monitor this endangered heritage.

25. Multiple Nubias: Of Animals and Men

The Deep Symbolic and Economic History of Wild and Domestic *Bos* in Sudan from Prehistory to Contemporary Times

Elena A.A. Garcea, Julia Budka, John Galaty, Salima Ikram and Shayla Monroe

Drawing from a book currently in press entitled *The Deep History of Cattle Herding and Symbolism: New Perspectives from Anthropology, Archaeology and Zooarchaeology in Sudan* by the present authors, this presentation offers an overview of the deep symbolic and economic history of *Bos* in Sudan from prehistoric to contemporary times across more than 10,000 years. It explores the complex relationship between humans and wild African aurochs (*Bos primigenius africanus*), as well as the ecological and ideological relevance of that relationship to the adoption of cattle pastoralism by African peoples. Aurochs had been part of the human spiritual imagination before domestic *Bos taurus*. They have represented the transcendent intermediary between humans

and divine/supernatural entities and their material impersonation since the final Pleistocene. The supremacy of cattle in the economic and symbolic sphere was consolidated in the Neolithic and Late Neolithic periods. Later, from the mid-third millennium BCE, the emphasis on cattle reached its highest material and spiritual expression across the entire Sudanese country, continuing into historical and contemporary times. This paper demonstrates the *longue durée* of cattle-centred behaviour in Sudan, with its emergence, formation, and retention, which draws its roots into the symbolism of wild aurochs and finds its highest expressions in the Kerma and Meroitic periods.

Cattle Capital: The Fauna of Meroitic Napata

Bailey Franzoi (University of Michigan)

Geoff Emberling (University of Michigan)

Tim Skuldbøl (University of Michigan)

It is accepted that cattle had a dominant role in the societies of the ancient Middle Nile Valley. As early as the Neolithic period, various breeds of cattle have featured prominently on rock art and other visual media, and Nubian tributes to Dynastic Egypt are often depicted leading cattle, or dressed in various leather hides. At Kerma, elite individuals were interred with up to 4,899 cattle bucrania and, in some cases, buried in leather shrouds and sandals used in life. The Kushite diet, as well, seems to have been heavily reliant on beef, with zooarchaeological reports attesting to a majority of species recovered as cattle. This has been the trend at all the excavated major Kushite sites, including Kerma, Meroe, Hamadab, Abu Erteila, and Musawwarat es-Sufra. This paper presents the results of new zooarchaeological analysis on the faunal remains of Meroitic Napata (modern Jebel Barkal), which are also overwhelmingly cattle (90%). These will be discussed in light of current understandings of Meroitic diet, mobility, and environmental change. Preliminary data about the site's microfauna, birds, and fish will also be included.

Herding Caprines in the “Belly of Rock”: Sheep and Goat Management at the Lower Nubian Fortress of Askut

Shayla Monroe

The fortress of Askut was built as stronghold on the Egyptian-Nubian border at the height of political tensions between ancient Egypt and Kush (1850 to 1550 BCE). The immediate area around the fortress is called *Batn El Hagr*, or “Belly of Rock”, and it was a harsh environment for raising animals. Nonetheless, herders persisted, and faunal remains from the fortress (dating from the Middle Kingdom all the way into the Late Period) can elucidate the complex intersection between ancient colonialism and borderlands interactions between Egyptian colonists and the Nubian C-Group, a group of semi-nomadic agropastoralists in the path of Egyptian colonialist expansion. Zooarchaeological data interpreted through the lens of political ecology can parse the various effects of Egypt's colonial presence in Lower Nubia, including the impact of the Second Cataract fortresses on the Lower Nubian landscape, the impact of military surveillance on pastoral seasonal mobility, and ever-present challenges of raising animals in drylands. Here, I use zooarchaeological methods to quantify the importance of caprines compared to cattle in the food refuse of Askut, patterns in osteometric values at the population level, and mortality profiles and the preliminary results of stable isotope analysis to understand the economic importance and management of sheep and goat in the area of the Second Cataract. Results from these combined analyses are summarised for each chronological period of Askut's occupation and the end result illuminates the resilient strategies of ancient herding communities in a harsh climate.

New People – New Animals – New Tastes: The Faunal Remains from 18th Dynasty Sai in Nubia

Nadja Pöllath (SNSB-SPM)

Ptolemaios Paxinos (SNSB-SPM)

Julia Budka (LMU Munich)

In this contribution, we present the results of the faunal analyses of two assemblages from the New Kingdom town of Sai Island excavated within the framework of the ERC AcrossBorders Project. The majority of the faunal material is composed of mammal and fish bones. A smaller proportion of the specimens can be attributed to the orders of birds and reptiles. A total of 96% of the identified mammal remains (micromammals excluded) are from domestic mammals. Of these, caprines (almost 42%) were clearly more important than cattle (almost 34%).

The assemblage from Feature 15, a large cellar in an administrative building, provides insights into the animal husbandry strategies and dietary customs of an 18th Dynasty town in a newly occupied area. Comparison with animal remains from Egyptian and indigenous Nubian sites revealed that the Egyptian settlers, including officials, workers and servants, introduced new practices and species to this area. These included the establishment of pig husbandry, a preference for fish and goat meat, and the unintentional introduction of the house mouse, alongside the cat, as a remedy.

Of Pigs and Men: Evidence for Pigs from New Kingdom Sai in Context

Julia Budka (LMU Munich)

Pig bones were among the vertebrate faunal remains in Sai City during its New Kingdom use. In sector SAV1 North, pigs are the third most important domesticated species behind sheep/goats and cattle. The pigs found here were slaughtered at the optimum age for meat consumption, suggesting pig breeding at the site.

In a recent article, the reconstruction of pig pens in an Amarna-style villa, designated H4, located in the southern part of Sai City, was presented.

This presentation will discuss the context of the findings, which include both faunal remains and architectural evidence, and which attest to the consumption of pork in Sai. Within its colonial context, this is especially remarkable because during Kerma times pigs were decidedly less common in Nubia than in Egypt. It has been hypothesised that the Egyptians were the first to import them during the colonisation of the region. This hypothesis will be discussed and contextualised, with the results of organic residue analysis of cooking pots also being included.

Something Fishy to Consider: Assessing Aquatic Species Consumption at the Makurian Monastery of Ghazali (680–1275 CE)

Carita Tham (University of Waterloo)

Robert Stark (University of Waterloo; Polish Centre of Mediterranean Archaeology, University of Warsaw)

Diet, beyond being a necessity of life, forms a biocultural interface within which prescriptions and proscriptions around what is permitted and what is prohibited come into contact. Given the largely absent textual record for monasteries in medieval Nubia, inferences to potential conceptions of diet among medieval Nubian monastic communities have often derived from cognate Egyptian and Byzantine monastic contexts. Among commentaries on diet in Byzantine *typika* and Egyptian monastery rules is a general, if at times complicated, avoidance of meat. Conceptions of restrictive diets as pious and gluttony as sin also pervade many recorded accounts. Numerous questions remain, however, around the outward projections and lived realities of monastic diets. Previous isotope analyses of bone collagen $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$ values from members of the monastic community at Ghazali (c.680–1275 CE) in the Bayuda desert of Sudan identified several individuals who were evidently regularly consuming terrestrial animal proteins, among whom a smaller subset also appear to have been eating aquatic species (e.g. fish), despite a lack of aquatic remains being identified during excavations at Ghazali and a conception that aquatic species were not a common dietary product consumed in medieval Nubia. To gain further insight to the potential consumption of aquatic species within this monastic community, sulphur ($\delta^{34}\text{S}$) isotope analysis of 18 individuals was undertaken. The addition of $\delta^{34}\text{S}$ analysis has further identified several of the initial individuals as possibly having consumed aquatic species as well as identifying possible future approaches for refining the insights obtained, namely through additional, compound specific, methods and robust baselines. The addition of $\delta^{34}\text{S}$ analysis contributes to and continues ongoing dialogues around perceived divides between outward projections of piety via dietary austerity, permissible consumption of animal products within monastic communities, for instance to regain strength during illness, and the need for a sufficiently robust diet.

Western Nubia Culture History: Reflections of Animal Symbolism on Darfur-Kordofan Heritage

Gafar A. F. Ibrahim (Nyala University)

Ibrahim O. E. Elimam (University of East Kordofan)

Ashraf M. A. Adham (Al Neelain University)

Fisal M. A. Toto (Al Neelain University)

This presentation investigates Western Nubia culture history through the use of animal imagery on various aspects of Darfur and Kordofan philosophies and values of prosperity, fertility and social hierarchy. It also seeks to examine how animals have become symbols of supernatural forces, means of communication with the natural world, and sacred ritual intermediaries between indigenous peoples and spiritual powers in the area under investigation. Totemic taboos of human-animal interactions in social organisation and festive events are also explored.

The significance of this study is meant to promote the interpretation and understanding of animal depictions, which refer to artistic representations of social, belief systems and ceremonial forms of expression. Different beasts in Darfur and Kordofan are often symbolised in old mythologies and brands that are rarely documented in the Sudan.

26. Multiple Nubias: Ceramic Evidence

Technological Shifts in Prehistoric Pottery Production at Kadero (Central Sudan), New Evidence from Museum Collections

Wafa Sharif Dawod Hussein (École Pratique des Hautes Études (EPHE), PSL Université; LLACAN (CNRS), Paris)

Despite the central role of ceramic technology in understanding prehistoric communities in Sudan, previous studies have paid limited attention to technological aspects of pottery production. Earlier methodological contributions addressed forming techniques (Haaland 1981; Caneva 1988), but decorative typologies have continued to dominate ceramic studies. Only recently has the expansion of *chaîne opératoire* approaches in African and Nile Valley archaeology begun to produce more detailed technological evidence (e.g., Garcea, 2001, 2006; Dal Sasso *et al.* 2014; D'Errico *et al.* 2017, 2024).

In the absence of a comprehensive technological study of late prehistoric pottery in central Sudan, this paper re-evaluates museum-held ceramic assemblages from the site of Kadero through an integrated analysis that combines decorative typology with microscopic observations of manufacturing techniques. The study first establishes a comparative typological framework for Mesolithic and Neolithic ceramics based on decorative attributes and available radiocarbon dates. This framework is then integrated with technological observations on forming methods, clay preparation and surface treatment.

Despite the inherent limitations of museum collections, the results reveal clear technological distinctions between Mesolithic and Neolithic assemblages, highlighting changes in production practices that are not detectable through decoration alone. While coiling remains the dominant forming technique, evidence of additional shaping methods based on mass clay manipulation such as modelling, and hammering have been identified. These findings challenge the long-standing assumption of a single continuous forming tradition from the 9th to the late 3rd millennia BC and open new perspectives on the transmission of ceramic technological knowledge in central Sudan.

Holocene Ceramics from Shaqadud: A Multi-Scalar Study Integrating Dating, Technology, and Petrography

Elena A. A. Garcea (University of Cassino and Southern Latium)

Giulia D'Ercole (LMU Munich)

Andrea Manzo (University of Naples "L'Orientale")

Lenka Varadinová (Czech Institute of Egyptology, Charles University)

Ladislav Varadzin (Institute of Archaeology of the Czech Academy of Sciences)

Shaqadud, located in present-day central Sudan about 115 km northeast of Khartoum, is a key site for Sudanese prehistory. It has recently been re-investigated as part of the *Shaqadud Archaeological Project* by the Czech Academy of Sciences. Notably, at the largest site, S1-B, new excavations over the unfinished Otto's trench uncovered a remarkably deep stratigraphic sequence, recording over 10,000 years of continuous human occupation. This sequence initiates at the beginning of the Holocene with an aceramic hunter-gatherer phase followed by the appearance of pottery around 8700 BCE, which is roughly contemporary with the earliest evidence from the Nile Valley. The sequence continues with evidence of Neolithic pottery which, although similar, exhibits specific characteristics in comparison to the Neolithic assemblages from Esh-Shaheinab and other sites in the Nile Valley, as well as including post-Neolithic material.

This contribution presents unpublished data on the site's stratigraphy, new dating results, and a description of the ceramic material, based on both macroscopic evidence and petrographic observations of the ceramic fabrics.

Early Pottery of Western Sudan: New ¹⁴C and Petrographic Insights on Dotted Wavy Line/Laqiya Ceramics from the Wadi Howar and Laqiya Region

Giulia D'Ercole (LMU Munich)

Giacomo Eramo (Università di Bari Aldo Moro)

Friederike Jesse (University of Wuppertal)

The Wadi Howar and Laqiya region in western Sudan – encompassing the Lower and Middle Wadi Howar, the Ennedi Erg, Djebel Tageru, up to the Wadi Shaw/Laqiya Arba'in zone and the Selima Sandsheet – is today among the most arid areas in Africa. During the early and middle Holocene, c.5000 BCE, however, this region offered favourable climate conditions and abundant environmental resources, making it an important hub for hunter-gatherer communities. For at least five millennia before it dried up, the Wadi Howar functioned as a strategic corridor linking the Nile Valley with the Ennedi Mountains of present-day Chad. The whole area has been the focus of intensive research for over four decades through the B.O.S. project and the subsequent ACACIA project. These investigations have identified more than 2,000 archaeological locations and established a ceramic sequence spanning over five millennia, from the earliest Dotted Wavy Line (DWL)/Laqiya phase to the Handessi tradition, the latter associated with pastoral communities and dated to the mid-third/second millennium BCE.

This contribution proposes a reassessment of selected ceramic materials from the earliest DWL/Laqiya occupation phase, drawing on samples conserved in the Africa Research Centre, University of Cologne, which have been newly investigated through polarised optical microscopy (POM) on thin section, scanning electron microscopy with EDS microanalysis (SEM-EDS) and directly dated via radiocarbon analysis on organic tempering.

Old Materials, New Perspectives: Reassessing the earliest sites at Khashm el-Girba

Donatella Usai (Centro Studi Sudanesi e Sub-Sahariani - ETS, Treviso)

During the Early Holocene, the Nile Valley and its adjacent regions witnessed the spread of pottery-bearing hunter-gatherer and fishing communities. The regions to the west and east of the Nile were occupied by groups whose cultural character was shaped by their relationship with the river valley, but whose archaeological contexts are more difficult to interpret due to factors affecting the preservation of the evidence, as well as research challenges linked to the limited accessibility of these areas.

While the Western Desert, particularly the Wadi Howar area, has been the focus of systematic research by German teams within the BOS and ACACIA projects, the Upper Atbara region in eastern Sudan has only recently experienced a revival of scholarly interest through the work of the IAEES at the University of Naples "L'Orientale". One of the aims of this renewed project is to reanalyse data collected in the 1980s, reassessing it in

light of new evidence gathered both in the region and in the Nile Valley itself. This new body of evidence has significantly enhanced our capacity to reinterpret archaeological materials from earlier research.”

Some sites in the vicinity of the Khashmel-Girba area have so far been reanalysed from the perspective outlined above, in order to investigate possible links with the Nile Valley and to place their pottery production within a relative chronological framework, with the aim of updating and integrating the older one, which currently appears particularly inadequate.

The Nubian Pottery from Cemetery WT1 at Wadi el-Tawil: A Technological and Petrographic Analysis

Maria Carmelo Gatto (Polish Academy of Sciences)

Jade Bajeot (Université de Toulouse 2 - Jean Jaurès)

Aaron de Souza (Museums of History of New South Wales),

Mary Ownby (Ownby Analytical, LLC.)

Carla Gallorini (University of Birmingham)

Cemetery WT1, found in Wadi el-Tawil, a few kilometres north of Wadi Kubbaniya (west bank, north of Aswan), and dated by Egyptian pottery to the late 12th/early 13th Dynasties, is unique in having black-topped bowls showing both Pan-Grave and C-Group formal characteristics. Along with the complete typological classification, a technological analysis of the ceramic assemblage facilitated the reconstruction of the entire *chaînes opératoires* for pottery making. Thus, an anthropological reading of the material was obtained. It has been possible to distinguish Pan-Grave and C-Group vessels based also on the techniques adopted to shape them, and not only on slight typological differences, thus allowing us to create a series of considerations on how to interpret those technological variances. The petrographic results support the idea that the Nile clay used to make these vessels is similar across the sherds and suggest local production. Only a single sample may have been brought to the site from further south. Such a thorough study of this unusual assemblage has indicated the probable local presence of Nubians producing their own pottery following different schools of knowledge. This may suggest a complex and nuanced coexistence of two culturally distinct Nubian groups, who maintained their own identities while engaging in fluid interactions across these distinctions.

An Analysis of Neolithic & Bronze Age Nubian Pottery Forming Techniques from the Scandinavian Joint Expedition to Sudanese Nubia Using X-Ray Microtomography (µ-CT)

John Gait (Budapest Research Centre, HUN-REN Centre for Energy Research)

Katalin Bajnok (Budapest Research Centre, HUN-REN Centre for Energy Research; Eötvös Loránd University)

Stephen Hall (University of Lund)

This presentation describes the results of an investigation into the forming techniques of late Neolithic and Bronze Age Nubian pottery from the collections of the Scandinavian Joint Expedition to Sudanese Nubia (SJE) housed at the Museum Gustavianum, Uppsala University. A total of 40 pottery sherds attributed to the A-Group, C-Group, Pan-Grave and Kerma cultures, from nine sites in Northern Lower Nubia, dated to the 4th–2nd millennia BCE, were analysed using non-destructive X-ray microtomography (µ-CT).

Previous studies of such material have largely followed an art historical or typological approach, with the significance of often subtle stylistic differences emphasised within a strict culture-historical framework. From this perspective, the underlying technological tradition(s) have been relegated to a minor role, with such details of manufacture as have been proposed based largely on recent historical ethnographic parallels rather than direct empirical evidence from the artefacts themselves.

The wide range of materials analysed in the present study provides an opportunity to further examine this question, and to investigate potential technological changes within the region over time. By situating this analysis in the wider theoretical approach of the *chaîne opératoire*, and by considering ideas of technological choice and the transmission of technological knowledge, it also aims to explore the cultural and temporal permeability of Nubian cultures. This study hopes to demonstrate both the practical application of new non-destructive approaches to the analysis of ancient pottery, as well as the importance of historic collections in addressing ongoing archaeological questions.

Identifying Pottery Forming Techniques in Bronze Age Sudan: New Results from X-ray Microtomography (μ -CT) and Small-Angle Neutron Scattering (SANS)

John Gait (Budapest Research Centre, HUN-REN Centre for Energy Research)

Giulia D'Ercole (Ludwig-Maximilians-University Munich)

Katalin Bajnok (Budapest Research Centre, HUN-REN Centre for Energy Research; Eötvös Loránd University)

Zoltán Kovács (Institute of Technical Physics and Materials Science, HUN-REN Centre for Energy Research)

Ákos Kukovecz (University of Szeged)

Adél Len (Budapest Research Centre, HUN-REN Centre for Energy Research)

Imre Szenti (University of Szeged)

Julia Budka (LMU Munich)

The study of the *chaînes opératoires* of pottery provides not only an effective way to examine the technology of the past, but also a means by which the understanding of tangible objects may be used to explore wider aspects of the dynamics of the communities in which production occurred. Within the entire sequence of actions and events occurring during production, the specific techniques by which raw clay-rich pastes were shaped into vessel forms are of particular significance, ultimately reflecting resilient culturally embedded and socially mediated processes of teaching and learning and the intergenerational transmission of technological knowledge. In the context of Nubia under the colonial control of the Egyptian New Kingdom (c. 1550-1070 BCE), understanding pottery forming techniques may therefore provide a new perspective from which to view the complex entanglements of Nubian and Egyptian cultures.

In practice, however, identifying forming techniques may pose various challenges, such as the ability to examine fragmented and abraded sherds and to differentiate subtle composite forming techniques, and increasingly the need for non-destructive analysis. In this presentation, we compare the effectiveness of two separate, non-destructive material science techniques, X-ray microtomography (μ -CT) and small-angle neutron scattering (SANS), for the analysis of forming techniques using 20 sherds of stylistically Egyptian and Nubian pottery recovered from the New Kingdom colonial towns at Sai Island and Soleb as well as a domestic site in the hinterland of Sai at Attab West, together with samples from three modern replica vessels. The results are discussed with regard to the wider study of pottery in the Nile Valley as well as their potential implications for the understanding of Egyptian and Nubian interactions and technology transfer during the New Kingdom.

Nubian Ceramics from House 55 in Elephantine

Julia Budka (LMU Munich)

As a part of the research project examining the pottery from House 55 on Elephantine Island (Egypt), this presentation will focus on the Nubian vessels and the so-called hybrid vessels. The combination of Nubian surface treatment with Egyptian production technique, utilising Egyptian Nile clay, is a distinctive characteristic of these vessels. The shapes exhibit notable similarities to Pan-Grave style cooking pots and globular bowls, while concurrently displaying marked affinities to Egyptian shapes, exemplified by the 17th Dynasty cooking pots.

In general, Nubian pottery is very common in House 55, with 17.3% of the diagnostic pieces and an average of 4.8% of the entire ceramic material (more than 5,500 individual Nubian sherds were counted). In conjunction with 67 hybrid vessels, the Nubian vessels account for 20% of the diagnostic ceramics subjected to detailed analysis from House 55. This paper will present the corpus of Nubian vessels and wares and aims for a contextualised assessment of this material.

Kushite Pottery from the South Asasif Necropolis, Thebes: Comparing Material from Monumental and Non-Monumental Tombs

Julia Budka (LMU Munich)

This presentation will provide an updated report on the ceramics datable to the 25th Dynasty from the South Asasif necropolis, with a particular focus on material associated with indigenous Kushites. Material from the monumental, decorated tombs of Karakhamun and Karabasken will be compared to pottery found in the non-monumental tombs recently unearthed by the South Asasif Conservation Project (SACP) under the direction of Elena Pischikova.

In addition to discussion of the dating, function and possible parallels within Egypt from Thebes and Abydos and from Kush (Kurru and Nuri), quantitative aspects will be the focus of the comparative approach presented. The following discussion will present a number of tentative hypotheses concerning the relationship between monumental and non-monumental tombs, as well as the sacred landscape of South Asasif, created by the Kushites in Thebes.

Pottery from Jebel Barkal East Mound – Form, Function and Food on the ‘High Street’

Saskia Buechner-Matthews, Tim B.B. Skuldbøl, Geoff Emberling (Jebel Barkal Archaeological Project, Kelsey Museum of Archaeology, University of Michigan)

Change in the pottery assemblage provides an important means for understanding the life-history of both a settlement itself and its inhabitants over time. Here we will consider changes in the relationship between form and function of the pottery from one area of the East Mound at Jebel Barkal, representing a possible commercial ‘high street’ area of the site. This area would have served not only local residents but visitors to the monuments, palaces, and religious buildings nearby.

Our analysis here has focussed on the large assemblage of pottery recovered through excavation of unstratified surface deposits in combination with stratigraphically recovered material from a number of small sondages across this commercial area. The start of the combined study of this material has allowed us to assign a wide range of diagnostic material to chronologically successive phases in the life-history of the site (currently 7–6th centuries BCE to around 0–50 CE), and to study changes in pottery manufacture and use over time. This process has highlighted the huge potential of surface collections, which might otherwise have been discarded in favour of only stratigraphically recovered material.

Whilst analysis of this material is ongoing, we will here offer some observations on the dual process of change in some specific vessel categories that occurred over time, as well as instances of both 1) new categories and forms introduced into the ceramic repertoire of the site, and 2) others that fell out of favour and were abandoned. These changes provided important glimpses into the common and changing food practices across the site in the context of food-related ceramic technologies, as well as resource use, and the wider changing political and economic fortunes of the site itself.

Pottery in the Afterlife of Nubian Bishops. Study of the Nubian Collection from the National Museum in Warsaw

Katarzyna de Lellis-Danys (Polish Centre of Mediterranean Archaeology, University of Warsaw / National Museum in Warsaw)

Ceramic vessels discovered in the tombs of bishops at Faras, now showcased in the Faras Gallery of the National Museum in Warsaw, present a puzzling element of Christian funerary practice. The presence of lamps, amphorae, and bottles in episcopal burials appears to contradict normative Christian attitudes toward grave goods. This paper examines the ceramic assemblages from Faras in comparison with archaeological evidence from bishops’ burials at Old Dongola and those from the Byzantine Empire. Their placement in the ecclesiastical contexts represents intentional ritual deposition. The vessels were not personal belongings but formed part of a structured funerary repertoire, potentially associated with apotropaic protection, commemoration and common practices shaped by other traditions rather than official doctrine. By situating the Nubian evidence within a wider Late Antique and Medieval Byzantine framework, the paper identifies close parallels in the use of ceramic lamps and amphorae in burials across the Eastern Mediterranean. These similarities underscore the persistent cultural and ritual connections between the Middle Nile Valley and the broader Eastern Christian world, regarding their contemporary occurrence.

Continuity and Change in Ceramic Production During the Islamic Period in the Middle Nile Valley: The Cases of Sennar and Al Khandaq

Hanaa Abdelgbar Ibrahim Adam

Ceramic studies constitute one of the most important sources in archaeological research, as the scientific analysis and classification of pottery contribute significantly to the identification and interpretation of archaeological cultures. Although ceramic studies have long been an integral part of Nubian and Sudanese archaeology, their development remains uneven, particularly with regard to certain periods and regions. The Islamic period – defined as the phase following the end of the Christian Nubian Kingdoms – is among the most understudied, as much of its material culture has been largely neglected by scholars.

This research aims to contribute to filling this gap by examining ceramic assemblages collected through ongoing archaeological projects conducted by the University of Khartoum at the sites of Sennar on the Blue Nile and Al Khandaq in Upper Nubia. The study seeks to reconstruct the ceramic typology of these two sites based on undisturbed assemblages, with the objective of tracing major developments in ceramic production and identifying patterns of continuity and change in manufacturing traditions. This research offers new insights into technological and cultural transformations during the Islamic period in the Middle Nile Valley.

27. Tales of Entanglement

Scales of Entanglement: Cultural Entanglement, Multiscalarity and the Contact Space Biography Approach

Panos Kratimenos (LMU Munich)

Entanglement remains a contested concept in archaeology, including in the study of the Nile Valley. In part, this is a function of the competing existing conceptions employed by scholars addressing a diverse range of research questions and time periods. However, by integrating archaeological understandings of scale and, in particular, approaches to considering and moving between *multiple* scales of analysis, various notions of entanglement are rendered more complimentary than contradictory when applied to the Attab-Ferka region. In this talk, several definitions of entanglement – including those originally formulated by Ian Hodder, Michael Dietler and Philipp Stockhammer – are considered in relation to their interpretive potential for the available data in Bronze Age Attab-Ferka, and a variety of approaches to addressing questions of scale surveyed in an attempt to weave a synthetic thread of entanglement ranging from single entangled, ‘hybrid’ objects to the entire ‘contact space’ region of contemporary northern Sudan between Egypt to the north and Kerma to the south. In so doing, the utility of the contact space biography approach to holistically reconstructing complex processes of entanglement between diverse peoples, landscapes and environment is illustrated.

Communities of Style in Bronze Age Middle Nile

Julia Budka (LMU Munich)

The concept of Communities of Style, as proposed by Marian Feldmann in 2014 for the Iron Age Levant, will be examined in this presentation as a case study for the Middle Nile region during the Bronze Age. The discussion will focus on prime examples of ceramic bowls and dishes which are regional Nile clay wheel-made Egyptian-style vessel types with Nubian-style decoration patterns. These locally produced vessels must be seen as syncretic, probably through the prism of the colonial experience, combining various cultural and aesthetic traditions to form something new. The existence of such ‘in-between’ ceramics has been interpreted as evidence for the impact of material culture on the formation of communities.

The presentation will discuss published material from sites in Lower Nubia such as Aniba and Askut but also partly unpublished material from Sai Island and its hinterland. A key site which will be presented is Attab West 001. It will be argued that the detailed assessment of sites such as Attab West 001, taking into account all

identifiable social practices, has the potential to facilitate a more profound understanding of rural communities in the Middle Nile Valley and their relationship to more central sites.

The Imprint of Empire: A Compositional Analysis of Egyptian and Nubian Ceramics

Reese Gover (University of California Santa Barbara)

The Nubian sites of Askut, Tombos, and Hannek present different levels of Egyptian colonial control over the region. Askut was colonised twice, Tombos once, and Hannek never at all. The comparison of these sites allows us to see how colonial power impacts material culture over time. A statistical analysis of count data and Instrumental Neutron Activation Analysis (INAA) data aids in the analysis of this impact. Since the chemical composition of Nile silt is relatively uniform, any visible differences in the composition are likely due to manufacturing traditions.

The count data shows a statistically significant correlation between colonial periods and predominant style. Chi-squared tests show a greater significance between predominant style and site than between predominant style and colonial status. Principle Component Analysis (PCA) was performed on INAA data obtained from Carrano, Ferguson, Girty and Smith (2008) to identify how the composition of ceramics varies across sites and periods. The results show that some samples from Askut, Hannek, and Tombos have a shared ceramic tradition, with select samples from Askut and Hannek showing a significant difference. The differences in the INAA data, reinforced by the statistical analysis of the count data, suggest a clear and lasting impact of colonial power on ceramics traditions.

Kushite Internationalism and the Iron Age “Phoenician” Style

Stuart Tyson Smith (University of California, Santa Barbara)

The second kingdom of Kush was deeply engaged with the Mediterranean world but is typically seen as a consumer, rather than active participant, in larger phenomena like the Iron Age international Style which appears on portable objects in decorative motifs associated with both royal and private contexts in Sudanese Nubia. Feldman argues that the conflict between Egypt and Assyria resulting in Egyptian alliances in the Levant in the eighth and seventh centuries BCE may have triggered an aesthetic shift to the more “Egyptianizing” trend of the “Phoenician” style shared widely across the region. However, the kings of Egypt at this time were Kushite, not Egyptian, so the artistic cultural entanglements between Northeast Africa and Western Asia may have had a more southerly origin than is usually acknowledged. We can gain further insights into this phenomenon through the application of Latour’s emphasis on object agency and an adaptation of Jasanoff’s formulation of co-production, in this case replacing scientific with artisanal innovation and production. The material products of the International Style created object worlds that not only reflected but in a process of mutual constitution, or co-production, crystallised the cultural and political transitions of the early Iron Age. A review of older evidence from sites like the royal cemetery at el-Kurru combined with objects from recent archaeological work at Tombos in northern Sudan provides a robust corpus of very early portable objects from this period that engage with and, given their early date, may have influenced, the motifs and techniques found in the greater Levant and Aegean. This evidence places ancient Kushites at the centre of the fluid cultural and stylistic entanglements and co-production that characterise the “Phoenician” style, not as passive consumers but actively engaged with their Levantine and Aegean counterparts in intersecting international spheres of practice extending deep into Africa.

Manufacturing Faience at Sanam Temple: New Insights from Excavation and Scientific Analyses

Kathryn Howley (Institute of Fine Arts, NYU)

Rennan Lemos (Durham University)

In 2018-20, the Sanam Temple Project excavated the first known faience production workshop from first millennium BCE Nubia. This has provided a new and exciting source of information to study the manufacture of the Egyptian-style objects that appear in Kushite Nubia and, by extension, the interaction between Kush and Egypt in the seventh century BCE, when connectivity between the two cultures was at a peak. Previous analyses of the interaction of Egyptian and Nubian cultures in the Napatan Period have focused overwhelmingly on style and

ethnic identity, but the mechanisms by which people and objects travelled through the Nile Valley to facilitate this exchange is still poorly understood.

Combining the results of excavation and SEM-EDS, ATR-FTIR and XRD analyses of faience objects connected with Sanam held at the Museum of Fine Arts Boston, this paper identifies the different compositions, production methods and styles present in royal faience objects of the Napatan period, and patterns between them. In so doing, we suggest how craftsmen and objects moved through the Nile Valley in the mid-first millennium BCE and identify how local and imported material culture and technology worked together to express Kushite royal power in Nubia. Faience provides a window into Nile Valley interaction that can advance conversation in Nubian archaeology beyond essentialised identities of “Egyptian” and “Nubian” and into new heuristic directions.

Adoption and Adaptation of Hellenistic Sculptural Elements in Meroitic Architecture: The Case of the Sandstone Chapel at Wad Ben Naga

Vlastimil Vrtal (National Museum, Czech Republic)

In the course of the exploration of the so-called Sandstone Chapel at the Meroitic settlement site of Wad Ben Naga (WBN 1100), at least three distinct sculptural elements of the sanctuary’s eclectic architecture unearthed in its remains or recorded in archival sources provided evidence of Meroitic adoption and adaptation of motifs from the architectural repertoire of Hellenistic Egypt, and particularly Alexandria – bead-and-reel moulding, double meander, and, quite possibly, a segmental pediment (or an arched opening). Some of these have not been previously attested in Nubia. While the chronological setting of the Chapel’s construction is not without uncertainties due to incomplete excavations, there are good reasons to believe that it preceded the vast building program of Natakamani and Amanitore at the site (and elsewhere), and may belong to a somewhat earlier phase of intellectual exchange flowing up and down the Nile Valley. This contribution will discuss possible sources of inspiration for the Meroitic architects and their transposition into the unique architectural design of the sanctuary – however hypothetical due to the latter’s fragmentary state of preservation – in light of other roughly contemporary Meroitic adoptions both in the realm of architecture and in other spheres of expression.

28. Trade and Markets through the Ages

Speculate to Innovate: The Role of Merchants as Agents of Change

Chloë Ward (LMU Munich)

Panos Kratimenos (LMU Munich)

Throughout the history of archaeological research, processes of social and cultural change in premodern societies have often been attributed to either external processes of diffusion or migration, or internal innovation. Within these paradigms, we suggest that merchants and traders represent underappreciated agents of change and potential destabilisers of the status quo, particularly during periods of sociopolitical upheaval. The flow of goods across long-distance trade routes was inevitably concomitant with flows of the people who transported them and, crucially, novel ideas and cultural practices that these worldly traders would have brought with them. Jeremy Sabloff and William Rathje have argued in the Mesoamerican context that trans-shipment hubs, trading ports and centres of commerce tended to be places with heightened degrees of cultural flexibility necessary to facilitate trade among disparate groups of people: something which they termed ‘mercantile pragmatism’. Here, we extend this logic to the agents of trade themselves and argue that the primary agents of trade – merchants – should also be considered as potential stimulators and inspirers of change. While the archaeological record lends itself to reconstructions of macro-economic processes, particularly those involving the political economy, we argue that essential characteristics of mercantilism such as the profit motive and prioritisation of economic self-interest over *raisons d’État* should be considered in understanding past changes in socio-cultural practices (e.g. cultural entanglement) as well as in the context of political change. These are particularly relevant for regions with multi-faceted roles as contact, frontier and border zones between different groups, such as northern Sudan, where a decentralised economy likely existed alongside more centralised ones at the ‘peripheries’ of state control.

The Question of Regional Marketplaces in Bronze Age Nubia

Julia Budka (LMU Munich)

The subject of marketplaces in ancient Egypt, with a particular emphasis on the available evidence, has been summarised in two studies by David Warburton and Juan Carlos Moreno García. These studies have provided a comprehensive overview of the topic, including the New Kingdom period.

Following Moreno García, the actors associated with markets must be seen as diverse and international, which fits well with the different forms, durations, sizes and locations of the markets themselves. Furthermore, contacts between Egyptians and foreigners paved the way for cooperation, economic complementarity, alliances and initiatives that were not necessarily supported by the Pharaonic state but were promoted by local actors and their diverse partners.

It is reasonable to assume that there were a variety of markets, often located in harbours, particularly along the Nile, and also in the Middle Nile region. This presentation will focus on new archaeological findings from the ERC-funded DiverseNile project concerning regional marketplaces and villages in Nubia. The primary case study is Attab West 001, a modest marketplace situated in the rural hinterland of Sai Island, identified as a seasonal market and meeting place for various groups, including nomadic desert communities in connection with gold mining.

This presentation will discuss that so-called marginal regions in ancient Sudan offer great potential for understanding trade networks and the dynamics of contact spaces at different regional levels in their entirety. After all, trade and exchange are always embedded in a historical context. Therefore, we need an approach that considers the bigger picture while also taking into account local events in different regions, without creating an artificial boundary between urban and 'non-urban' contexts.

Sealed in Time: Jar Sealings from Amara West in Context

Manuela Lehmann (University Tübingen)

This paper presents a comprehensive material study of clay sealings from Amara West, focusing on their archaeological contexts to investigate patterns of use, reuse, and discard within the daily life of the town. The sealings, spanning from the Ramesside to the Napatan Period, were excavated by the British Museum's Amara West Research Project between 2008 and 2019. Through detailed analysis of their form, manufacturing techniques, depositional contexts, and use-wear, we gain insights into diverse functional roles across domestic, administrative, and processing spaces within the town and cemeteries. Comparative analysis with similar assemblages from contemporary sites further elucidates the balance between local production and imported goods, contributing to a broader understanding of regional economic and trade networks in Upper Nubia of the late second millennium BCE. Ultimately, this research demonstrates how these seemingly mundane objects provide valuable insights into the organisation of storage, resource management, and the logistical operations of local administration in Upper Nubia.

Oasis amphorae from New Kingdom Nubia in Context

Julia Budka (LMU Munich)

Recent excavations at so-called temple towns and rural settlements of the New Kingdom in Nubia have yielded fragments of amphorae in Oasis ware. These vessels can be identified as imports from the Western oases, especially Kharga and Dakhla. Both oases are well-known wine-producing regions, in particular during the New Kingdom.

As will be demonstrated in this presentation, Oasis amphorae from 18th Dynasty contexts at Sai Island can provide essential information about contacts, power and possible trading routes in New Kingdom Nubia. The earliest finds of Oasis wares date to the beginning of the New Kingdom – a period when the new Theban rulers were busy extending their influence towards the South, but still had little power in the areas outside the Nile Valley. The changes in the Pharaonic presence in the desert areas and the oases at the end of the Second Intermediate Period and the early 18th Dynasty has been discussed on both the basis of textual evidence, epigraphic records and the

material evidence. The ceramic material from Sai and other sites adds further information on assessments of this important period.

Evidence suggests that during the mid and late 18th Dynasty, the town on Sai Island was fully integrated into Egyptian international trade routes. This is indicated by a ceramic corpus of great diversity, including Mycenaean stirrup jars, Black Lustrous Wheel made jugs, as well as imported Canaanite amphorae. The presence of contemporaneous Oases amphorae provides further evidence for this hypothesis, suggesting the trading of wine.

29. In Whose Name? Terminology, Periodisation, and Power in Nubian and Sudanese Archaeology

Current Problems in Studying the Middle Stone Age of North-Eastern Africa

Alice Leplongeon (CNRS–MNHN–UPVD, Tautavel; KU Leuven; University of Connecticut)

The North-Eastern African Middle Stone Age (MSA) has a complex history of research. At the beginning of the 20th century, the European model of prehistory was applied to the North-Eastern African record, with the use of terms such as Middle Paleolithic, Mousterian, and Levalloisian. However, it is the foundational works of the Combined Prehistoric Expedition in Nubia which gave the first framework for the study of the Middle Palaeolithic of the region with the introduction of numerous industries, defined following the principles used by Bordes for the French Mousterian (e.g. Levallois index, relative frequency of specific tool types). These industries include the Nubian Middle Palaeolithic, the Nubian Mousterian, the Denticulate Mousterian or the Khormusan. At the end of the 1990s, in the context of discussions around modern human origins and Out-of-Africa dispersals, a new broad taxonomic entity was introduced: the Nubian Complex, a techno-complex grouping together a number of MSA industries sharing techno-typological characteristics, such as the presence of Nubian Levallois reduction that may be consistent with contacts or diffusion between human groups. With the growing interest for Out-of-Africa dispersals, the Nubian Complex, initially grouping together several industries, gradually became understood as a stand-alone unit in the MSA of the region, replacing almost all lower-level units that it initially encompassed, and almost becoming a synonym for MSA in North-Eastern Africa. In this paper, the reasons why a return to smaller-scale analytical unit is warranted will be discussed. The Khormusan industry will be taken as a case study, reviewing how it was defined, how its meaning evolved, and how new field data may contribute to open new research avenues in lithic taxonomy of the North-Eastern African MSA.

Was the Community Buried at Kadruka 1 A Chiefdom? The Socio-Spatial Model Proposed by J. Reinold Tested Using Spatial Statistics

Olivier Langlois (CEPAM, Nice)

Gilles Durrenmuth (CEPAM, Nice)

Emma Maines (Eco-anthropologie, Paris)

Hala Alarashi (CEPAM, Nice)

Thibaut Langlois (MIVEGEC/ASTRE, Montpellier)

Although the Kadruka 1 cemetery excavated by J. Reinold in the mid-1980s has not been the subject of a detailed publication, it has given rise to a socio-spatial model which, according to the author, shows that the community buried there was already hierarchical. According to this model, this cemetery dating from the late 5th millennium BC was organised around the famous tomb No. 131, known as the “chief’s tomb,” which is believed to have initiated the occupation of the mound for funerary purposes. Further, according to this model, the wealth of the tombs would be inversely proportional to the distance separating them from this founding burial. This cemetery would therefore mark an important step in the process of social complexity that seems to have taken place in the region since the early Neolithic leading, two millennia later, to the rise of the Kerma Kingdom. However, the model proposed by Reinold does not appear to be the result of a detailed analysis of the data. Several decades after Kadruka 1 was excavated, we conducted a preliminary inventory of the material from this cemetery that we found in the SFDAS warehouse where it was stored and began studying certain categories of artefacts. Based on this

inventory and the available documentation concerning this burial mound, we will attempt to test the socio-spatial model proposed by Reinold using spatial statistics.

Transcending Taxonomy: Examining the Impact of Current Terminologies in the Study of Ancient Societies of the Greater Middle Nile

Maria Carmela Gatto (Polish Academy of Sciences)

Donatella Usai (Centro Studi Sudanesi e Sub-Sahariani - ETS, Treviso)

Ancient societies of the Greater Middle Nile region, including both the Nile Valley and surrounding deserts, were characterised, at least in earlier millennia and later in regions that witnessed the emergence of pastoralism, by high mobility over extensive areas. This led to the spread of shared cultural traits and significant intra-cultural diversity. Therefore, to understand the complexity of these socio-cultural dynamics, deeply influenced by changing climate and environment, it is necessary not only to examine the archaeological record from a broader, supra-regional perspective, but also to recognise that diversity does not necessarily equate to a new archaeological culture. Moreover, an archaeological culture cannot always be equated to actual socio-cultural systems.

There has been a troubling trend in the region's archaeological research practice: the creation of new chrono-typological sequences and terminologies for each site or area studied by a mission, often without looking for parallels with existing taxonomies from surrounding and contemporary contexts. As recent scholarship has highlighted, this practice has led to the proliferation of artificial cultural definitions that lack real-world coherence.

This contribution critically assesses the challenges posed by current taxonomies, using examples from Prehistory, the Early Nubian, and the Middle Nubian periods, with the aim of initiating a discussion that will, hopefully, encourage scholarship to move beyond the existing state of the art.

Some Thoughts on the Politics of Archaeological Periodisation and the Potential of Revisionism

Panos Kratimenos (LMU Munich)

The way in which we periodise the past has significant implications on archaeological interpretations. However, the periodisations habitually used by scholars to compartmentalise the past into manageable hermeneutic units all too often become naturalised, meaning the social and cultural contexts from which they emerge are less commonly acknowledged. This represents an important lacuna, given chronology construction is an inherently subjective and political process and, as such, should be viewed reflexively – both in terms of how we approach periodising the past ourselves and in adopting a critical approach to established chronological frameworks through better understanding the prevailing cultural *milieux* that underpinned their development. Given archaeology's fraught past involvement with various nationalist, imperialist and colonialist projects, interrogating the intellectual underpinnings, and implications, of periodisations is an important facet of reflexive practice. In this talk I draw on examples from Europe and the Americas – both areas with strong resonances for the history of archaeology in the Nile Valley – to demonstrate the value of adopting a historically critical approach to archaeological periodisations, as well as the potential benefits of revisionism on the basis of a broader understanding of the history of research (and wider society) which led to the initial construction of several well-established periodisation schemas. In so doing, it becomes apparent that the issues at stake are more than questions of temporal accuracy and semantics but, rather, matters of reflexivity with profound implications for the inevitable meta-narratives which arise from the chronological frameworks upon which archaeological interpretations are constructed.

Heritage in Words: Terminology, Power, and Community Knowledge in Sudanese Archaeology

Wafa Sharif Dawod Hussein (École Pratique des Hautes Études, PSL University; LLACAN (CNRS), Paris)

Fatima Idress Ali Mahmoud (Shendi University)

Archaeological terminology shapes how Sudan's past is interpreted and communicated, influencing both academic research and the ways local communities engage with their heritage. Much of the vocabulary currently used in Sudanese archaeology originated during the colonial period, reflecting classificatory frameworks imposed by British scholars with little consideration for local languages or indigenous knowledge systems. This legacy has

contributed to enduring hierarchies of knowledge and created a disconnect between academic narratives and community understandings of their past.

After independence in 1956, the absence of coordinated national efforts to standardise archaeological terminology led to further fragmentation, as Sudanese and foreign researchers continued to use varied and sometimes conflicting systems to describe sites, cultural phases, and regions. As a result, archaeological knowledge often remains inaccessible to the wider Sudanese public, limiting its potential role in strengthening cultural continuity and national identity.

This paper argues that continued reliance on inconsistent or foreign terminology marginalises local perspectives and weakens the transmission of heritage knowledge, especially in the current context of internal war and displacement, where oral traditions and community identities are at heightened risk. It advocates for a decolonised and collaborative approach to archaeological language that brings together scholars, archaeological and heritage institutions, alongside local communities to reassess existing terms and develop inclusive alternatives. Promoting bilingual publication and community-focused interpretation is essential to reconnect research with the people whose history it represents.

Colonial Legacies, Local Pathways, and Integrated Approaches: A Critical Review of the Sudanese Archaeological Nomenclature of the Mesolithic and Neolithic Periods

Giulia D'Ercole (LMU Munich)

Elena A.A. Garcea (University of Cassino and Southern Latium)

The archaeological toponymy of prehistoric Sudan appears as a mosaic of more or less overlapping and sequential cultural “orbits,” to which a variety of labels have been applied. These may be derived from either “Classical” European and Southwestern Asian traditions (e.g. the terms of “Mesolithic” and “Neolithic”), local eponyms (e.g. Early Khartoum, Abkan, Laqiya, Atbai, Gash Group, etc.), or evolutionist outlines based on the stylistic analysis of material culture (e.g. Wavy Line, Khartoum Variant, Leiterband complexes, etc.).

Among these, conventional chrono-cultural categories fail to capture the specific socio-economic and technological patterns of local pathways in Sudan. Unlike many European and Southwestern Asian traditions, Sudanese sites assigned to the “Mesolithic” often display ceramic technology—including a variety of incised and impressed wares—together with semi-sedentary human occupations, while assemblages traditionally labelled as “Neolithic” may retain technologies and subsistence strategies associated with earlier phases. On the other side, local eponyms and stylistic-based classifications risk regionalising broader processes or isolating specific material features, obscuring the variability of the archaeological record. Furthermore, teleological nomenclatures such as Pre-Saroba or Pre-Kerma impose a linear narrative, while designations such as Khartoum Variant function primarily as comparative shorthand rather than as reliable indicators of discrete cultural entities.

This contribution critically reviews the epistemological and methodological constraints of existing classificatory frameworks and advocates for a context-sensitive approach, offering a more accurate understanding of the prehistoric societies of the Sudanese Nile Valley and adjacent regions.

30. Transition from Napata to Meroe

Transition from Napata to Meroe – Some Considerations

Angelika Lohwasser (Institute for Egyptology and Coptology, University of Münster)

Janice Yellin (Babson College)

In his 1907 book, *History of Egyptian Sudan*, Budge distinguished between the kings of Napata and those who ruled from Meroe during the period of the Ptolemaic dynasty. Reisner's excavations of the royal cemeteries further reinforced this two-phase cultural history. Today, the Kingdom of Kush is generally divided into an earlier Napatan phase and a later Meroitic phase. The cultural changes, which may appear as breaks to scholars, who can only

observe surviving fragments of their culture, should be examined in the context of these two centres in order to understand their place in Napatan and Meroitic history.

Some of the differences between the Napatan and Meroitic phases are evident in; the writing of the Meroitic language, new depictions of indigenous deities such as Apedemak, Amesemi and Sebiemek, and the appearance of entirely new ceramic traditions. Other such changes are seen in the relocation of the royal cemetery with Arqamani's burial, to Meroe (although here a clear continuation of the traditions from Nuri can be seen in its decorations and construction techniques). Over the course of several generations, cultural differences become more apparent through the emergence of recognisable 'Meroitic' features in the royal tombs as well as through the first depictions of indigenous deities during the reign of Arnekhmani. Last but not least, significant changes, especially in royal ideology, are visible during the reign of Taniydamani. At the same time, many traditions show no disruption, but rather steady diachronic development.

The session organisers' introductory talk will provide an overview of the current state of research and present two short case studies on the transition from Napata to Meroe: one concerning the emergence Meroitic cultural elements as seen by the first lion temples alongside the simultaneous disappearance of new buildings for Amun and the other exploring changes in royal mortuary religion and art in terms of possible Ptolemaic influences versus the introduction of new, indigenous features.

Innovation and Continuity during the Formation of the Meroitic Dynasty

Pawel Wolf

The formation of a Meroitic dynasty and state in Western Butana on the Middle Nile was a complex process, reflecting the long-term reconfiguration of political power in Kushite society during the later first millennium BCE rather than a sharp break with the Napatan period resulting from isolated historical events.

The centre of political gravity shifted over several centuries towards the savannah of the Butana and the Meroe region, culminating in the relocation of royal necropolises to Meroe around 300 BCE. This process produced deliberate cultural and ideological innovations that contributed to the formation of a distinct Meroitic identity, such as the introduction of the Meroitic writing system, the incorporation of indigenous deities into the pantheon, the adoption of features reflecting sub-Saharan traditions in divine and royal imagery, and not least the emergence of a distinctly Meroitic style of pottery. However, the available evidence also testifies to substantial continuity in Napatan royal ideology, political institutions, religious traditions and elite practices.

There is no secure evidence for distinct ethnic predecessor groups of the Meroitic dynasty. Data suggest the emergence of regionally-based elite networks that were rooted in rural agrarian and pastoral communities. The economic basis of state formation appears to have relied on agricultural production and specialised crafts, such as ironworking, as well as on redistribution and exchange networks rather than a centralised royal administration.

The present contribution does not aim to provide a definitive explanation for the origins of the Meroitic dynasty and state but, rather, offers a synthesis of archaeological and historical evidence and a review of existing interpretative models to provide a framework for future research.

The Kushite Presence in the Region of Berber: Questions on Transition or Existence

Mahmoud Suliman Bashir (General Director of NCAM)

The statues discovered at Dangeil of the early Kushite kings Taharqo, Senkamanisken and probably Aspelta indicate an earlier inception of the site. In addition, currently two Napatan graves have been discovered within the Meroitic cemetery at Berber. These results are of considerable interest and offer great research potential for better understanding the early Kushite presence in the region of Berber. The Napatan remains indicate that the region of Berber probably played an important role in the early Kushite period; until a few years ago the Kushite presence was unknown, so more sites may be discovered in the future. Therefore, currently Berber and Dangeil form the only known Kushite complex along the road running from Meroe towards the Abu Hamad–Korosko Road.

These discoveries have provided evidence for a presence in the region since the early Kushite period. As such, this discovery may support the argument that the region of Berber was an administrative centre controlling state

economic activities in the area. The advantages offered by the important geographical location of the region of Berber and its easy access to mainland routes add to the significance of the site from the perspective of state control. The presence of such royal iconography as the aforementioned royal statues provide evidence for direct control by the state over the region during the early Kushite period, which continued into the late Kushite period.

Transition from Napata to Meroe – A Ceramicist's Perspective

Ulrike Nowotnick (BLDAM: Brandenburgisches Landesamt für Denkmalpflege und Archäologisches Museum)

Short-term political events rarely translate directly into everyday material culture such as pottery. It may therefore be debatable whether assumed dynastic changes between the Napatan and Meroitic periods can be traced by a study of ceramic changes. Nonetheless, this contribution will search for material differences in pottery between different areas of the Middle Nile that could justify distinct regional groups.

As Napatan ceramics (both in the Napata and Meroe regions) are dominated by wheelmade wares that mirror contemporary Egyptian models, the focus of this talk will be on handmade ceramics, given these may perhaps be more informative indicators of local cultural traditions. Handmade wares of the late Napatan and early Meroitic periods – as few as they are – will be reviewed to detect regional ceramic features in order to scrutinise the origin of this elusive Meroitic group.

33. Cultural Diversity in the Bronze Age: Results from the DiverseNile Project

The DiverseNile Project: Key Results and Take-Aways

Julia Budka (LMU Munich)

In order to gain a more detailed understanding of the cultural dynamics and diversity of ancient Nilotic groups, the ERC-funded DiverseNile project (grant agreement No. 865463) has developed the concept of 'Contact Space Biography' – which combines models of contact spaces, changing landscapes and technologies used by the region's inhabitants. This challenges existing approaches to cultural contact in the Middle Nile by taking a bottom-up approach and moving away from categorising sites as either Egyptian or Nubian.

This presentation will summarise the broad range of results of the ERC DiverseNile project and explore the broader potential of these new findings. The initial objective of the project was to document the intricacies of interconnected cultures in the Middle Nile region, taking the Attab to Ferka region as a case study. This area was inhabited by diverse groups and complex cultures that engaged in communication with one another, underwent refiguration, transformation, and development over time. It will be argued that the project's approach and outcomes modified our previous understanding of Bronze Age Nubia, especially regarding social dynamics, and represents a revised assessment beyond colonial studies.

Egypt in Microcosm: The Digital Reconstruction of Lived Space on Sai Island

Carl G. Elkins (LMU Munich)

This paper presents the results of a DiverseNile digital reconstruction project centred on the New Kingdom temple town on Sai Island in Nubia. Grounded in archaeological evidence and high-resolution 3D scans of the settlement's architecture and surrounding landscape, the project culminates in an interactive reconstruction conceived both as an experimental research environment and as a digital publication of its results. Making use of the real-time capabilities of Unreal Engine 5, this format is designed to bridge scholarly investigation and science communication within a single, transparent framework. Through this digital framework, reinvestigations of the SAV1 area have led to a series of reinterpretations with broader implications for the understanding of Egyptian settlement practice abroad. The reconstruction's ability to incorporate real-world construction techniques and

simulate local environmental conditions proved crucial for assessing architectural plausibility and exploring alternate structural solutions. More broadly, the project challenges long-standing assumptions regarding the exceptionalism of Amarna's domestic architecture. Rather than representing an isolated anomaly, the evidence from Sai confirms that Amarna reflects a broader architectural tradition, one responsive to differing environmental and planning constraints. In this sense, the New Kingdom temple town on Sai Island emerges as representing 'Egypt in microcosm', demonstrating how digital reconstruction can function as a methodological extension of fieldwork that is also capable of reframing wider historical narratives.

Diversity in Settled Life: Towards a More Holistic Understanding of Settlement Sites in the Attab-Ferka Region

Chloë Ward (LMU Munich)

Like Egypt, archaeology in Sudan has long been biased towards mortuary and monumental sites, in part because of the historical influence of Egyptological practices and Eurocentric perspectives. However, significant interdisciplinary and cross-cultural work has started to address this imbalance and re-centre Sudan and settlements in the archaeology of the Nile Valley. This talk will present the main results from the DiverseNile project's investigation of settlement sites in the Attab-Ferka region from the 3rd and 2nd millennium BC. These settlement sites reveal a considerable amount, not just on daily life in Nubia at the time, but also on complex interactions between different groups of people which have often been oversimplified in archaeological narratives. As well as showcasing ongoing interdisciplinary work, this talk will also address the important, if problematic, legacy of past archaeological research on methodological and interpretative work today.

Through examples of sites in northern Sudan, it is clear that existing models of urban sites and their hinterlands, such as core-periphery models, offer a very limited perspective on the complexity of these regions. Only by 'unsettling' such narratives, as well as fully integrating past research, data, and ongoing work is it possible to reach a more holistic understanding of settlement archaeology in the Nile Valley.

Cultural Diversity and Mortuary Practice at Cemetery GiE 003

Hassan Aglan (LMU Munich)

Recent research undertaken as part of the DiverseNile Project has demonstrated the value of moving beyond rigid cultural labels when investigating Bronze Age communities of the Middle Nile. This paper presents GiE 003, a cemetery in the Attab-Ginis region of the MUAFS concession, as a key case study for exploring cultural diversity and mortuary practices during the Middle and Classic Kerma periods.

Drawing on detailed stratigraphic and architectural analyses, the paper reconstructs the biography of mortuary space at GiE 003. The cemetery reveals a considerable range of burial forms – from simple infant interments and modest pits to bed-equipped adult graves – alongside evidence for repeated disturbance, looting and reuse. The analysis yields insights into distinctive burial practices, particularly with regard to animal sacrifices, the reuse of graves and evidence of looting. The aim is to present GiE 003 as a cemetery characteristic of the Attab-Ginis region, reflecting the character of the region as a dynamic contact space.

Chemical Analysis of Ceramics within the DiverseNile Project and its Relevance to Understand Cultural Diversity

Johannes H. Sterba (Center for Labelling and Isotope Production, TRIGA Center Atominstitut, Technische Universität Wien)

Giulia D'Ercole (LMU Munich)

Within the DiverseNile Project, over 250 samples of ceramic objects have been investigated by neutron activation analysis (NAA). Chemically, over 70% of those samples can be associated with several established NAA groups that are made of Nile Clay. These chemical groups can not yet be pinpointed to specific locations along the Nile, however, numerous samples from other excavations along the Nile belong to those groups. While chemically, the composition of the ceramics investigated is relatively homogeneous, stylistically, it is diverse. Nile Clay was used to produce Egyptian style as well as Nubian style wares, table ware as well as cooking pots.

This diversity shows that, although common raw materials were used, the forms and technological methods adhered to different cultural traditions. In this scenario, stylistic and technological crossovers are often seen as signs of interconnected traditions and cultural and technological fluidity, where the choice of raw materials mainly seems driven by opportunistic factors (convenience, supply proximity) rather than specific cultural preferences.

Current results of similarities and dissimilarities of chemical groups and stylistic groups will be presented.

Firedogs and Fire Management: New Perspectives on Ceramic Implements in New Kingdom Egypt and Nubia

Patrizia Heindl (LMU Munich)

This paper offers a critical re-evaluation of the function of so-called firedogs in New Kingdom Egypt and Nubia. Traditionally interpreted as ceramic pot supports used in domestic cooking installations, these objects have long posed interpretative difficulties owing to their pronounced morphological variability, uneven spatial distribution, and the frequent ambiguity of their archaeological contexts. Building on a systematic reassessment of earlier explanatory models, this presentation questions the adequacy of a purely culinary interpretation and argues for a more differentiated functional framework.

The analysis draws on a broad corpus of firedogs from Egypt and Nubia, integrating typological, comparative, and contextual observations. Experimental archaeological results demonstrate that firedogs are poorly suited to supporting large cooking vessels, calling into question their traditional interpretation as pot stands. Instead, their morphology and archaeological associations indicate functions involving controlled heat, such as the handling or cooling of small crucibles and deep dishes, and point to a wider operational range within artisanal and ritualised contexts.

On this basis, the paper proposes a revised interpretation that situates firedogs more firmly within technological processes related to metallurgical activities, in particular gold production. Rather than passive supports, firedogs emerge as multifunctional, contextually embedded artefacts whose study illuminates the complex interplay of technology, identity, and adaptation in the Middle Nile Valley. The paper concludes by outlining avenues for future research, including residue analysis and ethnographic comparison, to further refine our understanding of ancient thermal technologies.

Landscape Approaches Towards a Contact Space Biography of the Attab-Ferka Region

Panos Kratimenos (LMU Munich)

A central component of the Contact Space Biography approach developed through the DiverseNile project entails close landscape analysis, including an appreciation of the way in which palaeo-environmental factors would have influenced lifeways and intercultural engagements between peoples during the Bronze Age in the Attab-Ferka region. This includes a holistic appreciation of the interconnection between humans, landscape and climatic factors and how these articulated to shape the novel cultural formations which emerged over time.

In this talk, a variety of the approaches utilised in the DiverseNile project will be surveyed and the distinct inputs they provided to help reconstruct the idiosyncratic past lifeways and cultural formations seen in Attab-Ferka during the Bronze Age discussed. These include the utility of high-resolution digital aerial photography and remote sensing, GIS and 3D model construction, spatial analysis and palaeo-environmental reconstruction. The top-level perspective provided by such approaches assists in macro-level, holistic interpretation of the region as a contact space when correlated with the fundamental archaeological data relating to settlement and mortuary patterns – ranging from single objects to entire sites – that were revealed through the project. As such, the middle-range theory employed to link on-the-ground data to holistic landscape perspectives will also be discussed.

The Post-New Kingdom Period in the Attab to Ferka Region

Julia Budka (LMU Munich)

In recent decades, the concept of a so-called Dark Age in ancient Sudan at the beginning of the first millennium BCE has been called into question within the field of Nubian archaeology. This is due to new archaeological

findings and fresh theoretical approaches. The objective of this paper is to demonstrate that recent remote sensing surveys and excavations in the Attab to Ferka region of Sudan have also yielded significant evidence of ongoing occupation in the aftermath of Egypt's colonial rule over Nubia. In particular, studies of settlement patterns and ceramics have been shown to contribute to a more comprehensive understanding of the lives of people during the period between 1070 and 750 BCE. These studies facilitate an expansion of knowledge regarding dynamic processes, local forms of resilience and innovation. This novel comprehension of the endurance of communities following the collapse of colonial Nubia under Egyptian dominion offers a more sophisticated interpretation of the evolution of the Napatan Empire, thereby challenging the prevailing concept of secondary states. The Attab to Ferka case study demonstrates that previously marginalised regions and communities were significant contributors to cultural dynamics and achievements during the first millennium BCE in Sudan.

POSTERS

Take the Weight Off My Shoulders: A Long-term Perspective on Gendered Load-carrying in Upper Nubia

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This study examines gendered load-carrying practices in Upper Nubia through humeral enthesal changes, vertebral pathology, and unintentional cranial modifications in 275 individuals from six cemeteries spanning the Kerma, New Kingdom and Early Napatan periods – one of the largest comparative bioarchaeological datasets for this region. The analysis follows the premise that daily labour consists of socially learned, gendered body techniques that become materially expressed through repetitive activity.

The sample includes the three New Kingdom and Early Napatan cemeteries at Tombos (West, North, East), alongside Kerma-associated comparative contexts from Abu Fatima and the Northern Dongola sites O16 and P37, allowing assessment of local variability within a broader Egypto-Nubian landscape rather than a single frontier setting. Humeral enthesal changes show strong structuring by sex and age, with higher values in males and in middle, mature and old adults, while chronological and inter-site variation remains limited, indicating stable gendered divisions of upper-limb labour across political change. Vertebral markers present the sharpest contrasts: individuals from Kerma contexts, particularly in Northern Dongola, display markedly elevated frequencies and severity of Schmorl's nodes, whereas New Kingdom burials at Tombos show substantially lower levels, suggesting a reorganisation of heavy axial load-bearing rather than a linear developmental trend, potentially linked to changing mobility patterns and labour roles under Egyptian administration. Cranial load-carrying intensifies markedly from the New Kingdom onwards, reaching its highest values in Early Napatan individuals, and varies by mortuary tradition, with elevated scores in tumuli and Egyptian-style chamber tombs, and exceptionally low values in Kerma-associated pit burials at Abu Fatima, which are not equivalent to later Egyptian-style pits at Tombos. These patterns point to shifts in head-supported transport practices tied to community-specific labour organisation and social roles, rather than uniform technological change.

Overall, the results reveal substantial biomechanical variability shaped by gender, age, chronology, mortuary traditions and local community organisation, offering a nuanced, long-term perspective on labour, mobility and embodied experience in the Middle Nile over more than a millennium.

“Civil Observatories” and “Cultural Heritage Monitoring Platform” in Sudan

Maria Costanza De Simone (Nubia Museum in Wadi Halfa Team)

Paola Ceretta (Independent Researcher)

Scientific and technical research and solutions, as well as institutional protection measures, are often ineffective without community-level involvement in defining, understanding, and protecting cultural heritage. In Sudan, local community participation in cultural heritage is deeply ingrained and recognised across many projects. When community participation deals with protection it is necessary to add two more elements: reliability and organisation. It is not possible to leave this to improvisation or entirely unknown entities. The spontaneous mobilisation of citizens, including in emergency contexts, has often highlighted that what is missing is not the will or solidarity of the people, but rather an organised public system capable of valuing and coordinating them.

This poster presents the concept of a *Cultural Heritage Monitoring Platform*, with *Civil Observatories* as key tools for detection. Unlike technological tools, *Civil Observatories* not only monitor but actively intervene, raise awareness, and reduce the need for last-resort conservation measures like restoration. For this model to succeed, it must be officially recognised and managed by local institutions, integrating it into their governance frameworks. Sudan’s diverse cultural heritage encompasses religious, ethnographic, historical, and ethical aspects. Volunteer organisations on the ground provide practical solutions, empowering communities to address real issues. These groups do not replace experts but enhance governmental efforts and scientific initiatives.

Communities, especially at grassroots levels, need time, and “familiar and reliable” scenarios and interlocutors, even at a linguistic level. The *Civil Observatories* will overcome this aspect and will represent a sort of “pass” to the role played by the communities in unpacking this multiplicity of meanings that they attribute to the Heritage at a popular level and protect it.

In essence, the success of this approach lies in the ability of communities, empowered by *Civil Observatories*, to not only preserve their heritage but to shape its future through collective action and structured coordination.

El Rum Oasis – A Diachronic Perspective on a Micro-oasis in Wadi Abu Dom

Rebecca Döhl (University of Münster)

Tim Karberg University of Münster)

Angelika Lohwasser (University of Münster)

El Rum is a small micro-oasis located within the Lower Wadi Abu Dom in the Bayuda, situated approximately 10 km from Ghazali and around 20 km from the fringes of the Nile Valley. The recent use of the wadi and the oasis indicates the existence of (horticultural) farmers, who settle permanently in this favourable niche and engage in pastoral farming with small animals. Moreover, the presence of nomads with larger camel herds traversing the wadi is indicative of its functionality as a transit route, a consequence of the proximity of groundwater to the surface and the existence of numerous wells. The presence of archaeological remains in the oasis's vicinity, including graves and settlement structures, suggests the existence of the oasis since at least Antiquity. The importance of the area is underlined by three large building complexes: Umm Ruweim, Umm Khafour and Quweib. Wadi Abu Dom Investigations employs a variety of (geo)archaeological methods, including remote sensing, computational modelling and GIS analysis, in an attempt to reconstruct the diachronic development of the oasis and its inhabitants within their environmental setting.

Kordofan as crossroads. Preliminary results of the Interregional Linkage Investigations in Northern Kordofan (InterLINK) project

Jana Eger-Karberg (University of Münster)

Tim Karberg (University of Münster)

The region of northern Kordofan, long neglected by Sudan archaeology (at least when compared to the Nile valley and its immediate hinterlands), is the focus of the InterLINK survey project. Two survey campaigns were

conducted on the ground, but since then the methodology was shifted to data acquisition by earth observation data analysis. Therefore, research questions of the project were focused on landscape archaeological approaches. Altogether, almost 1500 archaeological sites of different categories and chronological periods were discovered. They are analysed in context of vegetation land cover, surface and sub-surface hydrology (reconstructed from multispectral and radar satellite data) as well as palaeoclimatological modelling. From this data, different strategies of subsistence and land use are modelled diachronically. Additionally, multispectral data is also used for detection of iron smelting facilities correlated with intensified agricultural schemes like hillslope terracing. All data is contextualized with middle-ranged patterns of cultural and technological transfer. Therefore, the InterLINK project contributes to an interpretation of Northern Kordofan (and indirectly also of the Nile valley cultures) as part not only of North-South oriented, Nile based communication and transfer networks, but also as a Sudanic cultural complex connected to the contemporary Sahel cultures further to the west.

Irkoni Project: Integrated Heritage Collaboration for Safeguarding Earthen Architectural Heritage in Sikoot

Tomomi Fushiya (Polish Centre of Mediterranean Archaeology, University of Warsaw)

Shadia Abdrabo Abdelwahab Abdalla (National Corporation for Antiquities and Museums)

Sana Elbatal (Sudan Academy of Science)

Abdelnaser Seralkhatim Hassan (Republican Palace Museum)

Sikoot, a northern riverine region of Sudan, demonstrates strong continuity in its rich cultural heritage. This heritage includes many historic earthen buildings along the River Nile as well as distinctive cultural practices, knowledge, language, and collective memories. Notable architectural styles include the *diffi*, *qubba*, and mudbrick houses (often referred to as “Nubian houses”), which are directly linked to community memories of ancestors, and a shared sense of belonging. These buildings are the symbols of Nubian culture and represent essential resources for understanding the history of Nubia and Sudan more broadly. Beyond their architectural significance, the narratives and memories associated with these structures provide critical insights into past societies and their connections to present-day communities, which remain understudied in Sudan.

Earthen architectural heritage, along with the knowledge and techniques required for its construction and maintenance, is increasingly threatened by climate change, shifting preferences, and land-use changes in northern Sudan. Despite their importance and vulnerability to increased rainfall, floods, storms, and broader social development, no systematic documentation of both tangible and intangible aspects has been undertaken. In addition to these pressures, ongoing armed conflicts and social instability further endanger this heritage. In response, community members in Sikoot expressed concerns about the future of their cultural legacy, prompting the development of an integrated collaborative heritage project, Irkoni (Nobiin: our town/village).

This poster introduces the project’s aims, methods, and preliminary results including the survey, documentation of historic earthen buildings, oral history research, and studies of technical knowledge related to earthen construction and maintenance in the project areas of Amara, Abri, Tabaj, and Kwieka.

HESES: A digital corpus of scarab-shaped seal amulets from excavations in Sudan and Egypt

Alexander Ilin-Tomich (Heidelberg University)

Vanessa Boschloos (Johannes Gutenberg University Mainz)

The poster presents the features of the new digital platform for ancient seals, seal amulets and seal impressions from excavations, developed at Mainz University: Hub for Excavated Seals from Egypt and Sudan (HESES).

In the first funding stage, the project focuses on scarab-shaped seal amulets from the first half of the 1st Millennium BCE, including the Napatan Period in Sudan. However, the digital platform is designed to accommodate any ancient, excavated seals and seal impressions in different shapes from Sudan and Egypt with the aim of successively building a topographically organised corpus of the material from contexts dating from the 3rd to the 1st Millennium BCE. Whereas the previous study of seals and seal impressions largely relied on objects from the antiquities market and focused primarily on the seal faces (with inscribed seals attracting most attention), the project excludes unprovenanced material and emphasises the comprehensive description and classification of all aspects of seals, including the sculptural features and the compositions on the seal face. The poster is also a call to action, because the project conducts retro-documentation of selected scarab-shaped seals from older excavations

in museums worldwide and invites all colleagues working in the field and in museums to collaborate on the new digital platform.

Ochre in Old Kush Period Burials in the Fourth Nile Cataract Region, Sudan

Elżbieta Kołosowska (Muzeum Archeologiczne w Gdańsku)

Ochre was found in the majority of graves dating to the Old Kush (Kerma) period excavated by a team from the Gdańsk Archaeological Museum in the Fourth Cataract region. Between 1996 and 2008, the team conducted archaeological work within a 124-km stretch along the right bank of the Nile, upstream from the town of Karima. The aim of this work was to identify and preserve as much of cultural heritage as possible in an area which is now under water following the construction of a dam on the Nile. A total of 749 sites dating from the Palaeolithic to the Islamic period were discovered. These included 31 Old Kush period cemeteries at which 138 graves were excavated.

Some of the bodies had been covered with ochre, as evidenced by red staining on the skeletal remains and remnants of ochre paste stuck to the leather wrappings in which corpses were buried. In addition to vessels containing food and drink, in the graves were also tools (mortars and pestles) and rock deposits (raw materials) used in the production of ochre powder/pigment, preparations made from it – such as paste or paint for applying to the skin – as well as cosmetic utensils (palettes and grinders).

The widespread presence of ochre in Old Kush graves attests to its important role in burial rituals. Understanding the nuances of these rituals will help us gain insights into the mentality and spirituality of the people of that time.

Plans are in place to carry out archaeometric analysis (XRF, LA-ICP-MS) on samples of ochre to determine its composition and identify sites from which it may have been sourced.

The Comparative Use of Ge'ez and Coptic in the Interpretation of Old Nubian Texts: New Philological Evidence

Rachel T. Leslie (Executive Director, The African Historical Society [AHS])

Nile Corridor literature in Old Nubian, Coptic, and Ge'ez is often studied in isolation. Comparative analysis of an Old Nubian burial shroud inscription and Ge'ez prayers led to the identification of a formerly unattested *Prayer of Mary at Bartos* in Old Nubian. Moreover, linguistic comparison of the Old Nubian text with a Ge'ez apotropaic name-formula illuminated the possible function of a previously unexplained theurgic name. Comparative linguistic analysis indicated that the Old Nubian theurgic formulation was perhaps influenced by, or shared with, Ethiopian prayer formulae and doxology. Similarly, comparison of an Old Nubian hagiographical text with Coptic material yielded new insights into Old Nubian theological exegesis.

From antiquity through the medieval era, centres of cultural exchange facilitated the transmission of literary culture in the Nile Corridor. The monastic complex of Wadi Al Natrun was conducive to the production and transmission of a shared literary heritage. Egyptian, Ethiopian, and Nubian theologians frequented and resided there from late antiquity through the medieval period. Among these were dignitaries like Patriarch Benjamin I and a notable number of Nubian kings who retired into monasticism, including the eleventh-century King Solomon and the twelfth-century King George. Possibly from the apostolic era through the medieval period, a corpus of Christian funerary literature developed, often inscribed on burial shrouds and tombs.

The Reconstruction of Ancient Environments at Tombos

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Michael A. Monzón (Department of Entomology Purdue University)

Krystal R. Hans (Department of Entomology Purdue University)

Michele R. Buzon (Department of Anthropology, Purdue University)

Excavations of the tumuli at Tombos, Sudan are a unique opportunity for exploring environmental archaeology because of the arid climate and landscape change from damming the Nile River. This poster communicates an exploration project focusing on insects, plant remains, and parasites using sediment from nine New Kingdom

Period graves. The aims of studying these biological proxies include increasing basic knowledge of the site's local resources, estimating environmental conditions, and incorporating these variables into analyses of health. Subterranean termites are a frequent destructive force in grave contexts where the group is established and are a noted challenge in the region. Termite observations from Tombos include remains of larvae in grave sediment and the metamorphosis of wooden grave objects into masses of termite frass (excrement) that have retained the shape of the original object. Changes to the landscape resulting from the damming of the Nile River may have increased the risk of water intruding into nearby archaeological contexts. These risks from environmental and engineered forces drive this project's need to conserve this important site's physical natural history data. A wider goal of this project is to promote the analysis of insects and other biological proxies at Sudanese archaeological sites.

Pottery Samples from Miseeda (Mahas Region) in Light of Neutron Activation Analysis

Katarzyna Anna Rosa (University of Warsaw)

Johannes H. Sterba (Technische Universität Wien)

As part of the project “*The ‘Good Shepherd’ of Miseeda: An Image in the Context of the Changing Cultural Landscape of the Third Cataract of the Nile*” (funded by the National Science Centre, Poland; grant no. 2019/35/B/HS3/02440), during the 2022/2023 season the research team conducted a surface survey that recorded almost 300 archaeological sites. On the basis of selectively collected ceramic material, the majority of these sites were dated to periods ranging from the Mesolithic Period to the 19th century.

From the collected potsherds, 32 samples were selected and subjected to Neutron Activation Analysis at the Technische Universität Wien in order to investigate their elemental composition and thereby determine the possible provenance of individual vessels.

The authors will present the results of these analyses with an attempt to assign the examined material to existing datasets, and try determine the influence of neighbouring kingdoms/ cultures on the Third Cataract region.

Form and Decoration of Neolithic Pottery Vessels: Imitating Containers made from Plant Materials

Sakura Sanada (Nagoya University)

Some of the earliest pottery vessels in Sudan and Egypt are believed to have been produced by imitating containers originally made from plant materials, as suggested by their decoration and form. If this is the case, how did these initial pottery vessels subsequently develop? I begin by examining the situation in northeast Africa, with particular reference to some early pottery examples. By reviewing whether the developments of the meaning of pottery vessels were similar among early examples worldwide, I analyse whether pottery developed in a comparable manner across regions. Should there be regional differences in the developmental processes of pottery vessels, I will explore the reasons behind them. My preliminary review indicates that initial pottery vessels were generally manufactured by mimicking containers made from plant materials, regardless of the region. However, the pottery vessels that followed the initial ones varied considerably depending on the region. By presenting exact examples through images of pottery vessels, I discuss this issue.

Churches of Lower Nubia Revisited: Wadi es-Sebua and Tafa

Gertrud J. M. van Loon (Faculty of Archaeology, University of Warsaw)

Dobrochna Zielińska (Faculty of Archaeology, University of Warsaw)

Adam Łajtar (Faculty of Archaeology, University of Warsaw)

Grzegorz Ochala (Faculty of Archaeology, University of Warsaw)

Agata Deptuła (Polish Centre for Mediterranean Archaeology, University of Warsaw)

Katarzyna de Lellis-Danyś (Polish Centre of Mediterranean Archaeology, University of Warsaw / National Museum in Warsaw)

The majority of churches known from Nubia were situated in the territory of Nobadia. From the beginning of the 19th century, European travellers and scholars left diaries, drawings, publications and photographs of their journeys

into Nubia but little was said on Christian remains. Most churches no longer exist, mainly due to the construction of the New Aswan Dam.

The South Temple of Tafa, reused as a church, was completely dismantled at the end of the 19th century while the church in the temple of Wadi es-Sebua was destroyed when the temple was moved to a higher level in the 1960s. This project gathers and studies the fragmentary documentation on both churches, dispersed and often hidden in archives, museums and libraries. Brought together, and using modern technologies, new and crucial information emerged, not only on the history and the use of these churches, but also on the (religious) history of Nobadia.

Aglan Suite: An Integrated Digital Platform for Archaeological Documentation, Measurement, Reconstruction, and Publication

Hassan Aglan (LUM Munich)

Archaeological documentation frequently depends on multiple disconnected software packages for image processing, measurement, reconstruction, data organization, and final publication. This fragmented workflow can increase processing time, create inconsistencies between datasets, and make it difficult to reproduce analytical procedures. Aglan Suite was developed as an integrated digital environment designed specifically for archaeological and cultural heritage research.

The platform brings together a series of specialized web-based applications that support different stages of the archaeological workflow. Assembly2D and Assembly3D assist with the organization and reconstruction of fragmented objects in two- and three-dimensional environments. DiaSnap calculates vessel diameters from photographed or drawn arcs, while ScanSnap supports calibrated measurements of lines, areas, and perimeters directly from images. VolumeSnap provides tools for estimating vessel capacity and the volume of polygon-based archaeological features. ViewsBox3D generates standardized orthographic views from three-dimensional models, PublishReady supports image cleaning, scaling, labelling, and export for publication, and ImageSync DB facilitates the structured linking of archaeological images with database records.

The suite is intended to improve workflow continuity, measurement transparency, data organization, and the preparation of publication-ready outputs. Rather than replacing specialist interpretation, the applications provide researchers with practical tools for carrying out repetitive technical tasks more consistently and efficiently. The poster presents the structure of Aglan Suite, its principal applications, and its potential use in excavation, object documentation, archaeological illustration, digital reconstruction, and research data management.