

CULTURAL DIVERSITY IN THE BRONZE AGE IN THE ATTAB TO FERKA REGION: NEW RESULTS BASED ON EXCAVATIONS IN 2023

I. INTRODUCTION

The research concession of the Munich University Attab to Ferka Survey Project (MUAFS), launched in 2018, is situated just south of the Dal Cataract (Fig. 1) and can be regarded as ‘peripheral’ to two urban centres of the region, Amara West¹ and Sai Island.² The region was previously surveyed in the 1970s by the Sudan Antiquities Service with the French Archaeological Research Unit under the direction of André Vila.³ The Attab to Ferka region comprises rich settlement and funerary remains from the Palaeolithic to Post-Medieval times, with a significant amount of archaeological evidence associated with the Kerma culture and the New Kingdom.⁴

Since 2020, the specific living conditions in this Middle Nile ‘contact space’⁵ during the Bronze Age⁶ in direct comparison to urban centres is being investigated by the ERC DiverseNile project. Our emphasis is on the Classic Kerma period (ca. 1750–1500 BCE) and the 18th Dynasty (ca. 1550–1290 BCE). The project introduces a novel approach focusing on contact space biographies, investigating human-landscape encounters in a

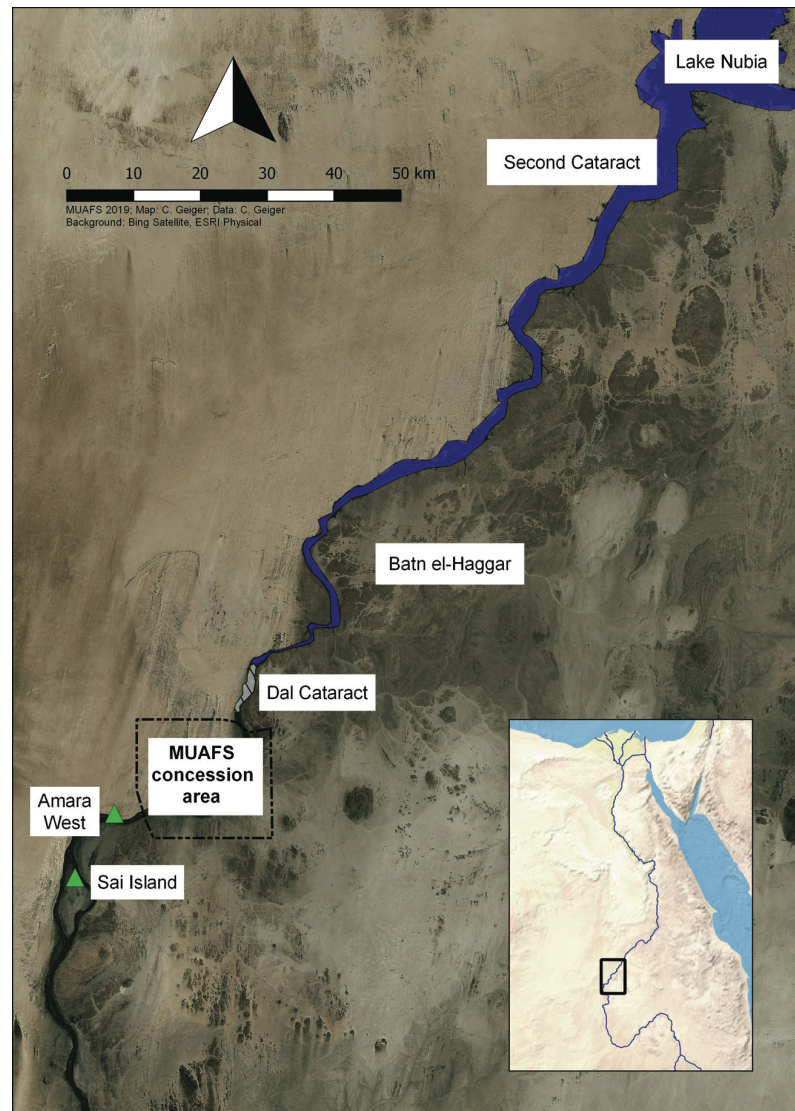


Fig. 1: Map showing the location of the MUAFS concession area. Map: C. Geiger, © DiverseNile project.

1 Spencer 2017; see also Stevens and Garnett 2017

2 Budka 2020a

3 Vila 1976a, b; 1977a, b

4 Budka 2019; Budka 2020b

5 Following the concept of ‘contact spaces’ by Stockhammer and Athanassov 2018

6 Bronze Age for Sudan is a disputed term, see most recently de Souza 2023. We use it, however, to correlate the periods of the Middle and Late Bronze Age with the ones in Egypt.

peripheral borderscape, shaped by humans, human activities, technologies, materiality, and animals.⁷

This article summarises the most important results from the 2023 fieldwork season. The excavation season took place between January 23 and March 18, 2023, and focused on Bronze Age sites in Ginis and

7 In line with Kolen and Renes 2015; see also Budka 2019



Fig. 2: Map showing the three sites excavated in 2023. Map: K. Rose, © DiverseNile project.

Attab. Our choice for excavations included two settlement sites and one cemetery. These sites (Fig. 2) will be presented in chronological order, starting with cemetery GiE 003 as the oldest (Kerma) one.

2. CEMETERY GiE 003

2.1 Introduction

The Kerma cemetery, which Vila documented as 2-T-39,⁸ was labelled GiE 003 by the MUAFS project.⁹ This large cemetery in Ginis East, on the outskirts of Attab East, comprises an estimated 150 tombs in an area of ca. 200 x 100m. A total of five trenches (Fig. 3) were excavated (Trenches 1 and 2 in 2022, Trenches 3-5 in 2023), yielding 58 burial pits. All trenches had eroded circular tumuli structures at the surface, which were covered with pottery sherds and human bones, clearly indicating ancient looting. It seems likely that most of the looting took place in Medieval times since a considerable number of re-used Medieval sherds were found and would

have been used to excavate the tombs. Despite the looting, there are still substantial remains of material culture, especially pottery, personal adornments, and remains of wooden funerary beds.

The oldest burials were unearthed in the southern part of the cemetery, Trenches 2 and 5. Whereas Trench 2 only yielded circular pits associated with the Middle Kerma Period (ca. 2000-1750 BCE), Trench 5 (Fig. 4) also comprised Pan-Grave style burials (the Pan-Grave tradition being dated to ca. 1800-1500 BCE).¹⁰ The burials in Trenches 1, 3 and 4 are all associated with the Classic Kerma Period (ca. 1750-1500 BCE). It therefore seems likely that Trench 5 shows a transition between the Middle Kerma and the Classic Kerma period, probably between 1800-1700 BCE. It is also remarkable that there is a pronounced cluster of graves in this trench on its eastern edge, whereas there is a notable absence of burials to the west. A similar trend of tomb distribution with the earliest tombs in the southern part, the newer ones in the northern part, can be found at the Kerma cemetery of Ukma.¹¹

⁸ Vila 1977a, 80, see Budka 2023

⁹ For an overview of the cemetery based on the 2022 field season see Budka 2023

¹⁰ See de Souza 2019 and most recently de Souza 2022

¹¹ See Vila 1987, 24; Budka 2023

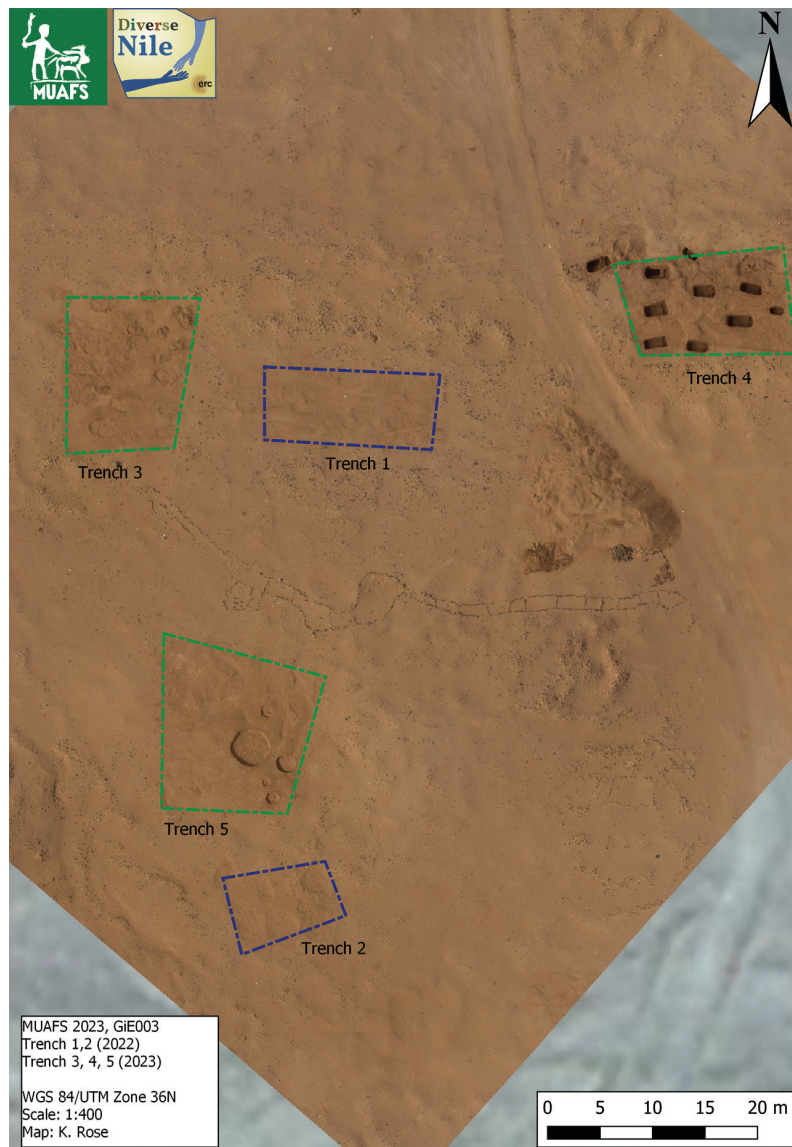


Fig. 3: Orthophoto of GiE 003 - showing all five trenches at the cemetery. Map: K. Rose, © DiverseNile project.

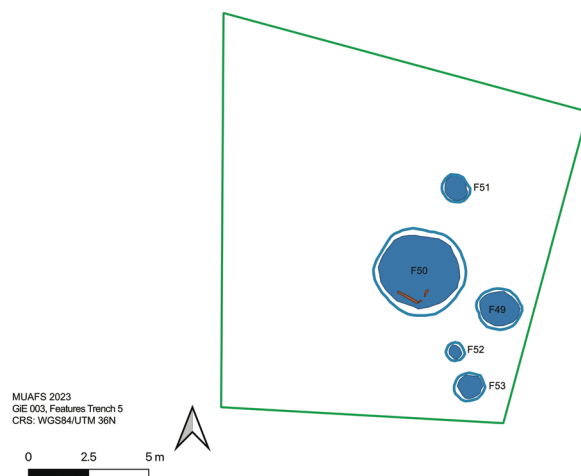


Fig. 4: Plan of Trench 5. Map: J.M.A. Gomez, © DiverseNile project.

2.2 Burial pit types and selected tombs

The burial pit types of the Middle and Classic Kerma Period find close parallels at other cemeteries, e.g. at Akasha, Ukma and Sai.¹² Trench 2, excavated in 2022, yielded large Middle Kerma period circular pits;¹³ Trench 5 one large and several small circular pits associated with the Pan-Grave horizon. The burial pits associated with Classic Kerma material in Trenches 1, 3 and 4 are predominately rectangular pits, most with trenches on the east and west ends for the legs of funerary beds. This type of burial pit corresponds to Vila's type III at Ukma.¹⁴ The dimensions and shapes vary, and include oval graves and variants with rounded corners (cf. subtype III-B at Ukma).¹⁵ Two oval niche burials in Trench 4, Features 65 and 66, are particularly intriguing; they cut rectangular Classic Kerma tombs but seem themselves to date to Classic Kerma times, suggesting short-lived traditions and changes in burial customs at the site. A similar situation can be observed in Trench 1: Feature 3 is an oval pit of Type II-A2 in Ukma, as described by Vila, with a small niche at the bottom of the pit towards the east – this grave almost cuts Feature 4,

a rectangular east-west oriented standard pit.¹⁶ To conclude, the Classic Kerma tombs in GiE 003 show a considerable variability within a general preference of an east-west orientation and rectangular burial pit.

Kerma funerary practices and identities are traceable at GiE 003 through the ceramics as well as the primary grave goods. Known Kerma cultural practices are evident for the Classic Kerma burials such as the position of the interments on wooden beds, animal sacrifices and Black Topped fine ware.¹⁷

¹² See Budka 2023 with references

¹³ For details see Budka 2023, 42-47

¹⁴ Vila 1987, 23-24, Figs. 20.7-12

¹⁵ Vila 1987, Fig. 20.9

¹⁶ Vila 1987, 23, Fig. 20.5

¹⁷ Budka 2023

Tomb no.	Burial type	Finds	Dating
Feature 50	Circular pit, 3.84 x 3.54m; depth: 0.42m	Human skeleton (displaced; 1 skull preserved); bed frame (wood); personal adornments: total of 472 complete faience ring beads, light blue (min. 3 different sizes/sets); 1 tubular faience bead, light blue; 1 small tubular faience bead, light blue; total of 94 complete small ring beads of eggshell (min. 6 different sizes/sets); 1 complete disc bead of eggshell; 1 complete carnelian ball bead; grave goods: 1 broken fragment of kohl applicator? of ivory; 1 stud/knob of ivory (probably box/furniture?); offerings: animal bones (including several goat offerings, one with red paint on horns and remains of a necklace, 95 complete ring beads of eggshell, partly with red ochre); pottery (min. of 5 complete pots); others: 2 possible polishing stones; 1 cowry shell; organic material; charcoal; leather	Pan-Grave horizon (ca. 1750-1700 BCE)

Table 1: Finds from Feature 50 in GiE 003.

In the following, two characteristic burials excavated in 2023 will be presented. Feature 50 (Fig. 5) in Trench 5 is a large, shallow circular pit associated with Pan-Grave style material culture. No obvious remains of its superstructure were visible on the



Fig. 5: Feature 50. Photo: J. Budka, © DiverseNile project.



Fig. 6: Detail of the goat offering in Feature 50. Photo: J.M.A. Gomez, © DiverseNile project.

surface, but since the pit yielded substantial remains of mudbrick debris, it is tempting to assume a brick superstructure. The grave contained the remains of a wooden bed frame, of a human contracted burial, several goat offerings (with traces of red pigments on the horns as well as remains of a necklace worn around the horn or neck, Fig. 6) and a considerable number of intact pottery vessels, comprising Black Topped fine wares as well as incised and impressed decorated vessels. One typical Pan-Grave style Black Topped beaker is particularly interesting because it shows several repair holes (Fig. 7). Table 1 lists all finds from the tomb, including two ivory objects and a large number of various beads of faience, eggshell and carnelian.



Fig. 7: Black Topped beaker with repair holes from Feature 50. Photo: J. Budka, © DiverseNile project.



Tomb no.	Burial type	Finds	Dating
Feature 61	Rectangular pit with trenches for bed legs, 2.31 x 1.33m, depth 1.05m	Human remains (Individual 17); personal adornment: two fly pendants, ivory (<i>in situ</i>); 171 complete faience ring beads, light blue, from neck of Individual 17 (as part of necklace); 2 short tubular beads, green faience; 4 complete ball beads of carnelian; fragment of textile (below hip of Individual 17); offerings: one sheep/goat (W trench); pottery (3 Black Topped beakers in E trench)	Classic Kerma

Table 2: Finds from Feature 61 in GiE 003.

While some of the pottery sherds from Feature 50 have characteristics known from the Kerma culture, the majority clearly belongs to the Pan-Grave horizon. The custom to adorn the horns of sacrificial animals with red ocre/paint is well attested to in Pan-Grave contexts.¹⁸ The adornment of the animals with bead necklaces around horns/necks is also known from Kerma cemeteries, e.g. the cemetery of Ukma (mostly from Middle Kerma tombs, including one Classic Kerma burial).¹⁹ In Ukma, these are mostly gazelles and sheep – in Feature 50, the choice of a goat might be a specific Pan-Grave decision reflecting the common herd structure among pastoral nomads.²⁰

Regarding the beads from Feature 50, one carnelian ball bead is worth mentioning. These beads are otherwise only attested to in Classic Kerma pits in GiE 003; the same can be said for Ukma.²¹ This seems to reflect the transitional dating of this tomb to between Middle Kerma and Classic Kerma.

Among the rectangular Classic Kerma pits, Feature 61 in Trench 4 yielded not only substantial remains of a wooden funerary bed with the two western posts (of simple post-shape) still preserved, but also parts of the contracted burial, placed with the face to the north and the head to the east. Despite clear evidence for grave disturbance, the skeleton of Individual 17 was largely found *in situ*, including two complete ivory fly amulets at the neck, together with remains of a faience necklace (Fig. 8). There was also an intact sheep/goat offering discovered below the foot end of the bed in this feature (finding parallels in Trench 1 and in Ukma).²² Table 2 lists all the finds from Feature 61.

2.3 Character and relevance of GiE 003

In summary, GiE 003 is a provincial cemetery in the Kerma kingdom's northern reaches, with evidence of continuous use from Middle Kerma to Classic Kerma times and an intriguing presence of the Pan-Grave tradition. It provides close parallels to cemeteries in the Batn el-Haggar such as Ukma and Akasha, but also has strong similarities to the Kerma cemeteries at Sai as well as at Ferka²³ and ultimately also shows unparalleled local features.

The findings of Pan-Grave material in Trench 5 are significant because evidence for this cultural horizon south of its core area between the First and the Second Cataract was only known from the Fourth Cataract.²⁴ Our discovery stresses that Pan-Grave people were part of the social structure in the Attab to Ferka region, at least in the period of ca. 1800–1700 BCE.²⁵

Cultural contacts during the Classic Kerma period are attested to at GiE 003 by imported Marl clay vessels from Egypt, Levantine amphorae found on the surfaces of Trenches 1, 3 and 4, as well as one Hyksos scarab from Trench 1, inscribed with the name of king Y'amu (MUAFS 005).²⁶ This king was not attested to in Nubia before the discovery of MUAFS 005, but royal Hyksos scarabs are known from Ukma, Akasha, Sai, and Kerma, as well as several Lower Nubian sites.²⁷ No Tell el-Yahudiya ware was found at GiE 003 and Kerman interactions with the Hyksos, Egyptians and Eastern Desert nomadic groups varied throughout the empire. GiE 003 illustrates local peculiarities mirroring the community's

18 See Dubosson 2021, 913

19 Vila 1987, 217, Fig. 246.2

20 Cf. Bangsgaard 2013, 291; Liszka and de Souza 2021, 230

21 Vila 1987, 218–219, Figs. 247.57 and 58

22 See Budka 2023, 51–53 with references

23 Budka 2023

24 See de Souza 2019, 82–89

25 Cf. de Souza 2022, 189

26 See Budka 2023, 50–51, Fig. 9

27 Ahrens and Kopetzky 2021, 295 with references and discussion



Fig. 8: Remains of Individual 17 on a funerary bed in Feature 61. Inset: details of ivory fly pendants *in situ*. Photos: J. Budka, © DiverseNile project.

ability to consume, shaping a marginal community in the Kerma state.²⁸

3. DOMESTIC SITE AtW 002

3.1 The site

At site AtW 002 (for its location see Fig. 2), Structure 1 is a rectangular building made of mudbricks and stones located on the steep slope of a rocky outcrop in the district of Foshu, the region of Ounet, probably on a former island (Fig. 9). The structure was recorded, but not excavated by Vila (as site 2-S-54) – the same is true for a circular stone structure to the north of the rectangular one (Structure 2).²⁹ Dated to the New Kingdom by Vila based on the mudbricks of Structure 1, the site is located next to a number of what appear to be Kerman dry-stone buildings (see also below, 5.2) distributed along a paleochannel of the Nile.³⁰

In 2023, we conducted cleaning and excavation of Structure 1 from the 9th to the 12th of February and from the 26th to the 27th. Before we were able to excavate the original deposit and clean the lowermost mudbrick debris, the structure was completely destroyed, likely by modern goldworkers, on the 27th of February.

3.2 Structure 1

Structure 1 can be dated through the ceramics to the early 18th Dynasty, and measures 6.5 x 3.5m on



Fig. 9: An overview drone image of site AtW 002. Photo: K. Rose, © DiverseNile project.

²⁸ See Lemos and Budka 2021; Walsh 2022; Budka 2023

²⁹ Vila 1977b, 85

³⁰ This is the so-called 'Northern paleochannel' according to Woodward et al. 2017, 232-241, Fig. 6. See also Budka 2019, 24-25 and Dalton et al. 2023, Fig. 3.

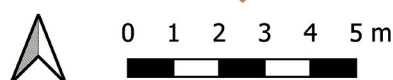
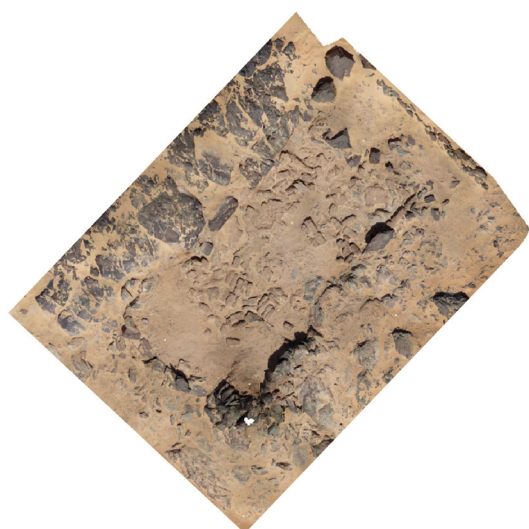


Fig. 10: Orthophoto after cleaning windblown sand from Structure 1. Map: C. Ward, © DiverseNile project.

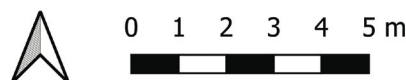
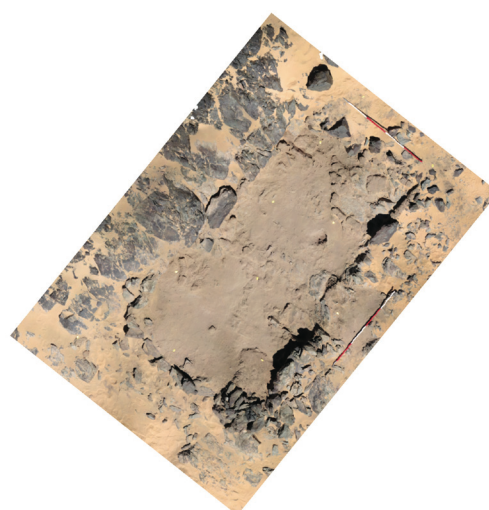


Fig. 11: Orthophoto showing the internal division of Structure 1, after removing most of the mudbrick debris. Map: C. Ward, © DiverseNile project.

the interior and is preserved to more than 80cm in height. The clearance of windblown sand exposed a substantial layer of mudbrick debris, as well as internal mudbrick features (Fig. 10). The structure seems to have been divided into at least three parts, presumably with an open courtyard in the centre where the main hearth area/fireplace was found (see Fig. 11). It remains unclear where the main entrance of the structure was originally located (one side entrance seems to have been on the east side in the centre, leading into the open courtyard).

3.3 Dating and function of Structure 1

One sample of charcoal from the presumed fireplace in the open area of Structure 1 was tested for C14 (Fig. 12). The results indicate that there is a high probability the site dates to the period of 1688-1517 BCE, from (Classic) Kerma times to the early 18th Dynasty. The associated pottery suggest the later part of the date-range is more accurate.

Beta Analytic TESTING LABORATORY		Beta Analytic, Inc. 4985 SW 74 th Court Miami, FL 33155 USA Tel: 305-667-5167 Fax: 305-663-0964 info@betalabservices.com	
ISO/IEC 17025:2017-Accredited Testing Laboratory			
REPORT OF RADIOCARBON DATING ANALYSES			
Julia Budka LMU Munich		Report Date: May 02, 2023 Material Received: April 20, 2023	
Laboratory Number	Sample Code Number	Conventional Radiocarbon Age (BP) or Percent Modern Carbon (pMC) & Stable Isotopes	
Beta - 661495	65-1413	3330 +/- 30 BP	IRMS δ13C: -23.5 o/oo
(94.4%) (1.0%)	1688 - 1517 cal B C 1729 - 1723 cal BC	(3637 - 3466 cal B P) (3678 - 3672 cal BP)	
Submitter Material: Charcoal Pretreatment: (charred material) acid/alkali/acid Analyzed Material: Charred material Analysis Service: AMS-Standard delivery Percent Modern Carbon: 66.06 +/- 0.25 pMC Fraction Modern Carbon: 0.6606 +/- 0.0025 Δ14C: -339.36 +/- 2.47 o/oo Δ14C: -345.17 +/- 2.47 o/oo (1950:2023) Measured Radiocarbon Age: (without δ13C correction): 3310 +/- 30 BP Calibration: BetaCal4.20: HPD method: INTCAL20			
<small>Results are ISO/IEC-17025:2017 accredited. No sub-contracting or student labor was used in the analyses. All work was done at Beta in 4 in-house NEC accelerator mass spectrometers and 4 Thermo IRMSs. The "Conventional Radiocarbon Age" was calculated using the Libby half-life (5568 years), is corrected for total isotopic fraction and was used for calendar calibration where applicable. The Age is rounded to the nearest 10 years and is reported as radiocarbon years before present (BP), "present" = AD 1950. Results greater than the modern reference are reported as percent modern carbon (pMC). The modern reference standard was 95% the 14C signature of NIST SRM-4990C (oxalic acid). Quoted errors are 1 sigma counting statistics. Calculated sigmas less than 30 BP on the Conventional Radiocarbon Age are conservatively rounded up to 30. δ13C values are on the material itself (not the AMS δ13C). δ13C and δ15N values are relative to VPDB. References for calendar calibrations are cited at the bottom of calibration graph pages.</small>			

Fig. 12: C14 analysis results of a charcoal sample from AtW 002 (from fireplace in lower stratum).



The pottery from Structure 1 is mostly Egyptian in style (predominantly beer jars, beakers, storage vessels, dishes, bowls), but also includes Kerma style ceramics (black topped wares but mostly rough cooking wares). From a total of 356 pottery sherds, 31 were hand-made in Nubian style (8.7%).

The total set of material culture comprised a small collection of typical settlement pottery, datable to the early 18th Dynasty, a considerable number of grindstones and several other stone tools like pounders and quartz flakes. This finds repertoire, as well as its location near dry-stone walls and ancient and modern goldworking sites, suggests a connection to early New Kingdom gold working. Maybe the site was a control post for trade and gold transport, enabling the communication between hinterland communities and the newly established Egyptian centre on Sai Island.³¹ One would assume that it was inhabited by a mix of both Kerma Nubians and colonialists from Egypt. The former seems essential given the location of the site and the earlier network of Kerma sites in the region, in particular along the Northern paleochannel, the latter are suggested by the material culture and dating of the site.

3.4 Outlook

Despite of the destruction of Structure 1, the general site needs to be more extensively excavated next season (focusing on Structure 2 and the natural slope south of Structure 1; ceramics and collapsed mudbricks were also found on this slope). Site AtW 002 finds several parallels in the larger area of Foshu. Its possible relationship to site 2-S-50, located further towards the east along the paleochannel, is of particular interest and will be investigated in the future seasons.

4. DOMESTIC SITE AtW 001

4.1 Introduction

Site AtW 001 is a small almost circular mound in the vicinity of site 2-T-62 recorded by André Vila (for its location see Fig. 2 and also below, 5.2).³² After first test excavations in 2022 (Trench 1),³³ the complete mound with an abundance of early 18th Dynasty potsherds as well as scatters of local schist

pieces on the surface was excavated in 2023 (Trench 2, 13 x 10m, Fig. 13).

4.2 The excavations 2023

The 2023 excavations were carried out over the course of 4 weeks and followed on directly from the test excavation conducted in 2022. Trench 2 covered the entirety of the previously identified mound and surrounding slopes. The main aim of the investigation was to fully investigate the mound and surrounding deposits and determine its function and role in the broader area.

Excavations on the west bank were at times challenging due to the high winds. In an attempt to prevent damage to the archaeology as we were excavating, a low boundary wall was built along the north and north-east of the trench (see Fig. 14). This helped prevent further erosion to the material as we were working in the area.

During excavations it became apparent relatively quickly that the main archaeological feature in the trench was a midden made up of several layers of archaeological debris. This included a large amount of pottery (sherds and complete vessels), animal bones, and mudbrick material (Fig. 15). The midden was excavated in a number of spits as distinctions between different layers or parts of the debris deposits were not always clear.

In addition to the layers of refuse, a number of pits were cut into both the midden and the surrounding sand deposits. These were mostly empty although some do include ashy material. Given the lack of finds within the pits, especially compared to the rest of the area excavated, it seems unlikely that they were storage pits, unless they were intentionally emptied or used only for organic material which left no traces. The pitting could also be linked to technological activities or cooking, or potentially to burn refuse. Excavation was not fully completed by the end of the season but it is clear that these features did not exist in isolation. Therefore, further work in the surrounding area is needed to determine the full extent of domestic and production activities in this part of the west bank.

4.3 Material culture

Pottery is the most common type of material culture found at AtW 001. These ceramics are comparable to material from other New Kingdom sites in Nubia. Interestingly, the number of Nubian wares in the

31 See Budka 2022

32 Vila 1977b, 88-89

33 See Budka 2022

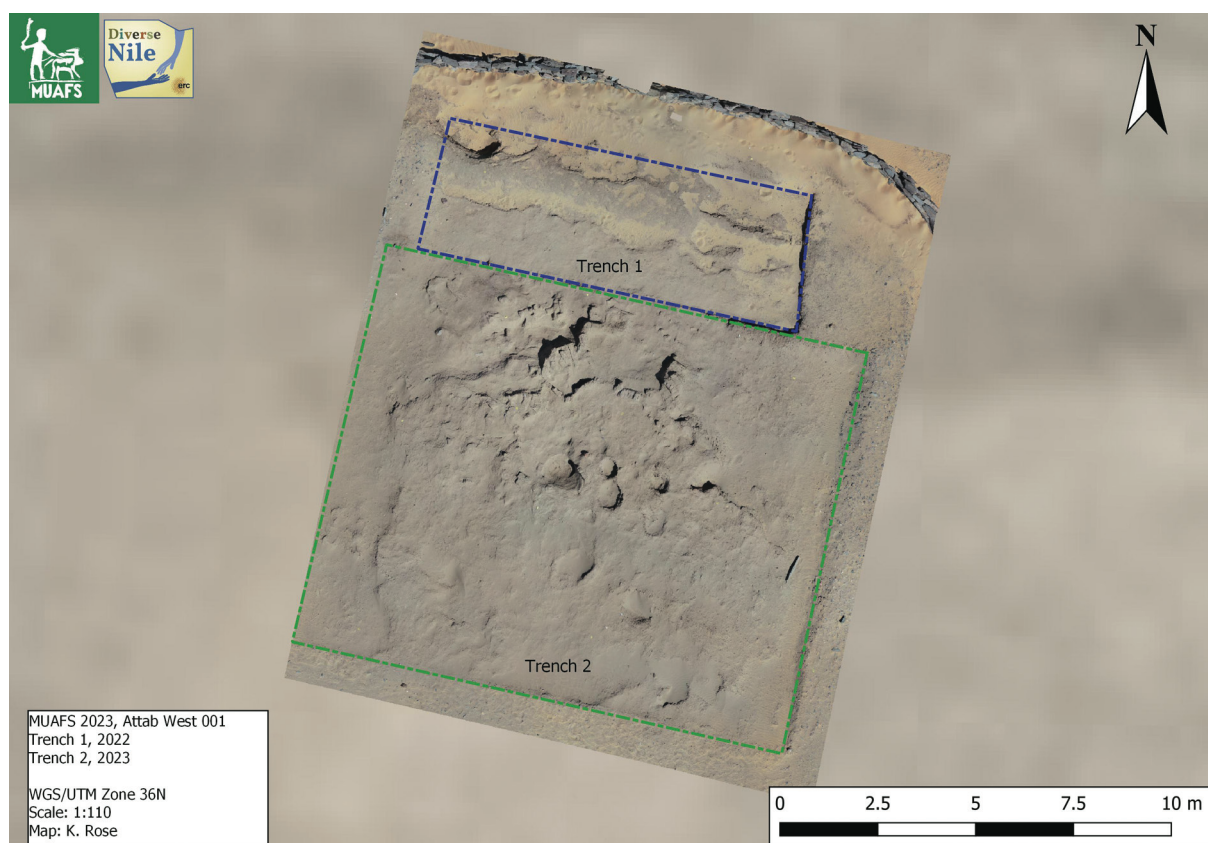


Fig. 13: Orthophoto of site AtW 001 with the two trenches excavated in 2022 and 2023. Photo: K. Rose, DiverseNile project.

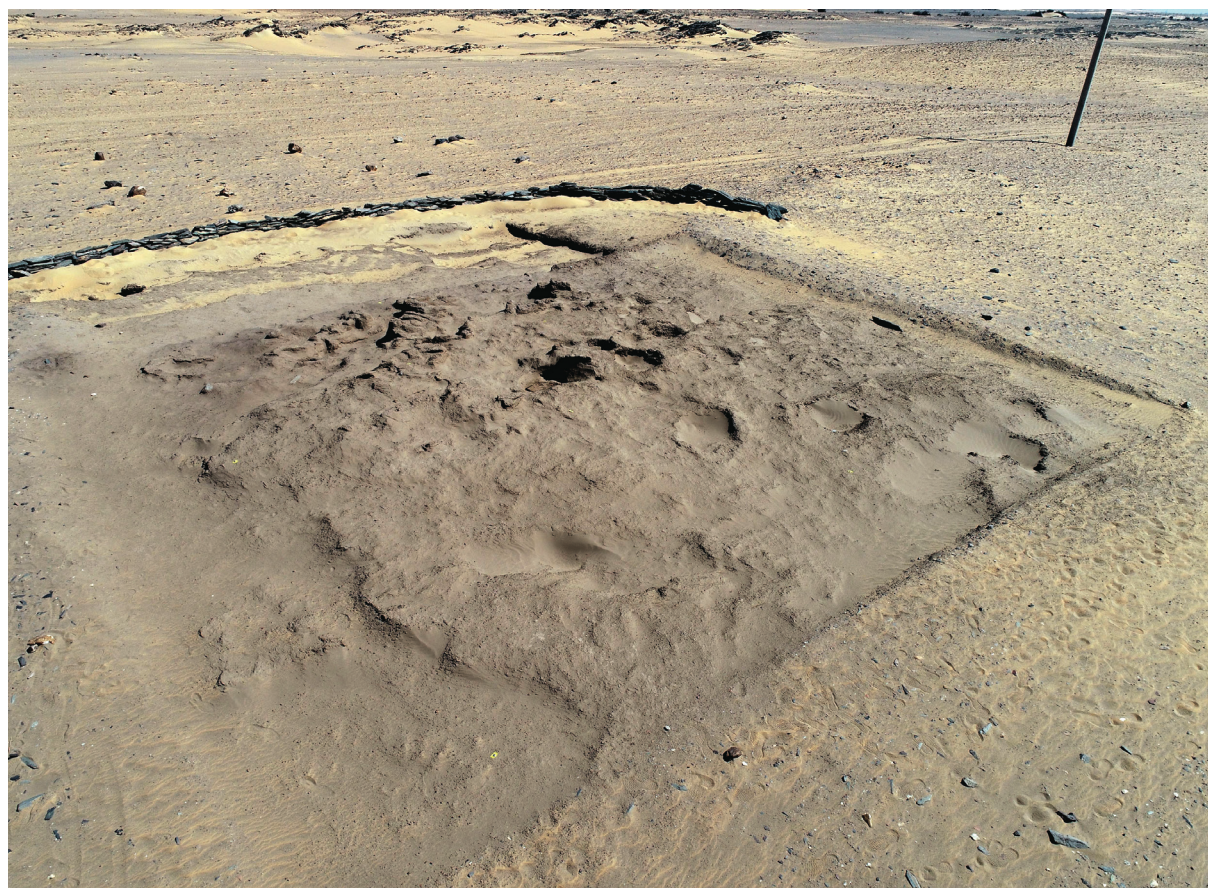


Fig. 14: Drone photograph of Trench 2 at AtW 001 at the end of the season. Photo: K. Rose, © DiverseNile project.



Fig. 15: 3D model of part of Trench 2 at AtW 001 during excavation which shows the accumulation of material in the midden. Model: C. Ward, © DiverseNile project.

various fill horizons was high, accounting for on average 20% of the ceramics.³⁴ The majority of the sherds from AtW 001 are wheel-made Nile clay variants, predominantly a Nile B2 variant. There are also rare imported Levantine and Marl clay sherds from Egypt. Overfired Nile clay sherds from storage vessels and *zirs* seems to suggest a local production of vessels.

In terms of the cooking pots there is a notable mixture of Nubian and Egyptian styles – Egyptian wheel-made cooking pots are used side by side with Nubian-style products. One extraordinary example without known parallels is MUAFS 082/2023, a cooking pot of so-called hybrid character (Fig. 16), combining a Nubian surface treatment with the Egyptian production technique in Nile clay.³⁵ In the case of MUAFS 82/2023, the shape and technique are Egyptian, but the pot which was fired in an oxidised



Fig. 16: Hybrid cooking pot MUAFS 082/2023. Photo: J. Budka, © DiverseNile project.

atmosphere has an incised wavy-line decoration, as well as pinched rim notches which reflect Nubian traditions.³⁶ Interestingly, pinched rims on Nubian cooking pots are very common at AtW 001 whereas this style of decoration is rare in the New Kingdom town of Sai. MUAFS 082/2023 is thus an innovative cross-cultural product deeply embedded in local traditions.³⁷

³⁴ This is the result of the 2023 excavation in Trench 2 (with a total of 10,373 sherds); in Trench 1, the average number of Nubian material was 33% (total of 971 sherds), see Budka 2022, 48. With a maximum of 45.6% of Nubian style sherds in individual contexts and this average rate of 20%, the proportion between Nubian and Egyptian style is a clear difference to Sai city where the average amount of Nubian style vessels in New Kingdom sectors is 2.1%. A stronger connection of AtW 001 to the hand-made indigenous ceramic tradition might be related to its rural character, to its occupants and/or to its function. Compare also the amount of 8.7% Nubian pottery from AtW 002, see above, 3.3.

³⁵ For other types of hybrid cooking pots see Raue 2017; de Souza 2020

³⁶ This style of decoration (wavy line incised patterns and rim notches/pie-crust rims) are also well known from both Egypt and Nubia for special carinated bowls of the Second Intermediate Period tradition; see Budka 2018, 153-154, Fig. 5 with 18th Dynasty examples.

³⁷ For cross-over ceramics at New Kingdom sites in Nubia see Rose 2017, 466; Stevens, Garnett 2017; cf. Budka 2020a,



All in all, the Egyptian style ceramic assemblage from AtW 001 is directly comparable with material from early levels at Sai. The vessels are associated with storage, cooking, serving and drinking. Typical domestic types like pot stands are common and functional vessels like crucibles, spinning bowls, fire dogs, bread plates and bread moulds are attested to in small numbers. Very remarkable and presumably a local feature is the abundance of painted Nile clay carinated bowls and dishes with white slip and wavy-line decoration. Such Nubian inspired decoration is also known from Sai, but there the slip is usually red.³⁸ Similar white-slipped painted vessels are known from Askut,³⁹ which may suggest trade networks from AtW 001 to Lower Nubia. In order to assess the pottery from AtW 001 in full detail, we must await the ongoing scientific analysis of the ceramic samples, especially results from instrumental neutron activation analysis currently being undertaken to specify the provenience of Nile clay vessels.⁴⁰

Apart from ceramics, finds from the 2023 season included net weights (of the axe-head shaped type well attested from Egyptian sites of the Middle and New Kingdom), spherical clay weights, re-used sherds and stone tools like grindstones, pounders and hammers. The group of spherical clay weights is interesting – including one piece found in 2022,⁴¹ there are now a total of 13 pieces. The objects are of irregular, roughly spherical shape and have a large hole in the middle. A function other than as a weight could be possible but remains unclear for now.

4.4 Dating and phasing of the site

Supporting the results from 2022, the ceramics from Trench 2 are datable from the early to the mid-18th Dynasty and include some Classic Kerma Black Topped fine wares. The fine dating of the various phases of use still needs to be established. For now, one can confirm the two phases of activity proposed in 2022 and add some further information.⁴² Phase I is early 18th Dynasty in date and comprises activities with firing, typical domestic waste deposits and possibly some rudimentary mudbrick structures. Phase

II is associated with the mid-18th Dynasty, most likely the reign of Thutmose III. Here, there is a phase of mudbrick walls and pits of unclear function as well as several layers of compact debris. For now, it seems as if the site was used in a newly defined Phase III as a midden. The material found in these debris layers is all mid-18th Dynasty in date, therefore an abandonment of the site under the late years of Thutmose III or one of the subsequent Egyptian kings is likely (material from Phase II would of course have ended up as filling material of Phase III). For now, the latest pottery found at the site seems to date to the reigns of Amenhotep II/Thutmose IV (e.g. bichrome decorated ware).

4.5 Function and outlook

The results of the 2023 excavation of Trench 2 allow us to better understand site AtW 001. The assessment based on the ceramics is now considerably different than in 2022⁴³: there are numerous functional vessels like pots stands, some fire dogs as well as bread plates and other functional vessels like spinning bowls. In general, the corpus is closely comparable to the one from the New Kingdom town of Sai, although differences regarding the Nubian wares and painted wares are notable.

Environmental remains from AtW 001 comprise botanical material as well as lots of faunal remains. Apart from charcoal and some wood, fruit trees like the doum and the date palms, well known from New Kingdom Sai and Amara West, are attested to by nuts and seeds (partly as charred pieces).⁴⁴ The faunal remains are mostly vertebrates (predominantly livestock animals such as sheep, goat and donkey) but molluscs are also present. For the latter, the occurrence of Nile oysters provides a close parallel to the most common species of molluscs at Sai city.⁴⁵

The functional analysis of AtW 001 must await the complete assessment of the faunal material. However, with many donkey and goat/sheep bones, the site might well have been linked to seasonal traffic/routes into the desert, possibly in connection with the provision of transport animals and livestock for gold working expeditions. The parallels between AtW 001 and site 2-R-18 in the Amara West district⁴⁶ are now even more obvious than in 2022.⁴⁷

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38 Miéle 2014, 387-389, Fig. 4

39 Smith 2003, Fig. 3.7; Budka 2018, 153. See also Rose 2018, 136

40 Analysis for the DiverseNile project by Johannes Sterba, Atominstut Wien and Giulia D'Ercole.

41 Budka 2022, Fig. 14

42 For the results from 2022 see Budka 2022

43 See Budka 2022

44 See Heinrich and Hansen 2020; Ryan 2017

45 See Sattmann, Schnedl and Budka 2020

46 Stevens and Garnett 2017

47 See the outline in Budka 2022

The lack of significant architectural remains suggests that AtW 001 was linked to a nearby settlement or temporary, possibly seasonal structures. The abundance of material culture at the site suggests that it was well connected to larger centres like Sai, but also to smaller domestic sites (like AtW 002, see above and see below, 5.2 for the various clusters of dry-stone wall sites in Attab West). Based on our results from 2023 at the site, the close surroundings of AtW 001 need to be further investigated, especially further 18th Dynasty sites close to the modern Nile and presumably on former islands. The possibility that what seems to be a sudden abandonment of the site can be correlated to changes in the waterscapes because of increased aridity (and the possible drying up of the channels around AtW 001 and its transformation into a semi-island) will be investigated. A similar interpretation has already been proposed for Amara West in a later phase and would ideally add to the information available for the so-called Northern paleochannel.⁴⁸

5. DRONE AERIAL PHOTOGRAPHY

5.1 Methods

For the 2023 MUAFS field season, our landscape data collection consisted of two primary objectives: 1) Unmanned Aerial Vehicle (UAV/drone) survey over the entire district of Attab West and other areas in the concession where possible, and low flights over targeted sites for the creation of detailed orthophotos and digital elevation models (DEMs) of the terrain, and 2) ground survey and mapping of dry-stone features in the landscape.

In the field, geospatial data was collected with a Trimble Catalyst GPS receiver, and a TDC 6000 data collector. We aimed for under 5 cm horizontal and vertical accuracy for all points taken with the Trimble Catalyst, though precision varied due to factors such as wind speed and number of satellites on a given day. Drone flights were conducted using a Phantom 4 aircraft, and DJI Go and Drone Deploy applications on an iPad (8th generation). Post-processing of drone imagery and data for DEM and orthophoto generation was completed using the Drone2Map software program from ESRI. Ground control points, recorded with the Trimble Catalyst receiver, were used to georeference and improve the accuracy of all drone models.

5.2 Attab West and the Bronze Age Landscape

Most of the drone survey program was conducted in the district of Attab West, with the aim of covering the entire area (Fig. 17 and cover picture). The focus was on documenting paleochannels extending from the Nile westward into the desert to understand terrain patterns and changes over time.

The drone survey included detailed, low-flying (30 m) mapping of the two sites excavated this season, AtW 001 and AtW 002. AtW 001 (Fig. 18) is located on a small mound, directly west of what could be a second, smaller mound. Slightly south-east of the site is a large dry-stone wall. A possible paleochannel runs east to west, directly north of the site, which is supported by the low elevation of this area recorded in the DEM (Fig. 19).

This past field season, we attempted to systematically document dry-stone features in the landscape through mapping with highly accurate GPS devices. Focusing on the districts of Attab West and Ginis West, we mapped approximately 300 dry-stone features. A total of 5 to 30 GPS points were recorded on each feature using the Trimble Catalyst Receiver, depending on the size. Special attention was taken to capture the highest and lowest point of each feature, as well as the overall extent. In the district of Attab West, we mapped 114 dry-stone features, consisting mainly of walls and circular and semi-circular clusters of stones located near walls. Figure 20 represents a map of the distribution of the recorded dry-stone walls. The features mapped do not represent all the dry-stone features in the area, as mapping coverage in the south-west boundary of the district along the Nile was limited this season. Based on the mapping that was completed thus far, the features are clustered in three main areas: along the west bank of the modern Nile, in the paleochannel west of AtW 002, and in a wadi running north-east to south-west in between AtW 001 and AtW 002.

Our investigation into the spatial patterning and functioning of the walls in this region is preliminary at this stage but can be contextualized within recent research. Dalton et al. published an analysis of river walls, referred to as gyrones, in the region of Amara West to reconstruct the long-term landscape history and practice of hydraulic engineering in the broader region.⁴⁹ The authors identified at least six different construction styles of river walls, ranging from dense coursed walls to indeterminate scatters of stones.⁵⁰

49 Dalton et al. 2023, 18. Fig. 3 in this article shows the distribution of walls in the paleochannel bent from Amara West into the MUAFS concession area.

50 Dalton et al. 2023, 6

48 See Woodward et al. 2017; Dalton et al. 2023



Fig. 17: An overview drone image of the landscape in the Attab West district. Photo: K. Rose, © DiverseNile project.

In Attab West, we observed a wide variety of construction materials, techniques, shapes, and orientations in the landscape, including flat and upright stone stacking, as well as coursing with and without rubble interiors. Lizska argues that these particular dry-stone architectural techniques were employed through many periods by Nubians.⁵¹

In the MUAFS concession area it appears that these walls were constructed throughout nearly all of the phases of human habitation in this region, from Kerma, through the New Kingdom, Napatan, Medieval, and post-Medieval periods.⁵² There does also appear to be variability between periods in the design and function of these walls. In terms of the earlier walls associated with Kerma sites, the placement of these walls along and in paleochannels suggests they may have served as wadi flood walls.

Future work will continue by analysing the data collected this field season and building upon preliminary observations as well as recent work by scholars, with the aim of further elucidating patterns of landscape use and management over time.

6. SUMMARY AND OUTLOOK

Our excavations at Ginis East and Attab West in 2023 provided important new data on the function, use and dating of the sites. Especially cemetery GiE 003 with its mixed material culture of Middle Kerma, Pan-Grave and Classic Kerma illustrates cultural encounters between various Nubian groups in the region. Day-to-day evidence of these cultural encounters is visible at sites like AtW 002 where both Egyptian and Nubian ceramics were found, rectangular and circular buildings appear side by side and mudbricks were used jointly with dry-stone architecture.

The detailed assessment of domestic sites like AtW 001 and AtW 002 has the potential to help us better understand the networks of rural communities in the Middle Nile Valley and their relation to more central sites like Sai, all embedded in the framework of a changing land- and riverscape which is becoming clearer thanks to the Drone Aerial Photography and corresponding analyses. The 2023 season confirmed our earlier assumption of the MUAFS area and especially Attab and Ginis (as well as Kosha) being used for gold exploitation,

⁵¹ Lizska 2017, 41

⁵² See Budka 2020

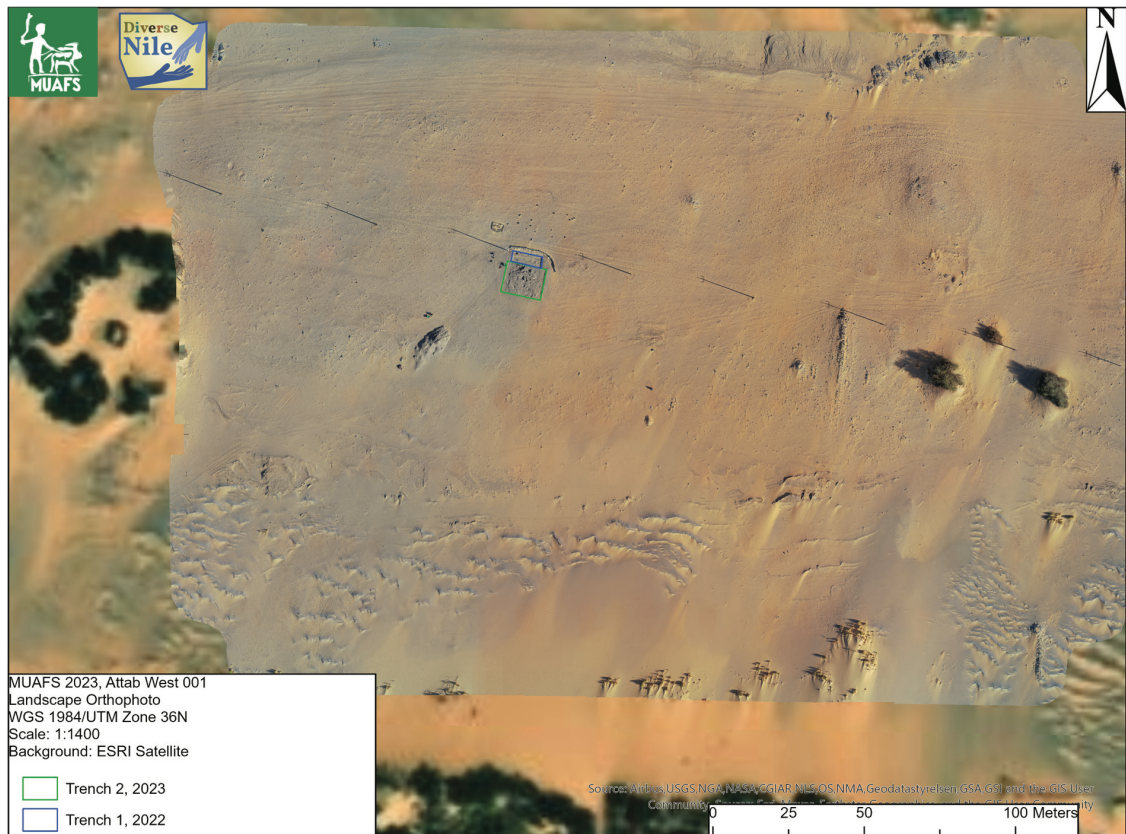


Fig. 18: An orthophoto of the broader landscape surrounding the site of Attab West 001, with Trench 1 (2022) and Trench 2 (2023) visible. Photo: K. Rose, © DiverseNile project.

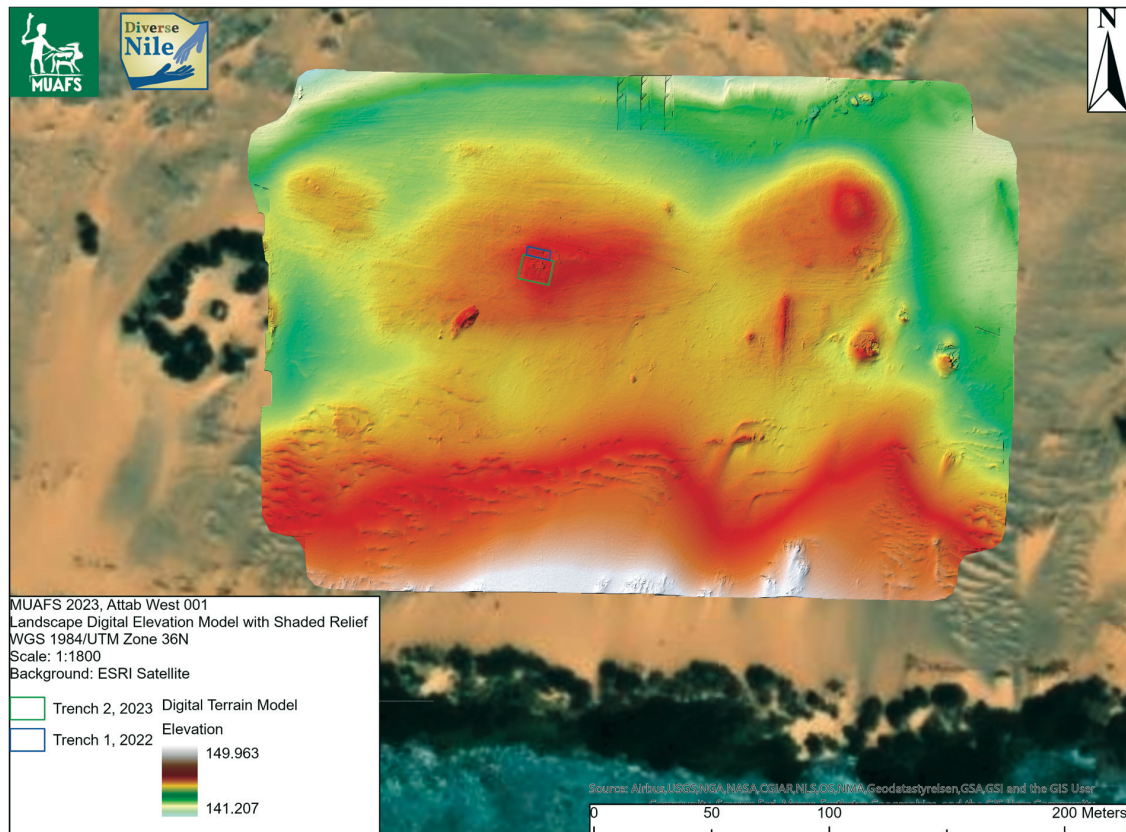


Fig. 19: A digital elevation model (DEM) of the landscape directly surrounding the site of AtW 001. Model: K. Rose, © DiverseNile project.



Fig. 20: A map of the spatial distribution of the recorded dry-stone features (represented as white linear features) in Attab West, with the location of sites AtW 001 and 002. Map: K. Rose, © DiverseNile project.

starting well before the Egyptian New Kingdom.⁵³ The connections to nomadic people traceable by means of the Pan-Grave burials and corresponding material culture from GiE 003 is highly significant in this respect because it suggests an involvement in gold mining in the Eastern desert.⁵⁴

These preliminary results require, however, further excavations as well as scientific analyses currently underway. Since the latest findings in Kerma cemetery GiE 003 suggest that people from the Eastern desert were at least a minor part of the complex social fabric in the Attab to Ferka region during the Bronze Age, a hinterland survey towards the east and towards the west holds much potential.

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⁵³ Budka 2020b, 69; Budka 2022

⁵⁴ Cf. the presence of Pan-Grave style ceramics at Hosh Guruf and El-Widay at the Fourth Cataract, Emberling and Williams 2010. See also Cooper 2021 for the role of desert nomads for Kerma's access to gold; Näser 2012 for the need to focus on questions of interactions between various groups including nomads.



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ZUSAMMENFASSUNG

Dieser Artikel fasst die wichtigsten Ergebnisse der Feldforschungskampagne 2023 des ERC Diverse-Nile Projekts im Rahmen des MUAFS Projekts in der Attab-Ferka Region im Nordsudan zusammen. Die Ausgrabungen konzentrierten sich auf bronzezeitliche Fundplätze in Ginis und Attab. Drei Fallbeispiele, zwei Siedlungsplätze und ein Friedhof, werden gemeinsam mit landschaftsarchäologischen Studien vorgestellt. Als Grabungsergebnisse sind wichtige neue Daten zur Funktion, Nutzung und Datierung der Fundplätze zu nennen. Insbesondere der Friedhof GiE 003 mit seiner gemischten materiellen Kultur aus verschiedenen Kerma Kulturstufen sowie dem Pan-Grave Kulturhorizont veranschaulicht kulturelle Begegnungen zwischen verschiedenen nubischen Gruppen und damit eine komplexe soziale Diversität während der Bronzezeit. Weitere Aspekte dieser kulturellen Vielfalt sowie das Zusammenleben verschiedener Bevölkerungsgruppen scheint an Fundplätzen wie AtW 002 nachvollziehbar zu sein, wo sowohl ägyptische als auch nubische Keramik gefunden wurde, rechteckige und runde Gebäude nebeneinander erscheinen und Lehmziegel gemeinsam mit Trockenmauerarchitektur verwendet wurden.

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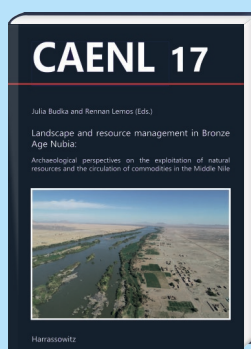
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