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MUSAWWARAT ES-SUFRA, SUDAN

Developing a Collaborative Archaeology of Pastoralism in the Hinterland of the Nile



Research between 2021 and 2023

Commission for Archaeology of Non-European Cultures of the German Archaeological Institute

by Cornelia Kleinitz, Alfatih Mohamed Ali Saeed and Hassan Ebeid-Allah



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Cooperation partners: National Corporation for Antiquities and Museums (NCAM), Khartoum; Humboldt-Universität zu Berlin, Northeast African Archaeology and Cultural Studies (AKNOA).

Head of project: C. Kleinitz.

Team: Z. Bakri Mohamed Ahmed, H. Ebeid-Allah, A. Mohamed Ali Saeed, F. Stremke.

Das Tal von Musawwarat es-Sufra mit seinen zahlreichen Tempeln und anderen Bauwerken war einer der wichtigsten Zeremonialorte im Königreich von Kusch. Heute ist Musawwarat ein wichtiger nationaler Kulturerbeort des Sudan und Teil des UNESCO-Welterbes im Rahmen der »Archäologischen Stätten der Insel von Meroe«. Forschung und Kulturerhalt fokussierten seit langem auf die monumentale archäologische Stätte als Teil der symbolischen Landschaft des (früh-)meroitischen Staates. Nun zielt ein neues archäologisches Kooperationsprojekt darauf ab, diese Perspektive zu ergänzen und ggf. herauszufordern, indem es die Lebensweisen der vergangenen und heutigen lokalen Tierhaltergemeinschaften in der Region Musawwarat in den Mittelpunkt der Betrachtungen stellt. Auf der Grundlage einer Forschungspartnerschaft mit Vertretern der lokalen Bevölkerung, die seit langem als Arbeiter und Wächter an der Erforschung und Erhaltung von Musawwarat beteiligt sind, untersuchen wir Materialitäten des Pastoralismus zwischen Archäologie, Kulturerbe und Entwicklungsbestrebungen.



1 Location of Musawwarat es-Sufra. (Map: DAI-KAAK, Frank Stremke)

The valley of Musawwarat es-Sufra, with its numerous temples and other built structures, was one of the primary ceremonial centres of the Kingdom of Kush. Today, it is a major national heritage site in Sudan and part of the »Archaeological Sites of the Island of Meroe« UNESCO World Heritage site. While research and preservation efforts have long focused on the monumental built structures as part of the (Early) Meroitic state's symbolic landscape, a new collaborative archaeology project aims to complement and counter this perspective by focusing on the lifeways of past and present pastoralist populations in the drylands of the Musawwarat region. Based on a research partnership with members of the local pastoralist communities, who have long been involved in the study and preservation of Musawwarat as workmen and guards, we explore materialities of pastoralism between archaeology, heritage and development.

Introduction: Looking Beyond Monumental Architecture

- 1 **Musawwarat** [↗] is one of the major monumental archaeological heritage sites in Sudan and part of the serial UNESCO World Heritage entry »Archaeological Sites of the Island of Meroe«, which comprises the ancient capital of Kush, **Meroe** [↗], the ceremonial centre of Musawwarat and the town of **Naqa** [↗] (Fig. 1). Musawwarat boasts numerous temples and other built structures, dating from roughly the middle of the 1st millennium BC to the 4th century AD. Among these structures are the oldest known temple dedicated to the indigenous lion-headed god Apedemak, the labyrinthine building complex of the Great Enclosure and one of the largest artificial water reservoirs of ancient Sudan, the Great Hafir.
- 2 The valley of Musawwarat is located in the hinterland of the Nile, at some distance to permanent surface water. It is likely that this ceremonial centre was only used seasonally by larger numbers of people, for example, during festivals. During or after the rainy season, water would have been available at the site, where it was collected and stored in monumental artificial reservoirs. The stored water would have been used for constructing and maintaining the ceremonial site as well as for sustaining humans and animals, and its control was of symbolic value [1] (Fig. 2).



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2 Monumental structures at Musawwarat: The Apedemak (or Lion) Temple at the Great Hafir after the rain. (Photo: Sudan Archaeological Collection and Archive at Humboldt-Universität zu Berlin, Cornelia Kleinitz)

3 Team members from the local pastoralist community protecting the tops of courtyard walls at the Great Enclosure of Musawwarat with earth and lime mortar covers. (Photo: DAI-KAAK, Álvaro Minguito)

- 3 For many decades, research at Musawwarat has primarily focused on the monumental structures as well as on the processes of constructing, maintaining, supplying and using the ceremonial centre. This meant that an important part of the (hi)story of Musawwarat remained underrepresented, that of the pastoralist populations who would have used the hinterland of the Nile, including the region of Musawwarat, as part of their rangelands. These populations may have attached a special significance to the valley of Musawwarat even before it was monumentalised through the construction of durable temples and other buildings under royal control (see Fig. 2).
- 4 To address the roles of pastoralist communities in the history of Musawwarat, a new collaborative archaeology project is now centring past and present pastoralist populations of the drylands in the Musawwarat region. This project is a research partnership between international and Sudanese archaeologists and anthropologists, as well as members of the local pastoralist community. Many of the latter have long been involved in the study and preservation of the site of Musawwarat as local team members, specifically as ›workmen‹ and guards (Fig. 3). The project centres on their expertise in terms of ecological knowledge, animal husbandry and land use strategies, water management, mobile lifeways, and other sets of knowledge. Together, we explore the materialities of past and present pastoralism between archaeology, heritage and development with the aim of writing a more inclusive history of Musawwarat. With our project, we hope to add new perspectives and different voices to the study of one of Sudan's foremost heritage sites.

Building a Collaborative Archaeology Project

- 5 What we would like to understand as a ›collaborative archaeology‹ project has grown out of more than 60 years of archaeological research as well as protection, conservation and restoration work at Musawwarat, which was undertaken by teams from Humboldt-Universität zu Berlin in collaboration with the National Corporation for Antiquities and Museums (NCAM) and – since 2020 – also with the Commission for Archaeology of Non-European Cultures (KAAK) of the German Archaeological Institute (DAI). We were thus able to build our collaborative work on long-established social relations



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4 Discussing dynamics of pastoralist dwelling. (Photo: DAI-KAAK, Cornelia Kleinitz)

5 Sharing knowledge about the functioning of a hyena trap. (Photo: DAI-KAAK, Cornelia Kleinitz)

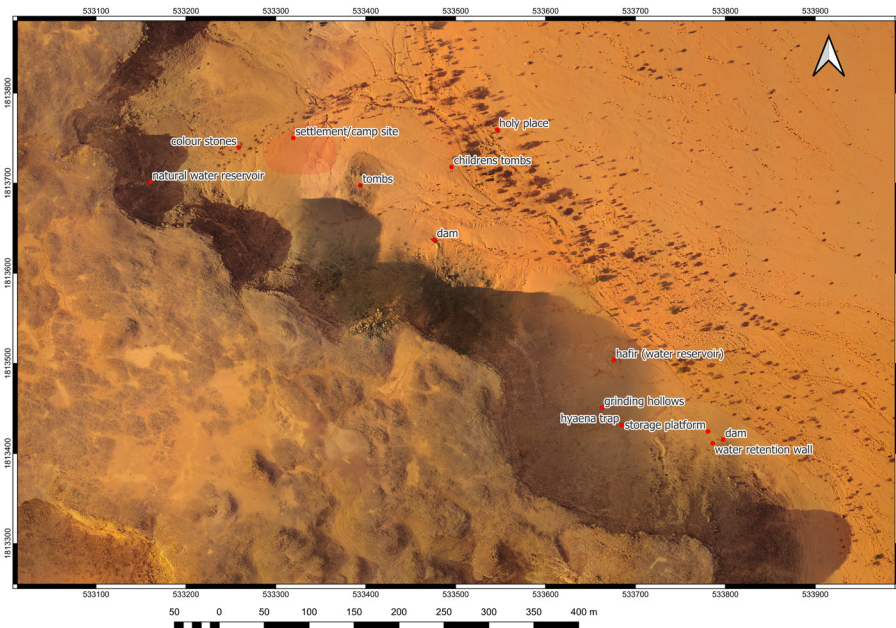
between international as well as Sudanese archaeologists and conservators and a local team drawn from the pastoralist population of the area (Fig. 4).

6 Social anthropological research on the relationship between the local population and the archaeological site by one of us built further bridges by intensifying communication between international, Sudanese and local team members [2]. The collaborative exploration of pastoralist lifeways at Musawwarat was a logical consequence of our engagement with each other and with our fields of knowledge and experience. The selection and definition of research foci and concerns within our project were defined on the basis of intense conversations; this process was locally-led. Due to the nature of our funding, we were not bound to a preconceived research framework because of funding requirements. Rather, we were able to develop and adjust the project in the process of our collaboration.

7 This allowed us also to make a virtue out of various restrictions due to the COVID-19 pandemic, which permitted travel only during the rainy season when archaeological work ›proper‹ was not possible. Working at Musawwarat outside of the archaeological season changed the parameters for the encounter between the international, national and local team members. At the time, the latter were engaged in animal husbandry using the rich pasture and ample water resources of the rainy season and not looking for paid (dry season) work with the archaeological project. For international and national team members, this provided a chance to engage more intensively with the pastoralist socio-economic and drylands ecological contexts of the Musawwarat region beyond the monumental structures of the ancient Kushite ceremonial site (Fig. 5).

Counter-Mapping the Valley of Musawwarat

8 The valley of Musawwarat is a roughly circular space surrounded by low table mountains and traversed by the temporary river bed of the Wadi es-Sufra in a north-east/south-west direction. Most of the monumental structures are located on both sides of the Wadi in the centre of the valley. This includes two artificial monumental water reservoirs as well as various buildings and building complexes. Sandstone quarries are found mostly



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6 Exemplary small-scale survey in the south-west of the valley of Musawwarat. (Graphic: DAI-KAAK, Frank Stremke)

7 The central structure of the well Bir Abdotab with its wooden frame, distribution basins and channels, and stone enclosures with water basins in the background. (Panorama: DAI-KAAK, Cornelia Kleinitz)

along the edges of the valley. Only few cemeteries were previously studied, and no evidence was found of the use of durable materials for dwelling structures beyond the core of the site. Only a few ›settlement scatters‹ were mapped. In the literature, this led to the description of Musawwarat as a ceremonial space without a local (resident) population.

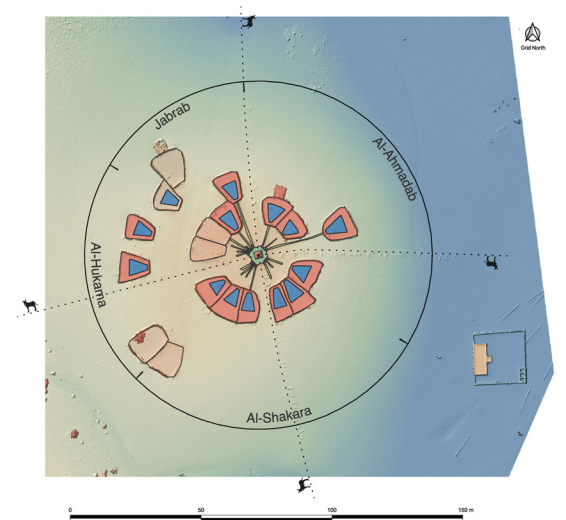
- 9 Realising a bias in the types of archaeological remains that were mapped at Musawwarat, our project explored the many empty spaces on the map of the valley, looking for material remains of pastoralist populations. Sandstone was readily available and amply used by pastoralists at Musawwarat, making these more or less mobile populations surprisingly visible in the archaeological record. Among the many features and finds we identified were various water infrastructures, hyaena traps, tombs, and the remains of long-term as well as short-term campsites, such as bed posts, storage platforms, storage pits, hearthstones, grinding platforms and ground stones (Fig. 6).
- 10 Led by our local team members, we learned to read and understand the pastoralist landscape of Musawwarat. We were able to fill the blank spaces on the map not only with dots of finds and feature locations, however, but with stories of local families and their ›grandfathers‹ and of the ›ancient people from before‹. Together with members of the local community – many of whom have worked with the archaeological project and have experience in identifying archaeological remains – we ended up ›counter-mapping‹ the valley of Musawwarat from a pastoralist perspective.
- 11 This not only added new facets to our interpretation of the site but also made us understand the space of Musawwarat in a very different way, namely as a web of paths, grazing ranges and water sources, and of dynamic settlement spaces and family relations – a web that grows and shrinks and transforms according to season and amount of rainfall.

Water Infrastructures: Dams, Reservoirs and Wells

- 12 When discussing the materialities of pastoralism, the first and most important category flagged by our local research partners were water infrastructures (Fig. 7). Indeed, the procurement of water can be understood as the main concern of the pastoralists of the Musawwarat region. The fragility of



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8 Orthophoto of Bir Abdotab with its central shaft and 19 distribution basins and channels as well as animal enclosures with watering basins. (Photo: DAI-KAAK, Frank Stremke)

9 Digital Elevation Model of Bir Abdotab with access rights to specific sections of the well by four main families indicated. (Graphic: DAI-KAAK, Frank Stremke)

the economic landscape, with access to water and sufficient grazing ground as limiting factors, was a recurring subject in our conversations. Many of the material remains of pastoralism visible in the landscape stem from dealing with these issues through time.

- 13 The ancient water infrastructures of Musawwarat have been thoroughly studied [3]. More recently, pastoralists used a number of less monumental water collection and storage features, such as dams for water retention, artificial water reservoirs and natural water reservoirs along the mountain slopes. During the past 150 years or so, deep wells were dug into an aquifer at a depth of between 70 and 95 m. Five of these traditional wells were identified by our local research partners as important foci of pastoralist life and heritage in the region (Fig. 8).
- 14 Pastoralists have been able to settle in the region of Musawwarat throughout the year since permanent groundwater sources were tapped by constructing wells. Before, pastoralist presence will have been mostly seasonal, relying on rainwater collection and storage. Therefore, the establishment of wells often forms the beginning of the local settlement histories of today's pastoralist populations in the Musawwarat region.
- 15 Indeed, the traditional wells are material manifestations of local ethnic structures and family genealogies, and they reflect a complex organisation of access and use rights. Their layout preserves a wealth of social information. Water is drawn from deep shafts with the help of animal – usually donkey – traction and poured into small basins from where it flows through narrow channels into enclosures with watering basins. Herds are subdivided, and smaller groups of animals are led into the enclosures to drink. The position of the enclosures with their watering basins is determined by family and/or ethnic relations, meaning that the layout of the well's overall structure mirrors the local family and/or ethnic structures at the ›time of the grandfathers‹ when the wells were constructed (Fig. 9).

Stone Structures: Hyena Traps, Tombs and Cemeteries

- 16 Apart from water collection and retention structures, hyaena traps were flagged as material traces from the ›time of the grandfathers‹. This coincides



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10 Detail of cemetery IV A, Qoz Barmido, during the rainy season. (Panorama: DAI-KAAK, Cornelia Kleinitz)

11 Contemporary dwelling with private room, reception room (raquba) in the centre and kitchen to the right. (Panorama: DAI-KAAK, Cornelia Kleinitz)

with the more permanent, i.e. year-round, presence of pastoralists with their animals in the valleys of the Musawwarat region. The traps are understood as a testimony to the efforts of the ›grandfathers‹ to clear the area from hyaenas and protect their herds from these predators, which are said to have been common in the area at the time. Hyaena traps contain a narrow inner chamber with a small entrance, which is covered by a superstructure constructed from drystone slabs of various sizes and shapes (see Fig. 4). They can easily be confused with tomb superstructures [4].

17 While the traps are tied to the settlement history of the present local communities, none of the tombs and cemeteries are claimed to relate to the present population or to their ancestors. The density of tombs and cemeteries in the Musawwarat region is an impressive testimony of the diachronic use of the hinterland of the Nile by successive pastoralist populations. This funerary landscape, with its often large drystone tumuli of various shapes and layouts as well as other types of tomb superstructures, was assigned by our local partners to the ›time of the ancients‹, before the present populations and their ancestors (Fig. 10). Previous excavations at Musawwarat support their view [5].

Settlement Sites: Pastoralist Campsites and Ground Stone Assemblages

18 What has been termed ›settlement scatters‹ in the maps of Musawwarat are testimonies to pastoralist campsites, some of which must have been (re)used for prolonged periods of time judging from the density of surface finds. Traces of dwellings are hard to trace at the surface as they were probably constructed from perishable – mainly plant – materials, similar to today's dwellings (Fig. 11). Our projects' study of contemporary pastoralist dwellings at Musawwarat has established that many are periodically shifted, sometimes every year, for a variety of reasons. These include family occasions, matters of hygiene, or environmental factors. The (re)location of contemporary dwellings is an ongoing, dynamic process. It does not involve random movement, however, but rather reflects family ties and pastoral ranges (see Fig. 4).

19 Among the most common finds within ›settlement scatters‹ are ground stones of various sizes and shapes. These grinding or crushing tools were



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12 Ground stone assemblage in a local household. (Photo: DAI-KAAK, Cornelia Kleinitz)

13 Quarry with pre-shaped grinding platforms. (Photo: DAI-KAAK, Cornelia Kleinitz)

used by pastoralist populations through time and are also found today among the tool kits in pastoralist households (Fig. 12). We discussed possible use scenarios with our local partners based on shapes, surface properties, and wear patterns. They pointed to the importance of the surface properties of ground stones, such as porosity and smoothness, for the processing of specific substances. Today, ground stones are mainly used for the grinding of sorghum and for the crushing of perfumes. Storage pits for sorghum are also among the features related to longer-term campsites.

- 20 Grinding platforms, or parts thereof, were rarely encountered within the ›settlement scatters‹. Our local partners indicated that – despite their weight – mobile grinding platforms were valuable and would be transported between longer-term campsites. We were shown one quarry in the Musawwarat region, where several pre-shaped grinding platforms and upper grinders (handstones) were encountered (Fig. 13). One of our elderly female interview partners indicated that she had sourced and shaped her long-term grinding platform herself, and transported it to each new camp location.

Herding Infrastructures: Short-term Campsites and Rest Places

- 21 Apart from longer-term campsites, the material remains of short-term settlement sites or rest places tied to herding were identified. These include storage platforms for use during the rainy season on soggy ground, stationary grinding platforms or hollows, stone alignments for bed platforms, or hearth/kitchen stone settings. The latter can also be found at longer-term campsites, but they are often obscured due to the density of surface finds and the apparent reuse of these locales.
- 22 While the function of some of these features is easily identified, the interpretation of others is difficult without knowledge of herding in the Musawwarat landscape. Equally, interpreting the interrelationships between different features, such as water infrastructures and storage platforms, relies on knowledge of herding practices (Fig. 14). Similarly, the interpretation of the spatial relation between stone structures and landscape features, such as water runoff channels, relies on an intimate knowledge of the valley of Musawwarat throughout the seasons. Lastly, knowledge of



14 Herder's space: Remnants of a storage platform next to a water runoff channel to the right with two small retention dams for creating watering places for animals. (Photo: DAI-KAAK, Cornelia Kleinitz)

animal behaviour is central to interpreting materialities of pastoralism: Our local partners stressed over and over that it is, in effect, the animals – and not the humans – who select rest places and dwelling spots.

Outlook: Opening Spaces of Communication and Learning

- 23 Our project opened a space of communication and learning that brought together very different sets of knowledge. Members of the local community were our research partners and shared their expertise on pastoralist lifeways as well as local history and ecology, thus allowing us to jointly develop a more inclusive narrative of Musawwarat's past and present. With a view to the future, our local partners hope that sharing their side of the (hi)story of Musawwarat will benefit and empower the pastoralist communities of the region.
- 24 Firstly, our project supported the development of a rural cultural tourism strategy with a focus on local lifeways, cultural and ecological knowledge as well as coping strategies in drylands in times of climate change, which would be offered as an extension to the ›standard‹ visit of the archaeological site of Musawwarat. This initiative, with its explicit aim to benefit the local communities, was successfully tested in early 2023.
- 25 Secondly, by contributing to the project, local pastoralists are hoping to raise visibility for their concerns, as their settlements and pastoral ranges are increasingly endangered by agri-industrial development projects. The latest of these was established just north of the buffer zone of the Musawwarat World Heritage site component in early 2023, directly impacting the local communities of Musawwarat.
- 26 Thirdly, members of the local community asked Humboldt-Universität zu Berlin to transfer to Musawwarat copies of the project archive held at the Sudan Archaeological Collection and Archive. This concerns especially those written and audio-visual documents that document the lives of the local communities since the beginning of the Musawwarat Project in 1958/1960. Transferring the relevant parts of the project archive will help the local communities – even though many of their members are illiterate – remember and tell their side of the story of living at and knowing about Musawwarat and of being involved in the long-term archaeological project.

27 The beginning of the armed conflict in Sudan in April 2023 has stalled these initiatives as well as our collaborative archaeology project for the moment, but we trust that we will find ways to continue and develop our partnership and to tell the (hi)story of Musawwarat from different – including local pastoralist – perspectives.

References

Gabriel 2001

B. Gabriel, Präislamische Gräber und Friedhöfe in der Butana (Sudan), *Der Antike Sudan. Mitteilungen der Sudanarchäologischen Gesellschaft zu Berlin e.V.* 12, 2001, 34–63

Jeuthe 2004 ↗

C. Jeuthe, Neuere Untersuchungen der Bestattungen im Wadi es-Sufra, *Der Antike Sudan. Mitteilungen der Sudanarchäologischen Gesellschaft zu Berlin e.V.* 15, 2004, 69–78

Joachim 2014

F. Joachim, Der Nordfriedhof (IF) von Musawwarat es Sufra, in: A. Lohwasser – P. Wolf (Hrsg.), *Ein Forscherleben zwischen den Welten. Zum 80. Geburtstag von Steffen Wenig*, *Der Antike Sudan. Mitteilungen der Sudanarchäologischen Gesellschaft zu Berlin e.V. Sonderheft 2014 (Berlin 2014)* 191–213

Scheibner 2017 ↗

T. Scheibner, *Wasserbauliche Infrastruktur und Wassermanagement in Musawwarat es-Sufra in kuschitischer Zeit* (Diss. Universität Wien 2017)

Weschenfelder 2014

P. Weschenfelder, Who Gets the Lion's Share? Thoughts on Meroitic Water Management and its Role in Royal Legitimation, in: A. Lohwasser – P. Wolf (Hrsg.), *Ein Forscherleben zwischen den Welten. Zum 80. Geburtstag von*

Steffen Wenig, *Der Antike Sudan. Mitteilungen der Sudanarchäologischen Gesellschaft zu Berlin e.V. Sonderheft 2014 (Berlin 2014)* 335–350

Endnotes

[1] Weschenfelder 2014.

[2] Alfatih Mohamed Ali Saeed, *Living with Monuments. Coping Strategies and Resource Competition Among Pastoralists in Musawwarat es-Sufra*. Unpublished MA Dissertation (2018), University of Khartoum.

[3] Scheibner 2017.

[4] Gabriel 2001.

[5] Jeuthe 2004; Joachim 2014.



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