

SUDAN & NUBIA

The Sudan Archaeological Research Society



Bulletin No. 11

2007





Egypt

RED SEA

Sudan

Eritrea

Ethiopia

ASWAN
1st cataract

Aniba
Qasr Ibrim

WADI HALFA
2nd cataract

3rd cataract
Tombos
Tabo
Kerma/Dokki Gel

Kawa

KARIEMA
Jebel Barkal
4th cataract

ABU HAMED

5th cataract

Dangeil

Akad
ATBARA

6th cataract

OMDURMAN
KHARTOUM
Soba East

Botri

WAD MEDANI

KOSTI

SENNAR

KASSALA

GEDAREF

The Sudan Archaeological Research Society Concession

▲ Ancient sites

● MODERN TOWNS



N

0 250 km

SUDAN & NUBIA

The Sudan Archaeological Research Society



Bulletin No. 11 2007

Contents

Kirwan Memorial Lecture

- Death at Tombos: Pyramids, Iron and the Rise of the Napatan Dynasty 2
Stuart Tyson Smith

The Merowe Dam Archaeological Salvage Project

- Survey and excavations in the vicinity of ed-Doma (AKSE) and et-Tereif (AKSCW), 2006-2007 15
Derek A. Welsby
- Preliminary Report on the Second Season of Excavations Conducted on Mis Island (AKSC) 20
Andrew Ginns
- The 4th Season of the SARS Anglo-German Expedition to the Fourth Nile Cataract 26
Pawel Wolf and Ulrike Nowotnick
- Rock art and archaeology: the Hadiab Survey 34
Cornelia Kleimitz
- The Value and Future Potential of Human Skeletal Remains Excavated at the Fourth Cataract 43
Tina Jakob

Reports

- A Century of Archaeological Salvage, 1907-2007 48
William Y. Adams
- The Nubian Cemetery at Hierakonpolis, Egypt. Results of the 2007 Season
- The C-Group Cemetery at Locality HK27C 57
Renée Friedman
- Overview of the Hierakonpolis C-Group Palaeopathology 63
Margaret Judd
- Overview of the Hierakonpolis C-Group Dental Remains 66
Joel D. Irish
- The Taharqo wall painting rescue project 72
Eric Miller, Pamela Rose and David Singleton
- Excavations in the Palace of Aspelta at Jebel Barkal, March 2007 82
Timothy Kendall and Pawel Wolf

- Bread Moulds from the Amun Temple at Dangeil, Nile State – an Addendum. 89
Julie R. Anderson, A. Catherine D'Andrea, Amanda Logan and Salah Mohamed Ahmed

- Rescue Excavation of a Late-Meroitic Tomb at Botri, South of Khartoum. Preliminary Report 94
Mahmoud Suliman Bashir

Akad Excavation Project

- Preliminary report on the 2005 and 2006 Seasons 98
Mohamed Faroug, Yassin M. Saeed and Alexandros Tsakos

- Report on the human skeletal material from Akad 107
Husna Taha el-Ata and Hwida Mohamed Adam

- Archaeological Reconnaissance in the Nuba Mountains, Sudan 112
Helen Taylor and Michal Bieniada

- The Sultan Ali Dinar Museum, el-Fasher. A window on Darfur's history 119
Pieter Tesch

- Victorian Gunboats in the 21st Century 122
Henry Keonn-Boyd

- A visit to a traditional leather tannery in Central Sudan 125
Lucy Skinner

Miscellaneous

Obituaries -

- Friedrich Wilhelm Hinkel (1925-2007) 127
Janice Yellin and William Y. Adams

- Patrice Lenoble (1942-2007) 128
Jacques Reinold

- Peter Lewis Shinnie (1915-2007) 129
Krzysztof Grzymiski

- Bruce Graham Trigger (1937-2006) 130
Krzysztof Grzymiski

Review -

- Włodzimierz Godlewski 2005. *Pachoras. The Cathedrals of Aetios, Paulos and Petros. The Architecture* 132
Julie R. Anderson

Front cover: Village on the Island of Dirbi in the SARS concession above the Fourth Nile Cataract (photo: D. A. Welsby).



Rock art and archaeology: the Hadiab Survey

Cornelia Kleinitz

Introduction

The final season of the SARS Fourth Cataract Rock Art Project, which took place from mid-November 2006 to early February 2007, focussed on the central part of the SARS concession. Work was undertaken in the region south and west of the village of Hadiab, where the left bank together with three seasonal islands was subjected to an intensive rock-art survey. The Hadiab region is located just to the south of the western part of Ishashi island, where a high concentration of rock-art sites was recognised during the initial season of the rock-art project (Kleinitz 2004). In the Hadiab region 97 rock-art sites were documented (Plate 1). Several kilometres to the east, in the et-Tereif area, further recording on the left bank supplemented the 2005 rock-art survey (Kleinitz and Olsson 2005). Here, 39 rock-art sites were recorded in addition to those identified during the 2005 survey, raising the overall number of known sites to 109. Further work also took place in the Birti area (Welsby 2003) as well as in the far eastern part of the concession, where nine and 25 new sites, respectively, were documented and the existing record was thus consolidated (Kleinitz and Koen-

itz 2006). In total 496 rock-art localities were documented in the four seasons of the SARS Rock-Art Project. This constitutes the largest and most detailed record of rock art in the Fourth Cataract to date.

The Hadiab region: the seasonal islands

The three seasonal islands, Umm Mereigit, Umm Balla and Midaimir, contain relatively little rock art in comparison to the left bank. The main concentration of petroglyphs is found on a large hill of boulders with a broad flat top that is located in the western part of the central island Umm Balla (site 3-N-111). Due to its size and unusual shape, the hill, Jebel Umm Balla, is extremely conspicuous in the landscape. It contains among its boulders a number of crevice graves (site 3-N-310), often in close proximity to rock-art panels (see Wolf and Nowotnick, this volume). Flanking a crevice grave (feature 7), for example, are a small west-facing cattle panel to the east and to the west a larger east-facing panel containing several anthropomorphs and zoomorphs (Figure 1). In the left-hand part of the latter, two anthropomorphs are positioned to the sides of a larger figure, a hitherto unique combination in the SARS concession. To their right, what appear to be dogs with long snouts seem to follow large bird-like figures of an unusual style.

The presence of other rare or unusual motifs or motif combinations at the site, as well as the careful execution of the images, indicate that the hill must have been attributed some special significance. Most of the panels at this locality

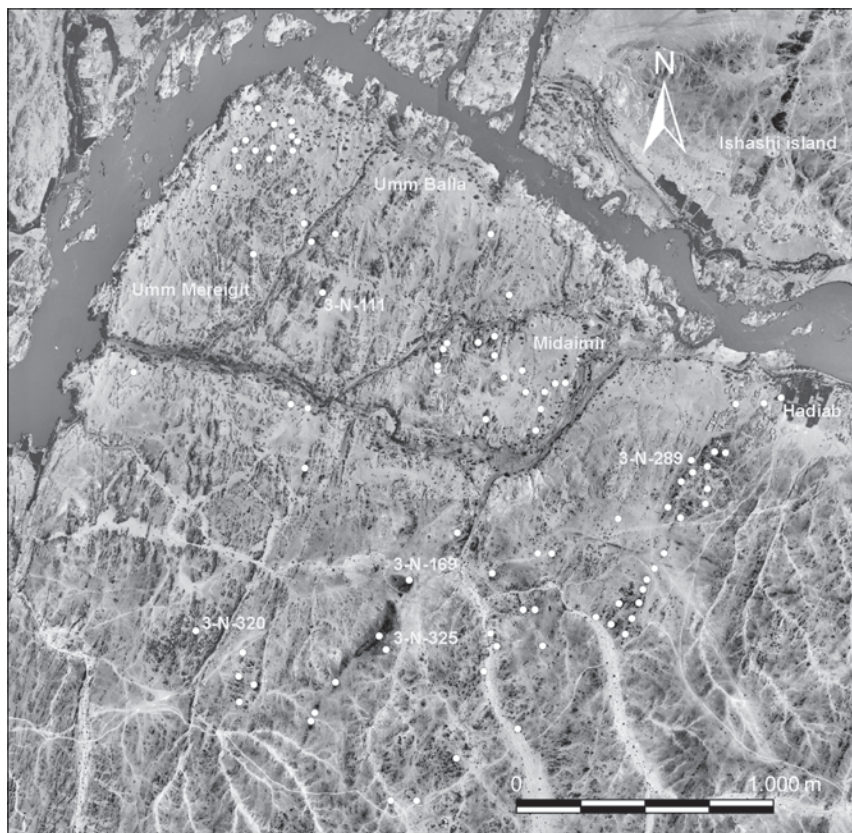


Plate 1. The study region south and west of Hadiab village.

contain one or more cattle motifs, sometimes cow/calf combinations. One of the most intricate of the cattle panels shows, among others, two cows facing each other with their heads touching. Small cattle figures, probably calves, are depicted between their legs (Plate 2). Close by, also on the upper horizontal bedrock platform forming the summit of the hill, two north-east pointing foot-soles were recorded, together with several cattle motifs, stick figure anthropomorphs, a large cross-shape and other forms (Colour plate XXII). On the summit, which offers wide views over the surrounding landscape, including Ishashi and other islands as well as the adjoining left bank, a large and well-used rock-gong complex is found. Its beige-coloured deep cup marks indicate that this instrument was used for a long time until relatively recently. Fully patinated percussion zones and cup marks, which obviously have not been played since antiquity, attest to the ancient use of this percussion idiophone.

In the upper part of the north-eastern slope of the hill, by a second cluster of rock gongs, another unusual cattle panel was found. Pecked into a 240-410mm high dark-

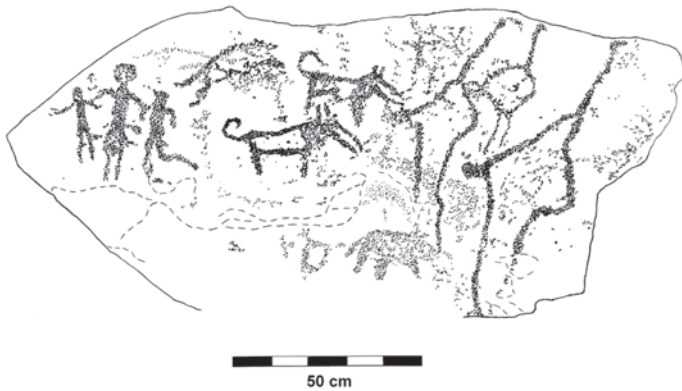


Figure 1. Anthropomorphs and zoomorphs at site 3-N-111 (scale 1:20).

grey band in the otherwise much lighter granite is a frieze, 3.1m in length, depicting a procession of nine longhorn cattle, some with deformed horns. They are led by what appears to be a dog and the last animal of the procession, a bull, has its tail held by an anthropomorph (Figure 2). In some cases udders are depicted, identifying these animals as cows; and in at least one case the small size of the animal in



Plate 2. Cattle panel at site 3-N-111.

relation to the others suggests that it represents a calf. Judging from a great consistency in technique, style and patination, most of the frieze seems to have been created in one session. The panel seems to represent a herding scene with the animals appearing to move westward, up onto the hill. The panel may, of course, have been attributed a range of meta-

phorical connotations. The cattle images are well-patinated and can be attributed to a Kerma-period tradition on the basis of their formal traits (Kleinritz, *forth.*; Kleinritz and Koenitz 2006).

The cattle frieze is located at a height of between 1.25 and 2.12m above the present ground surface. At its foot are found a rock-gong complex and one or more robbed crevice graves. This situation points to a number of common elements that we see repeatedly at this site and many others in the Hadiab region. The spatial proximity of well-patinated rock art depicting cattle, of well-used rock gongs and of crevice graves/tumuli often surrounded by Kerma horizon pottery, located in situations offering good views over the landscape, is noteworthy. There seems to be a broad temporal correspondence between these elements and it would be tempting to link the rock-art images/gongs to Kerma horizon funerary cults. However, the difficulties in more precisely dating the usually robbed graves and the rock-art images/rock gongs make it hard at the moment to establish much more than a spatial link (see Wolf and Nowotnick, *this volume*).

Extremely little rock art was found on the western island, Umm Mereigit. Here, rock gongs dominate the record. Well-used rock-gong complexes and a partially exfoliated cattle panel were identified only at site 3-N-386. These point to an ancient rock-art tradition and are located by a seasonal channel leading to site 3-N-111 on the neighbouring island. The rest of the island contains traces of Medieval period marking only. Most of the rock gongs and camel petroglyphs are found within and bordering a Medieval settlement zone in the north-western part of the island, including site 3-N-140 (see Wolf and Nowotnick, *this volume*). While the beige, little-patinated colour of the percussion zones attests to the relatively recent use of the rock gongs, the limited wear traces indicate that these features were not used over prolonged periods of time. Their use in connection with the Medieval occupation zone is probable.

The Hadiab region: the left bank

On the left bank a larger number of concentrations of petroglyphs are found. One of the most significant is located on a series of smaller and larger granite hills stretching \approx 1km to the south from the village of Hadiab. To the



Figure 2. Cattle procession at site 3-N-111 (scale 1:20).



north, across the river, this range of hills continues through the western part of Ishashi, containing the majority of the island's rock-art (Kleinitz 2004). The investigation of the Hadiab sites thus provided an interesting comparison to the rock art of Ishashi. Indeed, great similarities were recognised between the two corpora. Both are dominated by cattle motifs, many of which adhere to a highly standardised form canon (Plate 3; see Kleinitz, *forth.*; Kleinitz and Koenitz



Plate 3. Cattle motifs at site 3-N-289.

2006). Both show evidence for a long marking tradition, judging from the sometimes marked differences in patination between petroglyphs on individual rock surfaces. Both appear to have been used contemporaneously. Numerous crevice and other graves are found within and in the immediate vicinity of the hills (see Wolf and Nowotnick, this volume). In one case, at site 3-N-289, the boulders of a crevice grave covered the lower part of a cattle panel (Figure 3). Unfortunately, the grave was robbed and the boulders in question may have been moved from their original position.

While ancient cattle images dominate the rock art of the mainland south and west of Hadiab village, other motifs dating to different periods are also found in this part of the concession. Cross motifs and camel images, which are often found on boulders located at the sides of wadis, appear to date to the Medieval period. One of the more unusual panels, located on the side of a tiny *kebor* far from other archaeological remains, contains two stick figures, one holding a circular object over its head and a weapon-like form (Plate 4). Cup marks and elongated grooves are among the oldest rock art recorded, although some of them may have had a long use-life and others may have been made more recently (see Kleinitz, *forth.*). They are found primarily at site 3-N-320, which is located in the western part of the surveyed area. Dozens of cup marks and elongated grooves were pecked into the horizontal bedrock terraces of the widely visible summit and the upper terraces of a large north-south orientated outcrop. The large number and the density of the cup marks are remarkable, as is their full



Figure 3. Cattle figures and anthropomorph at site 3-N-289 (scale 1:10).

patination, which in this case points to their antiquity (Plate 5). Whilst cup marks and related forms have been recognised elsewhere in the Fourth Cataract region, a similarly large number of intricate arrangements of cup marks and elongated grooves, such as those at site 3-N-320 has not yet found a parallel in the region (see Kleinitz, *forth.*). Rock-art images are also present among the cup marks. They include cattle, as well as camels and crosses (Plate 6). While the former are of a dark patination, similar to the cup marks and related forms, the latter are of a much lighter colour



Plate 4. Anthropomorphs and weapon-like form at site 3-N-345.

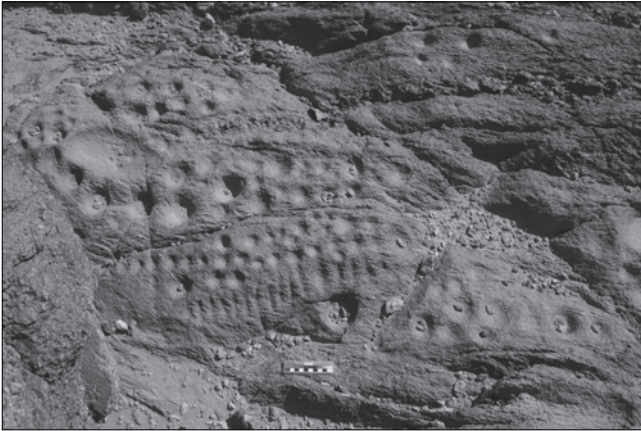


Plate 5. Cup marks, elongated hollows and grooves at site 3-N-320.

and thus form a less ancient phase of marking, indicating that the site may have been used over a long period of time, probably serving different functions. In contrast to cup marks, formed over time, when rock surfaces were beaten during sound making, those at site 3-N-320 are characterised by a sharp rim and relatively steep side walls. Innumerable suggestions have been made regarding the functions of these cup marks and related forms on more or less horizontal rock surfaces, including the crushing, or holding of substances, or the removal of rock matter for medicinal and magical purposes (see Kleinitz 2006 for a summary discussion).

One cluster of sites in the Hadiab region deserves a more detailed discussion, as it constitutes one of the most important accumulations of petroglyphs in the SARS concession. The site cluster is located on a north-south orientated basalt ridge, el-Aterein, the most prominent part of which is occupied by the extensive *Kerma Moyen* cemetery, site 3-N-340, with its more than 90 graves (see Wolf and Nowotnick, this volume). Site 3-N-325 occupies the highest part and the northern slope of the ridge, where petroglyphs are found



Plate 6. Cup marks and cattle motifs at site 3-N-320.

on small boulders and slabs as well as on the bedrock, included within and underneath the tumuli of site 3-N-340 (see below). Site 3-N-169 is situated at the northern end of the basalt ridge at ground level on a low outcrop immediately adjacent to the post-Meroitic cemetery site 3-N-160 (Plate 7). While three more concentrations of rock art are found along the ridge to the south of site 3-N-325, the greatest density of panels are encountered at sites 3-N-325 and 3-N-169. The extremely smooth surfaces of the usually quite small dark grey to black basalt rocks permitted the use of fine-tipped marking tools and thus the depiction of much greater detail, resulting in some of the most intricate rock art panels in the region (Figure 4).

The motif corpus at the el-Aterein sites is dominated by longhorn cattle, mostly pecked in outline, although fully pecked examples also frequently occur. Many animals are depicted with deformed, or multiple horns. Anthropomorphs are sometimes depicted close to cattle images. Additionally, images of dogs, birds and perhaps antelope, were recorded

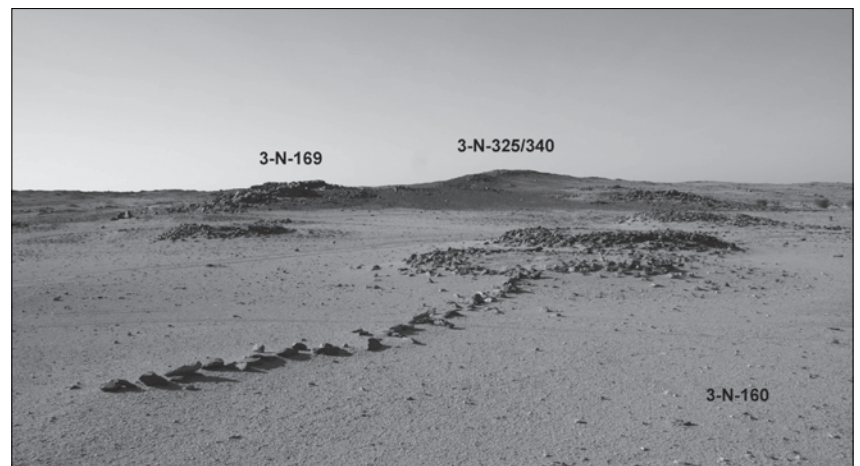


Plate 7. Basalt ridge with sites 3-N-169 and 3-N-325; post-Meroitic tumuli in the foreground.

together with very few camel images, crosses and other geometric forms. The largest marked rock surface is found in the highest part of the ridge at site 3-N-325 (Colour plate XXIII). The south-sloping bedrock contains several generally well-visible cattle motifs, the majority of which face west (Figure 5). The left-hand group appears to comprise a bull, cow and calf. All three have deformed horns, the left-hand animal showing the rarely depicted forward-bent variety. Due to similarities in technique, style and patination, this group of petroglyphs may have been made by one person and could form a scene.

Close by, two depictions were found of what may represent humped bulls (Figure 6). These figures were deeply patinated and differ significantly in style from the Medieval depictions of humped cattle recorded elsewhere in the SARS concession (Kleinitz and Olsson 2005; Kleinitz and Koenitz 2006). As they are similar in style and patination to the older cattle images at site 3-N-325, it seems reasonable to attribute

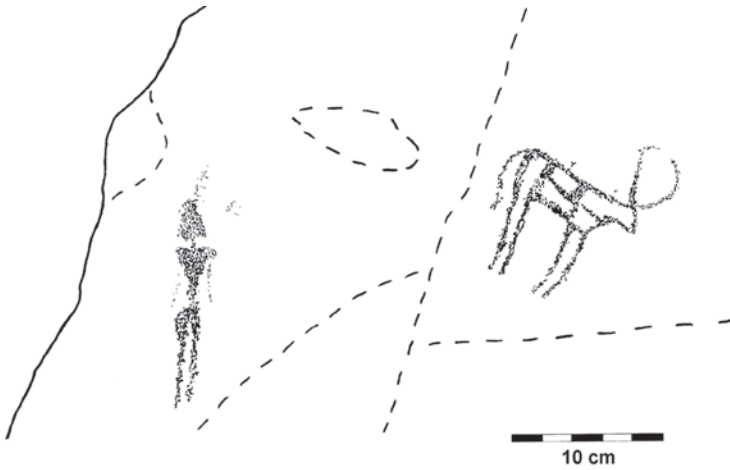


Figure 4. Finely pecked miniature anthropomorph and cattle image (scale 1:5).

a similarly ancient date to them. If their interpretation as depictions of humped cattle is accepted, then these could support suggestions of the at least occasional presence of humped cattle in the Kerma period (Karberg 2005).



Figure 5. Longhorn cattle, some with deformed horns, at site 3-N-325 (scale 1:20).

Apart from the common figurative and non-figurative peckings, numerous fine-line incisions were identified on rocks of the northern basalt ridge. Such extremely thin 'hair-lines' had not hitherto been recognised in the Fourth Cataract. They are often visible, solely upon close inspection of



Figure 6. Humped longhorn bull at site 3-N-325 (scale 1:5).

the rock surfaces and only in raking-light. Unfortunately, the fine-line incisions are usually poorly visible in photographs, but become more apparent in the tracings. Judging from superimposition evidence, fine-line incisions pre- and post-date pecked petroglyphs. Both techniques were thus used on the basalt rocks across time. Among the incised motifs are cattle (Figure 7) and less identifiable large quadrupeds, pentagrams (Figure 8), hourglass-shapes and zig-zags. What may represent a boat is also depicted, as well as a form reminiscent of modern temporary huts (Figures 9 and 10). On many surfaces criss-crossed lines are present, which do not appear to aim at representing a specific form.

Excavations at site 3-N-325/340

The proximity of rock art and archaeological features at site 3-N-325/340, especially their inclusion in some of the tumuli, allows some conclusions to be made as to the dating of the petroglyphs. Small slabs with petroglyphs were recognised in the outer lining of five tumuli. Four of these (tumuli 11-13 and 23) showed evidence of sound making in the form of percussion zones on one or more slabs. A well-used rock gong was found on top of tumulus 23, located at the northern end of the upper part of the site overlooking the post-Meroitic cemetery site, 3-N-160, to one side and the southern part of the Kerma cemetery to the other (Plate 8). Tumuli 12 and 13 contained slabs with rectangular motifs, whilst tumulus 17 incorporated a slab with a camel motif. These relatively little patinated features in all likelihood post-date the construction of the tumuli.

A closer inspection of the slab in tumulus 17 (panel 20) showed that the camel motif was superimposed on a completely re-patinated fully-pecked cattle image. In places just below the cattle motif, the slab had also been polished and it had been used as a rock gong (Figure 11). When this slab was removed at a later stage, it



Plate 8. Rock-gong slab on top of tumulus 23. View south along the summit of site 3-N-325.

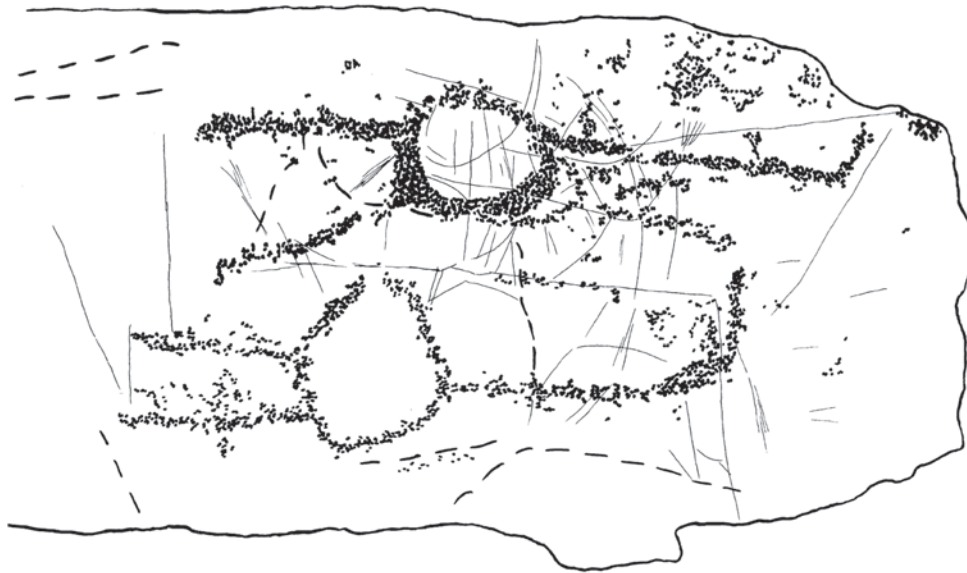


Figure 7. Pecked bird figures superimposed upon two fine-line cattle incisions at site 3-N-169 (scale 1:5).

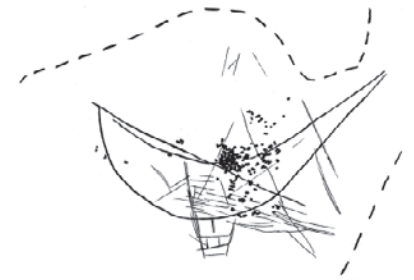
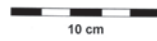


Figure 9. Peck marks superimposed upon boat-like incision at site 3-N-169 (scale 1:5).

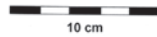


Figure 8. Pentagram, criss-crossing lines and peck marks at site 3-N-169 (scale 1:5).

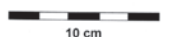


Figure 10. Hut-like fine-line incision and peck marks at site 3-N-169 (scale 1:5).

Figure 11. Site 3-N-325, Panel 20, obverse side (scale 1:5).



became apparent that its reverse side was also pecked. Here, the reddish-brown rock was marked first with cattle motifs, upon which another image of longhorn cattle was superimposed (Colour plate XXIV). The colour of the rock indicates that the reverse of the slab had been buried for enough time to allow the usual dark patina to disappear. The differences in patination between the petroglyphs on the reverse side suggest that at least two marking events took place before the slab was buried, separated by a long period of time. Judging from the cattle images on the buried side of the slab, it seems fair to assume that the fully patinated cattle image on the obverse side also already existed when the slab became part of the tumulus. All later modifications attest to the use of the slab when it formed part of the tumulus.

Some petroglyph panels on bedrock were partially covered by the edges of tumuli and thus appeared to pre-date their construction. However, as all of the tumuli in the upper part of the cemetery, where the petroglyphs are found, appear to have been robbed in antiquity, boulders and slabs forming the present edges of the tumuli may have tumbled down or may have been added during the apparent reconstruction of the tumuli at some later time (see Wolf and Nowotnick, this volume). It seemed appropriate to excavate some of the tumuli to establish whether or not they also covered any rock art closer to the grave pit, which is more likely to have been sealed by the original tumulus. Only such petroglyphs can, with certainty, be attributed an age older than the tumulus, which in these cases provides a *terminus ante quem* for the rock art.

Three tumuli located in the area with the greatest concentration of rock art were partially or totally removed. All three (11, 16 and 17) contained a great quantity of sand amongst the slabs and boulders, along with fragments of bone and *Kerma Moyen* pottery. Tumulus 16 also contained a smooth black pebble. Tumulus 11 was removed, as it partially covered a rock-gong complex and a cattle panel in its south-eastern extremity, while tumulus 16 partially covered some smaller cattle panels. However, no further rock art was found under these features. Due to the peripheral situation of the rock-art panels in relation to the probable original extent of the tumuli, the results of the excavations proved inconclusive. The rocks covering the rock-art panels bordering tumulus 16 were of a dark patination on both the obverse and the reverse sides, suggesting that they were deposited there relatively recently.

The investigation of tumulus 17, which was located in the centre of a group of tumuli just to the north of the summit of the site, brought more success. It partially covered a rock-art panel with some small cattle motifs in its north-western extremity. When the outer edge of the tumulus was removed, more cattle motifs came to light. About



Plate 9. Tumulus 17 at site 3-N-325 during excavation. Rock-art panels in foreground (photo: Pavel Wolf).

1m towards the centre of the tumulus, which measured 3.5m in diameter, horizontal slabs of bedrock border the grave pit (Plate 9). On these, a small north-east facing pecked figure, probably a cattle image, was recognised. In raking light it became clear that the pecked figure was superimposed on fine incisions. These extremely thin 'hair-lines' seem to form a quadruped (Figure 12). Upon close inspection a

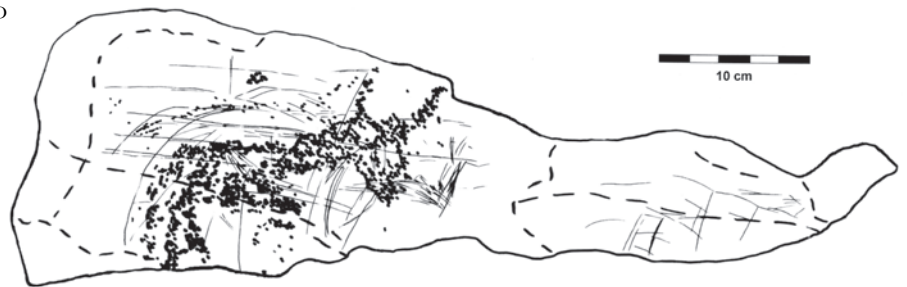


Figure 12. Pecked petroglyph superimposed upon fine-line incisions under tumulus 17 at site 3-N-325 (scale 1:5).

neighbouring rock surface revealed a miniature quadruped, probably an antelope or a goat (Figure 13). A third neighbouring rock contained a maze of criss-crossed fine-line incisions. The bedrock on which these petroglyphs were found was of a reddish colour and partially covered with a white crust, in stark contrast to the dark colour of the rocks that were exposed to the elements. The pecked cattle motif itself looked 'fresh'. This either suggests that it was made relatively shortly before being covered, or that it had lost its dark patination like the bedrock it was pecked into. Due to the position of the marked bedrock under tumulus 17, it is extremely likely that the petroglyphs already existed when the tumulus was constructed. It is thus suggested here that the covered petroglyphs date to the *Kerma Moyen* period, or earlier. While the evidence available is too limited to allow wide-ranging conclusions as to the dating of Fourth Cataract rock art, it nevertheless provides archaeological support for dating some of the pecked and incised petroglyphs

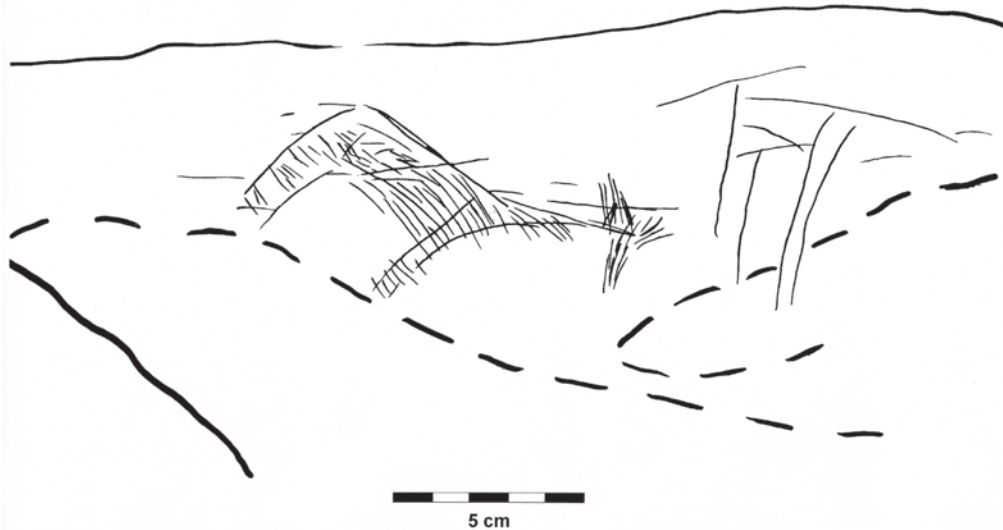


Figure 13. Fine-line incision of quadruped(s) under tumulus 17 at site 3-N-325 (scale 1:2).

to the Kerma period (see Wolf and Nowotnick, this volume).

In contrast to many other rock art sites in the SARS concession that occupy highly-visible points in the landscape, site 3-N-325 shows relatively little evidence of use in the more recent past. Extremely few camel images and other motifs indicative of the past one and a half millennia, such as crosses, were documented, giving the impression that the basalt ridge either was located away from communication routes of the Medieval and Islamic periods, or that the integrity of the site was respected. There is modern evidence for the avoidance of the site due to the local belief that it is haunted by ghosts, information that was volunteered by our workmen. This attitude changed immediately after our first excavations, when the site began to be vandalised.

Conclusions and outlook

The final season of the SARS Fourth Cataract Rock Art Project completed our efforts to achieve as broad an overview of the rock art of the concession as was possible in the limited time available. Since the winter of 2003/2004, in more than nine months of intensive fieldwork, 90 rock art sites were documented in the far western part of the concession, 254 in a broad central zone and 152 localities in the far east. The record is composed of more than 40,000 high resolution digital images, 31 hours of digital video tape, hundreds of direct tracings and detailed drawings as well as extensive written documentation. The analysis of this material and its publication are major tasks for the coming years. It promises more insights into the chronology of Fourth Cataract rock art as well as possible motivations for marking in specific landscape contexts.

Already, an initial assessment of the implications of the location of specific rock-art motifs corresponds to the impression gained by some of the general archaeological surveys. The great number of Kerma remains in the Hadiab region, for example, seems to be mirrored in the presence

of hundreds of cattle motifs that can be attributed to the Kerma period on stylistic grounds (Kleinitz, *forth.*; Kleinitz and Koenitz 2006). The Dar el-Arab region, by contrast, is characterised by much greater variety of archaeological material, dating to a range of periods, which is reflected in the great diversity of its rock art (Kleinitz and Olsson 2005; Wolf and Nowotnick 2005a, 2005b, 2006). On Mis island, the abundance of remains of the Medieval period is mirrored in the Christian period rock art, characteristic of the island (Ginns 2006 and this volume; Kleinitz and Koenitz 2006; Welsby 2003). Such correlations between the general archaeological and the rock-art surveys can also be observed in other parts of the SARS concession. However, the analysis of the rock-art record with reference to the general archaeological record, as well as to geographical studies of the region, forms only one of the promising avenues for uncovering the mysteries of the marked stones.

Acknowledgements

This project was kindly funded by the Sudan Archaeological Research Society. I would like to thank Pawel Wolf and Ulrike Nowotnick (AKSW) for their support of the rock-art project and for fruitful discussions regarding the archaeological context of the petroglyphs. This work partially builds on the general archaeological survey undertaken by the Anglo-German Expedition's team (see Wolf and Nowotnick, this volume). Derek Welsby is thanked for facilitating the continuation of rock-art recording in the Hadiab region under the auspices of the Amri-Kirbeka Survey East, and for supporting the continuation of work in the et-Tereif area. Last but not least, Roswitha Koenitz is thanked for her invaluable assistance in recording the rock art, while Baldur Gabriel is acknowledged for his help in identifying rock-art locations.



Bibliography

- Ginns, A. 2006. 'Preliminary report on the excavations conducted on Mis Island (AKSC), 2005-2006', *Sudan & Nubia* 10, 13-19.
- Karberg, T. 2005. 'Bemerkungen zu Rinderdarstellungen in Kirbekan', *Der Antike Sudan. MittSAG* 16, 89-92.
- Kleinitz, C. 2004. 'Rock art and 'rock gongs' in the Fourth Nile Cataract region: the Ihashi Island rock art survey', *Sudan & Nubia* 8, 11-16.
- Kleinitz, C. 2006. *Dialogues in Stone: Past and present engagements with rock art in sub-Saharan Mali, West Africa*. Unpublished PhD Thesis, University College London.
- Kleinitz, C. (forth.). 'Rock art landscapes of the Fourth Nile Cataract: characterisations and first comparisons', in C. Näser and M. Lange (eds), *Proceedings of the Second International Conference on the Archaeology of the Fourth Nile Cataract. Berlin, 4-6 August 2005*.
- Kleinitz, C. and R. Koenitz 2006. 'Fourth Nile Cataract petroglyphs in context. The ed-Doma and Dirbi Island rock art survey', *Sudan & Nubia* 10, 34-42.
- Kleinitz, C. and C. Olsson 2005. 'Christian period rock art landscapes in the Fourth Cataract region: The Dar el-Arab and et-Tereif rock art surveys', *Sudan & Nubia* 9, 32-39.
- Welsby, D. A. 2003. *Survey above the Fourth Nile Cataract*. Sudan Archaeological Research Society Publication no. 10. London.
- Wolf, P. and U. Nowotnick 2005a. 'First season of the SARS Anglo-German Survey at the Fourth Cataract', *Gdańsk Archaeological Museum African Reports* 4, 181-198.
- Wolf, P. and U. Nowotnick 2005b. 'The second season of the SARS Anglo-German Expedition to the Fourth Cataract', *Sudan & Nubia* 9, 23-31.
- Wolf, P. and U. Nowotnick 2006. 'The Third Season of the SARS Anglo-German Expedition to the Fourth Cataract of the Nile', *Sudan & Nubia* 10, 20-32.



*Colour plate XXII.
Rock-Art Project.
'Foot-soles' or 'sandal
prints' at site 3-N-111.*



*Colour plate XXIII. Rock-Art
Project. Petroglyph panels in close
spatial association with Kerma
tumuli at site 3-N-325.*



*Colour plate XXIV.
Rock-Art Project. Site
3-N-325, Panel 20,
reverse side (photo: D.
A. Welsby).*