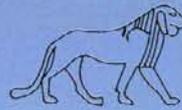


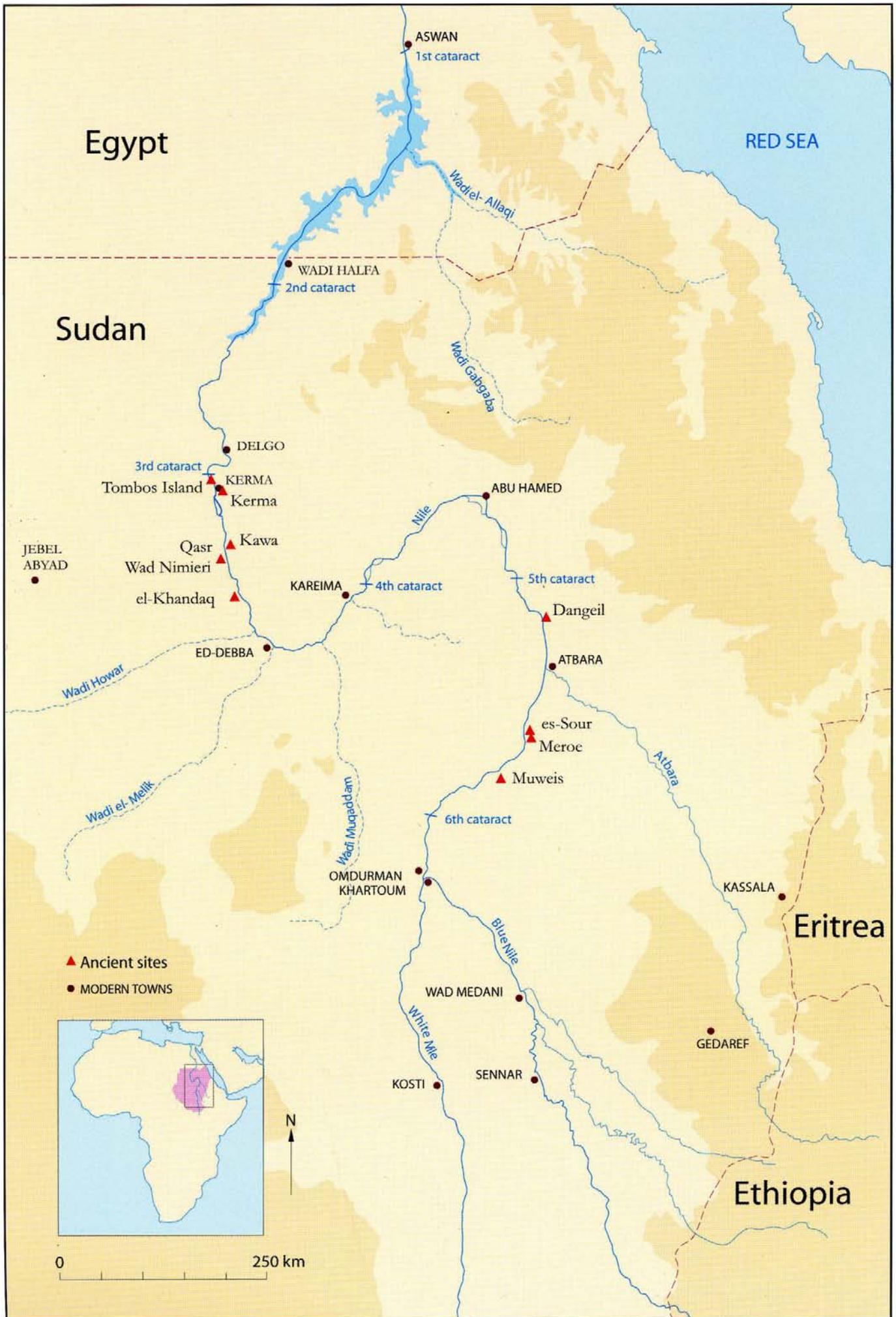
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2008

Contents

Kirwan Memorial Lecture

- The Linguistic Position of Meroitic. 2
New Perspectives for Understanding the Texts
Claude Rilly
-

Reports

- Pottery from the Neolithic site of es-Sour 13
(Central Sudan)
Azhari Mustafa Sadig
- North of the Lower Wadi Howar – A first 17
reconnaissance in the area between Jebel
Abyad and the Nile Valley
Friederike Jesse
- Tombos and the Viceroy Inebny/Amenemnekh 25
W. Vivian Davies
- The Northern Dongola Reach Survey. 34
Excavations at Kawa, 2007-8
Derek A. Welsby
- The Kushite Kiosk of Dangeil and Other 40
Recent Discoveries
Julie R. Anderson and Salab Mohamed Ahmed
- Excavations in Palace M 750S at Meroe 47
Krzysztof Grzymski and Iwona Grzymska
- The Meroitic royal city of Muweis: first steps into 52
an urban settlement of riverine Upper Nubia
Michel Baud
- The origin and use of ceramics on the islands 64
of Mis and Umm Muri, in the Late Meroitic
to Christian periods
Ross Thomas
- The Archaeological and Cultural Survey of 74
the Northern Dongola Reach, Western bank,
from el-Khandaq to Hannek. First Season Report 2007
Intisar Soghayroun Elzein
- The Wadi Halfa to Kerma Railway, 79
Survey February 2008
Derek A. Welsby

- A Chemical and Mineralogical Comparison of 90
Nubian and Egyptian Style Ceramics and the
Implications for Culture Contact: Preliminary Report.
*Julia Carrano, Jeffrey R. Ferguson, Gary H. Girty,
Stuart T. Smith and Carl J. Carrano*

- Meroitic and Tocharian – from the point of 99
view of a Tocharianist
Starostin A. Burlak
-

Miscellaneous

- Obituaries -
- Osama Abdel Rahman Elnur (1942-2007) 104
Jacques Reinold
- Glencairn Balfour-Paul (1917-2008) 106
John Alexander
- Reviews -
- Claudia Näser and Mathias Lange (eds) 2007. 107
*Proceedings of the Second International Conference on the
Archaeology of the Fourth Nile Cataract. Berlin,
August 4th -6th, 2005.*
Julie R. Anderson
- Jacques Reinold 2007. *La nécropole néolithique* 111
*d'el-Kadada au Soudan central. Volume I. Les cimetières
A et B (NE-36-O/3-V-2 et NE-36-O/3-V-3)
du kôm principal.*
Donatella Usai and Sandro Salvatori
-

Front cover: Rescuing rock art from the Sudan Archaeological Research Society's concession at the Fourth Nile Cataract. This collaborative project between the British Museum, Iveco and New Holland was undertaken in November 2007 and resulted in the removal, from the SARS concession, of over 50 boulders bearing rock art or used as rock gongs. The pyramid, offering chapel and enclosure wall from site 4-F-71 were also relocated. Here the work is being filmed by a cameraman from the Italian TV news channel Rei Due (photo D. A. Welsby).

North of the Lower Wadi Howar – A first reconnaissance in the area between Jebel Abyad and the Nile Valley¹

Friederike Jesse

Introduction

Despite the long tradition of archaeological research in Sudan, the areas west of the Nile Valley are not very well known from an archaeological point of view. Traditionally, work focussed on the Nile Valley (e.g. Hinkel 1979; Reinold 2000, 26). West of the Nile, the Wadi Howar and the Laqiya region benefited from intensive research by the long-term projects B.O.S. (“Besiedlungsgeschichte der Ostsahara”) and ACACIA (“Arid Climate Adaptation and Cultural Innovation in Africa”) of the University of Cologne since the 1980s (e.g. Kuper 1995; Keding 1998; Hoelzmann *et al.* 2001; Jesse *et al.* 2004; Jesse 2006a, b; Lange 2006a, b). The regions between these two areas, however, still await detailed archaeological explorations.

The area

The most prominent feature in the area between Wadi Howar and the Laqiya region is the large limestone plateau of Jebel Abyad (Figure 1), situated about 60km south of Laqiya Arba'in and its steep escarpment dominates its surroundings. The limestones bear witness to a palaeocene transgression. South-south-west orientated sand trajectories traverse the plateau, sometimes forming fields of barchan dunes. North of Jebel Abyad, marshy land existed and was episodically flooded during the Early and Middle Holocene. Outliers of 10 to 15m height mark the landscape. (Pachur 1999, 412; Pachur and Altmann 2006, 204, 236-237). East of Jebel Abyad, a sandstone *hamada* is present. Some of the local wadis of the Jebel Abyad Pla-

teau drain to the east, towards the Gharb (also: Qa'ab) Depression. This depression runs parallel to the Nile for about 100km. The high water table allows natural vegetation to grow. During the last wet phase, the depression was reached by surface runoff, tributaries from the Abyad Plateau and probably partly by the palaeo-drainage system of Laqiya Arba'in-Abyad. The oasis and water sources of the Gharb Depression (Figure 1) are surrounded by lacustrine sediments. At some localities, gastropods such as *Melanoides tuberculata* and *Lanistes carinatus* have been recorded (Pachur and Altmann 2006, 237).

During the Holocene the Gharb Depression might be imagined as an extended wetland landscape, fed by ground water and intermingled with shallow pools, with a carbonatic sedimentation. A series of moist habitats developed including the depression of “Dry Selima” (a locality about 65 km southeast of the oasis of Selima) and the region up to the Wadi Howar, only interrupted by some hamadas (Pachur and Altmann 2006, 238). These *hamadas*, which today seem void of any life, were scattered with pools and marshes, providing a habitat for large and medium-sized mammals. A savannah-type vegetation, with periodical and, north of 20° N, episodic grasses existed (Pachur and Altmann 2006, 444).

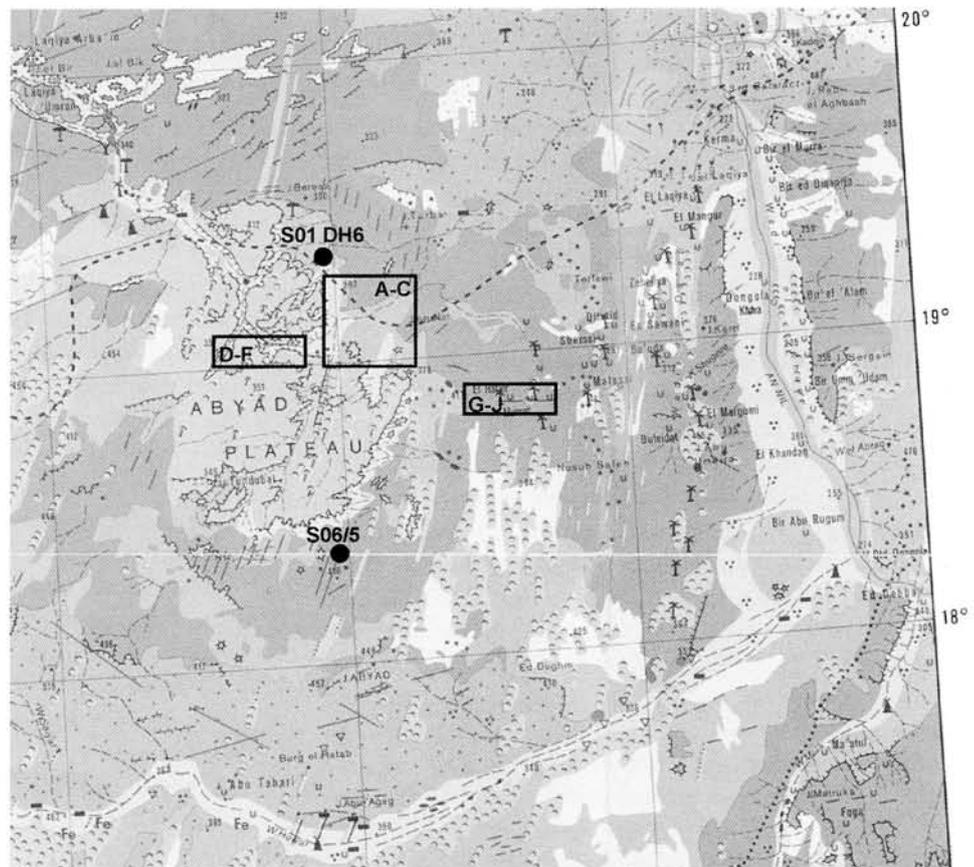


Figure 1. The Jebel Abyad region. Indicated are the areas of survey and two further sites mentioned in the text. The map was adapted from Pachur and Altmann 2006, map 2.

¹ This is the slightly revised version of a paper presented at the International Symposium “Prehistory of Northeastern Africa – New Ideas and Discoveries” held at Poznań 2nd-5th July, 2007.



History of research

The region of Jebel Abyad has not yet been the focus of scientific interest. In October 1884 Lieutenant E. J. Montague-Stuart-Wortley travelled eastward from Laqiya Arba'in and crossed the Wadi el-Qa'ab on his way to Dongola. Three years later, Karl Neufeld trekked with a caravan to Kordofan. The caravan became lost between Selima and the western part of Wadi el-Qa'ab, where it was captured by Mahdist supporters. In the early 20th century the area was traversed and explored by Capt. H. Hodgson who visited Matassi and Tundubai (cf. Figure 1) on his way to el-Atrun in 1903. The following year G. R. Carey surveyed for mineral deposits between el-'Ein and Matassi. Capt. Coningham travelled in the region in 1907 and in 1909 W. Nicholls surveyed the area of the Wadi el-Qa'ab (Hinkel 1979, 12-15). In 1941 R. C. Wakefield travelled again east of Dongola (Hinkel 1979, 21).

Few archaeological finds were therefore mentioned. In 1939, Anthony Arkell collected lithic artefacts and pottery near Murbeiti in the Gharb Depression. An ancient fortress was recorded at el-Kueibi; however, no further information concerning this structure or its age is available (Hinkel 1979, 125). A palaeolithic site, with handaxes of ferrocrete sandstone, was described by G. Yanni Karkanis and Anthony Arkell in the 1940s near el-Lagiya (cf. Figure 1) in a depression called Wadi Tundubai Dam el-Kheir. The pieces collected allow an attribution to the Acheuléan (Gamal el-Deen Idris 1994, 128; Arkell 1949, 37-38).

The situation changed a little at the beginning of the 1990s. In 1991 and 1992, the French Unit (S.F.D.A.S. - Section Française de la Direction des Antiquités du Soudan) surveyed the west bank of the Nile over a distance of about 75km between ed-Debba and el-Khandaq (cf. Figure 1). Work was concentrated in the Nile Valley and barely exceeded a strip 3km in width. The only site which was discovered further afield, in the rocky area of Jebel Abu Shamli, Eberek and Buleidat, was near the well of el-Margum, approximately 30km west of the Nile (Reinold 1993, 157). The majority of the sites recorded belonged to historic times and no Neolithic sites were observed (Reinold 1993, 160). The University of California undertook a survey on the West Bank of the Nile, from Hannek to el-Khandaq in 1997 and 1998. Areas investigated included the land next to the river, the desert margin and the desert proper (Smith 1998-2002, 157). The Wadi el-Qa'ab was briefly visited and evidence of ancient lakebeds and Neolithic and Islamic occupation was found (Smith 1998-2002, 158). The Neolithic occupation yielded lithic artefacts and bones of large fish; however, no pottery was found. (Smith 1998-2002, 164-165).

The research by the Cologne projects B.O.S. and ACACIA in the southern Libyan Desert barely touched the area between Jebel Abyad and the Nile Valley. A few sites were recorded while traversing the region in 1985, 1997 and 2001.

During a geological survey in 2006, an ancient fortress² and nearby numerous petroglyphs showing enigmatic signs, symbols and ancient writings (including Demotic and Arabic) have been described (Kröpelin 2006; Kröpelin and Kuper 2006-2007).

The discovery of pottery sherds with an incised herringbone pattern in the Lower Wadi Howar has attracted attention to this area as a zone of transition as the best parallels for this decoration can be found in the Pre-Kerma and A-Group cultures in the Nubian Nile Valley (e.g. Keding 2000, 92; Jesse 2006b). An archaeological survey between Jebel Abyad and the Nile Valley should thus show, if there are sites with similar pottery, the points of contact between the Lower Wadi Howar and the Nubian Nile Valley.

The survey 2006

The survey was undertaken during the last field season of the ACACIA project of the University of Cologne in February 2006. Three survey areas were chosen (Figure 1). A grid was laid over each survey area to define fixed survey points, which were then approached by car, using a GPS. At each survey point, photographs were taken in the four directions of the compass and the available archaeological information was then recorded. In addition, vegetation, distinctive outcrops, or other landmarks were noted. All archaeological features recognized whilst driving towards the fixed survey points were also recorded. A similar survey strategy had already successfully been applied in the region of Abu Tabari, in the Lower Wadi Howar (Haberlah 2004).

The first survey area, labelled 'survey A to C', covers 30 x 30km and is situated in the eastern approaches to Jebel Abyad (Figure 1). The grid laid over the survey region defined squares of 5 x 5km in size. The survey was carried out by three teams and it took two days to describe all the fixed survey points. The landscape is comprised of flat sandy plains, interspersed with small hills. Old lorry tracks traverse the area in an east – west / southeast – northwest direction. The most western part of the survey area is an alluvial plain, whereas the north-eastern part of the survey area presents a more hilly aspect. Ferrocrete crusts and sandstone characterise the landscape. In the depressions, playa or calcareous sediments are often visible.

The second survey area, labelled D to F, extended over 10 x 30km on the plateau of Jebel Abyad but only 10 x 20km were actually surveyed (Figure 1). The three teams each drove in straight lines at a distance of 5km apart. Along the line, fixed survey points were established every 2km. The survey area covered a valley and the plateau on either side. On the southern plateau, a limestone hamada is present. On the northern plateau, large areas were covered by nod-

² The fortress is obviously identical to the desert fortress at el-Kab for which an Islamic date is proposed (Smith 1998-2002, 160). The fortress of el-Kab is also marked on the 1:250,000 survey sheets (written comm. D. Welsby 2008).

ules of chalcedony, but it was not possible to define a site context. The valley itself is greatly disturbed by old lorry tracks. In the western part of the survey area is a wide plain with sandy areas and some barchan dunes.

The third survey region (G to J) also extended over 10 x 30km and was situated further to the east, towards the Gharb Depression (Figure 1). The survey was undertaken by three teams driving along lines 5km apart, with fixed survey points every 2km. The area is a mixture of sandy plains and hills with significant patches of vegetation such as groups of mainly dom palms (*Hyphaene thebaica*), or acacia trees. The survey was greatly hampered by a sandstorm.

Results

Altogether, 97 archaeological sites ranging from single finds to large settlements were recorded (Table 1). In 40 instances more detailed descriptions and/or surface collections were made. The sites have been used for settlement, but often also for burial purposes, as indicated by the presence of stone tumuli, situated at the edge of several of them. However, it is often not evident whether a small stone heap is a tumulus, or simply a natural feature. Lithic artefacts are present on most sites, whereas pottery only seldom occurs. The main raw material used is chalcedony, which is readily available in the Jebel Abyad. Blade technology is frequently observed. Retouched pieces are present, lunates, scrapers, borers and denticulated pieces have been found (Figure 2). Very often, however, the blades and flakes only show simple retouch probably resulting from the use of the blanks. Among the bones are human ones and those of cattle, sheep, goat and camel.

Survey area A to C

In survey area A to C 57 archaeological sites were noted of which 13 were described in more detail (Table 1; Colour plate II). Site size mostly ranges between 10,000 and 40,000m², one site covers an area of about 160,000m² while another site (a group of probable tumuli) covers only 200m². Lithic artefacts made of chalcedony are present on most sites, whereas pottery was recorded only in five places. Pottery is not prolific and most of it is undecorated. Grinding equipment is for the most part made of sandstone. Two sites present interesting features.

Jebel Abyad S06/18 extends over about 100 x 200m and is situated on calcareous sediments in a small depression surrounded by hills of ferrocrete sandstone (Colour plate II). About 20 tumuli are present in the western part of the site. No pottery was observed, but there were lithic artefacts made of chalcedony. Among the retouched pieces are lunates. An enigmatic piece of sandstone with a constriction on one side was collected. It is 169mm in length, 62mm wide, 45mm thick and weighs 567.1g (Plate 1). Very probably it is an unfinished figurine. Figurines made of veined sandstone, also very schematic in their style, have been found in the Neolithic graves at Kadruka dated to the 5th millennium BC (Reinold 2000, 67, 84).

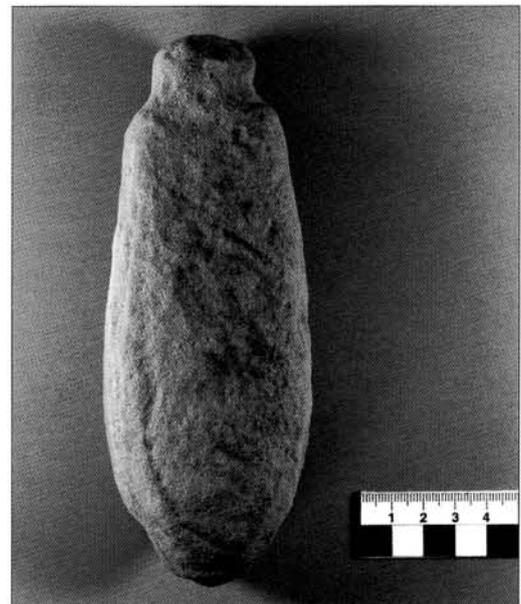


Plate 1. The probable sandstone figurine from site Jebel Abyad S06/18.

Jebel Abyad S06/19 (Colour plate II) is a loose scatter of decorated pottery sherds, grinding equipment and lithic artefacts made of chalcedony. A depot of denticulated blades was found with blades scattered over an area 1-2m in diameter. The faunal remains consist of bones from large mammals, amongst which are those of cattle and sheep/goat. Tumuli are situated in the south-eastern part of the site,

Table 1. Summary of the archaeological discoveries during the survey in the Jebel Abyad area in February 2006. Indicated is the frequency of the appearance of different archaeological material and features. A site is here to be understood as a locality where either a detailed survey sheet was filled out and/or a surface collection has been made.

Survey area	Context	Pottery	Lithic artefacts	Grinding equipment	Bone	Ostrich eggshell	Metal	Knapping areas	Stone settings	Burials
A – C (n = 57)	sites (n = 13)	5	10	9	4	-	-	1	1	4
	simple observations (n = 44)	-	34	8	-	1	-	-	4	10
D – F (n = 20)	sites (n = 13)	-	13	1	1	-	-	1	3	1
	simple observations (n = 7)	-	6	1	-	-	-	-	2	-
G – J (n = 20)	sites (n = 14)	7	10	8	8	7	1	-	4	2
	simple observations (n = 6)	1	3	2	-	1	-	-	-	3

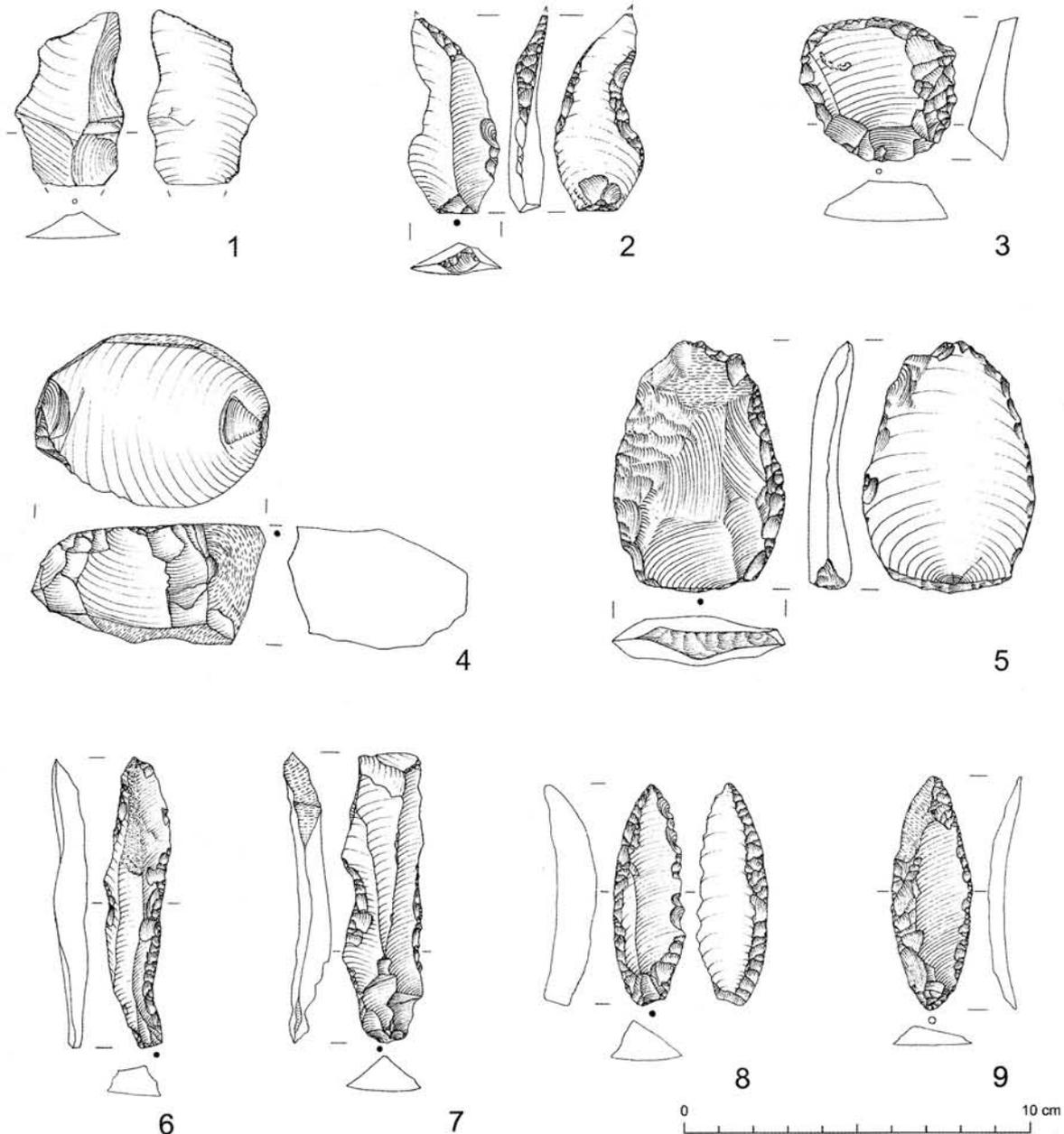
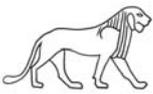


Figure 2. Examples of lithic artefacts found at different sites in the area of Jebel Abyad: 1 – use retouch, site S06/22; 2 – edge retouch, site S06/11; 3 – end scraper, 6-7 – blades with edge retouch, 9 – point, all found at site S06/17; 4 – core, site S06/37; 5 – side scraper, site S06/26; 8 – denticulate, site S06/19. (Scale 1:2).

where in some cases bones have been exposed by wind erosion. In one deflated tumulus, two molars were collected which allowed the age at death of the deceased to be determined, about 30 to 40 years. The sex could not be ascertained (written comm. E. Becker, 2007). Nearby a fragment of a caliciform beaker was found (Plate 2). This wall sherd of reddish-brown colour has a rather eroded outer surface, the decoration therefore is only partly visible. Oblique small bands of fine impressions can be seen. Similar decorative patterns are present, for example, at Kadruka (KDK 2; Reinold 1987, 51, fig. 11b) and at sites in the Dongola Reach, such as the cemetery R12 (Salvatori and

Usai 2002, 5, fig. 5), all dated to the Neolithic period in the 5th millennium BC.

Survey area D to F

In survey area D to F 20 archaeological sites were discovered, among them 13 which have been described in more detail (Table 1). The southern plateau was most interesting (Colour plate II). Site size could only be determined in four cases and ranged between 100m and 40,000m². All sites are marked by lithic artefacts; pottery was never discovered (Table 1). Some of the lithics might be of Palaeolithic date. Stone settings have often been observed, for example at

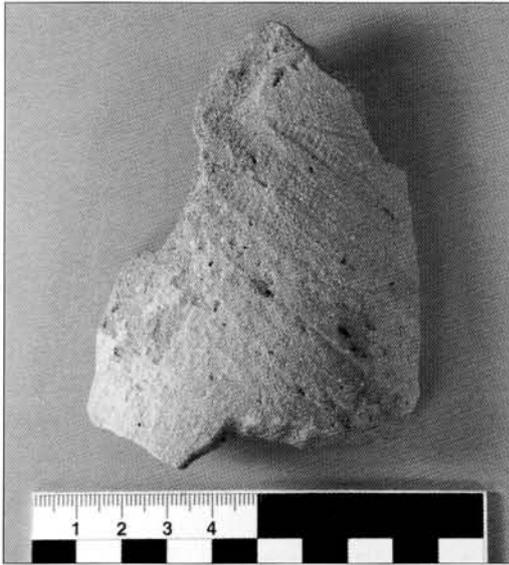


Plate 2. A sherd of a caliciform beaker found at site Jebel Abyad S06/19.

site Jebel Abyad S06/22. This site covers an area of about 40,000m². Nearly 40 circular limestone settings, probably tumuli, are found in the northern and western parts of a small limestone hill. The structures have diameters of around 1.6m. Artefacts made of chalcedony are scattered over the whole site.

Survey area G to J

In survey area G to J 20 archaeological sites were noted of which 14 were described in more detail (Table 1). When determinable, site sizes seldom exceed 20,000m² and only one site extends over 40,000m². Pottery is more common and was present on seven sites. The pottery recorded is mostly organic tempered and bears mat impressions. A few sherds with dotted wavy line patterns, or a plain zigzag decoration of, probably, Abkan style, are present. Some fragments of china were found in the vicinity of a group of palm trees (site Jebel Abyad S06/30). A number of sites (Colour plate II) present interesting features:

Jebel Abyad S06/6 - In a shallow depression, near a group of dom palms, a skeleton was found, lying on the sand. No grave cut was visible. The anthropological examination indicates that it was of a woman between 15 and 30 years old of gracile appearance but with a rather robust mandible. The woman was about 155 ± 5cm tall. A lesion on the lateral side of the left humerus is remarkable, which might have been the result of sharp force trauma (written comm. E. Becker, 2007). An iron bracelet still encircles the forearm and some ostrich eggshell beads of rather fresh appearance were found nearby. The bracelet has a weight of 64g and consists of a ring with overlapping ends and a diameter of about 59mm within which a smaller ring with a diameter of 42mm is hooked (Plate 3). The presence of the iron bracelet suggests that the burial can be dated to the



Plate 3. The iron bracelet found at site Jebel Abyad S06/6.

post-Meroitic period (pers. comm. Ali Elmighani, 2006), or even later (Christian) times (written comm. Mahmoud Suliman Bashir, 2007).

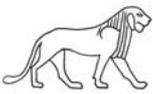
Jebel Abyad S06/7 - On a plateau located half way up Jebel Nuseib el-Bugt, situated in the western part of the survey area, at least 13 circular stone structures were found, roughly arranged in a circle (Colour plate III). They are built of sandstone slabs and are approximately 2m in diameter (Colour plate IV). Their openings face south. In two structures the wind-blown sand was removed to discover whether there were any features beneath, but only the natural surface, a consolidated fine sand of reddish colour, cemented by iron and calcite (Fe and CaCO₃), was present.

Similar stone structures, also with openings to the south, but with a smaller diameter, were found near the foot of the jebel (site Jebel Abyad S06 NP27). Here, however, stone settings made from long sandstone blocks are present, which are very probably tumuli. On both sites, no archaeological material was observed.

Circular stone settings can be interpreted as the foundations of huts or tents but also as hunting blinds (Schmidt 1991, 129). Circular stone settings with this latter function have been discovered at the 4th millennium BC site Wadi Shaw 82/33³ in the Laqiya region (Schuck 2006), and at site Mudpan 85/50⁴ dated to the first half of the 6th millennium BC, in the Abu Ballas region of south-western Egypt

³ The diameter of the 39 stone circles recorded at site Wadi Shaw 82/33 is between 2.4m and 3.8m north-south and between 2.3m and 4.7m east-west. The openings are orientated to the south or south west and the preserved height of the stone circles is between 200mm and 400mm (Schuck 2006, 546).

⁴ The diameter of the 20 stone circles present at site Mudpan 85/50 is between 1.4m and 3m north-south and 1.5m and 2.3m east-west. The openings are mostly orientated to the west or south west (Schmidt 1990, 12-13).



(Schmidt 1990; 1991). Both sites are situated on the plateaux of outliers and thus allowing good visibility over the surrounding landscape, as at site S06/26. In contrast to site S06/26 archaeological material, such as lithic artefacts, bones and pottery has been found. Hearths are also present. The obvious lack of any archaeological material at site S06/26 makes it difficult to finally ascribe a function to the stone circles.

Jebel Abyad S06/36 - The small site covers an area of about 100 x 100m and is situated close to a group of dom palms. Several stone settings made of grinding stones are present, presumably the remains of hearths. A large number of camel bones were found and concentrations of pottery. Fragments of pottery representing three vessels were collected. The vessels have 'S'-shaped profiles and always mat impressions on the body. One vessel has a band of three, incised, wavy lines on its neck (Figure 3.2) and another has a horizontal band of simple impressions, followed by an incised large 'V' pattern at the junction of the neck and

shoulder (Figure 3.1). This vessel can be closely paralleled on site Jebel Tageru 84/37, several hundred kilometres to the south. On the southern edge of an outlier a rock art station was found along with pottery nearby but of different ages, amongst them part of the rim of a more recent vessel, also decorated with the incised 'V'-pattern on its shoulder.

The decorative pattern of incised zigzag lines is typical for the Islamic period (pers. comm. Intisar Soghayroun el-Zein, 2006). Such decorations are also present, for example, on sites in the southern Dongola Reach and may be attributed to the Islamic period (Phillips 2004) and at the site of Abu Geili (Crawford and Addison 1951, pl. XXVIII, VII.12 and VII.13). Vessel fragments with incised zigzag lines and mat impression have been found on the so-called Funj (or cemetery) surface at Abu Geili (Crawford and Addison 1951, 42 and 49 and pl. XLVI.B). The pottery from the cemetery is dated to medieval or later times, very probably to the 16th or 17th century (Crawford and Addison 1951, 39).

Two sites situated outside the three survey areas (Figure 1) should be mentioned briefly here.

Jebel Abyad S01 DH6 covers an area of about 200 x 200m and consists of a dense scatter of pottery, lithics and grinding equipment. Numerous circular ferrocrete sandstone settings represent, very probably, the remains of hearths. Several burials, in a very poor state of preservation, have been recorded on the western edge of the site. Amongst the pottery are sherds with dotted wavy line pattern and packed zigzags made with a cord-wrapped implement. The lithic industry utilised chalcedony, of which some blades are present. Among the modified pieces are lunates, notched pieces and simple retouched ones. Several small axes (one with a length of 85mm) have been observed.

Jebel Abyad S06/5 - The larger of the two sites is located in a small valley, where playa and calcareous sediments are visible. The calcareous sediments yield examples of various molluscs, such as *Bulinus obtusus*, *Melanoides tuberculata*, *Biomphalaria pfeifferi*, *Lanistes carinatus* and large pieces of *Limicolaria*. The site covers an area of about 400 x 300m. Tumuli are situated on the site. Occasionally human bone has been exposed by wind erosion. A flexed position was recognizable in one case. Tear-shaped stone beads can be regarded as grave offerings. Two molars collected indicate that the deceased was between 15 to 25 years old, the sex could not be determined (written comm. E. Becker, 2007). Vertically placed sandstone slabs form at least two large concentric circles of stelae. A similar, but isolated feature has been recorded also in the Jebel Abyad area in 2001 (site Jebel Abyad S01 DH7). The features probably represent tumuli in both cases.

Archaeological material is abundant on the site. Rounded scrapers, borers, lunates and one Levallois point with bifacial retouch made of chalcedony are among the lithic artefacts.

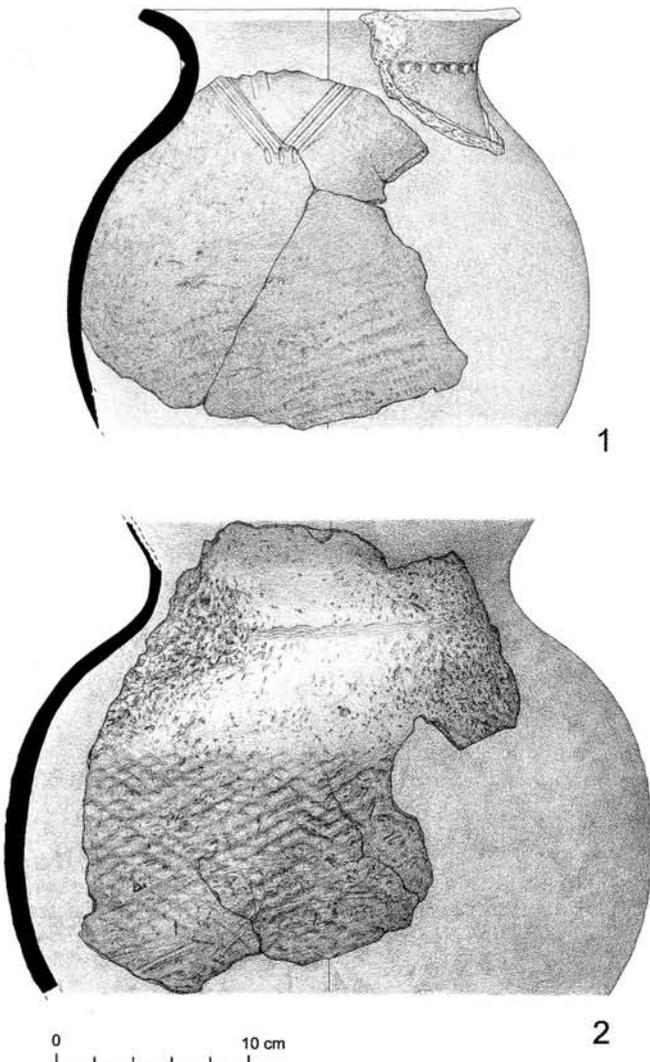


Figure 3. Examples of pottery recorded at site Jebel Abyad S06/36 (Scale 1:4).

Bola balls and small axes are also present. The faunal remains include the bones of cattle, sheep and goat. Pottery is numerous and displays a wide array of decorative patterns. A Laqiya-type sherd was found, as well as impressed, plain, and dotted zigzag patterns. A small vessel found near one grave is decorated all over with a plain zigzag pattern (Plate 4) and shows affinities to the early Kadruka material (pers. comm. J. Reinold 2006). Fragments of caliciform beakers are present. The best parallel for these (Plate 5) can be found at site R12 in the Dongola Reach, dated to the 5th millennium BC (Salvatori and Usai 2001, 20, Plate 1).



Plate 4. Examples of pottery found at site Jebel Abyad S06/5: a small vessel decorated all over with a plain zigzag pattern.

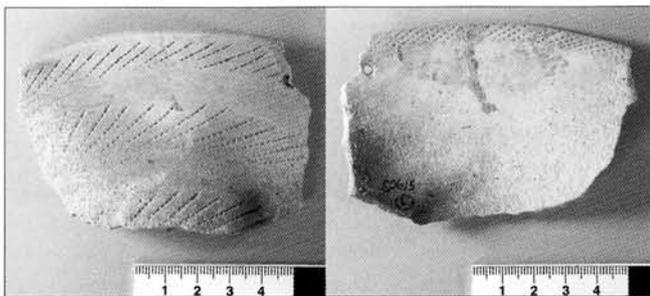


Plate 5. Examples of pottery found at site Jebel Abyad S06/5: rim sherd of a caliciform beaker, on the left the outer and on the right the inner surface.

Conclusion

The initial aim of the survey in the area between Jebel Abyad and the Nile Valley was not achieved as no pottery with an incised herringbone pattern has been found. Nevertheless, this first reconnaissance clearly shows the potential of this area for further archaeological research. There is evidence for occupation since Early Holocene times, as is shown by the presence of Dotted Wavy Line pottery. Of special

interest are, however, the Neolithic sites, as they indicate contacts with the Neolithic of Kadruka dated to the 5th millennium BC (Reinold 2000, 75). The Neolithic of Kadruka is obviously not only confined to the Nile Valley where it is found as far upstream as the el-Multaga region (Geus and Lecoite 2003, 37), but seems also to be present in areas west of the Nile. Site Jebel Abyad S06/5 is of especial interest for further excavation due to its good state of preservation, the numerous tumuli and circles of stone slabs. The combination of settlement and burial areas also make the sites west of the Nile fascinating, as settlement sites are never well preserved in the Nile Valley (cf. e.g. Reinold 2000, 75).

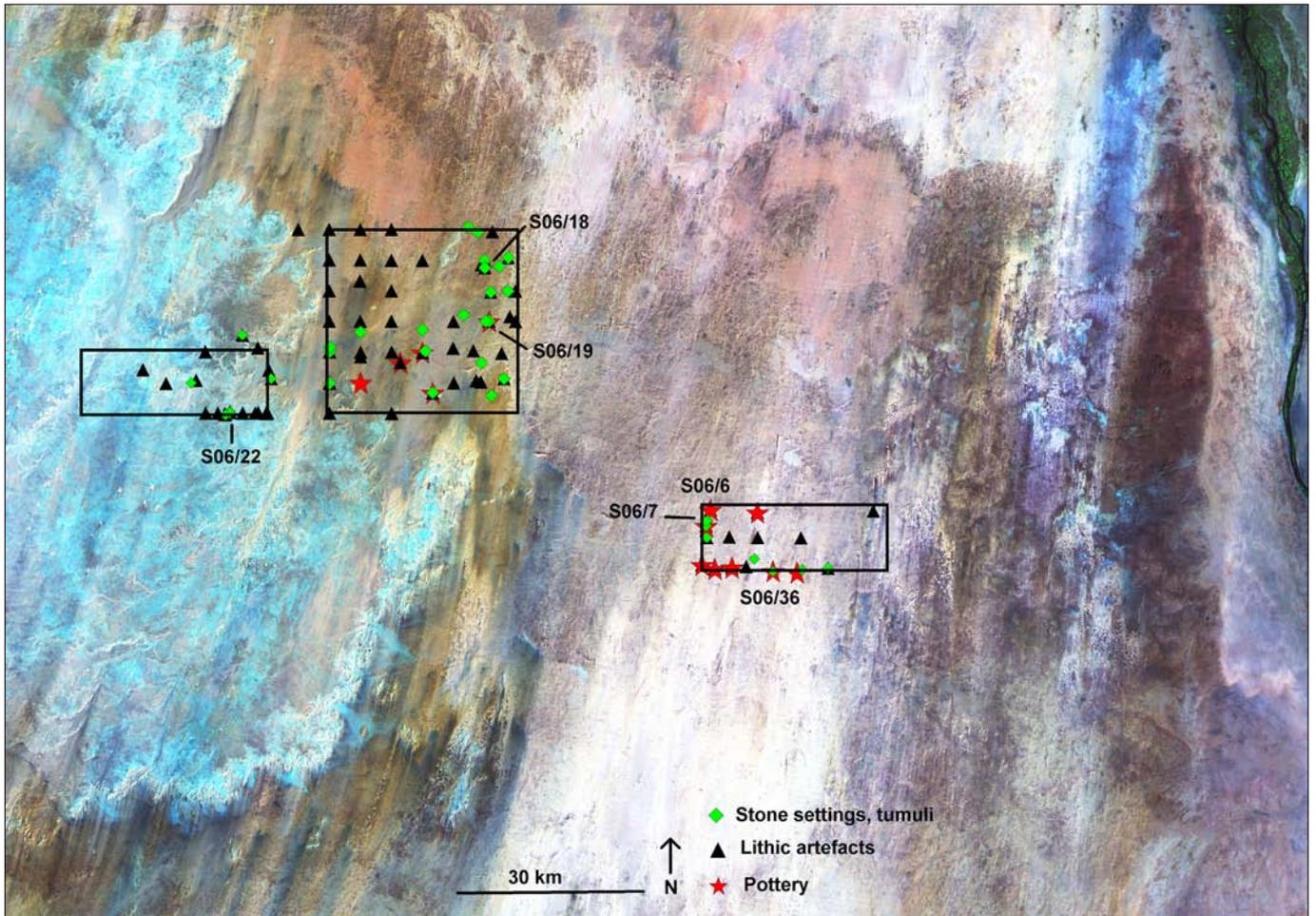
The discovery of fragments of caliciform beakers also relates these sites into a larger ideological network, as the vessels obviously served special purposes, linked with burial customs (cf. Jesse 2006-2007). The presence of Islamic pottery indicates the continuing use of the Nile hinterland at that time. The similarity with pottery found in Jebel Tageru might indicate a north-south orientated route. The establishment of the Funj kingdom in the Middle Nile Valley, stretching from the hinterland of Suakin, in the east to Kordofan in the west and from the area of the Third Cataract in the north to south of the capital, Sennar, in the early 16th century (Intisar Soghayroun el-Zein 2004, 17) certainly favoured exchange and commerce. The area north of the Lower Wadi Howar, between Jebel Abyad and the Nile Valley, has been used as a zone of interaction throughout time and should thus receive a great deal more attention in the future.

Bibliography

- Arkell, A. J. 1949. *The Old Stone Age in the Anglo-Egyptian Sudan*. Sudan Antiquities Service Occasional Papers 1. Khartoum.
- Crawford, O. G. S. and F. Addison 1951. *Abu Geili and Saqadi & Dar el Mek*. The Wellcome Excavations in the Sudan Vol. III. Oxford.
- Gamal el-Deen Idris 1994. *Die Altsteinzeit im Sudan*. Archäologische Berichte 4. Bonn.
- Geus, F. and Y. Lecoite 2003. 'Survey and Excavation at el-Multaga, a Resettlement Area related to the Construction of the Merowe Dam, preliminary results', *Sudan & Nubia* 7, 33-39.
- Haberlah, D. 2004. *Geomorphologisch-archäologischer Survey in Abu Tabari. Aufbau und exemplarische Nutzung eines satellitendatengestützten Navigations-Informationen-Systems*. Unpublished Diploma-Thesis, Freie Universität Berlin, Department of Earth Sciences. (http://www.haberlah.com/diploma/abu_tabari.pdf).
- Hinkel, F. W. 1979. *The archaeological map of the Sudan. The area of the south Libyan Desert*. The archaeological map of the Sudan, part II. Berlin.
- Hoelzmann, P., B. Keding, H. Berke, S. Kröpelin and H.-J. Kruse 2001. 'Environmental change and archaeology, lake evolution and human occupation in the Eastern Sahara during the Holocene', *Palaeogeography, Palaeoclimatology, Palaeoecology* 169, 193-217.
- Intisar Soghayroun el-Zein 2004. *Islamic Archaeology in the Sudan*. BAR International Series 1289. Oxford.
- Jesse, F. 2006a. 'A permanent link? – The Wadi Howar region and the Nile', in I. Caneva and A. Roccati (eds), *Acta Nubica. Proceedings of the X International Conference of Nubian Studies, Rome 9-14 September 2002*. Rome, 73-80.



- Jesse, F. 2006b. 'Cattle, Sherds and Mighty Walls – The Wadi Howar from Neolithic to Kushite Times', *Sudan & Nubia* 10, 43-54.
- Jesse, F. 2006-2007. 'Un nouvel aspect du Néolithique au Wadi Howar (Nord du Soudan) - des vases caliciformes', in B. Gratien (ed.), *Mélanges offerts à Francis Geus. CRIPEL* 26, 187-196.
- Jesse, F., S. Kröpelin, M. Lange, N. Pöllath and H. Berke 2004. 'On the periphery of Kerma – The Handessi Horizon in Wadi Hariq, Northwestern Sudan', *Journal of African Archaeology* 2(2), 123-164.
- Keding, B. 1998. 'The Yellow Nile, new data on settlement and the environment in the Sudanese Eastern Sahara', *Sudan & Nubia* 2, 2-12.
- Keding, B. 2000. 'New data on the Holocene occupation of the Wadi Howar region (Eastern Sahara/Sudan)', in L. Krzyżaniak, K. Kroeper and M. Kobusiewicz (eds), *Recent Research into the Stone Age of Northeastern Africa*. Poznań, 89-104.
- Kröpelin, S. 2006. 'Discovery of an ancient fortification in Northern Sudan', *Sabara* 17, 186-190.
- Kröpelin, S. and R. Kuper 2006-2007. 'More Corridors to Africa', in B. Gratien (ed.), *Mélanges offerts à Francis Geus. CRIPEL* 26, 219-229.
- Kuper, R. 1995. 'Prehistoric research in the Southern Libyan Desert. A brief account and some conclusions of the B.O.S. project', in *Actes de la VIIIe Conférence Internationale d'Etudes Nubiennes Lille 11.-17. Septembre 1994. Communications principales. CRIPEL* 17.1. Lille, 123-140.
- Lange, M. 2006a. 'The Archaeology of the Laqiya Region (NW-Sudan), Ceramics, Chronology and Cultures', in I. Caneva and A. Roccati (eds), *Acta Nubica. Proceedings of the X International Conference of Nubian Studies, Rome 9-14 September 2002*. Rome, 107-115.
- Lange, M. 2006b. (with contributions by J. Richter and W. Schuck) *Wadi Shaw – Wadi Sabal. Studien zur holozänen Besiedlung der Laqiya-Region (Nordsudan)*. Africa Praehistorica 19. Köln.
- Pachur, H.-J. 1999. 'Paläo-Environment und Drainagesysteme der Ostsahara im Spätpleistozän und Holozän', in E. Klitzsch and U. Thorweihe (eds), *Nordost-Afrika, Strukturen und Ressourcen*. Weinheim, 366-445.
- Pachur, H.-J. and N. Altmann 2006. *Die Ostsahara im Spätquartär. Ökosystemwandel im größten hyperariden Raum der Erde*. Springer Verlag Berlin Heidelberg.
- Phillips, J. 2004. 'Islamic pottery in the Middle Nile', *Azania* 39, 58-68.
- Reinold, J. 1987. 'Les fouilles pré- et protohistoriques de la Section Françaises de la Direction des Antiquités du Soudan. Les campagnes 1984-85 et 1985-86', *Archéologie du Nil Moyen* 2, 17-67.
- Reinold, J. 1993. 'S.F.D.A.S. Rapport préliminaire de la campagne 1991-1992 dans la province du Nord', *Kush* 16, 142-168.
- Reinold, J. 2000. *Archéologie au Soudan. Les civilisations de Nubie*. Paris.
- Salvatori, S. and D. Usai 2001. 'First season of excavation at Site R12, a Late Neolithic Cemetery in the Northern Dongola Reach', *Sudan & Nubia* 5, 11-20.
- Salvatori, S. and D. Usai 2002. 'The Second Excavation Season at R12, a Late Neolithic Cemetery in the Northern Dongola Reach', *Sudan & Nubia* 6, 2-7.
- Schmidt, M. 1990. *Ein Siedlungsplatz in der Ostsahara mit Hüttengrundrissen*. Unpublished Master Thesis, Johann Wolfgang Goethe-Universität Frankfurt/Main.
- Schmidt, M. 1991. 'Ein neolithischer Siedlungsplatz in der Ostsahara mit Hüttengrundrissen', *Archäologische Information* 14, 129-132.
- Schuck, W. 2006. 'Wadi Shaw 82/33. Eine Bergsiedlung des 4. Jahrtausends v. Chr.', in M. Lange, *Wadi Shaw – Wadi Sabal. Studien zur holozänen Besiedlungsgeschichte der Laqiya-Region (Nordsudan)*. Africa Praehistorica 19. Köln, 541-581.
- Smith, S. T. 1998-2002. 'The University of California Dongola Reach Expedition. West Bank Reconnaissance Survey, 1997-1998', *Kush* 18, 157-172.



*Colour plate II. Satellite image (Landsat 7) of the survey areas around Jebel Abyad.
The location of the sites mentioned in the text is indicated.*



Colour plate III. Site Jebel Abyad S06/7: general view of the site looking east.



Colour plate IV. Site Jebel Abyad S06/7: detail of the stone structures found at the site