

# SUDAN & NUBIA

The Sudan Archaeological Research Society



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*2013*





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Front cover: The descendency of Tomb IV T 1 near Sedeinga under excavation (© V. Francigny / SEDAU).

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# Reports

## Lithic Material from the Late Neolithic Site of es-Sour, Central Sudan

*Azhari Mustafa Sadig*

### Introduction

This is a report on lithic material found in es-Sour, a late Neolithic site near the Royal City of Meroe. The majority of pieces were flakes, core fragments, scrapers and general debitage. Few blades were found but those recovered have well prepared platforms, bulbs of percussion and some retouching.

### The Site

The site of es-Sour (16° 57' 045" N / 33° 43' 133" E) is located about 35km north of Shendi, 1.5km from the right bank of the Nile and west of the Khartoum-Atbara railway (Sadig 2005; 2008; 2010) (Figure 1). It was discovered during a field-training season of the Department of Archaeology,

University of Khartoum, in February-March 2004. It occupies an area of approximately 176 x 90m (64 x 90m for the main *kom*) and, while generally flat, it features two low mounds in its eastern part. The nearby village extends over much of the western part, while the central part of the site has been much disturbed by tracks running across it.

Following the site's discovery, surface collections and test excavations were carried out over five seasons (2005-2009). A 2m grid was laid out on the east side of the site covering an area 12 x 12m, later extended 26m northwards, with each square numbered (A1, A2, B1, etc.). Twenty-six squares within the grid were excavated. In the absence of obvious stratigraphy, deposits were excavated in arbitrary layers 100mm thick. Surface deposits were generally quite fragmentary and included small quantities of bones, shells and ostrich-egg shells. Level 1 (0-100mm) was mainly sand with some small quartz pebbles and sandstone fragments. The finds from es-Sour appear to be randomly scattered over the site, except for the greater concentration at depth. Apart from those in a funerary context, all pots were represented only as sherds, but a sufficient number of them have been recovered to allow useful reconstructions that indicate the original shapes and sizes of the pots. Five complete child-burial pots were found, which give clear information about the use of specific types of pottery in burial practices. Stone artifacts are little damaged, and give clear clues as to their original forms.

The pottery recovered from es-Sour is hard, well fired and polished. The ceramic assemblage included all the techniques and motif types favoured in the Khartoum Neolithic of the Central Nile Valley. A variety of techniques was employed, including impressing, incision, rocker stamping and combing, giving in effect a number of ornamental motifs. Other finds of potential importance were 15 fragments of human figurines. Some of them represent a human head, with no prominent features and are very similar to examples found at el-Kadada (Geus 1984, 22). The others are incomplete, each indicating a female feature. The purpose of these pottery figurines remains unclear, although it is often assumed that they have a religious significance.

Other artifacts were rare at es-Sour. Very few beads made of egg-shell, carnelian beads, lip-plugs, a single shell object used as a comb for decorating pottery and one ivory artifact were recorded. The ivory tool could have been used as an awl/

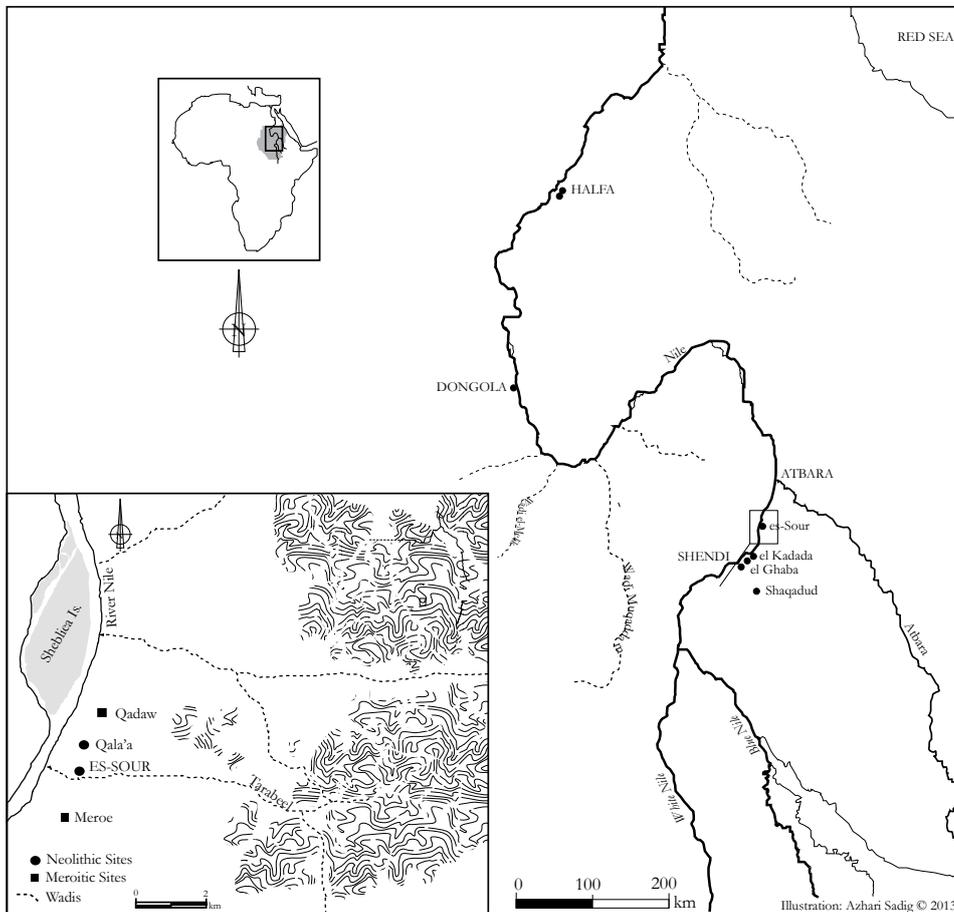


Figure 1. Location of es-Sour.

perforator, but it could equally well have been a personal adornment. Other typical Neolithic bone artifacts, such as harpoons and gouges, were not found. Bone tools are absent from most other Neolithic sites in Central Sudan, although recent finds in more arid areas further north suggest that this may be due to poorer preservation in the region.

Faunal remains consisted of bones of wild and domesticated animals including domesticated cattle, giraffe and buffalo as well as numerous remains of shells. These identifications were carried out by Prof. Achilles Gautier based on his examination of photographs.

One of the goals of the Department of Archaeology, University of Khartoum, project has been the establishment of a radiocarbon-supported chronology for the Neolithic in the northern environs of Meroe. Currently, three age determinations are available,<sup>1</sup> performed at the Radiocarbon Dating Laboratory of University of Waikato, New Zealand, yielding the following dates:

Wk23036: 5296±48BP: (Oxcal calibrated: 68.2%: 4230 BC-4190 BC and 4180 BC-4040 BC)

Wk23037: 5330±54BP: (Oxcal calibrated: 68.2%: 4240 BC-4050 BC)

Wk23038: 5180±48BP: (Oxcal calibrated: 68.2%: 4045 BC-3955 BC).

These dates place the site in the middle Neolithic of central Sudan<sup>2</sup> and perhaps slightly earlier than el-Kadada (the oldest date GIF-5770: 5170±110 BP) (Geus 1981).

### The Artifacts

The analysis of all lithic material recovered during five seasons (2005-2009) is given in Tables 1 and 2.

The lithic inventory includes flakes, cores, a few retouched tools, crescents, burins, borers, and grinders. The finished tools are few and poorly made. They exhibit a somewhat

Table 1. Tool typology by quantity (total of 6021 tools).

Core	Flake	Retouched Pieces	Crescent	Scraper	Backed Blade	Notched Flake	Burin	Borer	Points	Grinders	Total
629	3695	498	40	330	89	236	36	42	1	425	6021

limited technological and typological variability (Figure 2). The occurrence and density of artifacts were variable but continuous, from the surface down, although the largest group was concentrated in the top 500mm of deposits.

Preliminary analysis of the material confirms that flakes are the most numerous pieces discovered at es-Sour accounting for 61.4% (Tables 1 and 2, Figure 3) of the total number of

<sup>1</sup> From a freshwater mollusc (Nile oyster) shell from levels between 200mm and 500mm in squares C6, B13 and F7.

<sup>2</sup> Labelled elsewhere as Late Neolithic Horizon Type A (see Sadig 2012).

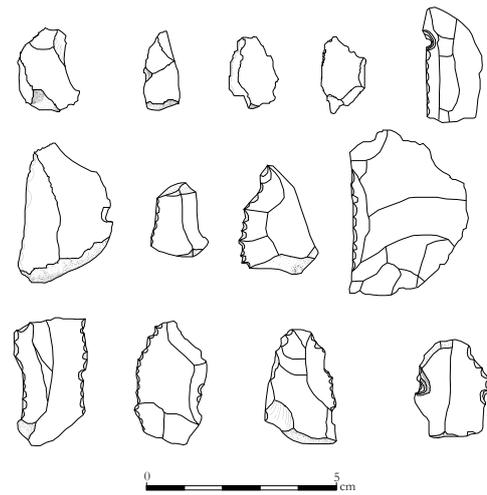


Figure 2. Lithic artifacts (scale 1:2) (illustration Azhari Sadig © 2013).

lithic products recovered. They are composed of shattered fragments, broken flakes, small chips and chunks. Other pieces (about 8.3%) processed by retouching can be added to these. The flakes themselves vary considerably in size and shape from small to irregular large flakes. Although only a small sample of chipped stone artifacts has been examined, it is possible to describe the site's industry as a flake-based one, with some larger but poorly-made quartz tools being produced on small blades. Retouched blade forms include endscrapers, burins and backed pieces. Unfortunately, none is complete.

Cores (10.4%) are generally of simple forms and were used primarily for flake production.

Blades, in the form of backed blades and crescents, account for about 1.5% of the total assemblage, most of them being fragmentary. More than a half of these pieces are processed by retouching.

Scrapers are frequently represented at es-Sour where 300

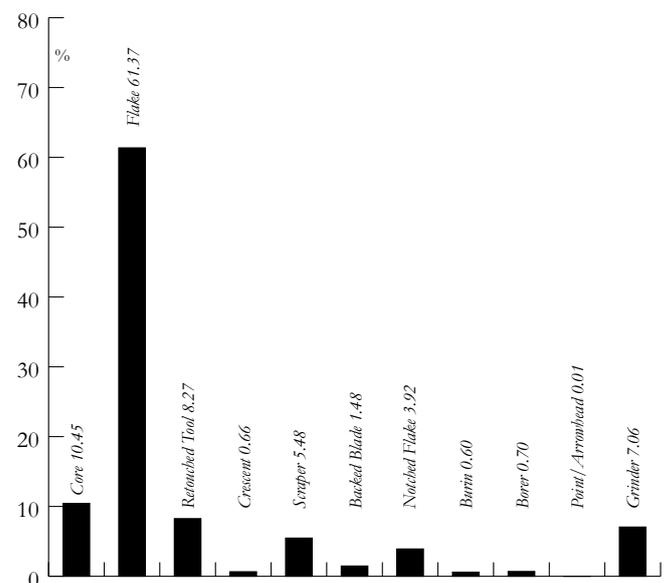


Figure 3. Tool typology as percent per season (of 5838 tools).



Table 2. Distribution of lithic materials across excavated levels (total of 6021 tools). (Li: lithics, G: grinders).

Sq/L	Surface		L1		L2		L3		L4		L5		L6		L7		Total
	Li	G	Li	G	Li	G	Li	G	Li	G	Li	G	Li	G	Li	G	
A9	0	0	76	0	22	5	11	2	22	1	3	0					142
A11	0	0	16	0	18	4	12	1	8	3	4	5	1	4			76
E10	0	0	71	0	15	1	23	0	20	0	19	0					149
E12	0	0	16	0	29	4	29	2	13	1	20	1					115
H12	0	0	83	2	53	3	25	2	26	2	24	3	8	3	3	2	239
E14	0	0	3	1													4
<b>Total</b>	<b>0</b>	<b>0</b>	<b>265</b>	<b>3</b>	<b>137</b>	<b>17</b>	<b>100</b>	<b>7</b>	<b>89</b>	<b>7</b>	<b>70</b>	<b>9</b>	<b>9</b>	<b>7</b>	<b>3</b>	<b>2</b>	<b>725</b>
F13	0	0	35	4	23	3	18	0									83
H9	0	0	37	7	62	3	20	9									138
H7	0	0	53	13	25	3	33	6									133
E8	0	0	48	8	33	3	15	6									113
B8	0	0	47	13	34	7	33	8									142
<b>Total</b>	<b>0</b>	<b>0</b>	<b>220</b>	<b>45</b>	<b>177</b>	<b>19</b>	<b>119</b>	<b>29</b>									<b>609</b>
A7	18	0	45	4	99	7	39	5	64	2	16	4	10	0	18	0	331
B5	30	0	24	1	327	4	86	4	173	3	62	0	31	0	0	0	745
D5	0	0	24	4	62	5	36	0	28	4	9	0	4	0	0	0	176
F5	15	0	320	0	224	6	352	1	127	2	43	0	0	0	0	0	1090
<b>Total</b>	<b>63</b>	<b>0</b>	<b>413</b>	<b>9</b>	<b>712</b>	<b>22</b>	<b>513</b>	<b>10</b>	<b>392</b>	<b>11</b>	<b>130</b>	<b>4</b>	<b>45</b>	<b>0</b>	<b>18</b>	<b>0</b>	<b>2342</b>
B13	0	0	55	1	68	7	27	2	44	0	0	0	28	1			233
C6	19	0	65	7	22	5	82	4	23	3	0	0	19	0			249
D7	19	1	84	4	57	9	31	9	70	2	12	0	3	7			308
E4	0	0	122	0	44	0	13	0	30								209
E6	30	44	158	0	135	0	42	4	16	1	8	0	3	0			441
F7	17	2	14	3	31	5	32	3	0	0	0	3					110
<b>Total</b>	<b>85</b>	<b>47</b>	<b>498</b>	<b>15</b>	<b>357</b>	<b>26</b>	<b>227</b>	<b>22</b>	<b>183</b>	<b>6</b>	<b>20</b>	<b>3</b>	<b>53</b>	<b>8</b>			<b>1550</b>
E6	3	2	11	3	33	5	46	7	28	7	7	1					152
D9	2	1	44	3	34	6	54	6	19	6	12	1					188
Q13	3	1	32	4	22	5	22	7	18	5	21	0					140
H11	4	2	20	2	33	4	35	4	24	3	11	0					142
B10	7	1	21	4	43	5	64	2	22	2	2	0					173
<b>Total</b>	<b>19</b>	<b>7</b>	<b>128</b>	<b>16</b>	<b>165</b>	<b>25</b>	<b>221</b>	<b>26</b>	<b>111</b>	<b>22</b>	<b>53</b>	<b>2</b>					<b>795</b>

pieces have been discovered which make up about 5.5% of the total material. Most of them are made on flakes. Thirty six burins and 42 borers have also been discovered, all of them made on flakes. One fragmentary bifacial arrowhead/point made on a blade was also discovered.

Upper and lower grinders, rings, pounders, hammers and pebble grinders make up a distinct category of pieces used on the site (Plates 1 and 2). The discovered pieces are fragmentary (about 425, accounting for 7.1% of the stone assemblage) and made on large and small sandstone slabs or pebbles. Only a few pieces are made on quartzite (Plate 3).

No polished stone tools and gouges of the type found at esh-Shaheinab were found, except for two small fragments of granite palettes located on the surface (Plate 4). It is odd, however, that our sample contains only one identifiable, bro-



Plate 1. Stone ring.



Plate 2. Grinding tools.



Plate 3. Pounder made of quartzite.

ken polished axe. One interesting category of find consisted of small rhyolite artifacts of characteristic shape and with two small depressions on both faces (Plate 5). Their function remains uncertain, although the shape suggests that they may have been used as a fine polishing/grinding tool or palette. The example from es-Sour is very similar to specimens found at el-Kadada (Geus 1984, 69, fig. 5). Parallels are also known from the eastern Butana and a site near Kassala (Marks *et al.* 1986, 47).

### Raw Material and Source Areas

Preliminary analysis of the material revealed that a limited

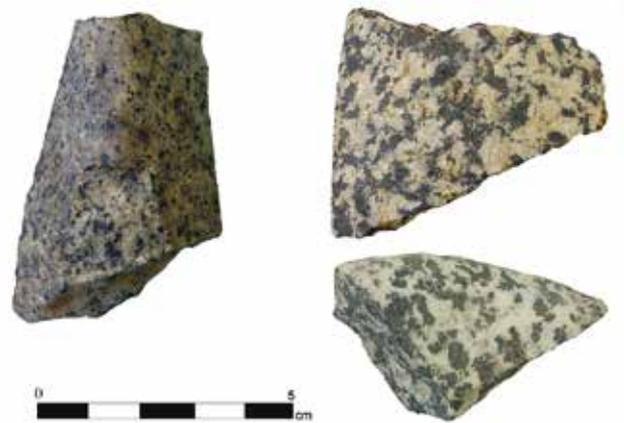


Plate 4. Fragments of granite polished palettes.

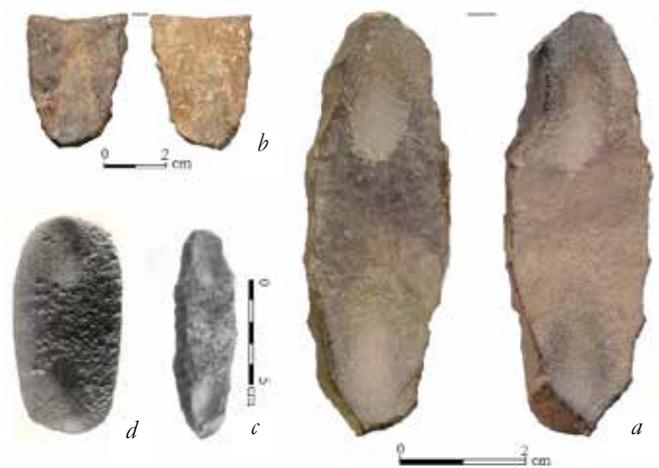


Plate 5. Small artifacts with a characteristic shape and two small depressions on both faces. The examples from es-Sour (a, b) are very similar to specimens found at el-Kadada (c) (Geus 1984, 69, fig. 5). Similar artifacts have also been found in the eastern Butana and near Kassala (d, no scale) (Marks *et al.* 1986, 47).

range of rocks was used as raw materials (Figure 4). Given the available raw materials used by the inhabitants of es-Sour, it is obvious that their selection was very specific. Briefly, the stone types present and their source locations are as follows:

1. Quartz: the basic raw material for lithic products, largely available as pebbles which are eroding out of the sandstones available everywhere within the site's vicinity. The majority of the excavated material is quartz.

2. Sandstone: this material is available in the small hills located less than 3km east of the site as well as being the bedrock of the area itself. Grinding stone tools are almost exclusively made of sandstone.

3. Rhyolite: its sources are limited to around the Sixth Cataract, some 130km to the south of es-Sour. Only three pieces made of rhyolite were found on the site. Rhyolite was almost certainly derived from outcrops in the Sixth Cataract region and the pieces found at es-Sour suggest that the inhabitants may also have exploited that source.

4. Quartzite: this material is available as large blocks on sandstone hills as well as from small outcrops. Only small

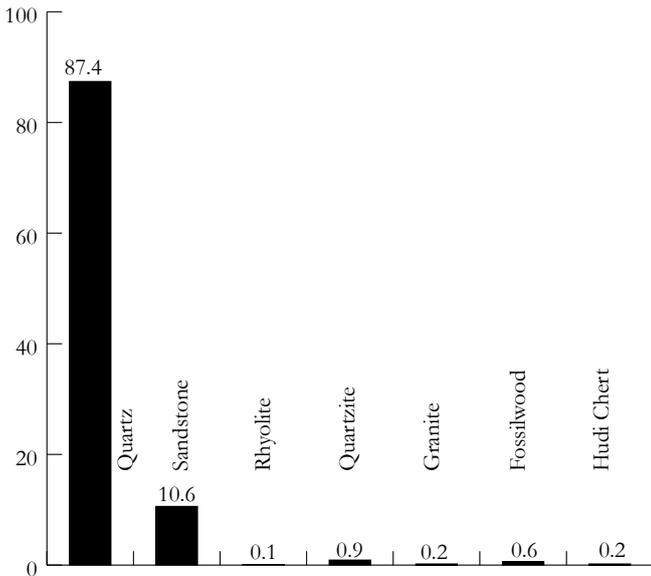


Figure 4. Raw material as percent (of 5838 tools).

pieces were noted within the vicinity of the site. A single piece, a pounder, was found during the excavation. Other small fragmentary flakes were also made of this material.

5. Granite: a number of granitic masses have been distinguished in the Sixth Cataract area. Granite tools were not found in the excavated squares, although some tools of this material were collected from the surface.

6. Fossil wood: locally available in the desert. No major finds were located near es-Sour, and there were only a few broken pieces found during the excavation.

7. Hudi Chert: these are cherty boulders deriving from lacustrine deposits found in scattered outcrops in the region between Atbara and Shendi, both east and west of the Nile. The nearest of these sources to the site of es-Sour is located about 20km west of the site (measured from the geological map prepared by the Geological and Mineral Resources Department, Khartoum, Sudan, 1981) (Figure 5), while there are three other sources about 73km to the south east and 33km and 60km to the north east. In el-Kadada, Reinold reported an 'overwhelming proportion of mainly quartzite and a significant percentage of Hudi cherts' (2008, 138). Nevertheless, hudi chert accounts for only 0.2% of the total number of pieces, most of them being fragmentary small flakes.

With the exception of granite and rhyolite, the sources of the other rocks could be easily found in large amounts close to es-Sour (Figure 5). Granite and rhyolite were materials moved through regular exchange networks

along the Nile exploiting the more localized sources of these rocks, for example, at the Sixth Cataract.

### Acknowledgements

This article could not have been finished without the financial assistance of the Department of Archaeology, University of Khartoum. I would like to thank Ali Osman, Intisar Soghroun Elzein, Yahia Fadl Tahir, Howida M. Adam, Ahmed Housein, Abd el Rahman I. Saeed, Husna Taha, Mohammed Hayati and the entire staff of the project for help and support. Students of the Department of Archaeology, University of Khartoum, deserve my appreciation.

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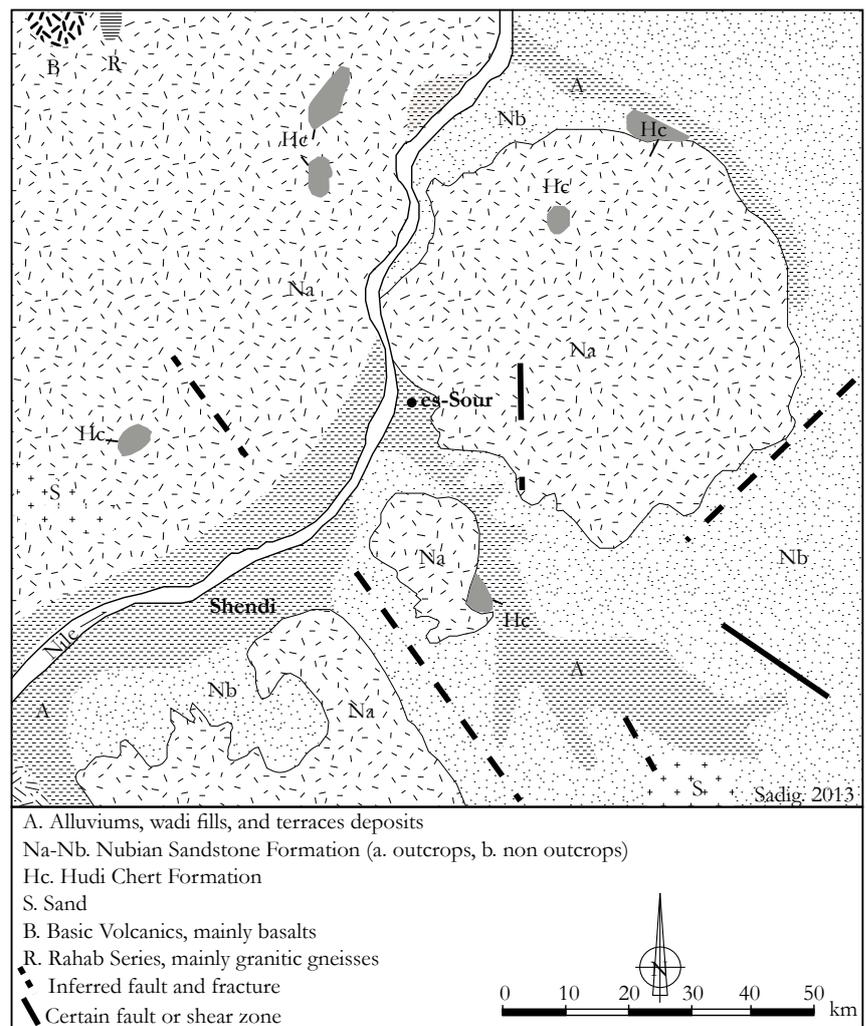


Figure 5. Map of es-Sour area showing the geological landscape. Based on the geological map prepared by the Geological and Mineral Resources Department, Khartoum, 1981.

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## Gabati

A Meroitic, Post-Meroitic and Medieval  
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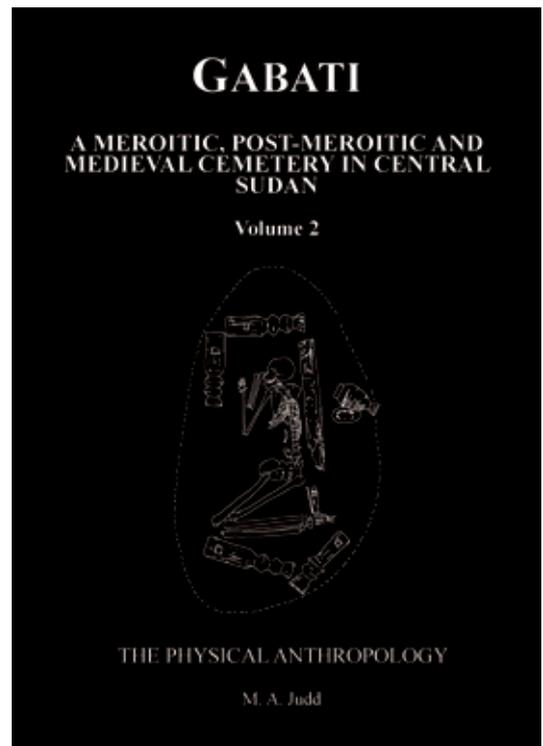
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## Sudan's First Railway The Gordon Relief Expedition and The Dongola Campaign

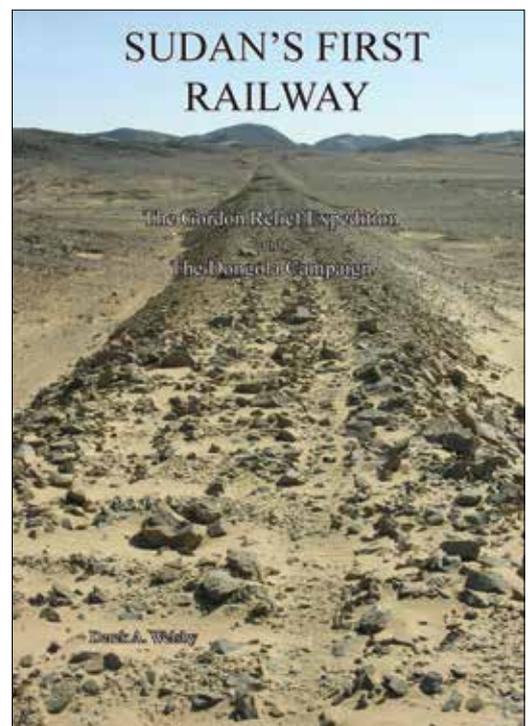
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London 2011

*149 pages, 6 tables, 47 figures, 173 colour and 19 b&w plates*  
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Begun in 1875 by the Egyptian khedive, Ismail Pasha, the railway played an important role during the Gordon Relief Expedition of 1884-5 and Kitchener's Dongola Campaign in 1896. It was abandoned and cannibalised to build other railways in Sudan during the first decade of the 20<sup>th</sup> century. For much of its course it runs through the desert and in those areas the roadbed, the associated military installations and the innumerable construction camps are extremely well preserved. This book is the result of a photographic survey of these installations together with the detailed archaeological surveys undertaken within them. A report on the artefacts, which includes personal equipment, ammunition, fragments of rolling stock, bottles, tins and ceramics, completes the volume.

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*Khartoum. The Republican Palace, once the Governor General's residence, in 1968 (photo SARS Hawkes Archive HAW P091.01).*



*Khartoum. The Anglican cathedral in 1968. Now minus its bell tower it houses the Republican Palace Museum (photo SARS Hawkes Archive HAW P090.01).*