SUDAN ARCHAEOLOGICAL RESEARCH SOCIETY PUBLICATION NUMBER 23

THE ARCHAEOLOGICAL SURVEY OF SUDANESE NUBIA 1963–69

The Pharaonic sites

edited by

David N. Edwards

by

David N. Edwards and Anthony J. Mills with contributions by Lauriane Mielle

Vivian Davies





ARCHAEOPRESS PUBLISHING LTD Summertown Pavilion 18-24 Middle Way Summertown Oxford OX2 7LG

Oxford OX2 7LG www.archaeopress.com

ISBN 978-1-78969-649-3 ISBN 978-1-78969-650-9 (e-Pdf)

© David N. Edwards and Archaeopress 2020

Front Cover: A view towards Kulb from Akasha West, 2013. (photo courtesy of Derek Welsby) Back Cover (top): A view upriver towards Shelfak from near Diffinarti, October 1966 (photo ASSN F/333:1) Back Cover (bottom): Inscription of Thutmose I, Akasha West, 2013. (photo courtesy of Derek Welsby)

All rights reserved. No part of this book may be reproduced, or transmitted, in any form or by any means, electronic, mechanical, photocopying or otherwise, without the prior written permission of the copyright owners.

This book is available direct from Archaeopress or from our website www.archaeopress.com

In memory of W.B. Emery, who introduced me to Nubia, of Nigm ed-Din Mohammed Sharif, who welcomed me to his homeland, and of William Y. Adams, who offered me the Batn el-Hagar as a place to work

A.J. Mills

Contents

Li	st of Figu	res	ix
Li	st of Tab	les	xxvii
1.	Introduc	ction	1
		aeological Survey of Sudanese Nubia (ASSN)	1
		N Archive	4
		chive to Publication	7
		tration and the Archaeological Map of Sudan (AMS)	8
	Nubian to		11
	Acknowle	edgements	12
2.	Gemai -	- Murshid	14
	11 - D-5	Gemai East (Affu) (= FNE 15)	18
	11 - D-36	Gemai West (Gintil)	20
	11 - D-37	Gemai West	23
	11 -I- 59*	Murshid West	25
	11 - I-5	Murshid East (Kermala) (= FNE 32)	26
	11 -I- 7	Murshid East (Sigaga) (= FNE 39)	27
	11 -I- 32	Murshid East (Sigaga) (= FNE 41)	29
	11 -I- 34	Murshid East (Sigaga) (= FNE 44)	30
	11 - H-11	Murshid East (Sigaga) (= FNE 46)	31
3.	Saras		32
	11 - H-7	Saras West	40
	11 - H-4	Saras West	44
	11 - H-3	Saras West	46
	11-M-11	Saras West (Kieko)	47
	11 - M-12	Saras West (Kieko)	48
	11 - M-13	Saras West (Kieko)	49
	11 - M-6	Saras West	52
	11-L-1	Saras – Askut	52
	11 - L-6	Saras – Askut	58
	11 - L-7	Saras – Kajnarti	58
	11 - L-24	Saras West	59
	11 - L-22	Saras West	60
	11 - L-18	Saras West	67
	11 - L-26	Saras – Kajnarti	78
	11 - L-30	Saras East	101
	11 - Q-9	Saras East (Kagifarai)	103
	11 - Q-3	Saras East (Oshiargi)	105
	11 - Q - 10	Saras East (Oshiargi)	108
	11 - Q-65	Saras East	109

	11 - Q-61	Saras East	115
	11 - Q-59	Saras East	125
	11 -Q- 62	Saras East	135
	11 - Q-63	Saras East	152
	11 - Q-60	Saras East	157
	11 - U-1	Shelfak (Saras West)	163
	11-U-11*	Shelfak (Saras West)	164
	11 - U-12*	Shelfak (Saras West)	164
	11 - U-13*	Shelfak (Saras West)	165
	10 - Y - 24*	Saras West	165
	Uronarti		166
	10 - Y - 1	Uronarti	168
	10 - Y - 22*	Uronarti	169
	10 - Y - 2	Uronarti	169
	10 - Y - 23*	Uronarti	170
	10 - Y - 23	Uronarti	171
	10 - Y - 20*		171
	11 - Q - 57	Saras East	172
4.	Semna		183
	10 - Y - 12	Semna West	187
	16-E-28	Semna West	193
	16-E-21	Semna East	197
	16-E-30	Semna East	212
	16-E-31	Semna East	214
	16-E-32	Semna East	215
	Other Ser	mna Sites	217
	16-Е -57 *	Semna West $(= 16-E-1)$	217
	16-E-58*	Kumma (= $16-E-2$)	217
	16-E-59*	Semna East (Suratab) (= $16-E-8$)	218
	16-E-51*	Semna West (Saidnambi-Saadig) (= 16-E-9)	218
	16-E-56*	Semna West (Saidnambi) (= 16-E-9)	218
	16-E-61*	Semna West (= S500)	220
	16-E-62*	Semna West (= S700)	220
	16-E-63*	Semna West (= S800)	220
	16-E-15	Semna West (= S1000)	220
	16-E-64*	Semna West Cemetery	221
	16-E-65*	Semna East (Kumma) (= H200)	221
5.	Duweisha	t – Tangur	222
	16 - 0 - 12	Attiri-Sorki	227
	16-O-27*	Duweishat West	235
	16 - 0 - 24	Duweishat West	236
	16-O-25	Duweishat West	239
	16 - 0 - 2	Duweishat (Jedagur)	243
	16-O-15	Duweishat East	251
	16-N-18	Duweishat West	254
	16-O-1	Duweishat East (= 16-N-1)	256
	16-N-11	Duweishat East	257
	16-N-13	Duweishat East	260
	16-N-14	Duweishat East	266

Contents

	Larger-scal	andscapes and burial communities e perspectives og and processing	396 397 398
	Napatan/E		396
	New Kingd		394
	Middle Kir	8	393
	0	cal perspectives	392
	Ukma-Akas		390
	Duweishat		388
	Semna		386
	Saras		380
	Gemai – M	Iurshid	379
7.		aonic Presence in the Batn al-Hajar	378
		The Egyptian Rock-Inscriptions [21-V-20], Tina Island – Dal Cataract, by W. V. Davies	375
	3 - B - 16	Asruniya Island	375
	3-B-2	Debba	375
	21-V-20	Dal (Tina)	372
	21-V-26	Dal West	371
	21-X-13*	Kulb East (Dakke) (= 21-X-2)	370
	21-X-12*	Kulb East (Shiragoshe) (= 21-X-1)	370
	21-S-32	Kulb West (Kolatod)	366
	21-S-13	Akasha East	364
		The Egyptian Rock-Inscriptions (21-S-29) by W. V. Davies	358
	21 - S - 29	Akasha West	355
		The Egyptian Rock-Inscription [21-I-34*/E17] by W. V. Davies	354
	21 -I- 34*	Ukma West (= 21-H-21)	352
	21 - H - 10	Ukma West (Milamu)	336
	21 - H - 11	Ukma West (Milamu)	328
	21 - H - 16	Ukma West	309
	21 - I-19	Sonki West	304
6.	Ukma – Al	kasha – Dal	300
	21 - D - 33*	Sonki East $(= 21-D-3)$	299
	21-D-31*	'Tanjur' – Sonki West (= 21-D-1)	299
	21-E-16*	Sonki East $(= 21 \cdot E \cdot f)$	299
	21-E-14*	Sonki East $(= 21-E-4)$	298
	21-E-13*	'Tanjur' – Sonki East (= 21-E-3)	297
	21-E-12*	'Tanjur' – Sonki East (= 21-E-2)	297
	21-E-11*	'Tanjur' – Sonki East (= 21-E-1)	297
	Tangur –	Sonki Inscriptions	297
	16-U-61*	Melik en Nasr East (Sahaba) (= 16-U-4)	296
	16-U-60*	Melik en Nasr East (Sahaba) (= 16-U-3)	296
	16-U-46	Melik en Nasr West	289
		The Egyptian Rock Inscription (16-V-22/1) by W.V. Davies	288
	16 - V - 22	Melik en Nasr West	287
	16-S-9	Duweishat East	280
	16-S-2	Duweishat East	279
	16-S-8	Duweishat East	273
	16-S-7	Duweishat East	271
	16 - N - 24	Duweishat West	268

Contents

 415 416 422 424 428 428
416 422 424
416 422
416 422
416 422
415
413
412
408

List of Figures

Figure 1.01	Northern end of ASSN Survey area, with sites identified during 1964-64 reconnaissance survey, between Gemai and Ambikol (based on Mills 1965,	0
Figure 1.02	fig.1).	2
Figure 1.02	Southern end of ASSN Survey area, with sites identified during 1964-64 reconnaissance survey, between Semna and Dal (based on Mills 1965, fig.1).	3
Figure 1.03	Survey area between Gemai and Dal. The 180m contour corresponded with	5
Figure 1.05	the expected high water levels (based on Mills 1965, fig.1).	5
Figure 1.04	Detail of aerial photograph (AP328230) of area of Turmukki island (Melik en	5
Figure 1.04	Nasr), with site locations marked.	9
Figure 1.05	Detail of ASSN record map for Turmukki island area.	10
Figure 1.06	ASSN staff of 1963-64 (reconnaissance survey) at Wadi Halfa. (left to right)	10
riguie 1.00	Abdel Ghani Ali, Abdel Hadi Mohammed, ?, Mohammed Hamid, Said	
	Beshir, Reis Ibrahim Mubarek, 'Satur'.	11
Figure 1.07	Reis Ibrahim Mubarek, Lesley Mills, Abdu Ferriq, Arbab Hassan Hafiz,	11
inguie 1.07	Yusuf Mohammed Yussuf, ?, Mohammed Hamid.	12
	rusu frontalinitea russul, , frontalinitea ruinia,	14
Figure 2.01	Northern end of ASSN Survey area at Gemai (Jemey). Detail from air	
8	photograph with site locations plotted.	15
Figure 2.02	Composite aerial photograph of Gemai-Murshid area.	16
Figure 2.03	Location of [11-D-5] north of the hamlet of Affu, Gemai East.	18
Figure 2.04	Examples of pottery recovered by FNE excavations in 1965 (based on Donner	
0	1998, pl.166) (scale c.1:5).	19
Figure 2.05	Location of [11-D-36] and [11-D-37] and adjoining sites in Gemai West.	20
Figure 2.06	Bowl (11-D-36/1).	20
Figure 2.07	Pottery samples from [11-D-36] (scale c.1:4).	21
Figure 2.08	Grindstone (11-D-36/2).	21
Figure 2.09	Location of [11-D-37] south of Gemai West village.	23
Figure 2.10	New Kingdom bowls from [11-D-37].	23
Figure 2.11	'Furnace' structure before excavation. Large jar rim visible at right side.	24
Figure 2.12	Excavated 'furnace' structure. Date uncertain.	24
Figure 2.13	Location of New Kingdom inscription [11-I-59*] at rock drawing station on	
	west bank, Murshid West.	25
Figure 2.14	Location of [11-I-5] near the end of Khor Sila at the Murshid bend; with an	
	early medieval ('Early Christian') settlement site [11-I-6] c.200m to NW.	27
Figure 2.15	Pottery from 'Kerma' burials [11-I-5] (based on Donner 1998, pls 174-175).	28
Figure 2.16	Pottery from [11-I-7] identified as potentially of New Kingdom or	
	'pre-Meroitic' date (redrawn from Donner 1998, pls 176, 179).	28
Figure 2.17	Location of [11-I-7 = FNE 39], [11-I-32 = FNE 41] and [11-I-34 = FNE 44]	
	and nearby sites in Sigaga plain, west of Murshid.	28
Figure 2.18	View south across river (from site [11-I-21]) to Sigaga area.	30
Figure 2.19	Location of rock drawings [11-H-11 = FNE 46] west of Sigaga village,	0.1
D' 0.00	Murshid East.	31
Figure 2.20	Rock drawings $[11-H-11 = FNE 46]$ (after Donner 1998, pl.216,1). No scale.	31

F	igure 3.01	Aerial photograph composite of northern Saras area.	33
	igure 3.02	Aerial photograph composite of south-central areas of Saras and Shelfak.	
		Location of west bank hilltop above [11-Q-15] indicated, from which both	
		Askut and Shelfak could be seen.	34
F	igure 3.03	View towards ridge at river bend at north end of Saras West (site [11-H-5] in	
		foreground).	35
F	igure 3.04	View south from northern end of Saras West with houses of Kieko/Kiyyeeko	
		visible, and hills of east bank beyond.	35
F	igure 3.05	View north from Diffinarti [11-P-1] showing sand accumulations along west	
		bank of Saras West.	36
F	igure 3.06	View towards Shelfak [11-U-1] and west bank from upstream of Diffinarti	
_		[11-P-1].	36
F	igure. 3.07	View downriver from near Shelfak [11-U-1] towards Diffinarti [11-P-1] when	
_		river levels quite low; with main river channel passing west of Diffinarti.	37
F	igure 3.08	Aerial photograph composite of area upstream of Saras between Shelfak and	
		Uronarti.	37
F	igure 3.09	Enclosure [11-L-34*], of unknown date in northern part of Saras, facing	0.0
Г	10	Mugufil.	38
	igure 3.10	Enclosure [10-Y-24], of unknown date, opposite Uronarti.	39
F	igure 3.1.1	Location of [11-H-7] on ridge overlooking river bend close to boundary	10
Б		between Saras and Murshid.	40
	igure 3.1.2	Plan of stone huts [11-H-7].	41
	igure 3.1.3	View upstream (south) from [11-H-7].	41
	igure 3.1.4	View downstream (east) from [11-H-7]. Note young dom palms close to river.	41
	igure 3.1.5	View north across desert from [11-H-7].	42
	igure 3.1.6	View across Room 1 towards Room 2, [11-H-7].	42
	igure 3.1.7	Room 1 with bowl (1) in centre of room, [11-H-7].	42 42
	igure 3.1.8 igure 3.1.9	Coarse handmade bowl (11-H-7/1). Coarse handmade bowl (11-H-7/2).	42
	igure 3.1.10	Pottery from (11-H-7) (scale 1:4).	42
	igure 3.1.11	Location of [11-H-4] on west bank at the north end of Saras, opposite Anksi	чJ
1	iguit 5.1.11	(Angsi) village.	44
F	igure 3.1.12	Pottery sample from [11-H-4] (scale 1:4).	45
	igure 3.1.13	Pottery 'weights' (11-H-4/1).	45
	igure 3.1.14	Location of tomb [11-H-3] in north section of Saras West.	46
	igure 3.1.15	Plan and section of tomb [11-H-3].	46
	igure 3.1.16	Location of [11-M-11] and nearby sites on west bank south of Kieku	10
	8	(Kiyyeeko).	47
F	igure 3.1.17	Wheelmade cup $(11-M-12/1)$.	48
	igure 3.1.18	Grindstones from [11-M-12]; (4) -top; (3) -bottom.	48
	igure 3.1.19	Wheelmade cup and bowl from cache (scale 1:4).	48
	igure 3.1.20	Location of [11-M-13] and nearby sites, south of Kieko (Kiyyeeko).	49
F	igure 3.1.21	Plan of [11-M-13].	50
F	igure 3.1.22	View across [11-M-13] to northeast. Hilltop location of [11-H-7] in distance.	50
F	igure 3.1.23	View across [11-M-13] to southwest.	51
F	igure 3.1.24	View north across [11-M-13].	51
F	igure 3.1.25	Jar (1) outside Room 4 [11-M-13].	51
F	igure 3.1.26	View east across Room 3 [11-M-13] with pits in floor.	51
F	igure 3.1.27	Steatite net-sinker/weight (11-M-13/2). (SNM.19753).	52
F	igure 3.1.28	Examples of mud weights (?) (11-M-13/2). (SNM.20472).	52
F	igure 3.1.29	Pottery from [11-M-13] (scale 1:4).	52
F	igure 3.1.30	Tall necked jar (11-M-13/1). (SNM.16506).	53
F	igure 3.1.31	Grave 1, [11-M-6].	54

Figure 3.1.32 Figure.3.1.33	Bowl (1) and jar neck (A) from grave 1 [11-M-6] (scale 1:4). Carinated bowl, (11-M-6/1/1).	54 54
Figure 3.1.34	Grave 2, [11-M-6]. Original burials cleared to south end of grave during	51
1 iguit 5.1.51	reuse.	55
Figure 3.1.35	Pottery from Grave 2, [11-M-6] (1:4).	55
Figure 3.1.36	Bowl (11-M-6/2/1) with red slipped upper interior surface. Surface suggests	55
11guit 5.1.50	much organic temper in fabric.	56
Figure 3.1.37	Bowl $(11-M-6/2/1)$ with red burnished exterior.	56
Figure 3.1.38	Handled bowl $(11-M-6/2/2)$.	56
Figure 3.2.1	Sites on Askut-Kajnarti and west bank.	57
Figure 3.2.2	Pottery from [11-L-24] (scale 1:4).	59
Figure 3.2.3	Plan of cemetery [11-L-22].	60
Figure 3.2.4	Plan and sections Grave 1, [11-L-22].	61
Figure 3.2.5	Grave 1, [11-L-22].	61
Figure 3.2.6	Jar $(11-L-22/1/1)$ (scale 1:4).	61
Figure 3.2.7	Plan and sections Grave 2, [11-L-22].	62
Figure 3.2.8	Grave 2, [11-L-22].	62
Figure 3.2.9	Plan and sections Grave 3, [11-L-22].	62
Figure 3.2.10	Grave 3, [11-L-22].	62
Figure 3.2.11	Plan and sections Grave 4, [11-L-22].	62
Figure 3.2.12	Grave 4, [11-L-22].	63
Figure 3.2.12	Grave 4, $\begin{bmatrix} 11-L-22 \end{bmatrix}$. Detail, with scarab (11-L-22/4/1) below neck.	63
Figure 3.2.14	Scarab (11-L-22/4/1) (scale 1:1).	63
Figure 3.2.15	Scarab (11-L-22/4/1).	63
Figure 3.2.16	Plan and sections Grave 5, [11-L-22].	63
Figure 3.2.17	Grave 5, [11-L-22].	63
Figure 3.2.17 Figure 3.2.18.	Plan and sections Grave 6, [11-L-22].	64
Figure 3.2.19	Grave 6, [11-L-22].	64
Figure 3.2.21	Bowl, pot-stand (scale 1:4) and copper alloy tweezers (scale 1:1) from Grave 6,	01
Figure 5.2.21	[11-L-22].	64
Figure 3.2.22	Bowl $(11-L-22/6/1)$.	64
Figure 3.2.23	Copper alloy tweezers $(11-L-22/6/2)$.	64
Figure 3.2.24	Plan and section Grave 7, [11-L-22].	65
Figure 3.2.25	Plan and sections Grave 8, [11-L-22].	65
Figure 3.2.26	Grave 8, [11-L-22].	65
Figure 3.2.27	Plan of Grave 9, [11-L-22].	66
Figure 3.2.28	Location of graves [11-L-22] and adjoining sites on west bank opposite Askut	00
1 igure 5.2.20	and Kajnarti.	67
Figure 3.2.29	Sketch location plan of two groups of tombs [11-L-18].	68
Figure 3.2.30	Plan and section of Grave 1, [11-L-18].	68
Figure 3.2.31	Incomplete bowls from (11-L-18/2) (scale 1:4).	69
Figure 3.2.32	Plan and section of Grave 2, [11-L-18].	69
Figure 3.2.33	Plan and section of Grave 3, [11-L-18].	70
Figure 3.2.34	Bowls and jar from (11-L-18/3) (scale 1:4).	70
Figure 3.2.35	Bowl (11-L-18/3/1).	70
Figure 3.2.36	Jar (11-L-18/3/A).	71
Figure 3.2.37	Plan and section of Grave 4, [11-L-18].	71
Figure 3.2.38	Bowl (11-L-18/4/A) (scale 1:4).	72
Figure 3.2.39	Plan and section of Grave 5, [11-L-18].	72
Figure 3.2.40	Bowl and bottle from (11-L-18/5) (scale 1:4).	73
Figure 3.2.41	Plan and section of Grave 6, [11-L-18].	73
Figure 3.2.42	Plan and section of Grave 7, [11-L-18].	73 74
Figure 3.2.43	Bowls from Grave 7, [11-L-18] (scale 1:4).	74

List of Figures

Figure 3.2.44	Bowl (11-L-18/7/1).	74
Figure 3.2.45	Plan and section of Grave 8, [11-L-18].	75
Figure 3.2.46	Pottery (scale 1:4) and carnelian ring (11-L-18/8/1) (scale 1:1).	76
Figure 3.2.47	Carnelian ring (11-L-18/8/1).	76
Figure 3.2.48	Bowl (11-L-18/8/2).	76
Figure 3.2.49	Fragments of 'glass' (?) (11-L-18/8/8).	76
Figure 3.2.50	Sherds of (A-Group?) vessels (scale 1:4) recovered from large pit near Grave	
0	8, [11-L-18].	77
Figure 3.2.51	Kajnarti island. General view towards main area of burials [11-L-26] on	
0	rocky outcrop to north of recently abandoned village.	78
Figure 3.2.52	Kajnarti island. View across narrow seasonal channel to Askut island.	78
Figure 3.2.53	Excavated area [11-L-26], view across site to east. Note east bank hills	
0	overlooking island.	79
Figure 3.2.54	Excavated area [11-L-26], view across site to south (upriver). Grave 10	
0	marked in centre of image.	79
Figure 3.2.55	Excavated area [11-L-26], view towards west side of site.	79
Figure 3.2.56	Plan of sampled area on south side of hilltop on Kajnarti [11-L-26]. Main	
0	rock outcrops shaded.	80
Figure 3.2.57	Scarab – surface find in sample excavation area $(11-L-26/0/1)$.	80
Figure 3.2.58	Grave 1, [11-L-26], from west.	80
Figure 3.2.59	Grave 1. Plan and section. Bowl (11-L-26/1/1) (scale 1:4).	81
Figure 3.2.60	Bowl (11-L-26/1/1).	81
Figure 3.2.61	Grave 2, [11-L-26], from north.	81
Figure 3.2.62	Grave 2, [11-L-26] plan and section. Bowl (1:4) and carnelian ring (scale 1:1).	82
Figure 3.2.63	Carnelian ring (11-L-26/2/2).	82
Figure 3.2.64	Grave 3, [11-L-26] plan and section.	83
Figure 3.2.65	Grave finds (11-L-26/3): Copper alloy 'cup' (11-L-26/3/1), beads (11-L-	
	26/3/2) and ring (11-L-26/3/3) (scale 1:1).	83
Figure 3.2.66	Copper alloy 'cup' (11-L-26/3/1).	84
Figure 3.2.67	Faience and glass beads (11-L-26/3/2).	84
Figure 3.2.68	Ivory ring (11-L-26/3/3).	84
Figure 3.2.69	Grave 4, [11-L-26].	84
Figure 3.2.69	Grave 4, [11-L-26].	84
Figure 3.2.70	Grave 4, [11-L-26].	84
Figure 3.2.71	Grave 4, [11-L-26] plan and section, intact upper burial and remains of	
	earlier burial at chamber base.	85
Figure 3.2.72	Pottery from Grave 4 (scale 1:4).	86
Figure 3.2.73	Amphora (11-L-26/4/1). Handle broken.	86
Figure 3.2.74	Bowl (11-L-26/4/2).	86
Figure 3.2.75	Bowl (11-L-26/4/A), part restored.	86
Figure 3.2.76	Grave 5, [11-L-26], plan and section.	86
Figure 3.2.77	Grave 6, [11-L-26] plan and section.	87
Figure 3.2.78	Vessel fragments from Grave 6, [11-L-26] (scale 1:4).	87
Figure 3.2.79	Grave 7, [11-L-26]. Intact lower burial and bowl (11-L-26/7/1) from upper	
	burial over head.	88
Figure 3.2.80	Grave 7, [11-L-26] plan and section.	88
Figure 3.2.81	Bowl (scale 1:4) and earring and bead (scale 1:1) from Grave 7.	89
Figure 3.2.82	Bowl (11-L-26/7/1).	89
Figure 3.2.83	Blue faience disc bead bracelet $(11-L-26/7/3)$, restrung.	89
Figure 3.2.84	Carnelian ring $(11-L-26/7/2)$.	89
Figure 3.2.85	Grave 8, [11-L-26] plan and section.	89
Figure 3.2.86	Grave 9, [11-L-26] plan and section. Painted plaster fragments from	0.5
	cartonnage.	90

Figure 3.2.87	Handmade bowl (11-L-26/9/A), incomplete (intrusive).	91
Figure 3.2.88	Grave 10, [11-L-26] plan and section. Pot fragments from fill (scale 1:4).	91
Figure 3.2.89	Grave 11, [11-L-26] plan and section.	92
Figure 3.2.90	Grave 12, [11-L-26] plan and section. Carnelian ring (11-L-26/12/1) (scale	
8	1:1) and reconstructed bowl (11-L-26/12/A) (scale 1:4).	92
Figure 3.2.91	Bowl (11-L-26/12/A).	93
Figure 3.2.92	Carnelian rings $(11-L-26/12/1)$.	93
Figure 3.2.93	Grave 13, $[11-L-26]$ plan and section; Bowl $(11-L-2/13/1)$ (scale 1:4).	93
Figure 3.2.94	Bowl (11-L-2/13/1).	93
Figure 3.2.95	Grave 14, [11-L-26].	94
Figure 3.2.96	Grave 14, [11-L-26] plan and section.	94
Figure 3.2.90	Grave 15, [11-L-26] plan and section.	94 95
Figure 3.2.97		95 95
0	Grave 16, [11-L-26] plan and section.	
Figure 3.2.99	Grave 17, [11-L-26] plan and section.	95 06
	Grave 19, [11-L-26], plan and section.	96 06
0	Grave 20 [11-L-26], plan and section.	96 07
	Grave 21, [11-L-26] plan and section, and pottery.	97
Figure 3.2.103	Grave 22, [11-L-26] plan and section; scarab (11-L-26/22/1) from fill	07
T	(scale 1:1).	97
	Scarab (11-L-26/22/1).	97
	Grave 23, [11-L-26] plan and section. Pottery finds.	98
0	Heavy bowl (intrusive?) (11-L-26/23/1).	98
0	Grave 24, [11-L-26] plan and section; carnelian ring and scarab.	99
-	Pair of carnelian rings (11-L-26/24/2).	99
0	Scarab (11-L-26/24/3).	99
-	Air photograph of linear excavations [11-L-30] in hills overlooking Kajnarti.	101
Figure 3.2.111	Bowls from [11-L-30] (scale 1:4).	101
Figure 3.3.1	Location of stone enclosure [11-Q-9] and nearby C-Group/Kerma sites,	
	Saras East.	103
Figure 3.3.2	Bowl (11-Q-9/1) (scale 1:4).	103
Figure 3.3.3	Bowl (11-Q-9/1).	104
Figure 3.3.4	Location of possible New Kingdom cemetery [11-Q-3] and nearby C-Group	
	and Kerma sites in central Saras plain.	105
Figure 3.3.5	Plan of cemetery [11-Q-3].	106
Figure 3.3.6	Plan and section Grave 1, [11-Q-3].	106
Figure 3.3.7	Plan and section Grave 2, [11-Q-3].	106
Figure 3.3.8	Intact stone blocking within Grave 2, [11-Q-3].	107
Figure 3.3.9	Decayed wooden coffin of child burial within Grave 2, [11-Q-3].	107
Figure 3.3.10	Plan and section Grave 3, [11-Q-3].	107
Figure 3.3.11	Location of graves [11-Q-65] on higher ground to east of workshop sites,	
0	Saras East.	109
Figure 3.3.12	Plan of Grave 1, [11-Q-65].	110
Figure 3.3.13	Sections through Grave 1, [11-Q-65].	111
Figure 3.3.14	Shaft blocking of (11-Q-65/1). Rubble and stone chippings around grave	
8	visible behind.	111
Figure 3.3.15	Shaft blocking of (11-Q-65/1).	111
Figure 3.3.16	Burial chamber of Grave 1, [11-Q-65], looking towards west end with	
inguite 0.0.110	disturbed burials in foreground and undisturbed burials behind.	112
Figure 3.3.17	Bowls from Grave 1, [11-Q-65] (scale 1:4).	112
Figure 3.3.18		114
1 iguit 5.5.10	Scarabs (3.4) and heads from (11-O-65/1), shell (a) faience (b.c) and carnelian	
	Scarabs $(3,4)$ and beads from $(11-Q-65/1)$: shell (a), faience (b,c) and carnelian (d) (scale 1:1)	119
Figure 3310	(d) (scale 1:1).	112 113
Figure 3.3.19 Figure 3.3.20		112 113 113

Figure 3.3.21	Bowl (11-Q-65/1/6).	113
Figure 3.3.22	Faience scarabs from Grave 1, $[11-Q-65]$.	113
Figure 3.3.23	Beads $(11-Q-65/1)$ from fill; restrung.	113
Figure 3.3.24	Plan and section of Grave 2, [11-Q-65]. Reconstructed profile of large dish/	
0	bowl (11-Q-65/2/A) (scale 1:4).	114
Figure 3.3.25	Initial test excavation at south end of site [11-Q-61], with undisturbed surface	
0	beyond.	115
Figure 3.3.26	Finds (unregistered) from test excavations of [11-Q-61]: faience bowl	
0	fragments (a), stone vessel (b), beads (c) and earrings (d).	115
Figure 3.3.27	Plan of two building complexes [11-Q-61].	115
Figure 3.3.28	Plan of southern part of complex [11-Q-61] (plan A. J. Mills).	116
Figure 3.3.29	Room 2, stone foundations of two bins.	117
Figure 3.3.30	Room 4, stone stands for grinding slab.	117
Figure 3.3.31	Stone-lined bin in Room 5.	117
Figure 3.3.32	Room 10, stone stands forming support for grinding slab.	118
Figure 3.3.33	View south across east side of [11-Q-61], Room 26 on left.	118
Figure 3.3.34	View southwest from south end of [11-Q-61] towards [11-Q-59] and [11-Q-	
	62] in distance, under excavation. This makes clear the close proximity of	
	these three sites. The upstanding building remains to right of cleared pathway	
	seem likely to date to the 19th century.	119
Figure 3.3.35	View north across [11-Q-61].	119
Figure 3.3.36	View looking west across north end of [11-Q-61].	120
Figure 3.3.37	Plan of north part of complex [11-Q-61] (plan A. J. Mills).	120
Figure 3.3.38	Quartz chippings outside Room 21; with grindstone just inside entrance	
	(looking west).	121
Figure 3.3.39	Room 22, stone-lined bin (unexcavated) and outline of the mud floor of	
	another bin (?) feature to north (right).	121
Figure 3.3.40	Room 22, excavated stone lined tank/bin.	121
Figure 3.3.41	Room 23, grindstone set in floor.	122
Figure 3.3.42	Finds from [11-Q-61].	122
Figure 3.3.43	Copper alloy awl $(11-Q-61/1)$.	123
Figure 3.3.44	Blue faience and calcite beads(11-Q-61/4) from Room 22.	123
Figure 3.3.45	Sample pottery from test trenches [11-Q-61] (scale 1:4).	123
Figure 3.3.46	View west across south end of [11-Q-61].	124
Figure 3.3.47	Initial test excavations of [11-Q-59], from north.	125
Figure 3.3.48	Test excavations of [11-Q-59], from west. Examples of large grindstones on surface in foreground.	126
Figure 3.3.49	Plan of [11-Q-59] workshop with large spread of tailings on south side	120
Figure 5.5.49	(shaded).	127
Figure 3.3.50	Mortar embedded in floor of Room 3.	127
Figure 3.3.51	Hearth in corner of Room 4 with ash deposit beside it.	120
Figure 3.3.52	Stone-lined bin in Room 7, from east.	120
Figure 3.3.53	Detail of plastered lining of bin in Room 7.	120
Figure 3.3.54	Stone 'bins' in Room 8 area, from west.	128
Figure 3.3.55	Deposit of large pebbles in Room 8 area.	128
Figure 3.3.56	Stone bin on north side of Room 12, from east.	129
Figure 3.3.57	Stone bin on north side of Room 12, from north.	129
Figure 3.3.58	Excavated rooms at west side of [11-Q-59], from north.	130
Figure 3.3.59	Excavated site [11-Q-59] towards northwest. Note large rock outcrop, one of	
0	many in this area, between site and river beyond (marked by trees); west bank	
	hills in distance.	130
Figure 3.3.60	Excavated site [11-Q-59] looking east.	131
Figure 3.3.61	Excavated site $[11-\widetilde{Q}-59]$ looking south.	131

Figure 3.3.62	Small finds from [11-Q-59].	132
Figure 3.3.63	Copper alloy finds $(11-Q-59/1-4,6)$.	133
Figure 3.3.64	Calcite bow-drill holder (11-Q-59/5).	133
Figure 3.3.65	Carnelian ring, fragment (11-Q-59/7).	134
Figure 3.3.66	Examples of grinding tool types from surface of [11-Q-59].	134
Figure 3.3.67	Panoramic view across site [11-Q-62], before excavation, looking towards	101
11guie 5.5.67	southeast. Note large grindstones on surface in lower right part of image.	135
Figure 3.3.68	Sketch section of walls and floor levels.	135
Figure 3.3.69	General plan of [11-Q-62] with second (upper) phase of rooms in central area	155
Figure 5.5.09		126
E	(mainly Rooms 19-24).	136
Figure 3.3.70	View east across central area of excavation [11-Q-62].	137
Figure 3.3.71	Room 1 features, from west.	137
Figure 3.3.72	Room 1 Grinding emplacement, from north.	137
Figure 3.3.73	Feature within Room 1, from north.	138
Figure 3.3.74	Room 1. Two grindstone stands one with grinder in place, in northwest of	
	room.	138
Figure 3.3.75	Two tank/bins on east side of site in 'Room 5' area; from north.	138
Figure 3.3.76	View looking north across east side of site [11-Q-62]. Saras fort on hill (top	
	left).	139
Figure 3.3.77	Rooms 9 and 15, with series of stone bins.	139
Figure 3.3.78	Room 11 with mud bases of two bins in corners of room; looking west.	
	Grinders/mortars in centre of room.	140
Figure 3.3.79	Room 15, from west.	140
Figure 3.3.80	Detail of stone pounders in northwest corner of Room 15.	140
Figure 3.3.81	Bin in southwest corner of Room 15.	140
Figure 3.3.82	Stone lined tank/bin inside Room 24 with mortar beside it.	141
Figure 3.3.83	Room 22, from north.	141
Figure 3.3.84	Stone lined tank/bin in outside area Room 21; looking west towards	
8	Room 22.	141
Figure 3.3.85	View south across site. Grindstone stand in foreground in poorly preserved	111
11gure 5.5.05	Room 27 at north end of site.	141
Figure 3.3.86	Plan of earlier phase structure, identified mainly as Rooms 29-31 (shaded).	111
1 igure 5.5.00	Potters turntable was apparently found near bin in the northeast part of	
	Room 29.	142
Figure 3.3.87	Example of large granite grindstone (11-Q-62/1).	143
-		
Figure 3.3.88	Drawing of grindstone used on two sides from $[11-Q-62]$.	144
Figure 3.3.89	Example of mortar-type grindstone block (11-Q-62/2).	144
Figure 3.3.90	Copper alloy tools and artefacts from [11-Q-62].	145
Figure 3.3.91	Potters turntable $(11-Q-62/10 a,b)$.	145
Figure 3.3.92	Potters turntable (11-Q-62/10 a,b).	145
Figure 3.3.93	Copper alloy blade/knife (11-Q-62/5).	145
Figure 3.3.94	Granite hammer stone (11-Q-62/11), left; and grinder/rubbing stone (11-Q-	
	62/12), right (scale 1:3).	146
Figure 3.3.95	Finds from [11-Q-62].	147
Figure 3.3.96	Potters turntable (11-Q-62/10 a,b).	148
Figure 3.3.97	Pottery sample from test excavation [11-Q-62].	148
Figure 3.3.98	Pottery sample from [11-Q-62], with a range of plate and bowl forms.	149
Figure 3.3.99	Pottery sample from [11-Q-62], with a range of jars and other containers;	
	and handmade 'Kerma' pottery (41-44).	150
Figure 3.3.100	Three mud sealings (a-c) from [11-Q-62].	151
	View south across [11-Q-63]. Note large boulders used in wall of Room 2, in	
~	foreground.	152
Figure 3.3.102	Plan of small workshop [11-Q-63].	153
0		

Figure 3.3.104View across [11-Q-63], from southwest.153Figure 3.3.105Room 1 looking east across feature (bin?) with quartz dust, and water-laid material on left (north) side.154Figure 3.3.106Room 1 brick lined 'furnace', from north.154Figure 3.3.107Room 6 grindstone and mortar with fragment of surviving mud floor surface below, from north.154Figure 3.3.108Detail of Room 6 grindstone and mortar with fragment of surviving mud floor surface below, from north. Note small grinding stone, bottom centre.155Figure 3.3.109Large bowl (11-Q-63/1) by wall of Room 7.155Figure 3.3.110Wheelmade pottery from test excavation [11-Q-63] (scale 1:4).155Figure 3.3.112Bowl (11-Q-63/1).155Figure 3.3.113Handmade vessels from test excavations [11-Q-63] (1:4).156Figure 3.3.114Mining areas [11-Q-60] along Khor Ahmed Sherif and hills to north, and workshops and nearby graves to northwest. Kerma cemeteries [11-Q-36] and [11-Q-73] are also indicated.157Figure 3.3.115View across Khor Ahmed Sherif from [11-Q-60/B] towards [11-Q-60/A], (below arrow).158Figure 3.3.116Open mining [11-Q-60/A] on south side of Khor Ahmed Sherif.158Figure 3.3.118Narrow interior of mine [11-Q-60/B] on north side of Khor Ahmed Sherif.159Figure 3.3.119Hut cluster (11-Q-60/C) and nearby linear excavations relating to quartz extraction.159Figure 3.3.119Hut cluster (11-Q-60/C) and nearby linear excavations relating to quartz extraction.159
Figure 3.3.106Room 1 brick lined 'furnace', from north.154Figure 3.3.107Room 6 grindstone and mortar with fragment of surviving mud floor surface below, from north.154Figure 3.3.108Detail of Room 6 grindstone and mortar with fragment of surviving mud floor surface below, from north. Note small grinding stone, bottom centre.155Figure 3.3.109Large bowl (11-Q-63/1) by wall of Room 7.155Figure 3.3.110Wheelmade pottery from test excavation [11-Q-63] (scale 1:4).155Figure 3.3.111Bowl (11-Q-63/1).155Figure 3.3.112Bowl (11-Q-63/1).155Figure 3.3.113Handmade vessels from test excavations [11-Q-63] (1:4).156Figure 3.3.114Mining areas [11-Q-60] along Khor Ahmed Sherif and hills to north, and workshops and nearby graves to northwest. Kerma cemeteries [11-Q-36] and [11-Q-73] are also indicated.157Figure 3.3.115View across Khor Ahmed Sherif from [11-Q-60/B] towards [11-Q-60/A], (below arrow).158Figure 3.3.117Entrance to mine shaft [11-Q-60/B] on north side of Khor Ahmed Sherif.158Figure 3.3.118Narrow interior of mine [11-Q-60/B] on north side of Khor Ahmed Sherif.158
Figure 3.3.107Room 6 grindstone and mortar with fragment of surviving mud floor surface below, from north.154Figure 3.3.108Detail of Room 6 grindstone and mortar with fragment of surviving mud floor surface below, from north. Note small grinding stone, bottom centre.155Figure 3.3.109Large bowl (11-Q-63/1) by wall of Room 7.155Figure 3.3.110Wheelmade pottery from test excavation [11-Q-63] (scale 1:4).155Figure 3.3.111Bowl (11-Q-63/1).155Figure 3.3.112Bowl (11-Q-63/1).155Figure 3.3.113Handmade vessels from test excavations [11-Q-63] (1:4).156Figure 3.3.114Mining areas [11-Q-60] along Khor Ahmed Sherif and hills to north, and workshops and nearby graves to northwest. Kerma cemeteries [11-Q-36] and [11-Q-73] are also indicated.157Figure 3.3.116Open mining [11-Q-60/A] on south side of Khor Ahmed Sherif.158Figure 3.3.117Entrance to mine shaft [11-Q-60/B] on north side of Khor Ahmed Sherif.158Figure 3.3.118Narrow interior of mine [11-Q-60/B] on north side of Khor Ahmed Sherif.158
Figure 3.3.108Detail of Room 6 grindstone and mortar with fragment of surviving mud floor surface below, from north. Note small grinding stone, bottom centre.155Figure 3.3.109Large bowl (11-Q-63/1) by wall of Room 7.155Figure 3.3.110Wheelmade pottery from test excavation [11-Q-63] (scale 1:4).155Figure 3.3.111Bowl (11-Q-63/1).155Figure 3.3.112Bowl (11-Q-63/1).155Figure 3.3.113Handmade vessels from test excavations [11-Q-63] (1:4).156Figure 3.3.114Mining areas [11-Q-60] along Khor Ahmed Sherif and hills to north, and workshops and nearby graves to northwest. Kerma cemeteries [11-Q-36] and [11-Q-73] are also indicated.157Figure 3.3.115View across Khor Ahmed Sherif from [11-Q-60/B] towards [11-Q-60/A], (below arrow).158Figure 3.3.116Open mining [11-Q-60/A] on south side of Khor Ahmed Sherif.158Figure 3.3.118Narrow interior of mine [11-Q-60/B] on north side of Khor Ahmed Sherif.159Figure 3.3.118Narrow interior of mine [11-Q-60/B] on north side of Khor Ahmed Sherif.159
floor surface below, from north. Note small grinding stone, bottom centre.155Figure 3.3.109Large bowl (11-Q-63/1) by wall of Room 7.155Figure 3.3.110Wheelmade pottery from test excavation [11-Q-63] (scale 1:4).155Figure 3.3.111Bowl (11-Q-63/1).155Figure 3.3.112Bowl (11-Q-63/1).155Figure 3.3.113Handmade vessels from test excavations [11-Q-63] (1:4).156Figure 3.3.114Mining areas [11-Q-60] along Khor Ahmed Sherif and hills to north, and workshops and nearby graves to northwest. Kerma cemeteries [11-Q-36] and [11-Q-73] are also indicated.157Figure 3.3.115View across Khor Ahmed Sherif from [11-Q-60/B] towards [11-Q-60/A], (below arrow).158Figure 3.3.116Open mining [11-Q-60/A] on south side of Khor Ahmed Sherif.158Figure 3.3.118Narrow interior of mine [11-Q-60/B] on north side of Khor Ahmed Sherif.159
Figure 3.3.109Large bowl (11-Q-63/1) by wall of Room 7.155Figure 3.3.110Wheelmade pottery from test excavation [11-Q-63] (scale 1:4).155Figure 3.3.111Bowl (11-Q-63/1).155Figure 3.3.112Bowl (11-Q-63/1).155Figure 3.3.113Handmade vessels from test excavations [11-Q-63] (1:4).156Figure 3.3.114Mining areas [11-Q-60] along Khor Ahmed Sherif and hills to north, and workshops and nearby graves to northwest. Kerma cemeteries [11-Q-36] and [11-Q-73] are also indicated.157Figure 3.3.115View across Khor Ahmed Sherif from [11-Q-60/B] towards [11-Q-60/A], (below arrow).158Figure 3.3.116Open mining [11-Q-60/A] on south side of Khor Ahmed Sherif.158Figure 3.3.117Entrance to mine shaft [11-Q-60/B] on north side of Khor Ahmed Sherif.158Figure 3.3.118Narrow interior of mine [11-Q-60/B] on north side of Khor Ahmed Sherif.159
Figure 3.3.109Large bowl (11-Q-63/1) by wall of Room 7.155Figure 3.3.110Wheelmade pottery from test excavation [11-Q-63] (scale 1:4).155Figure 3.3.111Bowl (11-Q-63/1).155Figure 3.3.112Bowl (11-Q-63/1).155Figure 3.3.113Handmade vessels from test excavations [11-Q-63] (1:4).156Figure 3.3.114Mining areas [11-Q-60] along Khor Ahmed Sherif and hills to north, and workshops and nearby graves to northwest. Kerma cemeteries [11-Q-36] and [11-Q-73] are also indicated.157Figure 3.3.115View across Khor Ahmed Sherif from [11-Q-60/B] towards [11-Q-60/A], (below arrow).158Figure 3.3.116Open mining [11-Q-60/A] on south side of Khor Ahmed Sherif.158Figure 3.3.117Entrance to mine shaft [11-Q-60/B] on north side of Khor Ahmed Sherif.158Figure 3.3.118Narrow interior of mine [11-Q-60/B] on north side of Khor Ahmed Sherif.159
Figure 3.3.110Wheelmade pottery from test excavation [11-Q-63] (scale 1:4).155Figure 3.3.111Bowl (11-Q-63/1).155Figure 3.3.112Bowl (11-Q-63/1).155Figure 3.3.113Handmade vessels from test excavations [11-Q-63] (1:4).156Figure 3.3.114Mining areas [11-Q-60] along Khor Ahmed Sherif and hills to north, and workshops and nearby graves to northwest. Kerma cemeteries [11-Q-36] and [11-Q-73] are also indicated.157Figure 3.3.115View across Khor Ahmed Sherif from [11-Q-60/B] towards [11-Q-60/A], (below arrow).158Figure 3.3.116Open mining [11-Q-60/A] on south side of Khor Ahmed Sherif.158Figure 3.3.117Entrance to mine shaft [11-Q-60/B] on north side of Khor Ahmed Sherif.158Figure 3.3.118Narrow interior of mine [11-Q-60/B] on north side of Khor Ahmed Sherif.159
Figure 3.3.111Bowl (11-Q-63/1).155Figure 3.3.112Bowl (11-Q-63/1).155Figure 3.3.113Handmade vessels from test excavations [11-Q-63] (1:4).156Figure 3.3.114Mining areas [11-Q-60] along Khor Ahmed Sherif and hills to north, and workshops and nearby graves to northwest. Kerma cemeteries [11-Q-36] and [11-Q-73] are also indicated.157Figure 3.3.115View across Khor Ahmed Sherif from [11-Q-60/B] towards [11-Q-60/A], (below arrow).158Figure 3.3.116Open mining [11-Q-60/A] on south side of Khor Ahmed Sherif.158Figure 3.3.117Entrance to mine shaft [11-Q-60/B] on north side of Khor Ahmed Sherif.158Figure 3.3.118Narrow interior of mine [11-Q-60/B] on north side of Khor Ahmed Sherif.159
Figure 3.3.112Bowl (11-Q-63/1).155Figure 3.3.113Handmade vessels from test excavations [11-Q-63] (1:4).156Figure 3.3.114Mining areas [11-Q-60] along Khor Ahmed Sherif and hills to north, and workshops and nearby graves to northwest. Kerma cemeteries [11-Q-36] and [11-Q-73] are also indicated.157Figure 3.3.115View across Khor Ahmed Sherif from [11-Q-60/B] towards [11-Q-60/A], (below arrow).158Figure 3.3.116Open mining [11-Q-60/A] on south side of Khor Ahmed Sherif.158Figure 3.3.117Entrance to mine shaft [11-Q-60/B] on north side of Khor Ahmed Sherif.158Figure 3.3.118Narrow interior of mine [11-Q-60/B] on north side of Khor Ahmed Sherif.159
Figure 3.3.113Handmade vessels from test excavations [11-Q-63] (1:4).156Figure 3.3.114Mining areas [11-Q-60] along Khor Ahmed Sherif and hills to north, and workshops and nearby graves to northwest. Kerma cemeteries [11-Q-36] and [11-Q-73] are also indicated.157Figure 3.3.115View across Khor Ahmed Sherif from [11-Q-60/B] towards [11-Q-60/A], (below arrow).156Figure 3.3.116Open mining [11-Q-60/A] on south side of Khor Ahmed Sherif.158Figure 3.3.117Entrance to mine shaft [11-Q-60/B] on north side of Khor Ahmed Sherif.159Figure 3.3.118Narrow interior of mine [11-Q-60/B] on north side of Khor Ahmed Sherif.159
Figure 3.3.114 Mining areas [11-Q-60] along Khor Ahmed Sherif and hills to north, and workshops and nearby graves to northwest. Kerma cemeteries [11-Q-36] and [11-Q-73] are also indicated. 157 Figure 3.3.115 View across Khor Ahmed Sherif from [11-Q-60/B] towards [11-Q-60/A], (below arrow). 158 Figure 3.3.116 Open mining [11-Q-60/A] on south side of Khor Ahmed Sherif. 158 Figure 3.3.117 Entrance to mine shaft [11-Q-60/B] on north side of Khor Ahmed Sherif. 158 Figure 3.3.118 Narrow interior of mine [11-Q-60/B] on north side of Khor Ahmed Sherif. 159
workshops and nearby graves to northwest. Kerma cemeteries [11-Q-36] and [11-Q-73] are also indicated.157Figure 3.3.115 View across Khor Ahmed Sherif from [11-Q-60/B] towards [11-Q-60/A], (below arrow).158Figure 3.3.116 Open mining [11-Q-60/A] on south side of Khor Ahmed Sherif.158Figure 3.3.117 Entrance to mine shaft [11-Q-60/B] on north side of Khor Ahmed Sherif.158Figure 3.3.118 Narrow interior of mine [11-Q-60/B] on north side of Khor Ahmed Sherif.159
[11-Q-73] are also indicated.157Figure 3.3.115View across Khor Ahmed Sherif from [11-Q-60/B] towards [11-Q-60/A], (below arrow).158Figure 3.3.116Open mining [11-Q-60/A] on south side of Khor Ahmed Sherif.158Figure 3.3.117Entrance to mine shaft [11-Q-60/B] on north side of Khor Ahmed Sherif.159Figure 3.3.118Narrow interior of mine [11-Q-60/B] on north side of Khor Ahmed Sherif.159
Figure 3.3.115View across Khor Ahmed Sherif from [11-Q-60/B] towards [11-Q-60/A], (below arrow).158Figure 3.3.116Open mining [11-Q-60/A] on south side of Khor Ahmed Sherif.158Figure 3.3.117Entrance to mine shaft [11-Q-60/B] on north side of Khor Ahmed Sherif.158Figure 3.3.118Narrow interior of mine [11-Q-60/B] on north side of Khor Ahmed Sherif.159
(below arrow).158Figure 3.3.116Open mining [11-Q-60/A] on south side of Khor Ahmed Sherif.158Figure 3.3.117Entrance to mine shaft [11-Q-60/B] on north side of Khor Ahmed Sherif.159Figure 3.3.118Narrow interior of mine [11-Q-60/B] on north side of Khor Ahmed Sherif.159
Figure 3.3.116Open mining [11-Q-60/A] on south side of Khor Ahmed Sherif.158Figure 3.3.117Entrance to mine shaft [11-Q-60/B] on north side of Khor Ahmed Sherif.159Figure 3.3.118Narrow interior of mine [11-Q-60/B] on north side of Khor Ahmed Sherif.159
Figure 3.3.117 Entrance to mine shaft [11-Q-60/B] on north side of Khor Ahmed Sherif.159Figure 3.3.118 Narrow interior of mine [11-Q-60/B] on north side of Khor Ahmed Sherif.159
Figure 3.3.118 Narrow interior of mine [11-Q-60/B] on north side of Khor Ahmed Sherif.
Figure 5.5.119 – full cluster (11-O-00/G) and nearby linear excavations relating to quartz extraction. 1.5
Figure 3.3.120 Structures at $[11-Q-60/C]$, from west. 160 Figure 3.3.121 P 100 (C)
Figure 3.3.121 Rooms 1-2 at [11-Q-60/C], looking towards northeast.
Figure 3.3.122 Sketch plan of stone structures beside linear excavation/mining pit [11-Q-
60/C]. 160
Figure 3.3.123 Bowl with red-slipped rim (1:4) and profile of excavated pit.
Figure 3.3.124 Linear mining pit at [11-Q-60/C], before testing; looking towards east.
Figure 3.3.125Linear mining pit at [11-Q-60/C], after testing; looking towards east.161
Figure $3.3.126$ View towards river from $[11-Q-60/C]$. 162
Figure 3.3.127Shelfak fort [11-U-1] from east bank, looking upriver.163
Figure 3.3.128 Shelfak fort [11-U-1] overlooking major bend in river, and approximate
locations of associated cemeteries [11-U-12*] and [11-U-13*], excavated in 1931. 164
Figure 3.3.129 Stone enclosure [10-Y-24*] of unknown date on west bank opposite Uronarti.
Photograph also suggests rectilinear features c.200m to the east of the
enclosure close to river bank. 165
Figure 3.3.130 Uronarti, from west bank, to northeast of island.
Figure 3.3.131 View upriver with Kajinjera island in central distance, from south end of
Uronarti. Hill in foreground was location of some medieval structures [10-Y-
5], and inscription [10-Y-3] was near river to left of photograph (1966).
Figure 3.3.132 Uronarti fort; photographed when river levels were quite high. River stairs
and later stone quay to northeast of fort. 168
Figure 3.3.133 Location of 'Palace' [10-Y-2] on Uronarti. Location of Inscription of Turo
[10-Y-3] at southern tip of island and nearby area of (unexcavated) burials
[10-Y-23*] indicated. 169
Figure 3.3.134 Plan of 'Palace' building [10-Y-2] to southwest of Uronarti fort (after
Figure 3.3.134 Plan of 'Palace' building [10-Y-2] to southwest of Uronarti fort (after Dunham 1967, Map VI).
Dunham 1967, Map VI). 170
Dunham 1967, Map VI).170Figure 3.3.135Plan of cemetery [11-Q-57].172
Dunham 1967, Map VI). 170 Figure 3.3.135 Plan of cemetery [11-Q-57]. 172 Figure 3.3.136 Sketch plan and section of Grave 1 [11-Q-57]. 172
Dunham 1967, Map VI).170Figure 3.3.135Plan of cemetery [11-Q-57].172

Figure 3.3.140	Grave 2 [11-Q-57], from west.	173
Figure 3.3.141	Jar (11-Q-57/2/1) and bowl (11-Q-57/2/A) (scale 1:4).	174
0	Sketch plan and section of Grave 3 [11-Q-57].	174
0	Grave 3 [11-Q-57] from west.	174
0	Jar (11-Q-57/3/1) (scale 1:4).	174
0		
0	Sketch plan of Grave 4 [11-Q-57].	175
Figure 3.3.146	Grave 4 [11-Q-57], from east with jar $(11-Q-57/4/1)$ by head of	
	semi-contracted burial.	175
Figure 3.3.147	Jar (11-Q-57/4/1) and bowl (11-Q-57/4/A) (scale 1:4).	175
Figure 3.3.148	Sketch plan of Grave 5 [11-Q-57].	176
Figure 3.3.149	Sketch plan of Grave 6 [11-Q-57].	176
0	Grave 6 [11-Q-57], from east.	176
0	Bowl $(11-Q-57/6/A)$ (scale 1:4).	176
0	Sketch plan of eroded Grave 7 [11-Q-57].	176
Q		
0	Sketch plan of eroded Grave 8 [11-Q-57].	177
0	Jar (11-Q-57/8/1) (scale 1:4).	177
Q	Sketch plan of Grave 9 [11-Q-57].	177
Figure 3.3.156	Grave 9 [11-Q-57], from west.	177
Figure 3.3.157	Sketch plan of Grave 10 [11-Q-57].	178
Figure 3.3.158	Grave 10 [11-Q-57], from west.	178
0	Jar and bowls (scale 1:4) and bone awl (3) and glazed steatite scarab (4),	
0	(scale 1:1) from Grave 10 [11-Q-57].	178
Figure 3 3 160	Sketch plan of Grave 11 $[11-Q-57]$.	179
0	Grave 11 [11-Q-57], from south.	179
	Sketch plan of Grave 12 [11-Q-57].	179
0		179
0	Grave 12 [11-Q-57], from east.	
0	Sketch plan of Grave 13 [11-Q-57].	180
-	Infant burial in Grave 13 [11-Q-57], from west.	180
0	Sketch plan of Grave 14 [11-Q-57].	180
Figure 3.3.167	Grave 14 [11-Q-57], from west.	180
Figure 3.3.168	Sketch plan of Grave 15 [11-Q-57].	181
Figure 3.3.169	Grave 15 [11-Q-57], from west.	181
0	Grave 15 $[11-\widetilde{Q}-57]$, detail of loin-cloth.	181
8	= 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1	
Figure 4.01	Northern part of Semna, with projected line of (Middle Kingdom) wall [10-Y-	
inguio noi	12] extending from near Uronarti to area of Semna South [16-E-3]. The area	
	immediately south of Semna allocated to the University of Chicago Oriental	100
	Institute Expedition is indicated.	183
Figure 4.02	Rapids on eastern channel at south end of Kajinjera island, looking southwest	
	(1964).	184
Figure 4.03	View towards Semna-Kumma from c.1km downriver (1964).	185
Figure 4.04	View of Semna-Kumma from west bank c.500m northeast of Semna West.	185
Figure 4.05	The southern part of Semna, extending to area of Tila island, near Attiri.	186
Figure 4.06	Reconstructed line of wall [10-Y-12] based on field tests and aerial	
0	photographs.	187
Figure 4.07	Wall [10-Y-12]. West side of peak tower A, with three courses of bricks,	
inguite ino,	looking towards southwest.	188
Figure 4.08	0	188
0	Wall [10-Y-12]. West side of peak tower A, looking towards southwest.	100
Figure 4.09	Wall [10-Y-12]. View down slope to southwest of tower A into area of deep	100
F' 4.10		188
Figure 4.10	Wall [10-Y-12]. Northern section of wall, west of Kajinjera island with areas	100
T	of test excavations and tower A.	189
Figure 4.11	Wall [10-Y-12] running down towards river near south end of Kajinjera island.	190

F ' 4.10		
Figure 4.12	Wall [10-Y-12] running down towards river near south end of Kajinjera	
	island. Several long stone linear features visible beyond the wall are of	100
F'	unknown date and significance.	190
Figure 4.13	Wall [10-Y-12] in section examined to west of Semna West fort.	191
Figure 4.14	Wall [10-Y-12] with small areas of stonework c.1.2km north-northeast of Semna fort.	109
Figure 4.15		192
Figure 4.15	Sherds (A-C) found near wall [10-Y-12], probably from northern section opposite Kajinjera island.	192
Figure 4.16	Semna West – location of graves [16-E-28] cut into wall [10-Y-12], to	192
Figure 4.10	southwest of Semna Fort [16-E-1] and other known cemeteries S500, S700	
	and S800.	193
Figure 4.17	Plan of graves of [16-E-28] cut into and around wall [10-Y-12].	194
Figure 4.18	Grave 1, [16-E-28] from west.	194
Figure 4.19	Plan and section of Grave 1, [16-E-28]. Bowl (scale 1:4), scarab and beads	101
inguie inte	(scale 1:1).	194
Figure 4.20	Bowl (16-E-28/1/1).	194
Figure 4.21	Scarab (16-E-28/1/2).	195
Figure 4.22	Plan and section of Grave 2, [16-E-28]. Bowl (scale 1:4), beads (scale 1:1).	195
Figure 4.23	Faience bead necklace with carnelian pendant (16-E-28/2/1)	195
Figure 4.24	Plan and section Grave 3, [16-E-28].	195
Figure 4.25	Grave 3, [16-E-28] from above, with stone grave covering in situ.	196
Figure 4.26	Grave 3, [16-E-28] from east, with stone grave covering in situ.	196
Figure 4.27	Location of site [16-E-21] in areas of wall systems. Two groups of	
	unregistered features (circled) visible to the north and part of long wall feature	
	[16-E-40] running along raised ground to east.	197
Figure 4.28	View across [16-E-21] towards west-southwest, with approximate location of	
	Kumma fort beyond ridge.	198
Figure 4.29	Looking west over [16-E-21].	198
Figure 4.30	View to northwest over [16-E-21].	198
Figure 4.31	Plan of building [16-E-21] and location sketch. Inset shows distribution of	
	disturbed skeleton within Room 5.	199
Figure 4.32	Stone Feature A in Room 1 with mud surface partly preserved.	200
Figure 4.33	Stone Feature A in Room 1 with orthostats (B) beyond.	200
Figure 4.34	Room 1 from east wall, Looking west.	200
Figure 4.35	Room 2 looking north; doorway on right.	200
Figure 4.36	View across Room 2, looking northeast.	201
Figure 4.37	Pottery and other finds on floor of Room 2.	201
Figure 4.38	Room 5 from south, with skeletal remains on left and cluster of pots in	000
F'	northeast corner (top right).	202
Figure 4.39	Skeletal remains in foreground and pots beyond beside 'Room 4' stone	909
Figure 4.40	feature. Further animal (?) bones behind scale along east side of room.	202 203
Figure 4.40	Pottery and crucibles from Room 1. (scale 1:4, except (3B)) Finds from Room 1.	203 204
Figure 4.41 Figure 4.42	Pottery from Room 2 (scale 1:4).	204
Figure 4.43	Stone grinders, bone needle and haematite fragments from Room 2	205
Figure 4.45	(scale 1:2).	205
Figure 4.44	Stone and bone objects (scale 1:2).	205
Figure 4.45	Small finds, Room 3. Scales as indicated.	200
Figure 4.46	Pottery and grinder from Room 5 (scale 1:4).	207
Figure 4.47	Pottery vessels and crucibles from Room 1.	208
Figure 4.48	Interior of incense burner (16-E-21/3) with incised potmark.	200
Figure 4.49	Pottery vessels from Room 2.	209
Figure 4.50	Pottery vessels from Room 5.	209
0		

Figure 4.51	Bone tools from (16-E-21).	210
Figure 4.52	Stone tool (polisher?) (16-E-21/31).	210
Figure 4.53	Grindstone (16-E-21/23).	210
Figure 4.54	Bone beads (16-E-21/14).	210
Figure 4.55	Ivory bracelet fragments from Room 1 (16-E-21/11a-c).	210
Figure 4.56	Stone chopper from Room 2 (16-E-21/24).	210
Figure 4.57	Location of [16-E-30] and nearby sites on hills above Semna East/Kumma.	212
Figure 4.58	Structure [16-E-30].	212
Figure 4.59	Design on south face of structure [16-E-30].	212
Figure 4.60	View of boulder strewn hillside at [16-E-31].	214
Figure 4.61	View of hillside at [16-E-31].	214
Figure 4.62	Detail of broken stones and surface [16-E-31].	214
Figure 4.63	Detail of broken stones and possible pounders/hammer-stones [16-E-31].	214
Figure 4.64	General view of cairns on plateau [16-E-32], looking east.	215
Figure 4.65	Well-preserved cairn with niche in south face [16-E-32]	215
Figure 4.66	Cairn with niche in south face [16-E-32]. Note upright stone on more distant	
	cairn.	215
Figure 4.67	Cairns [16-E-32].	216
Figure 4.68	General view over cairns [16-E-32].	216
Figure 4.69	Semna-Kumma area and site locations.	219
Figure 4.70	Location of cemetery 'H200' [16-E-65*] to east of Kumma fort.	221
Figure 5.01	Area of Attiri and north end of Duweishat.	223
Figure 5.02	Duweishat East. The main area of New Kingdom gold mining and processing	
	was along the east bank and in the hills beyond.	224
Figure 5.03	Area of Ambikol. In modern times this was very thinly populated, with	
	encroaching blown sand a particular problem on the west bank.	225
Figure 5.04	Area of Melik en Nasr with large islands of Turmukki and Tangur.	226
Figure 5.05	Location of [16-O-12] in area of village of Sorki. A series of buildings relating	007
D' 5 .00	to the modern mining operations were located on higher ground to the east.	227
Figure 5.06	Panoramic view over area of test excavation 1 of [16-O-12], looking north,	000
E. 207	with village to northeast.	228
Figure 5.07	View over area of test excavation 1 of [16-O-12] looking east.	228
Figure 5.08	View over area of test excavation 1 of [16-O-12] looking west.	228
Figure 5.09	Parts of stone-lined bin in southwest corner of Room 5 [16-O-12].	229
Figure 5.10	Two large grindstones in east wall of Room 5 [16-O-12].	229
Figure 5.11	Partially preserved stone-lined bin in Room 6, (from southeast) [16-O-12].	229
Figure 5.12	Partially preserved stone-lined bin in Room 6, (from northeast) [16-O-12].	229
Figure 5.13	Plan of test excavation (Area 1) [16-O-12].	230
Figure 5.14	Plan of test excavation (Area 2) [16-O-12].	230
Figure 5.15	Pottery sample from test excavation (Area 1) [16-O-12].	232
Figure 5.16 Figure 5.17	Pottery sample from test excavation (Area 1) [16-O-12]. Pottery sample from test excavation (Area 2) [16-O-12].	233 234
0		
Figure 5.18	Location of rock drawing site [16-O-27] with Middle Kingdom (?) graffito.	235
Figure 5.19	Location of cemetery [16-O-24] on east side of dispersed 'settlement' [16-O-25] to porth of Aslum hamlet	236
Figure 5.90	25] to north of Askur hamlet.	230
Figure 5.20	Grave 1[16-O-24].	
Figure 5.21 Figure 5.22	Scarab (16-O-24/1/4). Pottery (scale 1:4) and scarab and bead (scale 1:1) from Grave 1 [16-O-24].	237 237
Figure 5.22 Figure 5.23	Grave 2 [16-O-24].	237
Figure 5.23 Figure 5.24	Bowl $(16-O-24/2/1)$ (scale 1:4).	238
Figure 5.24 Figure 5.25	Registered pottery from graves 1 and 2 [16-O-24].	238
Figure 5.25 Figure 5.26	Sketch plan of denuded stone structure 1, [16-O-25].	230 239
Figure 5.20	orected plan of definite structure 1, [10-0-23].	409

Figure 5.27	Surface clearance around Structure 1, [16-O-25].	240
Figure 5.28	View across denuded structure, towards east [16-O-25].	240
Figure 5.29	Sketch plan of Structure 2, [16-O-25].	240
Figure 5.30	Structure 2; view to north with blown sand on south side of hills.	241
Figure 5.31	Structure 2; view south towards river.	241
Figure 5.32	Entrance at south end of Structure 2.	241
Figure 5.33	Steatite seal/amulet (16-O-25/1).	241
Figure 5.34	Granite grinding stone (16-O-25/2).	242
Figure 5.35	Air photograph of northern end of Duweishat in area of Jedagur, Diffi	
	(named after the postmedieval 'Turkish Fort' [16-N-28*]) and Askur on the	
	west bank.	243
Figure 5.36	Location of three settlement areas of [16-O-2].	244
Figure 5.37	Plan of upper levels of workshop on 'Kom C' [16-O-2].	245
Figure 5.38	Room 1, looking west.	246
Figure 5.39	Detail of stone-lined bin in corner Room 1.	246
Figure 5.40	Room 2, looking west.	246
Figure 5.41	Rooms 1 and 2, looking south.	246
Figure 5.42	Room 6/L2, looking south. Note grindstone stands and mortars.	247
Figure 5.43	Large grindstones in Room 7, with doorway into Room 12.	247
Figure 5.44	Pit in area of Room 11.	247
Figure 5.45	Pit in area of Room 11, looking east.	247
Figure 5.46	General view across [16-O-2], looking towards Nile.	248
Figure 5.47	Plan of lower (original?) structure [16-O-2].	248
Figure 5.48	Lower (original?) structure [16-O-2], from east.	249
Figure 5.49	Stone-lined bin/tank and eroded walls on north side of structure in area L3.	249
Figure 5.50	Detail of stratigraphy within kom with surface deposits over alluvium, [16-O-2].	249
Figure 5.51	Pilgrim flask (16-O-2/1).	250
Figure 5.52	Bowls from lower structure (16-O-2/2-3).	250
Figure 5.53	Pilgrim flask and bowls from lower levels of [16-O-2].	250
Figure 5.54	Location plan of clusters of stone structures on hill-slopes above $[16-O-2/C]$.	251
Figure 5.55	Sketch plans of stone structures [16-O-15] in northern Duweishat East.	251
Figure 5.56	Stone structure [16-O-15/1] after test excavation, from north. Larger stones	050
E	slabs used to frame doorways.	252
Figure 5.57	Stone structure [16-O-15/1] after test excavation, from east.	252
Figure 5.58	Stone structure [16-O-15/4] after test excavation.	252
Figure 5.59	Stone structure [16-O-15/4] after test excavation.	252
Figure 5.60	Sketch plans of stone structures [16-O-15] in northern Duweishat East.	253 253
Figure 5.61	Stone structure [16-O-15] after test excavation, looking west.	253
Figure 5.62	Location of [16-N-18] and nearby sites: of which [16-N-15], [16-N-16] and [16 N 20] included 'A Crown' and (or 'C Crown' elements, [16 N 5] was a	
	[16-N-20] included 'A-Group' and/or 'C-Group' elements. [16-N-5] was a	954
Figure 5.62	small medieval cemetery and [16-N-19] a cluster of burials of uncertain date.	254 254
Figure 5.63	Sketch plan of stone structure foundations [16-N-18].	254 255
Figure 5.64	View across [16-N-18], Rooms 3 and 4, looking towards northwest.	255 255
Figure 5.65 Figure 5.66	View across [16-N-18], looking along wadi, towards southwest.	255 257
-	Location of small cemetery [16-N-11] above modern hamlet of Duweisha.	257
Figure 5.67 Figure 5.68	Plan of graves within cemetery [16-N-11]. Plan and section of Grave 1 [16-N-11].	257 258
0		258 258
Figure 5.69 Figure 5.70	Bowl $(16-N-11/1/1)$. Faience seal $(16-N-11/1/2)$	258 258
Figure 5.70	Faience seal (16-N-11/1/2). Pottery (scale 1:4) and faience seal (scale 1:1) from Grave 1 [16 N 11]	258 258
Figure 5.71 Figure 5.72	Pottery (scale 1:4) and faience seal (scale 1:1) from Grave 1 [16-N-11]. Grave 2 [16-N-11], plan and section.	258 258
Figure 5.72 Figure 5.73		430
Figure 5.75	Grave 2 [16-N-11], from east. Excavated pit with stone slabs at base covering burial.	259
	Dullal,	239

Figure 5.74	Grave 3 [16-N-11], plan and section.	259
Figure 5.75	Grave 4 [16-N-11]. Unexcavated; robbed to expose grave chamber.	259
Figure 5.76	Grave 4 [16-N-11]. Unexcavated with drystone wall sealing grave.	259
Figure 5.77	Location of workshop sites [16-N-13] and [16-N-14] and nearby features.	260
Figure 5.78	Plan of test excavation [16-N-13], Rooms 1-14.	261
Figure 5.79	View to southwest across excavated part of site from northeast side of Room	40-
8	14. Several grindstones/mortars visible.	261
Figure 5.80	Stone-lined bin in southeast corner of Room 5.	261
Figure 5.81	Stone-lined bin between Rooms 5-6. Pot in floor; large grindstones behind.	262
Figure 5.82	Central part of excavation with best preserved rooms (9-10).	262
Figure 5.83	Room 10 with large grindstone/mortar at west end.	262
Figure 5.84	Detail of grindstone/mortar in Room10, from north.	262
Figure 5.85	Pit beside east wall of Room12; with Room 11 at higher level beyond.	262
Figure 5.86	Pit in Room. 12. Grindstone in wall behind.	263
Figure 5.87	Limestone 'mace head' fragment (16-N-13/1).	263
Figure 5.88	View north across site with modern stone buildings behind.	263
Figure 5.89	Pottery sample from [16-N-13] (scale 1:4).	263
Figure 5.90	Plan of medieval structures (A,B) and remnants of workshop site (C) [16-N-	204
Figure 5.50	14].	266
Figure 5.01		266
Figure 5.91 Figure 5.92	Medieval pots (16-N-14/1-2) from Structure A. Medieval bowl with stamped centrepiece and incised designs from Structure	200
Figure 5.52	A (16-N-14/3).	267
Figure 5.02	Bowl (16-N-14/5), from Structure C.	267
Figure 5.93		
Figure.4.94	Pottery from area of (16-N-14) Structure C (scale 1:4).	267
Figure 5.95	Location of stone structures [16-N-24] and nearby sites, including several	969
E	'game-drive' walls.	268
Figure 5.96	View to southwest over structure ('House 1') of [16-N-24] under excavation.	268
Figure 5.07	Long wall running westwards visible on lower slope.	200 269
Figure 5.97	'House 1' under excavation.	269
Figure 5.98	Test excavation within [16-N-24] looking to northwest.	269 269
Figure 5.99	Test excavation within [16-N-24].	
Figure 5.100	Test excavation within [16-N-24].	269
Figure 5.101	Plan of excavated area within [16-S-7].	271
Figure 5.102	Pottery from [16-S-7].	272
Figure 5.103	Clay cylinders $(16-S-7/1)$.	272
Figure 5.104	Beads $(16-S-7/2)$.	272
Figure 5.105	Location of [16-S-8] on hilltop at south end of Duweishat. Several further	079
E'	(unregistered) clusters of structures are visible further east.	273
Figure 5.106	Unexcavated surface within area of [16-S-8] with stone alignments and	974
E	quantities of quartz debris visible on surface (view towards west).	274
Figure 5.107	Plan of area of test excavation within [16-S-8].	274
Figure 5.108	Room 1 in [16-S-8] looking north across room towards work space and pit	274
Figure 5 100	against north wall and entrance to subfloor bin on left.	274
Figure 5.109	Work place with pierced orthostat and other features in Room 1	075
E	(looking west).	275
Figure 5.110	Entrance to subfloor stone-lined bin in Room 1 [16-S-8].	275
Figure 5.111	Stone features in floor of Room 2, [16-S-8] (looking towards south wall).	275
Figure 5.112	Plastered stone-lined bin with raised surround in southeast corner of Room 2,	070
E	[16-S-8].	276
Figure 5.113	Mud plastered feature, probably a quern emplacement, Room 2, [16-S-8].	276
Figure 5.114	View east along Room 3 [16-S-8] to hilltop beyond.	276
Figure 5.115	Bin area with some surviving plastered floor at north end of Room 6	070
	[16-S-8].	276

Figure 5.116	Chert blade (16-S-8/1).	276
Figure 5.117	Pottery sample from test excavation of (16-S-8) (scale 1:4).	277
Figure 5.118	Location of [16-S-2] with further workshop sites [16-S-9] on high ground	
	to east.	279
Figure 5.119	Location of [16-S-9] and nearby sites.	280
Figure 5.120	Detail of main components of [16-S-9], with test excavation (1) and other	201
	structures (2-8). Air photograph taken when Nile levels falling.	281
Figure 5.121	View along north wall of Room 6 with stone bins and pit (centre).	281
Figure 5.122	Southwest corner of Room 6 with bin, and grindstones; looking west with	201
	river, islands and west bank beyond.	281
Figure 5.123	Plan of [16-S-9] building complex (House 1).	282
Figure 5.124	Stone-lined bin in Room11 (entrance to Room 4); looking south.	283
Figure 5.125	Stone features (bins?) along north wall of Room 7.	283
Figure 5.126	Stone features (bins?) along east wall of Room 8.	283
Figure 5.127	Stone features (bins?) on east side of Room 8.	283
Figure 5.128	View east into corridor Room 9.	284
Figure 5.129	Room 14 with Room 8 beyond.	284
Figure 5.130	Grinder setting in Room 10 on east side of complex.	284
Figure 5.131	Stone-lined bin, with stone base, in Room 15, at southwest side of site. $P_{1} = \frac{1}{2} \left(\frac{16}{2} + \frac{1}{2} \right)^{-1}$	284
Figure 5.132	Bone beads (16-S-9/1), restrung.	284
Figure 5.133	Pottery sample from [16-S-9].	285
Figure 5.134	View east across north of [16-S-9] test excavation, with locations of other	000
E	structures indicated on higher ground.	286
Figure 5.135	Location of inscription amongst rock drawings (16-V-22). Inscription $(16 \text{ V} 22/1)$	287
Figure 5.136	Inscription (16-V-22/1).	288 289
Figure 5.137 Figure 5.138	Location of [16-U-46] on west bank opposite Sahaba village. Plan of [16-U-46].	289 290
Figure 5.139	North end of site, looking upslope to north over bins in area 4.	290 291
Figure 5.140	Medieval (?) stone and mud bins in area 4.	291
Figure 5.141	Grindstone emplacement at north end of Room 5.	291
Figure 5.142	Buried jars in floor of Room 6.	291
Figure 5.143	Room 9 and Room 7 beyond.	292
Figure 5.144	View across [16-U-46] to south (east) bank and Sahaba village.	292
Figure 5.145	Sandstone bowl (16-U-46/1).	292
Figure 5.146	Stone axe $(16-U-46/2)$.	293
Figure 5.147	Copper alloy scale or sheathing (?) (16-U-46/4).	293
Figure 5.149	Mud object (16-U-46/6) with impressed decoration.	293
Figure 5.150	Pottery from [16-U-46].	293
Figure 5.151	Registered small finds from [16-U-46], all (scale 1:2) except stone bowl (16-U-	400
	46/1) (scale 1:3).	294
Figure 5.152	Pottery (date uncertain) from [16-U-46] (scale 1:6).	295
Figure 5.153	Melk en Nasr area between Tangur and Turmukki islands and approximate	
0	location of inscriptions [16-U-60*] and [16-U-61*] near Sahaba village.	296
Figure 5.154	Locations (approximate) of four groups of New Kingdom inscriptions and	
0	graffiti in Tangur-Sonki area [21-E-11* to 21-E-14*] on east bank and [21-D-	
	31*] on west bank, above the Tangur cataract. Other sites in [21-D] and	
	[21-E] registered by ASSN also indicated.	298
E'. 0.01		000
Figure 6.01	District of Sonki and northern end of Ukma and Akasha.	300
Figure 6.02	Districts of Ukma and Akasha.	301
Figure 6.03	The area between Akasha and Kulub/Kulubnarti.	302
Figure 6.04	The southern end of the ASSN survey area, between Kulubnarti and Dal.	303
Figure 6.05	Location of [21-I-19] and nearby sites at Sonki West.	304

Figure 6.06	Site Plan [91 I 10]	305
Figure 6.06 Figure 6.07	Site Plan [21-I-19]. Grave 1 [21-I-19] from northwest end. Cup and jar in corner of grave.	305 305
Figure 6.08	Plan and section of grave 1 [21-I-19].	305 305
Figure 6.09	Cup and bottle from Grave 1 [21-I-19].	305 306
Figure 6.10	Cup and bottle from Grave 1 [21-I-19] (scale 1.4).	306
Figure 6.11	Grave 2 [21-I-19] from east end. Further subrectangular pits around grave.	306
Figure 6.12	Plan and section of grave 2 [21-I-19].	307
Figure 6.13	Cup and bottle from Grave 2 [21-1-15].	307
Figure 6.14	Cup and bottle from grave 2 [21-1-19].	307
Figure 6.15	Plan and section of eroded grave 3 [21-I-19] and faience vessel from fill.	308
Figure 6.16	Faience vessel from fill of grave 3 [21-I-19] (SNM.19513).	308
Figure 6.17	Child burial grave 4 [21-I-19].	308
Figure 6.18	Pottery from grave 4 fill [21-I-19].	308
Figure 6.19	Location of [21-H-16], with cemetery [21-H-4] to north.	309
Figure 6.20	Plan of cemetery [21-H-16].	310
Figure 6.21	Plan of grave 1 [21-H-16] with upper burials (top) and lower adult (bottom)	010
ingulo 0.21	burial, and finds' locations.	311
Figure 6.22	Lower adult female burial in grave 1 [21-H-16].	311
Figure 6.23	Pottery from grave 1 [21-H-16] (scale 1:4).	312
Figure 6.24	Ovoid jar with incised potmark (21-H-16/1/7).	312
Figure 6.25	Jars and beer bottle (21-H-16/1/4-6).	312
Figure 6.26	Travertine (?) and carnelian earrings (21-H-16/1/1).	312
Figure 6.27	Earring $(21-H-16/1/2)$.	312
Figure 6.28	Necklace (21-H-16/1/8) with carnelian amulets and faience beads.	313
Figure 6.29	Carnelian and calcite earrings (21-H-16/1/3).	313
Figure 6.30	Necklace (21-H-16/1/9) of 4 bead strands – restrung.	313
Figure 6.31	Bracelet $(21-H-16/1/10)$ of faience beads.	313
Figure 6.32	Green steatite scarab (21-H-16/1/11).	314
Figure 6.33	Earrings, beads, amulets and scarabs from grave 1 [21-H-16] (scale 1:1).	315
Figure 6.34	Grave 2 [21-H-16], plans of superimposed burials (A-F) and section.	316
Figure 6.35	Burials B and C.	316
Figure 6.36	Burials C and sarcophagus of D, from west.	316
Figure 6.37	Details of sarcophagus plaster fragments from burial D.	316
Figure 6.38	Burials D,E,F and pottery, from east.	317
Figure 6.39	Burials D,E,F and pottery, from west.	317
Figure 6.40	Sketch of wooden coffin with painted plaster lid holding burial D, (for colours	
0	of decoration, see above).	317
Figure 6.41	Jars and bowls from grave 2 [21-H-16].	318
Figure 6.42	Jars and Bowls (1-4) from grave 2 [21-H-16] (scale 1:4).	318
Figure 6.43	Plan of grave 3 [21-H-16] blocking and section, with successive burials.	318
Figure 6.44	Dom palm coffin of Burial A, jar (1) and Bowl (2).	319
Figure 6.45	Burial A uncovered; Burial B below.	319
Figure 6.46	Burial C and associated pottery $(4,6)$ by head; (5) in mouth of jar (7) .	319
Figure 6.47	Burial D with child burial beside it.	319
Figure 6.48	Burial G and lowest levels of pottery becoming visible.	320
Figure 6.49	Jar, bowl and scarab with (21-H-16/3) Burial A.	320
Figure 6.50	Jars and bowl, with (21-H-16/3) Burial C.	320
Figure 6.51	Bottle (21-H-16/3/7) and black painted decoration. With Burial D or E?	320
Figure 6.52	Jar (21-H-16/3/8); possibly with Burials D/E?	321
Figure 6.53	Plans of grave 3 [21-H-16] successive burials and associated artefacts.	321
Figure 6.54	Restrung bead necklace (21-H-16/3/10) with scarabs.	322
Figure 6.55	Glazed steatite scarab (a) from necklace (21-H-16/3/10).	322
Figure 6.56	Glazed steatite scarab (b) from necklace (21-H-16/3/10).	322

Figure 6.57	Earring (21-H-16/3/21).	322
Figure 6.58	Restrung bead necklace (21-H-16/3/11).	322
Figure 6.59	Earring (21-H-16/3/26).	322
Figure 6.60	Wooden kohl stick (21-H-16/3/9).	322
Figure 6.61	Jars and bowl with grave 3 [21-H-16], Burials G/H/I.	323
Figure 6.62	Carnelian earring $(21-H-16/3/19)$.	323
Figure 6.63	Jars and bowls with grave 3 [21-H-16], Burials J/K/L/M.	323
Figure 6.64	Shell earrings (21-H-16/3/17), Burial J.	324
Figure 6.65	Shell earrings (21-H-16/3/16), Burial M.	324
Figure 6.66	Beads, scarabs, earrings and kohl stick from grave 3 [21-H-16] (scale 1:1).	324
Figure 6.67	Pottery from grave 3 [21-H-16] (1:4).	325
Figure 6.68	Grave 3 [21-H-16] before excavation.	326
Figure 6.69	Plan and section grave 4 [21-H-16].	326 297
Figure 6.70	Carnelian arrow head (21-H-16/1/0); surface find.	327
Figure 6.71	Location of [21-H-11] and [21-H-10].	328
Figure 6.72	Location plan of three graves in [21-H-11].	329
Figure 6.73	Grave 1 [22-H-11], from north. Plan of superstructure and shaft grave 1 [21-H-11].	329 329
Figure 6.74		329 329
Figure 6.75	Shaft and uncompleted chamber of grave 1 [21-H-11], from east.	329 330
Figure 6.76	Sections across shaft and superstructure (21-H-11/1). Reconstructed bowls from (21-H-11/1) (1:4).	330 331
Figure 6.77		331
Figure 6.78	Shaft and collapsed chamber entrance of Grave 2 [21-H-11], from east.	332
Figure 6.79 Figure 6.80	Plan and section of Grave 2 [21-H-11]; with location of qadus jar. Qadus jar (21-H-11/2/A) (scale 1:6).	333
Figure 6.81	Qadus jar (21-H-11/2/A).	333
Figure 6.82	Grave 3 [21-H-11], from southeast.	333
Figure 6.83	View to southeast over area of grave 3 [21-H-11] towards river and hamlet of	333
Figure 0.05	Milamla.	333
Figure 6.84	Plan and section of grave 3 [21-H-11].	334
Figure 6.85	Pilgrim flask (Marl B), reconstructed (21-H-11/3/1).	334
Figure 6.86	Reconstructed amphora (21-H-11/3/2) (1:6) and Pilgrim Flask (21-H-11/3/1)	551
rigure 0.00	(scale 1:4).	335
Figure 6.87	Plan of cemetery [21-H-10].	337
Figure 6.88	Plan and section of grave 1 [21-H-10].	338
Figure 6.89	Grave 1 [21-H-10] looking west, with rubble mound beyond.	339
Figure 6.90	View into shaft of grave 1 [21-H-10] covering slab in place.	339
Figure 6.91	Entrance and chambers of grave 1 [21-H-10].	339
Figure 6.92	Pottery sample from grave 1 [21-H-10] (scale 1:4).	340
Figure 6.93	Fragmentary bowl (21-H-10/1/1).	340
Figure 6.94	Grave 2 [21-H-10].	341
Figure 6.95	Beads (21-H-10/2/1).	341
Figure 6.96	Grave 3 [21-H-10] under excavation with bowl in upper fill.	341
Figure 6.97	Grave 3 [21-H-10].	342
Figure 6.98	Grave 3 [21-H-10], detail of head.	342
Figure 6.99	Grave 3 [21-H-10].	342
Figure 6.100	Handmade bowl (21-H-10/3/1).	342
Figure 6.101	Grave 4 [21-H-10].	342
Figure 6.102	Grave 4 [21-H-10].	343
Figure 6.103	Grave 5 [21-H-10], from east.	343
Figure 6.104	Grave 5 [21-H-10].	343
Figure 6.105	Grave 6 [21-H-10].	343
Figure 6.106	Beads (21-H-10/6/1).	343
Figure 6.107	Grave 7 [21-H-10].	344
-	-	

Figure 6.108	Grave 7 [21-H-10].	344
Figure 6.109	Grave 8 [21-H-10].	344
Figure 6.110	Grave 8 [21-H-10].	344
Figure 6.111	Beads (21-H-10/8/2).	345
Figure 6.112	Glass beads (21-H-10/8/1 and 3).	345
Figure 6.113	Grave 10 [21-H-10].	345
Figure 6.114	Grave 10 [21-H-10].	345
Figure 6.115	Grave 11 [21-H-10].	346
Figure 6.116	Grave 11 [21-H-10].	346
Figure 6.117	Grave 13 [21-H-10].	346
Figure 6.118	Bowl (21-H-10/13/1).	346
Figure 6.119	Bowl and jar (21-H-10/13/1-2) (scale 1:4).	347
Figure 6.120	Grave 14 [21-H-10], from east.	347
Figure 6.121	Grave 14 [21-H-10].	347
Figure 6.122	Faience ring (21-H-10/14/1).	348
Figure 6.123	Carnelian pendant (21-H-10/14/2).	348
Figure 6.124	Beads (21-H-10/14/3).	348
Figure 6.125	Grave 15 [21-H-10].	348
Figure 6.126	Grave 15 [21-H-10].	348
Figure 6.127	Superstructure over Grave 16 [21-H-10].	349
Figure 6.127	Grave 16 [21-H-10].	349
Figure 6.128	Grave 16 [21-H-10].	349
Figure 6.129	Grave 17 [21-H-10].	349
Figure 6.130	Grave 17 [21-H-10].	349
Figure 6.131	Grave 18 [21-H-10].	350
Figure 6.132	Grave 18 [21-H-10].	350
Figure 6.133	Ring, beads and pendant from Grave 14 (21-H-10/14/1-3) and calcite vessel	
8	fragment $(21-H-10/x)$ (scale 1:1).	350
Figure 6.134	Calcite vessel fragment, (21-H-10/x); surface find.	351
Figure 6.135	Pit 9 and jar, [21-H-10].	351
Figure 6.136	Pit 12 and jar with stone covering its mouth, [21-H-10].	351
Figure 6.137	Pits 9 and 12 [21-H-10].	351
Figure 6.138	View over lower wadi and location of rock drawings on rock outcrop [22-I-	
8	34*/E], originally registered as [21-H-21/E].	352
Figure 6.139	Southwest face of rock outcrop with drawing groups [21-I-34*/E17-18].	353
Figure 6.140	Detail of drawings and inscription on [21-I-34*/E17].	353
Figure 6.141	View east over location of [21-I-34*/E] below wadi, now masked by recent	000
8	alluvium. (photo W.V. Davies 2015)	353
Figure 6.142	Location of inscriptions [21-S-29] and nearby sites.	355
Figure 6.143	View up hillside towards inscriptions A-C [21-S-29].	355
Figure 6.144	Inscription A, of Ahmose recording presence of Amenmose, Year 2 of	
8	Thutmose I. Additional inscriptions to right.	356
Figure 6.145	Inscription 'face B', [21-S-29].	356
Figure 6.146	Inscription 'face C', [21-S-29].	356
Figure 6.147	Inscription 'face D', [21-S-29].	356
Figure 6.148	Inscription 'face E', [21-S-29].	357
Figure 6.149	Inscription 'face F', [21-S-29].	357
Figure 6.150	Inscription 'face G', [21-S-29].	357
Figure 6.151	Northern end of main hill at Akasha West, viewed from near the river	507
	(2015).	358
Figure 6.152	Inscriptions of Thutmose I and others (Faces A-C).	359
Figure 6.153	Copy of inscription of Thutmose I (Face A).	360
Figure 6.154	Inscription of Nehy (Face A).	360
- 19410 0.101	monthash or rout (race ra).	500

Figure 6.155	Inscriptions of Ahmose-Pennekhbet (left) and Minmose and Menkheper (right)	260
	(Face B).	360
Figure 6.156	Inscription of Amenhotep (Face B).	360
Figure 6.157	Inscription of Minmose (left) and a scribe (right) (Face C).	361
Figure 6.158	Inscription (upper) of King's son Uadjmose; (lower) remnant of inscription	961
Eigung 6 150	(Face D). Incomination of Suitable (Face D)	361 361
Figure 6.159	Inscription of Sutekh (Face D).	361 361
Figure 6.160	Inscription of Great king's wife (Face E). (Photo Bert Verrept).	361
Figure 6.161 Figure 6.162	Inscription of Siamun and (left) unclear inscription (Face F). Rock with inscriptions and indigenous drawings (Face G).	362
0		362 362
Figure 6.163 Figure 6.164	Inscription of Hatia (Face G). Inscription of scribe, name unclear (Face G).	362 362
Figure 6.165	Inscription of scribe, name uncertain (Face G).	363
Figure 6.166	Location of [21-S-13] on west side of wadi leading south from Akasha.	364
Figure 6.167	Grave 1 [21-S-13].	364 364
Figure 6.168	Excavated cleft/crevice Grave 1 [21-S-13], looking west.	365
Figure 6.169	Detail of upper part of burial in Grave 1 [21-S-13].	365
Figure 6.170	Bowl (21-S-13/1).	365
Figure 6.171	Bowl $(21-S-13/1)$. Bowl $(21-S-13/1)$ (scale 1:4).	365
Figure 6.172	Location of [21-S-32] and medieval/Meroitic cemetery [21-S-31] to west of	505
Figure 0.172	Kulubnarti island	366
Figure 6.173	Location plan of two graves [21-S-32].	367
Figure 6.174	View west across area of [16-S-32] with burials; Grave 2 near centre.	367
Figure 6.175	Beads (21-S/-32/1/1).	367
Figure 6.176	Saucer (21-S-32/1/2) (scale 1:4).	367
Figure 6.177	Saucer (21-S-32/1/2).	367
Figure 6.178	Grave 1 [21-S-32], from east.	368
Figure 6.179	Plan and section of Grave 1 [21-S-32].	368
Figure 6.180	Plan and section of Grave 2 [21-S-32] One stone slab, possibly from original	000
inguie 0.100	covering at east end.	369
Figure 6.181	Grave 2 [21-S-32], from east.	369
Figure 6.182	Location of inscriptions [21-X-12*] and [21-X-13*] and other sites in Kulb East.	370
Figure 6.183	Location of site [21-V-26] and nearby sites on west bank at Dal.	371
Figure 6.184	Location of [21-V-20] and nearby inscriptions on the east bank [3-B-2] and	
8	on Asruniya island [3-B-16]. The southern boundary of the ASSN survey	
	crossed Tina island.	372
Figure 6.185	Two inscriptions (21-V-20/A-B) on boulder face, from north.	373
Figure 6.186	Detail of (21-V-20/A) (photo A. J. Mills, April 1968).	374
Figure 6.187	Detail of (21-V-20/B) (photo A. J. Mills, April 1968).	374
Figure 6.188	View of Tina island from east bank. Inscriptions are at north (right) end of	
0	island (photo W.V. Davies, 2014).	375
Figure 6.189	Boulder with two inscriptions, from river (photo W. V. Davies, 2014).	376
Figure 6.190	Tina Island, two Nile-level inscriptions of Senwosret III, (photo W.V. Davies,	
0	2014).	377
Figure 7.01	Sites in Gemai-Murshid area (180m contour approximates to flood level).	380
Figure 7.02	Sites in northern Saras (180m contour approximates to flood level).	381
Figure 7.03	Sites in area of Askut (180m contour approximates to flood level).	381
Figure 7.04	Askut, Kajnarti and nearby sites.	382
Figure 7.05	Sites in southern Saras area (180m contour approximates to flood level).	383
Figure 7.06	Workshop sites [11-Q-59], [11-Q-61], [11-Q-62] and [11-Q-63] and	
	nearby cemeteries/burials [11-Q-36], [11-Q-57] and [11-Q-65] with 'late	
	C-Group'/'Kerma' and/or New Kingdom burials.	384

Figure 7.07	Site distribution within Saras region (180m contour approximates to flood level).	385
Figure 7.08	Site distribution within Semna region (180m contour approximates to	505
	flood level).	387
Figure 7.09	Site distribution within Duweishat region (180m contour approximates to	
-	flood level). Some sites survive above flood levels to southwest of Shuwerta	
	and in (unsurveyed) areas away from river. Location of 'Kerma' workshop site	
	[16-S-16] also indicated.	389
Figure 7.10	Site distribution within Melk en Nasr - Tangur - Sonki region (180m contour	
	approximates to flood level).	390
Figure 7.11	Site distribution Ukma -Akasha to Dal (180m contour approximates to flood	
	level). Two sites with inscriptions ([3-B-16] and [3-B-3]) recorded by Vila lay	
	just to the south of the ASSN survey concession.	391
Figure 7.12	Buildings of modern mines at Duweishat Manjam, from north (1964).	399
Figure 7.13	Aerial photograph detail of Duweishat area including some mining areas	
	(Duweishat 2 and 7) of the interior (cf. Klemm and Klemm 2013, fig.6.209).	399
Figure 7.14	Area of quartz mining, before (left) and after (right) test excavation;	
	[11-Q-60] in Saras East (1965).	400
Figure 7.15	Mine adit in Duweishat interior, probably in area of mining areas 1 or 2	
	(1964).	400
Figure 7.16	Grindstones and rubbers/grinders, Duweishat site [16-O-2]. Several mortars/	
	anvils in walls behind.	401
Figure 7.17	Varied grindstone forms, Duweishat site [16-O-2].	401
Figure 7.18	Large grindstone with prominent (here horizontal) striations and 'leather-like'	
	residues on the surface. This example is also identified as [11-Q-62/1) in	
	photographic records.	402
Figure 7.19	Large grinder on one of two adjoining stone stands, Saras site [11-Q-62].	402
Figure 7.20	Stone stand for larger grindstone, Saras site [11-Q-61].	402
Figure 7.21	Stone stand for larger grindstone, Duweishat site [16-S-9].	403
Figure 7.22	Rounded mortar (?) also used for grinding set in floor level, Saras [11-Q-61].	403
Figure 7.23	Detail of grinding emplacement, Saras [11-Q-62].	403
Figure 7.24	Mortar/anvil amongst quartz chippings, Saras [11-Q-62].	403
Figure 7.25	Example of mortar/anvil set in floor levels with some surviving laid mud	
	surface beside it and a larger (associated ?) grindstone, Saras [11-Q-63], room 11.	404
Figure 7.26	Mortars/anvils in wall fabric of Saras site, [11-Q-62].	404
Figure 7.27	Mortars/anvils set beside wall fragment in uncertain context, Saras site	
	[11-Q-62]. These examples could relate to an earlier phase of the	
	workshop's use.	404
Figure 7.28	A cluster of pounders/grinders and partially preserved floor surface, Saras site	
	[11-Q-62].	404
Figure 7.29	Stone-lined tank/bin.	405
Figure 7.30	Stone-lined tank/bin.	405
Figure 7.31	Work-station and storage pit at Duweishat site [16-S-8].	405
Figure 7.32	'Kerma/C-Group' workshop site [16-S-16] under excavation, 1967.	406
Figure 7.33	Scarabs and seals.	409
Figure 7.34	Faience beads and carnelian Bes amulets (21-H-16/1/8).	410
Figure 7.35	Copper alloy tools and other artefacts from the Saras workshops.	410
Figure 7.36	Abandoned pottery within Semna East workshop [16-E-21].	411

Appendices

Figure 8.01	Example of field notebook record for site [11-Q-59], from November 1965	
-	(notebook AJM VII, for 1965-1966).	416
Figure 8.02	Details of annotated site plan (scale 1:50) of initial test excavation at site	
	[11-Q-59]. Stone construction was represented schematically.	417
Figure 8.03	Example of object finds card: dish (11-Q-63/1), registered as SNM.18319.	418
Figure 8.04	Record sheet for Grave 3, site [21-H-6] showing arrangement of multiple	
	burials.	419
Figure 8.05	Detail of record sheet for Grave 3, site [21-H-6].	420
Figure 8.06	Record sheet of finds from Grave 1, site [21-H-6].	421
List of Table	es	

Table B.1	Concordance of Site registration numbers.	422
Table C.1	Register of finds and Sudan National Museum (SNM) numbers.	424

1. Introduction

The Archaeological Survey of Sudanese Nubia (ASSN)

Of the Nubian Archaeological Campaigns (see Adams 1992) responding to the construction of the Aswan High Dam, the survey and excavations carried out within Sudanese Nubia represent the most substantial achievement of the larger enterprise. Many components of the larger project of the UNESCO – Sudan Antiquities Service Survey have been published, in addition to the reports of a number of other major projects assigned separate concessions within the region. However, the results of one major element, the Archaeological Survey of Sudanese Nubia (ASSN) between the Second Cataract and the Dal Cataract remain largely unpublished. This volume is the first of a series which aims to bring to publication the records of the ASSN. These records represent a major body of data relating to a region largely now lost to flooding. This is also a region of very considerable importance for understanding the archaeology and history of Nubia more generally, not least in relation to the still often poorly understood relationships between Lower Nubia to the north and the surviving areas of Middle and Upper Nubia, to the south.

The ASSN project fieldwork was undertaken over six years between 1963 and 1969, investigating c.130km of the river valley between Gemai, at the south end of the Second Cataract, and Dal. A first reconnaissance survey traversed the whole region in 1963–64, passing through the administrative villages of Gemai, Saras, Semna, Attiri, Duweishat, Ambikol, Melik en Nasr, Songi, Ukma, Akasha, Kulb, Dakki and Dal (figs 0.1–2). During that initial reconnaissance, the first archaeological investigation of any kind in many of those areas, c.240 sites were located and registered (Mills 1965). That work started on the 22nd December 1963 and reached the end of the concession at Dal on 14th April 1964. Beginning 4th November 1964, the ASSN survey team began to survey and excavate areas and sites not otherwise assigned to other missions, starting at Gemai, the most imminently threatened area. During that season it completed the survey of areas south of Gemai as far as Saras, investigating 69 sites between November 1964 and April 1965. A preliminary report on that work was published soon afterwards (Mills and Nordström 1966; see also Robinson and Hewes 1966).

The third field season (October 1965-March 1966) covered the region between Saras and Semna, recording a further 101 sites; a report relating to this was published in the next volume (for 1967–68) of *Kush*, albeit delayed for some years (Mills 1973). Reports on the subsequent seasons were not however forthcoming following the lapse of the journal *Kush* (not revived until 1993), so even preliminary published reports have been lacking for the three later seasons. Of those the 1966–67 season focused mainly on excavations in the Semna-Attiri area, while the final seasons, in between November 1967 – April 1968 and October 1968 – April 1969 took the survey southwards to Dal.

The final stages of fieldwork were largely completed in April 1969 with the excavation of the large Kerma cemetery [21-H-4] at Ukma West, under the direction of André Vila (Vila 1987). The consolidation and removal of a painted altar from a medieval (monastic?) site [21-N-11] at Akasha West represented the final site-based work, completed in mid-May, after which the field team returned to Wadi Halfa, leaving for Khartoum on the 21st May 1969.

The fieldwork carried out between Gemai and Dal by the ASSN teams was complemented by the work of a number of other projects. An early and important contribution was made by the German Epigraphic Mission led by Professor Fritz Hintze (Hintze 1963, 1964, 1965; Hintze and Reineke 1989). They explored the whole area due to be flooded both north and south of the

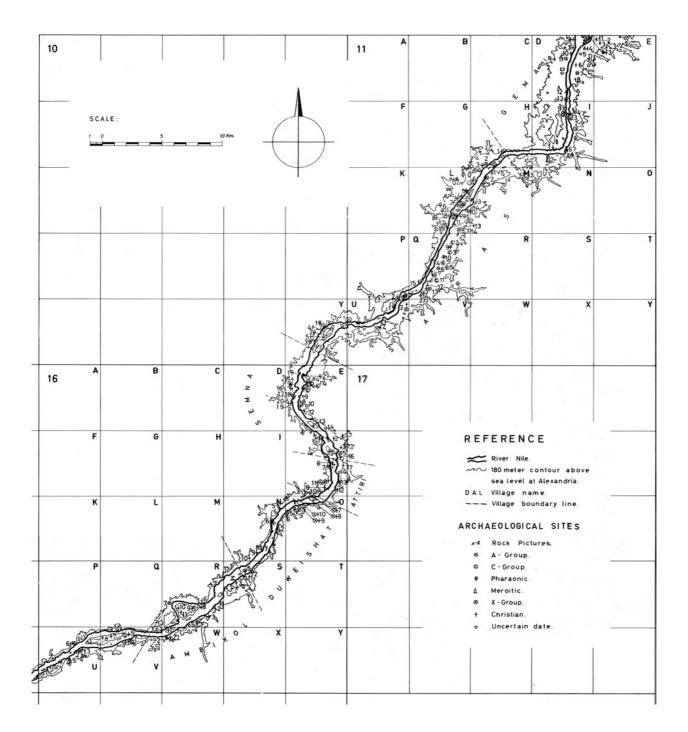


Figure 1.01 Northern end of ASSN Survey area, with sites identified during 1963–64 reconnaissance survey, between Gemai and Ambikol (based on Mills 1965, fig.1).

Second Cataract, with a brief to record the rock art and inscriptions (see below).¹ Parts of the east bank between Gemai and Firka were also investigated by a team from Columbia University² with a particular interest in the earlier prehistory and geology, in the field over the winter of 1961–62 (Solecki 1963). Further survey and site investigations of a range of prehistoric sites of the west bank was later undertaken by a team from the University of Colorado Nubian Expedition over two fieldwork seasons in 1964–1965 and 1965–66 (Hewes 1966; Carlson and Sigstad 1973).

A number of more localized concessions were also allocated to other projects. Following the

¹ Nubien-Expedition der Akademie der Wissenschaften, Berlin, DDR

² In some records this is also identified as the New Mexico-Columbia Expedition (=NMC)

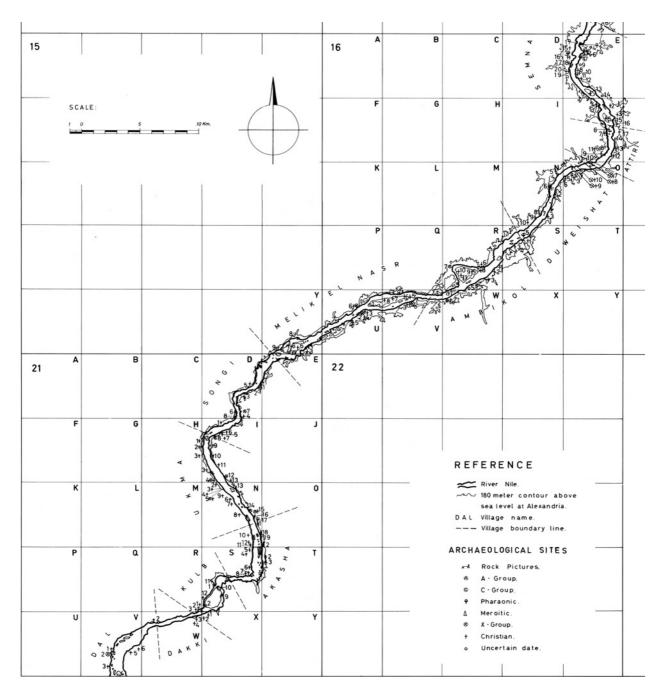


Figure 1.02 Southern end of ASSN Survey area, with sites identified during 1963–64 reconnaissance survey, between Semna and Dal (based on Mills 1965, fig.1).

initial reconnaissance survey of 1963–1964, 15km of the east bank from Gemai to Murshid was allocated for further investigation by the Finnish Nubian Expedition (FNE). The Finnish expedition conducted fieldwork between 21st December 1964 and 1st May 1965, their work including more extensive excavations on several sites identified by the ASSN reconnaissance. Its preliminary results were reported in the journal *Kush* (Donner 1973), and more fully in 1998 in a two-volume report (Donner 1998; see also Strouhal 1995). For the

sake of completeness, a summary of the results of the later work relevant to this volume is included here. The northernmost of the sites reported here (11-D-5 = FNE 15) lay c.1km south of the small groups of islands around Meili island, at the upstream end of the Second Cataract.

In the Saras area, the one major Middle Kingdom site which had not been investigated by Reisner's expedition, at Askut, was excavated over two seasons in 1962–1964 by a team from the University of California at Los Angeles (Badawy

1964, 1966; S.T. Smith 1995). At a similar time, further epigraphic and architectural studies were also made of the New Kingdom temples at Semna West and East (Kumma) by a joint expedition of the Egypt Exploration Society and Brown University (Caminos 1964, 1965, 1998a, 1998b). During 1966 an additional concession was allocated to the Oriental Institute Expedition to Sudanese Nubia (OINE) at Semna, in the central area of the region. This was focused on the Middle Kingdom fortified outpost at Semna South and an adjacent cemetery, and undertook two seasons of fieldwork in 1966–67 and 1967–68 (Žabkar and Žabkar 1982).

Further concessions were also allocated in the southern Batn al-Hajar, removing further areas from further ASSN investigations. On the west bank in the Songi (Sonki) area, an area of c.4km of the west bank was allocated to a team from the University of Rome (Donadoni 1970; Fanfoni 1979). A little upstream, a larger concession extending from Sonki East to Akasha (c.16km) on the east bank became the responsibility of a Swiss mission (Maystre 1970, 1975, 1980, 1996a, 1996b). In addition a group of medieval sites in the Melik en Nasr area (Sunnarti, Tangur and Turmukki) and at Kulb West were investigated by a German Archaeological Institute/University of Heidelberg team in 1967 and 1968 (Dinkler 1970, 1985; Rodziewicz 1972). As the ASSN Survey was drawing to a close, W. Y. Adams began new fieldwork on Kulubnarti in 1969, continued in1970 and again in 1979, mainly concerned with investigating the post-medieval (Islamic') archaeology of the island but later also excavating two medieval cemeteries (Adams 1994, 4-9).

What was soon apparent from the fieldwork undertaken in this region was the great density of sites identified and recorded. By the mid-1960s the results of early fieldwork within Egyptian Nubia have been drawn together and assessed in Bruce Trigger's still important synthetic study: History and Settlement in Lower Nubia (Trigger 1965). Mainly sites recorded by the First and Second Archaeological Surveys of Nubia, these included c.151 sites recorded during 1907-11, a further 76 sites during 1929-34 (see Adams 1977, 72-76), and c.70 sites recorded by the Sondage Survey of the Egypt Exploration Society during early 1961 (Smith 1962, 3). Trigger's analysis also identified a range of factors likely to have contributed to both the uneven recovery as well as uneven preservation of sites of various types and periods within this region (1965, 43–54).

The increasing intensity of fieldwork by the 1960s was soon reflected in its results. Within Sudanese Nubia in the area between the Egyptian-Sudanese frontier and the Second Cataract zone, the West Bank Survey subsequently recorded c.262 sites (Adams 2004, 1). The Scandinavian Joint Expedition (SJE) recorded c.490 sites over the corresponding area along c.60km of the east bank (Säve-Söderbergh 1992, 39), a total also including numerous rock drawing sites. As the SAS/UNESCO team had recognized during the later phases of their work (1961-62) within the Second Cataract zone, notwithstanding the rugged and inhospitable terrain south of Wadi Halfa this was not reflected in the number of sites encountered. As they recognized "the very barrenness ... has undoubtedly been responsible for the survival of minor remains which long since have disappeared had they been situated in more populous areas" (Adams and Nordström 1963, 11).

The subsequent work of the ASSN south of Gemai was to further demonstrate the often remarkable conditions of archaeological preservation at a more extensive regional scale. In this respect attention may also be drawn to experiences both of the Sudan Antiquities Service survey over c.64km of the Nile between Dal and Nilwatti which recorded more than 460 registered 'sites' (Vila 1979, 7-8) and the more than 700 sites identified in the often rugged Third Cataract region (Osman and Edwards 2012). More recently large numbers (still unquantified) of sites were identified in another sparsely inhabited cataract region during salvage work in advance of the Merowe Dam (Welsby 2003; Paner and Jakobielski 2005; Näser and Lange 2007; Wotzka 2012).

The ASSN Archive

The paper record produced by the project was extensive and built on the experience and practices of the earlier survey work downstream of Gemai and north of the Second Cataract (Adams 2004, 16–19). This included a handwritten field diary compiled by A. J. Mills, latterly archived as a typed document. Primary site records were compiled within a series of field notebooks, with details of individual sites recorded in one or more of these. These included 14 volumes compiled by A. J. Mills spanning the six field seasons from 1963 to 1969 (AJM II-XV), three by Bengt Schönbäck

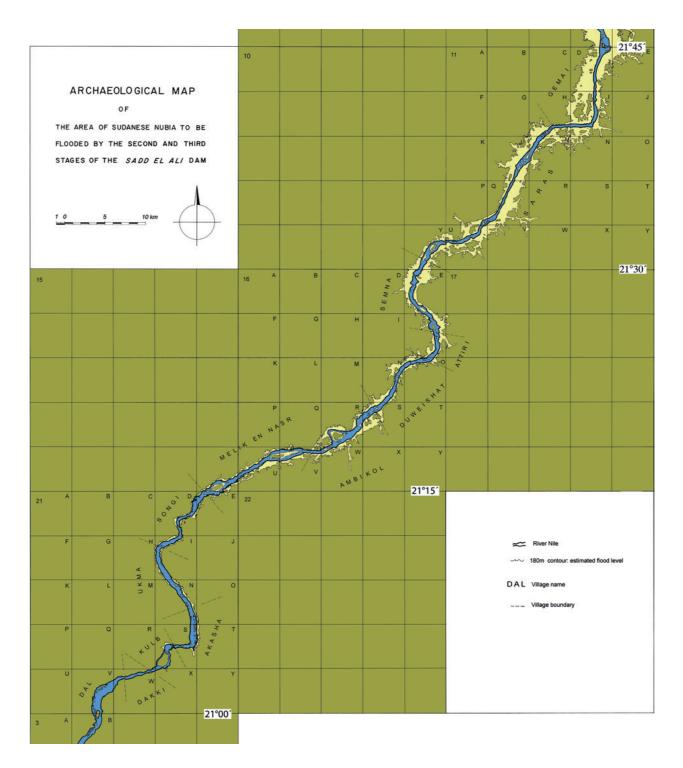


Figure 1.03 Survey area between Gemai and Dal. The 180m contour corresponded with the expected high water levels (based on Mills 1965, fig.1).

(BS I-III) for the 1967–6 season, four by J. E. Knudstad (JEK I-IV) and a further five for Lars Gezelius (Gez I-V) relating to sites examined during the seasons of 1967–68 and 1968–69. Some additional records were also made in one notebook of Nordström's (Nordström VII) as well as a volume prepared by W. Y. Adams (WYA

XII). While the notebooks commonly included sketch plans and object drawings as well as written descriptions for sites, these were supplemented where necessary by additional paper site plans, of various sizes, but most commonly on c.A3 size squared sheets. In earlier seasons these made use of proforma record sheets originally devised for the West Bank (Faras-Gemai) Survey. For excavated cemeteries these were commonly recorded as grave sheets for one or more burials with increasingly standardised formats. The quite standardized character and formatting of these records was developed to facilitate publication, and a quite similar format was later followed in the publications of the Dal-Nilwatti Survey. Examples of field notebook records and additional record sheets are illustrated in Appendix A.

The photographic archive relating to the ASSN Gemai-Dal Survey survey and excavations is substantial comprising more than 9000 images, as photographic negatives. These may be added to the c.3000 images in the archive of the West Bank Survey. Facilities for and practical experience in photographic work has already begun to be established in 1960 when the first fieldwork began in Sudanese Nubia and an associated documentation centre was established in Wadi Halfa. The development of the first phase of survey and excavation has been described elsewhere in the reports of the West Bank Survey (Adams 2004, 2005; Nordström 2014) and need not be repeated here. However, this early work was important in seeing the establishment of a photographic darkroom in Wadi Halfa as well as the acquisition of a series of field cameras, supplied by UNESCO, essential to the successful completion of the project. The museum assistant and photographer Arbab Hassan Hafiz also provided much valuable support for such work.

As described by Nordström, then as now, practical challenges of successful photographic work in the harsh Nubian environment were not inconsiderable. It is also evident from the archive how practical experience and expertise was accumulated over several years of fieldwork, producing an archive within which the generally high quality of the photographs is very evident. The very small number of poor quality images makes clear the care and attention taken in creating these records, care and attention perhaps less familiar in the age of almost limitless digital photography. The reasonably satisfactory condition of most of the photographic negatives some 50 years later may also be noted, although some physical deterioration is occasionally evident. Bearing this in mind, one early priority of this publication project has been to ensure the creation of digital copies of the whole photographic archive.³

The care and skill evident in the photographic archive has ensured that a large proportion of images are significant and suitable for publication, and it is assumed that the majority were prepared with that in mind. That the continuous pressure of work did not always allow the best conditions to be established for photographic recording is sometimes apparent, seen for example in rather ad hoc attempts of providing shade for photograph in a desert environment of bright sunlight and often deep shadows. While the field photographic record remains generally closely focused on site recording, some more general content may also be found amongst this archive. On occasions interesting and valuable landscape views were recorded, all too rare perhaps for a landscape which has since disappeared or been radically transformed. On some other occasions fleeting glimpses of Nubian communities just prior to their removal may also be seen. Such records are also all too rare with the limited ethnographic record made of this region prior to its inundation, although we may be grateful to the more informal photographic record made by Herman Bell during his work in the region 1962–1964 (Bell 2009).

This part of the archive forms a continuation of the photographic records relating to the initial UNESCO-Sudan Antiquities Service West Bank Survey project (Nordström 2014, 3). Following on from that, there was one series of 'field' photographs (prefixed with an F/), and a second consecutive series of films used for objects/'collections' (prefixed with a C/). The majority of the former were medium-format (120) films, while the object photographs were largely 35mm. The sequence of site films for the ASSN Gemai-Dal Survey comprise eight 35mm films,4 and c.330 films of medium format (sequence F/293-F/618). The object/finds films comprise films C/049-C/180, continuing the sequence of films (C/001-C/048) of the West Bank Survey (Nordström 2014, 3). In total these represent a total of c.4,300 site photographs and c.4,700 object photographs, although to these may be added some photographs within the West Bank Survey archive relating to the first season's work when both projects were underway.

³ The scanning of the photographic negative archive was assisted by a grant from the Sudan Archaeological Research Society in 2014, for which we are very grateful.

⁴ These include films F/197, 199, 200, 230–233, 260, 265; partly within the sequence used by the West Bank Survey.

A card index photographic record for Gemai-Dal Survey, begun for the West Bank Survey, is currently incomplete, but is being reconstructed as the publication programme develops, while also better integrating the paper and digital archives of both projects. A series of notebooks record on-site photography from 1964–1969. In addition the archive holds prints of c.850 aerial photographs (scale 1:15,000), most taken during late 1959, but with some earlier coverage (initiated by Jean Vercoutter) apparently dating to 1955–57 (Adams and Allen 1961).

Finds from sites were generally recorded in the field and those selected for retention were latterly photographed and registered into the Sudan National Museum (SNM) collections. These were recorded on standardized finds cards with descriptive information, generally including sketch drawings, record information and Sudan National Museum (SNM.xxx) registration number, as well as attached identification photograph. Identification numbers of small finds were allocated based on (AMS) site registration codes. An example finds card is also illustrated in Appendix A.

From Archive to Publication

Some further comments may here be offered concerning this publication programme and its objectives, and how it relates to the original fieldwork and its records. In the first instance it must be made clear that the primary objective remains to bring to publication, as far as possible, the existing archive in the form that it was originally created. Additional discussion and commentary is also added, in this volume mainly in section 7, but a priority remains to present the original data in a concise and accessible form. This follows a similar approach to the publications of the earlier West Bank Survey (Adams 2004 2005; Nordström 2014). In so doing, the publication has attempted to make the fullest use of the various elements of the original archive, using the original fieldnotes, drawings and site and object photographs. One more innovative feature of this work has however been to make better use of the extensive aerial photography archive to better visualise the archaeological sites within their landscape setting. This may be a first stage in rediscovering the landscapes of the Batn al-Hajar before their inundation. In so doing it has been felt desirable to make a full use of the aerial photographs the 1950s, in so doing

often being able to provide useful views of now lost landscapes.

In respecting the structure of the original site records, it has also been necessary to maintain the basic chronological scheme around which it was organized, in this case dealing only with sites identified as 'Pharaonic'. That there are many potential problems with the original chronological scheme is recognized, not least with the division made between 'Egyptian' Pharaonic and potentially contemporary 'Nubian' sites (identified as C-Group and/or Kerma). As scholarship of more recent decades has made clear, both in Nubia and more widely, such distinctions may often be very problematic, not least where such boundaries may often have become very blurred in the long history of Egyptian/Nubian encounters, colonial or otherwise. Addressing such problems and the more general interpretative issues raised in exploring the encounters between Egyptians and Nubians must however await the completion of the basic publication of the data. Where the records relating to the C-Group/Kerma sites recorded by the ASSN are much more substantial than those relating to the 'Pharaonic' sites presented here, it was not felt possible to further delay the publication of this first element of the larger archive. That the complete study of the full archive is likely to throw new light on a number of sites presented here also seems very likely.

On occasions, where some sites are already identified as likely to be relevant to these 'Pharaonic' sites, they have however been noted in the text. This has been the case for example with what may be termed a 'Late C-Group' cemetery at Saras East [11-Q-57] which may be dated to early Dynasty 18, in exactly the period when Egyptian/Nubian identities are becoming blurred. The presence of what appears to be a 'Kerma' workshop site close to the area of New Kingdom gold-working at Duweishat is also noted. It should also be noted here that a number of sites initially registered as 'Pharaonic' (and on occasions identified as such in early publications), but which now may be interpreted otherwise, have also been included here, to avoid as far as possible the creation of further uncertainties in published accounts. One exception has been a number of rock drawing sites, mainly around Kulubnarti which while identified as possibly 'Pharaonic' (Adams 1994, Table 1.1, 288), cannot be easily dated. These sites have not been included here as this attribution requires further investigation. These are however recorded in the site listing in Appendix B.

It should also be noted that individual site records were generally compiled in a format looking forward to publication rather than a subsequent separate phase of post-excavation analysis and interpretation. As such there is limited scope for further re-interpretation of the site records, and as far as possible the degree of editing of the records has been kept to a minimum, so as to maintain as far as possible its original form. The one most common amendment to the original texts has been to change site descriptions phrased in the present tense to the past, reflecting their subsequent loss. That a number of sites (or at least their location), mainly in the southern Batn al-Hajar, have however survived above the Nile waters has been noted on a number of occasions, where known. Similarly, as much as possible of the original records are presented here, both in terms of site drawings and photographs. At this stage the original record photographs of objects are presented. That many researchers would wish to have new (and colour) photographs of objects is understood, but the major undertaking of relocating and re-recording objects in the Sudan National Museum collections is beyond the scope of this publication project, however desirable. The basic format for presenting the general site records as well as specific site components (e.g. grave descriptions) also closely follows the format devised by the ASSN team and used quite systematically within their field records.

As is often evident with some of the uncertainties concerning the date of some sites reported here, understandings of Pharaonic pottery at the time of the ASSN survey were often inadequate. That this material was recorded prior to the very important study by Holthoer (1977) of the pottery from the Scandinavian Joint Expedition concession to the north must be borne in mind. The general recording of pottery followed practices then current, such as the EES project at Buhen where A. J. Mills had been working (during the 1960-61, 1961-62 and 1962-63 seasons) prior to the ASSN Survey, which itself looked back to typological studies established much earlier in Nubian archaeology (Emery et al. 1979, 160). As such, particularly where dealing with fragmentary sherd material, much of the archaeological potential of the material recovered was never adequately exploited. Observations on the production technology of pottery sought only to distinguish 'handmade' and 'wheelmade' pottery, while observations of fabrics and wares remained at a rather generalised level. Also following common practice of the time, record drawings of pottery were limited to more general formal records, mainly at a scale of 1:3. On occasions their scaled measurements also lack precision, although measurements were provided for most registered vessels on the finds registration cards. Where changes in width/height proportions of some Egyptian vessel forms have been recognized as chronologically significant (e.g. S. T. Smith 1995, 28–32) this 'vessel index' (VI) has been noted in the pottery records.

This lack of more detailed and nuanced recording can be especially frustrating where much progress has been made in the intervening years in developing more sophisticated understandings of Egyptian ceramic technology and its products. In view of this, the dating of pottery groups must often remain tentative, generally relying on the presence of more chronologically distinctive vessel forms. Where possible, likely dates for these have been noted, and we are very grateful for Lauriane Mielle [LM] for her work on reviewing this material. Pottery collections may be divided into two main bodies of material, those selected as individually registered finds and more general sherd collections, from within excavations and more general surface collections. Of the latter, the written records make clear that on occasions, some were examined by colleagues with more specialist expertise, notably W. Y. Adams in the case of Meroitic and a more recent pottery ('Christian' and 'Islamic'), and H-Å. Nordström for prehistoric pottery. Their comments, with annotations relating to wares and fabrics are on occasions added to the field notebooks.

Site registration and the Archaeological Map of Sudan (AMS)

The ASSN continued the site registration system initiated north of the Second Cataract, a system later pursued by F. Hinkel with the Sudan Antiquities Service with the aim to develop a definitive *Archaeological Map of Sudan* (Hinkel 1977). All sites were assigned registration numbers within this system as the work progressed, and considerable progress was made in establishing a primary database, both at the time and in subsequent discussions between A. J. Mills and F. Hinkel (especially in 1990) and with D. N. Edwards. However, while Hinkel was able to make some progress is publishing a number of regional volumes of the



Figure 1.04 Detail of aerial photograph (AP328230) of area of Turmukki island (Melik en Nasr), with site locations marked.

Archaeological Map of Sudan, a definitive listing of sites in this region has yet to be completed. While it may be hoped that one outcome of the ASSN publication programme will be to complete that task (if no longer envisaged in the same form), this remains an ongoing project. The current work has for example identified a number of instances where sites have been mis-located and consequently assigned incorrect registration numbers.

A more substantial task remains the integration of site registers of other projects working in the region, most importantly those of the Epigraphic Expedition of the German Academy of Sciences (Nubien-Expedition 1961–1963 der Akademie der Wissenschaften, Berlin, DDR). As was recognized at the time there was some duplication of site registration numbers in the early stages of the ASSN. As reported in preliminary reports, it was initially sought to avoid renumbering of sites where there has been duplication of 'epigraphic' site numbers and those assigned to archaeological sites (Mills 1965, 2; Hintze and Reineke 1989, 10–11; Otto and Buschendorf-Otto 1993, 13). However it was later recognized that this would be necessary and this process was begun, although not fully completed.⁵ At least one card index concordance was prepared by A. J. Mills, referring to 11 volumes of records prepared by the Rock Drawing survey registering 757 field files (*Feldakte*).⁶ Many of these had been assigned registration numbers which duplicated those of the main ASSN site register.

Integration of the large body of information collected by this team with the ASSN records was not completed at the time and presents a number of challenges. While the survey of rock drawings was published with an extended series of 46 maps,

⁵ The organising principles for site registration laid out by W.Y. Adams (1961) and later developed more fully by F. Hinkel (1977) in relation to the Archaeological Map of Sudan (A.M.S) clearly require a single unique reference for all sites

⁶ Note that Otto and Buschendorf-Otto indicate that 794 field files were created (1993, 13).

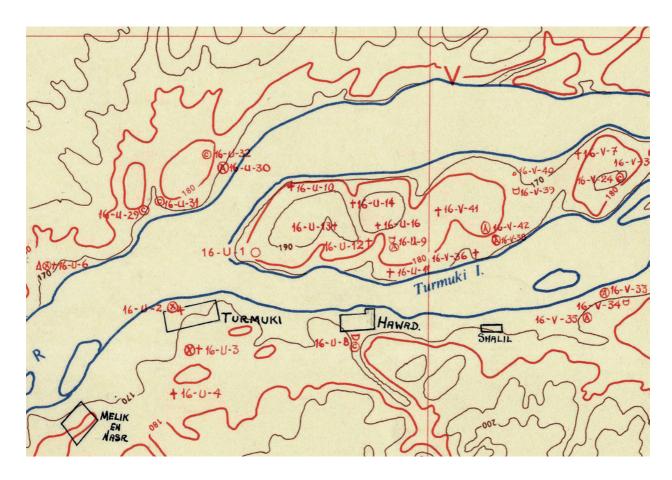


Figure 1.05 Detail of ASSN record map for Turmukki island area.

based on those also used by the ASSN, no such maps accompany the publication of the inscriptions (Hintze and Reineke 1989). This omission in itself creates practical problems for establishing basic documentation, and the exact location of some sites cannot always be established with confidence on the basis of the published records. More generally, however, the lack of topographical information also limits the possibilities for more detailed spatial analyses of such sites in within the landscape. On occasions, inscriptions and rock drawings were encountered together, some additional locational information may be extracted from the published records of the latter. Such shortcomings are of course by no means uncommon. Seidlmayer has recently drawn attention to similar issues encountered in older records of inscriptions in the Aswan area (2013, 206).

In relation to this volume only a small number of sites with Egyptian inscriptions/graffiti have been assigned new numbers (see also Appendix B). Most of these were required by the duplication of registration numbers although, as noted above, occasional examples have been encountered where sites were allocated numbers within the incorrect grid squares, which are now renumbered. With the more general requirement for the renumbering of rock drawing stations which will need to be undertaken the preliminary concordance also suggests it may on occasions be necessary to assign additional numbers to large groups of drawings initially registered under a single number.⁷

The last key aspect of the registration of sites was their mapping on the series of ten 1:25,000 topographic maps prepared by W. Y. Adams during 1960–61 (Adams 1992, 13). While fieldworkers downstream of Gemai had access to an excellent series of 1:25,000 topographic maps prepared for the Survey Department of Egypt,⁸ the only existing map coverage further south was the Sudan Survey 1:250,000 series. Once printed by the Sudan Survey Department in 1962 the

⁷ e.g. with 11 groups of drawings (Otto and Buschendorf-Otto 1993, 275-278) originally registered at Semna East/Kumma as (16-E-5), their renumbering as six 'sites' (16-E-42* to 16-E-47*) was proposed.

⁸ These maps were prepared for the Survey Department by the U.S. Army Corps of Engineers in 1955, based on aerial photographs of 1953

new 1:25,000 maps provided functional base maps for plotting sites. These were also used as the base maps for the publication of the German Epigraphic Expedition. While useful for the compilation of general mapping, the primary locational data remained based on the aerial photography, on which sites could be located with some precision (Adams and Allen 1961, 14). In addition to the marking of individual sites on the standard imagery, a series of 35 larger prints at a scale of c. 1:8,333 were made on which sites were marked directly. An example (fig.1.04), may be compared with the more schematic registration map (fig.1.05).

Nubian toponyms

It may also be appropriate here to provide some background to the toponyms by which sites are recorded here, and how these may relate to our wider understanding of placenames within this part of Middle Nubia. At this time, Herman Bell's fundamental study of the placenames of the region (Bell 1970), based on fieldwork carried out between 1962 and 1964 represents the most definitive record of the region's placenames, informed by his extensive knowledge of the Nubian (Nobiin) language. At the southern end of the survey around Dal some additional recording was undertaken by the SFDRA-Sudan Antiquities Service survey which continued the general survey upstream of the Dal cataract (Vila 1979, 63–64, fig.21). During the twentieth century various forms of toponyms are encountered in the archaeological records. In relation to the ASSN, the most common forms are those reproduced on the Sudan Survey 1:250,000 map series, which are supplemented by those which appear on the ASSN map coverage, elements of which are used in this report. As made clear by Bell in a number of studies (e.g. Bell 1970, 2018; Bell and Hashim 2002) a number of problems are commonly encountered in the way such toponyms have been represented. Here, while the most familiar forms of toponyms will continue to be used, additional information will also be provided on variants, including the more linguistically 'correct' forms. As an example, such well-known toponyms such as that of Gammai/Gemai may



Figure 1.06 ASSN staff of 1963–64 (reconnaissance survey) at Wadi Halfa. (left to right) Abdel Ghani Ali, Abdel Hadi Mohammed, ?, Mohammed Hamid, Said Beshir, Reis Ibrahim Mubarek, 'Satur'.

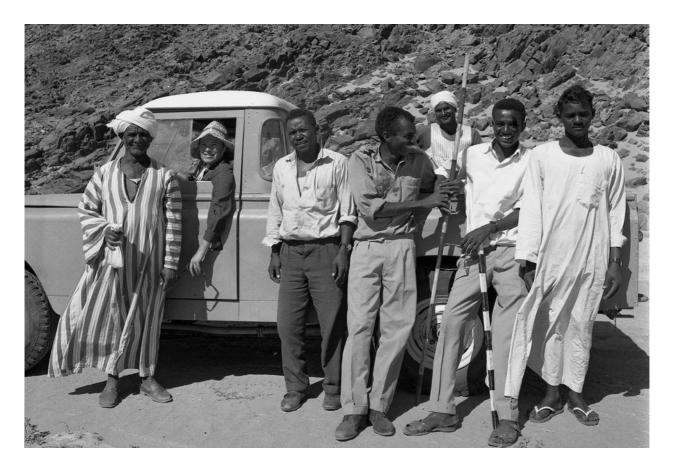


Figure 1.07 Reis Ibrahim Mubarek, Lesley Mills, Abdu Ferriq, Arbab Hassan Hafiz, Yusuf Mohammed Yussuf, ?, Mohammed Hamid.

be compared with a more correct form of *Jemey* (Bell 1970, 47). While such modern placenames are only indirectly relevant to the ancient sites and landscapes described here, these may prove of greater relevance in subsequent volumes dealing with the medieval and more recent archaeology of the region.

Acknowledgements

A first and fundamental acknowledgment is due to all those who undertook the fieldwork, both the expatriate staff, especially H-Å. Nordström, B. Schönbeck, L. Gezelius, A. Vila and J. Knudstad and their Sudanese and Egyptian staff. As recorded elsewhere (Adams 2004, 2–3) the Sudanese staff of the Antiquities Service provided essential practical support throughout, notably Thabit Hassan Thabit and Negm el-Din Mohammed Sherif then Inspector of Antiquities resident in Wadi Halfa, as well as Gamal Ahmed Hassan and Arbab Hassan Hafiz. Following current practice and drawing on links with the Egyptian Exploration Society, field staff included both Egyptian workers, recruited from Quft, as well as locally recruited Sudanese staff. These were led in the early years of the Survey between Faras and Gemai by Reis Hufni, Reis Beshir and Reis Ibrahim Mubarek and latterly Yussuf Mohammed Yussuf el-Khouli.⁹ While a comprehensive record of all the field staff does not survive in the ASSN archive the names of some may be recorded here: (1963-64) Abdel Ghani Ali Maharib Dungul (Quft), Abdel Hadi Mohammed Osman (Quft),¹⁰ Khalifa Hamed Abdullah (El Kab), Mohammed Juma

⁹ It may be noted that Reis Ibrahim Mubarek worked with a number of other foreign archaeological teams during this period, for example accompanying the Swiss team working at Tabo (Argo) in the northern Dongola Reach, and the Italian team at Sonki.

¹⁰ The ASSN field diary records that the survey work began at 6.00a.m. on 22nd December 1963, with two Quffis, Abdel Ghani and Abdel Hadi

and Hamuda Ali (Ambikol), Mohammed Hamid Mohammed Hamid (Soleb), Abdel Salam Ibrahim Salem (Kosha), logistic support of drivers, cooks, water supplies and boats, Mohammed Osman Mohammed Daud Aga Derwish Ramadan (Abri), Said Beshir Mohammed Saleh Abdel Karim (Halfa), Abdel Moneim Mohammed Fadl (Kumma), Abdel Rashid Abdu Ali (Saras), Abdel Aziz and Suleiman Salih Beshari (Semna), Ali Mohammed Musa (Attiri), Idris Mohammed Fareg, Saleh Hussein Berkieh, Salih Ghassim; (1964-65) Hamid Shegah Ahmed, Ibrahim Idris Ibrahim, Ali Mohammed Ali, Saleh Berkieh; (1965–1966) Ibrahim Mubarek, Yussuf Mohammed Yussuf el-Khouli, Abdel Hadi Mohammed Osman, Mutawalli Hassan Ali; (1966-1967) Ibrahim Mubarek, Yussuf Mohammed Abdel Hadi Mohammed Yussuf el-Khouli, Osman, Ali Mustafa Shahat [Abdel Ati], Hassan Mohammed Musa; (1967-68) Ibrahim Mubarek, Yussuf Mohammed Yussuf el-Khouli, Abdel Hadi Mohammed Osman, Kamal Faris, Tewfik Ali Shahat, Abdel Majid Hussein, Mubarek Mubarek, Mahmoud Mohammed Ali el Far, Ramadan Mohammed Osman, Hussein Ibrahim, Hamid Mohammed Aboud; (1968-69) Abdel Hadi Mohammed Osman, Ibrahim Mubarek, Mubarek Mubarek, Tewfik Ali Shahat, Ali Mustafa Shahat, Abdel Majid Hussein, Yussuf Mohammed Yussuf el-Khouli, Abdallah el-Kurdi.

Thanks are also due to the Sudan Archaeological Research Society for financial support for beginning the digitizing the photographic archive. Further early support for the publication of the ASSN provided to A. J. Mills by the Fondation Michela Schiff Giorgini and the Haycock Trust should also be acknowledged. The editor (DNE) is also grateful for a period of academic study leave in 2018 provided by the University of Leicester which assisted in the completion of this volume. Additional special thanks are due to W. V. Davies for sharing information and insights concerning the Egyptian inscriptions, a number of which he has relocated in recent years as part of his more general research (see Davies 2014, 2016, 2017a, 2017b, 2018).

An acknowledgement is also due to Iain McLean for a number of interesting insights concerning the Saras gold workshops which emerged as part of a BA Dissertation project at the University of Leicester. Amongst many others who have contribution to the completion of this volume, Martin Sterry provided much valuable assistance with aerial photographs and their integration with modern satellite imagery, Margaret Finch and Mike Hawkes with preparation of drawings as well as Chantal Bielmann, Michaela Senkova and Julia Nikolaus. Thanks are also due to Laurel Bestock, Julien Cooper, Vivian Davies, Maria Gatto, Christian Knoblauch, Claudia Näser, Pamela Rose, Stuart Tyson Smith and Derek Welsby for advice and information on various elements of this material. All errors of course remain our own. All photographs are from the ASSN archive.