THE UNIVERSITY OF CHICAGO ORIENTAL INSTITUTE NUBIAN EXPEDITION VOLUME VIII

# EXCAVATIONS BETWEEN ABU SIMBEL AND THE SUDAN FRONTIER 

# MEROITIC REMAINS FROM QUSTUL CEMETERY Q, BALLANA CEMETERY B, AND A BALLANA SETTLEMENT 

Thomas A. Holland • Editor
with the assistance of Richard M. Schoen

| Internet publication of this work was made possible with the <br> generous support of Misty and Lewis Gruber |
| :---: |

# CAMPAGNE INTERNATIONALE POUR LA SAUVEGARDE DES MONUMENTS DE LA NUBIE 

THE UNIVERSITY OF CHICAGO
ORIENTAL INSTITUTE NUBIAN EXPEDITION
VOLUME VIII

# EXCAVATIONS BETWEEN ABU SIMBEL AND THE SUDAN FRONTIER <br> Keith C. Seele, Director 

## PART 8:

# MEROITIC REMAINS FROM QUSTUL CEMETERY Q, BALLANA CEMETERY B, AND A BALLANA SETTLEMENT 

Part 1: Text and Figures

by<br>BRUCE BEYER WILLIAMS<br>with a contribution by<br>NICHOLAS B. MILLET

## Library of Congress Catalog Card Number 91-60921

ISBN: 0-918986-71-0
The Oriental Institute
(C) 1991 by The University of Chicago. All rights reserved.

Published 1991. Printed in the United States of America.

## DEDICATION

to Patricia A. Williams

## TABLE OF CONTENTS

LIST OF FIGURES ..... Xi
LIST OF TABLES ..... xxiii
LIST OF TEXT AND REGISTER ABBREVIATIONS ..... xxv
BIBLIOGRAPHY ..... xxvii
LIST OF BIBLIOGRAPHICAL ABBREVIATIONS ..... xliii
ACKNOWLEDGMENTS ..... $x \mid v$
PREFACE ..... xlvii

1. MEROITIC REMAINS AT QUSTUL AND BALLANA ..... 1
A. The Location of Meroitic Remains in the Concession ..... 1
Cemetery Q ..... 1
Cemetery B ..... 2
Other Finds ..... 2
B. The Construction of Cemeteries Q and B and the Chronology of Lower Nubia ..... 3
Archaeological Chronology in Meroitic Nubia ..... 3
The Distribution of Objects and Practices in Cemeteries Q and B ..... 6
Archacological Phases in Cemeteries Q and B ..... 9
Structural Evidence for Chronology ..... 15
Historical Correlations ..... 15
Stages in the Construction of Cemeteries Q and B ..... 20
C. Tombs and Burial Customs ..... 23
Phase I: The Simple Coffin Burial ..... 23
Changes in the Burial: Phases IB and II ..... 25
Changes in the Burial: Phases III and IV ..... 25
2. POTTERY ..... 27
A. Manufacturing and the Classification of Meroitic Pottery ..... 28
B. Meroitic Pottery with Painted and Stamped Decoration:
Kushite Wheelmade and Fine/Ordinary Pottery ..... 32
Pottery of Kushite Tradition ..... 32
Meroitic-Kushite Form Group II: Kushite Wheelmade Pottery ..... 32
Meroitic-Kushite Form Group I: Meroitic Fine/Ordinary Pottery ..... 34
C. Meroitic Painted Decoration ..... 35
Design ..... 35
Style ..... 37
Motifs and Their Organization ..... 40
D. Meroitic Stamped Decoration ..... 59
E. Meroitic-Kushite Form Group III: Storage Jars ..... 59
F. Meroitic-Kushite Form Group IV: Kushite Wheelmade Utility Vessels. ..... 60
G. Meroitic-Kushite Form Group V: Meroitic Handmade Ordinary Pottery ..... 61
H. Pottery Imported from Egypt ..... 62
I. Egyptian Form Group I: Egyptian Fine/Ordinary I ..... 62
J. Painted Pottery from Egypt. ..... 64
Phases. ..... 65
Style and the Vine Group ..... 67
K. Egyptian Form Group II: Egyptian Pink Utility I ..... 67
L. Egyptian Form Group III, Chaff-Faced Utility Pottery: Egyptian Pink Utility II ..... 68
M. Egyptian Form Group VI: Barbotine ..... 69
N. Brown Amphora Pottery ..... 70
O. Egyptian Form Group IV: Aswan (?) Amphora Pottery ..... 70
P. Egyptian Form Group V, White Pottery from Upper Egypt: Fine/Ordinary IIA and B ..... 71
Fine/Ordinary IIA ..... 71
Fine/Ordinary IIB ..... 71
Q. Egyptian Form Group VII: African Red Slip: Terra Sigillata ..... 72
R. Pottery of Sudanese-Saharan Tradition ..... 72
S. Conclusion: Meroitic Pottery in Lower Nubia ..... 74
Meroitic Painted Pottery ..... 74
The Vine Group ..... 74
Form and Varicty in Meroitic Pottery ..... 74
3. OBJECTS ..... 93
A. Funcrary Objects ..... 93
Stone Funerary and Cult Objects ..... 93
Funerary Objects from the Burials ..... 96
B. Secular Objects ..... 100
Introduction ..... 100
Leather ..... 101
Wood ..... 103
Metal ..... 103
C. Military Equipment ..... 104
D. Clothing: Sandals ..... 108
E. Jewelry ..... 108
F. Vessels and Containers ..... 152
Kohl Tubes ..... 152
Wooden Vessels and Cylindrical Boxes ..... 155
Wooden Boxes ..... 155
Metal Vessels ..... 156
Glass Vessels ..... 158
G. Craft Implements ..... 159
H. Cosmetic and Medical Instruments ..... 159
TABLE OF CONTENTS ..... ix
4. MEROITIC INSCRIPTIONS FROM QUSTUL AND BALLANA, by Nicholas B. Millet ..... 163
5. CONCLUSION ..... 171
APPENDIX A: A RELATIVE CHRONOLOGY OF MEROITIC REMAINS BELOW THE FOURTH CATARACT. ..... 175
APPENDIX B: A TABULAR CONCORDANCE OF POTTERY CLASSIFICATIONS FROM CERAMIC INDUSTRIES OF MEDIEVAL NUBIA, ADAMS (N.D.), AND OINE ..... 191
FIGURES ..... 196

## LIST OF FIGURES

1. The Distribution of Phases in Cemetery Q ..... 196
2. The Distribution of Phases in Cemetery B ..... 198
3. Major Meroitic Sites in Lower Nubia and Northern Sudan ..... 200
4. Meroitic Fine/Ordinary Bowls/Cups, I-A-H ..... 201
5. Meroitic Fine/Ordinary Cups, I-I-S ..... 202
6. Meroitic Fine/Ordinary Jars, I-A ..... 203
7. Meroitic Fine/Ordinary Jars, I-A, B ..... 204
8. Meroitic Fine/Ordinary Jars, I-D-F ..... 205
9. Kushite Wheelmade Bowl, Cups, and Beakers, II ..... 206
10. Kushite Wheelmade Jars, II ..... 206
11. Kushite Wheelmade Jars, II-D-F ..... 207
12. Kushite Wheelmade Jars, II-G ..... 208
13. Kushite Wheelmade Jars, II-H, I ..... 208
14. Kushite Storage Jars, III ..... 209
15. Wheelmade Utility Pottery, IV ..... 210
16. Handmade Ordinary Pottery Bowls, V ..... 210
17. Sudanese-Saharan Bowls/Cups and Beakers, I ..... 211
18. Sudanese-Saharan Jars, I ..... 211
19. Sudanese-Saharan Form Group I Pottery ..... 212
20. Kushite Wheelmade Stand or Platter, II. ..... 212
21. Egyptian Fine/Ordinary Pipettes or Klepsydrai, I ..... 213
22. Egyptian Fine/Ordinary Cups, I ..... 214
23. Egyptian Fine/Ordinary Juglets, I ..... 215
24. Egyptian Fine/Ordinary Juglets, I (cont.) ..... 216
25. Egyptian Fine/Ordinary Juglets, I (cont.) ..... 217
26. Egyptian Storage Jugs, I-B, C ..... 218
27. Egyptian Pitchers or Jugs, I-A-F3 ..... 219
28. Egyptian Pitchers or Jugs, I-F4-G ..... 220
29. Egyptian Pitchers or Jugs, Tankards, and Amphorae I-H-K ..... 221
30. Egyptian Pitchers or Jugs, Amphorae I-LL1-2b ..... 221
31. Egyptian Pitchers or Jugs, Amphorae I-L2c-dii ..... 222
32. Egyptian Pitchers or Jugs, Amphorae I-L3 ..... 222
33. Egyptian Handleless Jugs and Small Jars, I-M, N ..... 223
34. Egyptian Pitchers or Jugs, Large Globular Jars and Variants, I-O, Q ..... 224
35. Egyptian Utility Dishes and Bowls, II-A-G ..... 225
36. Egyptian Utility Jars and Jugs, II/III-A-C ..... 225
37. Egyptian Utility Jars, Jugs, and Cooking Pots, II/LII-D-F ..... 226
38. Egyptian Amphorae ..... 227
39. Egyptian Fine/Ordinary Pottery, Form Group V ..... 228
40. Barbotine Pottery, Form Group VI ..... 228
41. Terra Sigillata or African Red Slip Bowl, Form Group VII ..... 228
42. Quivers from Tombs B 213 and B 313 ..... 229
43. Quiver, B 319A-1 ..... 230
44. Corpus of Beads, la-Ilb ..... 231
45. Corpus of Beads, IIc- $\mathrm{Vb}, \mathrm{c}$ ..... 232
46. Corpus of Beads, Vc/d-VIs ..... 233
47. Corpus of Beads, VIIa-XIi ..... 234
48. Corpus of Beads, XI-XVI ..... 235
49. Corpus of Pendant Beads, Pla-PIIIc. ..... 236
50. Corpus of Pendant Amulets ..... 237
51. Kohl Tube, B 25-5 ..... 237
52. Kohl Tube, Q 592-6 ..... 238
53. Kohl Tube (Exploded View and Section), Q 592-6 ..... 239
54. Kohl Tubes and Lids from Tombs B 93, B 282, and B 308 ..... 240
55. Bronze Inlaid Kohl Tube, B 108-4 ..... 241
56. Ivory Inlaid Kohl Tube, B 68-3 ..... 242
57. Grooved Kohl Tubes from Tombs B 314 and Q 475 ..... 243
58. Ribbed Kohl Tubes from Tombs B 144 and B 173 ..... 244
59. Cylindrical Boxes from Tombs B 93 and B 179 ..... 245
60. Wooden Box with Winged Sun Discs, B 68-2 ..... 246
61. Spindles from Tombs B 58, B 108, and B 182 ..... 247
62. Jar, Q 81-1 ..... 248
63. Cup, Q 139-4 ..... 248
64. Amphora, Q 150-2 ..... 249
65. Pendant and Scarabs from Tomb Q 154 ..... 249
66. Metal Objects and Amphora from Tomb Q 155 ..... 250
67. Sherd, Q 159 Mer.-A ..... 250
68. Pottery and Plaque from Tomb Q 162 ..... 251
69. Pottery and Iron Kohl Stick from Tombs Q 162 and Q 164 ..... 252
70. Plan and Sections of Tomb Q 172 ..... 253
71. Pottery from Q 172 ..... 254
72. Meroitic Fine/Ordinary Cup, Q 176-2 ..... 254
73. Kushite Wheelmade Jar, Q 180-6 ..... 254
74. Plan and Section of Tomb Q 181 ..... 255
75. Pottery from Tombs Q 188, Q 191, Q 194, and Q 230 ..... 255
76. Anklet and Iron Rod from Tombs Q 232 and Q 235 ..... 256
77. Lid, Q 237 Mer.-C ..... 256
78. Tankard, Q 250-3 ..... 256
79. Pottery from Tomb Q 251 ..... 257
80. Pottery and Scarab from Tomb Q 253 ..... 258
81. Amphora, Q 253-5 ..... 259
82. Pottery from Tombs Q 254, Q 256, Q 257, and Q 262 ..... 260
83. Pottery from Tomb Q 269 ..... 261
84. Pottery from Tombs Q 270, Q 278, and Q 284 ..... 262
85. Pottery from Tomb $Q 283$ ..... 263
86. Pottery from Tombs Q 293 and Q 296 ..... 264
87. Pottery from Tombs Q 298, Q 301, and Q 302A ..... 265
88. Tomb Q 303: Plan, Section, and Pottery ..... 266
89. Pottery from Tombs Q 304, Q 305, and Q 307 ..... 267
90. Wood Fragments from Tomb Q 306 (Surface, D1) ..... 267
91. Iron Kohl Stick and Pottery from Tomb Q 308 ..... 268
92. Pottery and Scaraboid from Tomb Q 312 ..... 269
93. Tomb Q 317: Plan, Section, Pottery, and Scarabs ..... 270
94. Pottery from Tombs Q 318 and Q 319 ..... 271
95. Pottery from Tomb Q 322 ..... 272
96. Tomb Q 322: Pottery Stand and Tomb Q 325: Arrowhead ..... 273
97. Pottery from Tombs Q 335 and Q 340 ..... 274
98. Tomb Q 346: Plan, Section, and Scarab ..... 275
99. Jar Sherd, Q 351 Eg.-A ..... 275
100. Tomb Q 352: Plans and Pottery ..... 276
101. Pottery from Tombs Q 353 and Q 359 ..... 277
102. Tomb Q 363: Plans and Bowl ..... 278
103. Jar and Lead Bowl from Tomb Q 365 ..... 278
104. Pottery from Tomb Q 372 ..... 279
105. Arrowhead, Spearhead, and Pottery from Tomb Q 378 ..... 280
106. Jar, Q 383-3 ..... 281
107. Pottery from Tomb Q 384 ..... 281
108. Iron Objects from Tomb Q 384 ..... 282
109. Pottery from Tomb Q 392 ..... 282
110. Tomb Q 402: Plan, Section, Pottery, and Bronze Kohl Stick ..... 283
111. Pottery from Tomb Q 402 ..... 284
112. Tomb Q 406: Plan, Section, and Pottery ..... 285
113. Tomb Q 416: Plan and Section. ..... 285
114. Tomb Q 417: Plans, Section, and Pottery ..... 286
115. Pottery from Tomb Q 417 ..... 287
116. Tomb Q 427: Plan, Section, Pottery, and Lead Bowl ..... 288
117. Pottery from Tomb Q 430 ..... 289
118. Tomb Q 432: Plan and Section ..... 289
119. Pottery from Tomb Q 439 ..... 290
120. Pottery from Tombs Q 448, Q 449, Q 459, Q 461, and Q 464 ..... 291
121. Pottery from Tomb Q 466 ..... 292
122. Tomb Q 469: Plan, Section, and Pottery ..... 293
123. Tomb Q 475: Plans, Section, and Metal Objects ..... 294
124. Metal Objects from Tomb Q 475 ..... 295
125. Iron Objects from Tomb Q 475 ..... 296
126. Headrest and Metal Vessels from Tomb Q 475 ..... 297
127. Pottery from Tomb Q 475 ..... 298
128. Pottery from Tomb Q 475 ..... 299
129. Poltery from Tombs Q 472, Q 480, Q 481, and Q 485 ..... 300
130. Pottery from Tomb Q 488 ..... 301
131. Tomb Q 489: Plan, Sections, and Pottery ..... 302
132. Tomb Q 490: Plan, Section, and Pottery ..... 303
133. Pottery from Tomb Q 493. ..... 304
134. Pottery from Tomb Q 495 ..... 305
135. Tomb Q 499: Plans, Section, and Jar ..... 306
136. Pottery from Tomb Q 499 ..... 307
137. Jar, Q 499-7 ..... 308
138. Pottery from Tomb Q 499 ..... 309
139. Pottery from Tombs Q 523, Q 526, and Q 529 and a Plaque from Tomb Q 526 ..... 310
140. Tomb Q 540: Plans, Section, Pottery, and Iron Objects ..... 311
141. Tomb Q 547: Plan and Section. ..... 312
142. Tomb Q 560: Plan, Section, and Pottery ..... 313
143. Tomb Q 566: Plan, Section, and Pottery ..... 314
144. Tomb Q 567: Plan, Section, and Potuery ..... 315
145. Pottery from Tomb Q 567 ..... 316
146. Pottery and Iron Kohl Stick from Tomb Q 573 ..... 317
147. Pottery from Tomb Q 573 ..... 318
148. Pottery from Tomb Q 573 ..... 319
149. Tomb Q 574: Plan, Section, Poutery, and Tweezers. ..... 320

## MEROITIC REMAINS FROM QUSTUL AND BALLANA

150. Pottery from Tombs Q 574 and Q 578 ..... 321
151. Tomb Q 588: Plans and Section ..... 322
152. Pottery from Tomb $Q 591$ ..... 323
153. Tomb Q 592: Plan, Section, Pottery, and Iron Kohl Stick ..... 324
154. Pottery from Tomb Q 592 ..... 325
155. Pottery from Tombs Q 594 and Q 595 ..... 326
156. Sherd, Q 609 Mer.-A ..... 327
157. Pottery from Tomb Q 612 ..... 327
158. Tomb Q 613: Plans, Section, and Pottery ..... 328
159. Pottery from Tomb Q 618 ..... 329
160. Jar, Q 624-4 ..... 329
161. Tomb Q 625: Plan, Section, and Pottery ..... 330
162. Pottery from Tomb Q 626 ..... 331
163. Jar, Q 630-1 ..... 331
164. Tomb Q 634: Plan, Section, and Pottery ..... 332
165. Pottery from Tomb Q 634 ..... 333
166. Pottery from Tomb Q 636 ..... 334
167. Poltery from Tomb Q 646 ..... 335
168. Bronze Bowl, Pottery, and Scarabs from Tombs Q 647 and Q 650 ..... 336
169. Pottery from Tomb Q 661 ..... 337
170. Poltery from Tomb Q 667 ..... 338
171. Pottery from Tomb Q 670 ..... 339
172. Pottery and Leather Archer's Brace from Tombs Q 674, Q 675, Q 676, and Q 677 ..... 340
173. Pottery from Tomb Q 683 ..... 341
174. Pottery from Tomb Q 684 ..... 342
175. Tomb B 8: Plan, Section, and Pottery ..... 343
176. Pottery from Tombs B 9 and B 10 ..... 344
177. Poltery from Tombs B 11 and B 12 ..... 345
178. Pottery and Metal Vessels from Tomb B 14 ..... 346
179. Pottery from Tombs B 15 and B 18 ..... 347
180. Pottery from Tombs B 19, B 21, B 22, and B 24 ..... 347

## LIST OF FIGURES

xvii
181. Iron Kohl Stick, B 25-1 ..... 347
182. Tomb B 26: Plan, Section, Pottery, and "Chatelaine" ..... 348
183. Pottery and Arrowheads from Tombs B 27, B 28, B 29, and B 31 ..... 349
184. Pottery from Tomb B 32 ..... 350
185. Tomb B 39: Plan and Sections and Tombs B 34 and B 35: Pottery ..... 351
186. Pottery from Tomb B 40 ..... 352
187. Pottery from Tomb B 41 ..... 353
188. Tombs B 42A and B 42B Plans and Sections and Tomb B 42B Pottery ..... 354
189. Jar, B 43-1 ..... 355
190. Pottery from Tombs B 45A, B 47A, and B 47B ..... 355
191. Tombs B 49A-C Plan and Section and Tomb B 49C Pottery ..... 356
192. Pottery from Tomb B 49C ..... 357
193. Tombs B 47A, B 47B, B 51B, and B 52 Plans, Section, Pottery and Iron Kohl Stick ..... 358
194. Pottery from Tomb B 51B ..... 359
195. Pottery from Tombs B 51B and B 52 ..... 360
196. Tombs B 53A and B 54 Pottery and Tomb B 55B Bracelet Fragment ..... 361
197. Pottery from Tomb B 58 ..... 362
198. Juglet, B $61-1$ ..... 363
199. Pottery from Tomb B 64 ..... 363
200. Tombs B 66A and B 66B: Plans and Section and Tomb B 66A: Pottery ..... 364
201. Pottery from Tomb B 66B ..... 365
202. Pottery from Tomb B 67 ..... 366
203. Tomb B 69 Plan, Section, and Juglet ..... 367
204. Pottery from Tombs B 73 and B 76 ..... 367
205. Pottery from Tomb B 77 ..... 368
206. Pottery from Tomb B 77 ..... 369
207. Pottery from Tomb B 78 ..... 370
208. Pottery from Tomb B 80 ..... 371
209. Pottery from Tomb B 81 ..... 371
210. Pottery from Tombs B 82 and B 83. ..... 372
211. Tombs B 87 and B 109 Plans and Tomb B 87 Pottery ..... 373
212. Pottery from Tomb B 88 ..... 374
213. Pottery from Tombs B 81 and B 91 ..... 375
214. Pottery and Bronze Jar from Tombs B 89, B 92, B 93, and B 96 ..... 376
215. Tombs B 105, B 108, B 112, B 141, and B 150: Plans and Tombs B 108 and B 141: Metal Objects ..... 377
216. Pottery from Tomb and B 108 ..... 378
217. Tombs B 111A-D, B 120, and B 125 Plans, Section, and Pottery and Tomb B 111A Iron Kohl Stick ..... 379
218. Pottery from Tomb B 111A and B 120 ..... 380
219. Pottery from Tomb B 111 B/B 125 ..... 381
220. Pottery from Tombs B 99, B 112, and B 113 ..... 381
221. Pottery from Tomb B 122 ..... 382
222. Tombs B 126-B 130, B 133, and B 134: Pottery and Tomb B 134: Iron Kohl Stick ..... 383
223. Pottery and Arrowheads from Tomb B 135 ..... 384
224. Pottery from Tomb B 135 ..... 385
225. Pottery from Tomb B 140 ..... 386
226. Pottery and Bronze Bowl from Tomb B 143 ..... 387
227. Pottery and Iron Kohl Stick from Tomb B 144 ..... 388
228. Pottery from Tombs B 145, B 146, B 150, and B 151 ..... 389
229. Pottery from Tomb B 149 ..... 390
230. Pottery from Tomb B 152 ..... 391
231. Pottery and Arrowheads from Tombs B 153, B 154, B 155, and B 157 ..... 392
232. Pottery and Iron Kohl Stick from Tombs B 162, B 164 , and B 167 ..... 392
233. Pottery from Tomb B 166 ..... 393
234. Jar, B 166-4 ..... 394
235. Pottery from Tomb B 170 ..... 394
236. Pottery from Tomb B 171 ..... 395
237. Pottery from Tomb B 174 ..... 395
238. Pottery from Tomb B 179 ..... 396
239. Pottery from Tomb B 180 ..... 397
240. Pottery from Tombs B 182, B 184, B 185, B 186, and B 188 ..... 398
241. Pottery from Tomb B 193 ..... 399

## LIST OF FIGURES

242. Jar, B 193-5 ..... 400
243. Pottery from Tomb B 194 ..... 401
244. Pottery from Tombs B 194 and B 195 ..... 402
245. Tomb B 197 Plans, Section, and Weapon Points ..... 403
246. Bronze Bowl and Pottery from Tomb B 197 ..... 404
247. Pottery from Tomb B 199 ..... 405
248. Pottery from Tomb B 200 ..... 406
249. Arrowhead and Pottery from Tombs B 191, B 203, and B 208 ..... 407
250. Tomb B 205: Plans, Section, Pottery, and Objects ..... 408
251. Pottery from Tomb B 205 ..... 409
252. Jar, B 208-1 ..... 410
253. Pottery from Tomb B 209 ..... 411
254. Pottery from Tomb B 209 ..... 412
255. Pottery from Tomb B 209 ..... 413
256. Iron Kohl Stick, B 211-1 ..... 413
257. Pottery from Tombs B 213, B 215, and B 216 ..... 414
258. Pottery from Tomb B 217 ..... 415
259. Pottery from Tombs B 222, B 226, B 228, and B 233 ..... 416
260. Pottery from Tomb B 236 ..... 417
261. Pottery from Tomb B 238 ..... 418
262. Tombs B 240, B 244, and B 248: Pottery, Tomb B 240: Iron Kohl Stick, and Tomb B 241: Arrowheads ..... 418
263. Tomb B 245: Plans, Section, and Pottery Cup ..... 419
264. Pottery from Tomb B 251 ..... 419
265. Tomb B 252: Plans, Section, and Pottery ..... 420
266. Pottery from Tombs B 254, B 255, and B 256 ..... 420
267. Pottery from Tombs B 261 and B 263 ..... 421
268. Jar, B 264-1 ..... 422
269. Pottery from Tomb B 268 ..... 422
270. Tombs B 273, B 277, and B 278: Pottery and Tomb B 277: Iron Kohl Stick ..... 423
271. Tombs B 281, B 282, and B 283: Pottery and Tomb B 282: Iron Kohl Stick ..... 424
272. Tomb B 280: Plans, Section, and Arrowhead ..... 425
273. Pottery from Tomb B 285 ..... 425
274. Pottery from Tombs B 287 and B 289 ..... 426
275. Pottery from Tombs B 291, B 292, B 293, and B 296 ..... 426
276. Tombs B 297 and B 298: Pottery and Tomb B 297: Leather Archer's Brace and Arrowhead ..... 427
277. Tomb B 299: Plans, Section, and Pottery ..... 428
278. Tomb B 302: Plan, Section, Pottery Cup, and Arrowhead ..... 429
279. Tomb B 307: Plan, Section, and Pottery ..... 430
280. Pottery from Tombs B 308, B 309, and B 310 ..... 431
281. Pottery from Tomb B $311 / 316$ ..... 432
282. Pottery from Tomb B 312 ..... 433
283. Tomb B 313: Plan, Section, and Pottery Jar ..... 434
284. Pottery from Tombs B 314 and B 315 . ..... 345
285. Tomb B 314: Plans and Section ..... 436
286. Pottery and Bronze Bowl from Tomb B 317 ..... 437
287. Pottery from Tomb B 319A ..... 438
288. Pottery from Tomb B 319A ..... 439
289. Pottery from Tombs B 323 and B 328. ..... 440
290. Pottery from Tomb B 330 ..... 441
291. Tomb B 331: Plan, Section, and Pottery ..... 442
292. Pottery from Tomb B 333 ..... 443
293. Jar, B 334-1 ..... 443
294. Pottery and Iron Kohl Stick from Tomb B 322 ..... 444
295. Cemetery B, Unprovenienced Surface Pottery ..... 445
296. Cemetery B, Unprovenienced Surface Pottery ..... 446
297. Cemetery B, Unprovenienced Surface Pottery ..... 447
298. Cemetery B, Unprovenienced Surface Pottery ..... 448
299. Cemetery B, Surface Pottery ..... 449
300. Ballana Settement Pottery: Kushite Wheelmade (Mer. II) Vessels ..... 450
301. Ballana Settement Pottery: Kushite Wheelmade (II), Meroitic Fine/Ordinary (I), and Egyptian Vessels ..... 451
302. Ballana Settlement Pottery ..... 452
303. Surface Pottery from Qustul ..... 453
304. Ballana Settlement Pottery ..... 454
305. Ballana Settlement Pottery and Objects ..... 455
306. Ballana Setulement Poutery ..... 456
307. Ballana Settlement Pottery ..... 457
308. Plan of the Meroitic Settlement at Ballana ..... 458

## LIST OF TABLES

Part 1:

1. Points of Difference Between Cemeteries $Q$ and $B$ ..... 7
2. The Occurrence of Dated Tombs in Cemeteries Q and B ..... 12
3. Archaeological Phases and the Stages of Cemeteries Q and B ..... 13
4. Structural and Other Special Relationships ..... 14
5. A Summary of Evidence to Date the Archaeology of Meroitic Nubia ..... 19
6. Major Chronological Criteria in Meroitic Nubia ..... 20
7. Formal Categories in Meroitic Pottery from Qustul and Ballana ..... 28
8. Major Decoration in Meroitic Painted Pottery, Primarily from Qustul and Ballana ..... 51
9. Stamped Decoration on Meroitic Pottery ..... 60
10. The Occurrence of Vine Decoration on Roman Period Egyptian Pottery ..... 67
11. Decoration on Sudanese-Saharan Pottery ..... 73
12. Corpora of Shapes of Meroitic Pottery from Qustul and Ballana ..... 75
13. Register of Pottery by Form Group and Shape ..... 83
14. List of Offering Tables ..... 94
15. List of Stelae ..... 95
16. List of Ba Figures ..... 96
17. List of Coffins ..... 97
18. List of Leather Objects and Samples ..... 102
19. Summary Descriptive Register of Leather Military Equipment ..... 105
20. The Occurrence of Weapons in Cemeteries Q and B ..... 107
21. Register of Bar Jewelry ..... 109
22. Register of Band Rings ..... 109
23. Register of Glass or Stone Studs ..... 110
24. Beads from Meroe and Qau ..... 112
25. Register of Beads ..... 114
26. Register of Scarabs and Plaques ..... 147
27. Typology of Bezel Rings ..... 149
28. Register of Bezel Rings ..... 150
29. The Occurrence of Phases I-IV in Meroitic Nubia ..... 175
30. A Concordance of Pottery Classifications from Ceramic Industries of Medie val Nubia, Adams (n.d.), and OINE ..... 192
Part 2:
31. Register of Finds in Cemetery Q ..... 2
32. Register of Finds in Cemetery B ..... 167
33. Tabular Summary of Finds in the Ballana Settement ..... 291

## LIST OF TEXT AND REGISTER ABBREVIATIONS

| Ag. <br> alt. | silvered <br> alternated | irreg. <br> jasp. | irregular, irregularly jasper |
| :---: | :---: | :---: | :---: |
| am. | amethyst | jav. | javelin |
| amb. | amber | Ku. wm. | Kushite Wheelmade |
| anth. | anthropoid | L | left |
| approx. | approximate | L. | late |
| bk. | black | lt. | light, lightly |
| bl. | blue | max. | maximum |
| br. | brown | Mer. | Meroitic |
| ca. | circa | mil. | millefiore |
| car. | carnelian | N | north |
| cat(s). | catalog(s) | N/A | not available for study |
| CAT | catalog entry, Mayer-Thurman and Williams 1979 | NID | not identified (used moslly for location of finds) |
| cb. | crude brick/mudbrick | N.K. | New Kingdom |
| Cem. | Cemetery | no. | number |
| cf. | compare | OIM | Oriental Institute Museum |
| cl. | clear | op. | opaque |
| cry. | crystal | ord. | ordinary |
| dec. | decorated/decoration | os. egg. | ostrich eggshell |
| deg. | degrees | pk. | pink |
| det. | deteriorated | pl. | plate |
| diam. | diameter | ptd. | painted decoration |
| dim. | dimensions | qz. | quartz |
| Disc. | Discarded | R | right |
| dist. | disturbed | rect. | rectangular |
| dk. | dark | rem. | remark |
| E | east | S | south |
| E. | early | samp. | sample |
| Eg. | Egyptian | St. | steatite |
| ext. | extended | std. | standard decoration |
| fa. | faience | Sud.-Sah. | Sudanese-Saharan |
| fig. | figure | $t \mathrm{t}$. | translucent |
| frag. | fragment | turq. | turquoise |
| gl. | glass | unc. | uncertain |
| gn. | green | unreg. | unregistered |
| gr. | gray | var. | variant |
| gt . | gilt (gilded glass) | vert. | vertical |
| hor. | horizontal | W | west |
| illus. | illustrated, illustration | wh. | white |
| inv. | inverted | ye. | yellow |

## BIBLIOGRAPHY

Abdelgadir M. Abdalla
1984 "Meroitic Social Stratification," Meroitica 7: 23-84.
Abdel-Moneim Abu Bakr
1963 "Fouilles de l'Université de Caire à Aniba (1960)," Fouilles en Nubie 1959-1961. Cairo:Organisme général des imprimeries gouvernmentales, pp. 111-25.
1967 "Rapport préliminaire sur les résultats des fouilles entreprises par la missionarchéologique de l'Université du Caire dans la région d'Aniba en Nubie saison 1961-1962," Fouilles en Nubie 1961-1963 Cairo: Organisme général des imprimeriesgouvernmentales, pp. 1-26.
Adams, William Y.
1962 "Pottery Kiln Excavations," Kush 10: 62-75.
1964 "Post-Pharaonic Nubia in the Light of Archacology I," JEA 50: 102-20.
1965a "Sudan Antiquities Service Excavations at Meinarti 1963-64," Kush 13: 148-76.
1965b "Post-Pharaonic Nubia in the light of Archaeology II," JEA 51: 160-78.
1976 Meroitic North and South; a Study in Cultural Contrasts. Meroitica 2: 11-25, 119-75.
1977 Nubia, Corridor to Africa. Princeton: Princeton University Press.
19791983 "Primis and the 'Aethiopian' Frontier," JARCE 20: 95-104.
1984 "The 1980 Excavations at Qasr Ibrim. Implications for the History of Kush," Meroitica7: 415-20.
1986 The Ceramic Industries of Medieval Nubia. Lexington: The University Press ofKentucky.
n.d. "Pottery Wares of the Ptolemaic and Roman Periods at Qasr Ibrim. Preliminary Ware Descriptions." Distributed as a service to the archaeological community by the Qasr Ibrim Expedition and the University of Kentucky.
Addison, Frank
1949 Jebel Moya. The Wellcome Excavations in the Sudan. London: Oxford University Press.

## Adovasio, J. M.

1977 Basketry Technology. A Guide to Identification and Analysis. Chicago: Aldine Publishing Company.

## Almagro, Martín

1965 La necrópolis meroítica de Nag Gamus (Masmás, Nubia Egipcia). Memorias de la Misión Arqueológica, vol. 8, Madrid: Ministerio de Asuntos Exteriores, Ministerio de Educación Nacional.

## Arkell, Anthony J.

1949 Early Khartoum: An Account of the Excavation of an Early Occupation Site Carried out by the Sudan Government Antiquities Service in 1944-5. London: Oxford University Press.

1953 Shaheinab: An Account of the Excavation of a Neolithic Occupation Site Carried out for the Sudan Antiquities Service in 1949-50. London: Oxford University Press.

## Arnold, Dorothea

1981 "Ägyptische Mergeltone ("Wüstentone") und die Herkunft einer Mergeltonware des Mittleren Reiches aus der Gegend von Memphis," in Studien zur altägyptischen Keramik, edited by D. Arnold. Mainz: Phillipp von Zabern, pp. 167-91.

Basch, Martín Almagro, and Gorbea, Martín Almagro
1968 Estudios de atte rupestre nubio, I. Yacimentos situados en la orilla oriental del Nilo entre Nag Kolorodna y Kars (sic) Ibrim (Nubia egipcia). Memorias de la Misión Arqueológica en Egipto, vol. 10. Madrid: Ministerio de Asuntos Exteriores, Ministerio de Educación Nacional.

Bates, Oric, and Dows Dunham
1927 Excavations at Gamai. in Varia Africana, Vol. 4, edited by E.A. Hooton and Natica I. Bates. Harvard African Studies, vol. 8. Cambridge: Harvard University Press, pp. 1-122.

## Bietak, Manfred

1968 Studien zur Chronologie der Nubischen C-Gruppe: Ein Beitrag zur Frühgeschichte Untermubiens zwischen 2200 und 1550 vor Chr. Berichte des Österreichischen Nationalkomitees der UNESCO-Aktion für die Retung der Nubischen Altertümer, vol. 5. Österreichische Akademie der Wissenschaften, Phil.-hist. Klasse, Denkschriften, vol. 97. Vienna: Hermann Böhlaus Nachf.

1968 "Vorlaufige Bericht über die erste und zweite Kampagne der österreichischen Ausgrabungen auf Tell ed-Dab'a im Ostdelta Ägyptens (1966, 1967)," MDAIK 23: 79-114.

1970 "Vorläufige Bericht über die dritte Kampagne der österreichischen Ausgrabungen auf Tell ed-Dab’a im Ostdelta Ägyptens (1968). Mit einem Beitrag von Joachim Boessneck," MDAIK 26 (1970): 15-42.

1987 "Canaanites in the Eastern Nile Delta," in Egypt, Israel, Sinai. Archaeological and Historical Relationships in the Biblical Period, edited by Anson Rainey. Tel Aviv: Tel Aviv University, pp. 41-56.

Bissing, F.W. Freiherr von
1939 "Alexandrinische Kunst in nubischen Tumulus-Gräbern um 400 n. Chr." Forschungen und Fortschritte 15: 350-52.

1941 "Die kunstgeschichtliche Bedeutung der neuentdeckten Nekropolen im Gebiet des II. Nilkataraktes," Miscellanea Gregoriana. Raccolta di scritti pubblicati nel I centenario dalla fondazione del Pont. Museo Egizio (1839-1939). Vatican City.

## Bonnet, Charles

1978 "Fouilles archéologiques à Kerma (Soudan). Rapport préliminaire de la campagne 19771978," Genava n.s. 26: 107-34.

1980 "Les fouilles archéologiques de Kerma (Soudan). Rapport préliminaire des campagnes de 1978-1979 et de 1979-1980," Genava n.s. 28: 31-62.

1982 "Les fouilles archéologiques de Kerma (Soudan). Rapport préliminaire des campagnes de 1980-1981 et de 1981-1982," Genava n.s. 30: 29-53.

1984 "Les fouilles archéologiques de Kerma (Soudan). Rapport préliminaire sur les campagnes de 1982-1983 et 1983-1984," Genava n.s. 32: 5-20.

1986a Kerma: territoire et métropole. Quatre leçons au Collège de France. Paris: Institut français d'archéologie orientale du Caire.

1986b "Les fouilles archéologiques de Kerma (Soudan). Rapport préliminaire sur les campagnes de 1984-1985 et 1985-1986," Genava n.s. 34: 5-20.

1988 "Les fouilles archéologiques de Kerma (Soudan). Rapport préliminaire sur les campagnes de 1986-1987 et 1987-1988," Genava n.s. 36: 5-20.

Bonnet, Charles and Valbelle, Dominique
1987 "Un objet inscrit, retrouvé dans un bâtiment napatéen à Kerma (Soudan)," CRIPEL9, Sociétés urbaines en Égypte et au Soudan, pp. 25-29.

Bradley, Rebecca
1984 "Meroitic Chronology," Meroitica 7: 195-211.
Bourriau, Janine
1981 Umm el-Ga'ab; Pottery from the Nile Valley before the Arab Conquest. Cambridge: Cambridge University Press.

Breccia, Evaristo
1912 La Necropoli di Sciabti. Catalogue général des antiquités égyptiennes (Musée d'Alexandrie) Nos. 1-624. Cairo: Institut français d'archéologie orientale.

## Brunton, Guy

1930
Qau and Badari III. BSAE and ERA Vol. 50. London: Bemard Quaritch

Butzer, Karl
1974 "Modern Egyptian Clays and Predynastic Buff Ware," JNES 33: 377-82.
Butzer, Karl and Hansen, Carl L.
1968 Desert and River in Nubia; Geomorphology and Prehistoric Environments at the Aswan Reservoir. Madison, Milwaukee, and London: The University of Wisconsin Press.

Catalán, Manuel Pellicer
1963 La necrópolis meroítica de Nag-Shayeg (Argín Sudán), Memorias de la Misión Arqueológica, vol. 2. Madrid: Ministerio de Asuntos Exteriores, Direccion General de Relaciones Culturales.

## Chapman, Suzanne, and Dunham, Dows

1952 Decorated Chapels of the Meroitic Pyramids at Meroë and Barkal, The Royal Cemeteries of Kush, vol. 3. Boston: Museum of Fine Arts.

Charleston, R.J.
1955 Roman Pottery. London: Faber and Faber.
Corcoran, Lorelei
1988 "Portrait Mummies from Roman Egypt," Ph.D. dissertation, The University of Chicago.
Crawford, O. G. S., and Addison, Frank
1951 Abu Geili and Saqadi \& Dar el Mek. The Wellcome Excavations in the Sudan, vol. 3. London: Oxford University Press.

Daressy, M. G.
1903 Textes et dessins magiques. Catalogue général des antiquités égyptiennes du Musée du Caire, Nos. 9401-9449. Cairo: Imprimerie de l'Institut français d'archéologie orientale.

Davies, Nina de Garis
1926 The Tomb of Huy; Viceroy of Nubia in the Reign of Tutankhamun (No. 40). London: EES.

Dunham, Dows
1950 El Kurru. The Royal Cemeteries of Kush, vol. 1. Cambridge, MA: Harvard University Press.

1955 Nuri. The Royal Cemeteries of Kush, vol. 2. Boston: Museum of Fine Arts.
1957 Royal Tombs of Meroc and Barkal. Royal Cemeteries of Kush, vol. 4. Boston: Museum of Fine Arts.

1963 The West and South Cemeteries at Meroe. The Royal Cemeteries of Kush, vol. 5. Boston: Museum of Fine Arts.

1977 Kellia. La Poterie Copte. Recherches suisses d'archélogie copte, vol. 3. Geneva: Georg.
Emery, Walter B.
1963 "Egypt Exploration Society. Preliminary Report on the Excavations at Buhen, 1962," Kush 11: 116-20.

Emery, W. B and Kirwan, L. P
1935 The Excavations and Survey between Wadi es-Sebua and Adindan 1929-1931. Service des antiquités de l'Égypte; Mission archéologique de Nubie, 1929-1934. Cairo: Government Press, Bulaq.

1938 The Royal Tombs of Ballana and Qustul. Cairo: Government Press.
Endesfelder, Erica
1984 "Beitrag zur Diskussion," Meroitica 7: 85-91.
Fernandez, Victor
1980 "Excavations at the Meroitic Cemetery of Emir Abdallah (Abri, Northern Province, the Sudan). Some Aspects of the Pottery and its Distribution." Meroitic Newsletter 20: 13-22.

1986 "Early Meroitic in Northern Nubia," Nubische Studien, pp. 59-65
Firth, C. M.
1912 The Archacological Survey of Nubia. Report for 1908-1909. Cairo: Govemment Press
1915 The Archacological Survey of Nubia. Report for 1909-1910. Cairo: Government Press.
1927 The Archaeological Survey of Nubia, Report for 1910-1911. Cairo: Govemment Press.
Feathers, J. K. and Scott, W. D.
1989 "Prehistoric Ceramic Composite from the Mississippi Valley," American Ceramic Society Bulletin (Ceramic Bulletin) 68: 554-57.

Frankfort, Henri
1939 Cylinder Seals. A Documentary Essay on the Art and Religion of the Ancient Near East. London: MacMillan and Co.

Gardberg, C. J.
1970 Late Nubian Sites. Churches and Settlements. The Scandinavian Joint Expedition to Sudanese Nubia. vol. 7. Copenhagen, Oslo, and Stockholm: Scandinavian University Books.

Garstang, John, Sayce, A. H. and Griffith, F. Ll.
1911 Meroe: The City of the Ethiopians. Oxford: The Clarendon Press.
Gamer-Wallert, Ingrid
1983 Der Löwentempel von Naq'a in der Butana (Sudan). III. Die Wandreliefs. Beihefte zum Tübinger Allas des vorderen Orients Reihe B (Geisteswissenschaften). Nr. 48/3.

## Geus, Francis and Lenoble, Patrice

1984 "Fouille d'un tumulus méroïtique à el Kadada (Taragma)," Meroitica 7: 433-35.
Griffith, F. Ll.
1912 Meroitic Inscriptions. Part II. Napata to Philae and Miscellaneous. The Archaeological Survey of Egypt, memoir no. 20, London: EEF.

1922 "Oxford Excavations in Nubia (Continued)." LAAA Vol. 9, pp. 67-124.

1923 "Oxford Excavations in Nubia, XVIII. The Cemetery of Sanam," LAAA 10: 73-171.
1924 "Oxford Excavations in Nubia, XXX. The Meroitic Cemetery at Faras," LAAA 11: 141-80.

1925 "Oxford Excavations in Nubia, XXXIV. Classification of the Meroitic Graves at Faras," LAAA 12: 57-172.

1926 "Oxford Excavations in Nubia, XL. Meroitic Antiquities at Faras and other Sites," LAAA 13: 17-35.

## Grzymski, Krzysztof

1984a "Seriation of the Royal Pyramids at Begrawiya North, Preliminary Discussion," Meroitica 7: 222-28.

1984b "More on the Seriation of the Royal Pyramids," Meroitica 7: 229-31.
Guinea, Miguel Angel García, and Teixidor, Javier
1965 La necrópolis meroítica de Nelluah (Argín Sur, Sudán), Memorias de las Misión Arqueologica, vol. 6. Madrid: Ministerio de Asuntos Exteriores, Ministerio de Educación Nacional.

Hayes, John
1976 Roman Pottery in the Royal Ontario Museum. A Catalogue. Toronto: Royal Ontario Museum.

Hayes, William C.
1953 The Scepter of Egypt. A Background for the Study of the Egyptian Antiquities in the Metropolitan Museum of Art. Part I: From the Earliest Times to the End of the Middle Kingdom. Cambridge, MA: Harvard University Press.

## Heinzelin, Jean de

1968 "Geological History of the Nile Valley," in The Prehistory of Nubia. edited by Fred Wendorff. Dallas: Fort Burgwin Research Center, pp. 19-55.

Heinzelin, Jean de and Paepe, Roland
1965 "The Geological History of the Nile Valley in Sudanese Nubia: Preliminary Results," in Contributions to the Prehistory of Nubia. edited by Fred Wendorff. Dallas: Fort Burgwin Research Center, pp. 29-56.

Hellström, Pontus, and Langballe, Hans
1970 The Rock Drawings. The Scandinavian Joint Expedition to Sudanese Nubia, vol. 1. Copenhagen, Oslo, and Stockholm: Scandinavian University Books.

Hewes, G.W.
1964 "Gezira Dabarosa: Report of the University of Colorado Nubian Expedition, 1962-63 Season," Kush 12: 174-87.

## Hinkel, Friedrich

1977 Auszug aus Nubien. Berlin: Akademie Verlag.
1982 "Pyramide oder Pyramidenstumpf? Ein Beitrag zu Fragen der Planung, Konstruktiven Baudurführung und Architektur der Pyramiden von Meroe (Teil C und D)," ZÄS 109: 127-47.

1986 "Reconstruction Work at the Royal Cemetery at Meroe," in Nubische Studien. pp. 99-108.
Hintze, Fritz
1959 Studien zur meroitischen Chronologie und zu den Opfertafeln aus den Pyramiden von Meroe. Abhandlung der Deutschen Akademie der Wissenschaften zu Berlin, Klasse für Sprachen, Literatur, und Kunst, Jahrgang 1959 Nr. 2. Berlin: Akademie-Verlag.

1962 "Preliminary Report on the Excavations at Musawwarat es Sufra, 1960-61," Kush 10: 170-202.

1971 Musawwarat es Sufra. Vol. I, 2. Der Löwentempel, Tafelband. with contributions by Ursula Hintze, Karl-Heinz Priese, and Kurt Stark. Berlin: Akademie-Verlag.

1973 "Meroitic Chronology, Problems and Prospects," Meroitica 1: 127-44.
1984 "Diskussionsbeitrag zum Thema 'Meroitic Chronology'," Meroitica 7: 231-41.
Hintze, Ursula
1979 "The Graffiti from the Great Enclosure at Musawwarat es Sufra," Meroitica 5: 135-150.
Hofmann, Inge
1978 Beiträge zur Meroitische Chronologie. Studia Instituti Anthropos, Vol. 31. Bonn: St. Augustin bei Bonn: Verlag des Anthropos-Instituts.

1979 "Meroitische Chronologie im Lichte von Kunstgegenstanden," Meroitica 5: 71-84.
1984a "Zum Problem der Meroitischen Stammbăume," Meroitica 7, pp. 92-98
1988 Hase, Perlhuhn und Hyăne-Spuren meroitischer Orallitertur. Beiträge zur Sudanforschung, Beiheft 4. Vienna: Mơdling.

Hofmann, Inge and Tomandl, Herbert
1987 Die Bedeuteung des Tieres in der meroitichen Kultur. Beiträge zur Sudanforschung, Beiheft 2. Vienna: Modling.

## Holthoer, Rostislav

1977 New Kingdom Pharaonic Sites: The Pottery. The Scandinavian Joint Expedition to Sudanese Nubia, vol. 5:1. Copenhagen, Oslo, and Stockholm: Scandinavian University Books.

## Hope, Colin

1981a "Two Ancient Egyptian Potter's Wheels," Journal of the Society for the Study of Egyptian Antiquities XI: 127-33.

1981b "Dakhleh Oasis Project-Report on the Study of Pottery and Kilns Third Season-1980," Journal of the Society for the Study of Egyptian Antiquities XI: 233-41.

1982 "Concerning Egyptian Potter's Wheels,"Journal of the Society for the Study of Egyptian Antiquities XII: 13, 14.

Isings, C .
1957 Roman Glass from Dated Finds. Archacologica Traiectina Edita ab Academiae RhenoTraiectinae Instituto Archacologico, vol. 2. Groningen: J. B. Wolters.

## Junker, Hermann

1925 Bericht über die Grabungen der Akademie der Wissenschaften in Wien auf den Friedhöfen von Ermenne (Nubien) im Winter 1911-1912. Akademic der Wissenschaften in Wien Phil.-hist. Klasse, Denkschriften, no. 67, vol. 1. Vienna: Alfred Hölder.

Kaiser, Werner
1956 "Stand und Probleme der ägyptische Vorgeschichtsforschung," ZÄS 81: 87-109.
1957 "Zur inneren Chronologie der Naqadakultur," Archacologia Gcographica 6: 69-77.
Kemp, Barry
1982 "Old Kingdom, Middle Kingdom, and Second Intermediate Period in Egypt," in The Cambridge History of Africa. Vol. I; From the Earliest times to C. 500 B.C., edited by J. Desmond Clark. Cambridge: Cambridge University Press, pp. 658-829.

Kendall, Timothy
1989 "Ethnoarchaeology in Meroitic Studies," Meroitica 10: 625-745.
Krall, Jakob
1898 Beiträge zur Geschichte der Blemmyer und Nubier. Akademie der Wissenschaften in Wien, Phil.-hist. Klasse. Denkschriften, vol. 46 no. 4.

## Lacovara, Peter

1986 "The Funerary Chapels at Kerma," CRIPEL 8: 49-58.
Lajoux, Jean-Domenique
1963 The Rock Paintings of Tassili. Cleveland and New York: The World Publishing Company.

```
Leclant, Jean
```

1985 "Bouteilles globulaires à long col de moyenne-Nubie," in Mélanges offerts à Jean Vercoutter. Paris: Éditions Recherche sur les Civilisations, pp. 185-212.

## Lenoble, Patrice

"Trois tombes de la region de Méroe; la clôture des fouilles historiques d'el Kadada en 1985 et 1986." Archéologie du Nil Moyen 2: 89-119.
n.d. "The 1987 Excavations at Umm Makharoqa: The Central Grave of Tumulus VI in el Hobagi (NE-36-0/7-0-3): A Preliminary Study of 'Burial Customs' of Political and Religious Significance, at Late Meroitic Times in the Sahellian Nile Region." Sudan Antiquities Service.

Lister, Florence C.
1967 Ceramic Studies of the Historic Periods in Ancient Nubia. The University of Utah, Department of Anthropology, Anthropology Papers, No. 86. Sall Lake City: The University of Utah Press.

Lucas, Alfred and Harris, J. R.
1962 Ancient Egyptian Materials and Industries. London: Edward Arnold.

Mayer-Thurman, Christa and Williams, Bruce
1979 Ancient Textiles from Nubia. Chicago: The Art Institute of Chicago and The Oriental Institute of The University of Chicago.

Maystre, Charles
1986 Tabo I. Mission archéologique de la fondation Henry M. Blackmer et du centre d'études orientales de l'Université de Genève sou la direction de Charles Maystre, vol. 2. Geneva: Georg.

Michalides, George
1962 "Le Dieu Bes sur une stele magique," Bulletin de l'Institut d'Égypte 43: 65-85. (1960-1962).

1964 "Bes aux divers aspects," Bulletin de I'Institut d'Égypte 45: 53-93. (1963-1964).
Millet, Nicholas B.
1963 "Gebel Adda: Preliminary Report for 1963," JARCE 2: 147-65.
1964 "Gebel Adda: Preliminary Report for 1964," JARCE 3: 7-14.
1968 "Meroitic Nubia," Ph.D. dissertation, Yale University.
Mills, A. J.
The Cemeteries of Qasr Ibrim. A Report of the Excavations conducted by W. B. Emery in 1961, EES memoir 51. London: EES.

## Mohamed Riad

1966 "Patterns of Ababda Economy in Egyptian Nubia," in Contemporary Egyptian Nubia: A Symposium of the Social Research Center, American University Cairo. Ed. Robert Fernea. vol. 2. New Haven: Human Relations Area Files. (no sequential pagination).

Monneret de Villard, U.
1941 La Nubia Romana. Rome: Instituto per l'Oriente.
Needler, Winifred
1984 Predynastic and Archaic Egypt in the Brooklyn Museum. Wilbour Monographs vol. 9. Brooklyn: The Brooklyn Museum.

Nicholson, Paul and Patterson, Helen
1985a "Pottery Making in Upper Egypt: an ethnoarchaeological study," World Archaeology 17: 222-39.

1985b "Ethnoarchaeology in Egypt: the Ballas Pottery Project," Archacology 38/3: 52-59.
Nordström, Hans-Åke
1962 "Excavations and Survey in Faras, Argin and Gezira Dabarosa, with a note on the Cattle Skulls," (by H. T. B. Hall) in "Archacological Survey on the West Bank of the Nile."
Kush 10: 34-61.
1972 Neolithic and A-Group Sites. The Scandinavian Joint Expedition to Sudanese Nubia, vol. 3. Copenhagen, Oslo, and Stockholm: Scandinavian University Books.

Oren, Eliezer
1987 "The Ways of Horus in North Sinai," in Egypt, Israel, Sinai. Archaeological and Historical Relationships in the Biblical Period, edited by Anson F. Rainey. Tel Aviv: Tel Aviv University, pp. 69-119.

## Passarge, Siegfried

1955 Morphologische Studien in der Wüste von Assuan, Universität Hamburg Abhandlungen aus dem Gebeit der Auslandskunde, Vol. 60, Series C: Naturwissenschaften, Vol. 17. Hamburg: Cram, de Gruyter and Co.

Pellicer, Manuel, Llongueras Zozaya, Juan, and Acuña, I. Vasquez
1965 Las necrópolis meroíticas del grupo " $X$ " y cristianas de Nag-el-Arab (Argín, Sudán). Memorias de la Misión Arqueológica, vol. 5. Madrid: Ministerio de Asuntos Exteriores and Ministerio de Educación Nacional.

Petrie, W. M. F.
1901 Diospolis Parva. The Cemeteries of Abadiyeh and Hu 1898-9. EEF memoir 20. London: EEF.

1906 Hyksos and Israelite Cities. BSAE and ERA 12. London: Bernard Quaritch, 1906.
Pinder-Wilson, R. H. and Scanlon, George
1987 "Glass finds from Fustat, 1972-1980," Journal of Glass Studies 29: 60-71.

Posener-Krieger, Paule
1986 "Les travaux de l'Institut français d'archéologie orientale en 1985-1986," Bulletin de I'Institut français d'archeologie orientale 86: 367-97.

Randall-Maciver, D., and Woolley, C. Leonard
1911 Buhen, Eckley B. Coxe Junior Expedition to Nubia, vol. 8. Philadelphia: The University Museum.

Redford, D. B.
1978 "Son of Sun Disc," Royal Ontario Museum, Archaeological Newsletter, 154 (March 1978): no pages.

Reisner, G. A.
1910 The Archaeological Survey of Nubia, Report for 1907-1908. Vol. I Archaeological Report. Cairo: National Printing Department.

1923a Excavations at Kerma, Parts I-V. Harvard African Studies, vols. 5, 6. Cambridge, MA: Peabody Museum of Harvard University.

1923b "The Meroitic Kingdom of Ethiopia: A Chronological Outline," JEA 9: 34-77; 157-60.
Richter, Gisela M. A.
1959 A Handbook of Greek Art, 2nd. Ed. London: Phaidon Press.
Ricke, Herbert
1967 Ausgrabungen von Khor-Dehmit bis Bet el Wali. Oriental Institute Nubian Expedition, vol. 2. Chicago: The University of Chicago Press.

## Robertson, John H.

1975 "The 74/75 Meroe Excavation," Nyame Akuma 6: 25-26.
Romano, James
1980 "The Origin of the Bes Image," Bulletin of the Egyptological Seminar 2: 39-56.
Rönne, T. and Fraser, P. M.
1953 "A Hadra-vase in the British Museum," JEA 39: 84-94.
Säve-Söderbergh, Torgny, Englund, Gertie, and Nordström, Hans-Ake, eds.
1982 Late Nubian Cemeteries. Scandinavian Joint Expedition to Sudanese Nubia, vol. 6. Copenhagen, Oslo, and Stockholm: Scandinavian University Books.

Schiaparelli, Ernesto
1927 La Tomba intata del'architetto Cha nella necropoli di Tebe, Relazione sui lavori della Missione archeologica italiana in Egitto (anni 1903-1920), vol. 2. Turin: Giovanni Chiantore.

Schiff Giorgini, Michela
1971 Soleb II. Les Nécropoles. Florence: Sansoni.

```
xxxviii
MEROITIC REMAINS FROM QUSTUL AND BALLANA
```


## Seele, Keith C.

```
1947 "Oriental Institute Museum Notes; Horus on the Crocodiles," JNES 6: 43-52.
1974 "University of Chicago Oriental Institute Nubian Expedition: Excavations between Abu Simbel and the Sudan Border, Preliminary Report," JNES 33: 1-43.
Seligman, C. J. and Seligman, Brenda
1932 Pagan Tribes of the Nilotic Sudan. London: George Routledge and Sons.
Shinnie, Peter, and Bradley, Rebecca.
1980 The Capital of Kush 1. Meroitica 4. Berlin: Akademie-Verlag.
Shinnie, Peter and Kense, François
1982 "Meroitic Iron Working," Meroitica 6: 17-28.
```


## Simpson, William Kelly

```
1967 a "Toshka-Arminna 1962; The Pennsylvania-Yale Archaeological Expedition to Nubia," in Fouilles en Nubie (1961-1963). Cairo: General Organisation of Government Printing Offices, pp. 169-83.
1967b "The Pennsylvania-Yale Expedition to Egypt Preliminary Report for 1963: Toshka and Arminna (Nubia)," in Fouilles en Nubic (1961-1963). Cairo: General Organisation of Government Printing Offices, pp. 185-194.
```


## Sist, Loredana

```
1982 "Alcune ceramiche decorate," Meroitica 6: 317-21.
Streck, Bernhard
1982 Sudan: Steinernde Gräber und lebendige Kulturen am Nil. Cologne: Dumont Buchverlag.
Striedter, Karl Heinz
1984 Felsbilder der Sahara. Munich: Prestel-Verlag.
Tobert, Natalie
1984 "Ethno-archaeology of Pottery Firing in Darfur, Sudan: Implications for Ceramic Technology Studies," Oxford Journal of Archacology 3: 141-56.
1988 The Ethnoarchaeology of the Zaghawa of Darfur (Sudan). Cambridge Monographs in African Archaeology 30. BAR International Series 445. Oxford: British Archeological Reports.
Török, László
```

"A Special Group of Meroitic Property Marks from the 1 st to 2 nd Centuries A.D.," Meroitic Newsletter 10: 35-44.

1979 "The Art of the Ballana Culture and its Relation to Late Antique Art," Meroitica 5: 85-100.

## BIBLIOGRAPHY

1987a "The Historical Background: Meroe, North and South," in Nubian Culture Past and Present; Main Papers Presented at the Sixth International Conference for Nubian Studies in Uppsala, 11-16 August, 1986, edited by Tomas Hăgg. Konferenser 17. Uppsala: Kungl. Vitterhets Historie och Antiqvitets Akademien, pp. 139-229.

1987b "Meroitic Painted Pottery: Problems of Chronology and Style," Beiträge zur Sudanforschung 2: 75-106.

1988 Late Antique Nubia: History and Archaeology of the Southern Neighbor of Egypt in the 4th-6th c. A.D. Antaeus. Communicationes ex Instituto Archaeologico Academiae Scientarum Hungaricae 16. Budapest: Archaeological Institute of the Hungarian Academy of Sciences.

1989a "Kush and the External World," Meroitica 10: 49-215.

Trigger, Bruce G.
1965 History and Settlement in Nubia. Yale University Publications in Anthropology, no. 69. New Haven: Department of Anthropology, Yale University.

1967 The Late Nubian Settlement at Arminna West. Publications of the Pennsylvania-Yale Expedition to Egypt, no. 2. New Haven and Philadelphia: The Peabody Muscum of Natural History of Yale University and the University Museum of the University of Pennsylvania.

1969 "The Myth of Meroe and the African Iron Age," African Historical Studies 2: 23-50.
Tylecote, R. F.
1982 "Metal Working at Meroe, Sudan," Meroitica 6: 29-42.
Vandiver, Pamela and Lacovara, Peter
1986 "An Outine of Technological Changes in Egyptian Pottery Manufacture," Bulletin of the Egyptological Seminar 7: 53-85.

1979 "La Tombe mérö̈tique SA. S.2.T.1. (1)," CRIPEL 5. Études sur l'Égypte et le Soudan anciens: 210-36.

Verner, Miroslav
1973
Some Nubian Petroglyphs on Czechoslovak Concessions. Prague: Charles University.
Vila, Andre
1967 Aksha II; le cimitière méroïtique d'Aksha. Paris: Centre nationale de la recherche scientifique.

1980 PASCAD, Fascicule 12: la nécropole de Missiminia I, les sépultures napatéennes. Paris: Centre nationale de la recherche scientifique.

1982 PASCAD, Fascicule 13: la nécropole de Missiminia II, les sépultures méroïtique. Paris: Centre nationale de la recherche scientifique.

1984 "Gens à anneaux, gens à cistes," Meroitica 7, pp. 557-570.

Vincentelli, Irene
1982 "La ceramica del quadrati F 7-G 7," Meroitica 6, pp. 313-16.

Wainwright, G. A.
1945 "Iron in the Napatan and Meroitic Ages," Sudan Notes and Records 26: 5-36.
Wenig, Steffen
1979a "Meroitic Painted Ceramics," Meroitica 5: 129-34.

1979b Africa in Antiquity II. The Arts of Ancient Nubia and the Sudan. Brooklyn: The Brooklyn Museum.

Wildung, Dietrich and Grimm, Günter
1978 Götter Pharaonen. Mainz am Rhein: Philipp von Zabern.
Williams, Bruce
1985 "A Chronology of Meroitic Occupation below the Fourth Cataract," JARCE 22: 149-95.
1987 "Forebears of Menes in Nubia, Myth or Reality," JNES 46: 15-26.
1988 Decorated Pottery and the Art of Naqada III. Münchner Ägyptologische Studien 45. Munich: Deutscher Kunstverlag.
n. d. "The Late Nubian Pottery." An unpublished review of Ceramic Industries of Medieval Nubia by William Y. Adams.

Williams, B., Williams, W. W. and McMillan, A.
1985 "Report on a Preliminary Study of Pottery and Clays in Nubia," in Ancient Technology to Modern Science, edited by W. D. Kingery. Ceramics and Civilization, vol. 1. American Ceramic Society.

Winckler, H .
1938 Rock-Drawings of Southern Upper Egypt I. London: Humphrey Milford.

Woolley, C. Leonard, and Randall-MacIver, D.
1910 Karanog: The Romano-Nubian Cemetery. Eckley B. Coxe Junior Expedition to Nubia, vols. 3, 4. Philadelphia: The University Museum.

1911 Karanog: The Town. Eckley B. Coxe Junior Expedition to Nubia, vol. 5. Philadelphia: The University Museum.

Yellin, Janice W.
1982 "Abaton-style milk libation at Meroe," Meroitica 6, pp. 151-55.

Zabkar, Louis V.

## Zabkar, Louis V. and Zabkar, Joan J.

1982 "Semna South. A Preliminary Report on the 1966-68 Excavations of the University of Chicago Oriental Institute Expedition to Sudanese Nubia," JARCE 19: 7-50.

Zach, Michael
1988 "Die gestempelte meroitische Keramik," Beiträge zur Sudanforschung 3: 121-150.

## LIST OF BIBLIOGRAPHICAL ABBREVIATIONS

| CRIPEL | Cahier de Recherches de l'Tnstitut de Papyrologie et d'Égyptologie de Lille. |
| :---: | :---: |
| EES | Egypt Exploration Society. |
| EEF | Egypt Exploration Fund. |
| JARCE | Journal of the American Research Center in Egypt, New York. |
| $J E A$ | Journal of Egyptian Archacology, London. |
| JNES | Journal of Near Eastern Studies, Chicago. |
| $L \ddot{A}$ | Lexikon der Ägyptologic. Vols. I-VI, edited by W. Helck and E. Otto. Wiesbaden: Otto Harrassowitu, 1975-1986. |
| LAAA | University of Liverpool Annals of Archacology and Anthropology, Liverpool. |
| $L D$ | Karl Richard Lepsius, Denkmaeler aus Aegypten und Aethiopien, 12 Bde u. Erg. bd., Berlin, 1849-1858. |
| Meroitica 2 | W. Y. Adams et al., Meroitic North and South. A Study in Cultural Contrasts. Meroitica. Schriften zur altsudanesischen Geschichte und Archäologie. Vol. 2. Berlin: Akademie-Verlag, 1976. |
| Meroitica 5 | Africa in Antiquity; the Arts of Ancient Nubia and the Sudan. Proceedings of the Symposium Held in Conjunction with the Exhibition, Brooklyn, September 29October 1, 1978, edited by Fritz. Hintze. Meroitica. Schriften zur altsudanesischen Geschichte und Archäologic. Vol. 5. Berlin: Akademie-Verlag, 1979. |
| Meroitica 6 | Meroitic Studies: Proceedings of the Third International Meroitic Conference, Toronto 1977, edited by N. B. Millet and A. L. Kelley. Meroitica. Schriften zur altsudanesischen Geschichte und Archäologie. Vol. 6. Berlin: Akademie-Verlag, 1982. |
| Meroitica 7 | Meroitistische Forschungen 1980; Akten der 4. Internationalen Tagung für Meroitistische Forschungen vom 24. bis 29. November 1980 in Berlin, edited by Fritz Hintze. Meroitica. Schriften zur altsudanesischen Geschichte und Archäologie. Berlin: Akademie-Verlag, 1984. |


| xliv | MEROITIC REMAINS FROM QUSTUL AND BALLANA |
| :---: | :---: |
| Meroitica 10 | Studia Meroitica 1984: Proceedings of the Fifth International Conference of Meroitic Studies. Rome 1984, edited by Sergio Donadoni and Steffen Wenig. Meroitica. Schriften zur altsudanesischen Geschichte und Archäologie. Vol. 10. Berlin: Akademie Verlag 1989. |
| MDAIK | Mitteilungen des Deutschen Archảologischen Instituts Abteilung Kairo, Mainz am Rhein. |
| Nubische Studien | Nubische Studien; Tagungsakten der 5. internationalen Konferenz der International Society for Nubian Studies, Heidelberg, 22.-25. September 1982, edited by M. Krause. Mainz am Rhein: Philipp von Zabern. |
| OINE III | Bruce Beyer Williams, Excavations Between Abu Simbel and the Sudan Frontier, Keith C. Seele, Director. Part 1: The A-Group Royal Cemetery at Qustul: Cemetery L. The Oriental Institute Nubian Expedition, vol. III. Chicago: The Oriental Institute, 1986. |
| OINE IV | Bruce Beyer Williams, Excavations Between Abu Simbel and the Sudan Frontier, Keith C. Seele, Director. Parts 2, 3, and 4: Neolithic, A-Group, and Post-A-Group Remains from Cemeteries W, $V, S, Q, T$, and A Cave East of Cemetery K. The Oriental Institute Nubian Expedition, vol. IV. Chicago: The Oriental Institute, 1989. |
| OINE V | Bruce Williams, Excavations Between Abu Simbel and the Sudan Frontier, Keith C. Seele, Director. Part 5: C-Group, Pan Grave, and Kerma Remains at Adindan Cemeteries T, $K, U$, and J. The Oriental Institute Nubian Expedition, vol. V. Chicago: The Oriental Institute, 1983. |
| OINE VI | Bruce Beyer Williams, Excavations Between Abu Simbel and the Sudan Frontier, Keith C. Seele, Director. New Kingdom Remains from Cemeteries R, V, and K at Qustul and Adindan. The Oriental Institute Nubian Expedition, vol. VI. Chicago: The Oriental Institute (forthcoming). |
| OINE VII | Bruce Beyer Williams, Excavations Between Abu Simbel and the Sudan Frontier, Keith C. Seele, Director. Part 7: Twenty-Fifth Dynasty and Napatan Remains from Qustul: Cemeteries W and V. The Oriental Institute Nubian Expedition, vol. VII. Chicago: The Oriental Institute, 1990. |
| OINE IX | Bruce Beyer Williams, Excavations Between Abu Simbel and the Sudan Frontier, Keith C. Seele, Director. Part 9: Noubadian X-Group Royal Funerary Complexes and Private Cemeteries at Qustul and Ballana. The Oriental Institute Nubian Expedition, vol. IX. Chicago: The Oriental Institute (forthcoming). |
| PASCAD | La prospection archéologique de la vallée du Nil au sud de la cataracte de Dal (Nubie soudanaise). |
| $Z A ̈ S$ | Zeitschrift für Ägyptische Sprache und Altertumskunde. Leipzig, Berlin. |

## ACKNOWLEDGMENTS

The excavations of The Oriental Institute Nubian Expedition were made possible by a grant from the United States State Department and support from Mr. William Boyd. Research for the present volume was supported by a grant from the National Endowment for the Humanities. Publications were assisted by a gift from Mr. and Mrs. John Leslie. Without the help of these people and institutions, the project could not have been carried forward, and their help is gratefully acknowledged.

Many have aided this publication by contributing time and effort. Their number is too large for me to record here, and I can mention only those who played a role in forwarding this book. Artists were Kathryn Cruz-Uribe, Joanna Steinkeller, Lisa Heidorn, who also undertook most of the production, and Carol Abraczinskas; Peter Zale prepared the concession map. Photographers were Carlos Cabasos, Jean Grant, and Ursula Schneider. Major assistance in preparing and checking the manuscript was done by Leanne Galvin. Special care shown by Lynn Michaels of Color Concept Company made possible the half-tone reproduction of painted pottery drawings. Pottery was mended by Mrs. Elizabeth Tieken and Mrs. Corsin Ellis. Objects were conserved, cleaned, and sometimes reassembled by Donald Hansen, Barbara Hall, and Mrs. Carolyn Livingood. Text editing was done by Mrs. Sally Zimmerman, Mrs. Daila Shefner, and the staff of the Publications Office. Valuable volunteer assistance was rendered by John Robb, Deborah Schwartz, and Patrick Zak. The staff of The Oriental Institute Museum has been a constant source of help, notably Raymond Tindel, John Larson, Honorio Torres, and the curator, Karen Wilson. The registry volunteers deserve special thanks for their continuous care and patience, as does Karen Bradley, who placed the objects in storage with care and precision. Very special thanks must be given to Mrs. Camilla Fano whose devotion and care in checking and registering ogjects have contributed greatly to the series, and to John Ellsworth for his great care and skill in pasting up the figures and plates for this volume. The directors, faculty, and staff of The Oriental Institute are owed deep gratitude for making the present series possible.

## PREFACE

The present volume and its companion, OINE IX (forthcoming), present the largest body of materials excavated by The Oriental Institute north of the Sudanese border. Because the amount was so great, a far smaller selection of the remains is actually presented than in previous volumes that deal with The Oriental Institute's excavations at Qustul, Ballana, and Adindan. Nevertheless, the work is large, because the remains were varied enough to require some organization for presentation. This volume has resulted from a chronological study that was funded by the National Endowment for the Humanities which was extensively reported in another work, ${ }^{1}$ and is discussed here in Chapter 1 and Appendix A. Although much Meroitic material has been found in northern Nubia, the most important publications are quite old, and they often omit reporting details of deposition that are essential for chronology. Recording at Qustul and Ballana was rapid, and many contexts were damaged to the point of confusion. Nevertheless, enough information survived that can no longer be recovered from the early excavations to justify a publication even more detailed than the one offered in this work.

Drawings for this volume were made with grey tones to indicate various shades of red on painted pottery. In cases where the entire vessel was coated red, no color is indicated on the exterior, but a strip of black marks the distance of the coat inside the rims of cups.

## CHAPTER 1

## MEROITIC REMAINS AT QUSTUL AND BALLANA

Meroitic remains were found in two cemeteries and in a fragmentary settlement at Ballana. ${ }^{1}$ Together, these cemeteries make up one of the largest bodies of Meroitic material found in Lower Nubia.

## A. THE LOCATION OF MEROITIC REMAINS IN THE CONCESSION

## CEMETERY Q

The larger of the two cemeteries was found during the expedition's work in the site of the Noubadian X-Group royal cemetery at Qustul, which Emery and Kirwan had designated 220. ${ }^{2}$ The director, Keith C. Seele, renamed it Cemetery $Q$ and it was excavated in the first season of operations, 1962-63, primarily by clearing broad areas of the surface to find graves and surface installations. Work had begun in the southwest corner of the site. As operations moved northward and eastward, a large Meroitic cemetery was encountered just north of tumulus Qu. $48 .{ }^{3}$ Located on the low gravel desert just below the R. L. 130 contour, the tombs were cut into the more or less densely compacted deposits. ${ }^{4}$ The cemetery occupied an area of about $160 \times$ 40 m , its greatest dimension on an east-west (river direction) axis; an orientation exaggerated by the destruction of the northern and southern edges of the cemetery caused by tumuli $\mathrm{Qu} .48, \mathrm{Qu} .51, \mathrm{Qu} .54$, Qu. 55, and Qu. 56. The construction of a long row of chapels across the cemetery north of tumulus Qu. 48 also disrupted many superstructures and probably resulted in much plundering. Although enough evidence remained to reconstruct approximately the original dimensions of the cemetery much was destroyed, and the tombs next to tumulus Qu. 48 now were positioned near the center of a cemetery that once extended farther south. The destruction, the regular spacing of the great tumuli in the northward progression of the X-Group cemetery and the location of the row of chapels directly above, indicated that the Meroitic cemetery had not been taken into account when the tumuli and the chapels were constructed. X-Group tombs were constructed in the later areas of the Meroitic cemetery and around its edges but there is no reason to believe that these graves represent a direct continuation of the earlier cemetery. Similar tombs were found in all the areas of Cemetery Q explored by The Oriental Institute. Without a direct transition between the phases, this Meroitic cemetery was not really related to the X -Group tumuli that succeeded it, any more than earlier A-Group

## 1. Seele 1974, pp. 8-12, 20-22.

2. Emery and Kirwan 1935, p. 479.
3. Seele 1974, p. 7. See Emery and Kirwan 1935, p. 68 and fig. 32 for Meroitic burials found under tumulus Qu. 36 at the north end of the cemetery. These belonged to the earliest phase of the Meroitic period IA; see p. 9 below.
4. Seele 1974, pp. 7, 8.
cache pits were related to the Meroitic cemetery. ${ }^{5}$ Later, a small Christian cemetery was established at the northwest corner of the Meroitic cemetery.

In Cemetery Q, 684 tombs and pits were explored and given numbers. In addition more than one hundred X-Group chapels and various other installations were explored, not all of which were numbered. Graves and pits were given numbers prefixed by the letter $Q$, while Meroitic surface installations were designated QD with numerical subscripts. Not all of the superstructures indicated on the plan were assigned numbers. Some superstructures could not be assigned to a specific substructure, so their separate numbers will be included here. ${ }^{6}$

## CEMETERY B

The discovery of the Meroitic cemetery at Qustul was incidental to the exploration of the X-Group necropolis, but the exploration of the second Meroitic cemetery at Ballana, renamed Cemetery B (EmeryKirwan 221) ${ }^{7}$ was intentional. It was excavated in the early part of the second season, and 334 tombs ${ }^{8}$ and combined complexes of tombs ${ }^{9}$ were given numbers. It covered an area approximately $110 \times 65 \mathrm{~m}$, the largest dimension north-south and was located on the desert just at the R. L. 130 contour following a low slope or scarp into which the earliest tombs of the cemetery were dug. These tombs and their contents indicate that they were contemporary with the main phase of the Qustul Meroitic cemetery and with the settlement to the cast near the river. This early cemetery was soon abandoned and the surface subsequently eroded (making many original plans difficult to recover). When tombs were again made, it was mostly in the area to the west, on slightly higher and more level ground. ${ }^{10}$ After the end of the Meroitic period, Cemetery B was never again the site of a major burial ground and only a few X-Group and Christian tombs were placed in and around it, leaving its plan essentially intact.

## OTHER FINDS

Nearly all of the Meroitic remains found by the expedition in this concession came from Cemeteries Q and B. Some material was found in a settlement between Cemetery B and the Nile, ${ }^{11}$ but this site was so deeply buried that only a small area could be explored before the expedition resumed excavations elsewhere.

Very little other material could be identified as even possibly Meroitic. A pair of Meroitic tombs was found by Emery and Kirwan below X-Group tumulus Qu. $36 .{ }^{12}$ Cemetery W did contain a few shafts with chambers on the north or south sides that might date to the later Napatan or early Meroitic period. ${ }^{13}$ One had

## 5. See also OINE IX, forthcoming; OINE IV, Chapter 2.

6. The fields excavated in the cemetery proper were east of Tumuli 42 and 3, north and west of Tumulus 41 , north of and around Tumulus 48 (the Meroitic cemetery) and around Tumulus 36 (all by Emery and Kirwan numbering, OINE IX, forthcoming). These fields were given literal designations on "sheets" A-F.
In addition, a number of surface structures of various dates, some not in the cemetery proper, were also given literal designations, and called "areas." Of these, only "Sheet E", which includes the Meroitic cemetery near Tumulus 48; "Area C." which consists of the X-Group chapels for Tumulus 48 that overlay the Meroitic cemetery; and "area $D$," which designates only superstructures of Meroitic tombs, concern us here. See Seele 1974, pp. 3-7.
7. The cemetery had been noted before, but was not excavated. See Emery and Kirwan 1938, p. 479.
8. See OINE VIII, Part 2. pp. 167-289.
9. See pp. 14. 15 below, tab. 4 .
10. See also Seele 1974, pp. 20-22.
11. Sce OINE VIII, Part 2, pp. 291-93.
12. Emery and Kirwan 1938, p. 68 and figs. 30. 31. These belong to the simplest type of burial (discussed below, p. 9 as phase Ia), which contained ramped shafts and chambers at the west ends with stone blocking. There were no grave goods except for a pair of heavy iron anklets on body 36 b . A shaft with a chamber on the north side blocked with slabs contained a shrouded extended burial which could have come from the same approximate period, but its relation to the other tombs is not clear.
13. OINE VII, p. 53; see for example tombs W 28A and W 34.
an end chamber, a substructure also typical of the later Napatan and Meroitic periods. ${ }^{14}$ Cemeteries V and K each contained a shaft with a mudbrick structure in it but without the ramps usually found in X-Group tombs in this concession. One possibly earlier oval shaft, V 58, contained a large jar with lugs and a crudely milled rim. ${ }^{15}$

In most respects, the occurrences of Meroitic materials parallel their appearance elsewhere in Lower Nubia, where burials tended to be concentrated in cemeteries that were often very large, such as Faras, 16 Karanog, ${ }^{17}$ Qustul, Ballana, and Semna South, ${ }^{18}$ in contrast with the New Kingdom and X-Group remains which tended to be scattered among smaller cemeteries and plots. ${ }^{19}$ In particular, X-Group tombs occurred in scattered smaller cemeteries, small plots, and clusters (cemeteries V, R, and J), ${ }^{20}$ and even the great cemetery of Qustul itself consisted primarily of the royal tumuli, ancillary installations, and the relatively few smaller tumuli scattered among them.

## B. THE CONSTRUCTION OF CEMETERIES Q AND B AND THE CHRONOLOGY OF LOWER NUBIA

Despite the difference between the major axes of Cemeteries $Q$ and $B$, the arrangement of tombs was much the same in both. Tombs were distributed roughly in north-south rows that allowed access to the east side of the grave for post-funeral offerings. ${ }^{21}$

Despite the destruction in Cemetery Q , it is apparent that both the situation of tombs and rows in the cemeteries as well as changes in the distribution of various kinds of tomb structures occurred over time, and these changes are useful in determining the chronological relationship between the two cemeteries and establishing an archacological chronology for Meroitic Lower Nubia. This will shed light on important archacological and historical problems such as the chronology and distribution of occupation, the cultural orientation of the inhabitants, and the significance of the changes that distinguish Meroitic from succeeding X-Group material. ${ }^{22}$ Until recently, chronology has often been treated as a matter of estimation advanced without carefully constructed links between archacological and historical evidence. ${ }^{23}$ In particular, the vagueness of chronological correlations makes it difficult to identify the cultural orientation of the inhabitants or describe the relations between Meroitic Lower Nubia and Meroe, Egypt, and the adjacent deserts. ${ }^{24}$

Unlike those in Egypt, the archacological cultures of Nubia are discontinuous clusters of easily recognized materials and practices with often poorly documented transitions. The appearance, modification and disappearance of cultures in various parts of the valley often seems abrupt and different cultures sometimes appear contemporaneously side-by-side, ${ }^{25}$ as also happens less frequently in Egypt. ${ }^{26}$ Some
14. OINE VII, see p. 64, W 49; the chamber had collapsed, and the tomb was reused, however.
15. OINE IV, p. 86.
16. Griffith $1924,1925$.
17. Woolley and MacIver 1910.
18. Zabkar and Zabkar 1982, pp. 21-29.
19. See OINE VI (forthcoming) and OINE IX (forthcoming) for the plans of New Kingdom and X-Group cemeteries.
20. OINE IX, forthcoming,
21. Where superstructures occur (pl. 2), the chapel is on the east side. This contrasts strongly with X-Group royal and private cult arrangements (Seele 1974, pp. 3-6; OINE IX, forthcoming).
22. See, for example, Adams 1965b; Trigger 1967, pp. 58-70.
23. So treated in Adams 1965a, pp. 148, 149, 174-76; idem 1976, pp. 14, 15; idem 1977, p. 345, and idem 1986, p. 604. See now, Török 1987a, pp. 188-207; idem 1987b, and Williams 1985, pp. 191-93.
24. Török 1988, pp. 27, 28 and Adams 1976, pp. 19-24; idem 1979, pp. 9-13.
25. See Bietak 1968a, pp. 92-127 for a descriptive analysis of contemporary burials in C-Group Nubia. The cultural groups distinguished in the Second Intermediate period may not be readily related to those found earlier and later. See, for example, Kemp 1982, pp. 705, 706, 711. See also Adams 1979.
26. See Bietak 1968b, 1970, 1987. The Egyptian tradition is so readily identifiable from both written and archaeological materials that even fragments often suffice to identify a context as Egyptian. Within Egypt, most
periods have no archaeological materials assigned to them, although evidence from written records and monuments indicate that there was activity in the area. ${ }^{27}$ Phases without distinctive remains have thus been lost or dismissed as archaeologically nonexistent. ${ }^{28}$ Phases separated in time and space share distinctive features that indicate they were related, evidence that gives only sporadic illumination to what must have been long-lasting traditions. No critical method has been devised to evaluate possible links between these discontinuous phases.

## ARCHAEOLOGICAL CHRONOLOGY IN MEROITIC NUBIA

Archaeological chronology in the Nile Valley depends largely upon stratigraphy and clusters of intentional deposits, mainly burials. Although the value of stratigraphy was recognized early, ${ }^{29}$ grave groups remained important ${ }^{30}$ because many are actually chronological units, and because early excavators did not recover the details of debris deposits and structures in setlements.

Reacting to errors frequently made in clustering intentional deposits whose contents had not been carefully evaluated, investigators turned to stratigraphy as the primary support of chronology. However, close observation of the boundaries of a deposit assured the general order of events in the record of deposition, but not close chronological control of the contents. ${ }^{31}$ Common flaws such as the use of fill from earlier levels and the fact that changes in the development of pottery and phases in deposition do not necessarily coincide are well known. Finally, none of the excavations in the Nubian rescue were carried out with sufficient attention to details of deposit to justify detailed statements of stratigraphy. Although general trends might be indicated using such materials, detailed statements about transitions ${ }^{32}$ and historical chronology ${ }^{33}$ are not supported in any cogent manner. Meroitic archaeological chronology in particular must be rebuilt using other methods.

For the present work, it was clear that complete records of every detail of every grave and object could not be presented. It was also clear that the burial chronologies available were not adequate to ensure that every phase and aspect of Meroitic Qustul and Ballana would be represented fairly. A different chronological approach was therefore adopted in order to make the essential details of each age and aspect accessible.

## ObJECTIVES IN CHRONOLOGY

The chronological basis of the present work was defined in three objectives: (1) identifying materials made for use at any one time, (2) determining the order in which these groups or phases occurred, and (3) assigning them their actual historical period.
contexts left by immigrants who retained their own culture, such as C-Group and Pan-Grave cemeteries in Upper Egypt or Asiatic settlements in the Delta, can therefore be easily identified.
27. See OINE IV, Chapters 3 and 4.
28. See OINE VII, especially pp. 1, 29-49; the Twenty-fifth Dynasty/Napatan period is an important example (Vila 1980, pp. 169-78). Materials from these unrecognized periods lacked characteristics that would easily distinguish them from chronologically contiguous phases. Major changes in burial customs have made some periods much easier to detect than others. Those first detected, and still most widely recognized, were the ones with the most elaborate and easily distinguished burials. When less distinctive materials were originally found along with these elaborate complexes, they were considered to be contemporary.
29. Petrie 1891, pp. 14-17, pl. III.
30. Petrie 1901, pp. 4-8; Kaiser 1956, 1957; Bietak 1968a.
31. See Trigger 1967, pp. 80-83, for mixed materials ranging from middle Meroitic to middle X-Group, all assigned to a transition between the two periods.
32. Ibid. In addition, sherds were very frequently used as building materials, to separate courses of brick in walls and vaults, or to fill the spaces between vaults and the floors above (author's observation, Quseir 1982, made, courtesy of the project directors, D. H. Whitcomb and J. H. Johnson. See also Woolley and MacIver 1910, p. 18).
33. See Adams 1986, pp. 606-09, for problems at Ibrim. The numerical estimates indicated for dates in the work do not overcome the problem because no evidence was offered for chronological boundaries and none was derived from areas outside Nubia where many types found at Ibrim originated.

## Identifying Deposits

The first objective may be attained using groups of objects that were originally deposited together, in this case unmixed tomb groups or other intentional deposits. These present certain problems, however. Meroitic tombs were often plundered and sometimes reused, occasionally after the complete removal of earlier burials. ${ }^{34}$ Sometimes, especially in tombs that had not been previously cleared, new vessels and objects were deposited alongside earlier ones. Sherds were frequently used as digging tools in tomb plundering and discarded in the plundered tombs. Large, worn sherds can easily be identified as tools, but others may not be recognized. In a few cases, much older objects apparently taken from other tombs were deposited. ${ }^{35}$ These obvious examples indicate that such redeposition occurred where it is not easily detected, e.g. when relatively new objects were redeposited.

## Phases

Even intentional deposits of essentially contemporary material did not contain sufficiently broad representations of the objects and practices of their age. ${ }^{36}$ It has been necessary to link contexts together or establish phases by comparisons between objects and practices found in equivalent situations or contexts (such as burials), in order to distinguish the materials characteristic of any given age. Parallel to this process is the assumption that only a limited number of objects and practices were unique to any cultural group in Meroitic Nubia. Thus, where equivalent contexts were contemporary, they would share some features distinctive of their age, most often sufficient to generate some positive evidence of contemporaneity. ${ }^{37}$

In the present work, the various phases identified are based upon changes in burial customs and objects found, notably pottery, and have been given designations that parallel those given the C-Group by Bietak. ${ }^{38}$ As in that work, the transitions between phases based on changes in pottery are not always exclusive. ${ }^{39}$

## Sequence

In Meroitic Nubia, historical, stratigraphic, and cartographic evidence is available to help arrange phases in their original sequence.

Historical Evidence. Only a few groups could be linked directly to any historical persons or events in Meroitic Nubia that are of substantial chronological valuc. ${ }^{40}$ Many objects, notably pottery, ${ }^{41}$ bronze, ${ }^{42}$ and glass vessels ${ }^{43}$ have been connected to dated counterparts in the Mediterranean world, and the clearest of these comparisons can be used not only to verify the sequence, but also to provide a framework for the historical chronology.

Stratigraphic and Structural Evidence. Stratified sherd debris cannot be assumed to comprise sequences of chronologically well-defined materials, but chronological verification was obtained from archaeological
34. See p. 25 below.
35. Vila 1982, frontispiece:5, from 2-V-20/165; see pp. 71, 72 and fig. 64.
36. See pp. 23-25 below for a discussion of changes in the kinds of object deposited with the burial.
37. These are often indirect. See OINE VII, pp. 41, 42, for graves which differ from common Kushite types. Extended burials in rectangular shafts were correlated chronologically with partly contracted burials in circular shafts based upon pottery they shared, not with each other but with other dated groups, mostly royal tombs.
38. Bietak 1968a.
39. Ibid., p. 179, tab. 9.
40. See pp. 15-20 below.
41. Török 1987a, pp. 188-207 (objects in other materials are also brought into the discussion, especially metal); idem 1987b.
42. Hofmann 1978, pp. 213-30; Török 1988, pp. 75-165 (dealing with the fourth and fifth centuries C.E.); see also von Bissing 1939 and 1941 and note 41, above.
43. Hofmann 1978, pp. 199-213; Török 1988, pp. 75-165 (dealing with the fourth and fifth centuries C.E.); see also von Bissing 1939 and 1941 and note 41, above.
contexts, features, or sequential constructions. As indicated above, the evidence offered by stratified materials was limited by their poverty and mixture. ${ }^{44}$

Cartographic Arguments: Sequential Distribution. From the beginning of serious archaeological investigations in Nubia, combined variations in structures, practices, and objects could be observed in different areas of cemeteries and the inference was made that these changes were successive. ${ }^{45}$ Based upon that inference, Reisner established a sequence for the great tumuli at Kerma. This has since been reversed in order but remains intact as a series. ${ }^{46}$ Various parts of the great sequence of Kushite royal tombs have been established using arguments based upon sequential distribution, a sequence that remains remarkably intact after repeated critical examinations. ${ }^{47}$ This method of chronological argumentation has also been used rigorously to distinguish phases and to determine their order in earlier periods. ${ }^{48}$ In the case of Ballana and Qustul, important differences between cemeteries $Q$ and $B$ indicated that such a method would produce positive results. ${ }^{49}$

## THE DISTRIBUTION OF OBJECTS AND PRACTICES IN CEMETERIES Q AND B

A number of general comparisons between Cemeteries $Q$ and $B$ indicated that chronology could be verified by examining the distribution of objects and practices. For example, Cemetery $Q$ contained a number of tombs with superstructures (pl. 2). Those near the center were almost always square indicating that originally a pyramid had been erected (Q 352, Q 363) and often the outer edges of the walls were beveled at an angle (pl. 8d, Q 363). The superstructures near the western edge of the cemetery appear to have been mostly rectangular mastabas (Q 169). Substructures were mostly shafts with chambers excavated in the east end. Some with chambers on the west (Q172) and on either (mostly the north) or both sides were also found (Q 301, Q 303). On the other hand, oblong rectangular superstructures of mastabas were common in Cemetery B (B 201, B 302). Most of the substructures in Cemetery B were shafts containing brick vaults built either on narrow ledges cut in the sides or on low walls (B 252, B 302; for two stories, see B 280); a few tombs had stone slabs instead of the brick vault (B 333). These tombs contrasted sharply with the chamber tombs of Qustul. They sometimes cut or replaced earlier denuded chamber tombs of the Qustul type (tab. 4).

Since each of the cemeteries was typified by a certain sort of tomb and types of tomb characteristic of Cemetery B intersected those typical of Q , the difference between the two cemeteries must be considered mainly chronological (tab. 1).

In addition to the structures, burial positions found in the two cemeteries differed. Almost all of the burials preserved in Cemetery B had the hands placed at or on the pubis (B205). Although this position is also common in Cemetery $Q(Q 317)$, hands were also found at the sides or with one hand placed at the side and the other on the pubis (Q475, Q 490, Q 540). The Osirian significance of this last position is confirmed by a well-preserved burial at Aksha. ${ }^{50}$

Other specific features of burial common in Q but rare or nonexistent in B include coffins, ${ }^{51}$ leaf deposits, ${ }^{52}$ and crudely incised offering tables. ${ }^{53}$ For example, only four tombs contained coffins in Cemetery B, while in Cemetery $Q$ more tombs contained coffins than any other single object. ${ }^{54}$ Typical combinations

[^0]found in Cemetery Q included a burial in cloth wrapping, a coffin, leaves, and a simple incised offering table. ${ }^{55}$

The marked differences between burials found in Cemeteries Q and B were enhanced by comparisons of objects and pottery found in the two cemeteries, establishing a pattern of distinction (tab. 1). For example, while some pottery vessels were not found exclusively in one cemetery or the other, many types were found fairly frequently in one and rarely or not at all in the other. Thus the distribution of objects as well as structures and burial customs indicates that most of the tombs in Cemetery Q are of a different date from most of the tombs in Cemetery B.

Table 1. Points of Difference Between Cemeteries Q and B.

| Feature | Cemetery $Q$ | Cemetery $B$ |
| :--- | :--- | :--- |
| Coffins (and Plant Leaves) $^{\text {a }}$ | Common | Rare |
| Incised Offering Tables $^{\mathrm{b}}$ | Occur | - |
| Weapons $^{\text {c }}$ | Rare | Common |
| Spindles $^{\text {d }}$ | Rare | Common |
| Metal Vessels $^{\text {e }}$ | Lead | Bronze |
| Black Incised-Impressed Pottery $^{\mathrm{f}}$ | Common | Rare |
| Kushite Wheelmade Potteryg $^{\text {Meroitic Fine/Ordinary Pottery }}{ }^{\text {h }}$ | Common | - |
| Egyptian Pottery | Fine Styles Common | Late Styles Common |
| Klepsydrai | Cooking Pots | Globular Jars |

a. See pp. 97-99, tab. 17 below.
b. See p. 94, tab. 14 below.
c. See p. 105, tab. 19, and p. 107, tab. 20 below.
d. See p. 159, below.
e. See pp. 156-159, below.
f. See pp. 86, 87, tab. 13 below.
g. See pp. 85,86 , tab. 13 below.
h. See pp. 83-85, tab. 13 below.
i. See pp. 87-91, tab. 13 below.

After a general review, it was clear that the main difference between Cemeteries Q and B was chronological. However, it could not be assumed that all of the distinguishing features, especially structures, were the same all over Nubia. ${ }^{56}$ It was also not automatically clear that all of the phases of Meroitic Lower Nubia were present at Qustul and Ballana. Other sites in the region were therefore reviewed to identify materials that might be the central elements needed to establish clusters or ensembles.
55. This burial also occurs in various forms at Aksha and Abri in Sudan. Coffins were also common at Gamai. See Vila 1967, pp. 329, 330; Vila 1982, various; Bates and Dunham 1927, pl. XIV:1, 2; Bonnet 1978, pp. 116-21.
56. For example, pyramids are quite late at Karanog. Ibrim, and Adda, and the change to Cemetery B may be due to some change in the ranking.

## Simple Coffin Burial

The most interesting of the archaeological phenomena at Qustul was the simple coffin burial, often with leaves and an incised offering table. Although common at Abri-Missiminia, ${ }^{57}$ it was rare in Egyptian Nubia south of the Dodekaschoinos. Since the coffins and leaves deteriorated rapidly, it was difficult to remove them completely and therefore many fragments remained even after the tombs were plundered.

## Black Incised Pottery

Both at Qustul and at sites to the south, simple burials were often found with black or grey burnished and incised vessels, generally with rocker-stamp decoration. ${ }^{58}$ It was also prominent in the "Western Palace" at Faras ${ }^{59}$ and at a site in the cataract region. ${ }^{60}$ These occurrences suggest that this pottery has some chronological significance.

## Kushite Wheelmade Pottery

A second prominent group of pottery includes globular or ovoid jars and large cups or bowls with wellpainted heavy walls but often simple Meroitic decoration (figs. 9-13). The most typical jar of this kind has a tall neck (figs. 12c-f, 13c, d), but some do have short necks. This pottery called here Kushite wheelmade, ${ }^{61}$ is found frequently with black incised handmade pottery but less so with northern imports or Meroitic fine vessels (Q 475). ${ }^{62}$ It is not found with the decorated ordinary pottery most commonly associated with Meroitic Nubia, especially globular or baggy jars with short cylindrical necks (figs. 6i-1, 7, 8).

## Pottery Imported from Egypt

Pottery imported from Ptolemaic-Roman Egypt often occurred at Qustul in tombs containing imports with some Kushite wheelmade or black incised vessels. Imports also occurred at Ballana, but were much less common and diverse and occurred in restricted areas of the cemetery. Imports are common in Meroitic Lower Nubia, but not south of the cataract. ${ }^{63}$

## Meroitic Fine Pottery

The more elaborate imports were often found with fine vessels of grey-white clay painted in very regular or close patterns (fig. 6d). Jars of this type, globular, burmished, and with short, wide cylindrical necks are distinctive (fig. 6c-e). Fine vessels, notably cups, also occur with narrow-necked jars (see tomb B 51B). ${ }^{64}$

## Meroitic Pottery with Red Exterior Coats

Some materials appeared primarily at Ballana. Most prominent were red-coated cups and baggy-or barrel-shaped jars with short, narrow necks. Jars with red coats had never been entirely absent from Kushite pottery but these vessels have certain special features. The shapes are very different from the Kushite wheelmade vessels with red coats. Many vessels, both cups and jars, have no other decoration but the red coat. Others have only a simple decoration of white bands, or well-painted figures in white bands, or figures painted in lighter colors against the red ground. This particular style of red exterior, important at Karanog, dominant at Gebel Adda, very common at Ballana, was unusual at Qustul and at sites to the south. ${ }^{65}$ Pottery
57. Vila 1982. See, for example, 2-V-20/81, pp. 43, 44 (with fig. 36 ) and $2-\mathrm{V}-20 / 90$, p. 46 (with fig. 37).
58. Fernandez 1986, fig. 1 and Vila 1982, p. 169, fig. 192.
59. Griffith 1926, pl. XVIII.
60. Lister 1967, pp. 62-64.
61. See pp. 32-34 below.
62. See OINE VIII, Part 2, p. 96.
63. Reisner 1923a, l-III, pp. 41-50; see also Bonnet 1978, pp. 116-21 and Bonnet 1980, pp. 59, 60.
64. See OINE VIII, Part 2, pp. 188, 189.
65. Woolley and MacIver 1910, pl. 53:e; N.B. Millet, personal communication 1982.
with this decoration is frequently found with vessels, primarily cups, which have red bands around the rims (fig. 5d), ${ }^{66}$ and with other vessels decorated with striding birds (fig. 189). ${ }^{67}$

## Key Features and Type-Clusters

The practices and objects mentioned above were distributed geographically in a way that might reflect change over time. This distribution, and the time change it suggests, were significant, not only in comparing Cemeteries Q and B with other sites but also in plotting the occurrence of features within the cemeteries themselves. The plotting formed a basis for identifying larger typological clusters of tombs and for checking their chronological order according to their distribution within Cemeteries Q and B.

The clusters were made up of important groups; either complete burials or those with a major proportion of their original contents intact. They were representative of deposits generally collected according to shared details of structure, practices, and objects. Features of each cluster found in positions considered original were then plotted on plans of Cemeteries Q and B to identify chronological relationships (figs. 1, 2). As a result of the plots, the features could be traced in greater detail than they could in the preliminary survey.

## ARCHAEOLOGICAL PHASES IN CEMETERIES Q AND B

Verification of four phases was obtained by plotting contexts that contained distinctive features as original deposits on the plans of Cemeteries $\mathbf{Q}$ and B . Their progressively dispersed distribution determined the order (figs. 1, 2). As noted below, differences in material indicated the existence of subphases which were not always as clearly verified by the plots as were the major divisions. Some transitional or ambiguous groups did exist.

Phase IA
The first phase is typified by the simple coffin burial, sometimes with plant leaves, generally with cloth wrappings, and occasionally with a crude offering table deposited in the shaft or used as part of the blocking (figs. 74, 113; note that the illustrations cited are typical of the phases but do not necessarily come from that particular period).

Phases IB-IIA
Tombs with coffins and leaves, which also contained pottery, were assigned to phases IB or IIA. The most interesting vessels were burnished black and impressed with a rocker stamp in bands and sometimes figures (fig. 112; no coffin). Whéelmade pottery of Kushite origin was also found. Globular jars with short, tapered or concave necks were common. Compared with slightly later Kushite wheelmade pottery the shapes and decoration are rather simple consisting principally of horizontal bands (fig. 131e). One jar has a row of hatched lozenges incised at the base of the neck (fig. 131d). A third kind of pottery present was fine/ordinary pottery from Egypt. Egyptian fine/ordinary pottery was represented by a small, barrel-shaped juglet (fig. 131c) and a large askos with bitumen lining (fig. 132c).

After phase I, the divisions between phases were established on the basis of pottery. Changes in burial customs and associated objects were also important, although they did not correspond exactly to the boundaries between phases. They are discussed below in the summary to this section.
Phase IIA
Significant changes in all three groups of pottery marked phase IIA proper. The black Sudanese-Saharan pottery was often represented by a tapered jar with a sinuous profile decorated with white-filled rocker-stamp impressions in bands at the shoulder and rim. Often, a stylized quadruped was shown in the space between the bands (fig. 18d, e).

The shape of the Kushite wheelmade jar was considerably elaborated. It became globular or ovoid with a tall, cylindrical or concave neck; tapered, conical, and bow necks also occurred (figs. 11d-f, 12, 13a). The vessel was sometimes coated red, and the decoration still consisted primarily of bands, although one jar with

[^1]overlapping crescents gives only a small hint of the elaborate decoration found on such jars elsewhere (fig. 12d). Large convex and tapered cups with band decoration were also found (fig. 9b-g).

Fine/ordinary vessels from Egypt were more varied; they included tall convex cups (figs. 22b, 68b), amphorae (fig. 94b), juglets (fig. 93b), and large globular or barrel-shaped jars with small lug handles (fig. 34a). Some vessels were decorated with horizontal black bands. Chaffy utility pottery occurred for the first time.

Phase IIA-IIB
A number of tombs contained elements of both parts of phase II or were otherwise chronologically ambiguous.

Phase IIB
The earliest materials to occur in both the Qustul and Ballana cemeteries belong to phase IIB. Although substantial changes occurred in the impontance of major groups of pottery and their treatment none of these major groups either appeared or disappeared. Black incised pottery occurred much less frequently and was represented only by rather tall cylindrical beaker-cups with bands of incised decoration and "tassels" (fig. $17 \mathrm{~b}, \mathrm{c}$ ). This was accompanied by a substantial reduction in the amount of Kushite wheelmade pottery. The few jars of this group now had necks that were sometimes long and elaborate.

Phase IIB contains the greatest number and widest variety of vessels from (Roman) Egypt, including most early klepsydrai or pipettes (fig. 21a-d) as well as utility vessels (fig. 37). Slight changes can be noted in the cups, some of which are lower and wider than before (fig. 22e, f), while the large globular jars rarely have handles (fig. 34c). Painted decoration in the early sinuous and curvilinear vine style still appears (see fig. 34c).

## Phases IIB-IIIA Transition

A series of changes marks the IIB-IIIA transition. The most important of these is the appearance of pottery made of fine grey-white clay usually known as Meroitic fine pottery. ${ }^{68}$ Made partly or entirely of fine clay from the Nubian sandstone, ${ }^{69}$ shapes include globular or cylindrical jars with short wide necks (fig. 6de) and wide cylindrical cups with flat or convex bases (fig. 5 j ). There are also hemispherical bowls (fig. 4a). Decoration, mainly in black and red, is usually painted in bands on the shoulders and bodies of jars, in framed bands on the sides of cups, and occasionally on their bases. The decoration was carefully painted and the small motifs were rather densely packed on the surface (fig. $299 \mathrm{c}, \mathrm{h}$ ). ${ }^{70}$ Impressed decoration also occurs in this early stage (fig. 4d). ${ }^{71}$

Changes in other pottery groups are difficult to assess in this rather small transitional group, but it can be noted that the painted decoration on jars from Egypt became more angular although the curvilinear style did survive. The last phase of Cemetery Q's importance during the Meroitic period was IIB. During this transition, Cemetery B became increasingly important, and in IIIA, the only groups were from Cemetery B.

## Phase IIIA

The most important feature of phase IIIA is the full development of the Kushite Standard style of Meroitic painted pottery. ${ }^{72}$ With its large motifs in framed bands, abbreviated pharaonic designs with Kushite elements, and apparent rapid execution, this is the painted pottery most often associated with Meroitic Lower Nubia (fig. 6g-1). ${ }^{73}$ Most jars now have a narrower neck and inverted piriform body. Most cups have a tapered, cylindrical or concave side which angles sharply to a flat base (fig. 4p).

Meroitic fine/ordinary pottery virtually replaced the Kushite Wheelmade. Black incised pottery still appeared, but rarely and with simplified decoration (fig. 19a). Like the transition, phase IIIA at Ballana and
68. See pp. 34,35 below.
69. For clays, see pp. 28, 29 below.
70. See p. 38 below.
71. See pp. 59, 60 below.
72. See pp. 38-40 below, for standard painted pottery.
73. Török 1987a, pp. 204, 205.

Qustul contained relatively few groups, so some of the changes in Roman period Egyptian type pottery may not be fully documented. The large globular jar is now consistently more barrel-shaped than before (fig. 34d). Its neck is conical and the rim everted without the carefully beveled outer edge that typified earlier examples. Many of the cups now have bulged cylindrical sides and carinations (fig. 22g-i). Painted decoration is still more angular and simplified on the jars. Vine garlands are sometimes horizontal and the first examples of an almost geometric rectilinear style occur (fig. 34f). Meroitic type painting occurs on at least one Roman period Egyptian jug (fig. 25f).
Phase IIIB
The second stage of phase III (B) was represented at both Ballana and Qustul. The Meroitic jars and cups changed slightly; now the jar has a narrower neck, and its baggy shape is now more pronounced (fig. 7). The bodies of most cups are bulged cylinders, although some vessels still have tapered sides (fig. 4j). The painted decoration is bolder than before and ranges from the carefully to the carelessly done.

Kushite storage jars appear, replacing the large Egyptian vessels, which disappeared, along with almost all other Egyptian pottery (fig. 14). Chaff-faced jars and some juglets continue; the latter often with a vertical "candlestick" rim having small ribs or ridges at the top and bottom (fig. 25k). Some are decorated in Meroitic style (fig. 251). Although no vessels with Roman period Egyptian vine painting can be dated to this phase, it may be that the development of the "burst style," in which the vine disintegrated into a number of spots, occurred in this or the next phase.

A number of changes took place during IIIB, and a late phase might be distinguished, although it could not be verified in the plots. Some tombs of this period contained many fewer vessels with Kushite Standard painting, often radically simplified; the paint is monochrome, and the variety of motifs reduced. Some cups have red bands at the rim and Kushite Standard decoration below in double framing (fig. 4j). Although rim bands did appear in several other periods, and red rim bands occurred earlier in Kush, ${ }^{74}$ this is the first time such decoration was important in Meroitic painted pottery. At this time Meroitic fine/ordinary pottery frequently had a polished red coat, often with white bands, and sometimes fincly painted decoration (fig. 297; not from a tomb). ${ }^{75}$ There were also changes in other classes. Except for a Kushite wheelmade cup, pottery of local origin was confined to fine/ordinary vessels and storage jars with ovoid bodies and tapered or cylindrical necks. Pottery from Roman period Egypt consisted only of globular juglets, a chaffy jug, and an amphora, which may have been reused.

## Phase IV

## Phase IVA

Pottery was even simpler in phase IV. Figure decoration virtually disappeared on cups and many of the bottle jars have no decoration but the red exterior (figs. 5c, 7b). Simple complexes of bands or single rows of "beads" are the only common decoration (fig. 89c). Some decoration occurred on storage jars (fig. 14b), and although rare, figure decoration which included some of the finest examples of the art from Meroitic Lower Nubia (pl. 37). These consisted of light figures on a red background, outlined figures in a light or white band, and even elaborate polychrome scenes. ${ }^{76}$ Vessels were much the same shape as before, though many jars had rib-rims with narrower necks, and bodies even more barrel-shaped (fig. 7e, f). Except for amphorae, globular and cylindrical juglets with wide ring bases are the only pottery vessels from Roman period Egypt. One juglet was painted in the "burst style" that continues into X-Group (fig. 25j).

[^2]Table 2. The Occurrence of Dated Tombs in Cemeteries Q and B.

| Phase | Cemetery $Q$ | Cemetery B |
| :---: | :---: | :---: |
| 1 | Very Many | - |
| IB-IIA | $\begin{aligned} & 270(1 \mathrm{~b})^{\mathrm{a}}, 278 \text { (1b) } 354(1 \mathrm{c}), \\ & 485(\mathrm{lb}), 490(\mathrm{lb}) \end{aligned}$ | - |
| IIA | $\begin{aligned} & 269 \text { (1b), } 318 \text { (1c), } 392,466,488 \text { (1b), } 499(1 b), \\ & 529 \text { (1a), } 613,626,667,676(1 \mathrm{c}) \end{aligned}$ | - |
| IIA-B | 253 (1c), 592, 634, 684 | - |
| IIB | $\begin{aligned} & 162 \text { (1b), } 293 \text { (1c), } 372 \text { (1a }), 417 \text { (1c), } 427, \\ & 566,567 \text { (1c), } 573 \text { (1b), } 574,612 \text { (lc) } \end{aligned}$ | 122, 134, 140, 143, 151, 299, 312. |
|  | 625, 646, 650 | $99(\text { ? or later })^{b}$ |
| $\begin{aligned} & \text { IIB- } \\ & \text { IIIA } \end{aligned}$ | $\begin{aligned} & 308(1 \mathrm{c}), 312(1 \mathrm{c}), 439,469 \\ & 493,495,540,618,636 \end{aligned}$ | 66A, 80,268 |
|  |  | 66B, 81, 82, 96, 111A/120, 273,308 |
| IIIA | - | $52,67,88,89,91,92,111 \mathrm{~B} / 125$ |
|  |  | 76 (? or later) |
| IIIB | $\begin{aligned} & 139(2 \mathrm{c}), 191(2 \mathrm{c}), 301,335, \\ & 340,352,353,402,430,472 \end{aligned}$ | $\begin{aligned} & 18,43,51 \mathrm{~B}, 62,77,78,174,193,194 \\ & 200,278,289,328 \end{aligned}$ |
|  | 565, 661 | 14, 22, 84, 130 (all III) |
| Late <br> IIIB- <br> IVA | 283B | $\begin{aligned} & 10,186,205,238,252,263,279.287, \\ & 291,317,319,330,331,333 \end{aligned}$ |
|  |  | $\begin{aligned} & 13,21,35,39 \mathrm{~A}, 133,138,144,178 \\ & 201,215,285,302 \end{aligned}$ |
| IVA | 164? (2c), 172 (2c), 303 | $\begin{aligned} & 58,135,149,179,197,208,209 . \\ & 217,240,311 / 316,314,322 \end{aligned}$ |
|  |  | 255, 256 (IV) |
| IVB | - | 6, 12, 40, 41, 64,170, 261A, 307, 309, 310, 313 |
|  |  | 304 (very late) |

a. Note that this table lists selected tombs that can be assigned dates in the Meroitic series. Tombs in Cemetery B whose contents appear to have been contemporary with the original construction of the tomb are indicated with the area of the cemetery in parentheses. As is the case with other tables in the present volume this table does not list all occurrences.
b. Where the entries in table 2 are divided horizontally, the lower group is devoted to more transitional or doubtful groups.

## Summary: Phases I-IV at Qustul and Ballana

## Phase IVB

Virtually the only vessels deposited in tombs in the last stage of Meroitic Nubia were cups and bottle jars. The jars had been simplified into barrels with cylindrical necks although vessels were quite baggy (fig. 175). Cups were cylindrical. In the present material the only decoration was the red coat, though it can be presumed that the "burst vine" and red rim bands continued, since they occurred in X-Group. ${ }^{77}$ Though the Meroitic jar was probably the prototype for one jar in X-Group, ${ }^{78}$ it was relatively unimportant. This is truly a terminal, rather than a transitional, phase.

Table 3. Archaeological Phases and the Stages of Cemeteries Q and B.

| Phase | Type of Evidence | Cemetery Q Stages |  |  |  |  |  | Cemetery B Stages |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 1a | 1b | 1c | 1d | 2a | 2b | 1 | 2 | 3 |
| I | Coffin only | X |  |  |  | X |  |  |  |  |
|  | Objects | x |  |  |  |  |  |  |  |  |
| IIA | Pottery: KW, BI, (E) | X |  |  |  |  |  |  |  |  |
| IIB | Pottery: $\mathrm{E}_{\mathrm{E}}(\mathrm{KW}, \mathrm{BI})$ | x | x | X | X |  | x |  |  |  |
|  | E, (P) |  |  |  | X |  |  |  | X | x |
| III | Pottery: P, (E) |  |  |  |  |  | X |  |  | x |
|  | P, Redext |  |  |  |  |  | X |  |  | X |
| IV | Pottery: <br> P, Redext |  |  |  |  |  | X |  |  | X |
|  | Redext ${ }^{\text {a }}$ |  |  |  |  | X |  |  |  |  |


| Designations in the second column refer to pottery: |  |
| :--- | :--- |
| BI | Corresponds to Black Incised |
| KW | Corresponds to Kushite Wheelmade |
| E | Corresponds to Ptolemaic and Roman period Egyptian |
| P | Designates Meroitic painted pottery of Academic and Kushite Standard types |
| Redext | Designates painted pottery with a red painted background color <br> () |
| Indicate kinds of pottery which occur but are not common in the period |  |
| X | Indicates a significant occurrence |
| x | Indicates a limited or slight occurrence |
| -. | Separate subdivisions of phases IIB, III, and IV |

The foregoing chronological outline was dominated by changes in pottery and the way it was deposited in tombs. Changes in the occurrence of other objects and practices paralleled but did not correspond precisely
77. See Mills 1982, pl. LXXVII for the vine in X-Group. This revival of the complete vine probably appeared first on Egyptian imports. Compare pls. LXIV:133.10 and LXV: 134.5 with pl. LXIII:122.8, for example. For the burst vine, see OINE IX (forthcoming) and Mills 1982, pl. XXVII:34.2-5.
78. Emery and Kirwan 1938, pl. 112:31a. The bottle-jar may be a simplified X-Group vessel, however.
to the changes in pottery, and are consequently of less chronological value (tab. 1). The most important changes include the transition from end and side chamber tombs to vaults and slab-roofed tombs (IIIB-IVA, probably complete by IVB), the disappearance of the coffin (IIIB), the appearance of weapons (IIIB-IVA) and spindles (IIIB-IVA), as well as the change from lead to bronze vessels (IIB-IIIA?). This is important because it helps to identify the phases where pottery has been mixed, or the tombs plundered and reused. These differences are much less specific, however. The changes in burial customs are also discussed in section C of this chapter.

The chronological inferences are indicated by the Qustul and Ballana plots. At Qustul, Phase I is earliest and it occurs only in that cemetery. In Cemetery Q, tombs belonging to IB and IIA are later than IA. In Cemetery Q, IIA precedes IIB and III is still later. At Ballana, IIB was the earliest phase. IIB and IIIA tombs were made in north-south rows or areas to the east of the Ballana cemetery and occur as nuclei to the west. IIIB and IV tombs cut earlier tombs in the eastern part of the cemetery and formed clusters that filled the space between nucleus tombs to the west. Phase IV was the latest present in the Meroitic cemeteries and no Meroitic tomb or group of tombs contained evidence of a transition to X-Group. Although the plots did not verify every detail of the clusters, notably the transitions and some of the subphases, they clearly indicated that these clusters were dated in the correct order. ${ }^{79}$ The results require two historical changes in reconstructions sometimes advanced about Meroitic Lower Nubia: an early phase of uncertain length (I) must be added before the archaeological phases now recognized, and a putative transitional phase between the Meroitic and X-Group periods must be rejected, at least on the Meroitic side. ${ }^{80}$

Table 4. Structural and Other Special Relationships.

| Tomb(s) | Feature | Chronological Indication |
| :--- | :--- | :--- |
| B 51A | B added | W end chamber tomb with added N side chamber; B dates to IIIB |
| B 55A | Altered for vault |  |
| B 58 | Reused | S side chamber, cb, vault added in shaft with late pottery |
| B 66A | B added | W end chamber, with coffin, Eg., objects |
|  | Reused | cut for S-side chamber with P |
| B 77 | Cut by B 88 | Wend chamber reused; P added |
| B 99 | IIIA supersedes IIB |  |
| B 197 | Reused | Earlier burial with pottery superseded |
| B 261 | Reused | W a later burial with weapons |
| B $298 / 308$ | Cut B 306 | Same as B 261 |
| B 313 | Vault cuts earlier tomb |  |

Eg. Corresponds to Egyptian pottery.
P Designates Meroitic painted pottery of Academic and Kushite Standard types.
79. Except for the reversal of the salient phenomena associated with IIB and IIIA, this order corresponds with Adams's earlier opinion (1964, pp. 164, 165), although chronological change is much more prominent than he supposed.
80. This rejection would apply only in Lower Nubia, not in the Butana, where transitional groups have been identified. See Lenoble 1987, pp. 94-101 and Török 1988, pp. 195-99, 213-16. See also Geus and Lenoble 1985.

## STRUCTURAL EVIDENCE FOR CHRONOLOGY

In Cemetery $B$, a number of tombs were modified for reuse or damaged in the construction of neighboring tombs indicating stratigraphical or chronological relationships: B 49A, B consisted of a tomb that contained standard painted pottery and a vaulted tomb that contained red exterior pottery. B 51 consisted of a tomb with a chamber at the west end that cut a tomb with a chamber on the north side of the shaft. B 58 was a shaft with a chamber on the south side that had a brick vault built in the shaft, with late pottery. B 66 was a shaft with a chamber at the west end that contained a coffin, Roman period Egyptian pottery and some objects, which was cut by a tomb with a chamber on the south side that contained standard painted pottery. B 77 was a tomb with a chamber on the west end that was reused, the reuse including the deposit of standard painted pottery. B 197 was a reused tomb with a chamber on the north side; the original burial contained pottery; the second burial contained weapons. B 261 was an example of a tomb with a chamber on the west end that was cut to receive a vault.

## HISTORICAL CORRELATIONS

Attempts to establish a chronology for Meroitic Nubia have been based on historical arguments, including links to Meroc, ${ }^{81}$ general correlations between archaeological and historical events, ${ }^{82}$ and comparisons of archaeological material, such as imports from the Roman world, with other areas. ${ }^{83}$ Although a number of opinions have not been based on thorough examination of the evidence, recent work in the field has put the discussion on a new basis of historical detail, which can only be summarized briefly. ${ }^{84}$ The evidence includes imported objects and motifs and direct links with historical events in Nubia itself.
Imports, Northern Elements in Meroitic Pottery, and Chronology
The most important evidence available to date Meroitic tombs is pottery. László Török has recently 85 detailed important relationships of painted pottery found in Meroitic contexts.

## The Vine Group: the "Silhouette Style" of Phase IIA and Vine-Painting of Phases IIB-IIIA

Török described a style of pottery decoration which he called the "Silhouctte Style." It and related vessels make up an important body of decorated pottery which will be referred to as the Vine Group in the present work. It was derived from the style of decoration found on the Hadra vases of Alexandria, especially the use of crosshatched bands, elaborately sprawling vines, and figures shown as dark silhouettes. In some cases leaf garlands are shown as light silhouettes on a dark background. Based on inscribed Hadra and related vessels of silhouette style, he dated the beginning of the style to the second and third quarters of the second century B.C. In Nubia, this style appears most frequently on vessels with reserve garlands, vertical "trellises," and claborately sprawled vines (fig. 301g, j and fig. 307b-e). ${ }^{86}$

The end of the silhouette style is dated by two amphorae from Faras ${ }^{87}$ either to the middle or the last decades of the first century B.C., although there are antecedents for the decoration over a century earlier. ${ }^{88}$
81. See Bradley 1984, pp. 197-207 for a preliminary report on an archaeological sequence at Meroe in the Meroitic period. For a more detailed presentation of some aspects, see Shinnie and Bradley 1980, especially pp. 7-162. For careful application of evidence based on the royal sequence, however, see Török 1987b.
82. Adams 1964, pp. 109-14; and idem 1965b; 1976; 1977; 1984, p. 420; Trigger 1965, tables, pp. 160, 166.
83. Török 1979; 1987b; 1988, pp. 65-165 (dealing with the fourth and fifth centuries C.E.); Hofmann 1979.
84. Hofmann 1978; 1979; Török 1987a; 1987b; 1988, pp. 65-165 (dealing with the fourth and fifth centuries c.E.).
85. 1987a, pp. 188-208 and 1987b.
86. Török 1987a, pp. 78-80, 1987b, pp. 190-96. From the Dodekaschoinos, see Firth 1915, fig. 226:98.248; from the northern Triakontaschoinos, see Simpson 1967a, pp. 39-46 and p. 64 below; from the southern Triakontaschoinos, see Török 1987a, figs. 4, 5, and 8; from Napata, see Sist 1982, figs. 1:F 7.3 and 3:F7.1; from the Meroe region, see Török 1987a, fig. 1 and p. 190; from Musawwarat es Sufra; and Shinnie and Bradley 1980, fig. 44e.
87. Török 1987a, figs. 27 and 29.
88. Török 1987a, p. 197.

The amphorae can be compared with two important vessels from Karanog tomb 712,89 but Török distinguishes both groups from related vessels Wenig had assigned to a "vine-leaf school." 90

Without undertaking a detailed review of later styles of the vine group here, it can be noted that Török has tightly clustered a group of vessels that may have been made over a longer period of time, for there is considerable change in shapes and decoration. The silhouette style was dated primarily to phase IIA; styles which will be discussed under a vine group below continue in IIB (tendril, sinuous, and arched, possibly angular) and IIIA (angular and burst), but a simple recognizable vine probably continued in use in ordinary Meroitic pottery decoration until painting was abandoned in Phase IV. ${ }^{91}$ The beginning of the style and Meroitic phase IIA very probably occurred by the end of the second and century B.C., while the end of the silhouette style probably took place by the end of the first century B.C., or some time in phase IIB. A series of developments in painting occurred thereafter in phases IIB and III, which would be dated as much by their occurrence in the phase as by any independent evidence. ${ }^{92}$

Pottery from Tomb 2800 at Faras corresponds approximately to phase IIA and to early Roman contexts in Egypt. It also contained pottery decorated in the latest (?) form of the silhouette style. ${ }^{93}$ The altar of Peste Tasamerekh was found on the SE corner of the superstructure but its connection with the tomb is uncertain.

## The "Academic School" or "Stern Pharaonic" Style of IIB-IIIA

The development of Meroitic grey-white fine pottery may be traced to imitations of Eastern Sigillata A or bronze vessels of late Hellenistic type. ${ }^{94}$ Shapes and some decoration may have been adopted from Ptolemaic models that in turn partly relied on Achaemenid prototypes, notably the carinated bowl, ${ }^{95}$ scale patterns, ${ }^{96}$ rosettes, and the trefoil flower. ${ }^{97}$ Although the carinated bowl was abandoned, the decoration continued to the end of Meroitic figured painting. These developments do not suggest any exact synchronism, but they do indicate that the origin of Meroitic fine painted pottery was not separated from the Ptolemaic period by any substantial length of time.

## Barbotine Pottery: Trailed-Slip Decoration

One of the most characteristic northern imports to Lower Nubia was extremely thin-walled pottery with a light grey, buff, or white ground, a broad, very dark grey to black band on the upper part of the vessel, and
89. Woolley and Randall-Maclver 1910 , pl. $45: 8156$ and 8157 , and there is one slightly later vessel with rather stiff vine painting ( $8182, \mathrm{pl} .56$ ). The tomb was badly plundered, the remains possibly mixed and the pottery thrown out into the dromos (ibid., pp. 228-29). A bronze cup from the tomb ( $7133, \mathrm{pl}, 31$ ) is closely related to the close-painted fine pottery of IIB-IIIA otherwise known as the "Academic" or "Stern Pharaonic" style (see p. 38 below). The tomb probably dates to late IIB in the present scheme.
90. 1987a, p. 197. Note that the finest of the silhouette-related vessels Karanog 8162 (Woolley and Randall-Maciver 1910, pl. 54) was associated with other northern imports (ibid., p. 205, types xii and xvii) and with a close-painted jar (ibid., pl. 80:Cairo 40208 [the register gives 40708]) which would also give a date about the end of IIB.
91. See the "Polychrome figural style," pp. 39, 40 below (also known as Red Exterior/White Band), for a similarly tightly clustered group of vessels that actually represent a longer series.
92. See Török 1987b, pp. 80, 81 . He would date the style to the second half of the furst century C.E. They are later than 1 A.D., and earlier than about 200 A.D. but evidence does not confine them to such an early date. The basic motif, the vine or vine-garland, is found in various guises even much later.
93. Griffith 1924, pl. XIV, tomb 2800; pls. XXIII, XLIIIa, b; see Griffith 1925, pp. 162, 163; decoration on vessels seems to belong to the general "trellis" or "silhouette" group. Bag-shaped askoi are dated to IIA in the present work (see Q 490, OINE VIII, Part 2, p. 102). The amphorae, for example, appear slightly earlier than those found at Quseir in the first to second centuries c.e. The present conclusion differs somewhat from one advanced previously (Williams 1985, p. 192). The Kushite wheelmade jar IIl probably belongs to the earlier IIA rather than later type, and the decorated imports also belong to the earlier phase. Thus the inscribed altar would have to be considered separately from the objects the tomb contained.
94. Török 1987b, pp. 82, 83 and note 2. See also Törok Meroitica 10 and 1987a.
95. Török 1987b, pp. 82, 83; Dunham 1963, pl. 78:8457.
96. Török 1987b, pp. 82, 83; Dunham 1963, pl. 70:8271.
97. Török 1987b, pp. 82, 83; Zabkar and Zabkar 1982, pp. 44, 45.
trailed-slip relief decoration in either the ground or the band color. ${ }^{98}$ Although vessels decorated with this technique in the Mediterranean world have been dated as late as the fourth century A.D., evidence from dated contexts elsewhere indicates that most vessels with the shapes and decoration found in Nubia date to the last half of the first century A.D. and slightly later. ${ }^{99}$ Phase IIB should include part of the first century.

## Long-Necked Bottles

Török dated the series of IIB long-necked bottles to the first century A.D. based on its occurrence with early-type glass aryballoi. ${ }^{100}$

## Bronze and Glass Vessels

Small objects, primarily of bronze and glass and mostly from IIIA-B and IV tombs at Karanog, have been linked to the Roman world with dates that vary from the first to the early fourth centuries, although centering on the third century A.D. ${ }^{101}$ Because of the mixture in many groups, and the uncertainty in the date ranges for most of the objects from the Roman world, little was done to refine the chronology.

Two glass objects found with standard painted pottery at Karanog may help to date phase III. ${ }^{102}$ Although they have been used to support a late third and fourth centuries A.D. date for Meroitic painted pottery, the dates indicated by Isings range from the third to fourth centuries A.D. for one object, ${ }^{103}$ and the first through third centuries A.D. for the other. ${ }^{104}$ The vessels would support a date for Phase III that ended in the third century A.D. as well as any later date.
Historical and Other Correlations in Nubia and Sudan

## Phase I and Simple Burials

The burials and tombs of phase I closely resemble burials at Abri in the late Napatan and early Meroitic periods. The shapes of the tombs and their stone blockings also closely resemble counterparts in the Dodekaschoinos dated to the Ptolemaic period. 105

## Ostraca

The site of 6-B-8 contained a small amount of Meroitic decorated pottery. Although the other vessels described or discussed may include a range of dates, only the painted pottery fits directly into the sequence. It includes sinuous vine-decoration of IIB-IIIA and Standard painted pottery of III. Two Demotic ostraca that appear to date to early Roman times (first century) mention a peqer. In a very general way, the date would permit a proposed date of the first century A.D. for most of Phase IIB. ${ }^{106}$

A Greek ostracon, apparently dated to Alexander Severus, was found in the Meroitic town at Karanog. Although the stratigraphic quality of the association is impossible to evaluate, the ostracon could hardly be dated to any other phases than phases III-IVA. ${ }^{107}$
98. See pp. 69, 70 below.
99. Török 1987b, p. 83. Hayes ( 1976 , cats. $29,42,43,147$ ) consistently assigns dates to barbotine decorated pottery in the last half of the first century (Claudian-Flavian) but allows for some slightly later dates (see CAT 29).
100. 1987b, pp. 82, 83; see also Vila 1982, fig. 77; Isings 1957, pp. 78-81; and Leclant 1985.
101. Hofmann 1979.
102. Török 1987a, pp. 206, 207 and fig. 54; see Woolley and Randall-MacIver, 1910, pls. 37:7340 and 7343, and 39:7349 (tomb 384); Isings 1957, nos. 42, bowl and 101, bulbous flask.
103. Isings 1957, flask, cat. 101.
104. Ibid., bowl, cat. 42.
105. See p. 6, above. Firth 1915, pp. 160-62, esp. p. 162 above. The date of these tombs is further supported by the types of cattonnage masks and plaques used (pl. 26:a, d) and two amphorae used to block another tomb (pl. 26:f).
106. See Lister 1967, pp. 54-60. For the vine and standard painted pottery, see fig. 24:e and fig. 24:a-c, f-j, respectively. For the ostraca, see fig. 26; they are dated to a peqli (reading courtesy of Robert K. Ritner).
107. Woolley and Randall-MacIver 1911a, pp. 4, 36.

## The "Polychrome Figural Style"

A number of carefully painted vessels with figures painted in different colors on red ground were grouped by Torök into a relatively compact chronological unit he called the "Polychrome Figural Style." 08 The cohesion of the group is based on certain important themes they depict, the generally high quality of the painting, and the combination of colors on a red background. However, as is discussed in Chapter 2, the themes are shared with other Meroitic painted pottery. ${ }^{109}$ The group is also diverse, including Kushite wheelmade jars with very tall necks and Meroitic ordinary vessels with wide bodies and very short, narrow necks ${ }^{110}$ which have been dated to III and later in the present chronology. One vessel of this type he dates to the late first century because of a specialized mark. ${ }^{111}$ This mark which may have developed from a much earlier representation of offerings on an altar, has a rather longer history at Meroe than he indicates. It occurred in tombs dated from reigns $35-45$ in the royal sequence and from $55-65$ (?), with a possible antecedent on black incised pottery dating from 35-40. ${ }^{112}$ The mark he cites from Karanog resembles the later marks from sealings (second century, late?) much more than the earlier group of the first century. 113 Marks contemporary with the carlier group also appeared at Qustul: Q 499-2 has three different marks of this type painted on the shoulder, and Q 499-7 has another. ${ }^{114}$ Two of the marks are of types not known to Török. From their chronological spread and from the occurrence of three different marks on one vessel it may be concluded that these marks are not connected to any one person. They appear at least from phase II (Kushite wheelmade jars) through phase IVA (white-banded red-exterior Meroitic jars associated with weapons) or the equivalent (55-65). This rather longer range of dates, from sometime after $100 \mathrm{~B} . \mathrm{C}$. to ca. A.D. 225 is in accordance with the stylistic diversity of the "Polychrome Figural Style" and the archaeological difference between the vessels on which it occurs.
Phase III
Perhaps the best-known phase of Meroitic Lower Nubia, phase III, is not dated by as well-defined evidence as phases II and IV. It is limited by the adjacent phases approximately to the second century A.D. ${ }^{115}$

## Peste Officials at Karanog and Phase IVA

At Karanog, the tombs of Peste officials, Nalewitar, Khawitrer, and Maleton, contained pottery that can be linked to early IV or late IIIB. The tomb of Maleton contained a jar with the name of Amanitewawi, an official also known from the Meroitic Chamber at Philae, an inscription that dates before the end of the first half of the third century C.E. ${ }^{116}$ The tomb of Maleton contained considerable pottery including a red-exterior
108. 1987a, pp. 203, 204 and figs. 38-40; 1987b, p. 81.
109. See pp. 31-58 below.
110. Törờk 1987a, pp. 203-4.
111. Ibid., see p. 204; Karanog 8177, from grave 271, pl. 42.
112. See Török 1972 and Dunham 1957, figs. 90 (Dunham sequence no. 53. Wenig sequence [1979b] 56) and 97 (Dunham sequence 55, Wenig sequence 58); Dunham 1963. fig. 119b, dated to 55-65. Török's no. 1 (Dunham 1957, fig. 90, his sequence 53, Wenig's 56, assigned by Török to Amanitaraqide no. 48; 35-45) is of the earlier group; his no. 9 (dated 55-65?), from the later group, comes from a tumulus. His fig. 3 alpha may appear on a black incised jar from Meroc. Compare Dunham 1963, fig. 154:2 from W 13 (35-40) with fig. I:14 (23-1-277).
113. See previous note; compare Török 1972, no. 9 with Woolley and MacIver 1910, pl. $27: 8177$ from tomb 271. On pp. 162-63, the tomb is described as containing arrowheads, the remains of a quiver, a bronze bowl, and a second redexterior painted jar, 8257 ( pl .41 ) as well as three simple storage jars. The (undisturbed) burial belongs to phase IVA in the present chronological scheme; dates for the parallel decorated stamps at Meroe would include the second and early third century.
114. See pp. 45,46 below.
115. Török refers to the bulk of the standard group here (1987a, pp. 204, 205, figs. 41-44). Note that figs. 41, 43, and 44 include cups with red rims.
116. The link among Maleton, Amanitewawi, and historical chronology is discussed by Millet (1968, supplement, MI 105; for Amanitewawi's place in the series of generals, see pp. 35, 36, 106, 107; for Maleton, see pp. 136, 137. A jar label of Amanitewawi from the tomb of Maleton is illustrated by Woolley and Randall-Maciver 1910, pl. 107:13).
jar with a white band containing "trees" 117 and a Kushite storage jar with a red exterior and striding guinea fowls in a light band and a light rim. ${ }^{118}$ Cups cited for the tomb are also very late.

Table 5. A Summary of Evidence to Date the Archaeology of Meroitic Nubia.

| Phase | Major Features and Evidence | Remarks |
| :---: | :---: | :---: |
| IA | Most graves with burials only; Streak-burnished pottery Ptolemaic burials in Dodekaschoinos |  |
| IB | Personal objects |  |
| IIA | Black incised pottery <br> Early Kushite wheelmade <br> Early imports from Egypt | ${ }^{14} \mathrm{C}$ determination from Abri, reflects a B.C. dat Silhouette style begins ca. $150-100$ в.с. |
| IIB | Vine style replaces silhouette <br> Barbotine imports <br> Meroitic fine pottery begins | ca. 50 B.C.-A.D. 50 <br> ca. A.D. $50-$ A.D. $100+$ <br> ca. 50 B.C.-A.D. 50 |
| IIIA | Standard painted <br> Fine continues <br> Vine continues |  |
| IIIB | Standard continues Beginning of late styles Imports practically cease |  |
| IVA | Late styles <br> Guinea fowls | After A.D. 200 <br> Amanitewawi in tomb of Maleton ca. A.D. 250 |
|  | Rim-band <br> Red coated, white band | Adda tombs, persons related to "General of the River," ca. A.D. 260 |
| IVB | Red coated only |  |
|  | Coins in Bab Kalabsha cemeteries | A.D. $338+$ |
| X-Group |  |  |
|  | Coin and objects in Qustul tombs | A.D. $378+$ |

## Generals of the River and Phase IVB at Gebel Adda

Tombs of persons at Gebel Adda who were related to the Generals of the River in the mid-third century A.D. contained only red-coated pottery with simplified decoration. ${ }^{119}$ Since good figure decoration continued to be made in early IV, these tombs should date to later IV and represent the end of Meroitic Lower Nubia in archaeology.
117. Meroitic fine/ordinary I.B3 red exterior coat, Woolley and Randall-MacIver 1910, pl. 53:8152.
118. Woolley and Randall-Maclver 1910, pl. 64:8227; see Török 1987a, pp. 205-6 and figs. 45-53.
119. N. B. Millet personal communication, 1982.

## Summary of Historical Chronology

Although the correlations given above do not fix the outer boundaries of each phase in Lower Nubia, they suggest certain conclusions (see tabs. 5 and 6, Appendix A, and fig. 3). Phase I is derived from the late Napatan near the Third Cataract. Phase IIA begins in the late second century B.C. and continues to the end of the first century B.C. Phase II corresponds to the first century A.D. Phase III appears to date to the third century A.D. Phase IVA dates in part to the 240s, or the period of the Peste-officials at Karanog. Phase IVB dates in part to the 260s and 270s, being linked to the late Generals of the River by finds at Gebel Adda. Given the pace of change between IIA and IV, it is difficult to believe that IIIA began long after A.D. 200 and it is even more difficult to believe that IV continued much past A.D. 300 Since X-Group cannot be dated in this region before 375 or so ${ }^{120}$ and no genuinely transitional groups appeared in the local Meroitic, we must conclude that there is a gap in the occupation of the Triakontaschoinos, or at least a lack of datable and characteristic materials. This hiatus, however, does not reflect on the situation in the Isle of Meroe, where it appears that the Meroitic culture continued for some time, with important transitional elements. ${ }^{121}$

Table 6. Major Chronological Criteria in Meroitic Nubia.


## STAGES IN THE CONSTRUCTION OF CEMETERIES Q AND B

The phases of Meroitic Nubia outlined above were the result of changes in objects and burial customs. Apart from these changes, both Cemeteries $Q$ and $B$ contained stages that comprised clusters or groups of tombs whose construction overlapped phases in the archaeological chronology. Although the existence of stages in the expansion of the cemeteries is indicated by the distribution of objects and materials, the boundaries between the various stages are not defined precisely enough to allow them to be mapped. The locations of various stages may be determined by referring to table 2 and individual tombs in the registers. For Cemetery Q, the numbered stages are indicated; for Cemetery B, stages are indicated according to a relative date in the Meroitic sequence. This "location date" does not always correspond to the date in the sequence, partly because many tombs were reused and partly because location cannot always be relied upon to date individual contexts.
120. Török 1988, pp. 75-165 generally, but see especially pp. 93-98 for the date of Qu. 14; see also OINE IX (forthcoming).
121. See Török 1988, pp. 194-99 and 213-16, for a recent discussion and review of the evidence from Upper Nubia and the Shendi area.

## Cemetery Q

Because of the destruction in Cemetery Q due to the construction of Qustul tumuli 48 and 56 , its development was more difficult to trace than that of Cemetery B. In addition, reuse of tombs sometimes involved several graves in a row, so it was often difficult to distinguish clearly parts of the early stages. Except for X-Group tombs scattered around the periphery of the cemetery, however, two major stages can be readily identified. The westernmost of these was a group of four or five rows of tombs, some with simple superstructures, usually of mastaba type. Most of these tombs had chambers on the side, though some had them at the east or west end. Directly to the east of this group is the main part of Cemetery Q in the Meroitic period. Toward their western end and to the southeast the tombs were spaced well apart, but in the large central area, the distance between the shafts was often less than a meter. Had they been made only as needed, these tombs would probably have cut each other more often than they actually did. Rather, it seems that several were made at one time. In this part of the cemetery, most chambers were on the east end of the tombs, but a few were on the west end or on the north or south sides. Since, the tombs were often reused, we can be sure only that they were made before the deposition of the objects they contained.

## Stage 1 a

Near the east end of the cemetery was a large group of tombs that contained almost no objects except coffins, shrouds, and leaves. Most of them have chambers at the east end, but a few were on the side; none have superstructures. While some of these tombs were in row-like groups of four or five, most of them were placed irregularly. A few were reused. At least one burial, near the eastern edge of the group, contained pottery of phase IIB.

## Stage $1 b$

Tombs immediately to the west were arranged in irregular rows, indicating that substage la had become a compact group with no room for additional tombs. The rows of lb appear to have been made in groups of four or five. It is here that pottery occurs frequently in original groups for the first time and includes the Sudanese-Saharan, Kushite wheelmade, and Roman period Egyptian vessels characteristic of phase II. The first pyramids appear in this substage.

## Stage lc

The subsequent expansion of the cemetery to the west seems to have been less regular. Original groups with only Roman period Egyptian pottery occur most often, but early versions of Meroitic painted pottery occur as well, the most prominent is that of the close painted IIB type. Pyramids occurred more often, with perpendicular crossed buttress walls and parallel chapel walls built against the east sides. This substage, lc, continued without visible break almost to the narrow part of the cemetery, the area remaining between tumuli 48 and 56.

## Stage 1d

South of substage la is a small group of tombs with chambers at the ends or sides that we are designating Id. Original groups with pottery in this small stage were dated to IIB by their Roman period Egyptian imports.

## Stage 1: Summary

If the boundaries of all the substages of 1 were hypothetically extended to completion, one could guess that possibly a third of that stage was destroyed during the construction of tumulus Qu . 48 . It is even more difficult to estimate how muçh was lost of the next stage, for tumuli Qu. 48, Qu. 53, Qu. 56, and tomb Q 405 occupy so much of the central area that only a few rows or parts of rows remain.

## Stage 2

Some idea of the original extent of stage 2 can be obtained from the area west of the tumuli where a series of north-south rows of five and six tombs formed larger rank-like rows three or four deep. Toward the east, the tombs are largely of the east chamber type, but side chambers mostly on the north side and west end chambers became more common in the western rows. One pyramid with diagonal cross-buttressing occurred in the eastern part of the cemetery and to the west there were two other groups of superstructures, apparently rectangular mastabas.

Stage 2a continued the westward expansion of the cemetery. Superstructures D11 and D9 were pyramids, but the superstructures of Q 169 and Q 184 may have been mastabas, since they were large and contained no butresses. This main part of stage 2 otherwise resembles ld, with its mixture of east end, west end, and side chamber tombs. Because of the extensive reuse of tombs in this stage of the cemetery, few original groups could be identified. However, concentrations of original simple burials occurred near D11 and D9 and at least one early type group (Q 154) occurred in this area. Egyptian pottery was found alone in some tombs, possibly as an original deposit. One or two tombs also contained Kushite Standard painted vessels.

One row of tombs near the south end of 2a had mastaba superstructures. Their contents included painted and red exterior pottery. This single area was the only concentration of tombs that contained these vessels as original deposits.

## Cemetery Q: Summary

Although many aspects of development in Cemetery Q are clear, some uncertainty remains about the date when the first tombs were constructed in stages 1c-2a, due to the occurrence of the simple coffin burial in both stages. Since coffins are known as late as IIB or IIIA at Gamai, it is probable that such burials began as the only type and other objects were simply added to it.

## Cemetery B

One of the major problems in tracing the development of Cemetery B is the fact that so many tombs were modified for reuse (B 108 , fig. 215 and B 280 , fig. 272). Sometimes chambers were excavated from the sides of tomb shafts with end chambers. At other times the shaft and part of the chamber were recut to accommodate a brick vault. While this reuse did not seriously impede the development of the general distribution study, it did present obstacles to tracing the development of any specific cluster of tombs.

Although its development was simpler than that of Cemetery Q, Cemetery B apparently did not expand from a single center or compact group of clusters.

## Stage 1

In its earliest stage, Cemetery B was a small cemetery of chamber tombs much like those of Cemetery $Q$, except that the chambers were cut mostly from the west end of the shaft. This placement was perhaps due to the cemetery's location on the west bank of the Nile and the fact that the tombs were cut in the east slope of a low ridge made the shafts rather more shallow than the chambers. Virtually all datable original groups belonged to phase IIB except one, which contained a jar of standard painted type and Roman period Egyptian pottery (early phase III).

Tombs of stage 1 were sometimes cut by those of later stages, and in most cases, they had been substantially denuded prior to the new construction. It would appear that the cemetery of stage 1 was abandoned for some time before stage 3 .

## Stage 2

A number of end chamber tombs were made in the part of the cemetery west of the scarp. Sherds and vessels of IIB occurred there often enough to indicate that the cemetery began to spread in that direction. However, groups of IIB did not occur in tombs that had originally been made as brick vaults, which thus belong to later phases.

## Stage 3

Neither stage 1 nor stage 2 represented the establishment of a major cemetery but rather the expansion of a modest row of tombs and a few scattered chamber tombs above the scarp to the west. The major expansion came in stage 3 when the cemetery grew to its full size and was then virtually abandoned. The tombs with vaulted chambers belonged to this stage and made up the greater part of the cemetery, though a few side chamber tombs were still made. Many tombs had rectangular superstructures. Stage 3 contained a number of original burials with standard painted vessels, indicating that it began in Phase III, but many more tombs contained only red exterior vessels and some other late pottery. Most burials in Cemetery B probably date to phase IV.

## Cemetery B: Summary and Comparison with Cemetery Q

The easily observed differences in structures and contents of the tombs in Cemeteries Q and B indicate that the stages described above were largely successive. Although this succession reveals neither the details of growth in each stage nor the principles by which the cemeteries were constructed, the evidence of continuing cults carried out at the east side of the tombs, the superstructures, especially pyramids, and offering tables would help to organize the burial ground by requiring accessible space east of the shaft. This need could have been met by a series of north-south rows which would not necessarily require strictly formal planning. The need for proximity to the main settlement and its larger cult, perhaps even an explicit relationship of the kind found in Egyptian mortuary feasts, would also help explain the fairly orderly cohesion of the greater cemeteries, ${ }^{122}$ while family relationships might be responsible for the presence of clusters within them. ${ }^{123}$

## C. TOMBS AND BURIAL CUSTOMS

## PHASE I: THE SIMPLE COFFIN BURIAL

The simple burial of Napatan Upper Nubia was the immediate antecedent of the simple burial of earlier Meroitic Nubia at Abri as well as Qustul. ${ }^{124}$ Tombs assigned to the early Meroitic period at Abri continued to have the axial arrangement, but the dromos was more often sloped or had fewer steps; sometimes a shaft was used for access. ${ }^{125}$ Coffins continued to be deposited, but the brick blocking was sometimes replaced by stones, and even offering tables. ${ }^{126}$

The typical tomb in the eastern part of Cemetery Q consisted of a trench-shaft with a sloping, later flat, floor (about $2.0 \times 1.0 \times 1.0 \mathrm{~m}$ ) that led to a chamber cut from the east or west end (about $1.6 \times 1.0 \times 0.5 \mathrm{~m}$ ) blocked by a large stone slab (Q 547), bricks (Q 538), or several stones (Q 537). Sometimes one of the stones was incised with a simple outline of an offering table. ${ }^{127}$ In the chamber were placed garlands of leaves ${ }^{128}$ and the burial. The burial was often made in a coffin that consisted of a hollowed out palm-log, planks, or even bark and bound with cords of straw. ${ }^{129}$ Many of the burials, whether in coffins or not, had been wrapped in sheets, tunics, or mantles. ${ }^{130}$ Sometimes the body was deposited with some personal jewelry (Q 547). The body was extended with the head to the west and the hands on the pelvis or pubis (Q 544) or with one hand at the side and the other on the pubis (Q 556). Often, the position of the hands had been disturbed because the hands and the head were the first parts of the burial disturbed during plundering.

This burial type which first appeared at Qustul, with end chamber tombs of stage 1 (Q 509-522), seems to have continued for some time, although the lack of objects makes dating difficult (sherds from undisturbed tombs were generally discarded). ${ }^{131}$ During this phase, side chamber tombs appeared (Q 523).
122. "Talfest," $L \ddot{A}$ V: cols. 187-88.
123. See Abdelgadir M. Abdalla 1984 (with Endesfelder 1984 and Hofmann 1984 for discussion). Although not recognized in the paper, the reuse and remodeling of tombs could, with the ambiguity of certain terms used to identify relationships in the texts, blur any specific pattern enough to make archaeological conclusions problematical.
124. For Napatan examples, see Vila 1980, pp. 18-32, Type N IV. At Abri, Meroitic axial stepped dromos tombs with chambers at the west end contained coffin burials. Some burials had crudely incised or carved offering tables; most were blocked with bricks. See Vila 1982, pp. 6-18. Type M III. See figs. 12, 13 and pp. 113, 114, figs. 117, 118 (2-V-20/264); pp. 156, 157, fig. 167 (2-V-20/360), for example.
125. Vila 1982, pp. 6-18; at Missiminia, shafts were used for side-chamber tombs or shaft tombs. See also Griffith 1923, pp. 144, 145.
126. Vila 1982, figs. 7, 8, 38, 40, and 41.
127. See tab. 14 below.
128. See p. 100 below.
129. See tab. 17 below.
130. Mayer-Thurman and Williams 1979, p. 41.
131. If the rarity of coffins in Cemetery $B$ is an indication, by phase IIIA, it was no longer in common use.

Although the burial is typically Meroitic, the general shape of the tomb and the simplicity of the burial are very much like the burials in the Ptolemaic and early Roman Dodekaschoinos. Even the blocking, a large stone slab, is quite similar. ${ }^{132}$ The more elaborate burials with stone sarcophagi and cartonnage plaques or coffins with elaborate decoration found in the Dodekaschoinos do not occur.

## Superstructures and Evidence for Cult

The earliest superstructures found at Qustul were the square foundations of what were presumably pyramids. These consisted of bricks, usually laid with alternating headers and stretchers (pls. 6, 7). In a few cases, the bricks were tapered on the outside. Sometimes the square was cross-braced with brick walls placed perpendicularly to the sides (Q 294) or crossing diagonally from the corners (Q 246). Small chapels, presumably to house offerings, ${ }^{133}$ were built against the east sides. ${ }^{134}$ One chapel contained a bowl decorated in the "silhouette style" of vine decoration of IIA (Q 363; fig. 102). Ba figures were found in fragments with no evidence for their placement. ${ }^{135}$ Two stone floral pillars were found (Q $156-2$ and 3 m W of D7) and they may have been installed at the pinnacles of pyramids, as reconstructed on pyramids at Meroe. ${ }^{136}$

At Qustul, the pyramids do not appear in the earliest, eastern part of the cemetery, but begin probably by the end of phase 1. Most pyramid superstructures were found in parts of the cemetery that dated largely to IIB. The square superstructure is paralleled at Abri, where one was erected over a simple, anthropoid coffin burial. ${ }^{137}$ The pyramid is certainly not confined to the early period in Lower Nubia for pyramids were the typical superstructures in the phase II parts of the Faras cemetery, ${ }^{138}$ the phase III-IV areas of Karanog, ${ }^{139}$ and the phase IV cemeteries at Gebel Adda ${ }^{140}$ and Ibrim. ${ }^{141}$

At Qustul, the pyramid was replaced by a rectangular, presumably mastaba, superstructure (pls. 8d, 11) in stage 2, dating to phase III, and was the only kind found in Ballana Cemetery B. Stone fixtures and figures were apparently added to mastabas as well as pyramids. ${ }^{142}$ At Aksha, the other major early cemetery, there were some rectangular superstructures. Although these may have been built in phase II, because of the repeated reuse of tombs there, such an early date cannot be verified. None were found at Abri, and most examples at Qustul are late. ${ }^{143}$ The chronological succession of pyramid and mastaba is clear in the Qustul cemetery, but it is equally clear that the pyramid was a standard form of tomb to the end of Meroitic Nubia. The change in these cemeteries must be considered local and was probably due to some aspect of Lower Nubia's rather elaborate social hierarchy we do not yet understand.

The early crude offering tables were originally deposited in the substructure. Other sandstone objects and fittings were found in substructures of early date, but, at Qustul, their position sometimes may not have been original. At Abri, one tomb contained two obelisks used as blocking. ${ }^{144}$ It is difficult to decide whether this use was original but a stone stela slab was found used as blocking as was a tall paddle stela.
132. Firth 1915, pp. 160-62, esp. fig 228 and cited plates.
133. For the presence of stelae in chapels and for the placement of offering tables and offerings, see Woolley and Maclver 1910, pp. 8-10.
134. See pp. 163-69 below, for inscribed material and pp. 93-96 below, for other stone fragments.
135. See Woolley and MacIver 1910, pp. 10, 11.
136. See Hinkel 1986, fig. 2, for details of this reconstruction, and pp. 95,96 below. The cross-bracing may have been intended to support these pillars.
137. Vila 1982, pp. 23, 24, fig. 20 (2-V-20/6).
138. Griffith $1924, \mathrm{pl}$. XIV, tomb 2800.
139. Woolley and Randall-Maciver 1910, pls. 112, 113.
140. See pp. 181, 182 below.
141. See p. 180 below.
142. See tables $17-19$ below, Cemetery $B$ entries.
143. Vila 1982, pp. 7, 8; only one superstructure was recovered, but the presence of bricks outside the shafts and the impressions left by brick or stone foundations convinced Vila that most of the large dromos tombs originally had superstructures.
144. Vila 1982, p. 48, fig. 39.

## CHANGES IN THE BURIAL: PHASES IB AND II

The simple burial type characteristic of phase I continued in use for some time, so the pottery and objects characteristic of IIA were probably partly contemporary with the simple burial type. At Qustul a number of tombs in early parts of the cemetery contained cosmetic implements and jewelry but no pottery, and we may infer that the first step in the transition was the addition of these objects to the burial with coffin, leaves, and offering table (Q 246).

Many tombs were reused in this period. Many earlier tombs contained evidence that previous occupants had been removed (Q 181). By phase IIB, earlier burials were often left in place when additional burials were deposited ( Q 475 ) although plundering and removal were certainly still practiced (Q 560).

The reuse of tombs in phases II and III made changes appear more transitional than they probably actually were. By phase III, however, certain changes had taken place. Broken and discarded sandstone fittings and accessories, including carved offering tables, Ba figures, and stelae, were found in both Cemeteries Q and B. In cemetery Q, these must have been made mostly for pyramids. In cemetery B, they were put with mastabas, the only kind of superstructure certainly built in the cemetery. Many of these had steeply sloped sides.

## CHANGES IN THE BURIAL: PHASES III AND IV

Substructures changed considerably between the main phases of Qustul and Ballana. ${ }^{145}$ At Ballana, the tombs with chambers at the end or the side were replaced by vaults, usually made of two bricks leaned in an inverted V, placed on ledges cut in the sides of the shaft (B 205). Larger vaults built on low walls also occur (B 313) and sometimes were built in the shaft of a chamber tomb (B 205). In any case, the smaller vaults and slab-roofed chambers were no larger than coffins. Thus the major change in practice may have involved not religious change but a conceptual transfer of the coffin's function to the chamber itself, a parallel to the transfer of ritual objects to the surface. Perhaps during III, or at the end of IIB(?), the burial position was changed slightly, both hands now regularly being placed on the pelvis, often crossed, and sometimes tied.

By the end of phase III, weapons and spindles were added to the burial, ${ }^{146}$ but these hardly amounted to a major intrusion of daily life into the tomb. However it was the transfer of ritual objects to the surface that led to the one truly major change in the burial, the large scale use of inscriptions. ${ }^{147}$ A few such objects may have been deposited at tombs before, but they were quite rare. No major changes in the structures, burials, or objects occurred in phase IV, which saw a continuation of trends noticed in late phase III.

[^3]
## CHAPTER 2

## POTTERY

The pottery collection of Meroitic Qustul and Ballana is one of the largest in Lower Nubia, spanning the entire time from Phase I through Phase IV. ${ }^{1}$ Of the other cemeteries, only pottery from Faras exceeded Cemeteries Q and B in amount and chronological representation, but its publication and presentation are problematical. The more important occupation sites are also problematical, for their materials are mixed and do not represent all of the phases of Meroitic Nubia. ${ }^{2}$ The presentation of a wide range of significant details is clearly necessary in the present volume as it contains the widest range of materials. On the other hand, it is not intended to be a primer of pottery in Nubia generally and useful discussions of details found elsewhere will not be repeated.

The present material is far too large to present entirely without comment, or without classification. Although important and illuminating prior categorizations exist (see Appendix $B$ ), they unfortunately separate materials that belong to the Meroitic period into two incompatible groups of classes. ${ }^{3}$ Shapes and decorations are not distinguished in sufficient detail to permit the substitution of a code for duplicate items, and categories omit significant intentional groupings ${ }^{4}$ while establishing boundaries that divide intentional groups ${ }^{5}$ making the complete presentation of new large bodies of material difficult.

To escape these contradictions, we will adhere to the method described in volumes III and V of this series and continue to distinguish traditions, form groups and forms within the material. ${ }^{6}$ As with earlier materials, the purpose has been to detect intentional distinctions present in the material rather than to construct a complex of regular arrays of pigeonhole categories. Detailed reasons for this choice have been presented elsewhere and will not be repeated here. ${ }^{7}$

In addition to the traditions, form groups, and instrumental categories, decoration was important in Meroitic Nubia. Although decoration was very complex, including painting impression, incision, and

1. As pointed out in Chapter 1 a major phase of Meroitic Lower Nubia left remains consisting of burials essentially without objects, and sites at Gezira Dabarosa (see below, pp. 187, 188). Thus continuous development has not been traced in the pottery between Dynasty XXV and the last centuries B.C. in this region.
2. See Appendix A, p. 188, below, Ibrim and Meinarti, for example.
3. Adams 1986, pp. 413-20, 435-39, 441-58,526-42,566-68, 575,576, and 580; see Adams n.d. for Ptolemaic pottery. For a concordance between the classifications in these two works, see Appendix B, below. A third classification proposed by Adams (1964) is not discussed because it was superseded by the later works.
4. See pp. 32-34 below. Kushite wheelmade pottery needs to be distinguished from Meroitic fine and ordinary vessels.
5. Adams 1986, see p. 66. Pottery with red and orange surface colors is distinguished from yellow and white vessels even in cases where the surfaces were painted rather than coated. See fig. 254 , Wares R $35(15,17,24$, and 25) and $W 26(16,22$, and 35$)$, for example.
6. OINE III, pp. 21 and 191-95 (Appendix). See pp. 191-94, Appendix B, below.
7. Williams 1986, OINE III, pp. 191-95 and OINE V, pp. 25-28.
application, major stylistic distinctions tended to correspond to divisions between major groups, ${ }^{8}$ and showed strong stylistic characteristics that were coherent within each group. However, some aspects of style and some motifs were transferred from one form group to another while the origins of some features are not readily identified.

Table 7. Formal Categories in Meroitic Pottery from Qustul and Ballana.

```
Meroitic-Kushite Pottery
            I. Fine/Ordinary
            II. Kushite wheelmade
            III. Storage jars
            IV. Kushite wheelmade utility
            V. Handmade ordinary
Sudanese-Saharan Pottery
            (dark-faced polished incised-impressed)
Egyplian Pottery
            1. Fine/Ordinary (I)
            II. Utility (I)
            III. Utility (II-chaffy, treated with utility I)
            IV. Amphorae
            V. Fine/Ordinary (IIA and IIB)
            VI. Barbotine
            VII. African Red Slip or Terra Sigillata
(Ptolemaic Egyptian Ordinary)}\mp@subsup{}{}{\mathrm{ a}
```

a. This pottery occurs in the Meroitic settlement only and was probably confined to the earliest phases. See OINE VIII, Part 2, pp. 287-93.

## A. MANUFACTURING AND THE CLASSIFICATION OF MEROITIC POTTERY

Apart from the prominent use of a fine gray-white clay, the materials and techniques used to manufacture Meroitic pottery continued those already found in earlier eras. The adoption of Egyptian techniques of shaping and firing was now more thorough, however, and experimental techniques such as using metal vessels to mold bowls no longer occurred. ${ }^{9}$

Clay
Before the Meroitic period, most vessels manufactured in Nubia were made primarily of silty clay from the valley alluvium. ${ }^{10}$ Vessels imported from Egypt were also made of this clay. Vessels were also made from marly clays deposited in desert wadis or clay quarried from layers in bedrock. ${ }^{11}$ These rock and desert clays, in addition to being used for the hard pink pottery, may have been mixed with alluvium to make some of the Egyptian fine or ordinary pottery. ${ }^{12}$ A number of other clays were available in Nubia, and they were used, either alone or in mixtures, to produce pottery.

See pp. 32-50, 64-68, and 72-74 below.
OINE VII, p. 7.
10. OINE III, p. 22; OINE V, pp. 28-29; Nordström 1972, pp. 38-39.
11. OINE V, pp. 28-29, tab. 9; Nordström 1972, pp. 39-40. For marl or desert clays from the Memphis region, see Amold 1981. For quarried clays used in modern Upper Egypt, see Nicholson and Patterson 1985a, pp. 224-25; see also Nicholson and Patterson 1985b, pp. 54-55 and illustration, p. 52.
12. See p. 63 below for mica in Egyptian fine/ordinary pottery. For mixtures, see Butzer 1974, pp. 381-82.

In Meroitic times, a fine pottery was made of clay derived from lenses and layers in the Nubian sandstone, either directly or from secondary deposits in the higher terraces of the valley. ${ }^{13}$ Even within the last century, bluish clay from the sandstone near Kalabsha was exported to Assiut for potters, ${ }^{14}$ and white clay has been identified in the hills near Meroe that may have been used to make pottery there. ${ }^{15} \mathrm{Kaolin}$ deposits in the sandstone at Aswan were also worked in ancient times. ${ }^{16}$ It is difficult to determine when this clay was first used for pottery, but a shell bearing clay from Gebel Sahaba was used to make pottery during the Neolithic period, ${ }^{17}$ and some bowls of Napatan date were probably made of fine clay from the sandstone. ${ }^{18}$ The pottery is light faced but pinkish to red in the breaks, and it may be that the gray surface is due to high firing and oxidizing. ${ }^{19}$

Some of the clays may have been mixed either naturally, or intentionally, ${ }^{20}$ but no one has yet developed a means of identifying such mixtures. The fine clay from the Nubian sandstone is either gray white or bluish before firing. After firing, the color varies from white to tan to pinkish sometimes with a gray, or bluish cast. ${ }^{21}$ No fragments of mica are visible, although biotite occurs as detected by X-ray diffraction. ${ }^{22}$ The alluvial clay, on the other hand, is gray when unfired or lightly fired, but as the temperature and duration of the firing increase, the clay turns brown, then red, then almost pink. ${ }^{23}$ In many cases, however, pottery of definitely alluvial clay showed the light bluish cast that appears when certain clays from the Nubian sandstone are used and it would appear that these vessels were made of a clay mixture. ${ }^{24}$ As this also occurs in the pottery from Egypt, it is difficult to distinguish what appear to be gradations in the mixture. ${ }^{25}$
13. Lister 1967, p. 74; Major deposits have been described at Aswan, along with evidence for exploitation (as kaolinites; see Passarge 1955, especially pl. 2, abb. 7-9; pl. 4, abb. 14; Little and Attia 1943, fig. 3 and p. 46). For other deposits on the terraces, see Butzer and Hansen 1968, pp. 483-93 and de Heinzelin and Paepe 1965, pp. 4850 (silt deposits); see also de Heinzelin 1968, pp. 54, 55 for a summary of Nile deposits.
14. Firth 1912, pp. 51, 52. At Assiut, this clay was mixed with Nile mud to make a black polished pottery.
15. Robertson 1976 pp. 25, 26.
16. Passarge 1955, pls. 2, 4.
17. Clays or clay-like deposits of this kind were quarried for incense burners in A-Group (OINE III, pp. 108-10; Williams 1987, note 55) and there is evidence in the Dongola reach that they were quarried (Kendall, pers. comm. 1989). For shell-bearing clays at Sahaba, see Nordstrom 1972, pp. 53, 54. Sec Feathers and Scott 1989, pp. 554-57 for a study in which shell temper improved the strength of low fired ceramics made from illite clays in the Mississippi Valley. The shell required crushing and preliminary roasting, and it was not quite clear that the improvement in performance was large enough for a potter to detect.
18. OINE VII, pp. 9, 10. Some vessels of Napatan date may have been made from this clay.
19. The black color which appears in many ceramics of the Nile Valley has been the subject of repeated discussion. See Lucas and Harris 1962, pp. 373-76 for a commentary on early investigations. The assumption that a black core was due to carbon was repeated by Adams (1986, p. 74, note 2, from Hodges) without comment.
20. Butzer 1974, pp. 381, 382.
21. See Firth 1912, pp. 51, 52.
22. Williams, Williams, and McMillan 1985, fig. 1.
23. This presumes an oxidizing atmosphere. Overfired Middle Kingdom sherds from Serra East are black.
24. Late Christian unfired pottery from Serra East shows this feature. See Williams, Williams, and McMillan 1985, pp. 46, 47. See also Adams 1986, pp. 52, 77, Tab. 8 (N.IV-VII, LB, LF, LG, G.I, and G.III), and Tab. 9.
25. The major kinds of clay deposit could be summarized: Alluvial clay deposits in the Nile valley include both low and higher deposits; the higher deposits tend to be finer (Nordström 1972, pp. 38, 39). Alluvial clays of desert origin occur in desert wadis and terraces; in Egypt, these are calcareous (Nordström 1972, pp. 39, 40; Arnold 1981) while in Nubia, they are essentially non-calcareous (Lister 1967, p. 174, on the 30 M terrace; Zabkar and Zabkar 1982, p. 16). In addition to these alluvial clays whose role in ceramic production has been repeatedly discussed there are a number of deposits in bedrock whose use or potential use in ancient pottery has received only very limited notice. In Egypt, clay is mined from the bedrock at Ballas (Nicholson and Patterson 1985a, pp. 224, 225; 1985b, pp. 54, 55). In Nubia, fine clays are found in the sandstone in several locations (notes 13, 14, and 15). Mixed clays are also found (at Gebel Sahaba, clay used in Neolithic pottery, contains shell; Nordström 1972, pp. 54, 55; at Aswan, high kaolin deposit, contains sand and small subrounded pebbles; author's observation, 1984). In addition, some ferruginous clays are also found in the bedrock of the Eastern Desert (called Hamra, and until recently, quarried by the Ababda and traded to Nubia; Mohamed Riad 1969, p.9).

## Inclusions

Materials added to clays in pottery from this period varied with the intended size and use of the vessels as well as the cultural orientation of the potter. Within the local pottery, one of the major distinctions is between the fine/ordinary and the other major groups. The Kushite wheelmade and handmade pottery almost all showed evidence of chaff inclusions. Much of this was of the finely divided kind that would usually be called dung. ${ }^{26}$ In others, voids are more irregular and the sherd has the rather spongy appearance (at ca. 40X magnification) which may indicate the presence of ash. ${ }^{27}$ Still others do not show evidence of the angular carbon fragments or limy particles that would appear in wood ash and it is assumed that dung ash was used.

Small voids can be observed in the Meroitic fine/ordinary pottery, especially the coarser ordinary sherds which also tend to have a spongy, fibrous appearance. It appears then that ash was used here in varying amounts from the finer to the coarser vessels. Some light vessels have a few red particles of what may be grog, or ground sherd temper. A large cup or bowl from the settlement was made with an organic temper, probably dung (Mer. Set.-E).

Except in the finest Meroitic cups, which contained only very tiny voids and particles of ground or crushed(?) sand evidence of ash or other organic inclusions exists alongside larger particles of sand and stone which may have served as the actual temper. In this case, the ash may have served as a flux used to reduce the temperature needed to sinter the vessel or as an agent to peptize the clay to make the surface smoother for decoration.

Previously, the surfaces of vessels made in the Nile Valley were too irregular to accept a very fine line; either they were grainy or burnished. ${ }^{28}$ Since the pottery of the Aswan area emphasized the decorated surface, the vessels were wiped smooth and ash may have been added to the paste peptizing the clay and making a smooth enough surface for precise painting. ${ }^{29}$

This ash and chaff was not the only kind of inclusion to be found; many of the fine and all of the ordinary, Meroitic and Kushite wheelmade vessels contained sand particles. Major temper in the fine/ordinary pottery from Egypt was very small, flattened, subrounded grains of sand and many particles of black and red granite. Shaping

Most vessels in the present collection were thrown on the wheel, probably the compound fast wheel that had been in use in Egypt. ${ }^{30}$ The only major groups of handmade pottery were fine dark-faced incisedimpressed vessels, drab household vessels, and possibly some imitations of painted wheelmade pottery. The smaller handmade vessels were made by pressing or beating slabs of clay. Some large vessels with lumpy surfaces and very thick walls were probably built up from slabs and/or pinched into shape.

## Coating

Red coats were put on many fine and ordinary local vessels which were then burnished and often painted. Others had coatings brushed onto the surface which was not improved further.

Light-colored coats also appear in this material, but many vessels once thought coated actually had their surfaces formed differently. As in the New Kingdom, the process of turning the vessel to smooth it tended to bring finer clay particles to the surface and force inclusions into the wall, creating a fine surface layer that would fire to a color much lighter than the body of the wall and would produce a surface with a different texture and sometimes a different color than the interior. In other cases, a light-colored surface is formed by the oxidation of carbonates near the surface. ${ }^{31}$
26. OINE V, p. 30, tab. 9; Nordström 1972, pp. 51-53.
27. OINE III, p. 22; Nordström 1972. p. 51.
28. Compare Naqada period and New Kingdom painted pottery, for example. OINE III, pls. 84-95; Holthoer 1977, pls. $53: 3 ; 55 ; 61: 2,3,4,6 ; 62: 1 ; 65: 3 ; 66: 1,4-6$.
29. The process of peptizing clay with ash was reconstructed during research on Attic pottery (Richter 1959, pp. 305-08). Ash would also serve as a flux.
30. Holthoer 1977, fig. 46:2, 3, 5-7; p. 34; See also Vandiver and Lacovara 1986, p. 60, Hope 1981, pp. 127-33, Hope 1982, pp. 13, 14, and Bourriau 1981 pp. 15, 16.
31. See Adams 1986, pp. 29, 30, 196, 197, 436 (ware family M; most vessels in The Oriental Institute collection corresponding with this group are actually uncoated or have a red-painted surface), and 454 (Ware Group N.I;

## Surface

Actual bumishing was confined to red coated and dark faced incised-impressed pottery. Most Meroitic fine pottery is somewhat lustrous, perhaps due partly to peptizing the clay with ash, and partly to polishing with a soft, smooth material such as leather. ${ }^{32}$

## Decoration

## Plastic

In handmade vessels, the dotted impressed and incised decoration of Sudanese-Saharan pottery continued with geometric, linear, and even simple representational designs. ${ }^{33}$ Some of the larger handmade jars and the few bowls of simple pottery have clay additions that consist of applied cords, lugs, and encrustations on the bottom. The most prominent plastic decoration on wheelmade vessels was the trailed slip decoration usually known as barbotine applied to certain thin-walled cups and jars (at Aswan) with very thin walls; although not a common pottery, it is one of the most characteristic pottery types of Meroitic Lower Nubia. ${ }^{34}$

## Stamping

Meroitic wheelmade vessels, mostly cups or goblets and fine jars were decorated with stamped designs. These include simple geometric motifs and small figures of Meroitic type. ${ }^{35}$

## Painting

Painting was the most prominent type of decoration in the pottery of Meroitic Nubia, occurring in several of the major groups and using Hellenistic, pharaonic, and older Nubian designs. ${ }^{36}$

## Firing

Pit or stack firing and kiln firing were both used in the Meroitic period. In addition, a special variation in the kiln firing that created special surface colors was apparently used for decorated pottery in Egypt. ${ }^{37}$

In the red or pinkish brown pottery of Nubia and Egypt, kiln firing resulted in pottery with much the same appearance as earlier pottery from Kush and even New Kingdom Egypt. ${ }^{38}$ The very high firing seen in the so-called Qena pottery was not present, although both industrial traditions appear to have kilns with separate firing chambers. ${ }^{39}$

Local handmade pottery often had a light surface color, indicating that it had been partly oxidized, though most surfaces have fire blooms, showing that a firing pit or pot stack with an irregular atmosphere was used.
many vessels in this group are also uncoated) for Meroitic examples. See Hope, Blauer, and Riederer 1981, pp. 141 (U.C. 24561 ), 144 (U. C. 24694), 162, and 163; and Hope 1978, p. 67 for surfaces. See also OINE VI (forthcoming). The separation of a smoothed surface from the body of a vessel may have led Adams to identify some small vessels of otherwise ordinary Aswan fabric as a distinct group (1986, pp. 536, 537, fig. 301) in later times that was actually not distinct.
32. See Adams p. 30. Lister (1967, p. 59) refers to the technique in connection with X-Group pottery, but considers both burnishing and polishing together.
33. See below, p. 73.
34. Charleston 1955, fig. 56; Hayes 1976, pp. 47, 48, cats. 238-43; cats. 244-48 are made of a slightly different clay, probably elsewhere in Egypt; Bourriau 1981, cat. 186, 187.
35. Zach 1988, pp.121-50; see p. 60, tab. 9 below.
36. See pp. 52-59, tab. 8; pp. 64-67; and p. 60, tab. 9 below.
37. See p. 64 below.
38. Here, a kiln is distinguished as having an actual chamber. See OINE VI (forthcoming) and OINE VII, pp. 7, 8 for this kind of pottery earlier. See Hope 1981b, pp. 233-41; Oren 1987, fig. 9 and pls. G, H; Holthoer 1977, pp. 34-37; Bonnet 1984, pp. 8-10 and figs. 4, 5; Redford 1978, fig. 1; and Posener-Krieger 1986, pl. 66 and pp. 370, 371 (kilns at Dakhla).
39. See Holthoer 1977, pp. 34-37 for a summary of representations and note 38 .

## B. MEROITIC POTTERY WITH PAINTED AND STAMPED DECORATION: KUSHITE WHEELMADE AND FINE/ORDINARY POTTERY

## POTTERY OF KUSHITE TRADITION

Although several form groups are included in this tradition, most shapes were simple cups and jars of the kind that had been used since A-Group, and the decoration was based also on the designs and styles of earlier pottery in Nubia. ${ }^{40}$ Despite the apparent disappearance of the pottery tradition during the New Kingdom, it reappeared in the ceramics of the Twenty-Fifth Dynasty, although with new clays, and the use of the wheel for local pottery, ${ }^{41}$ while the old methods continued to be employed for other pottery. From Napatan times, the shapes and decoration can be traced directly, establishing a continuity that allows us to identify the pottery in this group as Kushite, despite the addition of techniques and decorative elements from various sources.

The following groups are recognized: Meroitic fine/ordinary (I), Kushite wheelmade (II), storage jars (III), wheelmade utility (IV), and Meroitic handmade (V). The first two are discussed together in the present section because their materials and decoration are more closely related to each other than to any other group of objects.

## MEROITIC-KUSHITE FORM GROUP II: KUSHITE WHEELMADE POTTERY

The earliest distinctive pottery of the tradition in Meroitic Lower Nubia was the Kushite wheelmade. ${ }^{42}$ These vessels were made of the same alluvial clays as their Napatan predecessors, thrown in very similar shapes, with dimensions and wall thicknesses that correspond closely to those found in the earlier materials. ${ }^{43}$ A deep bowl or large cup and necked jar were the major shapes used.

Clay
A dull gray-buff, pink, or red appearance of the fabric indicates that alluvial clay was the major ingredient either in a natural or deliberate mixture with clay from the Nubian sandstone, both of which are ferruginous.

## Temper

Many cups and beakers have small mineral inclusions (subrounded grains of quartz with carnelian and mica) and some limy particles indicating that fine sand was used for temper. Sometimes, especially in jars, voids left by finely chopped straw appear indicating that dung or straw was used in addition to, or instead of, sand.

Shaping
Although the compound fast wheel was used to shape most local pottery, shapes consisted only of deep, convex bowls or large cups, conical beakers and globular or ovoid jars. Most have sloping, straight, or even concave necks, simple rims, and sometimes a rib at the base of the neck. Accessories were almost never added. ${ }^{44}$

Coating
Some vessels were given a red coat, and others were painted red over wide areas.
Surface
Most vessels had been smoothed on the wheel; some with red painted or coated exteriors were moderately burnished in the red areas.
40. See for example, OINE IV, figs. 5, 7, and 10 and OINE V, pls. 4-66.
41. OINE VII, p. 7.
42. See pp. 8-10 above.
43. OINE VII, pp. 7, 8.
44. See ibid. for antecedents.

Firing
The surfaces of Kushite wheelmade vessels vary in color from pinkish gray to red, indicating an oxidizing or neutral atmosphere during firing. Hardness varies also, from a rather crumbly to a sharp, almost angular fracture, implying firing at a low to moderate temperature. Most vessels have a relatively even color with only a few blooms.

## Decoration

The type of decoration common in Meroitic fine/ordinary pottery appeared earlier in Kushite wheelmade pottery. However, figure and semi-representational decoration was less common although it was well executed when it appeared. ${ }^{45}$ Most painted vessels were decorated only with bands used in various ways, such as large cups or open bowls with pairs of narrow bands just below the rim (fig. 9 b ), or on the lower body (fig. 9f), on the rim and below the rim (fig. 9d), or four bands placed well below the rim (fig. 9e). On jars, band styles include monochrome bands (fig. 10d), pairs and groups of narrow bands (fig. 12e), combinations of narrow and broad bands (fig. 10a), and broad bands alone (fig. 11c). However, jars offered much more space for decoration, which soon became complex. ${ }^{46}$

Meroitic Standard Painting-The decoration on some vessels closely resembles Meroitic standard painted pottery although the much larger necks of jars were also decorated. ${ }^{47}$ In other cases, the main motif or figure was put on the body of the vessel without framing bands. This was especially true of the serpent ${ }^{48}$ which was sometimes shown with very long undulations. Decoration of this kind also occurs on beakers though in the material from Ballana and Qustul the only motif is linked beads.

Red Exterior/Light Band-A number of jars were coated with wide areas of red and painted with black bands that frequently framed bands in lighter colors (fig. 10c); ${ }^{49}$ on occasion, the red coat was omitted. At Faras, identifiable motifs of the Meroitic standard pottery were placed in the bands. ${ }^{50}$ Because these vessels seem to be earlier than fine/ordinary vessels with red coats, they are probably to be considered prototypes for vessels with red exteriors in the finer pottery. ${ }^{51}$

Vine Related-Although the vine motif occurs on this pottery, it is treated in the fashion of the Meroitic standard painting and also as used at Napata and Meroe. Some combinations of crosshatched bands and reserve garlands are found (fig. 154a), however, in the vine group from Ptolemaic Egypt, as well as variations of the buds and the trellis. ${ }^{52}$ Called the "Silhouette Style" by Török, it is identical on both Kushite wheelmade and Egyptian vessels and it precedes sinuous, curvilinear (also found on Kushite wheelmade vessels; see fig. 12e) and later styles of vine painting. 53

In the present material, two vessels have vine decoration on the shoulder; one is curvilinear, the other almost sinuous, and both are framed by black bands. ${ }^{54}$ Two of the largest jars have variations of the curvilinear vine painted in black and red on the shoulder without framing. ${ }^{55}$ Another vessel has intersecting
45. Zabkar and Zabkar 1982, illustration on p. 46.
46. Griffith 1924, pls. 46:4, 5, 13, and 14; and Zabkar and Zabkar 1982, illustrations, pp. 42-46, for example.
47. Griffith 1924, pls. 17:IVf; 46:4, 5.
48. Griffith 1924, pl. 46:3.
49. Griffith 1924, pls. 46:13, 14; 47:4, 6, 7.
50. Griffith 1924, pl. 46:13.
51. Törbk (1987a, pp. 203, 204) referred to some vessels of this type as the "Polychrome Figural Style," which he believed dated to the first century C.E., based on the occurrence of special marks that appear on objects found in tombs of the first and second centuries (Török 1972, pp. 35-44). However, an important vessel cited by Török is a type that would be assigned here to phases IIIB and IV and it is probable that the style continued for some time, culminating in the best vessels of the red exterior group of phases IIB and IVA.
52. Griffith 1924, pl. 17:IVc, f, g (no garlands).
53. Török 1987a, pp. 190-95; see pp. 67, 68 below for details of the vine style.
54. See pp. 65-67 below for distinctions in types of vine decoration.
55. The vine was already well known in Kush (Dunham 1963, p. 96, fig. 73f [W 369]) and contained in bands.
crescents with drooping ends also framed by bands. This collection is not as varied in decoration, especially representations, as some groups of Kushite wheelmade pottery from this region. ${ }^{56}$

## MEROITIC-KUSHITE FORM GROUP I: MEROITIC FINE/ORDINARY POTTERY

Meroitic fine/ordinary pottery was a late development from the original body of Kushite wheelmade vessels. ${ }^{57}$ The cups or beakers and jars were clearly intended by shape and decoration to belong together despite use of varied materials in manufacturing. Most cups and some early small globular jars having short straight necks were made of fine gray-white clay; some larger jars were made of alluvial clay. Technically the pottery otherwise closely resembles Kushite wheelmade, except that the vessel walls are thinner, especially the thinnest cups which are as fine as the very thin Barbotine pottery from Aswan. In addition, the firing often seems to be more complete. Although shapes and most decoration can be distinguished from the Kushite wheelmade pottery, Meroitic fine and ordinary vessels were clearly derived from that group.

Despite the great differences between the fabrics of the finest and the coarsest vessels in this very large group, the consistent use of certain shapes, surface treatments and decoration indicates that it is a single group. The lightest clay is gray to white with few visible voids and virtually no visible grains of mineral inclusions, and the darkest is red with a definite sand temper and even some chaff. Under magnification many sherds appear to have the spongy texture that indicates the presence of ash. Although based on the beaker-cups of Kush and the Sudanese-Saharan tradition the cups are smaller and lighter than their Kushite wheelmade counterparts and are comparable to the small cups imported from Egypt. Larger jars are also lighter and thinner than Kushite wheelmade counterparts. The two shapes were clearly intended to belong together and, despite the occurrence of some other combinations, they often appear in the graves as sets with a cup or goblet inverted on a jar. The vessels share elements and styles of decoration, suggesting this specialized pottery had much the same significance as A-Group exterior-painted vessels ${ }^{58}$ or the blacktopped beakers of Kerma. ${ }^{59}$

## Clay and Temper

The finest clay used was the white or bluish clay from the Nubian sandstone or secondary desert deposits. In the finer vessels this clay was so clean that very few specks of inclusions could be detected and few tiny voids indicated porosity, but in some larger vessels the clay contained particles of various sizes, many possibly part of the clay deposit. This clay usually fired white, tan, or buff, occasionally light pink. However, some of the cups are a light red so it is possible that it was sometimes mixed with alluvial clay. Alluvial clay replaced the white clay in larger jars, and sand as well as some chaff was used as temper.

## Shaping

Vessels were shaped on the compound fast wheel with walls thinner than those of Kushite wheelmade vessels. They compare favorably with those of fine/ordinary pottery from Egypt; cups are as thin as 2 mm and, jars about $6-8 \mathrm{~mm}$.

There are convex bowls, conical or cylindrical beakers, convex, cylindrical, or carinated cups (figs. 4, $5 \mathrm{a}-\mathrm{m}$ ), and globular or baggy jars with short cylindrical necks (figs. 6,7). A few other shapes did occur such as a cup with multiple bulges (fig. 5p, q), ${ }^{60}$ carinated bowl (fig. 5r), pyxis (fig. 5s), cylindrical jars (figs. $8 \mathrm{~b}-\mathrm{d}$ ), and carinated jar (fig. 8e).
56. In particular, the finely-painted "Academic" style of decoration does not occur in this group at Qustul. Other early experiments, some less finely painted, have been found in the Cataract Region. (Zabkar and Zabkar 1982, illustrations pp. 42-47; see Wenig 1979a, pp. 132, 133, Török 1987a, pp. 200-02, and Török 1987b pp. 83, 84 for discussions of the "Academic" or "Stem Pharaonic" style).
57. See below, p. 38. The "Academic" style occurs in both groups and Meroitic fine Pottery appears first in phase IIB.
58. See OINE III, pp. 27-30; for the varied decoration, see tab. 9 .
59. For Kerma burials, see OINE V p. 111; Reisner 1923, I-III, various.
60. Ribbed beakers occur in A-Group (OINE III, p. 28; see fig. 32b) and at Kerma (Reisner 1923, IV_V. p. 378, fig. 260).

## Surface

Most vessels were smoothed and often burnished before painting. ${ }^{61}$ The finest pottery seems to have had lustrous surfaces, ${ }^{62}$ although the red vessels are often smooth and matte. Later many jars were given a red coat, and occasionally a horizontal open burnish as even sometimes occurs on pottery of Napatan and earlier Meroitic times. Some cups were also given a light overall polish.

## Decoration

Almost all but the latest coated vessels had some sort of painted decoration consisting largely of red and black (or dark) on the natural gray-buff or red background. On coated surfaces the colors were generally black and white although occasionally a somewhat darker red than the coat was also used for detail. In a few elaborate paintings, other colors such as yellow and blue-gray were used. The motifs, designs and styles will be discussed immediately below in greater detail.

## Firing

The temperature and duration of firing seem to have been less than that of the fine/ordinary pottery from Egypt, perhaps to avoid damaging the paint. It appears to have been moderate enough to fire the pottery, which had some alluvial clay, red completely through the wall. In a few cases, the painted decoration had been all but obliterated.

A number of sherds came from vessels that were underfired or not fired at all. ${ }^{63}$ Unfired vessels also occurred in X-Group.

## C. MEROITIC PAINTED DECORATION

The most important group of decorated vessels in this material is the Kushite-Meroitic. Painting belonging to this group occurs on both the earlier Kushite wheelmade and the Meroitic fine-ordinary pottery. While some styles and motifs are shared by both kinds of pottery, there are also important differences and the two groups are distinguished in the present publication.

The pottery of Meroitic Qustul and Ballana is one of the largest groups of such material in Lower Nubia, surpassed in quantity and variety only by the Faras and Karanog collections. It does not include a wide variety of the early experiments that led to the creation of the rich Meroitic painted pottery found in the cataract region, notably at Semna South. ${ }^{64}$ Nevertheless, the present material is rich and varied enough to supply new evidence in dealing with important problems in Meroitic pottery decoration including the development of designs, motifs, and the relation of these motifs to each other, to other objects in the Kushite tradition, and to materials elsewhere.

Partly because the organization of designs differs from group to group as well as within groups, and partly because of variations in color and quality of execution, and because motifs differ widely in kind, this pottery gives a misleading impression of chaotic diversity. In fact a number of stylistic groups of varying significance can be detected. ${ }^{65}$ The number of major decorative motifs includes a selection of those found in monumental art along with important elements that can be traced to other sources. These appear with the kind of regularity that can only be called iconography. ${ }^{66}$ Despite the summary execution of many pieces, it is difficult to believe that the choice of motifs and their juxtaposition are arbitrary. Major themes run through much of this art and dominate its core.

## DESIGN

Certain methods were used to organize space on the surface of pottery vessels in Meroitic Lower Nubia.
61. Adams 1986, p. 30; see also Tobert 1988, p. 65, for plaited leather thongs used now in Darfur, called habil el-arab.
62. See above, note 32.
63. Williams, Williams, and McMillan 1985, p. 46.
64. Zabkar and Zabkar 1982, pp. 42-47.
65. See Török 1987a, pp. 188-207; 1987b, pp. 75-88; and Wenig 1979a, pp. 129-34.
66. See, for example, Török 1987b, pp. 83, 84 for patterns used in the Academic group. For stamped decoration, see Zach 1988, pp. 121-40.

## Atectonic

In the early art of the Nile Valley, the shape and placement of figures appearing on an object were not always determined directly by the shape of the object. Figures often appear to float almost as if selected elements of an actual world were simply projected onto the surfaces. ${ }^{67}$

In this material, truly atectonic decoration does appear, exemplified most notably by meandering serpents painted inside a bowl ${ }^{68}$ or birds perched on twigs, also inside a bowl (fig. 4c).

## Tectonic

Most Meroitic painted pottery observed strict horizontal and less rigid vertical organization (fig. $6 \mathrm{c}-\mathrm{f}$, but see fig. 6 g ). The globular or gourd-like shapes of most jars do not have angular profiles that would clearly define zones for decoration. Since this does not precisely follow changes in the profile of the vessel, it is not strictly tectonic but it does occur on surfaces most likely to be seen and thus generally follows the shape. Regular areas of decoration were established and certain types of decoration generally appeared in each area.

## Overall

On some vessels most of the surface is a single field of decoration, across which the individual motifs are scattered evenly or alternated in a pattern. ${ }^{69}$ This is almost atectonic and had a number of earlier parallels; in C-Group, for example, the most important group of decorated pottery included vessels with a woven-pattern that extended across the entire bowl as though a fabric had been stretched over it. ${ }^{70}$ In Meroitic times, even zones were often filled with motifs which are alternated diagonally.

## Subordinate Design Structure

Tectonic and overall designs tended to be combinations of smaller structures which organized the space on the surface of the vessel. These structures normally contained or framed smaller elements, sometimes solid color, but most often were either geometric or figure designs.

## Quadrant

Some bowls had the decoration divided into four vertical zones, each a quarter of the circumference, extending from the rim to the bottom of the vessel. ${ }^{71}$

## Horizontal Zones

Although isolated bands typify Kushite decoration, both A- and C-Group vessels were often divided horizontally into two or three zones, each with a different scheme of decoration. ${ }^{72}$

## Bands

Most Meroitic painting was organized into horizontal bands. Cups have one or two bands of figure decoration (fig. 5a, b, e). Jars have broad bands on the shoulder and body that were frequently filled with decoration (fig. 6d). Often the bands were treated as independent entities, with no relation between their decorations (fig. 6e). In the woven or altemated patterns, the various bands are interlocked. ${ }^{73}$
67. This does not mean that the painted and carved representations were disorganized; nor does it mean that the shape had no influence.
68. Griffith 1924, pl. 51:7.
69. Griffith 1924, pl. 45:2, 8.
70. OINE V, pls. 4-7, for example.
71. Woolley and Randall-Maclver 1910, pl. 78:8457 and 8479.
72. OINE V, pl. 10b, d; OINE III, tab. 9, various; see fig. 16e; and OINE IV, fig. 43c. See also OINE III, fig. 12j; OINE V. pl. 14c.
73. Griffith 1924, pl. 45:13.

Panels
Although the banded decoration of pottery in Kushite Lower Nubia occurs in roughly vertical divisions, these are not generally framed or indicated by vertical lines (see fig. 6 h , however). Panels of this kind are a well-known characteristic feature of Egyptian, Near Eastem, and Classical art. ${ }^{74}$
Design and vessel shapes
In the present material, decoration is clearly related to the kind of vessel on which it occurs.

## Cups

On Meroitic cups, the most important decoration occurs almost entirely in a band or pair of bands that fill the entire side of the cup framed by single or double lines (fig. 5a, e). Later a red rim band was added (fig. 4i).

## Hemispherical Bowls or Large Cups

The convex bowls could be decorated inside and out (fig. 4). ${ }^{75}$ The exterior usually has a rather narrow band of decoration below the rim flanked by single or paired framing lines as on the cups. Red rim bands also occur. Inside, some bowls are decorated such that it parallels the rim as in an example from Ballana with birds perched on twigs (fig. 4c). Another bowl has ankhs arranged as on a kind of horizontal checkerboard (fig. 4a). The bowl with serpents from Faras has no special orientation. ${ }^{76}$
Jars
Except for the neck and body, no zones are established by changes in the contours of jars. A number of more or less arbitrary horizontal zones were created, corresponding approximately to the neck, the shoulder, which often was divided into upper and lower portions, the waist, the lower body, and the base (fig. 6 , various; base decoration was not found on jars in the present material).

Neck. The neck was filled with bands or painted solid red. No other motifs were used (fig. 7a, f). It is difficult to determine whether this band corresponds to the red rim bands that appear on many cups.

Upper Shoulder. The upper shoulder was often distinguished from the lower shoulder area (fig. 6 j ) framed by one or two lines above and below. Decoration in this area usually consisted of small motifs repeated to form a kind of necklace; in most cases these are beads, often alternating in size and/or color and either circular (fig. 6i), oval (fig. 6j), or teardrop-shaped (fig. 6f); strings are generally depicted. Sometimes other motifs appear in this area. ${ }^{77}$

Shoulder or Lower Shoulder. The shoulder band is the highest that is decorated with four or less alternating motifs, or one motif repeated four times (fig. 6f, g). Often, processional decoration occurs (fig. 6i) and radial or other repeated static motifs also appear. This zone is almost always framed.

Body or Waist. On many vessels, decoration stops at the shoulder (fig. $6 \mathrm{~g}, \mathrm{j}$ ). When the body or waist area is decorated it contains the most important elements (fig. 8a). On some large jars, this zone includes the lower shoulder. In contrast, Ptolemaic and Roman period Egyptian vessels often have empty bands (fig. 29e).

Lower Body and Base. These areas usually were not decorated, but the lower body was sometimes marked off by framing (fig. 6i). Only a few hemispherical vessels have a decorated bottom (fig. 4a), and there is one jar from Karanog with a lotus in profile. ${ }^{78}$

## STYLE

So far, we have considered Kushite Meroitic painting from the standpoint of design structure and its relation to the shapes of the vessels. ${ }^{79}$ However, in addition to the various structures of design in this painted

[^4]pottery, there are also several different modes of presentation that regularly combine preferences in motif and background, recognizable habits in the use of lines and fillings, and quality of execution of the styles. ${ }^{80}$

As opposed to the painted pottery of Ptolemaic and Roman period Egypt and the kinds of decoration put on incised-impressed pottery this painted pottery could simply be designated the Standard Meroitic style, which contains a number of important subgroups.
The "Academic" Group
The earliest subgroup to be detected is that from which most of the others were more or less directly derived. This was designated by Wenig the "Academic School" and by Török the "Stern Pharaonic Style." 81 It is characterized primarily by the careful drafting of motifs and their even distribution (fig. 4a). Space within the figures is often painted in solid color (fig. 295c), but also textured, by lines (fig. 299c) or crosshatched (fig. 244b), for example. The vessels painted in this style almost all have light surfaces and belong either to the Kushite wheelmade ${ }^{82}$ or Meroitic fine pottery. Most of the motifs appear also in later styles and they were treated in much the same fashion as their less precisely painted successors. ${ }^{83}$

The motifs appear as a frieze of decoration organized in the same way as the various bands of decoration on small objects earlier in Kush; they have narrow framing bands flanking a broader central band. ${ }^{84}$ The resulting effect not only resembles that on metal objects, it is also reminiscent of the bold glyptic of Sanam which seems to leave litule surface area undecorated, ${ }^{85}$ and has much hatched filling.
The Standard Meroitic Style
The principal difference between the "Academic "group and the Standard painted pottery is a general loosening of the structure and relaxation of standards of draftsmanship (fig. 6 g ). Subsidiary bands were made wider and motifs enlarged; sometimes cven crocodiles overlap (fig. 6i). With a few important exceptions the use of green, blue-gray, and yellow was dropped, leaving only white, red, and dark (dark red or black). The tightly organized quality of the Academic bands is made cursive. Despite the summary quality of most decoration, the standard painted style shows wide variation in drawing skill and some variation in methods of filling. However, the restricted number of motifs, the few shapes to which it was applied, and the uniformity of finish suggest that only a few artists were involved.

A number of subgroups developed within the standard style that can be identified. Some of them show special features of design, while some differ only in details from other members of the larger group, and others are simplified.

## The Striding Birds Group

Only the striding birds group and the graffito styles have the distinct mannerisms of representation and execution that identify them as individual styles within the larger group.

The most widespread of the groups contain hatched or crosshatched birds with solid necks shown striding around the vessel in a band (fig. 189). They are well drafted and well spaced within the band even when filling motifs are present. Sometimes they are alternated, a bird with a crosshatched body alternating with one that has a broad band across the middle, or they may have broad bands with only the colors alternating. At Qustul, they appear on a narrow necked jar, and there is one example on a wide-necked jar from Karanog, whose shape may indicate an earlier date. One red band standard jar from Karanog has a simplified version of this motif and there is one from Ballana Cemetery B. ${ }^{86}$
80. The issue was first raised in a meaningful way by Wenig (1979a, pp. 129-34), who first distinguished an "Academic School," a "Vine Leaf School," and specific "painters": the "Cartoonist Painter," the "Prisoner Painter," and the "Antelope Painter" (Vine Leaf).
81. Török 1987a, pp. 200-02; Wenig 1979a, pp. 131-33.
82. Zabkar and Zabkar 1982, illustrations, pp. 42 B, 44 left.
83. For an exception, note the crossed crescents on jar Q 269-2, fig. 12d.
84. For examples, see the cylinder sheaths from Nuri, Dunham 1955, pls. 94-111.
85. OINE VII, p. 16; see p. 153 below for a kohl tube carved with similar filling motifs or devices.
86. Woolley and Randall-MacIver 1910, pl. 64:8227 (G 187). An earring with this kind of bird was found at Meroe (Wenig 1979b, cat. 177). See also Woolley and Randall-MacIver 1910, pl. 74:8304 for the fine jar. The birds are

## Graffito Styles

Steffen Wenig pointed out two small groups of vessels with significant stylistic peculiarities in representing human figures: those of the "Cartoonist Painter" and those of the "Prisoner Painter." ${ }^{87}$ No work by the "Cartoonist Painter" is in this collection, but one example of the "Prisoner Painter" style appears here (fig. 298d); it is a procession of soldiers outlined in black with red and black bands, painted on the body of a red jar.

## Red Exterior/White Band Group

Although red generally was applied as a color to fill the fairly wide areas between bands in the standard style its use to cover the entire surface of a Meroitic fine/ordinary vessel, either cup or jar, was a special development. In cups, this appeared as an overall coat of red on the outside (fig. $5 \mathrm{~h}, \mathrm{i}, \mathrm{n}$ ), with a narrow band on the interior and occasionally a white band at the rim. In the present work these cups are shown only the band inside the rim; the exterior is left open.

Two subgroups of decoration occur on jars. Most decorated jars have white bands framed by two narrow black lines on the shoulder as far as the base of the neck (fig. 197c) which may also be white (figs. 223b, 270 e ). In some cases these white shoulder bands were broadened and decorated with figures occasionally of high quality (fig. 252, 297). ${ }^{88}$ In other cases the white bands were narrow and rather widely separated; figures outlined in black were painted in white with a few interior details picked out in a dull red that differs from the bright red background (pl. 37). These vessels were often decorated with an additional zone on the side, a feature that was not typical of Kushite painted vessels, though it occurs with some frequency on painted pottery imported from Egypt (fig. 219b). ${ }^{89}$ In some cases the figures were not framed, a feature
actually geese in this example. See Török 1987a, pp. 205, 206; for other examples, see Hofmann and Tomand 1986, pp. 128-35.
87. Wenig 1979a, p. 130. This small group is a significant representational link with the monumental art of Meroe.
88. Török (1987a, pp. 203-04) has connected paintings in this style to some in the Kushite Wheelmade group as a "Polychrome Figural Style," and dated all of its products rather early, to the first century A.D. The vessels he assigned to it include both Kushite wheelmade jars of IIB type and red-exterior vessels of IIIB-IVA.
The date of the later jars is argued from the presence of a mark on Karanog 8177 which Török (1972, pp. 35-44) would assign to specific rulers of the first century A.D. He collects a series of marks with the splayed forked linear base and circle above, from tombs dated to the first and second centuries. See also 1987a, p. 204, Woolley and Randall-Maclver 1910, pl. 42:8177. His comparison is not exact, however, as the supporting was-scepters are missing from the Meroe examples (Dunham 1957, figs. 90 and 97 ; 1963, fig. 119b, dated to 55-65 in the series has supporting elements, but they are not was-scepters). Kar. 8177 is probably dated after 200, and belongs probably to IVA. See Woolley and Randall-MacIver 1910, p. 163; the tomb has weapons.
Jar Q 499-2 has three of the so-called property marks, each in a loop of a scalloped band (See Fernandez 1986, fig. 2:100-8 and 179-2) one has the ankh in a circle on the altar stand flanked by was-scepters. Without the scepters, see Török no. 1 (Amanitaraqide no. 48:35-45). With the scepters, see Török, no. 9, from Meroe, ca. 5565 ?, a tumulus. The second mark has the ankh in a circle with uraei. Török does not list it. The third consists of two ankhs with curved, splayed bases that extend into was-scepters as a kind of ligature. Török does not have it either. With three different marks on one vessel, it is hard to see them as property marks. Tomb 25/245 at Serra, dating to phase IIB, contained a jar of this same description with two marks (Säve-Söderbergh, Englund, and Nordström, eds. 1982, pl. 82:2; see also pl. 35 and pp. 112-13). One consisted of a "Maltese cross" in a crescent above the altar, the other, two ankhs with curved bases that join (like the third, above) above an altar. Other marks are not mentioned, although the two described are arranged so that there would be room for a third.
Q 499-7 has a Meroitic inscription (Inscription No. 11) preceded by a mark exactly like his fig. 3 alpha, with a horizontal line and dot above. His parallel, from W 21 (22-1-629c) dates to 40-45?. The tomb also contained an askos of our IIA type (Dunham 1963, fig I:14 [23-1-277]).
Note that both Török's seal plugs, nos. 9 and 10 date to 55-65?, definitely later than the pottery marks. This is a decorative or more probably an amuletic motif that continues for some time. He clearly shows it to be an offering table or altar by comparison with earlier representations at Nuri (Aspelta). The first and second marks found on the Q 499-2 jar occur on a chapel at Begrawiya N 17; see Hofmann and Tomandl 1987, fig. 5 and Dunham 1965, pl. 33. The decoration may also occur on black incised pottery. See Dunham 1963, fig. 154:2, from W 13 of $35-40$ in the royal sequence (earlier than his other examples). This might make an interesting connection with the altar group of the vine style.
89. See, for example, Török 1987a, figs 27, 29, and 30.
derived ultimately from Kushite wheelmade pottery along with the red surface..$^{90}$ However, white or light paint was used for figures both in this pottery and the pottery imported from Egypt in which white had been used to pick out details and even to fill in the bodies of birds and giraffes. ${ }^{91}$ In one example, giraffes have spots treated almost like the white and black vine leaves common in the "Aswan" painted pottery. ${ }^{92}$

If aspects of technique were borrowed, the motifs and rendering were not. The red exterior jars developed a distinctive collection of motifs and a spare mode of presentation that make them better pieces and place them among the finest works of late Meroitic painted pottery.
Blob-Bead Group
Among the most common decorations on the Meroitic jars were strings of beads painted in the band at the base of the neck (fig. 6 j ). In this variation, all decoration was eliminated except for rows of simple oval beads rarely outlined but often alternating in color. These vessels tend to have narrow red necks.

## Rim-Band Group

A number of cups have red bands at the rim above groups of dark lines on the body (fig. 5 d ). ${ }^{93}$ The rimband occurred as a variant of the Standard style (fig. $4 \mathrm{j}, \mathrm{q}$ ) and eventually the more elaborate decoration on the side of the vessel was abandoned leaving only the bands (fig. 4i). Unlike the red exterior cups we cannot identify any counterparts among the jars (except possibly the following group).
Red-Band Group
A number of jars were neither red coated nor given narrow red bands, but rather had zones on the side bounded by lines filled with red paint (fig. 6k). As a stylistic group, this recalls Kushite wheelmade jars which were mostly red on the exterior. ${ }^{94}$

## MOTIFS AND THEIR ORGANIZATION

The painters of Meroitic pottery made use of a relatively limited number of motifs and combinations. A few of these, such as the vine, were continuous. Others, such as the meandering serpent, occupy more of the circumference than can be viewed at any one time (fig. 202d). This is also true of some of the large scale scenes put on exceptional vessels (fig. 298d). ${ }^{95}$ However, in most cases a major design element usually flanked by two others was so arranged that one complete group can be seen on each of the (usual) four sides of the vessel.

The decoration includes: scene-combinations, figures and parts of figures, amulet-like objects (including plants), and ornamental or background motifs. Here the decorative motifs are organized under the headings: Amulet-like Figures, Ornamental or Background Motifs, Other Themes and Combinations, and Dynastic Deities and Their Symbols. The following discussion is based on the materials from Qustul and Ballana with limited reference to materials from elsewhere in Lower Nubia.

## Amulet-like Figures

The most elaborate and popular representations are of deities and animals and most have some identifiable amuletic significance; others may have had such significance also but the motifs are less definitely associated with specific features of iconography.
Bes
The number of complete figures of deities with human features is quite limited. The most important are figures of the god Bes. A famous jar from Karanog shows three gray figures of the god Bes dancing with a
90. These are usually undulating bands or serpents; see Török 1987b, figs. 25 and 27.
91. Woolley and Randall-Maclver 1910, pls. 42:8171 and 8293; 45:8156 and 8157.
92. Compare Woolley and Randall-Maciver 1910, pl. $41: 8183$ with pl. $45: 8156$.
93. This rim-band group revives the red rim used on vessels of the Twenty-fifth Dynasty and Napatan times (OINE VII, pl. 6b-d).
94. The red-band group occurs rarely throughout the Meroitic Period in Lower Nubia. For an early example, see Griffith 1924, pl. 47:5.
95. Woolley and Randall-Maciver 1910, pls. 45:8216, and 41:8183, for example.
wreath (?) and dipper and one playing double pipes. ${ }^{96} \mathrm{He}$ has pointed ears and a broad mane that covers the head and protrudes straight from the chin, but is open at the angle of the jaw. He has broad, thick lips and large white eyes. The figures are alternated with amphorae on stands. One poorly painted red-exterior vessel has alternating frontal Bes figures painted in white. One form of the god has a scaly torso, round head, protruding ears, triangular nose, and bright red mouth. Another also has a round head, but no ears, and wears the tall feathered headdress characteristic of the god. The face appears to be marked with vertical scars; the torso has large round breasts, navel, and possibly a wrinkled garment. ${ }^{97}$ A third vessel has two (?) figures of the god in a frontal dancing pose with the feathered headdress and arms upraised flanked by vegetation and rosettes. The decoration was in a white band on a red-exterior jar. ${ }^{98}$ These full-figure representations combine details that appear in partial representations that may help to identify them. On a sherd from Ballana (figs. 6a, 273a), Bes appears with huge lips and an almost pointed head surrounded by a freelyflowing vine-tendril. ${ }^{99}$

## Face: Lion-, Bes-, and Hathor-Shaped Head

Of the representations of deities, the various faces shown full front are the most enigmatic. ${ }^{100}$ Some of these, with long, pendant curls, resemble Hathor (fig. 6 g ). Others, with pointed beards, caps and "horns," have been referred to as demons (fig. 209a), while others, with broad, catike noses and manes resemble lions (fig. 244, with no mane, also fig. 242). Some elements are interchangeable or they can appear on several different representations such as tall pointed ears (fig. 212), broad, flat, feline noses, and beards with pendant curls or moustaches (fig. 209). Frequently conical and close-fitting caps appear on alternate heads on the same vessel. The faces also contain elements of amuletic objects; sometimes the faces have crescents on the forehead (fig. 244). The alternating and interconnecting iconography of these heads is an important clue to their unified and coherent religious significance ${ }^{101}$ and their arrangement, facing outward from the vessel,

## 96. Woolley and Randall-MacIver 1910, pl. 45:8216.

97. Woolley and Randall-MacIver 1910, pl. 62:8220. For a recent discussion of these scars, see Kendall 1989, pp. 67280 and figs. 5-8.
98. Woolley and Randall-MacIver 1910, pl. 62:8219.
99. The closest parallels belong to Török's silhouette style, but even they are different (see 1987a, fig. 1); it should belong to the present group, but there is a modeled rim on the jar.
100. The situation with these representations is complex; for a discussion by Wenig 1979b, cats. 106-108. See also Török 1987a, figs. 33 (p. 200) and 39 (the former would be dated later in the present scheme, to IIIA) Adams 1986, fig. 135:z.
101. Certain seals show the same bald or close-cropped head facing front, as appears on many vessels (Woolley and Randall-Maciver 1910, pl. 33:8110; Griffith 1924, pl. 60:41). The leonine character of the face is emphasized; the face has a mane rimming it and a long beard with curls. The ears are those of a lion. This polymorph is shown as the head of a vulture-winged scarab with the hind legs of a frog on an armlet represented at Naga (Hintze 1971, pl. 22 above). Although the face is not crowned and the beard is always complete, the features of these glyptic representations are closely paralleled on the painted jars. To these, we can add the series of full face, leonine heads with the same mane, ears, and forehead elements as the other faces, and even with the crescent on the brow. It appears that these all represent the same figure, perhaps meant to be Bes in some of the many related forms popular in late Egypt. Bes had, moreover, a continuing involvement with pottery as demonstrated by the long and remarkable series of vessels from Egypt with Bes' face and arms (Michalides 1962, pp. 65-85, 1964, pp. 53-93).
Three aspects of Bes may be related to his appearance on these vessels. He is one of the most important amuletic figures and was especially popular as an amulet (Dunham 1950, pls. 50, 51, and 52:F, for example). He was closely associated with the worship of Isis/Hathor as the deity who greeted Hathor on her return to the gods after her murderous foray among mankind. This incident closely associated him with drinking and music, well-known representational aspects of Bes in late Egypt and Kush and precisely applied to the Karanog jar. Moreover, his chapel at Philae is identified with that function and he is also associated with Isis' return from Nubia. Finally, in this period, Bes is himself a creator god (Michalides 1964, fig. 12. For a wide ranging identification of Bes with Amun, see Dunham 1950, pl. 54:1034 and 1117).
Both here and in Egypt at this time, Bes has a kind of iconographical ambiguity. He is shown as the dwarf with a coarse face (Michalides 1964, figs. 1, 7), and as a young dwarf (very much like Patek, with the bald head or skullcap [Michalides fig. 14], here the youthful figure stands behind a Bes-headed lion) with a conical cap, which appears as a single leaf on the vessel, illustrated by Bourriau [1981, no. 54]), a close-fiting cap (Dunham 1950, pl. L:2, 3), or a lion mane (Michalides 1962, fig. 1; 1964, fig. 18.), in addition to the feathered cap. He appears at
has important parallels and precedents. ${ }^{102}$ Since it links several different kinds of motif, the face, the lionhead, Bes, Hathor, the uraeus, the frog, the crescent, and the lotus, the Bes head forms a major connection among various representations on this pottery.

## Uraeus

One of the most common amuletic representations is the frieze of uraei (fig. 298a, b). In this pottery decoration these are rarely crowned but they often have an ankh or other amuletic device hanging from the tongue (fig. 222 h ). Sometimes they are winged, and a few have sun discs. In some cases two curls dangle from the region of the mouth. These are probably curls from a beard and associate the uraei with the more fully leonine heads discussed above, an association made close by the lion-headed uraei on certain vessels and the leather pall from Semna South. Generally the uraei are simply repeated in a continuing framed frieze around the pot, although the "Academic" group contains an example in which three full face uraei emerge from, or surmount, a lotus with a lion face above them; this combination alternates in checkerboard fashion with the feather fan of Bes on a pole. ${ }^{103}$

## Serpent

Sometimes large serpents extend around the circumference of a vessel (fig. 117c). In a few cases, they meander freely ${ }^{104}$ but they were more usually disciplined to a regular undulation within a well-controlled band, generally enfolding ankhs or rosettes in their coils as symbols of their auspicious nature. ${ }^{105}$ The sinuous band of the vine is sometimes broadened, making it resemble the body of a serpent, and one
times as a female, even suckling the child Horus (Michalides 1964, fig. 8). The Bes face is also added to a frog on a cylindrical jar from Ballana (fig. 201a), and, to a lion, on a cup from Faras (Griffith 1924, pl. 50:10). The lion head is also seen in profile as the uraeus head on a pottery stamp (Q636-Mer. D), and on the leather pall or garment from Semna South (Zabkar 1975, pls. 24, 25), and in full face as the uracus head on an Academic jar from Karanog (Woolley and Randall-MacIver 1910, pl. 43:8310).
The erescent on the forehead has been related to forms of facial scarification found in ancient and modern Sudan (Kendall 1989, pp. 672-80, and especially figs. 6-8). An association of this kind would not be an obstacle to an identification with Bes, for at least one definite Bes figure on painted pottery shows vertical marks of the kind attributed to scarification (Woolley and Randall-Maclver 1910, pl. 62:8220).
For a discussion of the figure's origin, including the teardrop shapes on the forehead of the lion, see Romano 1980, pp. 39-56.
102. On a two dimensional surface, this was done by four leonine heads pointing outward on a ring bezel. The most famous Kushite example of heads pointing in several directions is the three-headed Apedemak on the back wall of the Lion Temple at Naga (Zabkar 1975, pl. 7). This feature may be traced back in time to glyplic at Sanam that shows the ram head of Amun (Griffith 1923, pl. 46:1-8), and the ram and Hathor heads, facing two directions (Griffith 1923, pl. 48:17), or the pierced bead with four wedjat-eyes facing in different directions (Griffith 1923, pl. 59:1). Among the most striking of these examples are the four-sided capitals common in mammisi and temples of goddesses of the period, showing the faces of Isis, Hathor, or Bes, emerging from the lotus. Most important examples are the Bes columns in the hypostyle and transverse hall of Taharqo's temple B at Napata and the four-faced Bes column in the mammisi at Wad ben Naqa; here Hathor emerges from the headdress of Bes, with a sistrum on her head (For an example, see LD, Abt. 1, pl. 108:1). The earliest in this series is the representation of column capitals of a pavilion sheltering Amenhotep III, with four lion heads facing outward (Zabkar 1975, p. 48, notes 76 and 77).
The use of this principle of deities facing in four directions was quite early in Kush, for the elaborate mirror handles of the Twenty-fifth Dynasty and early Napatan period show groups of deities in this manner, with additional bands of filling and amuletic motifs above and below (Dunham 1953, pls. 91-93). Actually, variations of the multi-headed deity occur even earlier in Kush. At Kerma, animals and birds were shown with multiple heads on inlays or appliques, sometimes with deities that had a protective function. Among the most striking of these are the ones with four lion heads attached to a single neck (Reisner 1923, IV-V, pl. 56:4; Hintze 1971, pl. 22 above).
103. The uraei were probably intended to be shown surrounding the emergence of the lion from the lotus, encompassed or supported by Bes' feather fans. See Griffith 1924, pl. 44:12 and Hofmann and Tomandl 1987, pp. 95-107 for a discussion of the lion.
104. Zabkar and Zabkar 1982, illustration p. 43 left; Hofmann and Tomandl 1987, pp. 115-20. This serpent appears earlier in Nubia on the pottery of late A-Group and early C-Group. See OINE III, fig, 74e; OINE V, pl. 26b; and Griffith 1924, pl. 51:7.
105. Griffith 1924, pl. 46:2; Török 1987b, fig. 56.
unpublished Kushite wheelmade vessel from Semna South depicts a serpent with a vine in its body. ${ }^{106}$ In later compositions such as the red exterior group, they are shown with interior details such as spotted bodies and scaly necks (figs. 179c, 202d). ${ }^{107}$ Unlike uraei, serpents of this description do not occur in the amuletic decorative friezes of small objects. They do occur as amulets ${ }^{108}$ and in reliefs. ${ }^{109}$

## Crocodile

In this painted pottery, the crocodile occurs in the major band for representation, either in tightly packed rows, alternating in color, lacking one pair of legs (fig. 6 i ), or more widely spaced; in one case, a single crocodile is shown with a bird on its tail. ${ }^{110}$ Although the bird might be taken as evidence that this is a natural representation, ${ }^{111}$ the occurrence is unusual. Like the serpent, the crocodile appears repeatedly as an amulet, but not in favorable situations. ${ }^{112}$

## Scorpion

Although unusual, the scorpion does occur, arranged horizontally in a band. ${ }^{113}$ Like the crocodile it is not an auspicious animal but it does appear as an amulet or on an amulet. ${ }^{114}$

## Frog

The frog is one of the more popular representations in painted pottery where it is shown in the normal profile view, except for the lion-headed example from Faras. ${ }^{115}$ It is often spaced with floral motifs, especially the lotus. A direct association with Bes is implied by the Bes-headed frog here (fig. 201a), somewhat tightening the coherence of this motif in Meroitic painted pottery. ${ }^{116}$
106. See Török 1987b, p. 80; 1987a, pp. 194, 195, figs. 7, 9, 17, and 18, Fernandez 1986, fig. 3:100-5 and 179-2. and Q 499-2, discussed above for wavy bands.
107. Woolley and Randall-MacIver 1910, pl. 41:8183, 8192.
108. Dunham 1955, fig. 34:18-2-65.
109. Apart from the A- and C-Group precedents mentioned above, a number of possible comparisons exist in Egyptian and Kushite ant (Chapman and Dunham 1952, pl. 18E). One of the most interesting is the lion-headed uraeus of Naga, which is a triple composite with a lion's head, the hood of a uracus cobra, and the body of a long serpent that may not belong to a cobra (Zabkar 1975, pl. 8). The long, vertical serpent of this type also appears, without the head preserved in vertical panels flanking the doorway of the Apedemak temple at Musawwarat es Sufra (Zabkar 1975 , pl. 15). The same feature occurs on some earlier carved wood (Dunham 1957, p. 92, figs. 62, 68 ; for a discussion of early vertical serpents in Nubia and Egypt, see Williams 1988, pp. 13-18, 21-22).
A striking occurrence of this type is (though horizontal) the serpent on the balustrade at Deir el Bahri. But perhaps its most remarkable precursors are the serpents with rosettes among their coils shown on Naqada period knife handles. This is surely the most uncanny of all the "prehistoric" revivals in Meroitic art (Williams 1988, fig. 25 and note 102).
110. Török 1987b, pp. 87, 88; Hofmann and Tomandl 1987, pp. 112-15; see Zabkar 1975, pp. 106-17 for a discussion of a hawk-headed crocodile god.
111. Griffith 1924, pl. 50:14; Török, 1987b, figs. 64-68 and pp. 87, 88.
112. Despite its association with Sobek the crocodile, like the hippopotamus (excluding Taoueris), is not usually an auspicious amuletic symbol in Egyptian minor art. It occurs in the Late Period as one of the animals, including the scorpion, whose threat is averted by the cippus (Horus on the crocodiles; see Seele 1947). It also occurs occasionally as an amulet (Griffith 1924, pl. 61:40).

In the Napatan period, the crocodile was put on the backs of plaques, alternating with the hippopotamus as a beast of ill omen striding about the circumference (Griffith 1923, pl. 50:1,2). Crocodiles appear in pairs, supporting such deities as Thoth (Griffith 1923, pl. 51:1) or singly, with Amun (Griffith 1923, pl. 53:10), and in pairs on the faces of scarabs, as do such other inauspicious animals as scorpions and gazelles (Griffith 1923, pl. 46:9, 18).
113. Hofmann and Tomandl 1987, pp. 120; Woolley and Randall-MacIver 1910, pl. 81:8488.
114. Griffith 1923, pl. 54:16.
115. Hofmann and Tomandl 1987, pp. 121-23; Griffith 1924, pl. 50:10.
116. As Heqat the frog is a very common figure, associated with fertility and childbirth, and one of the popular elements in Kushite amuletic iconography from the beginning sometimes reaching monumental proportions (Hinkel 1977, plate preceding p. 80).

## Wedjat

The wedjat and its amuletic function were so widespread and are so well known in pharaonic culture that its appearance here is predictable (fig. 195b). ${ }^{117}$ In the present material, it alternates with neb signs on the side of a cup and with Hathor heads on the shoulder of a jar (figs. 4 u and 6 g ).

## Eye

Simple eyes also appear on painted cups as well as amulets in other contexts (fig. 105b). A parallel can be found in the eyes that cover the garment of a deity on an ivory inlay from Kush and a garment of Bes in Egypt. ${ }^{118}$

## Winged Goddess

An example of a goddess with tapered spike-like body, capped or bald head, and wings bent downward, appears opposite the human-headed frog on a cylindrical jar (fig. 201a). Amulets of this design occur in earlier contexts. 119

## Griffons

Griffons are not a usual motif in this pottery, but they do occur twice at Faras. ${ }^{120}$ Composite animals of this type also occur on cippi ${ }^{121}$ and in magical representations of earlier times. ${ }^{122}$
Amulet-like Representations
A number of special objects are represented on these vessels which have religious significance.

## Ankh

In the Napatan period, the ankh was given a special shape in Kush. Its arms and base were splayed, and it was generally an outline or a silhouette. Sometimes the central knot was shown as a ball and the loop was reduced to an arm or filled. The ankh appeared in virtually every kind of decoration, including painted pottery (fig. 4a). It was alternated with other symbols in a band, it appears as an attribute, alone (fig. 280e), in simple bands, arranged in a checkerboard pattern, and on its side. It is often shown hanging from the mouths or tongues of serpents (fig. 8c). Sometimes the base is shown as a wavy line as though the ankh were part of a vine. ${ }^{123}$ It occurs as a stamp (fig. 6c). ${ }^{124}$

Sa
Like the ankh, the sa was sometimes alternated with other motifs in a band. ${ }^{125}$ Though frequently altered it is generally carefully drawn, and its shape is easily recognizable. Sometimes in "Academic" designs, it was even put edge to edge as a continuous frieze around the vessel (fig. 264c). It is always an independent motif, rather than an attribute. Sometimes the sa is shown with spread wings(fig. 295d), a feature shared in this material with the vulture, uracus, and sun disc. ${ }^{126}$ It generally retains its interior detail; it is not shown in checkerboard, nor is it miniaturized. The sa is a dominant rather than a subordinate motif.

## Crescent

The crescent is a very common motif in the painted Meroitic pottery, where it is treated much like the ankh. It was both painted (fig. 274c) and stamped, and appears in the checkerboard arrangement. In the
117. It does, however, have a close relationship with both Hathor and Bes. See also Michalides 1964, fig. 26, p. 72.
118. Michalides 1964, p. 62, fig. 2b. The pose of the god is unusual, but see also Dunham 1963, p. 24, fig. 16:2; p. 169. fig. 121.
119. Dunham 1950, pls. 54, 55.
120. Griffith 1924, pl. 52:3. See Woolley and Randall-MacIver 1910, pl. 77:8334 for another mixed being.
121. See Daressy 1903, pl. 11:9430 reverse for a winged Seth-animal, for example.
122. Hayes 1953, fig. 159 and Daressy 1903, pl. 12:9437, for example.
123. Woolley and Randall-Maclver 1910, pls. $52: 8496$ and 59:8201.
124. See p. 60 , tab. 9 below.
125. Woolley and Randall-MacIver 1910, pl. 42:8293.
126. Woolley and Randall-Maclver 1910, pl. 53:8158.
painted pottery the crescent occurs as a supporting attribute, sometimes holding the ankh (fig. 274c), the lotus bud (fig. 257a), or the rosette (fig. 295c), as well as alternating with them. On glyptic, crescents appear as supports for the heads of deities as well as objects, as they do in the Near East. ${ }^{127}$ They also appear often on the brow of the lion or "Bes" face (fig. 244a). The crescent is thus a link between all of these representations and the "Bes" figure. ${ }^{128}$

Rosette
In Meroitic painted and stamped pottery the rosette appears to be treated much like the ankh, although it does not appear as an attribute. It alternates as a major motif; ${ }^{129}$ it is used in checkerboard fashion; it appears in the folds of serpents ${ }^{130}$ and it rises out of or is supported by a crescent. ${ }^{131}$

## Neb Sign

An "Academic" cup has wedjat eyes alternated with neb signs (fig. 4u), which are otherwise subordinate motifs. ${ }^{132}$

## Fan or Standard

A red-coated jar from Karanog depicts four poles or standards with feathers and orbs above and a single large orb centered above; they alternate with lotus buds on long stems. These are, perhaps an equivalent of the Bes headdress or a fan held by Apedemak at Naga. On a jar from Faras the loops of ankhs are transformed into fan-structures with flame-like structures above. 133

## Royal Marks

A Kushite wheelmade jar (Q 499-2) is decorated with a band in swags that enclose three objects which Török has identified as royal property marks. The schematic offering table that supports the symbol consists of two curved, splayed lines for the base and a double line for the top. One emblem consists of an ankh with a large circular loop in a disc flanked by two inward-turned was-scepters. The second has a smaller ankh in a disc protected by two uraei. The third consists of three swag-loops whose upper ends are topped by two ankhs flanked by two inward-turned was scepters. ${ }^{134}$
127. For example crescents support heads in Palmyrene sculpture.
128. The crescent does not occur frequently in the Napatan Period, nor in the Egyptian Late Period, except when it is coupled with the sun disc, as in the crown of Thoth or other deities. See, for example, Griffith 1923, pls. 26:33, 39:7, $51: 5,8$. See note 101 above.
129. Woolley and Randall-Maclver 1910, pls. 44:8249, $46: 8176$ and 8254 . For a discussion, see Török 1987b, p. 84, who assigns them an origin in Ptolemaic faience. However, the motif is ancient in both Egypt and Nubia. See Reisner 1923 I-III, pl. 17:3; IV-V, pl. 55:2, 57:1
130. Griffith 1924, pl. 44:2.
131. At this period in Egypt it would be difficult to assign the rosette in its multi-petaled form a specific meaning but precedents for it, some quite remarkable, go back to the Naqada period. See Reisner 1923, I-III, pl. 17:3; Williams 1988, pp. 32-36.
132. They are also extremely rare in painted pottery. None appear on the vessels from Karanog. See Woolley and Randall-MacIver 1910, pl. 33:8065, 8113-8117 and 8121-8124 for their appearance on rings.
133. Woolley and Randall-Maclver 1910, pl. 42:8171; Griffith 1924, pl. $45: 12$ (alternated with complex figures incorporating lion-faces, triple protome-uraei, and lotus blossoms). For Naga, see Zabkar 1975, pls. 5-7. For a variant of the fan as headdress of Bes, see $L D$, Abt. I, pl. 127 above left and right.
134. See note 88 above. These marks or signs have been discussed in detail by Török who has concluded that they date to a relatively restricted period in the first or second centuries A.D. Since the present marks do not correspond exactly to marks from Meroe, it is reasonable to conclude that they were not necessarily restricted to a single ruler or other person, but may have a more general significance and a wider range of dates. For a similar pottery vessel with marks of this type see Säve-Söderbergh, Englund, and Nordström 1981, pls. 10:25/245:2 and 82:2.

## Garland of Isis or Notched Frond

Although rare in this painted pottery, vertical series of triangular garlands on a staff do occur, and this rarity emphasizes the focus of the iconography (fig. 299u), a form used for a special kohl tube in the present material. ${ }^{135}$

## Lotus

The lotus occurs in several forms on painted pottery. Often it is a major representation shown as an open flower with two buds on either side joined to the flower by festoon-like stalks (fig. 201a). This group is shown either alone or alternating with another major motif. Sometimes the flower is placed on a tall columnar stalk with the buds either splaying out from the base in an inverted $V$ (fig. 8a) or on festoon stalks that branch from the main stalk at the top. Quite often the buds and flowers are all on columns (fig. 282b) and alternate in a band around the vessel. In some cases the stalk is bent, creating a horizontal flower (fig. 191b). ${ }^{136}$ The stalk is also omitted at times with a horizontal flower with buds remaining (fig. 196a). In other cases, flowers are bound base to base (fig. 248a). ${ }^{137}$

## Possible Amulet-like Representations

Some objects were represented in positions similar to those with definite amuletic significance, but their relation to the traditional body of amulets is uncertain.

## Cowries

Bi-parabolic shapes with lines down the center and sometimes "teeth" drawn from one side of the line seem to represent cowrie shells (fig. 260b). In this painted pottery they appear in vertical or horizontal panels, packed tightly together, or they are put in a checkerboard arrangement. ${ }^{138}$

## Trefoil Flower

A ball with three petals or leaves projecting from one side is one of the more common motifs in the painted pottery (fig. 299k). Generally all of the leaves are teardrop shaped although the outer ones may curve outward near the tip (fig. 237a). This flower is shown in bands, often in alternate colors, horizontally, vertically, or even alternated horizontally and vertically. ${ }^{139}$ It also appears as a border motif on inlaid kohl tubes. It does not, however, appear in apposition to the object-amuletic motifs such as the ankh, sa, and rosette; its use rather parallels that of the major devices used to fill bands, the vine, and beads. ${ }^{140}$
135. Thought by Griffith to be a notched palm frond (1912, p. 35), it is one of the most ancient motifs in Kush, definitely appearing at Kerma, with a possible antecedent in A-Group (Reisner 1923, pl. 56:4. For possible examples from AGroup, see Williams 1986 , pl. 60 g ). It also occurs often on stone funcrary objects of this period in Lower Nubia, such as offering tables and door jambs (See OINE IX [forthcoming]; Emery and Kirwan 1935, pl. 29e; Woolley and Randall-Maclver 1910, pl. 20:7108). It may appear as a pillar (Griffith 1924, pl. 67:6-8; see pp. 95, 96 below for stone objects). This pillar may have survived as a funerary object to the present day, among tribes of the upper Nile (Seligman and Seligman 1932, figs. 24 [Lokoya], 32 [Bongo], pl. 49 [same], fig. 34 [Abukaya], pl. 55 [Moro Kodo]). See pp. 95, 96 below, for stone lotus pillars.
136. A feature also found on floral attributes in Napatan glyptic; see OINE VII, fig. 10a, and Griffith 1923, pl. 53:11-12.
137. This is a motif also found earlier in glyptic. The association of the lotus with creation makes it the most profoundly significant floral motif in Egyptian art. It is also one of the most common in the minor arts of Kush and Meroitic painted pottery. Its amuletic value is clearly shown by its appearance in Napatan glyptic. Sometimes the back of an amulet is shown enclosed in two flowers about to open and release the name of the ruler carved opposite on the face, conceptually very much like the famous bust of Tutankhamun as the god on the lotus (The best known of these representations is the head of Tutankhamun emerging from the lotus). This may be compared with the lotus on the head of Bes at Wad ben Naqa with Hathor above (Michalides 1964, figs. 2, 3; LD, Abt. I,pl. 139). This is not the first appearance of the lotus in Kushite painted pottery; a painted jar from Kerma has a band of lotus flowers altemating with solid triangles; See Reisner 1923 IV-V, fig. 340:11.
138. They are common jewelry elements in Egypt and Nubia, and they occur as jewelry in representations; see OINE VI [forthcoming]. See Seele 1974, fig. 8; the cowrie-shell girdle was not discemed until the object was cleaned. For a miniature sketch, see Oriental Institute Annual Report 1985-1986, p. 39.
139. Woolley and Randall-Maclver 1910, pl. 81:8455.
140. Török ( 1987 b p. 84 and figs. $45,47,49,50$, and 53 ) traces the origin of this motif to Hellenistic prototypes, especially Hadra vases. It was found in Egyptian decoration quite early (Wildung and Grimm 1978, cat. 124).

## POTTER Y

## Pomegranate

The pomegranate appears in one case in the same position as the trefoil flower attached to an undulating stalk-like vine leaves (fig. 299c).

## Vertical Trees

A sort of vertical tree with simple spike-like branches sometimes alternates with known amuletic motifs. In better representation the foliage is shown almost as a scale pattern (fig. 252). In this case, the alternating element is a frog.

## Omamental or Background Motifs

Certain motifs or design elements are not related as directly to amuletic functions as are the majority of the more complex representations. Most of the motifs and design elements discussed below were used alone to fill horizontal bands, but occasionally, these bands are vertical and alternate with major amuletic motifs.

## Vine

One of the most popular motifs in Meroitic painted pottery was the vine, ${ }^{141}$ represented primarily in bands. Often the leaves alternate in color or are red instead of black. ${ }^{142}$ The vines and leaves themselves occur in several different forms, of which the most complete is the standard undulating vine with broad threelobed, serrated or spade-shaped leaves that curve backward into the open spaces behind (figs. 180d, 207h $)$ while trilobate shapes push forward into the space ahead. ${ }^{143}$ Often the vine is simplified with only one leaf per undulation (fig. 4 m ). ${ }^{144}$ In a further simplification alternating stems spring upward and downward from each other or branch outward in a $V$ (fig. 184b). ${ }^{145}$ Sometimes the vine is shown in a zigzag pattern. ${ }^{146}$ Occasionally, vines are completely broken and individual leaves (or substitutes for leaves) are situated in a horizontal row (fig. 214a), or associated with a wavy line (fig. 300c).

Sometimes other objects were substituted for leaves, including the lotus bud (fig. 300e), grapes, the ankh, the pomegranate, and the trefoil flower. ${ }^{147}$
141. For discussions of recent writing on Hellenistic pottery in Egypt and its influence in Nubia, see Török 1987b, pp. 78-82 and 1987a, pp. 190-95. The vine became widespread in Egypt at the time of the so-called Hadra vases and appears here in one form or another on almost any kind of decorated surface. It occurred rather early at Napata and Meroe on metal vessels. The basic structure for the design of vine decorated vessels was clearly present on Hadra cinerary ums. This includes running vines (Ronne and Fraser 1953; Breccia 1912, pl. 35:42; 37:46 [trailed slip]; $40: 52,62 ; 41$, for example). The simplified vine garland also appears on these vessels (notably Breccia 1912, pl. $35: 42 ; 40: 52,62 ; 41: 54-56$ ), often with the running vine. One "hydriform" vase illustrated by Breccia (pl. 25:42) combines vine, garland, and curled wave (reserve garland) found simplified on the carliest vessels with the motif (Vila 1967, fig. 310; Griffith 1924, pl. 25:LIe) Other funerary motifs such as armor and stelae are painted on these vessels. By coincidence, the cemetery was marked with funerary altars, sometimes horned (Breccia 1912, pl. $17: 17$ ) and stepped, as they occur in the Meroitic representations. In addition, trailed-slip decorated pottery (pls. $53: 103 ; 54: 105,107 ; 56: 118,124$ ) has the vine garland, applied dots and vine characteristic of the "Barbotine" pottery from Nubia. Although the surface is polished black or "metallic," the relation to the vessels from Nubia is as unmistakable as the Hadra urns with which they were found. The literal origin of the vine decoration is shown by the relief decoration on pl. 37:47. Török ( $1987 \mathrm{~b}, \mathrm{pp} .80,81$ ) connects the floral decoration with funerary usages, but a clear distinction between funerary and other cultic, religious, or even amuletic domestic significance would be difficult to support. The major types of decoration were also found in the Ballana settlement, for example.
142. Woolley and Randall-MacIver 1910, pls. 50:8465; 51:8477.
143. Woolley and Randall-Maclver 1910, pls. 49, 8300; 50:8465; 55:8169; 79:8279 (both pulled back); 82, 8617.
144. Woolley and Randall-MacIver 1910, pls. 47:8240; 50:8444; 65:8234; 67:8246.
145. This development parallels the vine garland in Egypt. See Woolley and Randall-MacIver 1910, pl. 51:8477; $52: 8491$; Breccia 1912, figs. 28, 30, and 32.
146. Woolley and Randall-Maclver 1910, pl. 51:8975.
147. The occurrences of the lotus bud and ankh as leaves are not sufficient to establish a relationship with the amuletic group, as does the specific association of Bes with grapes and vines in both Meroitic and Egyptian representations. See Woolley and Randall-MacIver 1910, pls. $42: 8177 ; 50: 84528467 ; 51: 8469,8483 ; 91: 8711$, for objects that replace leaves, either in vines or arranged as though they were part of vine decoration

Beads
Round or oval shapes were painted in single or multiple bands on the shoulders of jars usually at the base of the neck (fig. 6d, i), though they are sometimes found below. They are identified as beads by their connecting strings (fig. 6h) and their close resemblance to beads depicted on Meroitic statues ${ }^{148}$ and on other representations at Napata and Meroe. 149

Ball-Shaped Beads. Most beads are globular as they appear on statues, often with small ball-shaped spacers and/or one or more strings in the spaces between (fig. 6i); usually they altemate in color. Often, they are simply spots (fig. 6 j ), and in this form they constitute a major group of simplified Meroitic painting. Truncated ball-shaped beads are also represented.

Drop-Shaped Beads. Teardrop-shaped beads (fig. 252) and ovals normally appear with one to three strings per row. They are sometimes divided vertically into two or three parts (fig. 262c) or have a dark center surrounded by lighter areas. Unlike ball beads these occur alternated with triangles.

Rhomboid Beads. Diamond-shaped or rhomboid beads were treated in much the same way as the ballshaped beads; they are normally shown strung without spacers (fig. 180c).
Scales
Scales were used primarily as a filler for wide bands (fig. 289c). Occasionally they appear in a triangular arrangement that may have been intended to represent bunches of grapes or trees. Since the basic element used to make the pattern is a crescent, it may be that crescents and scales were sometimes confused, especially when a spot was put in the curve of a crescent as a simplification of some motif the crescent supported (fig. 262c).

## Adjacent Opposed Hatched Triangles

They occur here in bands, both horizontal and vertical, separating major motifs. ${ }^{150}$

## Opposed Hatched Squares or Rectangles

In this painted pottery, opposed hatched squares or rectangles are usually used to fill a band. ${ }^{151}$

## Solid Triangles

Two solid triangles placed end to end sometimes occur as a major design element (fig. 299r). Where they occur with a ball or blob between them, a sa amulet may have been intended. 152

Simple solid triangles may have been variations of the concave sided black triangular masses painted on jars from Egypt (fig. 34d) for the intervening spaces were often filled as on those jars. ${ }^{153}$ In Meroitic decoration the fillings are simple, a small x or an ankh. ${ }^{154}$

## Crosshatched Bands

Bands of crosshatching were used in much the same way as the hatched triangles, alone in horizontal bands, or as vertical frames. ${ }^{155}$
148. Woolley and Randall-Maclver 1910, pl. 5:7000, 7005.
149. Dunham 1955, pls. 98, 99.
150. Opposed hatched triangles were a part of pottery decoration in Nubia from very early times occurring as a standard motif in A-Group and Kerma times. See OINE III, fig. 710 , for example.
151. Like the triangles, opposed hatched rectangles appear in A-Group painted pottery. See OINE III, p. 39 and fig. 10b, no. 32.
152. Precedents exist in materials as early as A-Group. See Woolley and Randall-Maclver 1910, pl. 47:8290; OINE III, fig. 15 f .
153. For variations, see Woolley and Randall-MacIver 1910, pls. $52: 8490 ; 56: 8182 ; 58: 8198$; it is also related to petal decoration, pl. 59:8201.
154. On the painted jar from Kerma with the polychrome lotus mentioned above, the flowers alternate with solid triangles. See Reisner 1923, IV-V, p. 473, fig. 340 (K 319-35); Davies 1926, pls. 24, 26.
155. See OINE III, fig. 13j for an early example.

## Crosshatched Squares

Crosshatched square panels appear in an alternated arrangement with the rosette (fig. 290a). ${ }^{156}$

## Truncated Lotus

Right triangles are sometimes shown flanking isosceles triangles, the apexes pointing horizontally, and with a vertical band at the bases (fig. 188e). This seems to be a very simplified version of the lotus on its side, and appears usually as the major motif in the central bands of cups. 157

## Crossed Zigzags with Spots

Zigzags, either alone or crossed, with spots at the intersections, are used to fill broad bands (fig. 199e). Often, the space between them contains crosses. Sometimes multiple or wavy lines are used.

## Guilloche

The rope band was found once in the present material, used in a narrow band near the rim of a cylindrical beaker (fig. 5m). ${ }^{158}$

## Chevrons

A row of chevrons with apexes pointing horizontally also occurred on the above-mentioned beaker.

## Bands

Bands, and the way they were used are important in Meroitic painted pottery and they were singled out above. Certain band styles seemed to have special significance, the white band, rim band, and red band groups. ${ }^{159}$ Other features of their appearance include black rim bands, framing bands, with or without other decoration between them, and main decoration of solid or multiple bands.

Other Themes and Combinations
In addition to the amuletic theme and filling or framing motifs, other, less common themes can be noted, especially animal files, cattle herds, and victories.

## Animal Files

In addition to the crocodiles and striding birds discussed above, rows of giraffes, carnivores, and even fish, appear in Meroitic painted pottery. Striding animals occur on contemporary incised pottery. Files, especially of hippopotami and giraffes, also appear earlier. ${ }^{160}$ A related composition that includes bustards, hares, and hyenas, painted in a very careful representational style appears on a large fine jar from Semna South. ${ }^{161}$

## Cattle

Files of cattle appear on painted pottery as well as on metal vessels, and they also have important parallels and precedents. ${ }^{162}$
156. Woolley and Randall-MacIver 1910, pl. 59:8204.
157. See p. 46 above.
158. It also occurs on vessels from Egypt. See Wildung and Grimm 1978, cat. 121, possibly 124 (rim) and p. 57 below.
159. See pp. 39, 40 above.
160. In inlay compositions, and on the walls of chapels (Reisner 1923, I-III, pl. 19; IV-V, pl. 54:4; Lacovara 1986, figs. 4, 5 and pl. 7). In A-Group or Neolithic times, animals appear in files in rock drawings (Hellström and Langballe 1970, pls. 86:1, 2, 88:2, and 96:3, for example). Files of giraffes appear as grafiti at Musawwarat es Sufra (U. Hintze 1979, figs. 49-52.). The animal-file is a well known and important theme in the art of early Egypt and files of giraffes appeared in modern times on houses in Sudan. For the "hoof-prints" see Seligman and Seligman 1932, fig. 26 (Nuba), and p. 368 for a giraffe on pottery. For a file of giraffes painted on a hut in Darfung, see pl. 1 and p. 9 , with a remark on the hoof-print decoration.
161. Zabkar and Zabkar 1982, p. 46; Hofmann 1988, especially pp. 13-18.
162. Herds of catule were incised on C-Group vessels (OINE V, pls. 19, 20, 46-48) and they also appear on an incised vessel of the Kerma culture from Sai (Gratien 1986, p. 73 and fig. 61). One black incised bowl from A-Group has a small bovid (OINE IV, pl. 35). See Hofmann and Tomandl 1986, pp. 135-44; for another discussion of cattle, see Kendall 1989, pp. 680-88.

## Victory

Two basic kinds of victory can be discerned, fragments of Kushite royal representations, as in the graffito styles, where prisoners or soldiers are shown (fig. 298d), in the red-exterior group which sometimes shows the heads of prisoners (fig. 294a), and the representations of camivores attacking a fallen enemy. ${ }^{163}$ In the present material, the victory appears as a procession of soldiers in the style of the "Prisoner Painter" and as heads shown in profile on a jar of the white-band red-exterior group (fig. 294a).

Dynastic Deities and Their Symbols
The Winged Sun Disc and the Vulture
Most of the representations in the Meroitic painted pottery refer to the amuletic complex of motifs discussed above. The winged sun disc has few parallels in this art, while the vulture that appears at Karanog is not found at all (see tab. 8, below).

Most of the motifs that depict any possible figure or object can be readily identified with some religious subject. In the present material, only some floral filling motifs and the large reserve petal frame cannot be readily identified with some specific religious motif.

Despite the addition of new details from Egypt and the recasting of themes and treatments carried down from carlier times, major representational themes of Meroitic painted pottery have precedents in Nubia, and their use in this art is consistent with their previous appearance. Meroitic painted pottery is recognizably heir to the tradition of decorating pottery and other vessels in Napata and Meroe, traditions that continued elements of Kerma and even A-Group decoration.

The following table 8 is intended to introduce the reader to the range of painted decoration on Meroitic pottery at Qustul and Ballana. Table 8 and its counterpart, table 13, which lists occurrences of pottery by shape, list important occurrences, but they are not complete registers of occurrences. In particular, some sherds and unclassified vessels and decoration are not included. The table that immediately follows refers to many objects and representations in Nubia, but it is not intended to be a comprehensive guide to the art, or even the pottery decoration from this area.

[^5]Table 8. Major Decoration in Meroitic Painted Pottery, Primarily from Qustul and Ballana.

## Special Religious Processions

## Dancing Bes

Pottery: B 285-Mer. C.
Comparanda: Karanog: Woolley and Randall-MacIver 1910, pls. 45:8216; 73:8297, Meroe: Dunham 1957, Begrawiya N 19, fig. 116:21-3-300.
Metal and Faience: Meroe: Dunham 1963, W 369: fig. 74, bronze beaker.
Glyptic: -
Remarks: Bes is one of the most common Dyn. XXV-Napatan amulets. See p. 41 and notes 96-99. Individual Representations:

Pottery: no provenience (fig. 295c), Hathor with baboon.
Comparanda: mixed procession, Karanog: Woolley and Randall-MacIver 1910, pl. 43:8451; Griffith 1924, pl. 52:2.
Metal and Faience: various scenes on bronze bowls.
Glyptic: -
Remarks: For the baboon, see Hofmann and Tomandl 1987, pp. 123-25.

## Common Meroricic Motifs

Face (Bes, Patek, Hathor)
Pottery: Q 251-Mer. A; B 88-2; B 194-1; B 278-3; B 311/16-Mer. A; B 316-Mer. A, no provenience (figs. 298e, 299s).
Comparanda: Karanog: Woolley and Randall-Maclver 1910, pls. 49:8275, 51:8478, 55:8180, also 62:8219, 8220, 70:8272, 99:9002, 6 examples; 93:8724, some crescents; Faras: Griffith 1924, pls. 16:II; 45:7, 4, 12; 46:5, 50:1, 4.
Metal and Faience: -
Glyptic: Karanog: Woolley and Randall-Maclver 1910, pl. 33:8095-97, 8110, all Bes-like; Faras: Griffith 1924, pl. 60:32-33, 41.

Remarks: Karanog: Woolley and Randall-MacIver 1910, pl. 24, ivory inlay, lion faces, one in crescent; Meroe: Dunham 1957. Begrawiya N 34, fig. 107:22-1-26, crescent below; N 18, fig. 96:21-3-659a, c, lion; Meroe: Dunham 1963, W 333: fig. 169 ( 4 on ring bezel); lion headed flies, W 603: fig. 6d, e, W 861 : fig. $9 \mathrm{~b}, \mathrm{c}$, W 678, fig. 32b-c; Hathor face; Meroe: Dunham 1957, Begrawiya N 11, fig. 44:21-3-369 (aegis), N 13, fig. 48:22-1-47, N 21, fig. 55:22-1-78-79. See pp. 41, 42 and notes 100-102.

## Uraeus

Pottery: B 53A-1; B 73-Mer. B (incomplete); B 130-1.
Comparanda: Meroe: Dunham 1957, Begrawiya, N 16, fig. 92:21-3-638b; Karanog: Woolley and RandallMacIver 1910, pls. 67:8250; 68:8259; 49:8168; 51:8472; 59:8199; 99:9021.
Metal and Faience: Faras: Griffith 1924, pl. 53:8.
Glyptic: Karanog: Woolley and Randall-MacIver 1910, pls. 33:8076, 8077 (both with lion faces).
Remarks: Nuri: Dunham 1955, Nu. 42, 18-1-287, pl. CXVIIB; Semna 223S.: Zabkar and Zabkar, 1982, p. 22; Zabkar 1975, pls. 24-25. See note 103.

## Meandering Serpent

Pottery: Q 430-1; Q 439-5; Q 481-Mer. A; Q 499-3; Q 540-1; B 67-1, 4; B 278-1.
Comparanda: Karanog: Woolley and Randall-MacIver 1910. pls. 63:8224, 8225; 76:8323; 41:8183, 8192; Faras: Griffith 1924, pls. 46:2, 5; 50:11; Argin: Catalán 1963, fig. 8:4; Semna S.: Zabkar and Zabkar, illustration, p. 43 left.
Metal and Faience: -
Glyptic: -
Remarks: Meroe: Dunham 1957, Begrawiya N 28, fig. 122:21-3-159 (sculpted); Nuri: Dunham 1955, Nu. 3, fig. 28:17-1-122 9 (?); Barkal: Dunham 1957, Bar. 2, fig. 62:16-2-183 (wood); Semna S.: Zabkar 1975, pls. 8, 24, 25 show a combination of the long serpent and uraeus. See p. 43, notes 104-09.

Table 8. Major Decoration in Meroitic Painted Pottery, Primarily from Qustul and Ballana (cont.).

## Crocodiles ${ }^{\mathfrak{a}}$

Pottery: Q 353-1 (on Eg. import); B 40-2; B 194-3.
Comparanda: Karanog: Woolley and Randall-MacIver 1910, pls. 50:8453; 62:8218; 80:C 40084; 99:9021, 2 examples; Faras: Griffith 1924, pls. 26:LIVd; 50:14; Argin: Catalán 1963, 2 legs.
Metal and Faience: Gamai LXV, 2.
Glyptic: Karanog: Woolley and Randall-MacIver 1910, pl. 33:8068; Faras: Griffith 1924, pl. 60:23; Meroe: Dunham 1963, W 5, fig. 92h, k.
Remarks: Rectangular pottery lid, Karanog: Woolley and Randall-MacIver 1910, pl. 98:8737. See p. 43, notes 110-12.

## Scorpion

Not in present material; see p. 43, notes 113-14.

## Frogs (including composite)

Pottery: Q 470-Mer. B; B 195-1; B 66B-2 (human head and cap); B 200-1.
Comparanda: Meroe: Dunham 1957, Begrawiya N 29 (59), fig. 109:21-3-140a; Karanog: Woolley and RandallMaclver 1910, pls. 54:8163, 57:8188, 60:8205, 66:8238, 41:8257; Faras: Griffith 1924, pls. 46:10, 46:4, 50:10 (lion head), 12, 13; Semna S.: Zabkar and Zabkar 1982, illustration, p. 43 right.
Metal and Faience: -
Remarks: Faras: Griffith 1924, pl. 64:20, ivory inlay; amulets, el Kurru: Dunham 1950, Ku. 52 (3) fig. 28f, 19-31040, Meroe: Dunham 1963, W 486: fig. 11d; W 502: fig. 40e; W 27: fig. 79i; W 5: fig. 92b; W 127: fig. 122e. Sanam: Griffith 1923, pls. 48:14-16; amulets, 57:9-11, 17, 18. See p. 43, note 116.

## Wedjat

Pottery: Q 439-1; B 52-1; B 88-2.
Remarks: The wedjat appears repeatedly in Meroitic painting, metal, faience, and glyptic. See p. 44, note 117.
Eyes
Pottery: Q 378-Mer. A
Comparanda: Argin: Catalán 1963, fig. 9:2; Karanog: Woolley and Randall-MacIver 1910, pl. 85:8645.
Metal and Faience: -
Glyptic: -
Remarks: Occurs on garment represented in carving. See p. 44, note 118.

## Winged Female Deity

Pottery: B66B-2.
Comparanda: -
Metal and Faience: -
Glyptic: Karanog: Woolley and Randall-Maciver 1910, pl. 33:8111, flanked by ankhs, Sekhmet.
Remarks: For the handles of a mirror, see el Kurru: Dunham 1950, Ku. 53, pl. L; common amulet. See p. 44 and note 119.

Griffon
Not in present material: See p. 44 and notes $120-22$.
Ankh
Pottery: Q 269-4; Q417-1, 4; Q430-1; Q439-5, Mer. C (Academic); Q 551C-2; Q 595—Mer. A; B 49CMer. B; B 51B-2; B 52-2; B 53A-1; B 64-Mer. A, F; B 66-Mer. A; B 67-1; B 111A/120-4; B 111B-1; B 257-Mer. B; B 289-2. B 308-4, no provenience (fig. 299b).
Comparanda: el Kurru: Dunham 1950, Ku. 2, fig. 9a; Meroe: Dunham 1957, Begrawiya N 1, fig. 80:21-3-122a (many others, Lower Nubia, ptd.).
Metal and Faience: Karanog: Woolley and Randall-MacIver 1910, pl. 31:7132, in quatrefoil rosettes; Faras: Griffith 1924, pl. 53:8, with quatrefoil rosette; Meroe: Dunham 1963, W 503: fig. 12f; g; W 20: fig. 68d. and fig. 243.
Glyptic: Karanog: Woolley and Randall-MacIver 1910, pl. 33:8126, 8127, 8111; Faras: Griffith 1924, pl. $60: 52$; Meroe: Dunham 1963, W 454: fig. 173:18 etc.

Table 8. Major Decoration in Meroitic Painted Pottery, Primarily from Qustul and Ballana (cont.).
Remarks: Karanog: Woolley and Randall-MacIver 1910, pl. 23:7530, inlaid kohl tube; see pp. 152-54 below; Meroe: Dunham 1957, Begrawiya N 26, fig. 128:21-3-76; Dunham 1963, W 145: fig. D22 (tray); W 214: fig. I4 (jar stand with pierced decoration). See p. 44 and notes 123-24.
Sa
Pottery: Q 269-4; Q 551C-2, no provenience (fig. 295d, winged); B 64-Mer. A; B 152-6; B 251-Mer. B; B 281-Mer. B.
Comparanda: Karanog: Woolley and Randall-MacIver 1910, pls. 47:8164, 51:8471, 53:8158; Faras: Griffith 1924, pls. 46:13, 50:18, 51:2; Semna S.: Zabkar and Zabkar 1982, illustration, p. 47a.
Metal and Faience: Karanog: Woolley and Randall-MacIver 1910, pl. 31:7133, cylindrical cup.
Glyptic: Karanog: Woolley and Randall-MacIver 1910, pl. 33:8125, Faras: Griffith 1924, pl. 60:50, 51.
Remarks: Faras: Griffith 1924, pl. 64:21, wooden lid; see p. 156 below (box); Meroe: Dunham 1957, Begrawiya N 18, pl. 62:21-3-632; N 21, pl. LXI:22-1-76-79; Dunham 1963, W 109: fig. 144b (wooden box). See p. 45 and notes 125-26.

## Crescent

Pottery: Q 230-Mer. E; Q 269-2 (KW jar, overlapping); Q 298-4; Q 352-1; Q 378-B; Q 481-Mer. B; Q 661-Mer. A; B 19-1; B 4SA-1; B 49C-3; B 51B-2; B 54-1; B 67-1; B 73-1; B 78-Mer. D, G; В $111 \mathrm{~A} / 120-4$; В $111 \mathrm{~B} / \mathrm{B} 125-1$; В 133-1; В 150-Mer. A; B 194-1; В $213-\mathrm{Mer}$ A; В 252-3; B 263-3; B 282-Mer. D; B 289-2, no provenience (figs. 295c, 299g, 1).
Comparanda: examples very numerous.
Metal and Faience: Meroe: Dunham 1963, fig. 243.
Glyptic: Karanog: Woolley and Randall-Maclver 1910, pl. 33:8094-109, all with deities; Faras: Griffith 1924, pl. 60:34, 36-47, all with deities.
Remarks: Karanog: Woolley and Randall-Maclver 1910, pl. 24 (ivory inlay, with lotus and lion face); Faras: Griffith 1924, pl. 64:1, 2, ivory inlay. See p. 45 and note 128.

## Rosette

Pottery: Q 193-Mer. A; Q 469-5; B 73-Mer. D (across circles); B 78-Mer. B, E; B 152-5; B 217-1; B 2732; B 282-Mer. E; B 330-1, no provenience (fig. 295c).
Comparanda: Karanog: Woolley and Randall-MacIver 1910, pls. 46:8176, 8254, 48:8170, 50:8454, 8462, $55: 8178,8180,59: 8204,60: 8207,64: 8229,65: 8235,74: 8302,78: 8457,79: 8473,80: \mathrm{C} 40084 / 21$, 81:8445, 8473, 8492, 82:8621, 84:8632, 97:8979; Faras: Griffith 1924, pls. 45:13, 8; 56:11; Semna S.: Zabkar and Zabkar, 1982, illustration, p. 44 left.

Metal and Faience: Karanog: Woolley and Randall-MacIver 1910, pl. 31 (quatrefoil):7132, with ankhs; Faras: Griffith 1924, pl. 53:8, base, 53:7; otherwise very numerous.
Glyptic: -
Remarks: Karanog: Woolley and Randall-Maclver 1910, pl. 21, ivory inlay, quatrefoil; 22; otherwise very numerous. See p. 45 and notes 129-31.

Neb
One occurrence in present material: See p. 45 and note 132.

## Fans or Standards

Pottery: none present.
Comparanda: Karanog: Woolley and Randall-MacIver 1910, pl. 42:8171 (alternating lotus buds and feather fans).
Metal and Faience: -
Glyptic: -
Remarks: Barkal: Dunham 1957, Bar. 9, fig. 75:16-2-36 bronze object. See p. 45 and note 133.
Royal Marks ("Property Marks")
Pottery: Q 499-2 (see also no. 7; see Chapter 4, Inscription No. 11).
Comparanda: Woolley and Randall-Maciver 1910, pl. 42:8177; Säve-Söderbergh, Englund, and Nordström 1981, pls. 10:25/245:2 and 82:2.

Table 8. Major Decoration in Meroitic Painted Pottery, Primarily from Qustul and Ballana (cont.).

## Royal Marks ("Property Marks")(cont.)

Metal and Faience: Meroe: Dunham 1963, W 415 (45?-55?): fig. 87c (amulet without table); W 179 (55-65): fig. 134i (amulet without table).
Glyptic: -
Remarks: Meroe: Dunham 1963, W 458 (55?-65?): fig. 135b (sealing). See pp. 45,46 and note 134.
Isis Garland
Pottery: B 185-Mer. A.
Comparanda: Nuri: Dunham 1955, Nu. 11 (19), fig. 150.
Metal and Faience: -
Glyptic: -
Remarks: The absence of this motif from the decorated objects is remarkable, considering its importance in religious art. See p. 46 and note 135.

## Lotus and Variants

Pottery: B 51B-5; B 53A-2; B 77-10; B 88-1; B 91-4 (Eg.); B 195-1; B 199—Mer. A; B 205-7; B 236-3; B 247-Mer. A; B 257-Mer. A; B 273-Mer. A; B 312-8; B 331-2; Q 280-Mer. A (horizontal), E; Q 378-B, D?, H; Q 464-Mer. A; Q 469-5; Q 470-Mer. B, Q 481-Mer. A?; Q 491-Mer. A; Q 612Mer. A; Q 626-Mer. A; Q 661-1; Q 683-Mer. B, no provenience (fig. 295c,); truncated horizontal lotus from Cemetery B; B 200-1, 2, 5; B 251-Mer. A.
Comparanda: Karanog: Woolley and Randall-Maclver 1910, pls. 41:8257, 43:8150, 8193, 8310, Faras: Griffith 1924, 41:20, 45:9, 10, 12; LI:1, 8; LII, 2; Argin: Catalán 1963, 1244, Karanog: Woolley and Randall-Maclver 1910, pls. 52:8903, 8912, 8900, 51:8470, 8476, 8481, 8484; 61:8215, 78:8479, 80:С 40088/2, 81:8485, 96:8551, 97:8958, 98:9014, 9042, 48:8313, 49:8275, 8209, 50:8448.
Mctal and Faience: Meroe: Dunham 1963, W 832: fig. 18e; W 369: figs. 73f, 74; W 5: fig. 90i; S 155: fig. 191; Sanam: Griffith 1922, pl. 57:9-X; Griffith 1923, pl. 32:4-10.
Glyptic: Not on cut bezels, but common in earlier glyptic.
Remarks: Karanog: Woolley and Randall-MacIver 1910, pl. 21, ivory inlay; pl. 24, ivory inlay, special chest, in crescent on alternate buds. The lotus is used in all art forms and it is not possible to list all examples. See p. 46 and notes 136-37.

Flame/Lotus Bud (often in crescent)
Pottery: Q 280-Mer. E?; Q 378-Mer. B, H; Q 464-Mer. A; Q 481-Mer. A; Q 683-Mer. B (KW); B 19-1; B 49C-3; B 54-2; B 67-4, Mer. A; B 77-2 (var.); B 78-Mer. B; B 188-2; B 194-1, 4; B 213-2, Mer. A; B 252-3; B 278-1.
Comparanda: (actual bud in crescent) Karanog: Woolley and Randall-Maciver 1910, pls. 54:8161, 71:8281, 77:8331, 91:8710.
Metal and Faience: Not separate from lotus.
Glyptic: Same as lotus.
Remarks: Same as lotus.
Cowrie
Pottery: B 66B-Mer. A; B 236-4.
Comparanda: Faras: Griffith 1924, pl. 50:24; Nuri: Dunham 1955, Nu. 36, fig 10:17-2-1892; Karanog: Woolley and Randall-MacIver 1910, pl. 71:8278.
Metal and Faience: -
Glyptic: -
Remarks: For jewelry, see Faras: Griffith 1924, pl. 58:8, 16. See p. 46 and note 138.

## Trefoil Flower

Pottery: B 32-2; B 77-2; B 78-3; B 166-3; B 174-1, no provenience (fig. 299k).
Comparanda: Semna S.: Zabkar and Zabkar 1982, illustrations on pp. 43, 45 left, and 47c; Karanog: Woolley and Randall-Maclver 1910, pls. 48:8231; 57:8190; 60:8210; 61:8212; 70:8269; 81:8455; Faras: Griffith 1924, pls. 29:LXXId, g; 50:22; 23:XLIIla; Dunham 1957: Begrawiya N 30 , fig. 113:21-3-482.

Table 8. Major Decoration in Meroitic Painted Pottery, Primarily from Qustul and Ballana (cont.).
Metal and Faience: Faras: Griffith 1924, pl. 53:10; Meroe: Dunham 1957, Begrawiya N 29, fig. 109:21-3-533a.
Remarks: See also the kohl tube, below p. 154; Meroe: Dunham 1957, Begrawiya N 26, fig. 128:21-3-124; N 15, fig. 89:22-1-19a-c. See p. 47 and notes 139, 140.

## Pomegranate

Pottery: Q 448-Mer. A, no provenience (fig. 299c).
Comparanda: Karanog: Woolley and Randall-MacIver 1910, pis. 97:8978, 8968 (on vines), 72:8289, 51:8469; Faras: Griffith 1924, pl. 50:6.
Metal and Faience: -
Glyptic: -
Remarks: See p. 47.
Trees
Pottery: B 52-2; B 257-Mer. B (or frond).
Comparanda: Karanog: Woolley and Randall-Maclver 1910, pl. 65:8233.
Metal and Faience: Karanog: Woolley and Randall-MacIver 1910, pl. 31:7132, below rosettes and ankhs.
Glyptic: see p. 149.
Remarks: Karanog: Woolley and Randall-Maclver 1910, pl. 23:7515, kohl tube; see p. 47.
Vine and Garlands
Pottery: Q 150-Mer. A; Q 159-Mer. A (KW); Q 230--Mer. D; Q 363-3 (or Ptolemaic-Eg. with crosshatched band); Q 439-5; Q 448-Mer. A (KW); Q 464-2; Q 540-1; Q 591-2 (KW); Q 595-Mer. C (KW); B 24-1; B 32-1; B 64-Mer. B, E (variant); B 67-3; B 78-1, 3; B 80-1; B 89-5; B 108-8, 12; B 143-3 (KW); B 181-Mer. A; B 199-Mer. B; B 273-Mer. A; B 281-Mer. C ?; B 285-3, Mer. A (KW), C; B 291-1; B 293-3 (KW); B 328-3.
Comparanda: Very numerous everywhere, both local and imported vessels.
Metal and Faience: Faras: Griffith 1924, pl. 53:7.
Glyptic: -
Remarks: Karanog: Woolley and Randall-MacIver 1910, pls. 20:7108; 21, ivory inlay, also garland, other parallels very numerous. See pp. 47, 48 and notes 141-47.

Beads
Pottery: Q 150-3 (color); Q 165-1; Q 305-5; Q 335—1; Q 378-Mer. C. I; Q 417-1, 4; Q 472-1; Q 540-1; Q 551C-2; Q 573-18; Q 636-6; Q 683-Mer. B (KW); B $10-2$; B 43-1; B 51B-5; B 53A-1; B 66A-Mer. A; B 77-4, 10; B 92-2; B 130-1; B 166-3; B 194-3; B 215-4, 5; B 240-3; B 244Mer. A, B; B 273-2; B 285-Mer. C (KW); blob-beads: Q 172-4; Q 191-Mer. E; Q 193-Mer. A, B; Q 230-Mer. C; Q 242-Mer. A; Q $257-$ Mer. A (KW); Q 274-Mer. C; Q 280-Mer. F; Q 293-Mer. A; Q 314-Mer. A; Q 353-Mer. B; Q 384-Mer. B; B 51-1, 5; B 77-3; B 135-4; B 171-5; B 180-6; B 193-3; B 194-2; B 281-Mer. A; B 287-1; B 323-2; B 328-1; B 334-1. See Q 191-3 (Eg. Import).
Comparanda: numerous and varied, see Meroe: Dunham 1957, Begrawiya N 1, fig. 80:21-3-122b; N 51, fig. 125:21-2-352.
Metal and Faience: -
Glyptic: -
Remarks: Karanog: Woolley and Randall-MacIver 1910, pls. 2:C 40232 (Nalewitar figure); 5:7000 (statue), 7005 (statue); Nuri: Dunham 1955, Nu. 8. pls. XCVII, XCVIII, CXV:18-2-268; Meroe: Dunham 1957, Begrawiya N 56, fig. 86:23-2-79 (grouping). See p. 48 and notes 148, 149.

## Elongated Beads

Pottery: Q 158-1 (color); Q 242-Mer. A; Q 417-4; Q 636 Mer. A; B 3-3; B 22-2, B 42A-Mer. A; B 78-Mer. E; B 88-1; B 208-1.
Comparanda: Karanog: Woolley and Randall-MacIver 1910, pls. 55:8169, 8243; 74:8306; 44:8262; 47:8260; 73:8301; 74:8305, 8306; 77:8335; 64:8229; Faras: Griffith 1924, pl. 46:5.
Metal and Faience: -

Table 8. Major Decoration in Meroitic Painted Pottery, Primarily from Qustul and Ballana (cont.).

## Elongated Beads (cont.)

Glyptic: -
Remarks: -

## Scale Pattern

Pottery: Q 402-4; Q 480-Mer. A; B 64—Mer. D; B 78-Mer. F; B 213—Mer. A; B 248—Mer. A; B 273-2; B 328-Mer. A; Q 191-3 (Eg. import).
Comparanda: el Kurru: Dunham 1950, Ku. 52, fig. 28c, Karanog: Woolley and Randall-MacIver 1910, pls. 56:8181; 57:8190; 70:8271, 8273; 73:8299; 88:8673, 8679; 92:8717; 93:8727; 94:8933; 95:8940, 8944; Faras:Griffith 1924, pl. 48:3.
Metal and Faience: Meroe: Dunham 1957, Begrawiya N 6, fig. 73:21-12-6a (?).
Glyptic: Meroe: Dunham 1963, W 369: fig. 73e.
Remarks: Barkal: Dunham 1957, Bar. 6, fig. 67:16-2-81 (possibly version of "egg and dart," glass). See p. 48.
Opposed Hatched Triangles
Pottery: B 51B-5; B 78-1.
Comparanda: Karanog: Woolley and Randall-Maclver 1910, pls. 46:8303, 8292; 48:8313; 52:8912; 65:8235, 8236; 69:8266, 8267; 70:8269; 80:C 40084/21; 94:8936; Semna S.: Zabkar and Zabkar 1982, illustrations, pp. 42 right and 45 left.
Metal and Faience: -
Glyptic: -
Remarks: See note 150
Opposed Hatching in Squares
Pottery: -
Comparanda: Faras: Griffith 1924, pl. 29:LXXIId, LXXIIIb; Karanog: Woolley and Randall-MacIver 1910, pl. 76:8323.
Metal and Faience: -
Glyptic: -
Remarks: Used in combination, see p. 48 and note 151.
Panels of Crosshatching
Pottery: B 285-Mer. A (KW); B 330-1.

## Solid Triangles

Pottery: Q 683 -Mer. B (KW), surface of Cemetery B.
Comparanda: Karanog: Woolley and Randall-MacIver 1910, pls. 86:8653; 47:8290; 61:8211; 77:8333.
Metal and Faience: -
Glyptic: -
Remarks: Inlays are common. Note that the triangles are sometimes joined tip to tip with a ball. See p. 48 and notes 153, 154.

## Crosshatched Band

Pottery: Q 363-3 (KW or Ptolemaic-Eg. ord., with vine); Q 595-Mer. A (hatched).
Comparanda: Karanog: Woolley and Randall-Maclver 1910, pls. 87:8667; 86:8655; 46:8254; Faras: Griffith 1924, pls. 30:LXXVla; 46:7; 48:7; 51:2; 26:LIVd.
Metal and Faience: -
Glyptic: -
Remarks: See note 155.

## Crosshatched Squares

Not in present material: see p. 49 and note 156.

## Bound Horizontal Lotus

Pottery: B 42B?-3; B 193-Mer. A; B 200-1; B 251-Mer. A.

Table 8. Major Decoration in Meroitic Painted Pottery, Primarily from Qustul and Ballana (cont.).

```
Comparanda: Karanog: Woolley and Randall-MacIver 1910, pls. 65:8236; 89:8686, 8694; 76:8326; Meroe: Dunham 1957, Begrawiya N 1, fig. 80:21-3-246.
Metal and Faience: -
Glyptic: Horizontal appears earlier, but not stylized.
Remarks: See p. 49 and note 157.
Intersecting Zigzags with Balls at the Intersections
Pottery: Q 383-Eg. A; Q 626-Mer. A; B 64-Mer. C; B 73-Mer. C; B 78-2, Mer. A; B 111A/B 120-2 (Eg. import); B 145-Mer. A; B 155-Mer. B; B 180-3.
Comparanda: Karanog: Woolley and Randall-MacIver 1910, pls. 46:8159; 76:8318; 81:8489; 82:8613; 87:8665; 88:8180, 8181; 89:8689; 95:8934; Faras: Griffith 1924, pls. 29:LXXIIIa; 21:XXII; 45:2; 26:LIVd.
Metal and Faience: -
Glyptic:
Remarks: See p. 49.
```


## Guilloche

```
Pottery: Q 683-Mer. I (modified); B 226-Mer. A; B 251-Mer. A; B 252-3.
Comparanda: el Kurru: Dunham 1950, Ku. 18, fig. 23f, Meroe: Dunham 1963, W 5: figs. 90i, 91b; W 369, fig. 74; Faras: Griffith 1924, pl. 26:LIVd.
Metal and Faience: Karanog: Woolley and Randall-MacIver 1910, pl. 31:7133; Faras: Griffith 1924, pl. 32:III; 53:7.
Glyptic: --
Remarks: Karanog: Woolley and Randall-MacIver 1910, pls. 26-28, catlle procession.
Herringbone in Bands
Pottery: B 226-Mer. A.
Comparanda: Karanog: Woolley and Randall-MacIver 1910, pl. 77:8331; Faras: Griffith 1924, pl. 21:XXVIIIa.
Metal and Faience: -
Glyptic: -
Remarks: -
Bands
Occurs generally in the present material.
```


## Anmal Files ${ }^{a}$

Giraffes ${ }^{\text {a }}$
Pottery: -
Comparanda: Karanog: Woolley and Randall-MacIver 1910, pl. 42:8293; 53:8154; 99:9021, 3 examples, altar group and procession: see pl. $45: 8156$ for the appearance in the Altar Group.
Metal and Faience: -
Glyptic: -
Remarks: Dark-faced incised-impressed vessels, see Q 392-2; Q475-9.
Carnivores ${ }^{\text {a }}$
Pottery: No provenience (fig. 297, dogs).
Comparanda: Karanog: Woolley and Randall-MacIver 1910, pl. 43:8150.
Metal and Faience: -
Glyptic: Karanog: Woolley and Randall-MacIver 1910, pl. 33:8062; Faras: Griffith 1924, pl. 60:16; Dunham 1957: Begrawiya N 6, fig. 74:21-3-604.
Remarks: Parallels are not dogs.

## Striding Birds

Pottery: B 43-1; B 51B-2; B 254-2, no provenience (fig. 295a).
Comparanda: Karanog: Woolley and Randall-Maclver 1910, pl. 58:8197, 64:8227; for other birds, see also pls. 41:8166, 64:8232, 74:8304; 84:8638; Faras: Griffith 1924, pls. 31:LXXXV; 47:2; 50:15.

Table 8. Major Decoration in Meroitic Painted Pottery, Primarily from Qustul and Ballana (cont.).

## Striding Birds (cont.)

Metal and Faience: -
Glyptic: Karanog: Woolley and Randall-MacIver 1910, pl. 33:8068, over crocodile; Meroe: Dunham 1957, Begrawiya N 6 fig. 74:21-3-601-603.
Remarks: Nuri: Dunham 1955, Nu. 53, fig. 22b, e, rooster; Meroe:Dunham 1963, W 179: fig. 134e; Karanog:
Woolley and Randall-MacIver 1910, pl. 93:8731. See also note 86.

## Bird on Perch

Pottery: B 285-3.

## Fish

Pottery: no provenience (fig. 296a, also b? or crocodile).

## Cattle ${ }^{\text {a }}$

Not in present material: see p. 50 and note 162.

## Victory

## Soldiers

Pottery: no provenience (fig. 298d).
Comparanda:-
Metal and Faience:-
Glyptic:-
Remarks: fragment of official relief composition. See p. 50.

## Prisoners

Pottery: Surface Q 25/38 (Heads in red ext. white band style; fig 294a).
Comparanda: Faras: Griffith 1924, pl. 33.
Metal and Faience: Bells with prisoners, Meroe: Dunham 1963, W 144, fig. 161.
Glyptic: -
Remarks: Also common in official art. See p. 50 and note 163.

## Dynastic Derites and their Symbols

## Winged Sun Disc

Pottery: B 281-Mer. B, Williams 1985, fig. 19b.
Comparanda: Karanog: Woolley and Randall-MacIver 1910, pl. 80:C 40219.
Metal and Faience: -
Glyptic: Karanog: Woolley and Randall-MacIver 1910, pl. 33:8067 (with vulture and falcon).
Remarks: see p. 50.

## Vulture

Pottery: -
Comparanda: Woolley and Randall-MacIver 1910, pl. 48:8170.
Metal and Faience: Faras: Griffith 1924, pl. 53:10.
Remarks: -
Unidentifed

## Floral Filling Motif

Pottery: (examples only) B 52-2; B 66B-2; B 194-4.
Comparanda: Varied.
Metal and Faience: -
Glyptic: -
Remarks: Karanog: Woolley and Randall-Maciver 1910, pls. 43:8451, 44:8172 (Egyptian Vine Group), 45:8156 (Egyptian Vine Group), 8221, 48:8313 (Egyptian Vine Group), 85:8648, 50:8462; see also 60:8207 (terminates in ankh); compare here B 19. with Karanog: Woolley and Randall-MacIver 1910, pl. 73:8298.

Table 8. Major Decoration in Meroitic Painted Pottery, Primarily from Qustul and Ballana (cont.).

```
Large Reserve Petal-frame and Variants
    Pottery: B 247-Mer. A.
        Comparanda: Karanog: Woolley and Randall-Maclver 1910, pls. 75:8311; 56:8185; Faras: Griffith 1924, pl.
                                    18:VIIIh (Egyptian type); Semna S.: Zabkar and Zabkar 1982, illustrations on pp. }44\mathrm{ left and }4
                    right.
```

    Metal and Faience: -
    Glyptic: -
    Other
Pottery: B 67-5; B 77-7
Comparanda: Karanog: Woolley and Randall-Maclver 1910, pl. 50:8436
Metal and Faience: -
Glyptic: -
Remarks: -
a. See p. 50 and notes $160-62$. A number of the elements cited in this table have been reviewed by Hofmann and Tomandl (1987) and Hofmann (1988) in discussions of animals in Meroitic art and African oral traditions. Because the material from Qustul and Ballana is not complete no attempt to list all of the possible motifs and combinations has been made here. See also Zabkar and Zabkar 1982, p. 46 and Hayes 1976, cat. 192. For carnivores attacking a captive or prisoner, see Griffith 1924, pl. 52:4.

## D. MEROITIC STAMPED DECORATION

Though less common than painting, stamping was one of the decorative techniques commonly used in Meroitic times and has been found in Lower Nubia, ${ }^{164}$ Napata and Meroe, ${ }^{165}$ and southern sites especially Gebel Moya and Abu Geili. ${ }^{166}$ Although northern prototypes for this pottery exist the floating rhomb and band patterns also appear in metal ${ }^{167}$ and in stamped leather decoration; ${ }^{168}$ stamped/impressed pottery has important precedents in Nubia and Sudan. 169

In lower Nubia the stamped decoration is closely associated with the Meroitic fine cups and jars (figs. 4d, $\mathrm{g}, 6 \mathrm{c}$ ). The decoration is organized into bands or zones with diagonal rows of elements. It is clearly associated with the standard painted decoration and it continued to be used with such later stylistic groups as the rim band style (fig. 222e). In fact, most examples in this material came from late contexts (tab. 9).

Motifs are relatively simple suited to the small scale of the medium and its numerous repetitions. ${ }^{170}$ Some, such as the nested lozenges, were popular earlier. ${ }^{171}$ The ankh and rosette continue the simpler amuletic theme from painting while the uraei perhaps refer to larger motifs.

## E. MEROITIC-KUSHITE FORM GROUP III: STORAGE JARS

One of the important categories of Twenty-Fifth Dynasty pottery consists of storage jars with prominent narrow shoulders and small handles on the side or shoulder. ${ }^{172}$ The shapes of these jars diverged into a more or less independent tradition of storage vessels (fig. 14).
164. Zach 1988, pp. 121-38, various; Woolley and Randall-MacIver 1910, pls. 89:8685, 8695; 90:8696; 87:8669, 8662; Griffith 1924, pl. 51:10-13.
165. Zach 1988, pp. 121-38, various; Dunham 1963, fig. C:24, 25, G:22-38.
166. Crawford and Addison 1951, pl. 90B; pp. 91B. Zach, however, attributes the stamped decoration to Hellenistic influence (1988, pp. 143-45).
167. The decoration of metal objects in Nubia was engraved, punched or gouged. See pp. 156, 157 below, for example.
168. See p. 101 below.
169. Stamped pottery appears at Gebel Moya, for example (Addison 1951, pl. 9L).
170. Zach 1988, pp. 121-38. Note that he cites various precedents as early as A-Group for specific designs.
171. See, for example OINE V, pl. 5.
172. See OINE VII, pp. 9, 10.

Table 9. Stamped Decoration on Meroitic Pottery.

| Motif | Provenience | Style | Shape Group | Remarks |
| :---: | :---: | :---: | :---: | :---: |
| Dots in zigzag | B 145-Mer. A | Rim Band | G1 |  |
| Triangles | Surface | Standard | G1 | Three rows |
| Nested lozenges | $\begin{aligned} & \text { Q 417-2 } \\ & \text { B 73-Mer. C } \end{aligned}$ | Unpainted in Band | D1 | Fine, alternated |
| Nested lozenges with center-dots | B 297 | Standard | E1 | Altemated |
| Ankh in lozenge | Q 469-4 | Standard | E1 | Alternated |
| Ankh in crescent | B 45-1 | Standard | J or A2 | Bands and alternated in narrow zone-non circle or lozenge |
| Rosette in circle | No Provenience No Provenience | Standard (?) <br> Standard |  |  |
|  | B 330-2 | Rim Band | G1 | See uraeus |
| Uracus with disc | B 330-2 | Rim Band | G1 | See rosette |
| Lion-headed (?) uracus with disc, also uracus, and crown | Q 636-Mer. D | Rim Band | M3 | Kushite wheelmade |

Clay and Temper
The fabric of these vessels appears pinkish gray indicating that the clay was drawn from the same sources as that used for Kushite wheelmade pottery. It contains numerous voids up to several millimeters in length left by chaff and some prominent angular or subangular voids where mineral particles decomposed. These would indicate that a combination of a poorly sorted mineral and straw or dung temper was used in the clay.

## Shaping

All of the vessels were wheelmade, and almost all are ovoid storage jars. These jars are quite broad and taper only slightly to make a barrel-shaped vessel. Like their earlier counterparts necks are short and cylindrical or conical though a few have a concave profile. Most rims are either modeled into a bead or everted; one, however, is straight. Like the other groups in this tradition, the bases were recut.

## Surface

The vessels were smoothed.

## Decoration

Some later vessels were decorated with bands, which was the only painted decoration in the group (fig. 224d).
Firing
Storage jars have slightly less regular surface colors than the Kushite wheelmade vessels. The surfaces are regular enough to indicate the vessels were kiln fired to a moderate hardness.

## F. MEROITIC-KUSHITE FORM GROUP IV: KUSHITE WHEELMADE UTILITY VESSELS

Some wheelmade bowls, cups, beakers, and small jars were made and finished in the same rather summary manner as the storage jars. ${ }^{173}$
173. For a series of vessels of this general type, see Reisner 1923, fig. 14. See also Shinnie and Bradley 1980, figs. 30:28-31 and 31:40-45. The bowls are more typical of Sudan than lower Nubia.

Clay and temper
Clays appear similar to those in other Kushite wheelmade vessels, but the temper is primarily sand.

## Shapes

The rather thick walled shapes parallel forms in Kushite handmade, Meroitic fine/ordinary and even Egyptian pottery (fig. 15). Two shapes ( G and H , fig. 151, m) were made in imitation of metal vessels; the tripod-leg jar and the miniature jar with narrow spout.
Surface
Although smoothed, no special finish or decoration was applied to these vessels, and they were fired in the same manner as others of the tradition.

## G. MEROITIC-KUSHITE FORM GROUP V: MEROITIC HANDMADE ORDINARY POTTERY

Simple handmade pottery was made in shapes that generally paralleled wheelmade vessels. The occasional decoration is simpler than that on wheelmade pottery. ${ }^{174}$

Clay and Temper
Meroitic handmade ordinary domestic vessels seem to have been made of the same materials as the coarsest Kushite wheelmade pottery, but dark alluvium seems to have been the predominant ingredient. Chaff or dung appears to have been the major temper.

## Shaping

Shapes include small, very irregular open dishes (fig. 16b), possibly used for lamps, deep, broadbottomed bowls (fig. 16a), moderate-sized jars, and very large, heavy-walled open jars with baggy shapes that were probably intended for use as bins. ${ }^{175}$

Shallow dishes were pinched into shape, giving them a lumpy appearance, but the pressure method was used to make the bowls and jars, leaving a smooth profile.

## Surface

Apart from a perfunctory smoothing, most of the vessels were not given any special surface treatment, although a few have irregular red coats and were lightly burnished.

## Decoration

Jars often have incised or plastic decoration. On medium-sized jars this takes the form of incised lines and shapes arranged vertically, but more crudely done than the dark-faced pottery of the Sudanese-Saharan tradition. ${ }^{176}$ The large jars often have milled rims, and often bands of rope-like decoration of applied cords. Sometimes this was coupled with incised zigzag and tree-like patterns.

Painted decoration did not occur on handmade pottery in the present material, though this has been reported elsewhere. ${ }^{177}$

Firing
The dark, crumbly breaks and mottled surfaces indicate that the vessels were given a low to moderate firing in a pot stack or pit.
174. See Adams 1986, figs. 246:L and 247:U. The vessels would be assigned to H1, p. 418. Adams' jar W.31 (1986, fig. 247) belongs to the Kushite wheelmade group, for it is not handmade. See Catalan 1963, fig. 7:1 and p. 74.
175. For the general shape, but in a smaller size, see Catalán 1963, fig. 6:2.
176. See p. 73 below for the decoration of dark-faced incised pottery, and Adams, fig. 247:9, 11, and possibly 16.
177. Adams (1986, p. 238) mentions painted decoration as very rare on handmade pottery (see fig. 112), but he does not specify examples. Of the two painted vessels on figure 247 , neither specified by provenience, one was wheelmade. See note 174 .

## H. POTTERY IMPORTED FROM EGYPT

Pottery imported from Egypt was common in Meroitic Nubia, but it did not include the complete variety of pottery available in Egypt. ${ }^{178}$ Egyptian pottery found in Nubia consists primarily of well made vessels for serving and consumption, cooking vessels, and jars for storing oil or wine. Coarser vessels, and very special vessels, such as those with polished red slips, are uncommon; luxury was served mainly by vessels of metal, glass, or faience. A few vessels such as the klepsydra or pipette are clearly of Egyptian origin, but are not well known there.

The diversity of Egyptian pottery in Nubia was restricted not only by the selective import of vessels, but also by the discontinuous nature of the trade. The vicissitudes of this trade made changes in the material appear more abrupt in Nubia than in Egypt, where successive modifications resulted in gradual transitions not apparent in Nubia. For example some categories of vessel such as the two handled cooking pot (fig. 37c, e-g) appear for only short periods in Nubia but have long gradual careers in Egypt. ${ }^{179}$ However, this temporal truncation substantially enhanced their chronological value.

The following form groups are recognized in the Egyptian pottery from Qustul and Ballana: fine/ordinary I (I); utility I (II), a less finished and coarser undecorated version of fine/ordinary; utility II (III), chaff-tempered jars and jugs; fine/ordinary II (IV), a white pottery from Upper Egypt; amphorae (V); barbotine (VI); and African red slip or terra sigillata (VII). ${ }^{180}$

As one might expect, vessels which are usually assumed to be from the region of Aswan are common (IIII, VI) ${ }^{181}$ while other groups are rare and not varied enough to classify here in any detail. Only one vessel of Mediterrancan luxury pottery was found in the present material; a simple bowl of African red slip pottery from Cemetery Q .

## I. EGYPTIAN FORM GROUP I: EGYPTIAN FINE/ORDINARY I

The largest group of imported vessels includes cups, jars and other vessels that were finished well enough to be used for serving or consumption in day to day living. It is not luxury pottery, like African red slip, nor is it a utility pottery of the kind intended primarily for kitchen or storage use. Many vessels were decorated, mostly with vine designs, and some painting is quite elaborate, particularly the products of the "Antelope Painter," and scenes of offerings. ${ }^{182}$ The painting came under Meroitic influence, and specific motifs were actually adopted from Meroitic decoration. ${ }^{183}$ Some later vessels with Egyptian shapes appear with truly Meroitic decoration and it is difficult to decide whether these are Meroitic imitations of Egyptian shapes, or whether Egyptian vessels were repainted in Nubia in Meroitic style, or whether Meroitic painters worked at Aswan.

Clay and Temper
Clay found in the Nubian sandstone at Aswan (white kaolin) may have served as a major constituent in mixtures used to make this pottery, as is suggested by substantial ancient works at Aswan. ${ }^{184}$ Some of this clay (from the upper deposit), whether white or bluish kaolin is mixed with sand and small pebbles ${ }^{185}$ and
178. Compare figures 21-41 with the range of later Egyptian pottery in Egloff 1977. pls. 36-90, 92, and 93, for example. See also OINE V, pp. 51-54; OINE III, pp. 67-80, tabs. 19, 20. Only in the New Kingdom did the corpus of pottery correspond closely (See Holthoer 1977, Corpus) to the equivalent corpus in Egypt.
179. Examples are presented in Egloff 1977, pls. 46-54.
180. See Appendix B, pp. 191-94 below, for cross references to Adams' classification.
181. See Appendix B below, and Adams 1986, pp. 526-38, Ware Group A.I, wares R30 31, and W24. R37, Aswan Graeco-Roman Polished Red Ware, and Ware W32, Aswan Graeco-Roman Fine Cream Ware, are primarily, or more probably entirely, post-Meroitic.
182. See pp. 65,66 below.
183. See p. 66 below.
184. See note 13 above.
185. Author's observation.
was probably levigated to refine the texture. Sand or alluvium could then be added for temper; the vessels of this group have a gritty sandy texture in the break indicating that sand (ground?) or even alluvium was used to give the clay its very regular texture. A few vessels are quite dark, and many have mica, plagioclase or feldspar fragments. Minute voids and a spongy appearance seem to indicate that this fabric also contained ash which served partly to temper and partly to improve the quality of the surface for decoration.
Shaping
Long known in Egypt, ${ }^{186}$ the compound fast wheel was probably used to shape this pottery. The vessels have regular, often angular, profiles and modeled rims (except the cups); the lower parts were frequently recut to ring bases. Vessels were not deliberately made with ribs, but the rapid shaping left many of the jars with slight surface ridges on the lower sides. The upper sides of most cups and the necks and shoulders of most closed vessels were smoothed. The shapes themselves are among the chief elements that distinguish this group from others of Egypt. Only the large globular or ovoid jar is likely to have originated in Egypt (Jars O, P; fig. 34), ${ }^{187}$ but ovoid jars with short vertical or narrow concave necks (Jar M) and cups (Jars A-F; fig. 22) were modified to suit local habits and tastes. The remaining vessels were derived by one means or another from foreign models; these were almost entirely Mediterrancan, with one special shape, the klepsydra, developed locally for export to Lower Nubia.

## Surface

Although some vessels with partial red and light coatings can be noted, and many others may have been given an unpigmented coating, few actually had a coat with pigment applied to the surface. Many vessels have a dark band on the upper exterior that seems to have been a result of firing. The surfaces of these vessels were smoothed, which completed the production process before firing. In a lew cases, however, large globular jars have a low luster that may have been due to polishing or to changes in the clay.
Decoration
Although later a few elements were taken from Meroitic decoration, and certain Mcroitic motifs are found mostly on some jugs and amphorae, ${ }^{188}$ most of the decoration consisted of a group of features called the "Vine Leaf School" by Wenig. ${ }^{189}$ These included combinations of black bands of medium width; black vines, often with white details; vine leaf garlands; and representations of objects and animals, including a specialized group that Wenig attributed to an individual he called the "Antelope Painter." Many of the animals (antelopes, birds, giraffes, and insects) have white details or filling. Later, such Meroitic elements as the ankh and the lotus were added. 190

Firing
The vessels were fired in a closed kiln in an oxidizing atmosphere to a moderate hardness, with a pink or light brown color that is virtually even through the vessel wall. The firing of some pottery was complex however. Many vessels have a darker surface and this sometimes appears as a band on cups, a distinctive appearance that was apparently produced by a special firing process. The dark surface could easily be mistaken for a coating but the border between the darker and lighter areas is not a line but a zone in which the dark top fades into the light area below. The one process that could account for these phenomena is firing in stages. The pink ground color of the vessel wall indicates that the first stage of the firing, which hardened the vessel, was oxidizing. With black paint on so many vessels some other steps must have been taken to preserve the decoration from oxidation.
186. Hope 1981, pp. 130-32, 1982, pp. 13, 14; Holthoer 1977, pp. 23-26.
187. Here shapes $O$ and $P$. The difference between this vessel and the Mediterranean shapes of most other Aswan-type vessels in the present collection is indicated by the round base and simple shape, which occur in Egypt at various times and contrast with the more articulated shapes of the Mediterranean world.
188. See p. 66 below.
189. Wenig 1979a, pp. 131, 132. See Török 1987a, pp. 190-98 and 1987b, pp. 78-82 for more extensive discussion of the origin and development of vine decoration.
190. See pp. 65-68 below.

In this reconstruction, the jars and jugs were placed separately when the kiln was charged but the cups were stacked. In the initial firing stage, an oxidation lightened the outer surface of the vessels bleaching the decoration and leaving the entire vessel surface pink. Many undecorated vessels were complete at this point and could be removed. In the second firing stage reduction darkened the exposed surfaces, especially the painted areas but did not affect portions of the cups protected from circulation in the stacks. Some undecorated vessels could be removed at this point also; jars would be brown, while cups would have a brown band. In the last stage oxidation lightened the more porous exposed surfaces while the less porous painted areas which were less able to absorb the oxygen and remained dark. The final result of the process was a dark band on the exterior of most undecorated cups, a dark interior and band on the cup at the top of the stack, and black decoration on the surfaces to which paint had been applied. Completely dark vessels, such as most juglets and jugs, would have been subjected only to the first two parts of the process. Apparently the process was used to produce dark areas on vessels elsewhere in the Classical Mediterranean world (white filling was also used for details and some figures) so that we should consider the firing, as well as the shape, to be of Mediterranean origin. ${ }^{191}$

## J. PAINTED POTTERY FROM EGYPT

As mentioned above, most of the painted vessels imported from Egypt in Meroitic times belonged to a group Wenig called the "Vine Leaf School" because of the predominance of vines and garlands in the decoration. ${ }^{192}$ To this large group should be added a phase which Török has identified as the "Silhouette Style." ${ }^{193}$ Derived from the decoration of Hadra vases, 194 this style appeared on both Meroitic and Egyptian vessels. ${ }^{195}$ The entirc continuum in Egyptian painted pottery is designated here as the Vine Group, preserving Wenig's recognition of its most prominent feature. The early phase or silhouette style, found on both Kushite wheelmade and Egyptian pottery used vines, crosshatched bands, and garlands outlined, in reserve, with bands on the neck and body of the vessel. Some fairly elaborate compositions appear in the style, including human figures. ${ }^{196}$ This style was supplanted by the later types of vine painting by the beginning of the Christian Era. ${ }^{197}$

Vessels that belong to the Vine Group of Egyptian origin are easily identified and within the late phase, a number of differences can be detected that probably occurred over time. Decoration was generally painted in solid black (fig. 28b) often with white spots added to fill painted leaves or to indicate the texture of an animal's hide. ${ }^{198}$ In elaborate designs with animal figures white was used to fill all or part of the figure, or to emphasize some detail of the anatomy. ${ }^{199}$ However, in the finest groups of these elaborately decorated vessels, those with antelopes, the figures are sometimes entirely black. ${ }^{200}$

[^6]
## POTTERY

On most shapes, decoration varies in complexity. The simplest decoration consists of bands arranged according to the shape of the jar or jug. On jugs and the pelike-like jar these were generally rather narrow and placed in two pairs above and below the waist leaving a broad empty space between; on the amphorae, bands were sometimes broader with one or a pair on the lower body, a pair at the waist, and a third pair at, or just below, the handles (fig. 31d). There are instances where the lower or upper bands were omitted as well as some vessels with additional pairs of bands (fig. 31f). On the handleless jugs pairs occur on the lower body above the waist, at the base of the neck and, where space permitted below the rim (fig. 33c). Globular jars have paired bands in the same positions, that is, lower body, upper body, and at or on the neck (fig. 34c). The large barrel-shaped jars sometimes have additional bands placed at or below the handles. Composite jars have groups of bands placed on the globular part as on the prototypes with three pairs of bands on the cylindrical part below (fig. 34f). ${ }^{201}$ Groups of bands are found on the upper and lower bodies of cylindrical juglets (fig. 25h). One vessel in this collection has a single pair of bands in the center of the body (fig. 25i) while another has four pairs of black framed gray bands (fig. 222d). Although earlier cups of the silhouette style from the Dodekaschoinos had bands none were painted on cups of the later Vine Group which were decorated only with the vine.

Vines and other decorations occur on the jars in two major areas, on the shoulder above the upper groups of bands (fig. 27i) and between the two major groups of bands on the body. When only one of these areas is decorated it is usually the shoulder. When both zones were filled the lower one strongly tended to be given the bolder and more elaborate decoration (fig. 34d).

## PHASES

When banded decoration occurs alone it is too simple to break down into subgroups except by association with more elaborately decorated examples of the same shape. We have therefore chosen the treatment of the vine as the major standard for determining phases in decoration. These phases may not all have chronological significance (except the antecedent "Silhouette Style", fig. 31a) but special characteristics stand out within each that establish its individual character.
Sinuous
In the most naturalistic decoration, the vine and its leaves flow almost freely around the surface of the pot as though blown by a wind. The wavy vines and other plants are not strictly sinuous-they are often recurved-and often have a light, almost wispy appearance. ${ }^{202}$ Many leaves are serrated, lobed, and even pointed. To this small group belong most of the works of the "Antelope Painter," with the wispy undulating wind blown vines and free flowing plants used to fill space (stalks are frequently reversed) as well as dashing antelopes with serrated horns. This style of vine appears primarily on globular jars and amphorae, beginning in the silhouette phase.

Some vines are more precisely sinuous and bolder. Leaves are fewer and arranged more formally. Occasionally the vine was broken into large fragments and filling is more common. Many jars are decorated in this style (fig. 28b) as are all of the tall-sided cups (fig. 22c, g), but none of the juglets. The vine garland, or simplified vine, appears in this subphase also, depicted as though waving around the vessel (fig. 27i).

## Curvilinear

The vine garland dominated the design in the second phase. No longer sinuous, it is stretched in great arches across the shoulder of a jug or within the central band on a jug or jar. ${ }^{203}$ Other floral fillings are treated in a like manner. Where vines rather than garlands are used, they appear somewhat straightened (fig. 202c) or they are confined in narrow bands. Some of the most important decorated jars in the Vine Group all depicting altars with the vine-garlands belong to this phase. ${ }^{204}$
201. Most pots of this kind combine a Meroitic upper part with the tub. See Woolley and Randall-MacIver 1910, pls. 45:8221, 48:8309, and 55:8179; see Griffith 1924, pl 47:1-3.
202. Wenig 1979a; Woolley and Randall-Maclver 1910, pls. 54:8162; 57:8187.
203. Woolley and Randall-Maclver 1910, pls. 43:8186; 45:8156, 8157; 67:8248, 8251.
204. Woolley and Randall-Maclver 1910 pls. $45: 8156,8157 ; 56: 8182$, all from G 712. See also Abdel-Moneim Abu Bakr 1963, pl. 4B. The altar appears in rock drawings, but not south of Ibrim (Verner 1973, pp. 73-75; Winckler

## Angular

The vine which had all but disappeared in curvilinear painting has been virtually replaced by the garland in this phase. The design is spare with much open space between motifs. For the first time explicitly pharaonic motifs from Nubia are included such as a tall slender version of the Nubian ankh with splayed base and arms and circular loop. ${ }^{205}$ The central band now contains curved solid black triangular areas each with an open line up the middle (fig. 219b). Vine garlands either frame the ankh or are diagonal and they have an almost zigzag formality; garlands are often painted horizontally. A newly prominent motif is a simple branch like a palm frond generally shown at an angle alternated with the main subjects (this had existed earlier; see pl. 50a). Painting of this phase appears for the first time on juglets and rarely on other shapes.

## Rectilinear

In some cases decoration was completely vertical or horizontal and the angular orientation was largely abandoned. In this phase new motifs from Nubia were added, the hatched adjacent triangles (here almost always used vertically) and a spiny version of the lotus. 206

## Broken or Burst

Some of the spot garlands of the preceding group already lacked linking lines and in this phase leaves were painted as though floating in space (fig. $25 \mathrm{~h}-\mathrm{j}$ ). One large globular jar combined this with the dark triangular areas. ${ }^{207}$ It was in this burst form that the vine decoration continued into X-Group. ${ }^{208}$

1938, pp. 16, 17, where they are called Blemmye; they are absent from Basch and Gorbea 1968 and Hellström and Langballe 1970).
The central band of one of these examples shows a group of three white geese before an altar with three ball-tipped homs and curious angular streamers. In front of the altar are tables of offerings and two (mating?) birds, each surrounded by an arched garland. The central panel of a second vessel has a recumbent white (trussed?) giraffe busily eating offerings from the altar, while instead of other offerings, two pairs of giraffes in black with white details spar or prepare to mate. All of these groups are surrounded by curved vine garlands, and above the band are arches of vines. A third vessel, also from Karanog, shows the horned altars with two dom palms, birds, a trellis (?) with tendrils, and two leaping antelopes all also framed by arching vine garlands. Although Wenig has assigned this piece to the "Antelope Painter," the horns and bodies of the animals are simpler and the bodies are wider than in other examples of the "Antelope Painter's" work. The arching garlands quite clearly relate this to the second style, while the simple spotted leaves and very simplified arched leaf garland above the shoulder indicate greater affinity with the next phase (angular) than with the previous one. In fact, the transitional nature of this phase is emphasized by the decoration on the last vessel of the group, apparently from the same tomb (Wenig 1979b, cat. 223; Woolley and Randall-Maclver 1910, pl. 56:8182 [G 712]). Its central band also contains altars, but very simplified reduced silhouettes, without the accompanying animals, the offering tables, or the pendant streamers. The altars are flanked by vine garlands placed at an angle, slighly arched and wavy and are carefully spaced in a stiff, almost frozen arrangement with garlands hardly arching across the shoulder band.
Although the altar group constitutes a special thematic group of elaborately painted vessels in the curvilinear stage, we cannot attribute it to an individual painter, for there is a real difference between the flowing, crowded decoration of the first two vessels and the increasingly formalized decoration of the second pair.
For discussions of elaborate compositions in this group, see Török 1987a, pp. 190-95, 200. One vessel not dealt with by him in detail (Hayes 1976, cat. 192) has a band with recumbent white hares separated by heavy floral decoration. Other bands on the vessel contain crosshatching and guilloche patterns; the interior is decorated with a Hellenistic female head. The appearance of the hare may be compared with the vessel from Semna South.
205. Woolley and Randall-MacIver 1910, pl. 75:8311 (G 645).
206. Woolley and Randall-MacIver 1910. pl. 75:8312 (G 659). The central bands of these jugs are divided into panels by vertical bands of hatched adjacent triangles and each panel contains a Meroitic amuletic motif. One jar has alternate ankhs and sa-amulets, another, the lotus flanked by alternating ankhs and bushes with birds sitting on the petals of the lotus. On the jug with ankh and sa amulets, the vertical bands partly cover concentric circles and the ankh signs have scale patterns above and below (Woolley and Randall-MacIver 1910, pl. 48:8313). Three vine garlands are painted on the shoulder. The central garland consists only of elongated lobes, each with two white spots, while the upper and lower consist of roughly triangular leaves with white spots attached to a horizontal line. Similar decoration can be seen on a large jar from Karanog (Woolley and Maclver 1910, pl. 60:8206).
207. Woolley and Randall-MacIver 1910, pl. 44:8172.
208. See Bietak 1968, pp. tabs. 9,12 , and pl. 18 for other continuations in earlier materials.

Table 10. The Occurrence of Vine Decoration on Roman Period Egyptian Pottery.

| Shapes | Remarks |
| :--- | :--- |
| Klepsydra C | Long klepsydra only. |
| Cups B, C, E | All with a broad band for decoration. |
| Pitchers C, F1, F2, F5, G2 | Decoration not usual, mostly bands. |
| Pelike-like Jar K1 | Decoration not usual, mostly bands. |
| Amphorae L2, L3 | Decoration usual. |
| Necked Jar M1 | Decoration usual. |
| Short Neck Jar N1 | Decoration usual. |
| Globular or Barrel-shaped Jar O, P, variant $Q$ | Decoration usual. |
| Juglets A7 of special cylindrical shape; | Decoration on a few juglets. |
| some decorated with gray bands. |  |

## STYLE AND THE VINE GROUP

Although the simple sequence of development given here may not be strictly chronological, 209 the major development, from sinuous through rectilinear vines, appears in phases IIB-IIIA at Qustul and Ballana with rare appearances of the burst phase thereafter. The great barrel jars (Jars O, P) are phases IIB-IIIA in date and the shapes on which the major Karanog examples were painted are IIIA indicating that these developments occupied a brief span of time. ${ }^{210}$ Despite the rapid pace of change, development can be traced not only in the vine, the substitution of the garlands for the vine and their progressive rigidity, but also in the development of the representations in the central band. These began with the speeding grace of the slim antelope whose surroundings are suggested by the blowing flora. The second phase is characterized by crowding, proliferation, and the explicitly religious themes of altars and offerings; birds fly, giraffes spar, and antelopes leap, all confined by vine garlands. An almost Minoan freedom and grace has changed to oppressive opulence. As if in reaction to this excess, by the next phase the motifs were reduced in number, simplified, and separated. In the process, even in the last curvilinear compositions the garlands and vines became straight. Two different approaches were used in the angular and rectilinear phases. On jars and some jugs, the open formal style was retained, even where the large black areas appear as frames to fill much of the space. In other cases, the motifs, including some taken from Meroitic decoration, were packed closely together. The use of these Meroitic pharaonic motifs is not idiomatic for the birds perch in a lotus as though it were a tree. ${ }^{211}$ Finally the Meroitic motifs were abandoned along with almost everything but the simple spots.

## K. EGYPTIAN FORM GROUP II: EGYPTIAN PINK UTILITY I

Although some utility pottery was made of much the same materials and with the same techniques as the fine/ordinary pottery, some utility II and II/III vessels were clearly intended to be different in shape (figs. 35 , 36d, e, 37) and surface texture. Occasionally parallels for the shapes can be found far afield but they do not originate in the formal Mediterranean shapes common in the finer pottery. Other than modeled rims these shapes were not generally well articulated but simply transitional. Except for bowls and tall jars most vessels have rounded bases; they were rarely painted ${ }^{212}$ but occasionally have a partial exterior coating.
209. The contexts in which the major examples were found at Karanog cannot be completely reconstructed, as the pottery indicated in the Karanog register (Woolley and Randall-Maciver 1910, pp. 115-237) is designated according to a vague typology (pls. 103-06) and object numbers are often omitted.
210. See pp. 15-17 above for chronology.
211. Woolley and Randall-Maclver 1910, pl. 48:8313.
212. Griffith 1924, pl. 26:LVIIIC.

## Clay and Temper

Although the clay and mixtures resemble those of the fine/ordinary pottery the sandy temper is sometimes coarser. In some cases white particles can be seen on the surface and there are even occasional voids where pieces of straw have burned away, but they are infrequent occurrences and cannot be called a temper.
Shaping
The restricted range of shapes is in marked contrast to the fine/ordinary pottery. As mentioned above Mediterranean shapes are absent, the jars are simply cooking pots or open storage jars while the pots have two or four handles and convex or simple ring bases. Instead of the convex cups there are deeper thick-walled bowls with everted or modeled rims; one squat jug has a spout and a single handle. ${ }^{213}$
Surface
The surfaces of both bowls and jars were smoothed and some of the finer textured jars are almost lustrous. However most surfaces were made slightly ridged or ribbed by the throwing and they are somewhat less regular than the fine/ordinary vessels.

## Coating

Most of the vessels in this form group were left uncoated, although some were given a partial coat on the body of the vessel up to the shoulder, which appears darker than the surface and a few others have white coats.

Firing
Most of the vessels were given a moderate firing in an oxidizing atmosphere. A few have the darker somewhat brownish surface, especially in the slipped area, produced by the multi-stage firing of fine/ordinary vessels; and it could well be that this pottery was fired in the same kilns with fine/ordinary decorated pottery.
Utility I Vessels in Nubia and Egypt
All of the vessels of this type in the present collection came from Cemetery Q , indicating that they date to the earlier part of the period and thus could immediately precede much of the finer pottery. Utility vessels of the kind found in this group are common in Egyptian sites throughout the Roman and Byzantine periods, 214 but their occurrence in Nubia is so restricted that their export, or at least their use in burials, must have been confined to a small part of their extended career in Egypt.

## L. EGYPTIAN FORM GROUP III, CHAFF-FACED UTILITY POTTERY: EGYPTIAN PINK UTILITY II

One- and two-handled ovoid jars with narrow to medium necks, ring bases, and occasional spouts were made of the pink utility fabric with chaff added to the paste (fig. 36, except dande). Some of the spouted vessels were made in either type of paste indicating a close connection between the two variants. Sometimes the surface is quite dark.

## Clay and Temper

The fabric of these vessels varies in color from pink to red or light brown indicating that the same range of mixtures was used for this as for the simple utility pottery. Because of the coarseness of the temper, it is difficult to determine how well the clay was cleaned. The paste was filled with large amounts of chopped straw, making the vessels especially porous.
213. Others with this shape are chaffy-utility II.
214. Egloff 1977, pls. 49-54, types 125-154; for comparisons, see pls. 92, 93; for dates, see "tableau" 6 .

## Shaping

Although one vessel's rim was modeled, most rims are simply everted and a handle extends from below the rim to the shoulder; the bases are low simple rings. Two nearly biconical jars have short upraised spouts. After shaping, the bodies were still ridged or ribbed although the ridges or ribs are not prominent. This may have been intended to make the vessel easier to grasp securely when wet, since these jars probably were used to cool liquids.

## Coating

Many of the jars in this group were coated white or red.

## Firing

Firing appears to have been the same as for simple utility pottery.

## M. EGYPTIAN FORM GROUP VI: BARBOTINE

The finest of the three Aswan groups is the Barbotine pottery so well known from Meroitic cemeteries (fig. 40). This is only one of many groups of pottery with trailed-slip decoration that were made at various times in the Roman empire. In fact, this kind of decoration passed into so many hands that the technique alone cannot be confined within narrow chronological limits. ${ }^{215}$ Its occurrence in Meroitic Nubia indicates that this particular form of Barbotine decoration is later than many important occurrences. ${ }^{216}$ A few vessels are classed with this group even though they lack trailed slip decoration because they are entirely characteristic otherwise.

## Clay and Temper

While the fabric of the Roman period Egyptian pink pottery is almost always buff to pink or darker, that of the Barbotine pottery is gray-white. This is actually the color of many Meroitic fine vessels, as well as some later white pottery, and indicates that the pottery was made of clay from the Nubian sandstone either unmixed with valley clays or fired to a white color. ${ }^{217}$ The fabric certainly has a finer texture than any of the other vessels from Roman period Egypt and the clay was apparently well cleaned. Although a few fine black particles are present there is almost no evidence of any mineral temper; some small voids give the fabric a slightly spongy texture, possibly evidence that ash was added.

## Shaping

The shapes of Barbotine vessels are almost all variations of a single basic form-a tapered convex cup with an everted rim (fig. 40b). ${ }^{218}$ The vessel walls are invariably quite thin, often thinner than most Meroitic fine cups. In some cases the rim was elongated enough to make a neck (fig 40c), while in other cases, the body was larger and more tapered, so that the vessel would be considered a jar (figs. 40d, 271i); one such jar has a spout. ${ }^{219}$ Other accessories included handles which sometimes had pottery chains attached to them. ${ }^{220}$ Occasionally the cups were carinated. Despite the differences between the cups and jars and among the various cups, the shapes closely resemble each other.
215. Charleston 1955, generally; Hayes (1976, pp. 47-49) argues the date from Nubia.
216. However, other kinds of trailed slip pottery decoration were assigned to this period by Charleston. For the Alexandrian background of this particular pottery and other associations, see note 141.
217. See notes 12,13 above, for example, and Lister 1967, p. 74.
218. Faras yielded the widest variety in Nubia (Griffith 1924, pl. 49:1-18). Woolley and Randall-MacIver 1910, pl. 90:8703-8705; pl. 100:9019.
219. Griffith 1924, pl. 49:9, 13.
220. Ibid.

## Plastic Decoration

Trailed slip decoration was added to the surface as small round, oval, or teardrop-shaped knobs in various patterns often arranged in simple rows of dots with upended chevrons between, but also as vines 221 and the trefoil flower well known in Meroitic painting. In a few cases, all decoration was omitted leaving a plain buff surface.
Surface
The surfaces are matte but quite smooth.
Firing
Sherds of barbotine vessels indicate that a more complex firing procedure was followed than for decorated pottery. Most cups have dark, almost black shoulders, while the lower body and interior are light, duplicating the dark band on fine/ordinary cups. However, the trailed slip decoration is mostly light-colored, sometimes lighter than the light areas of the vessel. Damaged areas indicate that the dark color generally extends under the light trailed slip. Sometimes trailed slip occurs in both dark and light colors on the same vessel. It may be inferred that vessels with trailed slip that were intended to be black were given the first two stages of the standard firing. Those intended to have white decoration had slip added after the second stage and they were fired again in an oxidizing atmosphere.

The vessels were shaped and such trailed slip as was intended to be dark was added. They were then subjected to the multi-stage firing used for fine/ordinary pottery, then given the trailed slip decoration and other accessories that were intended to be light and followed by oxidizing firing.

## N. BROWN AMPHORA POTTERY

Many of the wine amphorae imported from Egypt were made of a dense dark brown pottery (fig. 38e) often lined with bitumen. ${ }^{222}$

Clay and Temper
Although the pottery has the red-brown color usually presumed to indicate the presence of alluvium the hardness and density of the vessels suggests that a mixture of clays was used. The temper, a fine (ground?) sand and possibly grog, also added to the density.

## Shaping

The shaping of these vessels was rapid and rather rough, the exterior often left without the additional smoothing common even on many utility vessels. In some vessels the lower wall has a wavy profile and its thinness suggests that the oscillation was intended to strengthen the vessel. All of the full size amphorae were clongated and piriform with straight or slightly tapered or concave necks (fig. 38e). The handles on the amphorae from Cemetery Q were pulled out and expanded to the outer shoulder; those from B are straighter and bent in again near the bases. Also the amphorae from Cemetery Q were shorter and broader than those from Cemetery B, and the latter had impressed knobs on the bases.
Firing
The vessels were fired quite hard; the atmosphere must have been reducing for the surfaces and even the breaks are quite dark.

## O. EGYPTIAN FORM GROUP IV: ASWAN (?) AMPHORA POTTERY.

The truly hard amphora pottery with a dark brown fabric, often red-streaked, did not occur in the present material. The smaller vessels were made of chaffy utility pottery, but Nile clay predominated in the
221. Ibid., pl. 49:3, 11, $12 .$.
222. For storage and shipping amphorae of this period, see Adams 1986, pp. 534-536 (R30), 567, 568 (U4), 581, and 582 (U18). Only those from U4 (and U18) were present in this material. For remarks, see also Hayes 1976, pp. 66-68.
appearance of the mixture; this included shapes $I-1,2$ (thin red coat) and possibly 3. The larger amphorae, one from Q 51B, and the others from (I-4) Q $166-$ Eg. A and B 135-2, were made of light dense clay with some mica and abundant temper of black, gray-white, and some white (limy) particles. The surface is a brown layer much like a slip, but more likely due to firing, as B 135-2 has a fire-bloom the same color as the ground. The interiors were resinated. ${ }^{223}$

## P. EGYPTIAN FORM GROUP V, WHITE POTTERY FROM UPPER EGYPT: FINE/ORDINARY IIA AND B

Two other groups of table pottery were relatively rare in Nubia but they differed so much from the usual products of the Aswan region that they were readily distinguished (fig. 39).

## FINE/ORDINARY IIA

A number of globular, piriform or biconical jars with flared necks were found in cemeteries $Q$ and $B$ (fig. $39 \mathrm{c}-\mathrm{f}) .{ }^{224}$ Most of these were decorated with bands, either in groups or separate, and mostly narrow. One vessel has a reserve chain or guilloche on the shoulder.
Clay and Temper
The vessels appear to have been made of marly clay with some small black inclusions and sand. It is now buff-white in color.

## Shaping

The five most characteristic vessels in this collection were shaped quite precisely on the fast wheel. The globular jars with ring bases and flared necks are as untypical of Egyptian ceramics as the Hellenistic shapes of Upper Egyptian fine and ordinary; they may have a general origin in the pottery of Western Asia.

## Surface

Burnished surfaces on these vessels may have deteriorated badly, having spalled away in the manner generally once associated with slips, but this may be due to the separation of a slip-like surface clay from the body of the vessel. 225

## Decoration

The simple banded decoration on these vessels is not entirely different from the Aswan group except that the bands are generally narrower. One vessel has a band with a chain in reserve, a precise geometric design completely different from the bold sprawl of the Aswan vine decoration.

## Firing

As indicated by the light-greenish surface firing was quite high in an oxidizing atmosphere.

## FINE/ORDINARY IIB

Since the collection includes only one vessel of this group and it is unbroken we could use features of the fabric to assign it to any known group though it displays such strongly individual characteristics that its difference from the rest of the material is quite clear. (fig. 39 g )
Clay
The clay appears to have been marly as in group IIA but no evidence for the temper could be obtained.
223. Adams 1986, pp. 534-36; fig. 300:Z5 and Z7; U18, p. 575 and fig. 316:1. Note that the fabric descriptions do not differ materially except in hardness, but the Aswan description covers a wide range of types, while the U18 description applies only to an amphora. See Adams n.d. Amphorae.
224. Adams assigns the type to Nubia (1986, fig. 261:G.17), but it should probably be assigned to Egypt. See Hayes 1976, cats. 192, 193 for vessels of Egyptian ordinary or fine/ordinary pottery with this shape, one decorated with guilloche bands. Catalog 192 can be compared to the "Silhouette" style.
225. See note 31 above.

## Shaping

Although much more careful and precise, the shape with its broad lower side, well-defined shoulder and everted rim is reminiscent of earlier Kushite jars.

## Surface

The vessel was burnished to a medium luster.

## Decoration

Two groups of three bands each (one broad, flanked by two narrow) were painted in black on the shoulder.

## Firing

This process was probably rather similar to IIA; the color and hardness of the vessel indicates a high oxidizing firing.
Q. EGYPTIAN FORM GROUP VII, AFRICAN RED SLIP: TERRA SIGILLATA

One bowl of African Red Slip pottery was found in Q 469 (fig. 41).

## R. POTTERY OF SUDANESE-SAHARAN TRADITION

Dark-faced burnished incised-impressed pottery. Handmade burnished dark-faced bowls, beakers, cups, and jars with dot-impressed and incised decoration in linear, geometric, and even representational patterns, occur frequently in Meroitic Lower Nubia, especially in the earlier phases (figs. 17-19; fig. 20 shows a stand made in Kushite wheelmade pottery in a Sudanese shape). These vessels have simple mostly curved shapes. The incised impressed decoration is often white filled. They are related to contemporary vessels of this kind from deep in Sudan ${ }^{226}$ as well as to earlier pottery of the same description. ${ }^{227}$

## Clay and Temper

The clay used was alluvium like that used for related vessels earlier. ${ }^{228}$ There are many voids left by finely divided fragments of chaff indicating that dung was used as the major temper. They do not appear to contain much sand.

## Shaping

Shaping appears to have been executed by the same method of pressing or beating the clay into shape in a depression described in previous volumes as characteristic of the Sudanese-Saharan tradition. The shapes consist of globular or drop-shaped jars, some with a shoulder but most simply curved to the rim (fig. 18d, e), hemispherical cups (fig. 17a), and taller, conical cups with flat bottoms (fig. 17b, c). ${ }^{229}$

[^7]Table 11. Decoration on Sudanese-Saharan Pottery.

```
Linear/geometric
    Horizontal
        Horizontal incision
        Filled band
        Horizontal zigzags (sometimes marked with verticals)
        Crosshatched bands
        Lozenge or diamond shape (including reserve)
        Triangles
    Vertical
        Rows of rectangles (Addison 1949, pl. 92:O1, R2)
        Upended zigzags, in groups (Addison 1949, pl. 89:B4)
    Questionable orientation
    Large, truncated crosshatched lozenges (D)
Floral/skeuomorphic
    Tassels
        (Addison 1949, pl. 98:4; 100:C5; 101 various; 102:D3)
    Crosses and bow
            (Crawford and Addison 1951, pls. 37:5)
Representational
    Long-necked herbivore
        (Addison 1949, pl. 97:2-3, but much smaller and repeated)
```


## Surface

Surfaces were burnished to a moderate luster, jars on the exterior and cups and beakers on both interior and exterior surfaces.

## Decoration

Both incised and impressed decoration occurs. The incised decoration consists almost entirely of a row of triangles below the rim of a cup. Most of the decoration consisted of impressed dots made by a notched or toothed wheel rolled against the surface at an angle to the vertical axis of the pot. Successive rows of impressions so made were combined to produce vertical, horizontal, and diagonal bands of varying length; these bands in turn make up the actual motifs and designs ${ }^{230}$ (see tab. 11). Most of the designs have remains of white filling.

Firing
The low or moderate firing was probably accomplished in a simple pit or pot stack. ${ }^{231}$

## Sudanese-Saharan and Kushite Pottery

Although a long distance separates the region of Sennar and Gebel Moya from Meroe, Napata, and Lower Nubia the handmade burnished pottery of these regions has many close similarities in material, technique, and decoration. In addition, aspects of this pottery are related to the much more complex pottery of Kushite tradition despite the great differences in technique, shape complexity, and decoration. ${ }^{232}$
230. With important comparisons in the south, for example, at Gebel Moya (Addison 1949, pls. 94-103 showing the construction of designs).
231. For modern examples of the technique, see Tobert 1984, pp. 144-46.
232. For the regional occurrence of this pottery, see note 226 above.

## S. CONCLUSION: MEROITIC POTTERY IN LOWER NUBIA

## MEROITIC PAINTED POTTERY

Drawn from Mediterranean, Sudanese-Saharan, and mostly Meroitic ideas and techniques, Meroitic pottery is related to developments in other media. When considered separately from imported vessels or those made in imitation of imported vessels (e.g. the Vine Group) it is clear that the Meroitic painted pottery does not represent an incoherent or arbitrary mixing of borrowed motifs but a coherent use of pharaonic images according to Kushite usage. This coherence is in sharp contrast with the truly garbled use of pharaonic motifs in Western Asia where images and details were borrowed without their meaningful interrelationships. Although the desire for beauty and interest could hardly be denied as a motive in the creation of this decoration, the repeated use of such amuletic motifs as those based on Bes and Hathor with ancient cultural motifs from Nubia such as the meandering serpent indicates that the traditions were miscible.

## THE VINE GROUP

At first glance representations in the Vine Group appear to combine the Hellenistic vine, African fauna and Mediterranean shapes. Török has effectively traced the origin of this style to the Hadra vases of second century B.C. Alexandria. However the animals do not fit any style in the Hellenistic world. The representations are certainly not pharaonic. The early silhouette style has parallels in pottery Reisner recorded from the Dodekaschoinos, there accompanied by birds, with some bands of geometric decoration. Altars, a prominent theme in this pottery and a common cultural form at this period, are particularly important in rock drawings in the Dodekaschoinos and the Eastern Desert ${ }^{233}$ with signs Winckler connected with Blemmye "signatures" on the Gebelein documents. ${ }^{234}$ An altar of this type was actually found near Bab Kalabsha. ${ }^{235}$ Although the poses of animals differ considerably from those found in nearby rock art, the method of constructing the body resembles animals Winckler attributed to the Blemmyes. 236 The poses do occur, but far away in the art of Fezzan where almost flying antelopes and white giraffes have been attributed to the equine period. ${ }^{237}$ Thus, although the animals, birds (and insects?) are not obviously connected to any known art it is reasonable to believe that the Vine Group contains non-pharaonic elements that are neither Hellenistic nor Meroitic in origin.

## FORM AND VARIETY IN MEROITIC POTTERY

The major technical groups of pottery in Lower Nubian burials all contain vessels that are counterparts of forms found in the other groups. Medium-sized bottle jars and cups or beakers occur in Egyptian, Meroitic fine/ordinary, Kushite wheelmade, and Sudanese-Saharan pottery. They are the most common vessels in each group and the overwhelming majority in the tomb deposits of Nubia. Such complexity occurred in every great age in Nubia but none of the earlier phases contained four sets of vessels that could physically serve the same purpose at one time.

A noteworthy feature of this complexity is that it is of kind rather than form. Apart from the cups and bottle jars, other instrumental categories are not numerous. In Roman period Egyptian pottery, klepsydrai, juglets, serving amphorae, shipping amphorae, cooking pots, and jugs essentially make up the rest of the group. Storage jars and a few miniatures can be added to Kushite pottery and a few large bins not used in burials. Comparing the corpora from contemporary Egypt or Meroe the instrumental categories are not diverse. Most striking is the lack of plates, platters, and open bowls, vessels that occur at Aswan.
233. Winckler 1938, pp. 16. 17. pl. 4:3; see Verner 1973, pp. 71-75, cats. 206, 207 and 245.
234. See Krall 1898, pl. I; compare the second signature/sign with Winckler 1938, pl. 3:4, center.
235. Ricke 1967, fig. 43.
236. See, for example, Winckler 1938, pl. III:2.
237. For the flying gallop in the "Camel" period, see the Ennedi horseman in Striedter 1984, fig. 209. For the "Equid" period, see Lajoux, pp. 186, 187. Humans also appear in this posture earlier (Ibid, pp. 160-61). This is admittedly a distant and doubtful parallel. See Hofmann and Tomandl 1987, pp. 111-12 for a review of gazelles, antelopes, and deer.

Table 12. Corpora of Shapes of Meroitic Pottery from Qustul and Ballana.

## MEROITIC-KUSHITE POTTERY CORPUS

I. Fine/Ordinary Pottery

Bowls, Cups, and Beakers (figs. 4, 5)
A. Convex bowl
B. Wide convex bowl with grooved base
C. Wide bowl with angled or vertical side
D. Convex cup

1. Completely round, base slightly dimpled
2. Flat or grooved base
E. Cup, curved to vertical side
3. Convex base
4. Dimpled or grooved base
5. Ring base
6. Relatively tall
a. Flat or indented base
b. Ring base
F. Relatively wide, curve to vertical or almost vertical side
G. Cylindrical side, angle to base, flat, indented or slightly grooved base
7. Normal proportions
8. Tall
H. Inverted side, convex
I. Angled side, angle to base
9. Flat, indented or slightly grooved base
10. Ring base
J. Concave side (normal height), everted rim
11. Base as II
12. Ring base
K. Tall beakers
13. Flat base, no sharp transitions
14. Flat base, angle to side, slightly flaring rim
15. Ring base
16. Convex base (not illus.)
L. Very wide, very low angled side to base
M. Cylindrical
17. Low
18. Medium-high
19. High
N. Strongly concave side, convex below, ring base
O. Tall, sinuous profile
P. Multiple bulge
Q. Straight neck above, carinated to bulge below
R. Pyxis
S. Ladle

Jars (figs. 6-8)
A. Small to medium size, globular-baggy body, short, generally vertical neck

1. With roll-rim
2. Smooth globular profile, neck medium height, everted rim
3. Body same, wide, mostly short vertical neck

Table 12. Corpora of Shapes of Meroitic Pottery from Qustul and Ballana (cont.).

[^8]a. Not present at Qustul and Adindan. See Woolley and Randall-Maciver 1910, pl. 46:8254.

Table 12. Corpora of Shapes of Meroitic Pottery from Qustul and Ballana (cont.).
Jars (figs. 10-13) (cont.)
J. Crater-jar (fig. 300a)
K. Qadus-like jar (fig. 300e)

Stands or Pedestal Platters ${ }^{\text {b }}$ (see also Sudanese-Saharan)
III. Storage Jars (fig. 14)
A. Broad, piriform shape, almost angular, with tapered neck, sharply everted rim, ribbed surface
B. Very large, more tapered body, rim unmodeled or less pronounced

1. Relatively short
2. Relatively long and more narrow
C. Short, baggy shape, neck profile concave, rim modeled
3. Medium large
4. Very large
IV. Wheelmade Utility Pottery (fig. 15)
A. Hemispherical bowl
B. Flat or slightly bulged base, tapered side
C. Convex cup with flat base
5. Low
6. High
D. Related to Meroitic cup
7. Convex
8. Tapered-cylindrical side, angled to flat base
E. Wider bowl, curved or tapered to bend (base not present)
F. Tapered simple jars
9. Convex-tapered side, flattened base (?)
10. Tapered jar, simple rim
11. Straight rim, with vertical lugs
G. Shape of metal tripod jar without legs
H. Feeding cup (some vessels of this type may be handmade)
V. Handmade Ordinary Pottery (fig. 16)
A. Vertical-tapered side to baggy base
B. Shallow crude dish or lamp
C. Lid with knob, mat impressions
D. Deep broad-botomed jar with tapered side
E. Jar as Sudanese-Saharan D
F. Globular holemouth jar, sometimes incised (Q 307-Mer. A and fig. 302b)
G. Crater, often with ledge below rim (fig. 302a, c-e)

SUDANESE-SAHARAN POTTERY CORPUS
Bowls and Beakers (fig. 17)
A. Hemispherical bowls
B. Beaker, flattened base, curved side
C. Beaker, flattened base, straight upper side
D. Cylindrical beaker, flat base
b. See Faras LXXXVi and Faras LXXXVIa.

Table 12. Corpora of Shapes of Meroitic Pottery from Qustul and Ballana (cont.).
Jars (figs. 18, 19)
A. Globular jar, straight neck
B. Baggy jar with rib rim

1. Without neck
2. With neck
C. Baggy jar with sinuous profile, no rim treatment
D. Large baggy jar with slightly incurved neck
E. Jar with inset neck at shoulder (taller)
F. Broad ovoid jar, tall neck

Stands or Pedestal Platters ${ }^{\text {b }}$ (see also Kushite Wheelmade, fig. 20)

## EGYPTIAN POTTERY CORPUS

## I. Fine/Ordinary (1)

Pipettes or Klepsydrai (fig. 21)
A. Low, tapers to bottom
B. Medium long, convex or straight to botom
C. Very long, straight to bottom

Cups or Goblets, all with ring or stump bases ${ }^{\mathrm{c}}$ (fig. 22)
A. Convex side, ring base
B. Broad, convex, very clear ring base, sometimes with rib
C. Side curved inward to tall base; base marked with line
D. As B, sinuous profile
E. As B, slightly curved, tall upper side, carinated to lower side, low base
F. As B, slightly convex upper side, medium to short, carinated to sloping lower side, low base
G. Convex to almost carinated side, sloping lower side vertical rim, rim to shoulder handle

1. Tall, relatively broad base
2. Broad, narrow base
3. Two handles, short disc base

Ointment Juglets and Jars intended for resealing (figs. 23-26)
A. Juglets

1. Rounded smoothed profiles, candlestick rims, relatively carefully made handle attached to neck well below rim and to shoulder, rim circular
a. Globular
b. Rounded barrel shape
2. Ovoid profile
a. Circular rim, no ridge
b. Pitcher rim, ridge below, ring base
i. Plain ring
ii. Ridged
c. As b, with stump base
3. Globular to transitional biconical profile
a. Circular rim, sharp ridge
b. Pitcher rim
i. Simple ring
ii. Ridged
iii. Profiled stump
b. See Faras LXXXVi and Faras LXXXVIa.
c. Note that all of these show the firing band; B, C, and E have vine painting.

Table 12. Corpora of Shapes of Meroitic Pottery from Qustul and Ballana (cont.).

Ointment Juglets and Jars intended for resealing (figs. 23-26) (cont.)
4. Piriform body
a. Circular rim
i. Ring base
ii. Stump base
b. Pitcher rim
i. Ridged
ii. Stump
5. Globular body
a. Circular rim, sharp ridge
b. Pitcher rim
6. Baggy profile
a. Smooth convex profile, circular rim, bar handle, simple ring base
b. Circular rim, ridge below (see also X-Group)
c. Circular rim, very small for large juglet
7. Barrel shaped profile, circular rims with ridges and ring bases ${ }^{\mathrm{d}}$
a. Sharply tapered, broad sharp ridge
b. Gradually tapered
i. Candlestick rim
ii. Ridged rim
c. Side virtually vertical
i. Ridge only below rim
ii. Candlestick rim
iii. Double ridge rim
8. Specialized globular juglet
B. Broad, low, double carinated barrel shaped jar
C. Asymmetrical long jug with bar handle
D. Figure-askos (Rooster?)

Pitchers or Jugs and Jars (figs. 27-34)
A. Small, broad, Piriform body, trefoil rim, handle bent to imitate bilobate shape
B. Medium tall, convex side, circular rim, bar handle

1. Relatively tall and narrow, ring base
2. Relatively short and broad
a. Ring base
b. Stump base
C. Tall, with sinuous profile, beveled-rib rim, ring base with rib, bar handle with groove (rim circular)
D. Medium tall, smooth sinuous profile, bar handle, ring base (circular rim)
E. Tall, smooth sinuous profile, flat base, circular rim with 3 ribs
F. Tall, convex profile, sharply articulated neck, everted rim, usually with a small spout pulled down and a drip rib below, above the handle join; handle band, normally with 2-3 grooves; ring base, sometimes with a groove incised
3. Convex-piriform
4. Tapered upper side
5. Relatively long neck, taper more pronounced
6. Ledge at shoulder
7. Almost biconical
G. Large, simple jugs
8. Convex, bent at shoulder join, spouted rim (circular), low ring base, grooved bar handle
9. Ovoid, almost carinated at shoulder, simple circular rim, bar handle
10. Piriform, high, almost carinated shoulder, rim everted from cylindrical neck, ring base, bar handle
d. All of the vine painted juglets and all but two of the painted juglets belong to this group.

Table 12. Corpora of Shapes of Meroitic Pottery from Qustul and Ballana (cont.).

Pitchers or Jugs and Jars (figs. 27-34) (cont.)
H. Small, simple jug (convex upper profile, carination at shoulder to convex lower side, unfinished stump base, bar handle, rib rim [circular])
I. Tapered jug or tankard with curved lower body, high ring base, and bar handle
J. Tankard with carinated lower body

1. Large, twisted handle, bulged rib below rim
2. Flat base, bent band handle
K. Baggy jug, tapered to low waist, ring base, rim grooved
3. Handles, grooved bands
4. Handles on shoulder
L. Tall, amphora with neck-shoulder handles, and ring base
5. Tapered to baggy lower side, rib below rim, grooves on handle
6. High shoulder, tapered-convex side
a. Broad, sinuous profile, high-medium shoulder, rib below rim, grooved handles
b. Body profile almost like lekythos, handles very straight
c. Broad, high shoulder, almost carinated piriform, flattened everted or slightly grooved rim, handles from neck at rim to shoulder, pulled out
i. Medium width at shoulder
ii. Broad at shoulder
d. Piriform, straight or slightly flared neck, higher ring base, pulled out bar handle.
i. Flared neck
ii. Articulated neck
7. Globular, or broader than high
a. Relatively tall, piriform
b. Globular
i. Everted rim
ii. Straight neck
c. Shoulder almost carinated (taper toward lower side almost carinated before)
M. Handleless jugs with tall necks
8. Piriform body, candlestick rim, indented base
a. Long rim
b. Short, ribbed rim
9. Very tall, flared neck, biconical body, ring base
N. Handleless jars with ovoid or piriform bodies and short, straight necks
10. Indented base
11. Ring base
O. Globular or barrel shaped jar, mostly handleless, with short neck ${ }^{\mathrm{e}}$
12. Rim that also serves as a neck, edge of rim beveled, with lug or small loop handles
13. Globular, shoulder simply continues into the neck, relatively small
14. Globular, concave neck, well marked
15. Barrel shaped, conical neck
P. Large rounded barrel-shaped jar with concave neck (rim beveled outside) and small lug handles
16. 2 handles
17. Many handles
Q. Combined representation of an O jar set into a bucket shaped cooler, the join marked by a rib

II and III. Utility Pottery (1) and (II); for IV. Amphorae, see below I2b-4.
Utility Dishes and Bowls ${ }^{f}$ (fig. 35)
A. Small convex dishes with stump bases
B. Convex sides, bulged ring bases
e. Note that $O-Q$ form a subgroup of closely-related vessels.
f. Note that all of these came from Cemetery $\mathbf{Q}$.

Table 12. Corpora of Shapes of Meroitic Pottery from Qustul and Ballana (cont.).
Utility Dishes and Bowls (fig. 35) (cont.)
C. Tapered side, ring base, broad everted rim
D. Tall, straight, slightly concave side, ring base
E. Tall, convex side, beveled, broad, profiled rim, concave base
F. Angled, slightly concave side, everted rim, carination to very low lower side, ring base
G. Convex bowl with rib rim
Utility Jars and Jugs (figs. 36-38)
A. Tall ovoid jar with narrow neck, everted rim

1. One handle
2. Two handles
B. Same, with wide neck, two handles
C. Spouted jars (spout projects upward from shoulder at angle)
3. Broad, on flattened base single handle 90 degrees from spout
4. Medium height, ring base, two handles, each 90 degrees from spout
D. Large, barrel-shaped jar, ring base, wide neck, two or four rim-shoulder handles
E. Open jar with concave base, very broad piriform
F. Open broad, globular to barrel shaped pots with round bases, almost all with handles, rims mostly grooved inside, sometimes coated with clay
5. Squat (relatively small)
6. Globular (relatively medium)
a. Handleless
b. Two handles
7. Globular (rela tively large)
8. Barrel shaped, large
G. Rounded, still elongated, with cylindrical neck, handle neck at rim to shoulder
H. Ovoid jar with everted rim
9. Handleless
10. Two handles
I. Storage and shipping amphorae
11. Small, broad body, small stump base (model?)
12. Piriform, pulled out bar handles, slightly constricted, omphalos inside
a. Relatively shorter, emphasized rim
b. Relatively longer
13. Handle curves from concave neck, body tapers more strongly, base thicker, emphasized omphalos
14. Long tapered body, cylindrical neck, C-shaped handles, stump base marked with line, hollowed from below
V. Egyptian Fine/Ordinary Pottery(IIA and IIB) (fig. 39)
A. Flared neck jars
15. Small
a. Straight neck
b. Flared
16. Narrow neck
17. Medium neck
18. Biconical body
B. Tapered jar with convex base, carinated shoulder, and flared neck
VI. Barbotine Pottery and Ancillary Vessels (fig. 40)
A. Low handleless cup, shoulder ledge, almost vertical shoulder line
B. Goblet, piriform body, vertical rim, two handles
C. Tall, same, no handles
D. Fragment of much larger vessel of C-shape, with everted rim
E. Vertically indented side

Table 12. Corpora of Shapes of Meroitic Pottery from Qustul and Ballana (cont.).

## VII. Terra Sigillata (fig. 41) <br> Convex Bowl <br> Ptolemaic-Egyptian Ordinary Pottery <br> Unclassified

Table 13. Register of Pottery by Form Group and Shape.

## MEROITIC-KUSHITE POTTERY CORPUS ${ }^{\text {a }}$

## I. Fine/Ordinary Pottery

```
Bowls, Cups, and Beakers
    A. B 138-Mer. A; B 213-2
    B. B 77-2 (color); B 155-Mer. A; B 215-2
    C. B 285-3
    D.
    1.Q Q17-2; B 273-3
    2. B 21-1; B 58-2 (color); B 185-3; B 263-7
    E. Q 193-Mer. A (ptd.)
    1. Q 469-4
    2. Q 334-2; Q 253-Mer. D; Q 402-4, 5; B 3-3; B 27-1; B 40-3, 4, 5 (color); B 58-4; B 154B-3;
            B 170-5 (red coat); B 199-Mer. A, B; B 205-6; B 256-1, 2 (both red coat); B 282-Mcr. B
    3. Q 392-1; Q 472-1 (color); B 3-1; B 133-1
    4.
        a. B 182-1
        b. Q 352-9 (color); Q 626-Mer. A; B 32-1; B 236-3; B 247-Mer. A
    F. B 190-4
    G. Q 230-3; Q 384-Mer. A
        1. Q 150-3, Pit Q 150-Mer. A; Q 158-1; Q 164-3 (color, red coat); Q 165-6 (color); Q 172-2 (red coat);
        Q 191-2 (red coat), Mer. A (red coat); B (same); Q 230-6 (red coat); Q 252-8; Q 262-1 (red coat),
        Mer. A; Q 283-2, 3; Q 303-7 (color, red coat), 8 (color), 9 (red coat);Q 305-2,4; Q 334-3; Q 340-2;
        Q 352-1 (color); Q 378-Mer. A, B?, C?, E (red coat), F (red coat); Q 415-2; Q 430-3 (red coat);
        Q464-2 (color); Q 481-Mer. B; Q 488-Mer. A; Q496-Mer. A; Q 661-1, 3; B 8-3; B 12-3 (red
        coat); B 19-1 (color); B 22-2; B 31-3 (red coat), 4 (same); B 32-8; B 35-1 (color, red coat); B 40-2,
        12 (red coat); B 41-1, 2 (both red coat); B 42 Unc.-1, 2, 3; B 49C-3; B 50-4; B 51B-7 (color);
        B 53A-2; B 54-1, 2; B 57-2; B 64-2, 3 (both red coat), Mer. A; B 76-1 (color); B 77-4 (color), 7
        (color); B 78-2, 7, Mer. B, D, F; B 108-8, 12; B 113-1 (red coat); B 144-2; B 145-Mer. A; B 147-
        Mer. A; B 150-Mer. A; B 152-5; B 154B?-Mer. A; B 164-1; B 166-5; B 170-6 (red coat); B 180-3;
        B 186-3; B 188-2; B 199-1 (red coat), 4; B 200-2, 5; B 201-2; B 20S-2, 3, 8 (red coat); B 213-
        Mer. A?; B 215-5; B 228-2 (red coat), 3 (red coat); B 233-3; B 240-3; B 251-1; B 252-5,6 (red
        coat); B 255-1 (red coat), 5; B 257-Mer. A; B 261A-2, 3 (red coat); B 263-2,8 (both red coat);
        B 267-3 (red coat); B 281-Mer. B; B 282-Mer. A, C (both red coat); B 285-Mer. B; B 289-1 (red
        coat); B 291-1; B 293-2; B 298-6 (red coat); B 304-2; B 307-2,4 (red coat); B 308-4; B 309-2
        (red coat); B 310-2,4 (both red coat); B 311/B 316-1, 6 (red coat)
    2. B 28-2; B 32-5 (red coat); B 302-1
    H. Q 439-1 (academic); B 51B-6 (color)
    I.
    1. Q 251-Mer. A; Q 430-1 (color);Q 464-Mer. A; B 42B-3; B 67-3,4, 5; B 73-1 (color); B 111A-4;
        B 111B/B 125-1; B 181-Mer. A; B 251-Mer. B; B 278-1; B 289-2; B 312-8
    2. B 9-5, 6; B 24-1; B 32-2; B 194-4
J.
    1. Q 137-1 (reused, in X-Group tomb, see OINE IX, fig. 149b)
    2. B 10-2; B 205-4 (red coat); B 252-3
```

a. The table does not include sherds and vessels from the Ballana settlement.

Note that painted decoration is remarked only in Egyptian pottery, and that the notation "color" refers to entries in the registers according to the Munsell chart of soil colors.

Table 13. Register of Pottery by Form Group and Shape (cont.).
K.

1. Q 298-4; Q 573-18 (color)
2. Q 636-6; B 66B-3; B 263-3
3. Q 269-4; B 257-Mer. B
4. Q 174-2 (red coat, but early)
L. Q 469-5; B 200-1; B 251-Mer. A
M.
5. Q 636-1, 2
6. Q 575-Mer. B
7. B 226 Mer. A
N. B 309-4 (red coat)
O. B 296-2
P. B 312-6
Q. B 185-Eg. A
R. B 129-1
S. 236-4
T. Q 417-3 (handmade, with pierced handle)

Jars
A. Q 162 -Mer. A, B; Q 188-Mer. A; Q 191-Mer. C; Q 193-Mer. B; B 311/B 316-Mer. A, B

1. B 285 -Mer. C
2. Q 427-Mer. A; Q 636-Mer. A (color); B 45A-1
3. Q 156-Mer. A; Q 312-13 (color); Q 439-5 (color); Q 595-Mer. A
4. Q 304-Mer. A; Q417-1 (fine, academic), 4 (academic); Q 469-6; Q $540-1$; Q 661-8; B 77-9; B 801; B 88-1; B 273-2
5. Q 165-2; Q 402-1, 3; B 51B-5; B 52-1; B 66B-1; B 78-1; B 81-2; B 88-2; B 89-2. 3 (red coat); B 162-1; B 200-3; B 235-1; B 263-4, 5, 6 (red coat)
6. Q 81-1 (or B2, red coat); Q 165-1, Mer. A (red coat); Q 172-4; Q 191-Mer. E; Q 242-Mer. A; Q 262-2; Q 293-Mer. A; Q 302A-3; Q 305-3; Q 314-Mer. A; Q 335-1; Q 340-3; Q 352-5; Q 353-Mer. B; Q 378-Mer. H, I?, J; Q 384-Mer. B?; Q 402-2; Q 415-1; Q 661-2, 6; B 43-1; B 51B-1, 2; B $57-1$; B 58-1, 3 (both red coat); B 67-1; B 70-1, 2 (both red coat); B 77-1, 3, 5; B 78-3; B 87-9; B 92-1 (red coat), 2; B 105-1; B 108-7, 9 (red coat); B 132-1; B 135-4, 7 (red coat); B 154B-1, 2 (red coat); B 166-2, 3 (dec.), 4 (all red coat); B 171-2, 5; B 174-2 (red coat); B 185-1; B 186-1 (red coat); B 193-3; B 194-1, 2, 3; B 199-2, 3; B 205-7; B 209-9; B 215-4, 6 (red coat); B 230-1; B 233-2; B 234-1; B 285-2 (red coat), 5; B 287-1; B 309-1, 3? (both red coat); B 316-4
7. B 238-1 (red coat), 7?
B.
8. Q 592-14; B 86-1; B 178-1; B 180-5 (red coat). 6
9. Q 139-1, 2; Q 230-1 (red coat); Q 430-2 (red coat); B 6-1; B 7-1; B 32-4 (red coat), 7; B 49C-1; B 64-5 (red coat); B 236-1; B 255-2. (red coat); B 263-1 (red coat); B 279-6 (red coat); B 298-7; B 304-1; B 310-5 (red coat)
10. Q 230-2; Q 305-5; Q 352-4; Q 253-Mer. C ?; B 9-2. 3, 4; B 11-1; B 12-4 (red coat); B 13-4 (red coat); B 14-13, 15 (both red coat); B 26-1 (red coat); B 32-3 (red coat); B 39A-1; B 41-3; B 49C-2 (red coat); B 58-5 (red coat); B 62-1 (red coat); B 64-1, 6 (red coat); B 87-8; B 108-13 (red coat); B 152-4. 7 (both red coat); B 166-1 (red coat); B 170-9 (red coat); B 179-4; B 184-1; B 197-5; B 204A-1; B 208-1 (red coat, ptd); B 209-1 (red coat), 8; B 232-3; B 255-4 (red coat); B 267-1 (red coat), 2; B 282-13 (red coat); B 307-1, 3 (red coat); B 310-1, 3 (both red coat)
11. Q 303-4; Q 305-1; Q 621-Mer. A; B 135-8 (red coat); B 197-4; B 209-4, 10; B 215-7; B 217-2. 3., 4; B 255-3 (red coat); B 277-1; B 279-1 (red coat), 3; B 285-4; B 316-1, 3 (red coat)
C.

Table 13. Register of Pottery by Form Group and Shape (cont.).

```
Jars (cont.)
    D. B 77-10
    E.
        1.Q \51C-Mer. A;Q618-3,4;Q666-Mer. B
        2. B 53A-1; B 66B-2; B 130-1
    F. B 297-1
II. Kushite Wheelmade Pottery
Cups and Bowls
    A.Q 661-5
    B. Q 254_Mer.D; Q 336_Mer. A; Q 352_Mer. C; Q 459_Mer. A; Q 470_Mer. A; Q 508_Mer. B; Q 533-
        Mer. A
            1. Q 159-Mer. A; Q 250-Mer. A; Q 262-Mer. C; Q 269-3; Q 378-Mer. K; Q 416-Mer. A; Q 440-Mer.
                A; Q449-Mer. A, B; Q 466-Mer. A; Q 480-B; Q 488-7 (color); Q 510-Mer. A; Q 525-Mer. B;
                Q 573-15 (color), 17; Q 579-C; Q 648-Mer. A
            2. Q 165-3 (color), 4 (color); Q 176-2;Q Q75-Mer. A
    C.
        1. Q 488-2 (color); Q 634-1
        2. Q 359-1
    D. Q 323-Mer. A; Q 466-1 (color); Q 683-Mer. F; B 26-5; B 153-2
Jars
Q 155-2 (small handles, A?); B 293-3
    A. Q 491-2; Q 499-4; Q 630-Mer. A
    B. Q 242-Mer. B; Q 475-6; Q 478-Mer. A; Q485-1;Q 490-1; Q 574-4; Q 592-9; Q 595-Mer. B; B 14-9
    C.Q Q54-1
    D.Q 523-Mer. A
        1. Mer. Set B-1215
        2. B 153-2
    E. Q440-Mer. B; Q 551C-Mer. B
        1. Q 180-6; Q 257-Mer. A; Q 489-1
        2. Q 497-3; Q 573-11,12
        3. Q 308-2Q 47S-8; Q 508-Mer. A; Q 560-3; Q 574_Mer. A; Q 667-1; Q 683-Mer. C; B 143-3;
            B 264-1
    F.
        1. B 83-1
        2. В 77-6; В 78-5; В 180-1, 2; В 186-4,5
    G. Q 317-Mer. A; Q 579-Mer. A; Q 626-Mer. C
        1.Q 383-3; Q 567-Mer. B?;Q 647-2
        2.Q 613-1
        3. Q 269-2; Q 371-Mer. A; Q 475-5; Q 488-3; Q 499-5; Q 525-Mer. A; Q 567-Mer. A; B 312-1
        4. Q 322-3; Q 591-1, 2
        5.Q 683-Mer.D
    H.Q 499-2
    I. Q157-Mer. A;Q 430_Mer. A; Q 433-Mer. A; Q478_Mer. B; Q 573-Mer. C;Q 626-Mer. B; B 209-7
```


## Stands or Pedestal Platters:

Q 322-Mer. A

Table 13. Register of Pottery by Form Group and Shape (cont.).

```
III. Storage Jars
Q 339-Mer. C (with beveled rim, vestigial handles, two grooves)
    A. Q 301-1; Q 574-Mer. B; Q 595-Mer. D
    B. B 322-3 (red coat, dec.)
    1. B 40-11; B 135-6; B 193-1
    2. B 135-3
    C.
    1. B 13-3 (red coat); B 135-10; B 179-1
    2. B 209-5
IV. Wheelmade Utility Pottery
A. B 144-7
B. B 31-2 (red coat)
C. Q 235 -Mer. A
1. B 15-1
2. Q 156-1 (Mer. B); B 312-5
D.
1. B 315-1
2. B 26-5; B 34-1
E. Unc. Prov. (Cem. B or Mer. settlement)
F.
1. B 12-2
2. Q 674-2
3. B 264-1
G. Q \(312-10\)
H. B 149-2
V. Handmade Ordinary Pottery
(Globular holemouth bowl or jar Q 307-Mer. A)
(Tapered beaker; Q 461—Mer. A)
A. Q 157-Mer. B; Q 188-Mer. B; Q 237 -Mer. A; Q 274-Mer. H; Q 280-Mer. H. I (red coat); Q293-Mer. B; Q 301-Mer. E; Q 304-Mer. D, E (red coat), F; Q 305-Mer. B; Q 341-Mer. A; Q 352-D, E; Q 378-Mer. L. M, N; Q 497-Mer. A; Q 512-Mer. A; Q 533-Mer. or Later A; Q 563-Mer. B; B 149-3
B. Q 237-Mer. B; B 184-4
C. Q237-Mer. C
D. Q \(567-3\)
E. Q 319-3
```


## SUDANESE-SAHARAN POTTERY CORPUS

I. Bowls and Beakers

Q 173-Mer. A (bowl)
A. Q 489-8; Q 529-4
B. Q 162-9 (color); Q 417-5; Q 481—Sud. A
C. Q 281-Sud. A; Q 573-13 (color)
D. Q 406-1

Table 13. Register of Pottery by Form Group and Shape (cont.).

```
Jars
    A. Q 270-1; Q 278-1; Q 283-5; Q 304-Sud. A
    B.
        1. Q 439-3 (color)
        2. Prov. Unc. (Cem. Q or Mer. settlement)
    C. Q 188-Sud. A; Q 319-Sud. A; Q 439-Sud. A; Q 392-2; Q 406-Sud. A (4, possibly includes 3); Q 449-Sud.
        A; Q 475-9; B 92-3; B 151—Sud. A
    D. Q 319-3; Q 466-2 (or Mer. Handmade E); B 143-2
    E.Q 439-3; Q 489-2
    F. Q 613-2; Q 626-5; Q 644-1;Q 676-2
```


## EGYPTIAN POTTERY CORPUS

I. Fine/Ordinary (I)

Pipettes or Klepsydrai
Q 279-Eg. B ?
A. Q $318-1$; Q 330-1; Q 392-4; Q 595-Eg. A; Q 684-2
B. Q 298-2 (color); Q 312-11 (color); Q 336-3; Q 372-5; Q 466-4; Q 618-1; B 323-1
C. Q $540-6$; B 31-5

Cups or Goblets, all with ring or stump bases
A. Q 488-1 (color); Q 666-Eg. A
B. Q 162-8 (color); Q 449—Eg. A; Q 551C-Eg. A; Q 567-1, Eg. A; Q 574-5; Q 612-2; Q 618-2 (color); Q 622-Eg. A; Q 625-1 (color), 3 (color); Q 626-Eg. A, B; Q 646-7, 11 (color); Q 648-Eg. A; B 111A/120-11; B 134-1; B 140-4; B 281-2; B 298-3
C. Q 230-7 (ptd.); Q 660-Eg. A; B 91-5
D. Q 194-1; Q 335-Eg. A (very large); Q 469-8; Q 540-5; Q 595—Eg. B; Q 636-3; Q 666-Eg. B; B 122-6
E. Q $416-E g . A ; Q 493-4,6 ; Q 566-3$ (color); Q 567-5 (color); Q 574-8; Q634-Eg. A
F. Q 308-4; Q 439-2 (color); Q 495-1; Q 573-Eg. A; Q 646-3, 9; B $111 \mathrm{~A}-7,12$
G. Q 156-Eg. D (?)

1. Q 613-3 (color)
2. Q $162-10$ (color), 13 (color); Q $308-5$ (color); Q $540-4 ;$ Q $574-10$, 11 (color); B 122-2 (handle); B 298-2
3. B 292-2

Ointment Juglets and Jars intended for resealing
A. Q $540-\mathrm{Eg} . \mathrm{A}, \mathrm{C}$; Q 567-Eg. B
1.
a. Q 270-Eg. A; Q 670-16
b. Q 659-1; B 51B-4 (color); B 285-1
2.
a. Q $191-3$ (ptd.); Q 253-3; Q 298-1; Q 488-4; Q 566-4; B 282-1
b. Q 667-2
i. Q 308-1; B 209-6
ii. Q 493-5; Q 573-1 (color); Q 612-3; Q 638-1; Q 666-2; B 61-1 B 77-8; B $111 \mathrm{~A} / 120-5$; B 308-2
c. B 29-2

Table 13. Register of Pottery by Form Group and Shape (cont.).
Ointment Juglets and Jars intended for resealing (cont.).
3.
a. B 99-1
b.
i. Q 529-1; Q 592-8 (color); B 47A-1; B 236-5
ii. B 151-4
iii. B 40-1; B 264-2
4.
a.
i. Q 499-6; B 217-1 (ptd.)
ii. B 69-1 (color)
b.
i. B 268-1
ii. Q 162-12; B 15-2
5.
a. Surface D-8
b. Q $670-5$
6.
a. Q $630-1$
b. B 32-6
c. B 80-2
d. Q $303-5$
7.
a. Q 298-3; Q 312-12, 3; Q489-3 (color)
b.
i. Q 402-6; B 66A-8 (color); B 91-4
ii. B $26-2$ (ptd.); B 12-1
c.
i. B 35-2
ii. B 209-3 (ptd.)
iii. Q 230-5 (ptd.); B 14-10; B 127-1; B 174-1 (ptd.); B 193-2 (ptd.); B 215-8 (ptd.)
8. Q 340-1; Q 383-Eg. A (Mer. decoration)
B. Q 499-7 (see Chapter 4. Inscription No. 11); Q 540-Eg. B; Q560-Eg. D; Q 567-4; Q573-Eg. B; Q 587Eg. A; Q 626-Eg. D; Q 634-6; B 122-1; B 312-2
C. Q 490-2
D. Q $251-2$

Pitchers or Jugs/Amphorac and Jars
A. Q 634-3
B. Q 312-2 (Eg. C)

1. Q $162-7$
2. 

a. Q 592-13; B 122-3
b. B $91-1,2$
C. B 236-6
D. Q 372-2
E. Q $560-9$
F. Q 243-Eg. A; Q 280-Eg.E ?; Q 353-Eg. A; Q 466-Eg. B; Q $579-E g . A ; Q 683-E g . B$

1. Q 439-4; Q 540-2, 3; Q 658-1
2. Q 162-5 (color); Q 466-3; B 66A-12; B 128-1; B 140-2; B 299-4
3. Q 573-7: Q 625-2; Q 677-Eg. A
4. Q $574-9$
5. Q 162-6

Table 13. Register of Pottery by Form Group and Shape (cont.).

```
Pitchers or Jugs/Amphorae and Jars (cont.)
    G.
    1. Q 594-2
    2. Q 684-3
    3. B 299-1 (red coat?)
    H. Q 644-1; B 47B-1
    I. Q 250-3
    J.
        1.Q 384-2
        2. B 51B-3
    K. Q 683-Eg. E; B 66A-10 (color), 14 (color)
        1.Q 162-11; Q 296-Eg. A (III)
        2.Q351-Eg.A
    L.Q551C-Eg.C;Q587-Eg.D
        1. B 152-1 (red coat)
    2. Q 230-Eg. B
        a. B 299-2
        b. B 203B-1
        c. Q 253-5
            i. Q 318-2; B 111A-14
            ii. B 81-4
            iii. Q 670-15
        d.
            i.Q 488--8
            ii. Q 384-1
        3. Q 150-2 (II, color)
        a. Q 573-14
        b.
            i. B 111A-3
            ii. Q 683-6
        c. B 312-3
    M. Q 676-Eg.A
        1.Q 683-Eg. H, I
            a. Q427-3
            b. Q417-6; Q 612-1
        2.Q 636-7
    N.Q 243-Eg. B; Q 384-Eg.A
        1. B 81-1; B 111A-2; B 191-1
        2. B 96-1
    O. Q 156-Eg. A (-P); B (-P); Q 176-Eg. A; Q 300-Eg. A; Q 304-Eg. B ?. D ?; Q 372-Eg. A. B;Q 461-Eg.A;
        Q 466-Eg. A;Q 469-Eg. A;Q Q70-Eg. A; Q 475-1; Q 483-Eg.B (red coat);Q 574-Eg. A;Q Q87-Eg.B;
        Q 594-Eg.A;Q 626-Eg.C
            1.Q499-1
            2. Q 573-8
            3.Q Q72-3; B 67-2; B 111A-13; B 261A-1
            4. B 111B-2; B 122-4
P.
    1.Q Q53-4;Q 269-1;Q 475-2, 3; Q 659-2
    2.
    Q.B 52-2
    Note that O-Q form a subgroup of closely-related vessels.
```

Table 13. Register of Pottery by Form Group and Shape (cont.).
II and III. Utility Pottery (I) and (II)
Utility dishes and bowls.
A. Q 312-16 (color); Q 573-9
B. Q 254-Eg. B; Q 298-Eg. A (red coat); Q 331C-Eg. B; Q 573-16
C. Q 188 - 1
D. Q 254-1; Q 308-3
E. Q 307-Eg. A; Q 567-2; Q 595-Eg.E
F. Q $469-9$
G. Q 650-3

Note that all of these came from Cemetery Q .
II-IV. Utility Jars, Jugs, and Cooking Pots (note that this outline included form groups II, III, and IV; where not specified in forms A-H, vessels belong to II; in form I where not specified, vessels belong to IV)
A.

1. B 222-1; B 279—7 (III)
2. Q 330-Eg. A (III); Q 640-3 (III); B 200-4 (III); B 316-2 (III)
B. Q 162-Eg. C (III, -C2? red coat); Q 176-B (II, white coat); Q 188-Eg. A; Q 291-Eg. B (III); Q 475-7 (III); Q 551C-Eg. D (III); Q 560-Eg. C (II); Q 626-5; B 140-3, 5 (both III)
C. Q 532-Eg. A
3. Q 493-1 (color)
4. Q 416-Eg. B (II-III); Q 493-2 (III). Eg. A (III); Q 500-Eg. B (III); Q 573-Eg.E (III); B 273-1
D. Q 284-2
E. Q 256-Eg. C; Q 573-10
F. Q 237 -Eg. B; Q 256 -Eg. A; Q 304-Eg. G; Q 312-Eg. D. E; Q 313-Eg. A. C; Q 317-Eg. B; Q 336-1 (Eg. B, dark, with spout); Q $366-\mathrm{Eg} . \mathrm{A}$ (with spout); Q $466-\mathrm{Eg} . \mathrm{C} ; \mathrm{Q} 488-\mathrm{Eg} . \mathrm{B}$ (with spout); Q 500-Eg. A; Q 543-Eg. B?, C?; Q 683-Eg. F
5. Q 162 -Eg. A; Q 257 -Eg. A, B; Q 355-Eg. B; Q 493-3; Q 525-Eg. A; Q 646-8, 12; Q 666-Eg.E; Q 670-Eg. D
6. Pit Q $150-$ Eg. A (?); Q 354-Eg. A; Q 624-4; B 66A-12
a. Q $317-2$
b. Q 293-2; Q 317-1; Q 322-Eg. A; Q 359-Eg. A; Q 365-3; Q 529-2; Q 574—7
7. Q 293-3; Q 634-2
8. Q 414-Eg. A; Q 566-2; Q 567-6; Q 634—7; Q 650—-1
G. Q 271 -Eg. $A ; Q 427-1 ; Q 566-1$
H. Q $525-$ Eg. $B$
9. Q $293-1$
10. Q 156-Eg. C (?)
I.
11. Q 560-5 (II-III); B 298-5 (III)
12. 

a. B 146-2 (III)
b. Q 372-1; Q 495-2
3. Q $150-2$; Q 495-3?
4. Q 166-Eg. A (?); B 135-2
V. Egyptian Fine/Ordinary Pottery (IIA and IIB)
A.
1.
a. B 126-2
b. Q 639-2
2. B 134-2

Table 13. Register of Pottery by Form Group and Shape (cont.).

```
V. Egyptian Fine/Ordinary Pottery (IIA and IIB) (cont.)
        3. Q 560-1; B 151-3
        4. Q 646-4; B 144-1
    B.Q 670-6
VI. Barbotine Pottery and Ancillary Vessels
B 167-Eg. A
    A. Q 480-Eg. A (variant, no slip); Q 573-19; B 130-Eg. A; B 185-4 (indented sides); B 226-Eg. A; B 236-2;
        B 282-9
    B. Q 560-2 (color)
    C. Q 497-Eg. B; B 283-1
    D. B 282-Eg. A (jar; see also B 268 Eg. A)
    E. B 184-5; B 185-Eg. A (no trailed slip or dark bands)
VII. Terra Sigillata
    Convex Bowl: Q 469-7
Ptolemaic-Egyptian Ordinary Pottery }\mp@subsup{}{}{\mathrm{ b}
Bowls and Cups
    A. Q 363-3 (vine and crosshatched band, "Silhouette Style")
Jars
In shape of ord. jar I-O: Q \(603-E g\). A. U-E brown jar IV- in form of ord. jar I-O with small handle at rim, two pr. bk. bands
Unclassified
Q 277-1 (Sudanese-Saharan or Meroitic Handmade)
```

b. This is not a clearly distinguishable group, so it is not included as a separate classification. See Appendix B; the two pieces are identified separately to show that pottery of the period appears in Meroitic funerary contexts.

## CHAPTER 3

## OBJECTS

The Meroitic objects represent changing selections of funerary objects and objects of daily use. ${ }^{1}$ The former includes structural elements of the cult, such as stelae, door jambs, ba statues and carved offering tables, and objects deposited with the deceased such as coffins, wrappings, leaves, and incised offering tables. Although other objects such as cosmetic equipment, jewelry, weapons, and spindles could have been used in daily life, no attempt was made to equip the deceased with a full or even limited range of materials needed to continue an earthly existence.

Objects of daily use or potentially so, consisting largely of certain metal and glass vessels and beads, can be divided between objects made in Nubia and those imported from Egypt and the Mediterranean world. In the present work objects are presented according to their intended use, rather than their place of origin or the material from which they were made.

The Meroitic objects from Qustul and Ballana parallel those from other cemeteries such as Karanog and particularly Faras. Wood and textiles were not common, however, at Faras. ${ }^{2}$ Faras and Karanog exceeded the Qustul and Ballana cemeteries in size and wealth but the condition of the latter cemeteries and the finds therein offer much new information on the history of the region and the development of its culture. In fact, recording of many finds and contexts at Faras and Karanog was not exact and the careers of many types of objects and practices will have to be traced from such sites as Qustul and Ballana.

## A. FUNERARY OBJECTS

## STONE FUNERARY AND CULT OBJECTS

The funerary objects make up one of the most revealing groups of material in the collection because the stone objects and fittings associated with the superstructure were damaged and found out of position so often that they add relatively little to our knowledge of them or of the circumstances in which they were deposited. However, some crudely incised offering tables were often found in the shaft or used as blocking and their position may be considered original.

## Offering Tables

Offering tables (pls. 100, 101) were the earliest funerary objects after coffins were included with the burial in Napatan times. Early examples include ovals of clay, sandstone rectangles or squares. These have narrow ridges around the edge and offerings depicted in raised relief in the basin. Others were made simply by incising the outline of a offering table in the top of a sandstone slab, sometimes of quite irregular shape. The loaves were incised within the outline, and a deep, narrow channel for offerings cut across the base-side.

1. These are personal objects, clothing, and containers. The only implements, spindles, occur late. The one tool, a hoe/mattock, found at Karanog, came from the fill of a superstructure (Woolley and Randall-Maclver 1910, pl. 35:7459, from G 672). Others from G 585 and G 612 are either cosmetic implements or unidentifiable.
2. Only one coffin burial is cited (Griffith 1925, p. 58, of pottery), and ivory inlays (1924, pl. LXIV) are not described with any backing.

Both types were deposited in the substructure with the deceased, at, near, or even as a part of, the blocking. A few were deposited at or near the surface, and these were better made and ultimately inscribed, at first across the basin, then around the edge. ${ }^{3}$

Table 14. List of Offering Tables.

| Tomb and <br> Object Number |  |
| :--- | :--- |
| Q 89-1 |  |
| Q 155-11 | Reused in the structure of a Christian tomb |
| Q 161-1 | Incised |
| Q 161-8 | Incised |
| Q 258-2 | Incised |
| Q 270-2 | Inscription No. 15 |
| Q 292-1 | Inscription No. 12 |
| Q 295-1 | Incised |
| Q 458-1 | Inscription No. 6 |
| Q 472-3 | Incised |
| Q 474-5 | Incised |
| Q 480-2 | Incised |
| Q 480-3 | Incised |
| Q 480-4 | Incised |
| Q 486-2 | Incised |
| Q 486-3 | Incised |
| Q 486-4 | Incised |
| Q 535-2 | Incised |
| Q 536-2 | Incised |
| Q 546-2 | Incised |
| Q 599-3 | Incised |
| Q 626-4 | Inscriped |
| Q 633-2 | Inscribed sandstone fragment |
| Q 684-5 | Incised |
| Q 684-6 | Incised |
| B 42A-1 | Incised |
| B 84-1 | Incised |
| B 98-1 | Inscription No. 8 |
| B 146-1 | Inscription No. 19 |
| B 170-1 |  |
| B 170-2 |  |
| B 179-3 |  |
| B 183-1 |  |
| B 190-1 |  |
| B 226-1 |  |
| B 290-1 |  |

3. Vila 1980, pp. 106-111 (2-V-6/248, 259); idem 1982, p. 156 (fig. 167). Simplified offering tables were also deposited in the early Meroitic tombs at Abri (Vila 1982, figs. 37, 41).

These two kinds of offering table were still used in modified form in the Qustul cemetery. The simplest and most common was normally used as part of the blocking; as at Abri-Missiminia, it is an outline scratched on the surface of an irregular slab, sometimes with loaves in it. The second kind of offering table is the more elaborate object commonly associated with Meroitic Nubia. A stone was cut in the shape of an offering table with the sides roughly dressed, the undersides slightly flattened, and a basin carved in the top. Often, the surface had representations of offerings, symbols, or even deities, in raised relief. ${ }^{4}$ Very often, an inscription was cut in the border. Although these well-made offering tables were occasionally reused to block chambers, they were probably all intended to be a part of the cult installation at the surface. All but two of the offering tables from Cemetery Q were outlines incised on slabs; most of those from Cemetery B were carved.

The carved tables of the second group were not as complex as those found elsewhere. Only those with plain basins, basins with loaves, basins with loaves and hs jars, basins with loaves and an amphora, and basins with loaves and a cartouche shaped depression occurred. There were no representations of deities.

## Stelae

As far as is known, the Meroitic stela was intended for deposit with the superstructure, ${ }^{5}$ but none were found in position at Ballana and Qustul; they had been either reused or discarded. Major shapes include (a) elongated trapezoids or rectangles; (b) tablet shapes, a rectangle with a projection, frequently trapezoidal, on the top; (c) round topped or paddle shaped. Inscriptions occur, both ruled (pl. 100d) and unruled (pl. 99c); ruled lines sometimes cover much more of the surface than needed. Round topped or paddle shaped stelae types sometimes included carved or painted images of the deceased, generally in profile, ${ }^{6}$ and sometimes in a modified three-quarter view; one stela from Ballana has a figure in this pose (pl. 98). Occasionally the figure is shown frontally in relatively high relief. ${ }^{7}$ Only two of the stelae, round-topped and without inscriptions, were from Qustul; most came from Ballana.

Table 15. List of Stelae.

| Tomb and Object Number | Remarks |
| :---: | :---: |
| Q 191-1 | Inscription No. 4 |
| Q 345-3 | Inscription No. 5 (X-Group tomb) |
| Q 378-1 | Uninscribed, with round top |
| Q 378-2 | Uninscribed, with round top |
| B 2-7a |  |
| B 2-7b |  |
| B 10-1 |  |
| B 12-5 |  |
| B 14-19 |  |
| B 70-3 |  |
| B 138-1 | Inscription No. 2 |
| B 179-8 | Inscription No. 16 (fragment) |

## Floral Pillars

Rough stone pillars with an oval bulge near the top and a conical (inverted) capital occur in major cemeteries of Lower Nubia. Two were found at Qustul (Q 156-2 and Surface ca. 3 m SW of D 7), with the conical tops removed. The were both found near or with pyramid structures which had been destroyed. Pillars
4. For discussions of various kinds of offering tables, see Yellin 1982 and Hintze 1959.
5. Woolley and Randall-Maclver 1910, pp. 9, 10.
6. Woolley and Randall-Maclver 1910, pls. 11-14.
7. Woolley and Randall-MacIver 1910, pl. 11:C 40265, from G 411; Griffith 1924, pl. LXV:3.
of this type probably depict the lotus, and they have been restored as emerging from the tips of pyramids at Meroe. They have never been assigned a convincing place elsewhere in the complexes of Lower Nubia and their size would be appropriate for such a use. ${ }^{8}$

## Ba Figures

Most large Meroitic cemeteries and many small ones contain figures of birds (falcons) or combined human and falcon figures that are usually called ba statues or figures. Although several were found at Qustul and Ballana, none were complete and few remarks can be made on their typology based on the remaining fragments. Statues that were made entirely in the form of birds were found only in Cemetery Q, while combined bird and human figures were found in both cemeteries. The most common mutilation was the removal of the head, although the pedestal and feet were also often lost. A number of heads in Cemetery B were associated with bodies, but the degradation of the sandstone was often so complete that the join is conjectural. The best join is between B 242-1 and B 245-1.

Table 16. List of Ba Figures.

| Tomb and Object Number | Remarks |
| :---: | :---: |
| Surface near X-Group chapel QC 15-1 ${ }^{\text {a }}$ | Head of ba figure |
| Q 86A-1 | Fragment of ba figure |
| Q 276-1 | Torso of female ba statue |
| Q 279-1 | Avine ba statue |
| Q 333-1 | Base and feet of ba statue |
| Q 340-10 | Avine |
| Q 378-3 | Base of figure |
| Q 378-4 | Avine |
| Q 480-5 | Ba figure fragment |
| Q 551C-1 | Avine |
| Q 670-18 | Possibly recut avine, now with human head |
| Q 684-7 | Avine? |
| B 100-1 | Body of B 254-1 |
| B 213-5 ${ }^{\text {a }}$ | Head of B 215-1 |
| B 215-1 | Body of B 213-5 |
| B 242-1 | Head, joins B 245-1 |
| B 245-1 | Body of B 242-1 |
| B 254-1 | Head of B 100-1 |
| B 257-2 | Head |
| B 281-1 | Fragments of ba stame |

a. The head is represented with deep crisscross grooves for the hair. Similar treatment can be observed on heads from Argin (Guinea and Teixidor 1965, pl. XXIX:b, c) and Gamai (Bates and Dunham, 1926, pl. XXXVI:2, 3).

## FUNERARY OBJECTS FROM THE BURIALS

The simplest complete burial at Qustul consisted of a coffin, a wrapping (often a reused sheet or garment), and a crudely incised offering table. ${ }^{9}$ The only major element added at Qustul was a deposit of leaves, probably a funerary garland.
8. Griffith 1924, pl. LXVII, 6-8; Vila 1982, p. 30, fig. 31:3. The lotus depiction is confirmed by a decorated pillar from Aniba (Abdel-Moneim Abu Bakr 1967, pl. XXXII above). For the use of the pillar at the tip of a pyramid, see Hinkel 1982, pp. 127-35. Bonnet and Valbelle 1987, especially p. 28.
9. See pp. 93, 94 above for offering tables.

Coffins
The significance of coffins (pls. 18, 19) even for poorer burials of Late Period Egypt was that special protection was almost essential for a proper transmission to the pharaonic afterlife. Perhaps because of termites such objects have not been found often in Meroitic contexts, for the practical futility of such protection must soon have become apparent.

Though uncommon in Meroitic Lower Nubia, coffins do occur at Gamai, at Aksha, and at Abri (Missiminia) to the south. ${ }^{10}$ However, they are rarely mentioned among remains at Faras or Karanog. ${ }^{11}$

Except for textiles and pottery, coffins occurred in more tombs at Qustul than any other intentionally deposited object. The contrast between Qustul and Ballana, where they were found in only four tombs, is very important and must have chronological significance. Coffins in the present material were almost all badly deteriorated due to the action of termites, but most retained evidence of their original shape. However, because the wood was so thoroughly deteriorated, the original presence of a coffin burial was made easier to detect, since the fragmentary coffins were impossible to reuse and it would have been quite difficult to remove all of the remains from the tomb. A number were preserved well enough to be photographed, however, and some samples were obtained.

Table 17. List of Coffins.

| Tomb and Object Number | Material Remains and Type | Other Remarks |
| :---: | :---: | :---: |
| Q 151-1 ${ }^{\text {a }}$ | Log | Sample kept |
| Q 155-1 | Boards | Sample kept |
| Q 162-1 | Plank coffin | Sample kept |
| Q 163-1 | Log | "Carved," sample kept |
| Q 177-1 | Log | "Dom," sample kept |
| Q 180-1 | Wood fragments | Sample kept |
| Q 181-1 | Remains | Coffin B, sample kept |
| Q 185-1 | Remains | Coffin B |
| Q 189-1 | Same | Coffin B |
| Q 190-1 | Coffin |  |
| Q 193-1 | Coffin |  |
| Q 228-1 | Log |  |
| Q 233-1 | Remains, cord |  |
| Q 237-1 | Remains, cord |  |
| Q 240-1 | Remains, palm log |  |
| Q 245-1 | Remains, cord | Sample kept |
| Q 246-1 | Anthropoid? |  |
| Q 248-1 | Palm log |  |
| Q 250-1 | palm log |  |
| Q 251-6 | Log fragments |  |
| Q 256-1 | Coffin or bed remains |  |
| Q 258-1 | Coffin | Sample kept |
| Q 259-1 | Palm, tied | Ropes, sample kept |
| Q 267-1 | Log | Tied with twisted palm leaves, sample kept |
| Q 272-1 | Coffin |  |

10. Bates and Dunham 1927, pp. 26, 27 (where the destructive effect of termites is noted); Vila 1967, pp. 329, 330; Vila 1982, pp. 16, 180 (much more common than in other phases at Abri). See also Fernandez 1984, p. 430.
11. The only coffin found at Faras was pottery (Griffith 1924, p. 146), and wooden coffins were rare at Karanog (Woolley and Randall-Maclver 1910 G 67, G 177, possibly G 419).

Table 17. List of Coffins (cont.)

| Tomb and Object Number | Material Remains and Type | Other Remarks |
| :---: | :---: | :---: |
| Q 275-1 | Palm log |  |
| Q 280-1 | Remains, plank | Sample kept |
| Q 284-1 | Remains | Sample kept |
| Q 290-2 | Palm log | Holes bored for binding |
| Q 299-1 | Coffin | With cord |
| Q 300-1 | Palm log |  |
| Q 302A-1 | Coffin | Wound straw, sample kept |
| Q 303A-1 | Palm log, cord |  |
| Q 303B-2 | Palm log remains |  |
| Q 305-8-9 | Wood fragments | Straw cord, sample kept |
| Q 306-1 | Anthropoid with gesso, coffin made with slots | Sample kept |
| Q 307-4 | Wood fragment |  |
| Q 314-1 | Coffin |  |
| Q 328-2 | Palm |  |
| Q 339-1 | Coffin | With wound straw |
| Q 353-2 | Remains | Coffin B |
| Q 353-4 | Remains | Coffin C |
| Q 370-1 | Log, sycamore? | Sample kept |
| Q 371-1 | Palm |  |
| Q 372-7 | Anthropoid |  |
| Q 430-6 | Palm wood |  |
| Q 437-1 | Remains | Coffin A |
| Q 440-1 | Wood fragments |  |
| Q459-1 | Plank |  |
| Q 464-1 | Remains | Coffin C |
| Q 469-1 | Remains, coffin |  |
| Q 470-1 | Palm log remains |  |
| Q 475-25 | Remains | Coffin A |
| Q 475-26 | Remains | Coffin B |
| Q 477-1 | Coffin |  |
| Q 484-1 | Coffin | Wound straw |
| Q 486-1 | Coffin of palm tree bark | Bound with straw |
| Q 487-1 | Coffin | Cord binding |
| Q 489-6 | Remains, bier or coffin |  |
| Q 492-1 | No lid |  |
| Q 499-11 | Remains | N coffin |
| Q 499-12 | Remains | S coffin |
| Q 508-1 | Remains with straw cord |  |
| Q 509-1 | Palm log remains |  |
| Q 510-1 | Palm log remains |  |
| Q 523-1 | Palm log coffin | Straw cord |
| Q 526-4 | Palm log remains of coffin $B$ | Tied with reeds |
| Q 527-1 | Palm | Made of five bark strips |
| Q 531-1 | Remains | Wound straw cord |
| Q 541-1 | Sycamore coffin; lid on | With holes to fix planks |
| Q 547-1 | Sides palm, bottom other, holes for fastening with cord |  |

Table 17. List of Coffins (cont.).

| Tomb and Object Number | Material Remains and Type | Other Remarks |
| :---: | :---: | :---: |
| Q 564-1 | Palm log remains |  |
| Q 567-7 | Remains | With fiber |
| Q 568-1 | Remains | Reed bindings |
| Q 571-1 | Remains | Wound straw cord |
| Q 578-1 | Log remains |  |
| Q 579-3 | Remains | Coffin B |
| Q 585-1 | Palm log remains |  |
| Q 592-1 | Coffin | Dimensions given |
| Q 593-1 | Palm log remains |  |
| Q 595-1 | Palm log remains |  |
| Q 600-1 | Wood fragments | With cloth |
| Q 608-1 | Palm log remains |  |
| Q 617-1 | Wood remains |  |
| Q 623-1 | Rectangular? |  |
| Q 645-1 | Coffin | Dimensions given |
| Q 646-1 | Remains | Coffin F |
| Q 653-1 | Palm log | Dom species |
| Q 654-1 | Coffin | Wound straw cord |
| Q 668-1 | Remains | Dimensions given, straw cord |
| Q 670-3 | Remains of coffin B | Dimensions given |
| Q 684-1 | Remains | S coffin |
| Total: | 206 coffins in Cemetery $\mathrm{Q}^{\text {a }}$ |  |
| B 8-4 | Remains of coffin $F$ |  |
| B 66A-1 | Remains |  |
| B 140-1 | Remains |  |
| B 201-3 | Remains of coffin or bier |  |

a. Note that the list in this table includes only coffins with some specific description or disposition. Most coffins were recorded only by a brief notation, such as "wood traces," "fragments," or "remains." They are as follows: Q 168-1, Q 169-1, Q 172-5, Q 173-1, Q 174-1, Q 178-1, Q 197-1, Q 198-1, Q 232-1, Q 234-1, Q 235-1, Q 236-1, Q $260-1, \mathrm{Q} 263-1, \mathrm{Q} 276-1$, Q 297-1, Q 304-2, Q 313-1, Q 317-9, Q 340-6, Q 341-1, Q 342-1, Q 346-9. Q $347-1, \mathrm{Q} 357-3, \mathrm{Q} 362-1, \mathrm{Q} 363-1, \mathrm{Q} 366-1, \mathrm{Q} 367-1, \mathrm{Q} 374-1, \mathrm{Q} 375-1, \mathrm{Q} 407-1, \mathrm{Q} 408-1, \mathrm{Q} 414-1$, Q 416-1, Q 417-8, Q 424-1, Q 426-1, Q 428-1, Q 429-1, Q 433-1, Q 439-6, Q 443-1, Q 444-3, Q 460-1, Q 462-1, Q 467-1, Q 474-1, Q 481-1, Q 493-7. Q 497-1, Q 498-1, Q 500-1, Q 507-1, Q 512-1, Q 517-1, Q 519-1, Q 524-1, Q 525-1, Q 528-1, Q 530-1, Q 532-1, Q 535-1, Q 537-1, Q 542-1, Q 543-1, Q 544-1, Q 546-1, Q 548-1, Q 549-1, Q 550-1, Q 552-1, Q 553-1, Q 555-1, Q 556-1, Q 557-1, Q 558-1, Q 559-1, Q $560-7, \mathrm{Q} 562-1, \mathrm{Q} 563-1, \mathrm{Q} 565-1, \mathrm{Q} 566-5, \mathrm{Q} 569-1, \mathrm{Q} 570-1, \mathrm{Q} 572-1, \mathrm{Q} 574-6$, Q 577-1, Q 584-1, Q $586-1, \mathrm{Q} 597-1, \mathrm{Q} 598-1, \mathrm{Q} 599-1, \mathrm{Q} 607-1, \mathrm{Q} 610-1, \mathrm{Q} 613-6$, Q 614-1, Q 620-1, Q 622-1, Q 624-1, Q 626-1, Q 628-1, Q 632-1, Q 633-1, Q 636-5, Q 639-1, Q 640-1, Q 641-1, Q 649-1, Q 652-1, Q 655-1, Q 670-9, Q 674-1, Q 682-1.

Most coffins were hollowed out palm logs, sometimes with lids. Photographs show them with rounded ends, and the records sometimes indicate that the sides had been pierced to secure bindings of twisted straw. One unusual coffin was made of five strips of palm bark secured with straw bindings. A few coffins were built of planks; remaining evidence indicates they were boxes that tapered from head to foot. Some coffins were called anthropoid in the records, but this description cannot always be verified by sketches or photographs. Fragments of plaster were sometimes also noted, indicating that a relatively elaborate anthropoid coffin was
present. ${ }^{12}$ Since all of the recognizable large objects of palm wood or sycamore were coffins, all occurrences of soft wood are listed in the following table (tab. 17) as coffins except one from Cemetery B.

## Textile Wrappings

Textile objects from The Oriental Institute's excavations at Qustul and Ballana were published in Ancient Textiles from Nubia. They occurred in most coffins as shrouds and also in many burials that had no coffins. The majority seem to have been used first as sheets or mantles and then as a burial wrapping, although a few pieces may have originated as shrouds. Since these textiles were published, new information has caused a few of the dates to be altered. ${ }^{13}$

## Leaves

Frequently deposited in coffin burials with only objects and personal apparel, leaves were found almost exclusively in Cemetery $Q .{ }^{14}$ This preponderance is associated with the simple coffin burial and is part of the evidence that this complex of practices gives for chronology.

Leaves were found as follows: Q 259-2 (palm), Q 267-1 (palm), Q 325-2, Q 341-4 (leaves), Q 432-2, Q 447-2, Q 483-2, Q 500-3, Q 552-3, Q 556-3 and 6, Q 571-4, Q 576-2, Q 588-2, Q 590-3, Q 592-12, Q 603-1, Q 609-5, Q 620-3, Q 623-3, Q 644-3, Q 663-2, B 200-7

## B. SECULAR OBJECTS

## INTRODUCTION

Most of the objects used in daily life seem to have been made in Nubia; many are decorated, the most elaborate having amuletic motifs of Meroitic type. It is commonly assumed that the most complex manufactures were imported from the Mediterranean world. Although this report is not the place to challenge such an assumption, enough ambiguity remains in the attribution of such objects as simple glass beads to any particular origin so as to be somewhat problematical. Therefore, the objects are presented according to the purposes for which they were made or deposited. Since leather, wood, and metal appear in several categories, a few remarks on these materials are included in this introduction.

[^9]14. Woolley and Randall-MacIver 1910, register, G 11, G 19, G 184.

## LEATHER

The nature of archaeological leather objects in Nubia has been discussed elsewhere in this series with the processes implied by their appearance. ${ }^{15}$ A number of leather objects in the Meroitic contexts of Qustul and Ballana indicate that new manufacturing techniques, some of which had appeared in New Kingdom Egypt, had been adopted since C-Group. Since textiles had become common in Nubia, large garments were less frequently made of leather, so the great amounts of dark, originally soft, leather found earlier were not present in Meroitic tombs. ${ }^{16}$ The types of object produced from leather were quite variable, and a brief list of all the leather objects is included (tab. 18).

The Karanog bowl ${ }^{17}$ seems to indicate little change in herding from Middle Kingdom and C-Group representations, and many leather objects were probably made of cowhide. Because the hides were carefully dehaired, it is difficult to determine whether the hides of other animals were used for sandals.

Except for the careful dehairing and the use of pigments to color some of the rawhide objects, there was little difference in the appearance of the leather between C-Group and Meroitic times; the chemical processes were probably similar. However, most of the leather goods from Meroitic contexts were not tanned leather but rawhide, including sandals, quivers, and archer's braces.

If the chemical processes had not changed much, the mechanical ones were probably more elaborate; dehairing was more thorough and shaping and decoration was much more complex. This work almost certainly was done with metal, probably iron, cutting implements and perhaps a few bone awls. The smooth, sharp metal tools were capable of cutting soft materials to precise shapes, and the edge of iron tools excelled bronze in cutting elaborate shapes. For example, several layers cut to the same outline could now be used to produce reinforced objects. ${ }^{18}$

Incision
Although in earlier times, incision was used to decorate sandals with relatively simple linear patterns, in the Meroitic leather here it was used only to produce borders on tanned leather.

## Cut-Out

Among the most common decorations in Meroitic times were those made by cutting or piercing leather. Most designs were negative images; the holes make up the desired shape. However, some designs in rawhide were positive, and much larger areas of material were removed, sometimes leaving only narrow strips to hold the object together. In addition some pieces have serrated edges.

## Excision

Contrasting patterns of color and texture were obtained by cutting away small areas of the surface in a pattern. This was a technique used on the grain side of fully tanned leathers. It was particularly common in the Noubadian material.

## Embossing

Leather and rawhide objects were often stamped or impressed with patterns. Some patterns were made by stamps of the kind used to decorate pottery, but others were made by stamping or drawing with a tool with a narrow tip to make a linear pattern.
Applique
Decoration with leather appliques was an important part of representational art at Kerma and was also known in Egypt. The parallel development of mica appliques occurred at Kerma and possibly even in AGroup times. In the present material, small animals and floral motifs were cut from the leather with framing and attached either to small side panels or to the broad toe strap of the sandals.
15. For a discussion of leather in Nubia, see OINE V, pp. 65-71.
16. Note, however, the large leather pall from Semna South (Zabkar and Zabkar 1982, p. 22; Zabkar 1975, pp. 44-46, pls. 24, 25).
17. Woolley and Randall-MacIver 1910, pls. 26, 27.
18. For the application of some of these techniques in Meroitic times, see pp. 104, 105 below.

## Coloring

Sometimes appliques were dyed green, probably with a form of malachite, and red. The border of one decorated quiver panel was darkened, but the original color could not be determined.

Table 18. List of Leather Objects and Samples.

| Tomb and Find Number | Find Type | Kept | Remarks |
| :---: | :---: | :---: | :---: |
| Q 139-5 | Fragments |  |  |
| Q 155-7 | Fragment |  |  |
| Q 172-7 | Feather fragment |  |  |
| Q 243-1 | Strap |  | Used to bind body |
| Q 244-1 | Traces | x | Under pelvis |
| Q 262-4 | Strap fragment | x |  |
| Q 305-7 | Fragments | x |  |
| Q 306-2 | Sandals | x | Decorated |
| Q 417-11 | Remains |  |  |
| Q 432-1 | Quiver fragments |  |  |
| Q 462-2 | Sandal fragments |  |  |
| Q 474-4 | Footwear | x | Shoes or slippers |
| Q 475-23 | Sandal | x | With B |
| Q 478-2 | Sandals | x | Not on burial sheet |
| Q 551-3 | Sandal fragment |  |  |
| Q 560-6 | Leather fragment | x |  |
| Q 574-2 | Sandals | x |  |
| Q 574-3 | Leather with knot |  |  |
| Q 578-2 | Sandal | x |  |
| Q 594-9 | Quiver fragments | x |  |
| Q 605-1 | Cord |  | Twisted cord, at pelvis |
| Q613-4 | Sandal |  | Near feet |
| Q 624-3 | Sandal? |  |  |
| Q 646-5 | Fragments |  | Some under pelvis, body E |
| Q 670-1 | Sandal |  |  |
| Q 670-17 | Sandal | x |  |
| Q 675-2 | Archer's guard | x |  |
| B 2-2 | Cord (gut?) |  |  |
| B 2-3 | Sandal |  |  |
| B 2-4 | Sandal and strap |  |  |
| B 13-2 | Fragments |  | Near head, cap? |
| B 13-7 | Remains |  |  |
| B 26-3 | Remains of 2 sandals | x |  |
| B 89-1 | Sandals |  | Onfeet |
| B 135-11 | Quiver |  |  |
| B 144-8 | Fragments | x |  |
| B 184-2 | Leather |  |  |
| B 213-1 | Quiver | x |  |
| B 213-3 | Belt | x |  |
| B 219-2 | Sandal fragment | x |  |
| B 233-1 | Sandals and other leather | x |  |
| B 236-8 | "Loincloth" from G |  |  |
| B 252-4 | Quiver fragments | x |  |

Table 18. List of Leather Objects and Samples (cont.).

| Tomb and <br> Find Number | Find Type | Kept | Remarks |
| :---: | :--- | :---: | :--- |
| B 279—5 | Sandal |  |  |
| B 297-3 | Archer's brace/guard, sandal <br> strap, applique | x | Lotus bud decoration |
| B 313-4 | Quiver | x |  |
| B 319-1 | Quiver | x |  |
| B 169 | Sandal | x | Not on burial sheet |

## WOOD

Both simple rather makeshift objects and objects with considerable precision were made of wood. As in the case of leather, improved iron tools may have played an important role along with the introduction of the lathe.

In bulk and numbers, coffins make up the largest body of material in the collection of wooden objects. The large number of palm wood coffins was probably due in part to the availability of new tools that could hack out a coffin rapidly and cheaply and the availability of large amounts of palm wood. The latter was a by-product of the date palm's important role in the economy of Lower Nubia.

Most of the small wooden objects were made of tropical hardwood; zisyphus has been identified. ${ }^{19}$ Round objects were usually turned to shape on the lathe, a technique that allowed the production of the straight, smooth shapes of kohl tubes, the even domed heads of the spindle whorls, and the precise grooves needed for the banded decoration. Some very elaborate shapes were produced with this tool and occasionally modified further by hand carving. Only a few objects were carved to shape; these were either carved from solid blocks or assembled from panels hewn to shape.

## METAL

Until recently, the role of iron in Kushite civilization has been problematical. ${ }^{20}$ However, excavations at Meroe have amply confirmed the importance of iron there. ${ }^{21}$ While the specific export of the metal to distant regions is not documented-especially since preservation in wetter tropical regions would be much poorer-a large number of Meroitic iron arrowheads were found at Abu Geili, along with other weapons and implements. ${ }^{22}$

Evidence for metallurgy in Nubia comes from most periods, including furnace technology at Kerma, ${ }^{23}$ earlier evidence of smelting, or at least casting, at Buhen and Kuban, ${ }^{24}$ possible casting in the New Kingdom, ${ }^{25}$ and impressive products such as elaborate mirrors from Napatan times. ${ }^{26}$ Since Nubia had
19. A sample from a kohl tube was identified as zizyphus spina Christi (Sidder or Nabk), courtesy of the U. S. Forest Products Laboratory, Madison, Wisconsin, 1980.
20. Wainwright 1945; Trigger 1969.
21. Shinnie 1982; Tylecote 1982.
22. Crawford and Addison 1951, pl. LIII, pp. 82-84, 100. Iron arrowheads used by the pygmies are still made on the barbed Meroitic and Noba-Noubadian pattern (now displayed in the Manchester Museum). For the use of such arrowheads in Sudan, see Streck 1982, pl. 32.
23. Bonnet 1982, pp. 34-38.
24. Emery 1963, pp. 116-20; Firth 1912, p. 24, note. The tubes discussed in the text, however, are bread molds.
25. See OINE VI, chapter 3.
26. Dunham 1955, pls. XCI-CXI.
developed substantial traditions of metal working by the Meroitic period, many of the objects of iron, bronze, and gold were probably produced there. Many vessels, especially those of lead, were probably imported, however.

Iron
Iron arrowheads, cosmetic implements, fittings, and rings occurred at Qustul and Ballana. All of them except the fittings, either have Meroitic decoration or they have close parallels in Sudan. ${ }^{27}$

## Copper, Bronze, and Brass

Most of the local bronze objects were cast, ${ }^{28}$ but some may have been hammered. Some bowls were apparently turned, at least to finish them, a technique used to make lead bowls, which were probably imported. ${ }^{29}$ Some of the small rings and probably some of the small tripod-leg jars were made of brass. Since zinc does not occur locally, some part of this raw material had also to be imported.
Lead
The occurrence of lead deposits in regions near the Nile Valley, as well as its ease of smelting, ensured that lead was available. ${ }^{30}$ However, it is hardly found as a metal in Nubia before the Meroitic period. Some turned bowls were made of it, and a lead plate with staples was used to repair the base of an elaborate kohl tube. The Greek inscription on one of the bowls (fig. 126d) may indicate that it was imported.

## C. MILITARY EQUIPMENT

Except for spindles and archer's equipment, no implements are found in Mcroitic burials. Military equipment occurred primarily in Cemetery B, and it is clear that its frequent appearance is a relatively late development in Lower Nubia. All of the major elements, wooden self-bows, arrowheads, braces, and quivers were found. The well-preserved quivers began a sequence of developments that continued into Noubadian times, augmenting evidence of looses and arrows. Note that the preservation of military equipment was often poor and only the items that were complete enough to be described are discussed in the paragraphs below. Others are noted in table 19.

Brace
Braces or wrist guards were found, one made of rawhide, with excised decoration (tab. 19). Quivers

The three quivers from Cemetery B, are the first published (five were actually found) from Meroitic Lower Nubia. ${ }^{31}$ In general shape, the Meroitic quivers resemble Noubadian examples, although the Meroitic quiver is much simpler, and made of rawhide instead of tanned leather. It was either made from the skin of a small animal such as a goat or gazelle or from a piece of cowhide that had been cut to the shape of such an animal. Its construction can be described according to the anatomical equivalents of the animal hide. The piece bent along the back and joined along the belly and legs, the long neck area folded down to reinforce the upper part of the receptacle, which was sewn or glued grain side inward. The receptacle for the arrows was thus teardrop-shaped when viewed from above. On one quiver, the tail (or a flap in the shape of a tail) remained dangling from the front, and a second tail was added with an oval patch that covered the base. The tails were decorated with small cut out circles and rosettes and the neck was decorated by embossing and excising areas to make elaborate patterns in square frames around the edge of the reinforcement. The central square of one quiver (fig. 42a) was filled by a large rosette and that of a second had vertical bands of embossed chevrons (fig. 42b). In both cases, the framing is double, the first with reserve lozenges and
27. Dumham 1963, p. 206, fig. 149, from the metal tube quiver.
28. Lucas and Harris 1962. pp. 199-223.
29. One of which (Q 475-11) has a Greek inscription.
30. Lucas and Harris 1962, pp. 243, 244. Note that the common eye paint of the period was galena.
31. Quivers from Gebel Adda (Millet 1963, pp. 156-61, fig. 7) belonged to a Noubadian X-Group reuse of Meroitic tombs. Quivers have been dated to the Meroitic Period from Semna South (Zabkar and Zabkar 1982, p. 22). For the construction of quivers, see OINE IX, forthcoming.
excised crescents each in a double-framed band, and the second with double framed bands of embossed rosettes and excised, truncated, quatrefoil rosettes. Carrying straps consisted of twisted thongs inserted between the joined pairs of legs; one quiver (fig. 43) has a tanned leather strap around the lower body. Although no quivers of this type have been found in Meroitic representations or contexts previously, both the contexts and the decoration of these examples are Meroitic. A quiver is depicted being carried by Apedemak on a ring from Ballana (pl. 74a), ${ }^{32}$ but it has three tail flaps.

Table 19. Summary Descriptive Register of Leather Military Equipment.

## Quiver

Tomb B 213-1 (fig. 42a)
Structure: reinforcement only around the upper body and lip
Preservation: almost complete
Upper Cylinder: Dark pigment; excised rosette with four reserve point-petals, double frame, band of running lozenges, double frame, band of excised crescents, double frame
Thongs: carrying, twisted; suspension attached to back edge of chest flap, braided; third thong attached through lower comer of neck-reinforcement, twisted; smaller; fourth in hole at lower corner of receptacle

Flaps and Attachments:
Base tail Flap: double; serrated edges lined with punched out circles; center with two lozenge groups of circles and two 4 -point rosettes; attachment of inner flap uncertain

Brace
Tomb B 297-3 Decorated with 3 Bands of opposed excised triangles
Quiver
Tomb B 313-4 (fig. 42b, c)
Structure: probably oval or teardrop section, no rib at lip, badly damaged, made of rawhide
Preservation: outline of body substantially remains, details not well preserved
Upper Cylinder: 6 vertical bands of embossed herringbone, triple frame; framed by triple band of stamped squared rosettes; around edge 3 cm band cutout applique, dark in red-purple background
Thongs: -
Flaps and Altachments:
Base tail Flap: Serrated edge lined with punches, in center, two cruciforms of linked punches flank rosette
Remarks: leather strap around lower body

## Quiver

Tomb B 319A-1 (fig. 43)
Structure: upper reinforcement, not cylindrical, made of rawhide
Preservation: most of receptacle, little of chest and thigh flaps
Upper Cylinder: remains of three rectangular panels, all in double frame, each individually framed; top and bottom, alternating bands of running lozenges, with 3 "Nubian ankhs"; center panel, uncertain motif in the center (probably the bound lotus), crescents above and below

Thongs: no carrying or suspension thong, but strip of leather tied around lower body
Flaps and Attachments: front tail only
Base tail Flap: serrated edge, lined with row of circular holes; in center, two cruciform groups of linked circles flank 4-point rosette

[^10]
## Arrowheads

The stone arrowheads of Napatan and possibly early Meroitic times ${ }^{33}$ were replaced in the later Meroitic period by metal points (pl. 69), mostly iron, with rounded or angular profiles. ${ }^{34}$ Generally a single barb curves backward from a notch that extends up the center of the blade along the tang. Sometimes the barbs are small slivers of metal that protrude at an angle from the edge of the base. ${ }^{35}$

Earlier points from Cemetery Q are fairly small, thin, and light, while those from Cemetery B are heavier, and more $V$-shaped. ${ }^{36}$ One bronze point in The Oriental Institute collection was made with an elongated rectangular tang decorated with a series of six grooved ribs (pl. 68d). One arrowhead is chisel shaped.

A metal case-quiver found at Meroe and the remains of feathered shafts within the top of a Noubadian quiver indicate that arrows were about 50 cm long, appropriate for a draw to the chest or chin. ${ }^{37}$

## Looses

Meroitic thumb-rings or archer's looses (pl. 68a-c) are tapered rings of stone or wood, about $2-3 \mathrm{~cm}$ high, roughly half or less than the diameter. ${ }^{38}$ One loose of wood was turned and the top was made convex; the lower side had been trimmed. The surface of a second loose was too worn to determine the technique of manufacture. A third was made of diorite; it, too, showed signs of wear at the corners. Both wooden rings had been recut inside by hand.
Bows
Fragments of wooden self-bows, with notched ends and twisted gut strings were found with the other archery equipment. Unfortunately, they were not complete and would have to be restored according to representations. ${ }^{39}$

## Javelin point

A small bronze leaf-shaped point was too large to be an arrowhead and too small to be a spear (pl. 69a center).
Dagger
Fragments of an iron knife or dagger were found in Q 384, but little could be determined about its shape except that the edge was straight and it had a riveted tang.

## Staves

Two slim hardwood rods with one end cut from two sides at an angle to make a dull chisel point are probably staves. The staff from B 43 has a greenish line about 1 cm from the end perhaps indicating that it had a copper cap. The second, from Q 312-3 was incomplete, about 1.6 cm in diameter. The dimensions of the staff from B 43 were $32.5 \times 1.8 \mathrm{~cm}$.

## Macehead (?)

A thick tapered discoid stone (possibly clay minerals) object with a wide hole bored in the center (from Q 317-8) may have been a macehead or a model of a macehead. The object was found shattered, but the
33. Dunham 1950, fig. 1c, 19-3-369-370 (called quartzite, but probably quartz); 2c, 19-3-391 (flint); 3b, 19-3-421 (flint).
34. Woolley and Randall-MacIver 1910. pls. 34, 35; Griffith 1924, pl. LVII.
35. Woolley and Randall-MacIver 1910, pl. 34, 7180-7221, upper row, left. See also Lenoble (n.d.) on the construction of arrowheads
36. Dunham 1963, figs. 165-3, W 260; R. Hayes 1973.
37. See Dunham 1963, fig. 148c. The quiver was only 42 cm long, and it completely enclosed the arrows. A Noubadian X-Group quiver found at Qustul also contained the full length of the arrows; the length of these quivers was about 50 cm .
38. Dunham 1963, figs. 127c, 141 h (glass), 165:2, See OINE IX, forthcoming. Thumb rings from X-Group are taller than they are wide, and have very concave sides.
39. See numerous representations at Musawwarat es Sufra (Hintze 1971, pl. 53, for example).
material is quite hard (6.5 Moh's scale) and light brown (7.5 YR 7/6). Unfortunately the object was found in a plunderer's passage with some Noubadian X-Group cups and can be dated only to Meroitic or Noubadian X-Group times. ${ }^{40}$

Table 20. The Occurrence of Weapons in Cemeteries Q and B.

| Tomb and Object Number | Arrow | Bow/ <br> String | Loose/ <br> Guard | Quiver | Dagger |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Q 270-1 |  |  |  |  |  |
| Q 325-4 | x |  |  | x (X-Gr.) |  |
| Q 378-7 | X |  |  |  | Spear? |
| Q 384-3 |  |  |  |  | x |
| Q 432-1 |  |  |  | x (X-Gr.) |  |
| Q 594-9 |  |  |  | x (X-Gr.) |  |
| Q 594-10 |  | x (X-Gr.) |  |  |  |
| Q 549-12 | x (X-Gr.) |  |  |  |  |
| Q 549-14 | x |  |  |  |  |
| Q 675-2 |  |  | Guard |  |  |
| Q 675-3 |  | x |  |  |  |
| B 29-3 | x |  |  |  |  |
| B 135-1 | x |  |  |  |  |
| B 135-11 |  |  |  | x |  |
| B 157-1 | x |  |  |  |  |
| B 157-2 |  | x |  |  |  |
| B 197-2 |  |  | Loose |  |  |
| B 197-3 | x |  |  |  | Javelin |
| B 205-11 | x |  |  |  |  |
| B 205-12 | x |  |  |  |  |
| B 205-13 |  |  | Loose |  |  |
| B 205-15 |  | x |  |  |  |
| B 208-3 | x |  |  |  |  |
| B 212-1 | X |  |  |  |  |
| B 213-1 |  |  |  | x |  |
| B 241-1 ${ }^{\text {a }}$ | x |  |  |  |  |
| B $241-2^{\text {a }}$ | x |  |  |  |  |
| B 252-4 |  |  |  | x |  |
| B 280-2 | x |  |  |  |  |
| B 297-2 ${ }^{\text {b }}$ | x |  |  |  |  |
| B 297-3 |  |  | Guard |  |  |
| B 302-2 |  |  | Loose |  |  |
| B 302-3 | x |  |  |  |  |
| B 313-1 | X |  |  |  |  |
| В 313-4 |  |  |  | X |  |
| B 319A-1 |  |  |  | x |  |

a. Many examples.
b. This includes the arrowhead with a decorated shaft.
40. A stone object of this approximate shape was found also at Musawwarat es Sufra (Hintze 1962, fig. 12).

## D. CLOTHING: SANDALS

Textiles reused as burial wrappings have been discussed in a previous volume, but sandals were also found. The Meroitic and Noubadian burials were typified by different kinds of sandals although the occurrences were not exclusive (pls. 64-67). Sandals are listed with other types of leather objects in table 18. They were often not preserved well enough to describe.

The sandal typical of Cemetery $Q$ was made in two layers and either tapered to the toe or curved inward at the toe. The layers were stitched together around the edge and in one or more rows down the sole (pls. 65b, 66a). Occasionally the stitching was passed through angled cuts in a narrow reinforcing strip at the edge; alternatively the cuts were longitudinal or transverse. A hole was made for a thong to be placed between the first and second toes. None of the sandals of this type found at Qustul had the straps completely preserved, but one triangular piece of folded leather was found with a sandal in Q 306-2.

Some single-soled sandals also appeared in Meroitic Cemetery Q. Instead of stitching, these sandals were decorated with simple hatching or herringbone impressions in a band at the edge as a kind of decorative substitute for the more elaborate reinforcement (pl. 66c, d). Two holes were made in the longitudinal axis to pass thongs between the first and second toes. Straps were left on either side of the heel to fasten the sandal. Complete sets of thongs or straps were not preserved, but the main strap, passing over the instep, was tapered with the narrow end at the toes and the wide end at the upper instep.

Another form of sandal was found having more elaborate decoration. Sometimes a dark or red band was painted around the edge (pl. 66b), or an edge band was embossed with lines and stamps (pl. 67). The band was given a series of framing lines that flanked a central band impressed with double frame lozenges or a combination of stamps and double frame lozenges. The heel was embossed with a zigzag line. These sandals had a double strap at the ankle, and a tapered strap down the instep, but only a single hole was used to secure the strap between the toes. Most often the instep strap was made of tanned leather, and it was sometimes quite wide at the top. Some instep straps had rawhide stitching decorating the edges (pl. 67c).

Applique decoration appears in panels that were probably attached to the tapered strap over the instep and at the ankle. The best preserved was a pair of green squares that framed an animal (B 26-3) all attached to a red background with white stitching. Another panel was bent, with a triangular green area that has a cut out crescent containing a lozenge attached to it; this might have fitted over the toe. ${ }^{41}$ Another pair of sandals was decorated with a green lotus with two flaring buds glued to a red background (pl. 67b); this was probably part of the instep. ${ }^{42}$

## E. JEWELRY

Jewelry was both common and elaborate in the Meroitic tombs, although it consisted mostly of colorful rather than precious materials. The most important groups are rings and earrings of metal bands and bars, stone and glass studs, stone and glass beads, and bezel rings. Some scarabs were found in earlier tombs; mostly reused or copied from earlier prototypes. There were also some feminiform beads (fig. 61b), a small glazed uraeus, a fly, and a ram's head with sun disc (fig. 61c, d). Amulets and amuletic representations were unusual in Meroitic jewelry. The one item that consistently served as an amulet in this period was the bezel ring.

## BAND AND BAR JEWELRY

## Bar Jewelry

The simplest jewelry objects were made of metal bands and bars that offer relatively little opportunity for decoration. This is particularly true of bars, whether round, plano-convex, or triangular in section that were used to make rings and earrings. One large earring had a hook and eye fastening. The most remarkable bar jewelry was a very heavy pair of pennanular bronze anklets ( $\mathrm{Q} 235-2$ ) with incised decoration of crosshatched bands with framing lines near the division. One anklet preserved the impression of cloth
41. See Gamer-Wallert 1983, pp. 130, 131. Maystre 1986, pp. 44-49.
42. See Maystre 1986, pl. I and pp. 44-49 for the arrangement of decoration on sandals.
wrapping opposite the division. The tomb where they were found was very much like burials with anklets found to the south, especially at Abri. ${ }^{43}$

Table 21. Register of Bar Jewelry.

| Tomb and <br> Object Number | Shape | Material |
| :--- | :--- | :--- |
| Rings, plano-convex: | $0.2 \times 0.07 \mathrm{~cm}$, taper atone end, circle, 1.67 cm outer diameter |  |
| Q 529-3 | Tapered, $0.22 \times 0.06 \mathrm{~cm}$ <br> Q 579-2 | Triangular stock, $0.28 \times 0.1 \mathrm{~cm}$ |
| Q 674-3 |  | Bronze? |
| Ring, bar: | 0.35 cm | Bronze? ( 6 pieces) |
| Q 594-3 |  | Iron, cut? |
| Ring, continuous bar: | 0.39 cm , circle 2.75 cm outer diameter |  |
| B 190-7 |  | Bronze? |
| Earrings: | Tapered bar, large hook and eye, bent and |  |
| Q 230-9 | coiled at one end, hooked at other; $0.25 \times 0.47 \mathrm{~cm}$ | Bronze |
| Q 573-5 | Tapered to sharp points, circles 2.41 and 2.64 cm | Blue |
| B 14-5 |  | Bronze |
| B 190-9 |  | Bronze |

Table 22. Register of Band Rings.

|  | Tomb and Object Number | Material | Description |
| :---: | :---: | :---: | :---: |
| Rings: |  |  |  |
|  | B 219-4 | Bronze? | Penannular, rounded ends, incised decoration framed truncated zigzags with circles, $0.45 \times 0.04 \mathrm{~cm}$ |
|  | B 113-6 | Copper | Penannular, herringbone, no frame, $0.37 \times 0.03 \mathrm{~cm}$ |
|  | B 113-5 | Copper | Penannular, undecorated, $0.42 \times 0.04 \mathrm{~cm}$ |
|  | B 219-5 | Bronze? | Penannular, zigzag with circles, $0.5 \times 0.08 \mathrm{~cm}$ |
| Toe-bands: |  |  |  |
|  | Q 547-4 | Copper? | Penannular overlapped, undecorated $0.41 \times 0.08 \mathrm{~cm}$; corroded |
|  | Q 547-5 |  |  |
|  | Q 492-4 | Copper? | Penannular, overlapped, incised border, $0.44 \times 0.07 \mathrm{~cm}$ |
|  | Q 647-3 | Copper or | Tapered penannular ring |
|  |  | Bronze | With cut-off ends, three horizontal incised lines; upper of two bands with zigzag, $0.56 \times 0.5 \mathrm{~cm}$ |
|  | Q 647-4 | Same | Four horizontal lines, zigzag in central band, $0.68 \times 0.5 \mathrm{~cm}$ |

43. For pointed earrings, see Woolley and Randall-Maciver 1910, pl. 35:7311, 7308, 7377, and 7380; Griffith 1924, pl. XL:10. For continuous bar earrings, see Woolley and Randall-MacIver 1910, pl. 35:7374, 7381; Bates and Dunham 1927, pl. XXXIII:6, C, F, G; XXXVII:4, I, U, V; LXVIII:28. For the hook and eye, see Griffith 1924, pl. LIX:16, 17; Bates and Dunham 1927, pl. XXXVII:4, Aa-c; LXVIII:48. For the heavy anklets, see Vila 1984. As noted here, in Appendix A, and in Chapter 1, the type of tomb is early (IA or IB), rather than late Meroitic period in date.

## Band Jewelry

Finger and toe rings were often made of tapered bands. ${ }^{44}$ These were also often decorated with incised horizontal and zigzag lines, sometimes with small circles in the open triangular spaces, indicating the vine.

## STUDS

Small objects of stone, glass, and metal with narrow shafts, plano-convex heads on one end, and wider platelike, conical, or domical heads on the other end were probably inserted in the earlobe or nose as studs ( $\mathrm{pl} .76 \mathrm{c}-\mathrm{h}$ ). Three kinds are distinguished in this material, those with broad, circular plates with inlaid or applied decoration, those with conical heads, and those with domical heads. ${ }^{45}$ The second and third types appeared in later contexts.

Table 23. Register of Glass or Stone Studs.

## Conical heads:

Small, conical head, medium to narrow shank, discoid base:

| B $66 \mathrm{~A}-2$ | Light blue glass, $0.9 \times 0.63 \mathrm{~cm}$ |
| :--- | :--- |
| B $282-14$ | Red glass, $0.93 \times 0.79 \mathrm{~cm}$ |
| B $236-7 \mathrm{~b}$ | White stone, $0.94 \times 0.63 \mathrm{~cm}$ |

Small, composite truncated cone set with white stone (?), cap and dise, held with black adhesive:
B 151-1 Red glass, $0.74 \times 0.76 \mathrm{~cm}$

Medium large, composite as above, but with red cone on white cap:
B 282-17
Dark green glass, white stone, red glass, $0.96 \times 1.15 \mathrm{~cm}$
Discoid heads, large:
Disc head and base:

| B 292-4 | Quartz head with blue and red glaze neb signs flanking simplified notched white sa (?) signs glued to surface, $0.71 \times 1.37 \mathrm{~cm}$ |
| :---: | :---: |
| B 92-4 | White glaze head, mosaic on it, white stone circle border, white stone petals, light blue glaze center, red and blue glaze around petals held by black adhesive, $0.7 \times 1.63 \mathrm{~cm}$ |
| Carved head in form of a six petal rosette: |  |
| B 174-3 | Head of each petal drilled through and glass dowel set in, altemate dark blue and red, It blue center; remains of black adhesive, $0.85 \times$ 1.24 cm |

Metal stud (B 113-4)
A small rosette forms the head of the only metal stud from Ballana. ${ }^{46}$
Rosette (B 92-4)
The largest stud was made of white glass. A white stone circle glued to the face contains six pointed white petals around a turquoise blue center. The spaces between the tips of the petals are filled with red and dark blue triangles. ${ }^{47}$
44. Bates and Dunham 1927, pl. LXVIII, fig. 30.
45. Griffith 1924, pl. LIX:1, 3 (conical), 8 (rosette), 2, 4-7 (others) Bates and Dunham 1927. pl. XXXVII:4, k, i-j" (conical, one domical).
46. Griffith 1924, pl. LIX:5, 6.
47. Griffith 1924, pl. LIX:8; Wenig 1979a, cat. 178.

Rosette (B 292-4)
The head of this white glass stud was carved into a rosette. A small blue disc was set into the center, and alternately blue and red pieces of glass rod were set into holes drilled near the end of each petal.

Amuletic Design (B 292-4)
A white stone stud has red and blue glass neb signs, flanking white signs, possibly sa-amulets glued to the upper plate.

Cone with Discs (B 282-17)
A blue glass stud has a conical top made up of graduated white and red conical discs. ${ }^{48}$
Cone with Discs (B 151-1)
A red glass stud has a smaller head, with the base bored to take a pin that secured the white disc. The tip is missing.

Disc (B 236-7b)
One pair of studs was made with discs and tips added.

## Studs with Conical Tips

Glass studs with conical tips include a pair in blue glass, and a pair with one blue and one red glass stud (B 66A-2, B 153-1b ). ${ }^{49}$

## Studs with Domical Tips

The simplest studs have fairly summary domical tops. This type was most common in Cemetery B. ${ }^{50}$

## BEADS

Beads (pls. 76a, b, 77-81, figs. 44-50) were among the most common objects in cemeteries B and Q, and they are among the most common objects from Meroitic Lower Nubia generally, although they did not occur as frequently at Abri..$^{51}$ Unfortunately information concerning the other major groups of beads in Lower Nubia, from Karanog and Faras, was not systematically published and the most complete available corpus was made for beads from Meroe. This was similar enough to be applied to the beads from Qustul and Ballana
48. Dunham 1963, fig. 96a (metal). For other antecedents in metal, see figs. 122i, 134f, 138k, 163:8; Dunham 1957, fig. 92:21-3-619, 620.
49. Griffith 1924, pl. LIX:1, 3.
50. Bates and Dunham 1927, pl. XXXVII:4i-j", Griffith 1924, pl. LIX:2.
51. Beads from Karanog are quite comparable to the present material. In general, the beads from Faras are larger and simpler than those of Karanog, but otherwise very like beads from Lower Nubia. However, the variety, quality, and quantity of beads found in Lower Nubia is not matched in the earlier cemeteries. (Woolley and Randall-Maclver 1910, pl. 40; Griffith 1924, pls. LXII-LXIII, LXX; Vila 1982, p. 22, fig. 19; p. 27, fig. 26; p. 77, fig. 73; p. 137, fig. 148:3; p. 151, fig. 163.)
with little modification. ${ }^{52}$ Only a few beads occur that are not found in the Dunham corpus, and those in Dunham's corpus not found at Ballana and Qustul mostly date to earlier periods.

Although beads are treated as a group, they were made from many types of material, each involving a different sequence of steps in manufacture and each having its own range of shapes. The identifiable groups of material are ostrich egg, metal, faience, stone, and glass. Glass beads can also be separated into groups including beads shaped in a viscous state, beads shaped like stone, and beads made by joining plaques and finishing like stone. Of all these groups the various kinds of glass beads are by far the most common, followed by stone, faience, ostrich egg, and metal.
52. The beads from Meroe cemeteries compare with the Roman/Coptic series in Egypt as follows (Dunham 1963, figs. R-T; Brunton 1930, pls. 45-47).

Table 24. Beads from Meroe and Qau.

| Meroe | Qau |
| :--- | :--- |
| Ia | $136-140,149^{\mathrm{a}}$ |
| II | $55,63-76^{\mathrm{b}}$ |
| III | $57-59,74$ |
| IV | $107-124$ |
| V | $13-26,35-36^{\mathrm{c}}$ |
| VI | $27-32,150-168,194-201^{\mathrm{d}}$ |
| VII | - |
| VIII | $48-51,93-103^{\mathrm{e}}$ |
| IX | $4445^{\mathrm{f}}$ |
| X | $46-47,87-88$ |
| XI | $141-142,173-177 \mathrm{~g}$ |
| XII | -h |
| XIII | -h |
| XIV | -h |
| XV | -i |
| Pendant I | $188-193 \mathrm{j}$ |
| Pendant II | - |
| Pendant III | - |
| Lobed or Knobbed | $78-79,143,179-182^{\mathrm{k}}$ |

a. Petrie 1906, pl. XLVII, center and left.
b. This includes banded, but none ribbed or modeled. See also Petrie 1906, pl. XLVII:165, 198.
c. This includes millefiore examples.
d. 194-201 are multiple.
e. The group includes rectangular and comer-faceted beads. See also Petrie 1906, pl. XLVII:198.
f. Petrie 1906, pl. XLVII: 174.
g. Petrie 1906, pl. XLVII: 198
h. These are early types with no counterparts in the Qau corpus.
i. No bilobate or "barbell" shapes were found in the present groups.
j. Some eye and millefiore beads are included.
k. Knobbed beads were not present in the Qau corpus.

The following types recognized at Meroe did not occur in the Qustul-Ballana materials; Ih, j, l-o, q, s, v, w; IIg-l, n-p, w; IIIc-e, i, j; IVa, d-h; Vf-j; Vlk, I, n-r, u; VIIb-f; IXb-d; Xa-h, k-m, n-p (n-p are actually bicones of IIIh type and are present); XId, $\mathrm{g}, \mathrm{j}, 1$ ("eye beads"; the missing types are not special); XII (rosette beads); XIII (flower beads); XIV (scarab-beads); XVb, c, e-g, $i=\mathrm{m}$. The most significant aspect of the absences in this material is probably chronology. X (the larger flattened beads), XII, XIII, and XIV, are probably all earlier and resemble beads from the Twenty-fifth Dynasty/Napatan period. The same could be said of pendants II and III as well as the larger beads of Ia-c, Ig $-\mathrm{l}, \mathrm{n}-\mathrm{p}$ and VII (Missing pendants are Ia, $\mathrm{b}, \mathrm{g}, \mathrm{h} ; \mathrm{II} \mathrm{a}-\mathrm{g}$, $\mathrm{i}-\mathrm{l}$, and IIIa-p; all missing except the fly and feminiform types.).

## Glass Beads Shaped While Viscous

In addition to the various ways of shaping glass in different states, several different techniques were used to make glass beads from heated material.

Molded or modeled. Most beads were made from glass canes, which had been pierced longitudinally. Some of the canes were apparently drawn through a notched die to make ribbed beads. Beads were then formed by crimping the cane before it cooled. Afterwards beads were separated individually, or in groups of up to five. Some of the largest beads were finished on the ends but most still had the flashing where they were broken apart.

Beads made of clear glass had been gilded or silvered. As indicated by the edges or corners of the sheet preserved on some beads, the viscous cane was wrapped with metal foil which fused with the surface before the cane was drawn. As the cane was drawn the foil burst or shredded giving the beads a special brilliance.

Shapes made by this method include balls (I), some barrels (II), canes (IV), cylinders (V), and tubes (VI), with possibly a few, unclassified or more elaborate beads. Some very simple beads with square sections could be considered under this category. They were drawn and broken without further treatment. These cane fragments have centers with contrasting colors.

Wound beads. Large ring beads were made in connected groups by winding a viscous rod around a wire or rod (VIs-v).

Millefiore beads. The most elaborate beads were made from glass plaques. They were cut from canes that had been made by fusing bundles of canes arranged to make a pattern on the end and by drawing to miniaturize the designs. ${ }^{53}$ Flat beads and plaques were simply smoothed and bored. Globular beads were made by joining three plaques each about $6-7 \mathrm{~mm}$ in thickness. Two corners were ground away, the plaques fused together, and the completed bead ground to its globular shape leaving the pattern clearly defined in the center but distorted near the edges. Millefiore beads included both balls and plaques (XI, IV, and XVI) with rosettes and checkerboard lozenges. ${ }^{54}$

Eye beads. Two plaques with concentric rings of color in the center were joined, bored, and finished like the millefiore beads. They also appear as a "drop and ring" type (Pendant IIa, b), but only the simple ball type (XI) occurs in the present material.

Banded beads. Plaques or strips of glass with longitudinal bands of color were made into beads with transverse, diagonal, or, more rarely, longitudinal bands. Shapes include balls, (Ip-t), barrels (IIr, s) and cylinders ( $\mathrm{Vg}, \mathrm{h}$ ).

## Glass Beads Shaped Cold

A large number of glass beads were reshaped after being separated from the cane. As revealed by imperfect joins the canes from which they were formed were made by fusing two flat bars around a wire or rod. After being cut to size these beads were smoothed to a rectangular shape, rolled on an abrasive surface to make them round, or rubbed on the comers to make facets. Shapes include larger balls (I), barrels (II), bicones (III), cones (IV), small tubes (VI), faceted (VIII, IX). Some special shapes (XVI) and pendants (IIII) were also made.

## Faience Beads

Beads made by glazing a ground quartz core were not very common in Meroitic contexts at Ballana and Qustul and it is difficult to determine whether they were actually made at this time or reused from earlier graves. Some however, do parallel the colors and some of the simpler shapes, especially the large balls, tubes, and barrels, found in the glass beads.

## Ostrich Eggshell Beads

Relatively few Meroitic tombs contained discoid beads made of ostrich eggshell.

[^11]54. See 3000 Jahre Glaskunst, Kunstmuseum Luzern, July-Sept. 1981, no. 178. See also nos, 344b and 344.

## Stone Beads

Stone beads are far less common than glass beads in the Meroitic burials. Most of the stone beads were carnelian with a few diorite and even quartz. Pendants were made of camelian, quartz, and rock crystal, with possibly one of tooth and one of glazed steatite, perhaps reused. They occur in the major simple shapes, including balls, barrels, bicones, cones, and tubes.

## Summary of Beads

The variety and abundance of beads in Meroitic burials was due to the very large number of glass beads. Despite the fact that the Dunham corpus from Meroe is used in the present work, most beads (except the pendants) had counterparts in Roman period Egypt. However the beads of Roman date in Upper Egyptian sites such as Qau el Kebir are simpler and less diverse than the beads of Nubia. ${ }^{55}$ The following table lists the beads found in Meroitic contexts at Qustul and Ballana. The Dunham corpus was used for the shapes, although some of the materials indicated in the corpus were not found in the same shapes as in Lower Nubia. Where original stringing was preserved, the order is described with the item according to the sequence of types. Many beads were restrung after recovery, but their order was not necessarily original. In a few cases, beads from different objects were put onto the same string, requiring some combined counts. Finally, the typological boundaries between bead types are often more difficult to distinguish than pottery; the identification of types, materials, and counts would vary with the investigator. Finally, some large groups of beads preserved with the original strings were stored in boxes in such a way that they could not be counted without doing considerable damage. Their numbers are estimated.

## AMULETS

## Faience Cobra (Cemetery B, Surface)

Although much of the art in Meroitic Nubia was amuletic, only one amulet occurs in the present material. It is a cobra of green-glazed faience with yellow highlights shown full face with the tail coiled behind in a figure eight. ${ }^{56}$
Fly (Q 267-3a)
A small fly was found alone, made of green glazed steatite. The simplicity of the material and workmanship indicate it was not a special item of jewelry or insignia.
Amun Ram-Amulet (Q 298-9a)
Perhaps the best known Kushite amulet is the ram's head with a sun disc. The present example, in blue faience, was quite worn and was probably reused from an earlier deposit.

Table 25. Register of Beads.
Columns in the following table are indicated by numbers.

1. Tomb and Object Number.
2. Subdivision of the Object Number According to Type, Material, or Color of the Bead.
3. Dunham Type.
4. Section* in $\mathrm{mm}^{-10}$
5. Diameter in $\mathrm{mm}^{-10}$
6. Count**

## 7. Remarks

*For pendants, the length is given first, followed by the width, with the thickness given in the remarks column in tenths of a millimeter ( $82=8.2 \mathrm{~mm}$ or 0.82 cm ). This level of precision was due to the available instrument, and it exceeds the legitimate needs of archaeology because it far exceeds the manufacturer's capacity for accuracy. A few beads were measured to the nearest half-millimeter.
**Where two numbers are separated by a hyphen, the first is the count and the second indicates the number of lobes on a multiple bead.
55. See note 52.
56. No amulets of this shape occurred at Sanam (Griffith 1923) or Faras (Griffith 1924). See Dunham 1963, fig. 109:4 (from W 308 [50-60]).

Table 25. Register of Beads.

| 1 | 2 | 3 | 4 | 5 | 6 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Q $150-1$ |  |  |  |  |  |
| a. Yellow glass | Ia | 21 | 30 | 57 |  |
| b. Blue glass | Ia | 22 | 26 | $18+$ | Dark |
| c. Pink glass | Ia | as b |  | $33+$ | Translucent, amethyst |

Some $b$ and $c$ are on an original string, but are not countable.
Q 150-1

Beads
Q 158-4
a. Blue glass

IIc
Q 162-14

| a. Camelian | IIe | 25 | 32 | 19 |
| :--- | :--- | :--- | :--- | :--- |
| b. Blue glass | VIe | 10 | 19 | 38 |
| c. Green glass | as b |  |  | 10 |
| d. White glass | as b |  |  | 4 |
| e. Gilded glass | as b |  |  | 2 |
| f. Gilded glass | VIs | 23 | 60 | 1 |

Q 163-2
a. Blue glass (?) 1

Q 165-5
a. Blue glass/faience VIf 14

Q 166-1
a. Black glass
b. Pink glass
c. Blue glass
d. Pink glass
e. Red glass

Q 172-8
$\begin{array}{lllll}\text { a. Blue glass } & \mathrm{Ilq} / \mathrm{s} & 98 & 40 & 3\end{array}$
$\begin{array}{lllll}\text { b. Camelian } & \text { IIIf } & 38 & 43 & 2\end{array}$
$\begin{array}{lllll}\text { c. Red glass } & \text { IId } & 35 & 32 & 1\end{array}$
$\begin{array}{lllll}\text { d. Blue glass } & \text { Vie } & 12 & 15 & 2\end{array}$
e. Uncertain
la?
Q 174-3
$\begin{array}{llll}\text { a. Blue faience } & \text { XIh } \quad 230 & 220\end{array}$
Q 175-1
$\begin{array}{lllll}\text { a. Blue glass/faience } & \text { Vlh-j } & 10 & 40 & 1\end{array}$
Q 180-4
a. Tooth

PId, e $185 \quad 130 \quad 1$
Q 180-4. ${ }_{\text {a. } \mathrm{To}}$


N/A

Dark, fig. 45a

Annealed
Turquoise
Opaque

Translucent, fig. 46h

Irregular
Irregular
Turquoise, translucent, fig. 46f

Broken, very small

Opaque, dark, band white with red center; remarks IIr?

Translucent
Turquoise
Very small

Imitation eye bead, fig. 471

Variant

Table 25. Register of Beads (cont.).

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Q 180-5 |  |  |  |  |  |  |
|  | Pendant |  |  |  |  | Register records 200 beads, Cairo error |
| Q 188-2 |  |  |  |  |  |  |
|  | a. Blue faience | Vc-d | 85 | 55 |  | Turquoise, fig. 46a |
| Q 240-4 |  |  |  |  |  |  |
|  | a. Blue faience | VId | 20 | 30 | 55 |  |
| Q 245-3-6 |  |  |  |  |  |  |
|  | a. Blue glass | VIe | 12 | 25 | 200 to 400 | Turquoise, opaque |
|  | b. White glass | VIe | as a |  | $2+$ |  |
| Some of the blue glass beads are still on strings, but they are too delicate to count. |  |  |  |  |  |  |
| Q 246-2 |  |  |  |  |  |  |
|  | a. Blue faience | VId | 26 | 36 | 94 | Turquoise; later? |
| Q 248-2 |  |  |  |  |  |  |
|  | a. Blue glass | IIs | 45 | 30 | 1 | Dark with white stripe, fig. 45 h |
| Q 251-4 |  |  |  |  |  |  |
|  | a. Yellow glass | Ia | 46 | 52 | 41 | fig. 44a |
|  | b. Blue faience | VIh | 25 | 45 | 1 | Turquoise |
|  | c. Camelian | Ia, b | - | 35 | 8 |  |
|  | d. Gilded glass | Xj | 41 | 35 | 1 | fig. 48a |
|  | e. Gilded glass | Vc | 75 | 28 | 6 | Ends marked, fig. 45p |
| Q 253-1 |  |  |  |  |  |  |
|  | a. Ostrich eggshell | Vle | 18 | 30 | 215 |  |
|  | b. Blue glass/faience | VIe | 25 | 30 | 36 | Dark, opaque |
|  | c. Red glass/faience | Vlh | 28 | 35 | 5 |  |
|  | d. Blue glass | Vle | 14 | 23 | 1 | Turquoise |
|  | e. Camelian | PIe | 122 | 95 | 1 | Stripe |
| Q 254-2 |  |  |  |  |  |  |
|  | a. Blue glass | VIIId | 305 | 60 | 1 | Turquoise, fig. 47e |
|  | b. Blue glass | VIIIb | 146 | 83 | 1 | Dark, fig. 47b |
| Q 255-1 |  |  |  |  |  |  |
|  | a. Gilded glass | XVa | 190 | 70 | 1 | Barrel, fig. 48c |
| Q 256-2 |  |  |  |  |  |  |
|  | a. Blue glass/faience | VIe | 15 | 27 | 19 |  |
|  | b. Gilded glass | XVa | 197 | 73 | 1 | Broken off bar stock |
| Q259-3 |  |  |  |  |  |  |
|  | a. Blue faience | VIg | 14 | 48 | 3 |  |
|  | b. Blue faience | $\mathrm{Ig} / \mathrm{NIh}$ | 40 | 62 | 1 | Discoid but with projection, fig. 44 h |
|  | c. White glass | VIh | 35 | 47 |  |  |

Table 25. Register of Beads (cont.).

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Q 260-2 |  |  |  |  |  |  |
|  | a. Camelian | VId | 30 | 20 | 101 |  |
|  | b. Gilded glass | VId | 10 | 20 | 27 |  |
| Q 267-2 |  |  |  |  |  |  |
|  | a. Green steatite | P |  |  | 1 | Green glass steatite pendant, in shape of fly |
|  | b. Blue faience | VIe | 24 | 47 | 226 | fig. 46 g |
| Q 270-3 |  |  |  |  |  |  |
|  | a. Blue-gray faience | Ic | 45 | 59 | 1 | Blue-gray, fig. 44d |
| Q 274-1 |  |  |  |  |  |  |
|  | a. Camelian | IIb | 75 | 40 | 2 |  |
|  | b. Camelian | IIb | 40 | 35 | 1 |  |
|  | c. Uncertain | Vla | 30 | 36 | 1 | fig. 46c |
|  | d. Gilded glass | If | 36 | 49 | 1 |  |
|  | e. Gilded glass | Ib/VIh | 20 | 27 | 47 |  |
|  | f. Blue glass | VIh | 28 | 36 | 47 | Dark, opaque |
|  | g. Red glass | Vlh | as b | 1 |  |  |
| Q 281-1 |  |  |  |  |  |  |
|  | a. Blue faience | Ve | 13 | 25 | 1 | Turquoise |
| Q 293-4 |  |  |  |  |  |  |
|  | a. Camelian | lb | 43 | 46 | 1 |  |
|  | b. Blue faience | VIe | 12 | 19 | 11 | Variable |
|  | c. Blue faience | VIf | 13 | 50 | 1 |  |
|  | d. Ostrich eggshell | VIf | 19 | 38 | 1 |  |
| Q 298-9 |  |  |  |  |  |  |
|  | a. Blue faience | P | 120 | 69 | 1 | Amun ram head with sun disc |
|  | b. Blue glass | PIIV | 120 | 67 | 20 | Variant; dark, fig. 49h |
|  | c. Camelian | li | 39 | 40 | 6 | Translucent |
|  | d. Red glass | Ii | as c |  | 1 | Opaque |
|  | e. Red glass | Ia | 30 | 30 | 2 | Opaque |
|  | f. Red glass | VIh | 35 | 57 | 1 | Opaque |
|  | g. Gilded glass | VIh | 12 | 41 | 10 |  |
|  | h. Gilded glass | VIs | as g |  | $\begin{aligned} & 9-2 \\ & 1-3 \end{aligned}$ |  |
|  | i. Gilded glass | Ia | 56 | 54 | 1-2 | Possibly more |
|  | j. Blue glass | Ia | as i | 2 |  | Dark |
|  | k. Blue glass | Ia | as i |  |  | Turquoise |
|  | l. Black steatite | Ie | 55 | 73 | 1 |  |
|  | m . Blue faience | VIb | 55 | 70 | 1 |  |
|  | n. Blue glass | Vlh | 06 | 18 | 58 | Turquoise |

## Table 25. Register of Beads (cont.).

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Q2 | -11 |  |  |  |  | Necklace |
|  | a. Blue glass (?) |  |  |  |  | Tiny, N/A |
| Q303-6 |  |  |  |  |  |  |
|  | Bead, blue |  |  |  |  | Discarded |
| Q 304-1 |  |  |  |  |  |  |
|  | a. Camelian | IIc | 56 | 42 | 3 |  |
|  | b. Blue faience | VIe | 18 | 29 | 1 | Turquoise |
| Q306-4a |  |  |  |  |  |  |
|  | a. Gilded glass | If | 38 | 56 | 4 | fig. 44f |
|  | b. Blue faience | VIf | 18 | 56 | 1 | Turquoise |
|  | c. Gilded glass | lb | 29 | 54 | 18 |  |
|  | d. Gilded glass | $\mathrm{Ia} / \mathrm{b}$ | 21 | 30 | 170 |  |
|  | e. Green glass |  | 14 | 25 | 68 |  |
| Q306-4b |  |  |  |  |  |  |
|  | a. Camelian | IId | 58 | 45 | 92 | Shapes good, sizes vary |
|  | b. Gilded glass | IIb | 33 | 45 | 40 |  |
| Q 306-4c |  |  |  |  |  |  |
|  | a. Gilded glass | $\mathrm{Ib} / \mathrm{VIh}$ | 32 | 40 | 73 |  |
|  | b. Gilded glass | VIh | 20 | 29 | 116 |  |
| Q 307-1 |  |  |  |  |  |  |
|  | a. Ostrich eggshell | VIc/e, f | 15 | 30 | 72 | Very small, fig. 46d |
|  | b. Blue faience | VIh | 25 | 39 | 4 | Turquoise |
|  | c. Gray faience | VIe | 18 | 30 | 1 | Gray |
| Q 308-8 |  |  |  |  |  |  |
| Beads N/A |  |  |  |  |  |  |
| Q312-1 Cairo |  |  |  |  |  |  |
| a. Pendants <br> b. White beads |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| Q 312-2 |  |  |  |  |  |  |
|  | a. Blue-gray glass | VIj | 12 | 21 | 210 | Dark blue-gray, opaque (VIh?), fig. 45 c |
|  | b. Green glass | IIf | 22 | 31 | $6+$ | Light, fig. 45 d |
| c. Gilded glass |  | VIs | 60 | 21 | $\begin{aligned} & 34-1 \\ & 4-2 \\ & 7-3 \\ & 1-4 \end{aligned}$ |  |
| d. Gilded glass |  | VIh | 31 | 55 | $\begin{aligned} & 18-1 \\ & 1-2 \end{aligned}$ |  |
| e. Gilded glass |  | $\mathrm{Ib} / \mathrm{g}$ | 53 | 60 | $\begin{aligned} & 8-1 \\ & 2-2 \end{aligned}$ | Deteriorated |
|  | f. Camelian | lb/ld | 25 | 28 | 44 |  |

Table 25. Register of Beads (cont.).

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Q312-4 |  |  |  |  |  | Original stringing |
|  | a. Gilded glass | IId | 52 | 49 | 1 |  |
|  | b. Blue glass | Ilb | 15 | 25 | ca. 40 | Dark, fig. 44m |
|  | c. Blue glass | VIf | 14 | 50 |  | Turquoise |
|  | d. Gilded glass | VIs | 78 | 20 | 4-5 | Four-part; some broken off |
|  | e. White glass | as b |  |  | 1 |  |
| Q312-5 |  |  |  |  |  |  |
|  | a. Blue faience | X | 25 | 141 | 1 | Not in Dunham; discarded, fig. 47i |
|  | b. Blue faience | VIg | 12 | 48 | 33 |  |
|  | c. Blue + white glass | It | 68 | 60 | 1 | Shape not consistent; turquoise, fig. 44 k |
|  | d. Black + white glass | IIr | 106 | 45 | 1 | fig. 45 g |
|  | e. Red glass | $\mathrm{la}, \mathrm{b}$ | 70 | 74 | 1 |  |
|  | f. Gilded glass | $\mathrm{lb} / \mathrm{i}$ | 50 | 70 | ca. 20 |  |
|  | g. Gilded glass | Vlt | 146 | 56 | $\begin{aligned} & 4-2 \\ & 1-4 \end{aligned}$ | Measured; Four-part |
|  | h. Gilded glass | $\mathrm{Vlh} / \mathrm{s}, \mathrm{t}$ | 22 | 31 | $\begin{aligned} & 42-1 \\ & 6-2 \\ & 1-3 \end{aligned}$ |  |
|  | i. Gilded glass | Ilc, d | 31 | 25 | 30 |  |
|  | j. Blue faience | Vd | 64 | 48 | 1 |  |
|  | k. Camelian | lb | 39 | 62 | 1 |  |
|  | 1. Camelian | Ia/Id | 35 | 40 | 24 |  |
|  | m. Red glass | VIs | 50 | 25 | 3.3 | Translucent |
|  | n. Red glass | XII | 59 | 56 | 1 | White and blue eyes, white matrix, blue circles and blue dot, fig. 47 m |
|  | o. Blue faience | Ii/Vlh | 42 | 58 | 1 | Dark |
|  | p. Blue glass | VIh | 27 | 37 | 49 | Dark, translucent |
|  | q. Black glass | as p |  |  | 16 |  |
|  | r. Blue faience | as p |  |  | ca. 12 |  |
|  | s. Yellow faience | VIe | 09 | 24 | 16 |  |
|  | t. Yellow faience | Ild | 88 | 21 | 1 | Turquoise, translucent |
|  | u. Blue glass | VIIId | 72 | 21 | 1 | Rectangular |
|  | v. Red glass | IIc, d | 39 | 29 | 1 | Opaque |
|  | w. Carnelian | IIIh | 32 | 32 | 11 | Irregular, fig. 451 |
|  | x. Blue glass | VIe | 17 | 25 | 1 | Turquoise |
|  | $y$. Deteriorated faience | Vle | 21 | 39 | 1 |  |
|  | z. Gilded glass | Vis | 52 | 20 | 2-3 |  |
| Q312-6 |  |  |  |  |  |  |
|  | a. Blue faience | PIII | 130 | 80 | 1 | 60 thick; feminiform(?); not in Dunham |

Table 25. Register of Beads (cont.).

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Q 312-6 (cont.) |  |  |  |  |  |  |
|  | b. Gilded glass | $\mathrm{Ib} / \mathrm{Vls}$ | 31 | 47 | 5 |  |
|  | c. Silvered glass | as b |  |  | 1 |  |
|  | d. Gilded glass | lb | 70 | 80 | 2 |  |
|  | e. Black glass | Pld | 90 | 66 | 1 | 51 thick |
|  | f. See remarks | IIb, c | 151 | 76 | 1 | Black, blue, yellow, and white glass |
|  | g. Blue faience/glass | VIf | 15 | 42 | 4 |  |
|  | h. Black glass | Vlh | 23 | 32 | 10 |  |
|  | i. Blue glass/faience | ash |  |  | 4 |  |
|  | j. White glass | as h |  |  | 2 |  |
|  | k. Red glass | as d |  |  | 1 |  |
|  | 1. Gilded glass | Ib/VIh | as h |  | 2 |  |
| Q 312-8 |  |  |  |  |  |  |
|  | a. Gilded glass | $\mathrm{Ia} / \mathrm{b} / \mathrm{g}$ | 54 | 63 | 8 | Deteriorated, fig. 44 g |
|  | b. Green glass | Vlh | 21 | 33 | 19 | Opaque, fig. 46k |
|  | c. Camelian | Ia/ld | 30 | 35 | 127 |  |
|  | d. Gilded glass | VIh | 30 | 52 | 9 |  |
|  | e. Blue glass | Ia/Vih | as b | 234 |  |  |
|  | f. Gilded glass | Vlt | 100 | 55 | 1-4 |  |
|  | g. Gilded glass | VIt | 100 | 58 | 2.3 |  |
|  | h. Gilded glass | Ia, b/VI |  | 33 | 57 |  |
|  | i. Gilded glass | Ia/VIh | 12 | 22 | 31 |  |
|  | j. Gilded glass | VIs | 1 pt | as i | 16-2 | fig. 46 m |
|  | k. Gilded glass | VIs | 1 pt | as i | ca. 5-3 | fig. 46 n |
|  | 1. Gilded glass | VIs | 15 | 78 | $\begin{aligned} & 4-3 \\ & 5-4 \end{aligned}$ | Four-part; measured |
| Q 312-15 |  |  |  |  |  |  |
|  | a. Blue faience | $\mathrm{Ib} / \mathrm{g}$ | 57 | 95 | 1 | Turquoise; worn |
|  | b. Blue faience | VIm | 11 | 56 | 465 | Turquoise; deteriorated, fig. 461 |
|  | c. Blue glass | Ii | 45 | 52 | 56 | Dark, fig. 44i |
|  | d. Pink/amethyst glass | Ii | 36 | 43 | 10 |  |
|  | e. Blue-gray faience | Ve | 11 | 22 | 21 |  |
|  | f. Blue glass | Ia/i | 22 | 25 | 175 | Dark |
|  | g. Black glass | Ia/i | as f |  | 51 |  |
|  | h. Ostrich eggshell | VIe | 16 | 25 | 55 |  |
|  | i. Red-pink glass | Ia | 34 | 26 | 48 | Translucent; irregular |
|  | j. Amber glass | Ia/IId | 34 | 34 | $\begin{aligned} & 100-1 \\ & 1-2 \end{aligned}$ | Irregular |
|  | k. Gilded glass | Vlh | 21 | 31 | 55 |  |

Table 25. Register of Beads (cont.).

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Q 312-15 (cont.) |  |  |  |  |  |  |
| 1. Gilded glass |  | VIs | 63 | 22 | 20-1 |  |
|  |  | 5-2 |  |  |  |
|  |  | 1-3 |  |  | Three-part; measured |
|  | m. Red glass |  | IIa | 60 | 32 | 1 | fig. 44] |
| Q314-2 |  |  |  |  |  |  |
|  | a. Glass |  | IIv | 82 | 55 | 1 | White, yellow, red, and black glass; stripe-twist, fig. 45 n |
|  | b. Blue glass | Ib, c | 38 | 49 | 1 |  |
|  | c. Blue glass | VIc | 25 | 38 | 5 |  |
|  | d. Blue glass | VIc | 11 | 52 | 1 |  |
| Q317-4 |  |  |  |  |  |  |
|  | a. See remarks |  |  |  |  | Blue and white beads in strands |
| Q 317-10 |  |  |  |  |  |  |
|  | a. Blue faience | VIe, f | 16 | 44 | 4 |  |
| Q 318-3 |  |  |  |  |  |  |
|  | a. Blue glass/faience | VIi | 10 | 21 | 71 |  |
| Q318-4 |  |  |  |  |  |  |
|  | a. Camelian | la | 61 | 70 | 4 | Irregular |
|  | b. Camelian | IIc, d | 63 | 57 | 1 |  |
|  | c. Blue glass/faience | Vii | 10 | 21 | 50 |  |
| Q319-1 |  |  |  |  |  |  |
|  | a. Blue glass | Vie | 11 | 20 | 506 | Turquoise-greenish |
|  | b. White/yellow glass | as a |  |  | 1786 |  |
|  | c. Red glass | as a |  |  | 11 |  |
|  | d. Black glass | as a |  |  | 3 |  |
|  | e. Red glass | IId | 35 | 29 |  | Opaque |
|  | f. Camelian | Ild | 43 | 38 |  |  |
|  | g. Shell | IId | 121 |  |  |  |
| Q 323-1 |  |  |  |  |  |  |
|  | a. Blue glass | XI | 53 | 47 | 4 | Eyes with blue centers, 4-6 on each bead; type not precise, fig. 47 k |
| Q 325-5 |  |  |  |  |  |  |
|  | a. Blue faience | VIa | 40 | 40 | 8 |  |
| Q 337-1 |  |  |  |  |  |  |
|  | a. Camelian | Plc | 18 | 140 | 1 | 68 thick |
|  | b. Crystal | Plc | as a |  | 1 | fig. 49b |
|  | c. Camelian | Plc-e | 46 | 7 | 36 | c-e more like PIcd, fig. 49c |
|  | d. Crystal | asc |  |  | 1 |  |
|  | e. White glass | as c |  |  | 3 |  |

Table 25. Register of Beads (cont.).

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Q 337-1 (cont.) |  |  |  |  |  |  |
|  | f. Black glass | asc |  |  | 1 |  |
|  | g . Blue glass | Ib | 46 | 45 |  |  |
|  | h. Black glass | Ib | 26 | 25 | 2 |  |
|  | i. Blue faience | Vc-d | 98 | 57 | 8 | fig. 46b |
|  | j. Blue faience | VIe | 15 | 40 | 17 | Turquoise |
| Q 346-1 |  |  |  |  |  |  |
|  | a. Red jasper | PIIb | 69 | 48 | 1 | 20 thick; plano-convex, fig. 49j |
|  | b. Carnelian | PIg | 78 | 20 |  | 18 thick; angular; variant |
|  | c. Black glass | as b |  |  | 1 |  |
|  | d. Gilded glass | $\mathrm{la}, \mathrm{b}$ | 73 | 66 | 1 |  |
|  | e. Gilded glass | $\mathrm{lb} / \mathrm{VIh}$ | 24 | 36 | 74 |  |
|  | f. Green glass | VIh | 12 | 22 | 482 |  |
|  | g. Black glass | as f |  |  | 312 |  |
|  | h. Blue glass | as f |  |  | 526 | Turquoise |
|  | i. Red glass | as f |  |  | 99 |  |
|  | j. Yellow glass | as f |  |  | 161 |  |
|  | k. Gilded glass | XVd | 27 | 40 | 1 |  |
|  | 1. Blue glass | as f |  |  | ca. 47 | Dark |
| Q 351-1 |  |  |  |  |  |  |
|  | a. Ostrich eggshell | VIe | 19 | 38 | 18 |  |
|  | b. Blue glass | VIi, ${ }^{\text {j }}$ | 14 | 21 | 3 | Turquoise |
|  | c. Blue faience | Ia, b | 33 | 40 |  | Turquoise |
| Q 353-8 |  |  |  |  |  |  |
|  | a. Camelian | Ild | 46 | 44 | 2 |  |
|  | b. Camelian | la, b | 36 |  | 2 |  |
|  | c. Yellow glass | $\mathrm{la}, \mathrm{b}$ | 22 | 27 | 1 |  |
| Q 365-al |  |  |  |  |  |  |
|  | a. Blue glass | Ia | 80 |  | 23 | Turquoise |
|  | b. Yellow glass | as a |  |  | 47 |  |
|  | c. White glass | as a |  |  | 18 |  |
|  | d. Blue glass | as a |  |  | 2 | Dark, opaque |
|  | e. Blue glass | Vle | 12 | 36 | 4 |  |
|  | f. Blue glass | Ild | 30 | 28 | 2 | Translucent; grooved transverse |
| Q 365-bl |  |  |  |  |  |  |
|  | a. Yellow glass | $\mathrm{Ia}, \mathrm{b}$ | 86 | 72 | 49 | Opaque; irregular |
|  | b. Blue glass | asa |  |  | 21 | Turquoise; irregular |
|  | c. White glass | as a |  |  | 18 | Irregular |
|  | d. Blue glass | as a |  |  | 1 | Dark |
|  | e. Black glass | as a |  |  | 2 |  |

Table 25. Register of Beads (cont.).


Table 25. Register of Beads (cont.).


Table 25. Register of Beads (cont.).

| 12 | 3 | 4 | 5 | 6 | 7 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Q 465-1 (cont.) |  |  |  |  |  |
| f. Blue glass | VIh | 42 | 48 | 6 | Dark, one opaque(?) |
| g. Green glass | IIIf | 52 | 57 | 1 | Dark turquoise, fig. 45i |
| h. Red glass | asf |  |  | 1 |  |
| i. Red glass | Ia | 61 | 64 | 1 | Translucent, fig. 44c |
| j. Red glass | IId |  | 34 | 2 | Translucent |
| k. Red glass | PIf | 115 | 90 | 1 | fig. 49 g |
| 1. White glass | PIIa, b | 105 | 70 | 1 | Pierced twice as spacer; white spiral on blue background, fig. 49 i |
| m. Carnelian | PIIIC | 103 | 50 | 1 | fig. 49 k |
| Q465-2 |  |  |  |  |  |
| a. Blue glass | Ve | 18 | 22 | 14 | Turquoise; variable size |
| Q 469-2 |  |  |  |  |  |
| a. Blue glass | Ia | 77 | 90 | 3 | Translucent |
| b. Yellow glass | as a |  |  | 1 |  |
| c. Cowrie |  |  |  | 1 | Back cut |
| Q474-3 |  |  |  |  |  |
| a. Red glass | PIf | 52 | 34 | 2 | 28 thick; translucent |
| b. White glass | as a |  |  | 6 |  |
| c. Black glass | as a |  |  | 1 |  |
| d. Blue + white glass | IId/V | 57 | 52 | 1 |  |
| e. Blue glass | VIh | 21 | 28 | 35 | Dark |
| f. Blue glass | ase |  |  | 17 | Turquoise |
| Q489-4. 5, 7 |  |  |  |  |  |
| a. Blue glass | lb | 21 | 32 | 74 | Dark |
| b. Gilded glass | VIs | 51 | 21 | $\begin{aligned} & 8-1 \\ & 32-2 \\ & 9-3 \end{aligned}$ |  |
|  |  |  |  | 1-4 | Measured |
| Q 491-1 |  |  |  |  |  |
| Beads |  |  |  |  | Discarded? |
| Q 499-14 |  |  |  |  | Two groups |
| a. Gilded glass | IIc | 77 | 56 | 1 |  |
| b. Gilded glass | VIs-t | 137 | 36 | $\begin{aligned} & 11-2 \\ & 12-3 \\ & 5-4 \end{aligned}$ | Measured |
| c. Blue glass | VIh | 14 | 23 | 6 |  |
| d. Camelian | Ild | ca. 40 | 38 | 1 |  |
| Q 499-15 |  |  |  |  |  |
| a. Red glass | PIf | 95 | 55 | 1 | Translucent |

Table 25. Register of Beads (cont.).

| 12 | 3 | 4 | 5 | 6 | 7 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Q 507-2 |  |  |  |  |  |
| a. Dark blue glass | XIh | 72 | 15 | 1 | Dark, white eye, black center and outline |
| Q 516-1 |  |  |  |  |  |
| a. Blue glass | lb | 53 | 75 | 2 |  |
| b. Camelian | Ild | 29 | 33 | 27 |  |
| c. Gilded glass | VIh | 24 | 35 | 1 |  |
| d. Gilded glass | XVIa | 42 | 32 | 1 | IId with grooves |
| e. Blue glass | VIh | 16 | 22 | 2 | Dark |
| Q 519-3 |  |  |  |  |  |
| a. Blue glass | Vlh, i | 11 | 70 | ca. 100 to 150 | Not cleaned |
| Q 540-12 |  |  |  |  |  |
| a. Blue faience | Vc | 110 | 56 | 1 | Turquoise |
| b. Blue glass | $\mathrm{lb} / \mathrm{Nlh}$ | 41 | 54 | 1 | Dark |
| c. Red glass | Ild | 109 | 74 | 2 | Opaque |
| Q 547-3a, b2 |  |  |  |  | Bead rings |
| a. Blue glass | VIh, i | 13 | 17 | $33+$ | Dark, deteriorated |
| b. Gilded glass | Ild | 20 | 18 | 4 | Countable |
| Q 556-2 |  |  |  |  |  |
| Bead. |  |  |  |  | Elaborate, large; discarded |
| Q 559-3 |  |  |  |  |  |
| a. Green glass | VIh | 31 | 53 | 1 | Translucent |
| b. Green glass | Vd | 57 | 62 | 1 | Opaque |
| Q 565-3 |  |  |  |  | Bracelet (?); from fill |
| a. Blue glass | $\mathrm{PIa} / \mathrm{g}$ | 68 | 44 | 28 | 44 thick; dark; some smaller |
| b. Blue glass | ase |  |  | 3 | Dark, translucent |
| c. Blue glass | ase |  |  | 3 | Turquoise, translucent |
| d. Gilded glass | VIh/s | 10 | 20 | 14 | One two-part bead |
| e. Red glass | Vlh | 20 | 29 | 1 |  |
| f. Green glass | Vd | 26 | 21 | 1 | Opaque |
| Q 569-3 |  |  |  |  |  |
| Beads unregistered |  |  |  |  | N/A |
| Q 571-2 |  |  |  |  |  |
| a. Green |  |  |  |  | Green bead; no record |
| Q 573B-4 |  |  |  |  |  |
| a. Blue glass | VId/h | 12 | 20 | 100 | Turquoise, opaque |
| b. Blue glass | as a |  |  | 1 | Turquoise, translucent, light |

Table 25. Register of Beads (cont.).

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Q 574-13 |  |  |  |  |  |  |
|  | a. Blue faience | Ia, b | 28 | 39 | 1 | Deteriorated |
|  | b. Blue glass | VIe/h | 18 | 30 | 11 | Turquoise |
| Q 575-1 |  |  |  |  |  |  |
|  | a. Blue-green |  |  |  |  | Unregistered; blue-green beads |
| Q 592-11 |  |  |  |  |  |  |
|  | a. Camelian | lb/Id | 24 | 27 | 43 |  |
|  | b. Gilded glass | VIs | 48 | 21 | 18-3 | Most broken |
|  | c. Gilded glass | VIs | 49 | 12 | $\begin{aligned} & 23-3 \\ & 1-4 \end{aligned}$ | Most broken |
| Q 592-15 |  |  |  |  |  |  |
|  | a. Blue bead |  |  |  |  | Large; from shaft; N/A |
| Q 594-7 |  |  |  |  |  |  |
|  | a. Blue glass | IIq | 64 | 36 |  | Blue glass matrix with white, black, and yellow |
|  | b. Blue glass | Ild | 29 | 27 | 6 | Dark |
|  | c. Blue glass | VIi | 10 | 26 | 5 | Dark |
|  | d. Yellow glass | Ii | 33 | 44 | 16 |  |
|  | e. Gilded glass | VIh? | 24 | 30 | 2 |  |
|  | f. Camelian | IId | 48 | 41 | 10 |  |
|  | g. Blue glass | VIh | 11 | 20 | 56 | Turquoise, translucent |
| Q 609-4 |  |  |  |  |  |  |
|  | a. |  |  |  |  | Unregistered stone bead; N/A |
| Q612-4 |  |  |  |  |  |  |
|  | a. Gilded glass | $\mathrm{l} /$ /VIh | 20 | 30 | 39 |  |
|  | b. Blue glass | Ia/VIh | 20 | 27 | 49 | Dark |
|  | c. Blue glass | VIh | 12 | 20 | 266 | Turquoise, translucent |
|  | d. Gilded glass | VIs | as a | X3 | 2 |  |
|  | e. Blue glass | VIs | as b | X2 | 13-2 |  |
|  |  |  | as b | X3 | 4-3 |  |
|  |  |  | as b | X4 | 1-4 |  |
| Q613-5 |  |  |  |  |  |  |
|  | a. Gilded glass | Ii | 28 | 35 | 8 |  |
| b. Gilded glass |  | IId | 60 | 25 | $\begin{aligned} & 5-1 \\ & 22-2 \\ & 1-3 \end{aligned}$ |  |
|  | c. Blue glass | VIh | 20 | 28 | 1 | Dark |
|  | d. Green glass | VIe | 10 | 12 | 28 | Opaque |
|  | e. Amethyst glass | as d |  |  |  |  |
|  | f. Gilded glass | VIs | 30 | 12 | $\begin{aligned} & 1-1 \\ & 4-2 \\ & 1-1 \end{aligned}$ |  |

Table 25. Register of Beads (cont.).

| 12 | 3 | 4 | 5 | 6 | 7 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Q 613-5 (cont.) |  |  |  |  |  |
| g. Gilded glass | as a |  |  | 2 |  |
| Q625-4 |  |  |  |  |  |
| Blue bead |  |  |  |  | Unregistered; N/A |
| Q 626-3 |  |  |  |  |  |
| a. Camelian | IId | 28 | 23 | 29 |  |
| b. Gilded glass | VIs | 31 | 17 | $\begin{aligned} & 2-1 \\ & 1-2 \end{aligned}$ | Two-part; measured |
| Q627-1 |  |  |  |  |  |
| a. Gilded glass | $\mathrm{Ib} / \mathrm{Nlt}$ | 290 | 83 | $\begin{aligned} & 2-1 \\ & 1-4 \end{aligned}$ |  |
| Q 634-5 |  |  |  |  |  |
| a. White glass | Pld | 97 | 70 | 2 | 55 thick, fig. 49d |
| b. Blue glass | Vd | 24 | 16 | 37 | Turquoise |
| c. Green glass | IIs | 41 | 30 | 82 | Green with white stripe |
| d. Gilded glass | XV | 54 | 39 |  | Variant on c, fig. 48b |
| e. Camelian | IId | 33 | 33 | 20 |  |
| f. Gilded glass | Va | 260 | 41 | 1 |  |
| g. Gilded glass | VIh | 19 | 35 | 49 | Single measured; possibly stuck together |
| Q638-3 |  |  |  |  |  |
| a. Gilded glass |  |  |  |  | N/A |
| Q 640-4 |  |  |  |  |  |
| a. Blue glass | Va | 205 | 25 | 6 | Turquoise |
| b. |  |  |  | 2 | Blobs of glass; ca. 0.35 cm diam. |
| Q 646-6 |  |  |  |  |  |
| a. Blue faience | Va | 144 | 26 | 21 | Turquoise; most broken |
| b. Blue faience | as a |  |  | 19 | Dark; most broken |
| c. Blue faience | VIe | 14 | 24 | 187 | Turquoise |
| d. Blue faience | asc |  |  | 14 | Dark |
| e. Yellow-white faience | as c |  |  | 16 |  |
| Q 652-2 |  |  |  |  |  |
| a. Green glass | VIe | 11 | 28 | 71 | Opaque |
| Q 658-2 |  |  |  |  |  |
| a. Red glass | IId | 31 | 28 | 40 | Translucent |
| b. Blue glass | VIh | 22 | 24 | 6 | Dark, translucent/opaque |
| c. Gilded glass | VIs | 31 | 20 | $6+-2$ |  |
| d. Gilded glass | VIs | 55 | 12 | $\begin{aligned} & 3-3 \\ & 1-4 \end{aligned}$ | Several broken |
| e. Amethyst glass | VIj | 15 | 10 | 14 |  |

Table 25. Register of Beads (cont.).


Table 25. Register of Beads (cont.).

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B 14-2 |  |  |  |  |  | Armlet; same as B 14-1 |
| a. Blue glass |  | VIIIf | 42 | 28 | 26 | Dark |
| B 14-3 |  |  |  |  |  | Armlet; same as B 14-1 |
|  | a. Blue glass | VIIIf | 42 | 28 | 40 | Dark |
|  | b. Green glass | Vlh | 24 | 30 | 4 | Translucent |
|  | c. Red glass | as b |  |  | 2 |  |
|  | d. Gilded glass | as b |  |  | 3 | c and dare strung |
| B 14-4 |  |  |  |  |  | Necklace; strings a-d |
|  |  |  |  |  |  |  |
|  | a. Blue glass | VIIIf | 40 | 38 | 63 | Dark |
|  | b. Green glass | IVc | 56 | 37 | 1 | fig. 45 m |
|  |  |  |  |  |  | Original stringing pattern uncertain |
|  | c. White glass | Ple | 67 | 54 | 33 | fig. 49 f |
|  | d. Red faience | Vlh | 16 | 24 | 10 |  |
|  | e. Gilded glass | VIh | 18 | 27 | 56 |  |
|  | f. Black glass | VIh 10 | 28 | 2 |  |  |
|  | g. Blue glass | $\mathrm{lb} / \mathrm{Nlh}$ | 18 | 32 | 6 | Turquoise |
|  | h. Blue glass | VIh | 19 | 35 | 6 | Dark |
|  | i. Red glass | Ib | 36 | 36 | 1 |  |
|  | j. Green glass | Vlh | 26 | 36 | 3 |  |
|  | k. Yellow faience | Vlh | 19 | 25 | 6 |  |
|  | 1. Green faience | VIe | 18 | 28 | 1 |  |
|  | m. Gilded glass | IIc | 37 | 23 | 1 |  |
|  |  |  |  |  |  | Original stringing pattem uncertain |
|  | n. Gilded glass | Ig | 37 | 46 | 14 |  |
|  | o. Blue faience/glass | VIe | 17 | 31 | 276 |  |
|  | p. Black faience | VIe | aso |  | 1 |  |
|  |  |  |  |  |  | Original stringing pattern uncertain |
|  | q. Quartz | Ple | 82 | 69 | 1 | fig. 49 e |
|  | r. Blue glass | Vld | 15 | 21 | 4 | Turquoise, translucent; irregular |
|  | s. Blue glass | as b |  |  | ca. 20 | String; not cleaned |

String d was also labeled c , but their relation is doubfful.
B 26-4

| a. Blue glass | Vb | 96 | 51 | 1 | Turquoise, translucent |
| :---: | :---: | :---: | :---: | :---: | :---: |
| B 42B?-6 |  |  |  |  |  |
| a. Blue faience | Xi | 65 | 65 | 40 | 24 thick; turquoise |

Table 25. Register of Beads (cont.).

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B 42-4 |  |  |  |  |  |  |
|  | Beads |  |  |  |  | N/A |
| B 42-5 |  |  |  |  |  |  |
|  | Beads |  |  |  |  | Cord too delicate to permit count; encrusted |
| B 66A-3 |  |  |  |  |  |  |
| a. |  |  |  |  |  |  |
|  | a. Blue glass | Va | 85 | 23 | 26-4 | Dark |
|  | b. Red glass | lb | 23 | 30 | 18 |  |
|  | c. Gilded glass | VIe/h | 28 | 33 | $\begin{aligned} & 1-2 \\ & 8-3 \\ & 11-4 \end{aligned}$ | Single bead measured |
|  | d. Gilded glass | Va | 69 | 22 | 47 |  |
|  | e. Gilded glass | VIe/h | 28 | 33 | 37 |  |
|  | f. Gilded glass | XV var. | 89 | 30 | 1 |  |
| b. |  |  |  |  |  |  |
|  | g. Blue-green faience | VIh | 12 | 26 | 5 | Turquoise-green; N. K. (?) |
|  | h. White glass | VIh | 28 | 43 | 8 |  |
|  | i. Gilded glass | VIh | 94 | 23 | 100 | Number approx.: probably all five-part; most broken |
|  | j. Green glass | VIh | 19 | 25 | 11 |  |
| k. As b |  |  |  |  |  |  |
|  | 1. Red faience | Vih | 20 | 28 | 4 | N. K. (?) |
|  | m. Green glass | Ilb | 55 | 33 | 5 |  |
|  | n. Dark blue glass | VIh | 12 | 25 | 11 | Dark |
|  | o. Black glass | Vlh | as n |  | 3 |  |
| c. |  |  |  |  |  |  |
|  | p. As b |  |  |  | 51 | Up to $4 \times 3$; very irregular; Ild in some cases |
|  | q. Gilded glass | Ilb | 82 | 29 | 109 |  |
| d. |  |  |  |  |  |  |
|  | r. As $q$ |  |  |  | 81 |  |
| e. |  |  |  |  |  | Original stringing: $s, t, s, t, w, s, t, s, t$ |
|  | s. Lead | Plg | 102 | 51 | ca. 16 | 32 thick; variant Ig |
|  | t. Gilded glass | $\mathrm{Ia} / \mathrm{i}$ | 36 | 36 | 42 |  |
|  | u. White glass | as b |  |  | 13 |  |
|  | v. Gilded glass | VIs | 54 | 21 | 3-5-3 | Three-part; all broken |
|  | w. Red glass | VIh | 20 | 21 | 1 |  |
|  | x. Green glass | as e |  |  |  |  |
|  | y. Gilded glass | Vc | 69 | 18 | 1 |  |

Table 25. Register of Beads (cont.).

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B 66A-4 |  |  |  |  |  |  |
|  | a. Yellow glass | $\mathrm{IVb}, \mathrm{c}$ | 95 | 55 | 1 | Irregular |
|  | b. Yellow faience | VIe | 11 | 28 | 32 |  |
|  | c. Red faience | Ve | 11 | 25 | 11 |  |
|  | d. Red glass | Vb | 95 | 28 | 1 |  |
|  | e. Red glass | Ii | 34 | 45 | 2 |  |
|  | f. Red glass | Ii-VIh | 24 | 32 | 2 |  |
|  | g. Millefiore | XVm | 105 | 12 | 1 | 37 thick; red plaque with sevenrayed sun disc, black outline, fig. 48 g |
| B 66A-5 |  |  |  |  |  |  |
|  | a. Camelian | IId | 30 | 37 | 1 |  |
|  | b. Gilded glass | Ib/VIh | 21 | 26 | 14 |  |
|  | c. Gilded glass | VIs | 75 | 27 | 5-4 | Some broken also |
|  | d. Gilded glass | IIa, b | 62 | 30 | 12 |  |
|  | e. Gilded glass | IIf | 45 | 57 | 11 |  |
|  | f. Blue glass | VIh | as b |  | 2 | Dark |
|  | g. Red glass | Vlh | as b |  | 2 |  |
|  | h. Black glass | VIh | as b |  | 1 |  |
|  | i. Green glass | VIh | as b |  | 1 |  |
| B 66A-7 |  |  |  |  |  |  |
|  | a. Blue glass | $\mathrm{I} / \mathrm{/IT}$ | 92 | 69 | 1 | Dark |
| B 74-1 |  |  |  |  |  |  |
|  | a. Blue glass | Ia | 65 | 71 | 13 | Dark |
|  | b. Blue glass | Ia | 52 | 62 | 10 | Turquoise |
|  | c. Gilded glass | Ii/VIh | 28 | 30 | 23 |  |
|  | d. Green glass | Vlh | as |  | 7 |  |
|  | e. Red glass | II/Vh | as c |  | 6 | Opaque |
|  | f. Blue glass | VIh | as c |  | 4 |  |
| B 77-11 |  |  |  |  |  |  |
| a. |  |  |  |  |  |  |
|  | a. Blue faience | Id | 120 | 190 | 22 | Globes, dark core, fig. 44e |
| b. |  |  |  |  |  |  |
|  | b. Blue faience | VIa | 30 | 37 | 32 | Turquoise |
|  | c. White glass | VIa | 45 | 36 | 2 |  |
|  | d. Blue faience | Ia | 85 | 72 | 1 | Turquoise |
|  | e. Glass | It, u | 56 | 60 | 1 | Red, black, white, and yellow |
|  | f. Glass | XIb, c | 68 | 76 | 1 | White with blue eye |
|  | g. Blue glass | IIc | 87 | 59 | 1 |  |
|  | h. Gilded glass | Xi | 48 | 53 | 2 | 23 thick |

Table 25. Register of Beads (cont.).

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B 77-11 (cont.) |  |  |  |  |  |  |
|  | i. Blue glass | VIIIe | 65 | 44 | 3 | Dark |
|  | j. Blue faience | Xi | 68 | 75 | 1 | 34 thick |
|  | k. Gilded glass | Ig | 51 | 50 | 4 | Smallest measured |
|  | 1. Glass | IIt | 93 | 40 | 3 | Red, white, and blue |
|  | m. Green glass | Ig | 63 | 53 | 1 |  |
|  | n. Gilded glass | Ig | 54 | 51 | 1 |  |
|  | o. Pink glass | IVc | 62 | 52 | 1 |  |
| B 78-6 |  |  |  |  |  |  |
|  | a. Gilded glass | $\mathrm{X}_{\mathrm{j}}$ | 36 | 47 | 4 |  |
| B 82-2 |  |  |  |  |  |  |
|  | a. Red faience | VIh | 15 | 23 | 39 | One-three beads originally multiple; single measured |
|  | b. Gilded glass | IIf | 36 | 35 | 8 | Irregular |
|  | c. Green glass | IIb | 105 | 48 | 9 |  |
|  | d. Crystal | lb | 81 | 85 | 5 | Irregular |
|  | e. Crystal | IIIh | 64 | 110 |  |  |
|  | f. Crystal |  |  |  |  | Two fragments |
|  | g. Blue glass | Ii | 45 | 47 | 30 | Dark; all broken |
|  | h. Gilded glass | Ii/a | 41 | 31 | 2 |  |
|  | i. Red glass | $\mathrm{li} / \mathrm{Vlh}$ | 12 | 24 | 1 |  |
|  | j. Ostrich eggshell | Vlg | 19 | 47 | 1 |  |
| B 87-2 |  |  |  |  |  |  |
|  | a. Blue glass | $\mathrm{IIIg} / \mathrm{h}$ | 33 | 52 | 1 | Dark, fig. 45j |
| B 87-4 |  |  |  |  |  |  |
|  | a. Quartz | PIc | 120 | 79 | 16 |  |
|  | b. Black steatite | as a |  |  | 8 |  |
|  | c. Carnelian | as a |  |  | 8 |  |
|  | d. Blue glass | Ia | 31 | 38 | 108 | Dark |
|  | e. Gilded glass | Vlh | 20 | 31 | 28 | Few Ii also? |
|  | f. Amber glass | ase |  |  | 1 |  |
|  | g. Blue glass | as e |  |  | 4 | Turquoise |
|  | h. Green glass/faience | ase |  |  | 8 | One faience |
|  | i. Red glass | ase |  |  | 5 | Opaque |
|  | j. Red translucent glass | asd |  |  | 3 |  |
|  | k. Blue glass | VIIIf | 38 | 27 | 1 | Dark |
| B 87-5 |  |  |  |  |  |  |
|  | a. Blue glass | VIIIf | 45 | 32 | 39 | Turquoise |
|  | b. Blue glass | as a |  |  | 42 | Dark |
|  | c. Blue glass | VIh | 23 | 25 | 5 | Dark |

Table 25. Register of Beads (cont.).

| 12 | 3 | 4 | 5 | 6 | 7 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| B 87-5 (cont.) |  |  |  |  |  |
| d. Green glass | asc |  |  | 11 | Translucent |
| e. Green glass/faience | as c |  |  | 10 | Opaque |
| f. Red glass | asc |  |  | 22 |  |
| B 87-6 |  |  |  |  |  |
| a. Blue glass + | XI | 78 | 90 |  | Turquoise with two red chips applied to one side |
| b. Red glass | VIh | 30 | 48 | 1 |  |
| c. Gilded glass | Ia | 83 | 80 | 2 |  |
| d. Blue glass | $\mathrm{Ia} / \mathrm{Nlh}$ | 28 | 38 | 4 |  |
| e. Yellow glass | $\mathrm{Ia} / \mathrm{NIh}$ | as d |  | 10 |  |
| f. White glass | as d |  |  | 2 |  |
| g. Green glass | as d |  |  | 4 |  |
| h. Gilded glass | as d |  |  | 2 |  |
| i. Pink glass | $\mathrm{IId} / \mathrm{VIh}^{\text {a }}$ | as d |  | 2 |  |
| j. Blue glass | VIIIc | 76 | 60 | 2 | Dark |
| k. Green glass | VIII | 53 | 82 | 6 | fig. 47 g |
| 1. White glass | Ia | 62 | 71 | 5 |  |
| m. Green faience | VIe | 16 | 34 | 2 |  |
| n. Blue glass/faience | VIe/h | as m |  | 57 |  |
| o. White glass | VIh | as m |  | 2 |  |
| B 91-3 |  |  |  |  |  |
| a. |  |  |  |  | Strung; one d, e attached |
| a. Blue glass | IId | 40 | 30 | 52 | Turquoise, translucent |
| b. Blue glass | VIt | 68 | 43 | $\begin{aligned} & 14-1 \\ & 4-2 \end{aligned}$ |  |
| c. Yellow glass | as b |  |  | $\begin{aligned} & 10-1 \\ & 3-2 \\ & 1-3 \end{aligned}$ |  |
| d. Blue glass | Vc | 86 | 33 |  | Turquoise, translucent |
| e. Gilded glass | Ii | 37 | 38 | 1 |  |
| B 97-1 |  |  |  |  |  |
| a. Blue glass | Ib | 49 | 64 | 1 | Turquoise |
| b. Green glass | Ib | 58 | 62 | 1 |  |
| B 108-2 |  |  |  |  |  |
| a. Blue glass | Ib | 100 | 105 | 9 | Dark |
| B 108-15 |  |  |  |  |  |
| a. Red glass | VIIIf | 40 | 30 | 68 |  |
| B 108-16 |  |  |  |  |  |
| a. Millefiore | XI | 114 | 134 | 12 | Black glass matrix; three-part; rosette, seven petals, blue, red, ten red spots surrounding; irregular bars |

Table 25. Register of Beads (cont.).


Table 25. Register of Beads (cont.).


Table 25. Register of Beads (cont.)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B 154A-1 |  |  |  |  |  |  |
|  | a. Carnelian | IIIh | 67 | 105 | 1 |  |
|  | b. Glass | Ir | 72 | 74 | 2 | Various, red in white strip in blueturquoise matrix |
|  | c. Blue glass | Ir | 57 | 62 | 1 | Turquoise with white stripe |
|  | d. Blue glass | Ib | 70 | 67 | 1 | Turquoise |
|  | e. Green glass | Ib | 50 | 55 | 2 | Translucent |
|  | f. Black glass |  |  |  | 1 | Irregular |
| B 161-1-2 |  |  |  |  |  |  |
|  | a. Quartz | Ia | 112 | 140 | 1 | Blue crystalline |
|  | b. Glass | XIf/i | 80 | 100 | 28 | Green spot in red, yellow matrix, eyes spotted in |
|  | c. Millefiore | XI | 120 | 140 | 2 | Three-part; yellow rosette with blue center, eight petals, black outline, red matrix |
|  | d. Millefiore | XI | 100 | 125 | 1 | Three-part; rhombs of rectangular bars; black, white, red, green, and yellow; four lines; blue matrix (?) |
| B 170-7-8 |  |  |  |  |  |  |
|  | a. Blue faience | IIIb | 203 | 147 | 11 | Variant; large turquoise |
|  | b. Blue faience | IIIh | 53 | 87 | 34 | Turquoise; large |
|  | c. Blue faience | Vd | 35 | 103 | 2 | Turquoise; actually size Ve ; not fused |
| B 171-4 |  |  |  |  |  |  |
|  | a. Blue faience | Ville | 30 | 55 | 3 | Turquoise |
|  | b. Blue glass | ville | 45 | 64 | 5 | Dark blue |
|  | c. Blue faience | VIa | 32 | 32 | 7 | Turquoise; length varies |
|  | d. Blue faience | Vd | 65 | 95 | 1 | Turquoise |
|  | e. Blue glass | VIh | 30 | 32 | 10 | Dark blue |
|  | f. Green glass | VIh | 30 | 32 | 2 | Light green |
|  | g. Gilded glass | Ig | 54 | 88 | 1-2 |  |
|  | h. Blue faience | VId | 11 | 24 | 2 | Turquoise |
|  | i. Blue faience | Ib | 74 | 79 | 1 | Turquoise |
|  | j. Blue glass | PIIh | 105 | 70 | 1 | Dark blue |
|  | k. Blue glass | PIIh | 110 | 76 | 1 | Turquoise |
|  | 1. Blue glass | PId | 126 | 85 | 11 | Dark blue |
|  | m. Red faience | IIIh | 18 | 43 | 1 |  |
|  | n. Pink glass | Ia | 34 | 32 | 5 |  |
|  | o. Blue glass | PIII | 137 | 59 | 6 | Dark blue; club |
|  | p. Pink glass | PIIh | 98 | 75 | 1 | Not in Dunham |
|  | q. Yellow faience | VId | 23 | 33 | 1 |  |
|  | r. Gilded glass | Ii |  |  |  | Uncertain |

Table 25. Register of Beads (cont.).

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B 171-4 (cont.) |  |  |  |  |  |  |
|  | s. Green glass | PIII | 154 | 72 | 1 | Pendant club; not in Dunham |
|  | t. Black glass | IX | 49 | 29 | 1 | White stripe in blue band; not in Dunham |
|  | u. Yellow glass | PId | 151 | 92 | 1 | Flat |
|  | v. Blue glass | VIIIe | 64 | 40 | 1 | + White |
|  | w. Gilded glass | Xj | 48 | 61 | 1 |  |
|  | x. Pink glass | PId | 86 | 69 | 1 |  |
|  | y. White faience | VIh | 19 | 42 |  |  |
|  | 2. Red faience | Ii | 73 | 37 |  |  |
|  | a. Green glass | IX | 49 | 37 | 1 | Rectangular; white stripe |
|  | ab. Blue faience | lb | 35 | 47 | 1 | Turquoise |
| Probably reused New Kingdom or other earlier beads: $z, y, q, m$. |  |  |  |  |  |  |
| Not in Dunham: o, s, t (actually short IXe), at (same). |  |  |  |  |  |  |
| B 176-1 |  |  |  |  |  |  |
| "Small quantity of white, green, and blue glass beads." |  |  |  |  |  |  |
| B 176-8 |  |  |  |  |  |  |
| "Small quantity of blue glass beads." |  |  |  |  |  |  |
| B 176-9 |  |  |  |  |  |  |
| "A few blue beads, some still strung." |  |  |  |  |  |  |
| B 179-5 |  |  |  |  |  |  |
|  | a. Blue glass | VIIIe | 60 | 60 | 18 | Very irregular |
|  | b. Gilded glass | II/VIs | 22 | 32 | 37 | Pairs maximum; singles counted |
|  | c. Red glass | IXe | 64 | 30 | 1 | Opaque |
|  | d. Green glass | $\mathrm{IXa}(?)$ | 62 | 52 | 1 | 35 thick |
|  | e. Yellow glass | Ia/VIh | as b |  | 2 |  |
| B 190-2 |  |  |  |  |  | Armlet; N/A |
| B 190-5 |  |  |  |  |  | Necklace |
|  | a. Glass | XVI | 71 | 70 | 1 | 32 thick; radial green and yellow lines, yellow center, red around, fig. 48 h |
|  | b. Green glass | VIII | 58 | 65 | 4 |  |
|  | c. Yellow glass | He | 70 | 85 | 15 |  |
|  | d. Pink/amber glass | IIIf | 80 | 82 | 1 |  |
|  | e. Blue glass | lb | 75 | 90 | 1 |  |
|  | f. Quartz | IIf | 88 | 2 |  |  |
|  | g. Blue faience | Ib | 47 | 66 | 1 |  |
|  | h. Green glass | IIf | 91 | 74 |  |  |
|  | i. Green glass | IIIf | 68 | 4 | 2 | Irregular; one almost faceted |
|  | j. Blue glass | VIIIa, b | 100 | 68 | 5 |  |
|  | k. Blue glass | IIIa | 115 | 88 | 2 | Irregular |

Table 25. Register of Beads (cont.).

| $1 \quad 2$ | 3 | 4 | 5 | 6 | 7 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| B 190-5 (cont) |  |  |  |  |  |
| 1. Quartz | VIb | 55 | 72 | 1 | Rose quartz |
| m. White glass | IIf | 66 | 60 | 1 |  |
| n. Red glass | IIf | 56 | 67 | 1 |  |
| B 190-6 |  |  |  |  |  |
| a. Quartz | Iq | 157 | 105 | 1 | Variant; rose |
| b. Quartz | If | 110 |  | 1 |  |
| c. Blue glass | Iq | 162 | 82 | 1 | Variant; irregular |
| d. Diorite | VIe | 17 | 30 | 40 |  |
| e. Blue faience | VIe | 30 | 35 | 2 |  |
| B 190-8 |  |  |  |  | Armlet; original stringing no patter |
| a. (1) |  |  |  |  |  |
| a. Blue faience | $\mathrm{Ib} / \mathrm{Vle}$ | 27 | 35 | 14 | Turquoise; irregular; number approximate |
| b. Blue faience | VIb | 40 | 42 | 16 | Turquoise; irregular; number approximate |
| c. Blue faience | $\mathrm{Vc} / \mathrm{d}$ | 66 | 36 | 14 | Turquoise; irregular; number approximate |
| d. Yellow glass | IIf | 67 | 71 | 2 |  |
| c. Red faience | VIh | 19 | 27 | 2 |  |
| f. Yellow glass | VIh | as e | 1 |  |  |
| b. (2) |  |  |  |  |  |
| g. As a |  |  |  | 24 | Number approximate |
| h. As c |  |  |  | 14 | Number approximate |
| i. Green glass | Ia | 72 | 2 |  | Irregular |
| j. Blue glass | Vlh | 24 | 35 | 1 | Dark |
| k. White faience | VIe | 17 | 36 | 2 | N. K. (?); sharp corner; wellmade |
| 1. Blue glass | VIh | as j |  | 1 | Variant; dark; two together; not in Dunham |
| m. Blue-green glass | VIh | 27 | 39 | 1 |  |
| c. (3) |  |  |  |  |  |
| n. As a |  |  |  | 20 | Turquoise; one or two N. K. (?) number approximate |
| o. As c |  |  |  | 16 |  |
| p. Blue glass | VIII | 72 | 79 | 1 | Dark; crude facets; proportions as IIIf; not in Dunham |
| q. as $p$ |  |  |  |  |  |
| r. Yellow glass | VIh | 57 | 31 | 1-2 |  |
| a. Blue glass | VIeh | 39 | 23 | 1 | Dark |

The totals are uncertain due to lack of precise boundaries in the classification.

Table 25. Register of Beads (cont.).

| 12 | 3 | 4 | 5 | 6 | 7 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| B 190-9 |  |  |  |  |  |
| a. Camelian | PId | 139 | 86 | 1 | 32 thick |
| B 193-6a |  |  |  |  |  |
| a. White glass | XV | 52 | 140 | 6 | Double spacer triangle; not in Dunham, fig. 48f |
| b. Blue glass | as a |  |  | 5 | Dark |
| c. Blue/white glass | VIIIe | 61 | 45 | 16 |  |
| d. White glass | VIIId | 138 | 37 | 4 | Variable dimensions |
| e. Blue glass | Ia | 23 |  | 2 |  |
| B 193-6b |  |  |  |  |  |
| a. Quartz | Ple | 80 | 76 | 6 |  |
| b. Camelian | Ia | 40 | 42 | 1 | Irregular |
| c. Blue glass | Ia | as b | 1 |  | Turquoise |
| d. Blue glass | XV | 105 | 47 | 1 | 20 thick |
| e. White glass | as b | as d | 1 |  |  |
| B 197-7 7 |  |  |  |  |  |
| a. Red glass | VIs, 1 | 37 | 165 | 53-1 |  |
|  |  |  |  | $\begin{aligned} & ?-2 \\ & ?-3 \end{aligned}$ | Measured |
|  |  |  |  | ?-5 | Segments only; five-bead |
| b. Camelian | IIIh | 40 | 70 | 1 | fig. 45 k |
| c. Carnelian | Ia | 59 | 70 | 2 |  |
| d. Silvered glass | P | 135 | 65 | 1 | 28 thick; pomegranate (?); not in Dunham |
| B 201-1 |  |  |  |  |  |
| a. Yellow glass | Ia | 78 | 80 | 1 |  |
| B 204A-2 |  |  |  |  | (X-Group N-S shaft) |
| a. Blue glass | VIt | 119 | 74 | 1 | Six-part; dark |
| b. Blue glass | VIIIb | 80 |  | 1 | Turquoise; irregular; six sides |
| c. Blue glass | VIe | 37 | 27 | 2 | Dark, opaque |
| B 205-1 |  |  |  |  |  |
| a. Blue glass | Va | 68 | 40 | 15 | Turquoise canes |
| b. Quartz | PIf | 147 | 92 | 1 |  |
| B 210-1 |  |  |  |  |  |
| a. Blue glass | XVh | 85 | 55 | 1 | Dark, fig. 48e |
| b. Blue glass | VIh | 26 | 36 | 2 | Turquoise |
| c. Blue glass | Xi | 40 | 60 | 4 | 20 thick; turquoise |
| d. Blue glass | $\mathrm{Vc}, \mathrm{d}$ | 85 | 47 | 2 | Turquoise |
| e. Blue glass | VIb | 32 | 36 | 5 | Turquoise |
| f. Green faience |  |  |  |  |  |

N.B. Break in string, count not completed.

Table 25. Register of Beads (cont.).

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B 210-1 |  |  |  |  |  |  |
|  | a. Blue glass | Vc | 60 | 35 | 1 | Turquoise, translucent |
|  | b. Red glass | Vc |  | 28 | 1 | Broken |
|  | c. Yellow glass | IVc | 45 | 43 | 1 | Broken |
| B 212-2 |  |  |  |  |  |  |
|  | a. Blue glass | VId | 33 | 35 | 15 | Turquoise |
| B 219-3 |  |  |  |  |  |  |
|  | a. Blue faience | Vd | 83 | 57 | 1 | Turquoise, irregular |
|  | b. Blue glass | Vb | 87 | 60 | 1 | Turquoise, translucent |
|  | c. White glass | Ib | 53 | 63 | 1 |  |
| B 227-3 |  |  |  |  |  |  |
|  | a. Light green glass | Ild | 36 | 25 |  | Translucent |
|  | b. Amber glass | IId | 38 | 26 |  | Opaque |
|  | c. Red glass | Ild | 35 | 30 |  | Opaque |
|  | d. Blue glass/faience | llm | 25 | 56 |  | Variant; turquoise, opaque |
| B 228-1 |  |  |  |  |  |  |
|  | a. Gilded glass | IIb | 60 | 30 | 47 |  |
|  | b. Blue faience | Vc | 107 | 53 | 2 |  |
| B 231-1 |  |  |  |  |  | See also B 66, B 266, B 168, and B 26 |
|  | a. Red glass | VIh | 18 |  | 1 |  |
|  | b. White glass | VIh | as a |  | 1 |  |
|  | c. Blue glass | VIIIf | 35 | 28 | 1 |  |
|  | d. Blue glass | Vd | 83 | 55 | 1 |  |
|  | e. Green glass | li/IIIf | 54 | 44 | 1 |  |
|  | f. Green glass | la | 22 |  | 1 | Diameter |
| B 236-7a |  |  |  |  |  |  |
|  | Beads |  |  |  |  | N/A |
| B 244-2 |  |  |  |  |  |  |
|  | a. Clay? |  | 150 | 91 | 1 | Irregular; green glazed |
| B 252-8 |  |  |  |  |  |  |
|  | a. Blue glass | IXa | 86 | 70 | 31 | 42 thick, fig. 47 h |
|  | b. Gilded glass | Vlh | 12 | 28 | 34 |  |
|  | c. Green faience/glass | VId, e | 12 | 20 | 15 |  |
|  | d. Camelian | Ia/IId | 45 | 40 | 9 | Approximate |
|  | e. Camelian | VIj | 21 | 32 | 6 | Approximate; irregular |
|  | f. Blue glass/faience | as b |  |  | 3 | Turquoise |
|  | g. Blue glass/faience | as b |  |  | 4 | Dark |
|  | h. Gilded glass | IId | 60 | 48 | 18 |  |

Table 25. Register of Beads (cont.).

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B 252-7 |  |  |  |  |  |  |
|  | Beads |  |  |  |  | N/A |
| B 263-10 |  |  |  |  |  |  |
|  | a. Blue glass | IIC | 70 | 40 | 1 |  |
| B 266-1 |  |  |  |  |  | See also tombs B 231, B 168, B 26, and B 66 |
|  | a. Blue glass | PId | 87 | 59 | 63 | Dark |
| B 269-1 |  |  |  |  |  |  |
|  | a. Yellow glass | Ip | 52 | 57 | 1 | Black stripe |
| B 279-2 |  |  |  |  |  |  |
|  | a. Gilded glass | XVd | 33 | 73 | 9 | fig. 48d |
|  | b. Camelian | VIh | 28 | 36 | 2 | Irregular |
|  | c. Gilded glass | Ii/VIh | 26 | 33 | 4 |  |
|  | d. White glass | Ia | 53 | 59 | 37 |  |
|  | e. Green glass | Ia | 64 | 79 | 19 | Opaque |
|  | f. Gilded glass | VIIa | 58 | 42 | 6 | Variant; surface striated, fig. 47a |
|  | g. Green glass | VIh | as c | 4 |  |  |
|  | h. Black glass | Ii/VIh | 30 | 45 |  |  |
| B 280-1 |  |  |  |  |  |  |
|  | a. Glass | $\mathrm{Ia} / \mathrm{i}$ | 60 | 67 | 1 | Orange |
| B 282-2 |  |  |  |  |  |  |
|  | a. Blue glass | Ha | 39 | 23 | 1 |  |
|  | b. Camelian | IId | 40 | 33 | 206 | Irregular |
| B 282-4a |  |  |  |  |  |  |
| a. |  |  |  |  |  |  |
|  | a. Gilded glass | IIj, k | 65 | 32 | 2 | Variant; not in Dunham |
|  | b. Carnelian | la/IId | 36 | 42 | 51 |  |
|  | c. Blue glass | as b | 2 |  |  | Dark; inegular |
|  | d. Blue glass | IIa, b | 41 | 27 | $\begin{aligned} & 74-1 \\ & 1-2 ? \end{aligned}$ | Dark |
|  | e. Gilded glass | VIh | 26 | 37 | 2 |  |
|  | f. Blue glass | VIh | 12 | 23 | 5 | Dark |
| b. |  |  |  |  |  |  |
|  | g. Green faience | IIm | 90 | 43 | 3 | Variant; transverse ribs, fig. 45e |
|  | h. Green faience | IIm | 70 | 46 | 3 | fig. 45 f |
|  | i. Yellow glass | IIf | 57 | 49 | 16 |  |
|  | j. Yellow glass | Ild | 40 | 35 | 101 | One pair joined |
|  | k. Yellow/white glass | Ils | 57 | 37 | 21 |  |
|  | 1. White glass | as j |  |  | 2 |  |
|  | m. White glass | Ia | 48 | 57 | 1 |  |

Table 25. Register of Beads (cont.).


Table 25. Register of Beads (cont.).

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B 299-6c (cont.) |  |  |  |  |  |  |
|  | b. Blue glass | Vb | 97 | 32 | 2 | Dark, opaque |
|  | c. Black glass | Vb | 45 | 26 | 1 |  |
|  | d. Green glass | $\mathrm{Va}, \mathrm{b}$ |  | 22 | 1 | Opaque |
|  | e. Blue glass | VIg | 15 | 54 | 1 | Turquoise |
|  | f. Blue glass | Vd | 24 | 15 | 10 |  |
|  | g. As f |  |  |  | 1 | Dark |
|  | h. Gilded glass | VIs | 86 | 25 | 1 | Four-part |
|  | i. Blue glass | $\mathrm{la}, \mathrm{b}$ | 44 | 46 | 1 | Dark |
|  |  |  |  |  |  | Original stringing |
|  | a. Green glass | Vle | 12 | 24 | 57 |  |
| B 314-4 |  |  |  |  |  |  |
|  | a. Quartz | PIe | 100 | 89 | 1 |  |
|  | b. Red glass | VIIIe | 44 | 31 | 3 |  |
|  | c. Blue glass | VIIIf | 37 | 27 | 3 | Dark |
|  | d. Gilded glass | VIh, i | 12 | 27 | 2 |  |
|  | e. Blue glass | Vlh | 21 | 30 | 2 | Dark |
|  | f. Blue glass | Vlh | 12 | 20 | 1 | Dark |
| B 319A-6 |  |  |  |  |  |  |
|  | a. Glass | XIb, c | 58 | 79 | 1 | White with three black spots |
| B 321-1 |  |  |  |  |  |  |
|  | a. Green glass | XI | 87 | 112 | 6 | Variant; green glass matrix, rosettes, yellow-white petals, wedge shaped, red center |
| B 327-1 Some stringing preserved: |  |  |  |  |  |  |
| a. Cylindrical white, 3 blue discoid, white ball, blue discoid, turquoise long cylinder, alternated large white and smal blue discoid. |  |  |  |  |  |  |
| b. Large blue balls |  |  |  |  |  |  |
|  | a. Red glass | VIIlb | 110 | 74 | 1 | Slighty irregular |
|  | b. White | Ilf | 70 | 75 | 10 |  |
|  | c. Blue glass | IVc | 76 | 82 | 1 | Variant; dark |
|  | d. Blue glass | VIIIc | 89 | 71 | 1 | Dark, fig. 47c |
|  | e. Blue faience | Ilf | 57 | 64 | 32 | Turquoise |
|  | f. Blue faience | VId | 27 | 40 | 22 | Turquoise |
|  | g. Blue faience | IVc | 50 | 40 | 1 | Turquoise |
|  | h. Blue faience | Vd | 68 | 45 | 1 | Turquoise |
|  | i. Blue glass | IIf | 32 | 69 | 1 | Turquoise |
|  | j. Blue faience | VIh | 31 | 60 | 1 | Turquoise |
|  | k. Green glass | Ilf | 33 | 35 | 1 | Translucent |
|  | 1. Blue glass | IIf | 38 | 40 | 10 | Translucent, dark |
|  | m. Blue glass | VIs, 1 | 55 | 43 | 1.2 | Dark |

Table 25. Register of Beads (cont.).


Table 25. Register of Beads (cont.).


Note that the following beads were not available for study in Chicago: Q 180-5, Q 298B-11, Q 312-1, Q 442-1, Q 491-1 (Cairo Museum) , B 42B-4 and 5, B 142B-1, B 153-1a, B 236-7, B 252-7, B 296-1.

## GLYPTIC

Two major kinds of glyptic occur in the Meroitic contexts at Qustul and Ballana, stone or faience scarabs (and plaques), and metal bezel rings. Because small, compact, and attractive objects of this type were frequently plundered, they are often difficult to date without complex critical arguments. In Meroitic Nubia, scarabs occurred at Faras, ${ }^{57}$ and at Qustul, but not at Karanog or Ballana, indicating that they date largely before phase IIIA. Bezel rings, on the other hand, occurred at Qustul and Ballana in phases IIB-IV.
57. Scarabs and plaques appeared at Faras (Griffith 1924, pl. LXI:2-35), but they were very rare at Karanog (Woolley and Randall-Maclver 1910, G 141, a fragment wrapped in a textile).

## SCARABS and PLAQUES

Scarabs and plaques with incised decoration on one surface were not popular in Meroitic Lower Nubia. The were found only in the Qustul cemetery and were probably all reused.

Table 26. Register of Scarabs and Plaques.

| Tomb and <br> Object Number | Object and Remarks |
| :---: | :--- |
| Q 154-1 | Scarab |
| -2 | Scarab |
| -3 | Scarab |
| Q 162-4 | Scarab |
| Q 253-2 | Glazed plaque |
| Q 317-5 | Scarab |
| -6 | Scarab |
| Q 346-2 | Scarab |
| Q 526-3 | Scarab |
| Q 650-4 | Plaque |
| -5 | Scarab, "Kushite fine" |
|  | Same, name Thutmose III/Piye |

## BEZEL RINGS

Bezel Rings (pls. 70a-c, f, k-m; 71b-f; 72-75) were much more common than scarabs or plaques. 58 Simple examples are metal bands with flat, rhomboid, or bi-parabolic plates soldered to them as the bezels. A somewhat more developed form consisted of a very thin tapered band with a flattened oblong area in the widest part; this had room for only the simplest motif such as an ankh. In still more developed forms the taper of the ring was made more pronounced. The mass of the bezel was increased, its surface raised and broadened first to an oval and then to a circle with a slightly convex surface. In rare instances the bezel was rectangular. By the end of the fourth century A.D. it became a tall circular projection with concave sides and a convex upper surface. ${ }^{59}$

As its surface was increased the representations also increased in elaboration. Many amuletic motifs used on painted pottery (the ankh, the sa, the uracus, and Bes as a head, dancing, drinking, or standing prepared to fight with a knife) appeared. ${ }^{60}$ Representations not found on pottery such as the heads and figures of gods were more important, however. These include various forms of Amun, the triple protome, female deities, Apedemak, and other figures that cannot be individually identified. ${ }^{61}$ Some figures, such as the triple protome, may have originated in relief or sculpture in the round; 62 others, such as the combined Bes, frog, scarabaeus, and wings, were miniaturizations of amuletic motifs found on larger items of jewelry. ${ }^{63}$ The motifs, including filling elements, were derived from monumental themes of Kushite art compacted for use in the smaller space of the bezel. Although the figure of a deity may be shown on a pedestal or enthroned, as in the elaborate scenes from Meroe, usually only the head is shown; female deities
58. Griffith 1924, pls. LIX:24-34, LX; Woolley and Randall-MacIver 1910, pl. 33.
59. Bates and Dunham 1927, pl. XXXIII:1, 6, I-K, M.
60. Woolley and Randall-Maclver 1910, pl. 33:8126, 8127, 8125, 8095, 8055 (?), 8056 (?), 8058 (?), 8059 (?).
61. Woolley and Randall-MacIver 1910, pl. 33:8113-8115, 8099-8105, 8107.
62. Woolley and Randall-MacIver 1910, pl. 33:8113-15.
63. Hintze 1971, pl. 22a.
are shown in profile; Bes or the bearded deity facing front. ${ }^{64}$ Many heads are supported by crescents. ${ }^{65}$ An element from earlier glyptic, the neb sign, was used to fill the lower space.

Although they were made with concave designs, two aspects of their occurrence indicate that the rings were used primarily as amulets rather than seals, or as displays of wealth. Bezel rings were frequently found in groups, sometimes still on the hand of the burial, even in groups of five or more. They are usually of a base metal including copper, brass, bronze, iron, or combinations of these metals. The following discussion of major representations and signs on the rings is intended to supplement the descriptions given in tables 27 and 28.

Apedemak (B 242-2). One ring with a circular bezel 1.3 cm in diameter depicts a lion-headed deity shooting a bow and brandishing a second weapon. The powerfully muscled god wears a kilt with the flap between his legs and the tail dangling behind and strides on or tramples a serpent. The left hand and arm are extended before the body to grasp a bi-curved bow and arrows. One seems to be nocked. The right hand is raised behind the head and appears to hold a mace. A quiver with three flaps dangling from the bottom projects backward at an angle at the waist. The figure is deeply cut, generally with a drill which emphasizes the weight and muscularity of the arms, legs, and chest. The bold, curved shapes made by drill work are especially effective in the powerful leonine profile of the head, emphasized by the bulges for the ears, eyes and lower jaw. Along with a relief in Sudan at Musawwarat es Sufra, it is the only representation of Apedemak actually using his weapons ${ }^{66}$ and it is the only full-figure representation of the god in Lower Nubia. ${ }^{67}$

Royal Representation (B 208-2). A large bezel, $1.7 \times 1.6 \mathrm{~cm}$, depicts a Meroitic pharaoh with shallow carving and very little use of the drill. The central figure with the left leg slightly in front of the right wears the long royal robe with a flap in front. The menat hangs behind his back and he wears the close fitting royal cap bound by a diadem with a uraeus whose crown projects above. ${ }^{68}$ In the ruler's extended left hand is a double staff, and in his right, also extended, a scepter. Behind the figure and bent forward above it are a lotus flower and a bud on long stalks. The ring is the only definite representation of its kind in Lower Nubia and probably one of the latest of any Meroitic ruler. ${ }^{69}$

Standing Figure (B 282-5). One other ring has a fully depicted figure, cut into an oval carnelian or agate in intaglio and set into a bezel. A very simplified standing male figure is shown against a hilly background. If the object held against the shoulder is a club, the figure is probably Heracles. ${ }^{70}$ The carved stone was very likely imported.

Large Male Head (Q 475-19). In most Meroitic glyptic, the central figure is surrounded by some space with filling motifs. In one case, however, a deeply cut head fills the bezel almost completely. The cheek is quite plump; incisions indicate the mouth, nose, eye, and hairline and a group of incisions show the texture of the hair. A collar forms a base for the head. This ring was probably made in imitation of Hellenistic intaglio.

Large Male Head with Cap (Q $155-3$ ). The large head also appears with a peaked cap and pointed beard on a ring, of iron, or more probably of silver, now in the Cairo Museum. It was also probably not of Meroitic manufacture.

Head of a Goddess or Queen (Q 230-8.) A relatively small (ca. 1 cm ), coarsely cut convex bezel has a female head above a neb sign. A vulture headdress is indicated by the head and tail, and it is crowned with horns that frame a sun discarded. Four crosses indicating ankhs or sa amulets surround the head which is simply a drill-hole.
64. For the bearded deity, see Gamer-Wallert 1983, pl. 10a.
65. Woolley and Randall-Maclver 1910, pl. 33, various. The combination/abbreviation occurs on a wall plaque at Meroe (Wenig 1979b, cat. 214).
66. Ursula Hintze 1979, fig. 3.
67. Lion-headed serpents occur in painted (Woolley and Randall-MacIver 1910, pl. 43:8310) and impressed pottery decoration, and as undulating serpents on a leather fragment from Semna South (Zabkar 1975, pls. 24, 25).
68. Török 1987, pp. 4-11, type AI.
69. The figure in a rock drawing is probably a deity (Basch and Gorbea, 1968, p. 256, fig. 263 at Khor Qatta, K.G.2). The crown may be feminine.
70. For another gem (lapis lazuli) depicting a figure in heroic pose with a club, see Griffith 1924, pl. LIX:24.

Head of Amun as a Ram (Q 540-10). A deeply cut ring bezel, $1.2 \times 1.1 \mathrm{~cm}$, shows a ram's head on a neb sign with a sun disc above. The disc is encircled by a fillet with a uraeus. ${ }^{71}$

Head of a God as a Falcon (B 173-1). A deeply but poorly cut bezel depicts the head of a falcon on a neb sign which has the proper basket texture. The head wears the double crown and is flanked by a pair of wings that were only scratched in the surface. The eye and brow are clearly shown and two crosses with splayed arms, probably ankhs, flank the crown.

Two Heads of Gods as Falcons (Q 402-9). A nearly round bezel, $1.3 \times 1.2 \mathrm{~cm}$, shows two falcon's heads on a neb sign; the head on the left wears the double crown, that on the right wears the hemhem. The figures are shallow and still show signs of engraving; the use of the drill was unobtrusive.

Uraeus (B 278-8). A very small flattened bezel shows a coiled uraeus with a sun disc above it.
Facing Uraei (B 278-5b). A flattened bezel shows two uraei on a neb sign, facing inward, each crowned with a sun disc.

Sandaled Feet (B 279-4). A pair of feet with sandal straps are shown above a neb sign surrounded above and on the sides by a two-headed uraeus with the heads facing outward. The scales of the serpent and the basketry of a neb sign below the feet are indicated by incised lines. The cutting is relatively shallow and details are lightly incised, but the outlines are clear and precise. It is difficult to determine the meaning of this representation, but its presence on glyptic as well as its association with the uraeus and the neb sign indicate its religious significance. Pairs of feet are quite common in rock drawings. ${ }^{72}$

Wedjat Eye (B $282-6$ ). A very small bezel shows a summary version of the wedjat eye, an uncommon motif on bezel rings.

Double Lotus and Sun Disc in Raised Relief (Q 346-5). An almond shaped flat bezel, with very low raised relief depicting two lotus flowers flanking a sun disc was soldered to a narrow band. ${ }^{73}$

Tree (B 232-4). One of the best made rings in the collection shows a tree on a somewhat coarscly scratched, but well-shaped crescent. The tree was well proportioned, the crown formed by drill holes, and the trunk indicated by vertical incisions crossed by horizontal cuts.

Frond Flanked by Uraci (Q 573-2). An almost rectangular bezel, $1.2 \times 0.75 \mathrm{~cm}$, depicts a vertical branch or frond flanked by two facing uraei.

Ankh (B 282-8). This small oval bezel contains a typical ankh of Nubia, with a circular knot and splayed arms and base. ${ }^{74}$

Sa (B 278-6). This flattened bezel contains a summarily cut sa sign. ${ }^{75}$
Damaged and Corroded Bezels. A number of rings had been so damaged that the decoration was not recovered. They varied considerably in size and elaboration and their decoration appears to have resembled the better preserved examples.

Ring of Wire with Bead Bezel (B 278-4a). This ring was made of wire, with a small flat circular green bead used as a bezel. Fine wires were twisted to the shank to hold the bead in position.

Table 27. Typology of Bezel Rings.
I. Bezel part of the ring itself
A. Small bezel on flattened oval area of the band ca. $0.3 \times 0.5 \mathrm{~cm}$

1. Small, narrow oval, ca $0.3 \times 0.5 \mathrm{~cm}$
2. Elongated narrow bezel, band tapers $t 0.1 \mathrm{~cm}$
3. Woolley and Randall-Maclver 1910, pl. 33:8108, 8109.
4. Hellstrorm 1970, Aa; Basch and Gorbea 1968; sandals:figs. 21, 26, 33, 51, 61, 67, 74, 75, 120, 140, 164. feet: figs. 22, 26, 74. They were also frequently carved on the roofs of late temples in Egypt.
5. The construction is paralleled at Meroe (Dunham 1963, figs. 27 f and 92 i .).
6. Woolley and Randall-MacIver 1910, pl. 33:8126, 8127.
7. Woolley and Randall-MacIver 1910, pl. 33:8125; Griffith 1924, pl. LX:50, 51.

Table 27. Typology of Bezel Rings (cont.).
B. Small raised bezel, ca. 0.7 cm diameter

1. Bezel wide area of band
a. Band plain
b. Band with horizontal incised decoration
2. Low bezel, ca. 0.18 cm thick
3. Moderate thickening, ca. 2.4 cm
4. High bezel, ca. 0.47 cm
C. Medium small bezel, ca. $1.0 \times 0.7 \mathrm{~cm}$
5. Low bezel
a. Oval
b. Elongate oval
c. Subrectangular
6. Medium bezel
D. Medium large bezel
7. Low bezel (all oval, ca 0.3 cm thick)
8. Medium bezel
a. Oval
b. Round
9. High bezel (oval vs. round not clearly distinguished)
10. Large, round, wider than tall, medium height
E. Very large bezel
II. Bezel attached to ring
A. Bi-parabolic metal plate soldered to band
B. Stone in setting, soldered to tapered ring
C. Green glass bead on copper wire, twisted together

Table 28. Register of Bezel Rings.

| Tomb and Object Number | Material | Type | Size | Subject |
| :---: | :---: | :---: | :---: | :---: |
| B 242-2 | "Brass," band with lead cover | I-D2b | 1.3 cm | Apedemak |
| B 208-2 | Iron | I-D4 | $1.7 \times 1.6 \mathrm{~cm}$ | Meroitic ruler |
| Q 540-10 | Copper | I-D2b | $1.2 \times 1.1 \mathrm{~cm}$ | Ram's head on neb sign with sun disc and crowned uraeus on fillet |
| Q 230-8 | Copper | I-D3 | 1.0 cm | Head of goddess on neb sign with homs and sun disc on vulture headdress, four crosses (sa amulets?) |
| B 173-1 | Copper | 1-D3 | $1.3 \times 1.2 \mathrm{~cm}$ | Falcon head on neb with double crown, two crosses flanking (ankhs?); wings added, includes eye and basket |
| Q 402-9 | Bronze? | I-D3 | $1.3 \times 1.2 \mathrm{~cm}$ | Two falcon heads on neb sign, left double crown, right, hemhem |
| Q 475-19 |  | I-Cla |  | Head on collar |
| Q670-7 | Iron | I-DI | $1.6 \times 1.2 \mathrm{~cm}$ | Bird, unknown type |
| Q 670-11 | Bronze? | I-B3 | small | Bes, face front |

Table 28. Register of Bezel Rings (cont.).

| Tomb and Object Number | Material | Type | Size | Subject |
| :---: | :---: | :---: | :---: | :---: |
| Q 670-12 | "Brass" | I-B2 | very small | Goose or bustard |
| Q 573-3 |  | I-A2 |  | Standing figure with staff, barely flattened |
| B 280-4 | Copper | I-D1 | $1.5 \times 1.2 \mathrm{~cm}$ | Ram-sphinx with sun disc on pedestal |
| B 282-10 | "Brass" | I-B3 | $0.8 \times 0.5 \mathrm{~cm}$ | Ram's head on neb, sun disc with uraeus |
| B 280-3 | Silver | 1-D2b | $1.5 \times 1.2 \mathrm{~cm}$ | Frog |
| B 331-4a | "Brass" | I-B1b | small | Bustard (?) on line |
| B 331-4b | Copper | I-C2 | small-medium | Head, female deity vulture headdress, incised detail, facing left |
| B 197-1 | Copper/bronze | I-B1a | small | Unknown, flattened |
| B 304-1 | Copper/bronze | 1-B4 | $0.7 \times 0.7 \mathrm{~cm}$ | Head, female deity on neb, crown of horns and sun disc on vulture headdress, facing right |
| Q 155-3 | Iron? or silver | D1 |  | Human head with peaked cap and chin beard (?) |
| B 232-4 | Silver | I-D2b |  | Tree on crescent |
| Q 573-2 |  | I-Clc | $1.2 \times 0.75 \mathrm{~cm}$ | Two uraci face palm frond, bezel almost rectangular |
| B 279-4 | Brass | I-D2b | 1.7 cm | Two sandaled feet enclosed by uraeus with two heads |
| B 282-6 |  | 1-B2 |  | Wedjat |
| B 282-8 |  | I-B3 |  | "Nubian" ankh |
| B 282-5 | Carnelian, brass, silver | II-B | $1.3 \times 1.1 \mathrm{~cm}$ | Heracles (?) |
| B 278-6 |  |  |  | Sa |
| B 278-8 |  | I-B1a | very small | Uracus, coils below and sun disc above |
| B 278-7 | Iron |  |  |  |
| Q 346-6 |  | I-C1b |  | Corroded |
| B 278-5a | Bronze | I-D3 | medium-large |  |
| B 278-5b | Iron | I-B3 |  | Two heads face inward |
| B 278-9 | Bronze | 1-D3 | $1.3 \times 1.2 \mathrm{~cm}$ | Falcon or vulture with wings spread, possibly on neb |
| B 93-4 | Copper? | 1-D | $1.4 \times 1.2 \mathrm{~cm}$ | Winged falcon-figure, ring corroded |
| B 278-4b | Bronze | I-B3 |  | Flattened bezel |
| Q 526-2 |  |  |  |  |
| Q 592-5 | Iron | 1-Cla |  |  |
| Q 592-7 | Iron | I-B3 |  |  |
| Q 579-1 | Bronze? | 1-E |  | Band corroded away |
| B 144-5 | Bronze | I-E |  |  |
| B 227-1 | Bronze | 1-B3 |  |  |
| B 227-2 | Bronze | 1-83 |  |  |
| B 236-10 | Iron | 1-Cla |  |  |
| B 299-5a | Bronze | I-B2 |  |  |
| B 299-5b |  | I-D1 | $0.8 \times 0.5 \mathrm{~cm}$ |  |
| B 236-9 |  | I-A1 | very small |  |

Table 28. Register of Bezel Rings (cont.).

| Tomb and Object Number | Material | Type | Size | Subject |
| :---: | :---: | :---: | :---: | :---: |
| B 278-4a |  | II-C |  | Glass bead on copper wire |
| Corroded or encrusted rings not added to typology: |  |  |  |  |
| Q 162-3a,b,c |  |  |  |  |
| Q 176-1 |  |  |  |  |
| Q346-5 |  |  | $1.7 \times 0.7 \mathrm{~cm}$ |  |
| Q 499-13 | Iron |  | $0.8 \times 0.5 \mathrm{~cm}$ | Ankh on bezel |
| Q 547-3 | Beads |  |  |  |
| B 128-2a |  |  |  |  |
| B 128-2b |  |  |  |  |
| B 154A-2 |  |  |  |  |
| B 193-4 | Bronze |  |  | Broken |
| B 193-8 | Bronze or |  |  |  |
| B 312-4a | Copper |  |  | Tree engraved on bezel |
| B 312-4b |  |  |  |  |

## F. VESSELS AND CONTAINERS

## KOHL TUBES

Wooden tubes used to contain the cosmetic galena used for eye paint are typical of Meroitic Nubia. Made of tropical hardwood, ${ }^{76}$ they were sometimes given elaborate shapes or decoration related to designs on other Meroitic vessels. Kohl tubes occur in most major cemeteries, notably at Karanog, ${ }^{77}$ but few were reported from Faras where termites were particularly active. ${ }^{78}$ Kohl tubes were much more common in Cemetery B than Cemetery $Q$ and they are part of the evidence that distinguishes the two cemeteries.

Kohl tubes from Qustul and Ballana are numerous and diverse but they do not represent the complete diversity of these vessels. Tubular containers for galena, often columnar, of wood, faience, and glass, replaced jars ${ }^{79}$ in the later Eighteenth Dynasty to accommodate cylindrical pellets of black eye paint (mostly galena) that had been stored in reeds. ${ }^{80}$ Although Twenty-Fifth Dynasty Kush returned to stone, ${ }^{81}$ faience, ${ }^{82}$ or possibly even metal vessels ${ }^{83}$ for containing black eye paint when vessels were used at all, the lathe apparently made wooden tubes a convenient alternative.
76. See note 19 above.
77. Woolley and Randall-MacIver 1910, pl. 23.
78. Griffith 1924, p. 143.
79. Griffith 1924, p. 143.
80. Schiaparelli 1927, figs. 59-61. The substance was confirmed as galena in analysis provided through the courtesy of McCrone Associates. For earlier identifications, see Lucas and Harris 1962, pp. 80-84.
81. Dunham 1950, pl. XXXVIIIc and XXXIXd, for example.
82. OINE VII, fig. 9 d .
83. This applies to wealthier burials; improvised arrangements were probably made by poorer people. The earliest dated example of a series of kohl tubes came from Begrawiya N 18 (55, Dunham 1957, pl. LXXIB). The object appears to have been turned. Metal tubes may also have been used, such as a silver tube from Nuri Nu 75 (Dunham 1955, fig. 24:18-2-304-305) and bronze, from Begrawiya N 30 (Dunham 1957, fig. 114:21-3-470).

## OBJECTS

The simplest vessels were made from narrow cylinders with a hole turned inside. A short flange was cut on the end which loosely fits a lid that may have been cut from the same piece. The ends of most tubes were too narrow to stand on a flat surface, but some discoid bases were found on elaborate examples. Some elaborate lids have knobs and even carved figures as finials.

Most kohl tubes are small and decorated only with groups of lines incised with a tool on the lathe. Larger tubes were more frequently decorated, most often with a series of convex ribs tumed in the surface, a feature found in the Sudan sites as well as Lower Nubia. ${ }^{84}$ Sometimes large tubes were incised and drilled to accept inlaid decoration. Occasionally the inlaid decoration was made from ivory; triangles arranged in a geometric pattern, ${ }^{85}$ triangles and circles arranged as trees or the splayed ankh, and various shapes placed in a checkerboard or rectilinear arrangement. Tube B 108-4 was inlaid with small bronze figures, including trefoil flowers, trees, and women.

A few tubes have special shapes or are carved with decoration in relief. One partly inlaid tube from Karanog has papyrus and modified lotus bud columns alternating as though the tube were a miniature columned hall. ${ }^{86}$ Tube B $93-1$ was turned in the shape of a simplified column, with base and "architrave." Q 592-6, of wood and ivory is a miniature version of the stone pillar-garland. B $25-5$ has a wide central band carved in high relief with alternating lotus flowers and buds on tall stems.

Individual kohl tubes and important groups are discussed below; a list of tombs and objects includes the following: Q 402-8, Q 475-18, Q 488-5, Q 592-6, B 4-4, B 13-6, B 51B-8, B 66A-9, B 68-3, В 81-7, В 93-1, В $108-4$, В $116-1$, В $144-4$, В 165-1, В $173-2$, В 176А-7, В $215-3$, В 219-1, В 282-7, В 308-1, В 314-1.

Kohl Tube with Lotus in Relief (B 25-5; fig. 51, pl. 82b). This unique tube has three divisions; the ends each consisting of a ball or globe framed above and below by cavetto shapes and the central cylinder with relief decoration. Between each cavetto and its globe is a rib, and the vertical edge of the cavetto has three grooves. The lid consists of one globe and the outer cavetto; its top is deeply grooved and it retains the center nub, surrounded by concentric grooves and uncut areas. The base is flat.

The central cylinder is framed by two groups of narrow bands, about 9 mm wide, consisting of two pairs of narrow bands that frame a broader central strip. The cylinder was carved in bold relief with alternating lotus flowers and buds. The buds are on long single stems grooved near the top, while the flowers protrude from three loop-shaped leaves set on broad triple stalks with two bindings at the top. Details of the petals are depicted by deep hatching; the areas between are also hatched in a style often found in painted pottery. ${ }^{87}$

Wood and Ivory Kohl Tube (Q 592-6; figs. 52, 53, pl. 83). A tube made in the shape of the pillar garland ${ }^{88}$ is a miniature of the stone pillar that was used in some tomb-structures.

The body of the tube is a slightly tapered wooden cylinder with a projection at the bottom to set into the base. At the top of the cylinder is a short, grooved ivory ring fitted to the body of the tube so that the surfaces match. The lid, fitted to the body by a truncated cone-like projection, has a dome which rested on the ivory ring. Above the dome are a somewhat tapered pod, an angular rib, and a grooved, flared conical, top. The base is a broad, splayed ivory disc with a hole to receive the body.

Depressions for the shafts of the lathe can be seen both in the top and bottom of the lid and the bottom of the tube. The bottom of the tube and the top of the base have a number of small depressions in a ring that may have held adhesive. The plate was broken in antiquity and repaired with two lead staples welded together and a lead plate bent over the edge (dim.: body, $13.8 \times 2.6 \mathrm{~cm}$; collar, $9.0 \times 2.5 \mathrm{~mm}$; base, $5.8 \times 0.3-$ 0.8 cm ; lid, $6.0 \mathrm{~cm} \times$ var., projection, $1.5 \times 2.0 \mathrm{~cm}$ ).
84. Woolley and Randall-MacIver 1910, pl. 23:7602; Dunham 1963, p. 148, fig. 108a (W 308). For later applicators, see OINE IX, forthcoming.
85. Woolley and Randall-MacIver 1910, pl. 23:7515, 7530.
86. Woolley and Randall-MacIver 1910, pl. 25:7514.
87. The group with similar elements occurs in ivory inlay at Karanog (Woolley and Randall-MacIver 1910, pl. 21; at Meroe, see Dunham 1963, fig. 134j [W179]). This resembles the bold style in the glyptic of the Twenty-Fifth Dynasty. See OINE VII, fig. 10a, b.
88. Griffith 1924. pl. LXVII:6-8; Vila 1982, p. 30. fig. 31:3. The pillar apparently depicting a lotus with a bulged pod like structure below.

Columnar Kohl Tube (B 93-1; fig. 54b). This tube was turned in the shape of a squat papyriform column ${ }^{89}$ with three grooves on the shaft and a cavetto comice or stylized flower above ànd below. On top of the lid are concentric grooves at various distances from the center. Inside, the lid was cut only deep enough to receive the flange from the body; the nub for the center still remains. The interior of the body was cut quite crudely and it appears to have been gouged rather than turned (dim.: $10.4 \times 3.8 \mathrm{~cm}$, lid 2.12 cm diameter). ${ }^{90}$

Kohl Tube with Bronze Inlays (B 108-4; fig. 55). The decoration of this inlaid tube has no direct parallel. The surface of the large cylinder ( $19.8 \times \mathrm{ca} .5 .2 \mathrm{~cm}$ ) with a flanged lid ( 4.9 cm in length) is largely destroyed. The decoration consists of small pieces of cast bronze in the shapes of trees ( $1.4 \times .8 \mathrm{~cm}$ ), trefoil flowers ( $0.8 \times 0.4 \mathrm{~cm}$ ), and women ( $1.0 \times 0.5 \mathrm{~cm}$ ). The trees are made up of six balls and a splayed trunk. The women are shown with large bulged hips and a small round head. It is difficult to determine whether the arms are folded over the body or vestigial. ${ }^{91}$ On the top of the lid, four trees radiate outward from a small bronze button. ${ }^{92}$ At the top of the side is a row of nine horizontal trefoil flowers. Below this row on the lid and body are three rows each of four trees or four women, alternated, producing a checkerboard pattern. Two rows of the pattern are on the side of the lid.

Kohl Tube with Ivory Inlays (B 68-3; fig. 56). A second inlaid cylinder, the largest kohl tube in the collection ( $28.4 \times 5.6 \mathrm{~cm}$ total height; lid, 5.3 cm ; flange, 0.5 cm , and hole in the lid, 3.0 cm in diameter) is decorated with ankh-signs. These ivory inlays consist of a dot in the center, short triangles for the arms, a long triangle for the base, and an inverted teardrop for the loop. A row of nine signs is on the lid, with seven more rows evenly distributed on the body in rows and columns. Those in the row on the lid were somewhat larger (ca. $2.8 \times 1.9 \mathrm{~cm}$ ) than those on the body ( $\mathrm{ca} .2 .2 \times 1.4 \mathrm{~cm}$ ). The lid has a small button in the top and its upper side has two shallow grooves forming a frame above. ${ }^{93}$

Lid with Ivory Inlays (B 282-7; fig. 54c). One simple cylindrical lid was inlaid with four groups of four ivory dots arranged in cruciform patterns on the side with four dots alternated below. Otherwise the lid is marked only by the hole in the top for the lathe shaft and some shallow concentric grooves.

Kohl Tube with Ivory Inlays (B 13-6). A tapered cylindrical tube, lacking the lid, has a prominent rounded rib near the bottom. The side is decorated with three rows of four cruciform shapes, each consisting of three lozenges which make up the top and arms, and a teardrop which forms the base. A row of horizontal ivory lozenges frames the top.

Ribbed Kohl Tube (B $144-4$; fig. 58a). A small ribbed tube ( $13.4 \times 2.7 \mathrm{~cm}$; receptacle, ca. 1.8 cm , in diameter, and flange, $0.6 \times 0.2 \mathrm{~cm}$ ). ${ }^{94}$ without a lid is covered by twenty-four convex ribs. These were made by V -shaped grooves approximately 0.2 cm . deep and their width varies slighty. The surface was damaged in several places and one side is nearly destroyed.

Ribbed Kohl Tube (B 173-2; fig. 58b). A rather long ribbed tube ( $13.5 \times 3.8 \mathrm{~cm}$; receptacle 2.0 cm . in diameter, flange, ca. $8.0 \times 0.25 \mathrm{~cm}$ ), also lacking the lid, is somewhat better made than $\mathrm{B} 144-4$. The side has fourteen rounded ribs made by grooves ca. 0.3 cm deep, with the addition of a small rib (ca. 0.2 cm . wide) at the bottom. The base was carved with ribs like the side, three encircling the rather deeply cut center, and the outer two acting as a base ring.
89. Columnar kohl tubes appeared in the later New Kingdom, but with the revival of stone ointment jars, the form became rare or disappeared. The early examples were mostly palm-shaped.
90. The column resembles shorter columns on the complex carved and inlaid tube from Karanog (Woolley and Randall-MacIver 1910, pl. 25:7514). A column with this capital is the base of a mirror handle at Meroe (Begrawiya N 18. Dunham, 1957, fig. 98:21-3-695); with a long "pod" and lotus above holding the disc. See AbdelMoneim Abu Bakr 1963, pl. 7B, right.
91. Female figurines with this body shape are the normal form of figurines in funerary sculpture in Egypt and Nubia. For early examples, see Needler 1984, cats. 267-73, and Wenig 1979b, cats. 13.15, 16. Amulets and a figure on a painted jar in this material are also comparable; see p. 44 above.
92. Woolley and Randall-Maciver 1910, pl. 23:7515.
93. Large simple cylinders with inlaid ivory decoration were found at Karanog, one inlaid with trees, the other with alternating trees and ankh signs. Simple cylinders occur at Meroe also. See Woolley and Randall-Maciver 1910, pl. 23:7515, 7530; Dunham 1957, pl. LXXI:B, from N 18 (55).
94. Woolley and Randall-MacIver, pl. 23:7627, 7602; Dunham 1963, fig. 108a, from W 308.

Kohl Tube with Ribs and Bands (B 66A-9). One small tube ( $12.2 \times 2.3 \mathrm{~cm}$; flange, $3.0 \times 0.2 \mathrm{~cm}$; receptacle, $1.3-1.5 \mathrm{~cm}$. in diameter) is divided by grooves about 0.2 cm in depth into ten alternating ribs and flat bands of somewhat variable width, the bands have four to six grooves. The lid is missing and much of the surface is destroyed.

Kohl Tubes with Grooves (fig. 57). Most kohl tubes are simple wooden cylinders of small to medium size with grooves on the bottom, the top, and arranged on the side in groups of four to six. ${ }^{95}$ Simple tubes included the following: B 219-1 (tube only), B 116-1 (tube and lid), B 4-4 (tube only), B 314-1 (tube and lid), Q 488-5 (tube only), Q 475-18 (tube and lid).

## WOODEN VESSELS AND CYLINDRICAL BOXES

The wooden vessels were all quite small and presumably intended for use in cosmetic or medicinal applications. ${ }^{96}$ If the preservation of hardwood boxes and kohl tubes was not complete, the condition of soft wood was much worse. Many wooden objects may have been so damaged they were not detected. The circular vessels were probably turned on the lathe.

Cylindrical Hardwood Box (B 93-2; fig. 59a). The sides of this small cylindrical box are slightly concave and tapered; the lid continues the profile smoothly. Apparently the basic shape was turned, the lid cut free, the body hollowed out, and the flange cut to secure the lid in a single sequence. After it was turned, the nub inside the box was cut away and the box was removed from the stock leaving some marks on the bottom. The lid was hollowed out in the same manner as the body but the top still has the depression left by the center. The box was decorated with pairs of grooves near the center of the lid, at the edge of the top, the top of the side of the lid, and near the base on the body. The box measures $5.04 \times 3.13 \times 0.4 \mathrm{~cm}$ in thickness, with a flange of $0.25 \times 0.17 \mathrm{~cm}$. The lid is 1.02 cm thick.

Concave Cylindrical Box (B 179-6; fig. 59b). A larger, but much more fragmentary pyxis was assembled from turned pieces of a soft, light wood as shown by the smoothly circular profile and turning marks on the base. The side, a concave cylinder with a rib at the bottom, was cut in two and glued over the disc-base which was turned separately. The side was decorated with bands of reddish brown and black paint. The side is 11.4 cm in diameter and 0.75 cm thick; the base is 9.6 cm . in diameter and $0.95-1.2 \mathrm{~cm}$ thick.

Circular Lid (B 240-2). A small fragment of a soft wood circular lid was decorated with a small flange and two parallel grooves near the edge.

Convex Pyxis (Q 670-8). The entire surface of this small ( $5.75 \times 3.6 \mathrm{~cm}$, with a variable thickness) convex circular box or vessel was badly decomposed. The base is broad and flat with no remaining traces of the center. The interior was cut concave to follow the outer profile of the vessel. Traces of four grooves remain in the upper side and there seems to have been another series of grooves near the base.

Lotiform Cup (Q 592-3). The most delicate ( $4.5 \times 2.0 \mathrm{~cm}$; base 2.4 cm in diameter, thickness $1.5-2.0$ mm ) vessel of soft wood also has the most elaborate shape. The vessel has a broad, lotus shape with a very short stem that leads to a broad disc base. The shape and some turning marks indicate that the lathe was used, as does a group of three grooves in the side and a single groove on the edge of the base. This is the only decoration. ${ }^{97}$ The surface of the vessel is neither smooth nor glossy.

Two more vessels were indicated in the records, but not preserved well enough to be described, Q 3724 , a wooden vessel, and Q 406-2, possibly a wooden cup.

## WOODEN BOXES

Other wooden boxes included small caskets or chests made of panels and frames and boxes carved from blocks of wood.

Panels from a Framed Box (B 187-1). Two side panels ( $22.0 \times 7.5 \times 0.6-0.7 \mathrm{~cm}$.) and one end panel $(10.8 \times 7.0 \times 0.6 \mathrm{~cm})$ appear to be from a framed box or casket of hewn from tropical hardwood, as is
95. Dunham 1963, fig. 163:4, from W 185.
96. Woolley 1910, pl. 23:7510, 7527, 7526, 7622, 7523; Dunham 1963, fig. 99e, from W 159; and fig. 108c-f, from W 308.
97. The vessel is actually a part of late Meroitic symbolism Dunham 1957, fig. 55:22-1-137 from Begrawiya N 21 (40) and fig. 92:21-3-704c from N 16 (53); see also Dunham 1963, fig. 108f.
indicated by their irregular thickness and strokes of the adze. Deep scratches across the grain indicate that one side and the end were given a rough sanding on the inside, but all three pieces were cut flat and smoothly finished on the outside. Although the tops were broken away, the ends and bottom of each piece were tapered to a thickness of about 0.2 cm and small scratches on the outside about 0.5 cm from the edge indicate where the frame overlapped the panels. The panels were decorated with ivory inlays in patterns made up of dots and teardrops that consist of trees within squares. Twelve squares, made of alternating large and small dots, large dots at the corners and at the middle of each side, are arranged in two rows on the sides with six squares in two rows on the end. The tree in the center of each square is made of three dots and one teardrop. Some of the holes bored for the dots pass through the wood, and the dots are long enough to be small dowels. 98

End Panel from a Joined Box (Surface between B 105, B 108 and B 112-1). An undecorated end panel (ca. $17.8 \times 8.4 \times 1.0 \mathrm{~cm}$ ) has tenons about 1.3 cm thick. The panel was finished on the outside, but the top and back still show signs of hewing. The surfaces have the glossy appearance of long wear. Two grooves about $0.6 \times 0.3 \mathrm{~cm}$. in depth were cut about 0.8 cm from the top and bottom. Two holes 0.4 cm in diameter were bored about 2.5 cm from the ends and 2.0 cm from the top. A box from Karanog had rings anchored in these positions, ${ }^{99}$ but no scratches remain in the damaged surface to confirm that such rings were ever installed. The panel was joined to the sides by a substantial rectangular tenon and three smaller triangular tenons.

Carved Box with Winged Sun Discs (B 68-2; fig. 60). A rectangular box with three square compartments carved from a single piece of tropical hardwood is one of the finest objects in this Meroitic collection and a major document of relations with the Meroitic heartand. ${ }^{100}$ Overall, the box measures 15.0 $\times 5.6 \times 3.0 \mathrm{~cm}$ with walls 0.7 cm thick; the end compartments are 4.1 cm and the middle is 3.7 cm in length. The end wall of one compartment has a semicircular projection that was drilled to take a peg which held a rotating lid in place. This lid was probably ivory and elaborately carved, as shown by parallel examples, but it is now missing. Both sides were badly worn, the pivot end partly broken, and the other end cracked in two places.

One motif, the winged sun disc, ${ }^{101}$ is shown twice carved in relief, centered on either side and extending around the corners onto the ends. They are framed at the top and bottom by rows of running lozenges and by a single narrow band at the top and two narrow bands at the bottom. Although somewhat simplified, the winged sun discs are precise and professional renderings of the pharaonic motif. The disc flanked by two uraei has no interior detail but one of the uraci preserves a groove that separates the body from the head and a depression that might indicate the eye. The muscular part of the wing is filled with small rhomboid feathers surrounded by a narrow band. The flight feathers are separated into inner and outer groups by a narrow band, each feather having a knifelike profile shown with the leading edge above the trailing edge of the next in series. Although they are compressed to fit the narrow band the outer flight feathers also show the tips.

Box in the Shape of a Sa Amulet (Q $634-4$ ). A broad, squat, sa amulet ( $19.0 \times 13.0 \times$ more than 3.5 cm ; lid more than 1.0 cm thick) was carved from a piece of hardwood with the ties and outer layer of the loop clearly indicated in the shape. ${ }^{102}$ Although details might have been shown on the lid, it was so badly deteriorated that none can be identified. The box has five chambers, corresponding to the upper loop (left and right) lower cords (left and right) and the tie. The lid was secured to the body by a bronze peg with a wide circular head inserted in a thickening of the lower partition and closed by a small hooked clasp of sheet bronze attached to the lid by a wire that could be hooked to a nail or dowel at the head end.

## METAL VESSELS

Both lead and bronze vessels were found at Qustul and Ballana, the bronze ones often lined with tin. Many bronze vessels in Nubia were made in shapes that resemble Meroitic pottery or were decorated with
98. This construction occurs at Karanog (Woolley and Randall-MacIver, 1910, pl. 22:7517).
99. Woolley and Randall-Maclver, 1910, pl. 21:7518.
100. Dunham 1963, fig. 144a, W 109; the side has rosettes carved on it; the hinged lid has a falcon lifting a basket in rather high relief. A relief decorated box from X-Group at Ibrim was made in panels (Mills 1982, pl. VII:2.19).
101. Woolley and Randall-MacIver 1910, pl. 80:C40219. The winged sun disc is not a common amuletic motif on Meroitic objects, but it does occur on a cup from Karanog.
102. Dunham 1963, fig. 144b, W 109.

Meroitic designs. ${ }^{103}$ These must have been made in Nubia, and it is possible that many undecorated vessels or vessels with similar shapes were also made there as was a single klepsydra in the collection. Other vessels such as tripod leg jars, lead bowls and cups, brass or bronze feeding cups, a bronze jug, and a strainer were possibly imported from the north.

## SPECIAL VESSELS

Decorated Bowl (B 299-3). One shallow convex bronze bowl with the interior and a band on the exterior brightly tinned was decorated in a gouged technique. An a wl, gouge, or punch was driven into the metal at a low angle, creating a short groove with the bulge of the flashing at the end. Pairs of gouged grooves were arranged in a herringbone pattern to construct the design on the exterior. This consisted of rows or bands and lozenge-shaped groups of four. Two herringbone bands frame a series of intersecting festoons with rhombs or tassels in the open spaces, and a long band in each central area, which is flanked by smaller shapes. Both the design and the effect of this technique parallel barbotine pottery, although the shape is different. ${ }^{104}$

Bronze Jug (B 14-16). A small ( $15.0 \times 12.5 \mathrm{~cm}$ ) jug with a sinuous profile had a circular rime and multiple-strand handle. At the base of the handle was a small, worn face. ${ }^{105}$

Bronze Strainer (B 205-10). A deep, convex cup-strainer had a band handle. Liquid was passed through holes arranged in chevron patterns around the body and a row of larger holes below the rim. ${ }^{106}$

Klepsydra (Q 475-15). This metal pipette made of a corroded alloy has a drop-shaped bulb and long tube. The end of the tube has a broad, flat rim added to accommodate the fingers ${ }^{107}$ and the bottom of the bulb was pierced with many holes and was decorated with engraved bands. The klepsydra had been soldered with lead, and damaged areas were given lead patches.

Tripod Copper or Bronze Ointment Jars (B 14-6, B 93-3). Small carinated jars with wide, everted rims and three small legs were probably used for personal ointment. Such jars were often decorated with engraved bands, and sometimes vines. ${ }^{108}$
"Feeding Cup" or Lamp Filler (B 108-3). A cylindrical bronze beaker with an everted rim turned up at the edge and a triangular spout attached to the rim and upper side. Like the tripod jar, the feeding cup was occasionally imitated in pottery (fig. 215d).

## COPPER OR BRONZE BOWLS

Bronze bowls were treated with various techniques. ${ }^{109}$ In most cases the basic shape was cast, the interior and part of the exterior tinned. Sometimes there are turning marks, and marks of a center on the vessel. In one case a bowl was reshaped with a chisel like tool that left oblique marks.

B 14-12. This bowl was cast in a hemispherical shape, then reshaped by means of a tool applied almost horizontally to a carinated form with a flaring rim; the rim is irregular, almost wavy. There is no evidence of tinning.

B 108-6. A cast bowl with a triangular rim has a slightly curved base, now battered, that curves to an almost vertical side. An inverted leaf shape is soldered to the side below the rim with a stem curved to hold a
103. For a discussion of painted pottery, including the relationship with other types of vessels, see Török, 1987, pp. 188207; see Griffith 1924, pl. LIII:7, 8, and 10; Woolley and Randall-MacIver 1910, pls. 26-28, 31:7132, 7133; Dunham 1963, figs. 18e (W 109), 22d (W 609), 29b (W 634), 73d-f (W 369), 74 (W 369), 90i (W 5), 242, 243.
104. Woolley and Randall-MacIver 1910, pl. 31:7129; Griffith 1924, pl. LIII:9, also with swags (Wenig 1979b, cat. 198).
105. This vessel was not assigned to the Cairo Museum and it was not available for study in Chicago. Woolley and Randall-Maciver 1910, pl. 31:7143 ; see also pl. 29:7512, 7513. See Hofmann 1978, pp. 213-30.
106. This object was not assigned to the Cairo Museum and it was not available for study in Chicago.
107. See Dunham 1963, fig. 71d, for example.
108. Woolley and Randall-MacIver 1910, pl. 31:7145; Griffith 1924, pl. XXXII:VIIb.
109. For a discussion of bronze bowls generally, see Hofmann 1978, especially 223, 224; 1979, 79-84, and Zabkar 1982, pp. 26, 27. Heavy pieces, often with tiny dendrites visible on the surface were considered cast. Thinner pieces with the mark of a lathe's center and concentric rings left by a tool were considered turned, if only to finish the piece. Such marks could be obliterated by abrasion or corrosion, or tinning.
handle. The interior and about 1.5 cm of the exterior were tinned with oblique strokes. A Meroitic inscription (no.17) was punched around the exterior.

B 143-1. This cast over-hemispherical bowl has a slight thickening inside the rim and a line below. The interior was tinned with oblique strokes.

B 197-6. A bowl with an omphalos base is curved to a straight, slightly angled side. The rim is triangular. While no scoring from turning appears on the vessel, the mark of a center remains inside. The entire vessel was tinned.

B 251-3. The upper side of this bowl is tapered; wheel scoring is much in evidence inside and out, especially on the lower part of the interior; the mark of a center remains. The interior and upper 4 cm outside were tinned with oblique strokes, leaving deep crisscrossed scratches.

B 310-6. Assigned to the Cairo Museum, this vessel was not examined in detail.
B 317-5. A hemispherical bowl with a shallow omphalos base and a triangular rim has no evidence of turning. The interior and upper 2 cm of the exterior were tinned.

B 14-20. A bowl with an omphalos base is curved to a tapered side. The interior and possibly the upper 1.5 cm of the exterior were tinned. Wheel scoring marks appear on the exterior.

Q 647-1. The only bronze bowl from Cemetery Q is broad with a slightly convex base that is curved to a vertical side. It may have been cast and has a triangular rim.

## LEAD BOWLS

All of the lead bowls in the concession were found at Qustul. ${ }^{110}$ They all appear heavy enough to have been cast. Although the brittleness of the material makes it difficult to shape cold, there is evidence that turning was used, at least to finish some vessels. In addition, some have light silvery surfaces, suggesting that they may have been tinned, especially Q 475-11 and Q 592-10.

Beaker (Q 365-4). A U-shaped beaker or cup has two pairs of lines below the rim. The lower body had been dented and hammered out.

Q 427-2. Two deep center marks and wheel scoring indicate this convex bowl was turned at some point in the finishing process. The rim is slightly thickened.

Beaker (Q 475-10). A rather wide, turned beaker with omphalos base has a flat-topped triangular rim. The bottom had been repaired with irregular patches of lead solder.

Q475-11. Although the surface of this convex bowl has center marks and two circular grooves on the bottom, the entire surface including the centers and lines is covered with tiny pits and there are no other turning marks. Perhaps the bowl was sand cast in a turned mold. Just below the rim, lightly impressed dots form the letters of the inscription Ammonit Agoraus. The vessel may have been tinned.

Q 592-10. A convex base with an omphalos is curved to the tapered side. Center and turning marks indicate that the vessel was turned. The interior has been hammered out.

## GLASS VESSELS

Goblets, vials, or vases, and jars (especially aryballoi) are characteristic features of Meroitic archaeology. The few vessels found in Cemeteries $\mathbf{Q}$ and $B$ are typical examples of antique glass blowing.

Small Bottle or Vial (B 171-1). A small bottle or vial of bluish translucent glass has a long neck and tapered body. ${ }^{111}$ The type is common and not chronologically distinctive. A similar but smaller vessel was found in Q 594 (-5).

Aryballos (B 108-14). Globular jars with heavy rims and thick lug-like handles extending from the rim to the shoulder and often decorated with incised concentric circles are typical glass objects in Nubia. ${ }^{112}$ The present example was blown of very pale green glass.
110. Griffith 1924, pl. XXXII:IIe-j and p. 153. Lead vessels occurred at Faras, in the so-called "cave graves", i.e. tombs with end chambers. No lead vessels are mentioned in the list of metal vessels (pp. 242, 243) or the register from Karanog (Woolley and Randall-Maclver 1910).
111. Glass vessels of this kind are discussed by Hofmann (1978, pp. 200-13; 1979 pp. 72-75), but without a clear resolution of their chronology.
112. The vessel type was discussed in some detail by Zabkar and Zabkar, (1982, pp. 25, 26). More were found at Abri (Vila 1982, frontispiece).

Fragments. Glass sherds were found in three tombs. They include blue-green sherds B 171-6 and B 259-2, and sherds of a pale brownish goblet B 313-3.

## G. CRAFT IMPLEMENTS

Craft implements were not common in Meroitic cemeteries, and they cannot be considered representative.

## SPINDLES

Almost the only common craft implement found in Meroitic burials is the spindle (fig. 61), occurring once in Cemetery Q and frequently in Cemetery B. The whorls are turned domical knobs, generally of tropical hardwood, with grooved decoration; in the center is a hole for the shaft, a wooden rod, to be inserted. The rod was often secured on the convex side by a metal hook driven between the rod and the knob, a hook that probably also served to hold thread.

Spindles and whorls were found as follows: Q $164-1,2 ; \mathrm{Q} 352-3$ questionable, possibly ring; $\mathrm{Q} 430-4$ wooden whorl; B 4-3a-d (4 whorls with metal); B $14-7$, 11, 18; B 17-2, 3; B 25-2, 3, 4; B 29-4; В 35-3; В $58-6,7,8$; В $108-10$, 11; В 182-2а-с; В 263-9; В 270-1; В 277-3; В 326-1.

## NEEDLES

Two small bronze needles, Q 155-9a and b, and one iron needle, Q $154-6$, are the only other craft equipment definitely deposited with the burials. Tomb Q 155 is early, and the needles could also have been used as probes.

## H. COSMETIC AND MEDICAL INSTRUMENTS

Instruments for applying galena (palettes, spatulae, and kohl sticks), removing thorns or treating minor skin eruptions (small blades, probes, and tweezers, often on a ring), trimming (shears, double-ended trimmer), and shaving (razors) or depilation (large tweezers) were deposited in Meroitic cemeteries. There were also a few larger probes and rods.

## TWEEZERS

Several examples of the larger size of tweezer occurred in the present material, in two groups, all made of iron.

## Tweezers with Straight Shanks

Q 574-12. A flat bar of iron which tapered slightly outward from the center to the edges was bent in the middle and bent inward again near the ends to make the jaws. These were carefully serrated with seven and eight teeth, each about 1 mm deep. Although the tweezer is very simple, its shape was carefully executed with smooth curves to make an elegant object.

## Tweezers with Bent Shanks

Most Meroitic tweezers have a loop-like bend at the back. The loop was made by curving the major bend around most of a circle, then bending outward again, allowing the shanks to separate before the metal near the ends was bent inward to make the jaws. The bends vary from smooth and sinuous to actual kinks. These tweezers were often decorated with transverse grooves or even more claborate decoration.

Q 475-14a and b. Both tweezers have long, straight shanks, but 14a is angled. The shanks are slightly splayed and decorated with incised lines.

Q 540-7. This pair of tweezers has broad, slighty splayed shanks.
Q 540-8. The shanks of this pair of tweezers are angled inward at the midpoints and they taper to narrow points.

Q 475-17a-c. Tweezer 17a of this group is recurved, but angled near the back. Tweezer 17b is completely curved to the tips of the jaws. Tweezer 17 c is angled at the back and the jaws are splayed. Four groups of transverse lines were scored on the shank and at the back.

B 205-16. A pair of recurved tweezers was made with sinuous shanks and decorated by filing the edges and scoring the surface to represent a sa-amulet. A locking band encircled the shanks.

## SPATULAE

Spatulae from Qustul used to dig galena from containers were made of bronze.
Spatula with a Gazelle Head Terminal (Q475-13). A blade extends from a bar handle which is curved so that the head of an oryx attached to the other end appears above the blade, facing the same direction. The head has a small muzzle, bulging eyes, large ears and high, curved horns. A small frog in relief crouches at the junction of blade and handle. Above and below the frog are horizontal transverse grooves.

Spatula (Q $155-8$ ). This spatula resembles some of the combined applicators. A blade rounded near the shaft curves to a splayed edge; at the shank end are two small holes. The shank is straight and ends in a very small bulb. The bulb may indicate the object also had an applicator, although its small size is unusual. It was accompanied by a copper fragment of an unknown, but possibly related object (no. 6).

## COMBINED APPLICATORS

Spatulae were replaced in later Meroitic times by combined applicators ("kohl sticks") which consist of an iron rod with a blade on one end and a bulb-applicator on the other. Often, the rod or shank has a rectangular section which has engraved or filed decoration. The blades were also cut into amuletic shapes with engraved detail such as hands, buds, sa amulets, and even the garland of Isis.

The earliest combined applicator in the series has a long blade, but a relatively short overall length; it occurs at Meroe. The second type is of moderate length, and the blade resembles that of an oar. It occurs in Cemeteries $Q$ and $B$, and in mid- to late Meroitic contexts at Meroe. The third type was made with a long staff and often a shaped blade. This was the type in use at the end of Meroitic times in Cemetery B.

## Applicators with Oar-Shaped Blades

Combined applicators with oar-shaped blades from Cemeteries Q and B include the following: Q 40210 (blade rounded at the tip), Q 573-6, Q 540-9, Q 592-4, B 134-3, B 51B-8b (long and slender), B 240-1 (short with leaf-shaped blade, round shank, small bulb).
Applicators with Long Shanks and/or Blades of Special Shape
Q 164-1. The shank is long and rectangular. The blade is a rectangular plaque with engraved framing, crowned by horns and a sun disc, apparently the offering table of Isis.

B 25-1. The very long square shank of this iron applicator is cut into the Isis garland. The blade is a rectangular plaque with a tassel.

B 108-5. The relatively short square shank of the iron applicator was cut into knot-shapes and the blade was hand-shaped.

B 277-2. The very long square shank was cut into knot-shapes and rhombs. The bulb is small and the blade a long hand.

B 211-1. The applicator is relatively short, with a small bulb, a round shank, and an oval blade.
B 322-4. This applicator has a square shank of moderate length and it is cut to a zigzag; the blade is hand-shaped.

Incomplete combined applicators include $\mathrm{Q} 308-7, \mathrm{~B} 111 \mathrm{~A}-8, \mathrm{~B} 165-2$ (blade end was reshaped as a probe), B 185-2, and B 144-10 (corroded). Q 475-22 was not studied for the present volume.

## THORN SET

B 26-6. Sometimes called a chatelaine, the group of blade, tweezers, and probes is a familiar object in Nubia and Egypt at this time. 113 Only one example occurred in the Meroitic remains. Two probes, a small, Lshaped blade and a pair of tweezers were assembled on a ring made of a length of wire wrapped at each end. The blade has two groups of three lines incised on the shank, and the recurved shanks of the tweezers are covered with incised lines and chevrons. The set was found in a small leather case secured by interlaced slit thongs.

## PROBES AND RODS

Probes and rods include Q 232-5, a simple rod, B 282-3, a rod with a blade at one end, possibly a reworked kohl stick, and B 197-3, which may even be some kind of point. It has a square section and the shank is twisted or cut in spiral, but the end is corroded.

[^12]
## IRON TRIMMERS

Q 384-4, 5 and Q 475-21. The tool usually known as a trimmer consists of a pair of iron blades joined by a double knob or other thickened area in the center. ${ }^{114}$ One blade is almost rhomboid, but asymmetrical, with a notch in the tip; the other blade is splayed to a broad chisel edge. The central bulge is normally curved, and there are generally incised bands on either side. 115

## SHEARS

Q 475-12. Shears consisted of a bar of iron with a knife blade at either end forged at right angles to the bar so that the sharp edges are opposed. The bar on the present object tapers toward the blades. The edges of the blades are almost straight, and the backs angle toward the edge. ${ }^{116}$

## OTHER COSMETIC IMPLEMENTS

Other cosmetic implements included a rectangular slate palette, probably of earlier (even Late A-Group) date with grinding pebbles (Q $155-4,5$ )

## MISCELLANEOUS OBJECTS

A few objects could not be readily assigned to the general categories established above.

## Ivory Knob

Q 274-3. A simple plano-convex knob, $2.4 \times 0.7 \mathrm{~cm}$, with remains of a pin 0.5 cm in diameter may have been a cap or drawer pull. ${ }^{117}$ The pin was quite narrow, however, and would probably not have been able to withstand much stress.

## Ivory Lion

Q 154 -5. A small ivory lion is shown in the normal couchant position, with the tail curled over the left flank and the head turned to the left. The figure is worn almost smooth in the head area so that the features are somewhat obscured, but the mouth is open. The body has a large hole bored in the region of the rib cage which was probably for a peg used to attach the figure to some object. ${ }^{118}$

## Baskets ${ }^{19}$

Two different kinds of basket were found in Cemetery Q. One, (Q 372-9) found in a pot, was finely woven in the shape of a Meroitic beaker, with a concave base (ca. $8.0 \times 6.5 \mathrm{~cm}$ ). The basket was woven on a split rod coiled foundation with a simple center. Vertically aligned, interlocking, intentionally split stitches appear on the work surface with no stitch gap, making a diagonal herringbone pattern that extends from the upper left to the lower right of the vessel's exterior. On the non-work surface, the stitches appear as unsplit, arranged in vertical columns with a marked stitch gap. On both the interior and the exterior, the stitches measure 2.2 mm from mid-point of a stitch to the midpoint of the adjacent stitch. The material has not been identified.

The second basket (Q 232-2) was larger, some $10 \times 16 \mathrm{~cm}$, in the shape of a bowl with a broad bottom and tapered side. A domical lid ca. $12.5 \times 5.5 \mathrm{~cm}$ ends in an open peak with an aperture of about 0.5 cm . The body was woven on a whole-rod coiled foundation with a normal center with simple unsplit stitches arranged in vertical columns with a marked stitch gap (both surfaces). The stitches were pigmented and a pattern can be detected, although it is somewhat difficult to define, consisting of rows of open rhombs. No decorative pattern can be distinguished on the lid. The width of the stitches from midpoint to midpoint is approximately 2 mm , with a 1 mm gap; from coil to coil it is about 3 mm . The stitches are much tighter near the center.
114. Woolley and Randall-MacIver 1910, pl. 36:7301.
115. See OINE VI (forthcoming) for a New Kingdom implement with a chisel blade on one end, a knife-like blade on the other and a small notch.
116. Woolley and Randall-Maclver 1910, pl. 36, G 585; Griffith 1924, pl. LVIII:17, 18.
117. Woolley and Randall-Maciver 1910, pl. 23:7602. It resembles somewhat the cap pull on a kohl tube from Karanog.
118. Dunham 1963, fig. 176 no. 14, from W 571 (4-6).
119. Baskets are recorded in a modification of the form developed by Adovasio (1977, pp. 53-98).

The basket contained four balls of hair, two small gourds (possibly used as vessels; the necks could be stoppered with the smaller balls of hair), a thick rod-shaped fragment of galena, and an iron rod.

A second basket of this type ( $\mathrm{Q} 301-3$ ) was not recovered; it contained date pits and grape seeds. A basket from Q $402(-7)$ was neither recovered nor described.
New Kingdom Kohl Jar
B 244-1. A small calcite kohl jar was certainly of New Kingdom manufacture, but the rim and base had been badly abraded, making it difficult to assign a more precise date. As indicated elsewhere, however it probably was not made after the middle of the Eighteenth Dynasty. 120

## Bone Implements

Borer? (B 29-6). A piece of curved, but almost flat bone was carefully worked into a symmetrical blade-like shape with a point. The edges, concave side, and point were worn quite smooth. About 2.5 cm of the outer edge near the point were broken away where the bone had been scored and the porous center of the bone had been smoothed. The object was probably used to make or enlarge holes.

Bone pin or awl (B 292-3). A narrow strip of flattened bone $8.0 \times 0.5 \mathrm{~cm}$ was shaped to a point at one end and rounded at the other.

## Wooden Rod

Convex rod with peg terminal (B 43-2). A soft wooden rod $7.0 \times 0.6 \mathrm{~cm}$ was cut with a short ( $1.0 \mathrm{~cm} \times$ 0.3 cm ) peg at one end for insertion into a larger assembly. There are two more rings $2.8-2.2 \mathrm{~cm}$. and $1.5-0.5$ cm from the other end where the surface is worn away.

## Headrests

The only item of furniture included in these tombs was the headrest. This is a version of the typical East African and Egyptian stool headrest that had been in use since the Old Kingdom. In Meroitic times, a hollowed out block version was made. ${ }^{121}$

Q 308-6. A headrest ( $15.5 \times 19.5 \times 6.5 \mathrm{~cm}$ ) , cut from a solid block has the usual concave top and a deep rectangular cavity in one end.

Q 475-16. Two blocks of tropical hardwood were joined to make this headrest. The profile is solid, but each half was cut with an approximately rectangular cavity from end to end. The two halves were joined with six small dowels ( $15.0 \times 20.0 \times 5.5 \mathrm{~cm}$, dowel holes ca. 0.4 cm ). The joint between the two pieces curves slightly downward at the ends, and the walls of the cavity are also slightly convex.

Q 417-7. A third headrest, with the same exterior profile, was made of a solid block of wood, severely damaged by insects.
120. OINE VI, forthcoming.
121. The occurrence is the first known to this writer in Lower Nubia; none were mentioned from Faras, where wooden objects were rare, or from Karanog, where they were common (Woolley and Randall-MacIver 1910 pp. 245-48, 7480-7749, including ivory objects and a few of metal).

## CHAPTER 4

# MEROITIC INSCRIPTIONS FROM QUSTUL AND BALLANA 

by Nicholas B. Millet

INSCRIPTION NO. 1 (pl. 104a)
Field Number: B 193, Tomb B 170-2
Acquisition Number: OIM 22555
Measurements: $39.5 \times 22.0 \mathrm{~cm}$
Description: Offering table in gray-white sandstone, with four loaves and an amphora on a stand.
Transcription:

1. Šoreyi
2. wosi : trqye :
3. qowi : tmreqeto
4. tedheli : tedhelowi : yirohtemo-

5 me terikelowi : [.
6. ...] yidotediyeke
7. te:
8. htekel : smlo
9. ant : mno : kdito

Commentary: Offering table of a lady named Taraqaye, whose husband was named, but illegibly, and who is stated to have been the sister of an unnamed prophet of the god Mano.

In lines 5-6 there seems to have been an abridged version of Terminal Formula E, a normal form of which would be:
nsdoke-li dole yidotediyekete.
The divine names in the Invocation (lines 1-2) have been transposed from the usual position. The usual final offering formulae have been omitted.

The content of the inscription is, as always with Meroitic texts, obscure, but the following "pseudotranslation" is appended with the intention of conveying the probable general burden of the text.
"O Osiris! O Isis! It is the noble Taraqaye, born of Tamareqeto, and begotten by Yirokhatemome; (Formula E); she was the wife of Khatekel (?); she was sister of a prophet of (the god) Mano."

INSCRIPTION NO. 2 (pl. 105a)
Field Number: B 592, Tomb B 138-1
Acquisition Numbers: OIM 22950A, B
Measurements: $55.0 \times 18.0 \mathrm{~cm}$

Description: Stela in two fragments, roughly made from an irregular slab of gray-white sandstone. Text largely illegible. Some slight loss on the right-hand edge is probable, but the stone, despite its narrow proportions, seems to be essentially complete.
Transcription:

1. [woši : Sor] eyi
2. [...] eqe [...]
3. [....] i : [....]
4. $[\ldots] i[\ldots .$.
5. [..] rb [.....]
6. [ ]
7. $]$
8. [....] mlo [......]
9. [ ]
10. me [...] mto [..]
11. $1[\ldots] \mathrm{i}$ : pqiye
12. teli : ytmde
13. lo

Commentary: The first few lines of the surviving text are too poorly preserved to make anything of. The occurrence of the relationship-word yetmde near the end of the text in line 12 does, however, make it most probable that we have a funerary text. The only intelligible portion is the final expression of relationship, which mentions one Paqiyeteli as a yetmde-relative of the deceased.

INSCRIPTION NO. 3 (pl. 105c)

Field Number: B 903, B 317-9
Acquisition Number: OIM 23258
Measurements: $11.0 \times 11.0 \times 5.0 \mathrm{~cm}$
Description: Small fragment of a stela of gray-white sandstone, bearing parts of five lines from the end of a funerary text.

Transcription:

| $x+1$. | $] .$. |
| :--- | :--- |
| $x+2$. | ] . elo |
| $x+3$. | ] ptre |
| $x+4$. | ] at mhe $e$ |
| $x+5$. |  |

Commentary: The traces in line $x+2$ may well be restorable to [yetm] de-lo. The text closes with the familiar funerary formulae, and obviously at least one more line of text after $x+5$ once existed to complete the last formula.

INSCRIPTION NO. 4 (pl. 106a)

## Field Number: Q 678, Tomb Q 191-1

Acquisition Number: OIM 20505
Measurements: $44.0 \times 32.0 \times 3.5 \mathrm{~cm}$
Description: Crude stela in gray-white sandstone with three short lines of text, apparently complete, as the upper line of text accommodates itself to the curve of the top of the stone.

## Transcription:

1. yṣ̆stoli
2. qo : temey
3. bllito :

Commentary: The text seems to commemorate a person named Yashasto(li), described as "honorable" and as a temey of Balali. The word temey as an appellation has been explained as an ethnic ${ }^{1}$; the following word may be a place name, or more likely, represent bl-li-s-lo "of the bl."

INSCRIPTION NO. 5 (pl. 107)
Field Number: Q 1033, Tomb Q 345-3 (reused in X-Group tomb for blocking)
Acquisition Number: OIM 20842
Measurements: $53.0 \times 21.0 \times 7.5 \mathrm{~cm}$
Description: Gray-white sandstone stela bearing four lines of text between rules, followed by two ruled lines left blank. There are traces of red color in some of the characters.

## Transcription:

1. woši : šorey[i]
2. wetklbe : mde-
3. to : armol : te-
4. rikel :
5. 
6. 

Commentary: The text begins with the usual invocation to Isis and Osiris, and commemorates a person named Wetakalabe. The doubtful sign in the next word may be $\underline{h}$. This word must correspond to the name of the father, even though the expected ending is lacking from the filiation word.

The word mdes (-lo) which follows the name in the second line is well known in funerary and other inscriptions, but always follows a name other than that of the subject (see for example Kar. 27, MI 94, and MI 84). One is perhaps entitled to guess that a name or title has been omitted by the scribe. Mdes has been hazarded to mean "descendant." 2

INSCRIPTION NO. 6 (pl. 108a)
Field Number: Q 873, Tomb Q 295-1
Acquisition Number: OIM 20691
Measurements: $28.0 \times 29.0 \mathrm{~cm}$
Description: Pink sandstone offering table carved with a representation of two lidded jars on stands, with four crosshatched loaves above them. The inscription is in one line, running around the rim. Much surface wear has apparently occurred over the face of the spout and the adjoining edge of the table itself; no doubt the text originally began in the usual way at the mouth of one side of the spout and continued around the outer edge of the table to the other side of the spout, but now both beginning and end of the text are lost.

## Transcription:

1. [?]
2. yimte-
3. qo [. . ato : m] be [:] psoh-
4. bhekes : at mhe

BIM XIII (July 1973), p. 44.
2. BIM XIII (July 1973), p. 39; and Millet, N. B., Meroitic Nubia (University Microfilms, Ann Arbor, Michigan 1968), p. 74.

Transcription (cont.):
5. $\mathrm{p}[\mathrm{s}] \mathrm{br}[\mathrm{b}] \mathrm{b}[$ ekes : ] hmlol..
6. [?]
7. [?]

Commentary: Since the offering formulae (A and B) are in the plural form, two persons were presumably commemorated, one whose name is lost, and the second Yimate(?).

INSCRIPTION NO. 7 (pl. 109a)
Field Number: B 308, Tomb B 226-1
Acquisition Number: OIM 22670
Measurements: $23.0 \times 23.0 \times 8.5 \mathrm{~cm}$
Description: Gray-white sandstone offering table carved with representations of two lidded and spouted jars discharging their contents into an oval basin. Four crosshatched loaves occupy the upper part of the composition. The text runs from the mouth of the spout in a single line to the same point on the opposite side, then returns to begin a second line at the right end of the side bearing the spout, whence it continues until the right end of the side farthest from the spout.

Transcription:

| 1. | woši : šo- |
| :--- | :--- |
| 2. reyi s- |  |
| 3. | hti : lowi : amero db- |
| 4. litelowi : mlomks tc- |  |
| 5. | dh metebelili drp-low |
| 6. | mstr- |
| 7. | li teri- |
| 8. | ke-lowi |
| 9. | ato mhe |
| 10. | pišohete : at m- |
| 11. | he pibr : kete : |

Commentary: The inscription commemorates one Shakhati, who is said to have held the office of amero dblite, which may mean "amero in the $d b$ " or "amero in dbli." The last word might be a form of the muchdiscussed $a d b$ in the title pelmos adbli-s, "general of the adb," the apparently complementary and junior title to that of "general of the water." The title amero seems to be generally associated with the service of the god Amanapa ${ }^{3}$, but one should be wary of assuming that it was therefore necessarily sacerdotal in character; gods require stewards, scribes, and other servants as well as do high officials and generals.

Lines 4 and 5 seem to include a curiously truncated statement of Shakhati's maternal descent. His mother's name, Malomakas, is followed by the verb tedh without the usual ending, no doubt by the carelessness of the scribe. The word drp occurs in REM 1030, in some sort of statement relating the deceased to another person, and the position of the statement including it here, after the mother's name but before the father's, may contain a clue as to its meaning which escapes me. The dead man's father is stated to have been one Mastarli, without titles. The offering formulae A and B concluded the text.

INSCRIPTION NO. 8 (pl. 110a)
Field Number: B 154, B 42A-1
Acquisition Number. OIM 22516
Measurements: $36.0 \times 31.0 \mathrm{~cm}$
3. Kar. 124, N. Gamus 6.

Description: Gray-white sandstone offering table, with representation of four circular loaves with an amphora on a stand between them. Superimposed on the drawing of the amphora is the representation of a ladle. The text consists of a single line running around the margin of the table, was carelessly cut, and is now largely illegible due to wear. Contrary to custom, the text begins on the right-hand side of the spout, as seen when the table is spout up.

## Transcription:

1. woši : ašo-
2. reyi :
3. [..] mebk [.] me -qo : mr [....]
4. $[\ldots \ldots]$ lo : [......]
5. [............]
6. [wo]ši :
7. Soreyi

Commentary: Litlle can be made out, save some of the deceased's name, which seems to have been [. .] mebak [.]me.

INSCRIPTION NO. 9 (pl. 104b)
Field Number: B 195, Tomb B 183-1
Acquisition Number: OIM 22557
Measurements: $26.0 \times 20.0 \mathrm{~cm}$
Description: Gray-white sandstone offering table, with the representation of four circular loaves and two hsvases from which water flows. Single line of text.

## Transcription:

1. woši :
2. šoreyi
3. horpeleye qe-
4. wiamiye : mdemdetowi
5. kbitekli : ted-
6. helowi :
7. šoreyi :

Commentary: The person commemorated is apparently one Khorepelaye; he or she is said to be in mde-mdes relationship with a person named Amiye. For this expression see also MI 89 in which Wayekiye is said to be in such a relationship to Shipeshiye and Qoresamaye. In Meroitic Nubia (pp. 72, 82) I hazarded a guess that, since both names are those of women, the term may mean "directly descended from" someone. Amiye here may have been the maternal grandmother. The mother's name, mentioned next, may be Kabitekali or Kaditekali. The text ends with a repeated invocation of Ashori (Osiris).

INSCRIPTION NO. 10 (pl. 106c)

## No Field Number: ("Set. MII A")

## Measurements: N/A

Description: Sherd of painted pottery with incised inscription. The text begins at the right edge and continues across the whole face.

## Transcription:

?] qodikeñ 10 [?
Commentary: The third letter is doubtful, either $\underline{d}$ or $\underline{b}$. Since ken is used in several texts before numerals (MI 101, GA 16, and the ostraca from Faras published by Griffith in JEA 11 [1925]) its presence on the exterior of a vessel unsuitable for ostracon material must be a measure of the contents, either of weight or volume.

## INSCRIPTION NO. 11

Field Number: Q 1773, Tomb Q 499-7
Acquisition Number: OIM 21551
Measurements: height 26.0 cm
Description: Inscription on an aryballos; to the left is a complex mark resembling the "owner's marks" on some Meroitic bronzes.
Transcription:
tebo
Commentary: The text is rather short to be a personal name, but may be that of the commodity.

INSCRIPTION NO. 12 (pl. 109b)

Field Number: Q 953, Tomb Q 270-2
Acquisition Number: OIM 20767
Measurements: $33.0 \times 31.0 \times 7.5 \mathrm{~cm}$
Description: This is a crude pink sandstone offering table with one irregular line in a rough circle, with an additional line begun but not finished under the end. The writing is faint in the extreme.
Transcription:
wosi soreyi arerteli-qo
are
Commentary: The text begins with the usual invocation of Isis and Osiris and then names a person "Arerateli, the honorable one." The three signs beneath are presumably the beginning of another word.

INSCRIPTION NO. 13 (pl. 111a)

Field Number: B 192, Tomb B 170-1
Acquisition Number: OIM 22554
Measurements: $33.0 \times 24.0 \mathrm{~cm}$
Description: This is a well-shaped gray-white sandstone offering table with a design of an amphora between four circular loaves. Only traces remain of two lines of text.
Transcription:
3. [5? ] r [.] bmo [...], and in the second line directly below,
8. [5?]iy[..]

Commentary: Nothing can be recovered from this badly eroded inscription.

INSCRIPTION NO. 14 (pl. 111c)

Field Number: B 563, Tomb B 298-1
Acquisition Number: OIM 22921
Measurements: $17.0 \times 15.0 \times 4.0 \mathrm{~cm}$
Description: The object is a roughly made gray-white sandstone offering table with only four letters of inscription. In the center is drawn an amphora between four circular loaves.

## Transcription:

liqo
Commentary: No traces of further text appear. We may take the word to be a personal name, Liqo.

## INSCRIPTION NO. 15 (pl. 111b)

Field Number: Q 986, from X-Group chapel QB 41, Q 258-2
(reused, see OINE IX [forthcoming] for the chapel)
Acquisition Number: OIM 20797
Measurements: $18.8 \times 18.6 \times 7.5 \mathrm{~cm}$
Description: A crude gray-white sandstone offering table with bare traces of inscription.
INSCRIPTION NO. 16 (pl. 105b)
Field Number: B 338, Tomb B 179—8 (Surface, ca. 3 m north of tomb)
Acquisition Number: OIM 22699
Measurements: $9.5 \times 9.5 \mathrm{~cm}$
Description: This is a fragment of a gray-white sandstone stela with rules. A few signs are preserved, suggesting, as they are part of the offering formulae, that the piece represents the bottom of the stela.
Transcription:
$x+1$. ]: at [
$\mathrm{x}+2$. ] . : woš [i :
Commentary: The signs represent the beginning of offering formula $B$ and the name of Isis from a final invocation.

INSCRIPTION NO. 17 (pl. 108b)
Field Number: B 307, Tomb B 108-6
Acquisition Number: OIM 22669
Measurements: $6.5 \times 13.5 \mathrm{~cm}$
Description: Bronze bowl with strap handle which has a horizontal, punched Meroitic inscription on the exterior just below the rim.
Transcription:
steṭqšoy sywo abhe : q...mkšoṭe
Commentary: Perhaps an owner's name with additions.
INSCRIPTION NO. 18 (pl. 99e)
Field Number: Q 665, Tomb Q 172-1
Acquisition Number: OIM 20492
Measurements: $6.8 \times 8.9 \times 0.4 \mathrm{~cm}$
Description: Sherd of Meroitic fine cup Ig, with lotus and buds in double-framed band in black and red. A black inscription is at the rim.
Transcription:
Jormsye so
Commentary: Perhaps a personal name followed by the word so.
INSCRIPTION NO. 19 (pls. 101c, 110b)
Field Number: B 142, tomb B 84-1
Acquisition Number: OIM 22504
Measurements: $33.0 \times 29.0 \mathrm{~cm}$
Description: Crude gray-white sandstone offering table with prominent chisel marks ca. $0.7 \times 0.3 \mathrm{~cm}$ deep on the rear and side.

## Transcription:

1. wosi so-
2. reyi : qo : šo-
3. .iye-qowi : qore-
4. yi tedbelowi apote
5. kleye : teri[kelowi
6. ato mhe]
7. psohekete
8. [at mhe]
9. psibrkete :

Commentary: The text is very badly engraved and worn, with numerous accidental scratches on the inscribed surface complicating the reading. The deceased, whose sex is uncertain, was apparently named Sho.iye; the mother was named Qoreyi. The father seems to have been an apote, or envoy, named Kaleye, unless the whole expression is his name, Apotekaleye. The terminal formulae $A$ and $B$ conclude the text.

## CHAPTER 5

## CONCLUSION

Five phases were identified in the Meroitic remains from Qustul and Ballana. These phases date from the last centuries B.C. to the end of the third century A.D. The major features of the last three phases correspond to those commonly associated with burials in Meroitic Nubia, but the earliest (I) has not been distinguished separately. This earliest Meroitic phase derives directly from the Napatan as found in this area, making it possible to identify a series of phases in Lower Nubia that extend from the end of the Third Intermediate period to the end of the Meroitic. A major gap in the occupational history of Nubia is closed. ${ }^{1}$

As far as can be determined, from the evidence of settlement in the cataract area and burials elsewhere, the early Meroitic occupants were located between Qustul and Sedeinga/Soleb. The remains in burials were quite simple and offer little in the way of distinctive object archaeology. However, the early burials simply continue the series of Napatan burials of the type found at Abri. Radiocarbon determinations, Roman period Demotic documents from Gezira Dabarosa, the close resemblance of some Meroitic tombs (at Qustul and Ballana) to Ptolemaic tombs in the Dodekaschoinos, and the early date of pottery from the following phase II are important chronological indicators. These factors indicate that phase I dates to the last centuries B.C. ${ }^{2}$

The only pottery dated to the first phase was black-polished impressed pottery of Sudanese-Saharan tradition and perhaps some heavy-walled wheelmade vessels. ${ }^{3}$ The second major phase saw the widespread appearance of painted decoration on this wheelmade pottery in an elaborate complex that precedes the common Kushite decoration of phase III. ${ }^{4}$ Sometime during the second part of this phase, the blue-grey-white clays from the Nubian Sandstone came to be used for a fine new "table pottery" of small, thin cups and globular jars. ${ }^{5}$ Kushite/pharaonic designs, patterns, and representations had already been used on the heavier pottery, but now a new elaboration and precision was introduced to the decoration of smaller vessels in both kinds of pottery. Wenig was inspired to call this style the "Academic School."

In addition to the local painted pottery, vessels from Roman period Egypt were imported. ${ }^{6}$ These were mostly "table pottery," juglets, and amphorae. Painted decoration in a form of trellis or silhouctte style occurred and it influenced some of the Kushite vessels as well. ${ }^{7}$

The large-scale occurrence of pottery made this phase easier to identify. The material is quite common in the cataract region but does not much occur north of Qustul.

The third major phase, IIB, in the development of Lower Nubia saw the large-scale expansion in the importation of Roman period Egyptian fine/ordinary pottery. This was often decorated, in a style that supplanted the trellis-like patterns of the previous phase. Curving vines and garlands are the most common motifs apart from bands. This "vine-leaf school" or vine style included decoration on cups, jugs, juglets,

1. See pp. 4-10 above and OINE VII, especially pp. 29-49.
2. See pp. 17-19 above.
3. The material is called Sudanese-Saharan here; see pp. 72-74 above.
4. Called Kushite wheelmade pottery; see pp. 32-34 above.
5. Called Meroitic fine/ordinary here; see , pp, 34, 35 above.
6. Roman period Egyptian fine/ordinary. See pp. 62-68 above.
7. This style occurs at Qustul and in the early Meroitic setlement at Ballana. See fig. 301f, j.
amphorae, and most especially, a large barrel-shaped jar. ${ }^{8}$ Finely painted Kushite (Meroitic fine/ordinary) pottery continued, with some tendency to make the necks of the jars narrower and the cups shorter and more angular. ${ }^{9}$ Another tendency to loosen the design and enlarge the motifs can be detected, but this probably occurred late in the phase.

Materials of phase IIB were the first to occur commonly all over Meroitic Lower Nubia, and it is rather clearly marked by the occurrence of the early styles of vine decoration and the angular shapes of the imported pottery. Moreover, some shapes, juglets and askoi, occur not only in Lower Nubia, but in Sudan and at second century Quseir, so that there is dating evidence.

The most widely-recognized product of phase III is the red and dark painted pottery with large designs designated the Kushite standard style in this publication. ${ }^{10}$ By this time, painting was largely confined to the Meroitic fine/ordinary pottery in the local group and the later stages of the vine decoration in the Roman period Egyptian group. Despite the large amount of material from this period, evidence to link it historically is difficult to develop and the date is simply established between IIB and IV.

Partly because it contained the most colorful product of Meroitic Lower Nubia, this phase has been considered the most characteristic phase of the culture. Prominent occurrences are in Cemetery B, Karanog, and Faras. However, few remains can be documented farther south, while materials are now common between Ibrim and Maharraqa; settlement seems to have shifted northward. ${ }^{11}$

The last phase of Meroitic culture in Lower Nubia saw a major simplification in the pottery deposited with burials. Imported vessels all but disappeared. Painted figures became less diverse and numerous, and they finally disappeared, although not before some very impressive pieces were made. The exteriors of most Meroitic fine/ordinary vessels came to be thickly coated with a red slip; some of these were painted with white bands. Only very simplified decoration survived to the end of Meroitic times, the white bands, cups with red rim-bands, and jars with groups of painted blobs arranged as beads at the base of the neck, for example. ${ }^{12}$

Since burials of this phase could be linked to dated rulers at Karanog and Generals of the River (at Adda) it should be dated to the late third century A.D. and hardly extended further. The area of seulement closely resembled phase III.

In Lower Nubia, the last burials of Meroitic culture are as clearly recognizable as the first; little indication of later cultural development is found in them. Although certain types of object found in this period also occur in X-Group, ${ }^{13}$ there is no cultural transition as can be found in the region of Meroe itself. ${ }^{14}$ Moreover, in this part of Lower Nubia, no material can be identified that corresponds to the mid-fourth century A.D. occupation of the Dodekaschoinos. When datable settlement is again found in this area, the coherence of the culture as revealed in the burials is so different that we must accept the earlier conclusion that a different group of people was responsible. Apart from noting the chronological gap in the first two thirds of the fourth century A.D., discussion of the changes is postponed to the next volume in the series, which deals with the royal complexes and private burials of X-Group Qustul. ${ }^{15}$

The Meroitic setulement of Lower Nubia was derived from a long-standing Kushite settlement in the cataract region beginning in the Twenty-Fifth Dynasty. This occupation resembles the burial evidence from Sanam and even Meroe in that same earlier period. However, as the settement in the cataract developed and expanded, certain differences emerged or became more prominent. The most significant, that the monumental remains of Meroe and Napata are echoed only in minor structures and dedications in the
8. See pp. 64-67 above.
9. See p. 10 above.
10. See pp. 10, 11 above.
11. See pp. 175-89 below.
12. See, for example, figs. $7 \mathrm{f}, 5 \mathrm{~d}$, and 236 b .
13. These are discussed in OINE IX (forthcoming).
14. Dunham, 1963, pp. 203-06. At Meroe, one burial, in W122, was arranged much like an X-Group royal tomb, with oxen in the dromos, sacrifices on either side of the doorway, main burial in the outer chamber (not displaced as interpreted by Dunham) and an inner magazine. Compare Emery and Kirwan, 1938, fig. 26.
15. OINE IX (forthcoming).

Dodekaschoinos, is probably due to Lower Nubia's explicit status as a province, and it is not the subject of this volume. However, a number of other aspects, especially burials, are more precisely comparable, and they may reveal significant aspects of the relationship between the two regions.

The major form of funerary architecture, the pyramid (with its chapel, ba statue, offering table, and sometimes, stela) is a miniaturized version of the superstructures found farther south. The formal complex is not found in contemporary Egypt, and nothing of the sort had been constructed there since the end of the New Kingdom. The exclusively Meroitic character of this complex as it appears in Lower Nubia is assured. ${ }^{16}$

The substructures of common burials also closely resemble Meroe, and, as noted above, the burials developed from the coffin or Osirian burial common earlier in Kush. ${ }^{17}$ The one substantial difference was that the non-Osirian burial that occurs near Meroe did not occur here. ${ }^{18}$

Except that the cemeteries of Meroe were richer in such objects as bronze vessels, and other luxury goods were more numerous and varied, differences between the objects of the major regions were quite limited mostly to details. Bead jewelry from the two regions was so similar that the corpus established for Meroe and Barkal sufficed to classify the beads from Qustul and Ballana as well. ${ }^{19}$

Only glass vessels brought from Roman period Egypt were more common and varied in Lower Nubia. The problem of transport also probably affected the pottery. The handmade black impressed pottery, Meroitic fine pottery, and Kushite wheelmade pottery are very similar in both regions, although there are differences in details. After phase IIA, most of the table pottery other than cups and globular jars found north of Abri is of Egyptian origin. South of the third cataract, most table pottery, a wheelmade domestic group, belongs to another group not represented in any numbers to the north. ${ }^{20}$

The one major cultural difference between Meroe and Lower Nubia is the presence of a number of contracted burials, especially to the west (Shaheinab, Shendi-Kadada) and south (Khartoum, Ushara) of Meroe. ${ }^{21}$ These burials indicate that the region was culturally diverse, a diversity not revealed in the burials of Lower Nubia. Somewhat later this culture came to have a major impact on both Upper and Lower Nubia; related remains at Qustul are the subject of the next volume.

As indicated by the pottery, objects, and funerary architecture, the major differences between material from Lower Nubia and Meroe itself are due to the distance between the two areas and the difficulty of transport. Archaeologically, Lower Nubia is revealed in the same light as in the written sources, hieroglyphic, Demotic, Meroitic, and classical, as a province of the Meroitic Empire.
16. Schiff Giorgini, 1971, fig. 322, for example.
17. Dunham, 1963, pp. 6-8; Vila, 1980; Vila, 1982.
18. See note 21 below.
19. See pp. 114-46 above.
20. Reisner, 1923a, fig. 14.
21. See OINE IX (forthcoming) for a discussion of cultural diversity and the fourth century.

## APPENDIX A

## A RELATIVE CHRONOLOGY OF MEROITIC REMAINS BELOW THE FOURTH CATARACT

As discussed in another work, the relative distribution of phases in a cemetery could not be traced as readily at most other sites in Lower Nubia as at Qustul and Ballana because the details of tomb reuse had not been completely recorded or published. Some recently discovered cemeteries to the south, however, such as Abri-Missiminia, Abri-Amir Abdalla, and the cemetery in the school yard at Kerma, have been excellently recorded and are suitable for such studies or they show certain phases in isolation. An updated chronological list of sites in Meroitic Nubia is presented below. In most cases, items that indicate specific dates are listed, but in others, the site is simply assigned a date based on criteria established in Chapter 1. Where details are specified, they are often cited by tomb or locus number rather than page number.

Table 29. The Occurrence of Phases I-IV in Meroitic Nubia.

| $\begin{aligned} & \frac{\text { Phase }}{\text { Subphase }} \\ & \text { Sitc }^{\mathrm{a}} \end{aligned}$ | Early | $I$ |  | II |  | III |  | IV |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | A | B | A | B | A | B | A | B |
|  |  |  |  |  |  |  |  |  |  |
| THE DODEKASCHOINOS | X | Pt | Pt | -R | R | R | R | $?$ | - |
| Pselchis-Dakka ${ }^{\text {b }}$ |  |  |  |  |  |  |  |  |  |
| Dakka Cemetery 98 | - | ? | ? | x - | -xR | ? | - | - | - |
| Maharraqa Cemetery 123 | - | - | - | x | x | - | - | - | - |
| THE NORTHERN TRIAKONTASCHOINOS |  |  |  |  |  |  |  |  |  |
| Wadi es-Sebua Cemetery 150 | Pt | Pt | [ X ] | X ? | - | - | X | X | - |
| Wadi el-Arab Setllement | - | - | - | - | - | x ? | x ? | x ? | x ? |
| Er-Riqa |  |  |  |  |  |  |  |  |  |
| Cemetery 163 | Pt | Pt | - | [x] | x | x ? | X | - | - |
| Cemetery 166 | - | - | - | $x$ - | -x | - | - | - | - |
| Cemetery 174 | - | - | - | - | - | x | - | - | - |
| Shablul | - | - | - | - | - | -x | -x- | -X. | -x |
| Tumas Cemetery 186 | - | - | - | - | - | - | - | x- | -x |
| Aniba Karanog Cemetery | - | $x ?$ | [x] | [x] | x ? | XX | XX | XX | X |
| Ibrim |  |  |  |  |  |  |  |  |  |
| Fortress | - | - | - | X | X | ? | ? | ? | - |
| Cemetery 192A and C | - | - | - | - | - | - | - | - | X |

Table 29. The Occurrence of Phases I-IV in Meroitic Nubia (cont.).

| Phase | Early | $I$ |  | II |  | III |  | IV |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Subphase |  | A | B | A | B | A | B | A | B |
| Site ${ }^{\text {a }}$ |  |  |  |  |  |  |  |  |  |
| Masmas Cemetery | - | - | - | - | - | x - | -x | - | - |
| Toshka Cemetery TWA | - | - | - | x | x | x ? | - | - | - |
| Arminna |  |  |  |  |  |  |  |  |  |
| Settlement | - | - | - | - | - | - | x- | -x- | -x |
| Eastern Cemetery | - | - | [X] | [x] | x- | -x- | -x | - | - |
| Western Cemetery AWB | - | - | - | - | - | - | x? | x | - |
| Abu Simbel W Cemetery 214 | - | - | - | - | x | - | X | X | X |
| Gebel Adda Cemetery | - | - | - | - | - | - | - | X- | -X |
| Qustul Cemetery Q | - | X | XX | XX | XX | X | X | x | $x$ |
| Ballana Cemetery B | - | - | - | - | X | X | XX | XX | XX |
| Ballana Setlement | - | - | - | X | X | - | - | - | - |
| THE SOUTHERN TRIAKONTASCHOINOS |  |  |  |  |  |  |  |  |  |
| WEST BANK SITES |  |  |  |  |  |  |  |  |  |
| Faras Cemetery | - | X ? | XX | XX | XX | XX | XX | XX | XX |
| Aksha Cemetery | - | x ? | x | X | X | - | [x] | - | - |
| Argin Cemetery |  |  |  |  |  |  |  |  |  |
| Nag el Arab | X. | -X | - | -x- | - | - | [x] | - | - |
| Nag Shayeg | - | - | - | X | - | - | x - | -x | - |
| Nelluah | - | - | [ X ] | X | X | X | - | -x | - |
| Argin Setulement 6-B-8 | - | - | - | - | x | x | x | -? | - |
| Gezira Dabarosa Setlement 6-G-9 | X? | x ? | x | x | - | - | - | - | - |
| Buhen Cemetery | - | - | x- | X | [ x ] | [ x ] | - | - | - |
| Semna South Cemetery | - | - | [x] | X | XX | - | -x- | - | - |
| EAST BANK SITES |  |  |  |  |  |  |  |  |  |
| Serra |  |  |  |  |  |  |  |  |  |
| Cemetery 25 | X ? | [X] | x | X | X | - | -x- | - | -x |
| Cemetery 280 | - | - | - | - | X | - | -x | - | - |
| Abka |  |  |  |  |  |  |  |  |  |
| Cemetery 250 | - | - | x | x | x | - | - | x ? | - |
| Cemetery 416 | - | - | x | - | - | - | $x$ - | -x | - |
| Gamai Cemetery | - | - | - | x- | X | X- | -x- | $x$ ? | - |
| SITES ABOVE THE SECOND CATARACT |  |  |  |  |  |  |  |  |  |
| Abri Cemetery |  |  |  |  |  |  |  |  |  |
| 2-V-20 | XX | XX | XX | XX | X | - | -x- | - | - |
| Amir Abdalla | - | - | [ X ] | XX | XX | - | - | - | - |
| Sai Cemetery | - | - | - | - | x | x | x | - | - |

Table 29. The Occurrence of Phases I-IV in Meroitic Nubia (cont).

| Phase | Early | I |  | II |  | III |  | IV |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Subphase |  | A | B | A | B | A | B | A | B |
| Site ${ }^{\text {a }}$ |  |  |  |  |  |  |  |  |  |


| Soleb Cemetery |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Meroitic | - | - | X | - | - | - | - | - | - |
| Reused New Kingdom | - | [X] | [ X ] | X | - | - | - | - | - |
| Kerma Cemetery |  |  |  |  |  |  |  |  |  |
| "l'ecole" | - | - | X | X | - | - | - | - | - |
| Northern Cemetery | - | - | - | - | X ? | X | X | X | X ? |
| Sanam Cemetery | X? | - | - | - | X | - | - | - | - |
| = Phase present |  |  |  |  |  |  |  |  |  |
| $\mathrm{X} \quad=$ Phase | $=$ Phase relatively important, strong presence |  |  |  |  |  |  |  |  |
| -x- $\quad=$ Phase | = Phase present but not distinct from adjacent phases |  |  |  |  |  |  |  |  |
| [] = Mater | $=$ Materials present may be identical with other phases |  |  |  |  |  |  |  |  |
| $? \quad=$ Doubic | $=$ Doubtful (where occurs, includes - and []) |  |  |  |  |  |  |  |  |
| = No re | = No remains |  |  |  |  |  |  |  |  |
| $\mathrm{Pt} \quad=$ Ptolem | $=$ Ptolemaic-Egyptian |  |  |  |  |  |  |  |  |
| $\mathrm{R} \quad=$ Roma | = Roman period Egyptian |  |  |  |  |  |  |  |  |

a. Sites in lower Nubia are identified by the Omodiyya in which they were located at the time of excavation. Other numbers and letters are designations given by the excavators. Sometimes, as at Argin and Abri, the name of the nag or hamlet is given also.
b. The fortress was in use throughout most of this period, but no dates were clear from pottery or small finds.

## THE DODEKASCHOINOS

The lower parts of the valley in the Dodekaschoinos were largely explored by the first archaeological survey of Nubia. Numerous cemeteries, some quite large, were dated to the Ptolemaic and Roman"Byzantine" periods; ${ }^{1}$ specific cemeteries and other installations were cited in the tabular resume of Trigger. ${ }^{2}$ The most important cemeteries were 89 (Awam) and 98 (Dakka), but cemeteries were numerous, especially near Aswan. The most detailed discussion of the Dodekaschoinos in this period remains that of Monneret de Villard. ${ }^{3}$ The relationship between cemeteries and settlements was discussed as well as the potential role of the vine ${ }^{4}$ and the saqiya. ${ }^{5}$

The wealthier burials called Ptolemaic were made in stone sarcophagi; mummies had cartonnage panels and were placed in end-chamber tombs cut into the rock. Sometimes many burials were found in a tomb. Other burials of descending wealth and status were made in end-chamber tombs cut into the higher alluvium deposits made with either a dromos or a pit and blocked with stone slabs. ${ }^{6}$ These also often contained

1. See generally Reisner 1910, especially pp. 343, 344 (tombs with chambers normally oriented at right angles to the hillside), Firth 1912, especially pp. 30-34; on p. 33, burials of the fifth century B.C. are described but dated later because of a "certain retardation of culture"; Firth 1915, especially pp. 160-62 and 22-24 with the discussion of Dakka settlements on pp. 25-38; and Firth 1927, especially pp. 30, 31 where Ptolemaic-Roman and Meroitic burials are compared; see also pp. 43-45 (a tabular resume).
2. 1965. 
1. 1941. 
1. Ibid., pp. 40-42.
2. Ibid., pp. 43-46.
3. Reisner 1910, pp. 343, 344.
mummies with cartonnage panels of types generally well known in Ptolemaic Egypt, and some had gold leaf faces of types dated to the early Roman period in Egypt. ${ }^{7}$ There were even remains of three portrait boards. ${ }^{8}$ Many burials, however, contained no objects, and offered no evidence for date other than their general appearance. Some closely resembled tombs at Qustul and simple burials at Karanog, even to the leaf garlands deposited with the burial. ${ }^{9}$ It would be difficult to exclude some relationship between the regions in this period.

Even though burials of this kind cannot be dated with detailed precision, the forms of cartonnage are clearly Ptolemaic; and it is equally clear that during the period between the fifth century B.C. ${ }^{10}$ and the third century of our era, the Dodekaschoinos was occupied with some intensity ("a very large and somewhat uninteresting class of graves"). ${ }^{11}$

The two most important cemeteries south of the Aswan-Philae region in the Dodekaschoinos were Awam, Cemetery $98^{12}$ and Maharraqa, Cemetery 123, which contained pottery of phases IIA and IIB. ${ }^{13}$

## THE NORTHERN TRIAKONTASCHOINOS

## Wadi es-Sebua, Cemetery $150^{14}$

Early evidence consists of broad dromos tombs, probably preceding phase I. ${ }^{15}$ Phase I evidence consists of long dromos tombs which contained some objects, but no pottery. ${ }^{16}$ Black incised, ${ }^{17}$ possibly Kushite wheelmade, ${ }^{18}$ carlier Roman period Egyptian, ${ }^{19}$ and other Roman period Egyptian pottery ${ }^{20}$ were found in other tombs in the cemetery. Standard painted pottery, ${ }^{21}$ red-coated, ${ }^{22}$ and other late styles were also found.

In addition to the long dromos, end chamber tomb, many were slab roofed, ${ }^{23}$ some with simple square or rectangular superstructures. Most of the cemetery probably dates to phases I, and IIA(?), then phases III and IV.

## Er-Riqa (Korosko) Cemetery $163^{24}$

Because some of the materials and probably tombs were reused, not all of the evidence is clear. There are a few vessels related to the Hellenistic style of Egyptian painted pottery (silhouette), however, and there
7. See Firth 1912. pls. 22-32; note the gilt faces pl. 27:b, c; see also Firth 1915, p. 26.
8. Reisner 1910, p. 344.
9. Reisner 1910, pp. 343, 344; Firth 1915, p. 162 and list.
10. Firth 1912, p. 33. Antecedents of the Ptolemaic burial with wooden and gilt coffins are described but assigned a later date based on an assumed "retardation of culture."
11. Ibid., p. 30. For chronology of the Roman types that succeeded this group, see Corcoran 1988, especially pp. 38-41.
12. Firth 1915. pp. 160-62; Williams 1985, p. 185. See fig. 226 for evidence of phases IIA, B.
13. Firth 1927, pp. 167, 168. Vessels include cups painted in the "trellis" (Török "Silhouette") style and in the sinuous style of phases IIA and IIB. There was one cooking pot.
14. Firth 1927. pp. 229-33; Emery and Kirwan 1935, pp. 70-102; Williams 1985, pp. 180, 181.
15. See, Williams 1985, p. 180 , note 150 .
16. See, for example tombs 1 and 180.
17. See note 154, tomb 28, with Roman period Egyptian pottery.
18. See note 155 , tomb 139.
19. See note 156 , tombs 207 and 139.
20. See note 157, tombs 134, 196, 200, 253, 234 (with a possible "Academic" pot), and 162.
21. See note 158 , tombs $128,130,132,162,170$, and 229.
22. See note 159 , tombs 125 and 148.
23. Firth 1915, plan 13.
24. Emery and Kirwan 1935, pp. 152-68; Williams 1985, p. 181.
are some Kushite wheelmade vessels and one painted in the "Academic" style. ${ }^{25}$ In addition, other Roman period Egyptian vessels ${ }^{26}$ and painted vessels in standard and late styles were found. ${ }^{27}$

As in cemetery 150, a number of north-south tombs with wide ramps and side chambers are probably to be dated earlier, to the Ptolemaic period, although Kirwan dated an inscription on a vessel to the fifth or sixth century B.C. ${ }^{28}$ Other tombs, however contained objects that are of types earlier than those found in Meroitic graves. ${ }^{29}$

## Er-Riqa Cemetery 166

One tomb contained Roman period Egyptian pottery. ${ }^{30}$

## Er-Riqa Cemetery 174

Simple shaft graves contained Roman period Egyptian and Meroitic Standard Painted pottery. Only a few graves of the cemetery were excavated. ${ }^{31}$

## Tumas Cemetery 186

This was a small plundered cemetery of shafts and shafts with vaults. Red-coated jars without other decoration occurred, and there was one simple bichrome cup. The cemetery probably dates to phase IV. ${ }^{32}$

## Shablul Cemetery ${ }^{33}$

Although the cemetery was dominated by a cluster of fewer than 40 pyramid tombs, there were simple graves nearby that were not excavated. ${ }^{34}$ The tombs consisted of rectangular shafts, the more elaborate with brick vaults, the others with stone slab blocking or no covering. No end or side-chamber tombs were found. Large groups were not preserved intact. No incised pottery was mentioned, and the earliest fragments published are fine "Academic" painted pieces, ${ }^{35}$ curvilinear vines of Roman period Egyptian type, ${ }^{36}$ and a barbotine vessel, ${ }^{37}$ which could be as early as phase II. Most of the vessels illustrated ${ }^{38}$ are standard and late types, however, especially those which are red-coated with white decoration. ${ }^{39}$ Rim band painted cups were also common. ${ }^{40}$ The cemetery was not completely excavated, and important details, especially of the structures, were not presented in the report. For example, it is not possible to determine whether all of the tombs were originally constructed as vaults or whether some of them might have been altered from other types, as at Ballana. According to Randall-MacIver and Woolley, the cemetery was late. Although the earliest materials could be IIB, all of them appear in IIIA, and the entire pyramid cemetery probably dates to III and IV.
25. Emery and Kirwan 1935, pp. 152-68, tombs 51, 140, and 143.
26. Ibid., tombs $1,3,29,65,67$, and 100 , the latter two are late.
27. Ibid., tombs 39 (standard), 40 (decorated red-coated), 43 (same), 64 (mixed debris with standard painted pottery and X-Group goblets), 99 (rim band cup), 132 (standard), and 136 (rim band and red-coated vessels).
28. Ibid., tomb 105.
29. Ibid., tombs 129, 131, and 3. See note 169 for a list of these tombs.
30. Ibid., pp. 168-82; tomb 4 (reused A-Group).
31. Ibid., pp. 206-8.
32. Ibid., pp. 210, 211.
33. Woolley and Randall-MacIver 1911a, pp. 23-42.
34. Ibid., p. 28.
35. Ibid., pl. 29:2.
36. Ibid., pls. 30:1, 3; 31:1-4, 7, 10 .
37. Ibid., pl. 29:7.
38. Ibid., pls. 24-29.
39. Ibid., pl. 28.
40. Ibid., for example, pl. 25:1, 2, 5, 7, and 10.

## Karanog Cemetery (Aniba) ${ }^{41}$

After Faras, this was the largest cemetery in Lower Nubia with about 800 tombs and about 3,000 burials. Although black incised pottery occurred, it was not necessarily of the earliest types and early pottery of Roman period Egyptian or Kushite wheelmade type was also missing. ${ }^{42}$ It remains possible that phase II is present. In addition, many of the tombs contained no pottery, a characteristic of phase I.

Some globular white vessels with short necks and carefully painted designs belonging to the "Academic" group were found here. ${ }^{43}$ In addition, a full range of vessels in the standard painted ${ }^{44}$ and late painted, ${ }^{45}$ as well as red-coated styles, ${ }^{46}$ were very important. Some of the most important Roman period Egyptian painted vessels came from this cemetery. 47

Although every major variety of Meroitic tomb-structure was present, including tombs with chambers on the east end, the west end, side-chamber tombs, vaulted-chamber tombs, and tombs with slabs, many graves were reused. Some of these were probably also altered, even to the extent of having superstructures added. The cemetery may have begun in phase I and continued through phase IV, but its most important phases were III and IV; its weakest phase was II which was hardly represented if at all.

## Karanog Townsite

Although much more secure than an open setulement, the fortress site of Ibrim was hardly suitable for the activities of ordinary living. The Eckley B. Coxe Expedition excavated a few houses that corresponded to the cemetery at Karanog. ${ }^{48}$ These had been built in two phases, but the style of excavation was not sufficiently detailed to verify the relative chronology of the various structures and rooms. Most pottery from this town was simple, but enough of the decorated pieces were found to indicate that at least the early phase of the town corresponded to the cemetery and dated to about phases IIIA or IIIB. ${ }^{49}$ The early phases found at Ibrim were apparently not present.

## Ibrim, Cemeteries 192A and 192C

Two small clusters of pyramid tombs, 192A and 192C, were erected over brick vaults. Pottery from 192C consisted only of red-coated jars with very narrow necks and broadly splayed bottoms and conical cups. The cemeteries belong to phase IV, probably at the end. ${ }^{50}$

## Masmas

Roman period Egyptian vessels with curvilinear vine-decoration and standard Meroitic painted pottery indicate that this small cemetery dates to phase III. ${ }^{51}$

## Toshka West, Cemetery TWA

A large cemetery of some 200 tombs at Arminna West included many Meroitic shafts with chambers on the west end, some of them with secondary chambers cut from the sides of the shafts. No superstructures were found. Very little material was published, but illustrations include a standard painted jug, sherds of
41. Woolley and Randall-MacIver 1910; Williams 1985, pp. 179, 180.
42. Williams 1985, p. 180. One or two jars may be related to the tall-necked jars; see Török's "Polychrome figural style" (1987a, pp. 203, 204. See Woolley and Randall-Maclver 1910, pls. 48:8231 and 8294, and 53:8154. The latter tomb contains an "Academic" painted vessel and elaborate Roman period Egyptian vessels see register, G 528).
43. See ibid., note 137.
44. See ibid., note 138.
45. See ibid., note 140.
46. See ibid., note 141.
47. See ibid., note 139.
48. Woolley and Randall-Maclver 1911, pp. 1-14.
49. Ibid., pp. 41-45.
50. Mills 1982, pp. 36-38; Williams 1985, p. 182.
51. Almagro 1965, pp. 39-68; Williams 1985, p. 182.
"Academic" painted vessels, and even sherds of vessels painted in the very early style noted in the Ptolemaic-Roman Dodekaschoinos and at Qustul. ${ }^{52}$

## Arminna Settlement ${ }^{53}$

Mixed materials from this fragmentary settlement have been used to indicate a transition between Meroitic and X-Group periods. The materials of Level III range, however, from Meroitic phase III ${ }^{54}$ to mid-X-Group. ${ }^{55}$ The transition therefore must be attributed to mixture and rejected.

## Arminna East Cemetery 56

A cemetery of some 75 tombs at Arminna was made up almost entirely of end-chamber graves with a few side-chambers and vaults. Simple coffin burials were not present, but simple incised offering tables did occur ${ }^{57}$ as did black incised pottery. ${ }^{58}$ As at Karanog, there were no Kushite wheelmade vessels of phase II type, but fragmentary vessels may not have been noted in the badly plundered cemetery. ${ }^{59}$ The remaining vessels indicate a date of late phase IIB to phase III.

## Arminna West, Cemetery AWB

Cemetery AWB at Arminna West contained a number of important pyramid tombs with elaborate fittings. Details of the burials and objects are not available in sufficient detail to date any phases in the cemetery except to note that the type of substructure, a simple roofed (?) shaft, is characteristic of later sites, probably dating the cemetery largely to phases IIIB and IV. 60
Abu SimbeI West, Cemetery $214^{61}$
A few tombs may date to phase II, probably B, which contained incised-impressed, ${ }^{62}$ Kushite wheelmade, ${ }^{63}$ and mixed Roman period Egyptian and handmade pottery. ${ }^{64}$ Otherwise, pottery includes standard painted pottery, ${ }^{65}$ and late painted styles. ${ }^{66}$

Only about eleven of the tombs had end chambers, while most had side chambers, shafts with vaults, or shafts with slab-roofs. Both the pottery and the structures indicate the cemetery had a short use in phase II and belonged predominantly to phase IV.

## Gebel Adda ${ }^{67}$

Reference was made to relatives of historical persons of the mid-third century buried in Cemetery 368 which contained amphorae inscribed with the name of Wayekiye. The substructures that were described
52. Simpson 1967, pp. 169-84; Williams 1985, p. 182.
53. Trigger 1967; Williams 1985, p. 186.
54. This included standard bichrome painted pottery; see Trigger 1967, pls. XXV-XXVII, various items.
55. Trigger 1967, tab. 2:K.
56. Junker 1925, pp. 120-25; Williams 1985, p. 182.
57. Junker 1925, pl. 12.
58. Ibid., p. 118.
59. Ibid., pls. 10, 11.
60. Simpson 1967b, pp. 15-22; Williams 1985, p. 182.
61. Emery and Kirwan 1935, pp. 417-50; Williams 1985, pp. 182, 183.
62. Emery and Kirwan 1935, pp. 417-50, tomb 75.
63. Emery and Kirwan 1935, tomb 79. Tall-necked globular jars, however, do not occur.
64. Ibid., tomb 36.
65. Ibid., tomb 73.
66. For rim bands, see tomb 93 ; for simple bands, see tombs $85,105,109,114,117$, and 125 ; for simple beads, see tombs 73 and 88.
67. Millet 1963, 1964, 1968, pp. 46-55, figs. 1, 2.
68. Ibid., tomb 6; see Millet 1968, pp. 48 and 53.
consisted of brick vaults on ledges or constructed on the floor of the shaft. ${ }^{69}$ Millet has indicated ${ }^{70}$ that the burials associated with the mid-third century historical persons were not decorated except for their red coats and white bands. This cemetery dates to phase IV. The settlement was not described with sufficient details of the finds to date it independently.
Qustul
The Meroitic cemetery at Qustul is detailed in this volume.
Ballana
The Meroitic cemetery and settlement at Ballana also are detailed in this volume.

> THE SOUTHERN TRIAKONTASCHOINOS TO SEMNA SOUTH

## WEST BANK

## Faras Cemetery

The largest Meroitic cemetery in Lower Nubia contained 2,000 graves and probably many more burials. Griffith reconstructed a chronology from the tomb-structures, but it is only partly usable because the tombs had been so frequently reused. The cemetery follows the full sequence of developments at Qustul and Ballana. ${ }^{71}$

The sequence begins with west-end chamber graves found with only a few objects, such as anklets. ${ }^{72}$ In Griffith's next stage east-end chamber tombs, black incised, Kushite wheelmade, and Roman period Egyptian pottery of phase IIA $(-\mathrm{B})$ date are reported.

Later graves are more complex, especially since they were so often reused, ${ }^{73}$ but pottery vessels of all of the phases found at Qustul and Ballana occurred, indicating that Faras was important through all of the Meroitic phases. ${ }^{74}$
Aksha Cemetery ${ }^{75}$
A cemetery of about 200 burials in end-chamber tombs (mostly oriented to the west; there was one vault) contained a number of simple coffin burials. ${ }^{76}$ Most burials with pottery contained black incised, ${ }^{77}$ Roman period Egyptian, or Kushite wheelmade pottery. ${ }^{78}$ Later vessels are not common ${ }^{79}$ and truly late vessels are rare. ${ }^{80}$

Argin North, Nag el Arab Cemetery ${ }^{81}$
Much of the Meroitic area of this large cemetery was not excavated, and most of the tombs that were explored had been plundered and reused. They consisted mostly of shafts with chambers at the west end, with a few side-chamber graves. A few of the end-chamber tombs had long dromoi ${ }^{82}$ and contained handmade
69. Millet 1963, p. 159.
70. Personal communication.
71. Griffith 1924, 1925; Williams 1985, pp. 175, 176.
72. Wood is rarely reported at Faras (see Williams 1985, note 56), so there are few coffins. See Griffith 1924, pl. 40, 1925. p. 58.
73. Williams 1985, p. 175.
74. Ibid., especially notes 61-70.
75. Vila 1967; Williams 1985, p. 176.
76. Vila 1967; see AM 50.
77. Ibid., figs. $65 \mathrm{c}, 281 \mathrm{f}$.
78. Ibid., pls. I-III, V-VII.
79. Ibid., fig. 213b, ("Academic") and pl. VI:5 (standard).
80. Ibid., fig. 198:a, e, both with rim-bands.
81. Pellicer, Llongueras and Acuña 1965.
82. Ibid., for example, tombs $624,622,626,628$, and 629.
vessels with burnished red-brown exteriors. These included bell-shaped beakers, conical beakers, and a lower conical bowl. ${ }^{83}$ Vessels of these shapes and general character occurred in the early Meroitic cemetery at Abri-Missiminia, in both hand and wheelmade pottery. ${ }^{84}$

Most of the tombs were clearly early, similar to those of phase I at Qustul, especially coffin burials with anklets. ${ }^{85}$ There was also some Kushite wheelmade pottery. ${ }^{86}$ Although red-coated vessels were mentioned from the cemetery, they could not be definitely identified as late. There was only one clearly late vessel, a globular jar with painted beads on the shoulder. ${ }^{87}$

## Argin North, Nag Shayeg Cemetery ${ }^{88}$

The large and compact cemetery of end- and side-chamber tombs contained some simple burials, ${ }^{89}$ some coffin burials, but with pottery that may have been plunderer's tools, ${ }^{90}$ early pottery, ${ }^{91}$ and also some later types. ${ }^{92}$ Phase IIA was clearly present, as well as phases IIIB-IV, but the "Academic" and contemporary Egyptian vessels were not present in any numbers.

## Argin North, Nelluah Cemetery ${ }^{93}$

This relatively small cemetery (about fifty tombs) consisted mostly of west end- and side-chamber tombs. It contained early evidence, such as black incised pottery, ${ }^{94}$ Egyptian, and "Academic" painted vessels. ${ }^{95}$ The Kushite wheelmade pottery includes a number of jars with very tall necks ${ }^{96}$ and (Roman) Egyptian vessels were later types, such as the great globular or ovoid jars, ${ }^{97}$ but not the earlier cooking pots. A few late pots were found, but they were scattered. ${ }^{98}$ Although some earlier and later phases are represented, the major period of the cemetery belongs to phases IIB and IIIA, the period missing at Nag Shayeg.

## Buhen Cemeteries ${ }^{99}$

Scattered remains of settements and parts of two religious structures at Buhen were accompanied by the substantial reuse of earlier Egyptian cemeteries. The materials were not completely documented, but early evidence includes black incised-impressed pottery ${ }^{100}$ and coffin burials. ${ }^{101}$
83. Ibid., see especially tombs 628 and 629 , but also 570,606 , and 657.
84. See Williams 1985, p. 171.
85. Pellicer, Llongueras and Acuña 1965, tombs 576, 587, 585.
86. Ibid., tombs 620 and 615; see also the incised vessel in tomb 611.
87. Dating to phases IIIB-IVA; see ibid., fig. 19:1.
88. Catalán 1963; Williams 1985, p. 176.
89. Catalán 1963, tombs 148 (coffin), 149, 150, 152, 173, 175, 189 (B-1), 190, 193, 199, 200 (A-1), 217, 200 (A-3).
90. Ibid., tomb 172.
91. Ibid., figs. 5-7 (black incised and Kushite wheel-made); fig. 14 (Egyptian cooking pot).
92. Ibid., figs. 11:6, 10; 12:4-8;8:1, 4 (simplified standard); figs. 10:3 and 9:4 (red-coated); figs. 11:5, 9; 12:3 (with red rim bands).
93. Guinea and Teixidor 1965; Williams 1985, pp. 176, 177.
94. Guinea and Teixidor 1965, tomb 6.
95. Ibid., figs. 5:2; 12:2; 14:5; 15:3, 4; and 16:3.
96. Ibid., figs. 7:1, $2 ; 17: 1 ; 22: 5,7$.
97. Ibid., figs. 24:1, 2; 26:7.
98. Ibid., figs. 25:3-7; 26:1, 2; 29.
99. Randall-MacIver and Woolley 1911, pp. 125-28 and registers, pp. 197-216 (cemetery K), 137-76 (cemetery H). and 167-79 (cemetery J); Williams 1985, pp. 177.
100. Randall-MacIver and Woolley 1911, p. 69.
101. Ibid., see tombs $\mathrm{H} 21, \mathrm{H} 22$, and K 16 ; two in H 4 and J 9 may be later. Tomb H 5 contained standard painted pottery. Tombs with Meroitic deposits generally include H3, H4 (74 vessels), H5, H8, H9, H15, H37, H65, H68, H69, H71, $\mathrm{J} 1, \mathrm{~J} 4, \mathrm{~J} 8, \mathrm{~J} 9, \mathrm{~J} 13, \mathrm{~J} 15$, and J 19 .

## Semna South Cemetery ${ }^{102}$

The Oriental Institute Sudan Expedition excavated a large Meroitic cemetery which has been summarized in a preliminary report. Most of the tombs had end-chambers, but there were a few vaults and slab-roofs. ${ }^{103}$ Except for the weapons, ${ }^{104}$ the published objects are all early; notably a series of Kushite wheelmade jars with tall necks decorated in the "Academic" style. ${ }^{105}$ The cemetery was probably constructed in phases I-IIB, with a few tombs constructed or reused later.

## The EAST BANK

Serra, Cemetery $25^{106}$
This cemetery contained a number of tombs with long dromoi and chambers at the west end which may belong to a very early stage of phase $\mathrm{I} ;{ }^{107}$ there was one tomb with heavy anklets. ${ }^{108}$ Some tombs contained black incised, Kushite wheelmade and Roman period Egyptian pottery of phase IIB date and a few redcoated vessels of much later times. The cemetery was reused, however, and intact and reliable tomb-groups were not preserved.
Serra, Cemetery $280^{109}$
Located just south of Cemetery 25, Cemetery 280 also contained a few tombs with chambers at the west end. Some tombs had chambers on the east and two had pyramids. ${ }^{110}$ Kushite wheelmade pottery, Roman period Egyptian pottery of phase IIB, and a lead cup indicate a date in that period.
Abka, Cemetery 250
This was a small cemetery of tombs with chambers on the west or east ends, some with narrow dromosapproaches (phase I). There was one coffin burial with Kushite wheelmade pottery; "Academic" painted pottery and Roman period Egyptian vessels all indicated that the cemetery was in active use through phase IIB. A few later vessels were probably deposited in a phase of reuse. ${ }^{111}$
Abka, Cemetery 416
Early west-end chamber tombs were reused in phases IIIB and IV as well as X-Group. ${ }^{112}$ Gamai Cemetery ${ }^{113}$

In the area partly occupied by the X-Group mounds of Gamai was found a medium-sized Meroitic cemetery ${ }^{114}$ consisting of end-chamber, ${ }^{115}$ side-chamber, trench, and vaulted tombs. ${ }^{116}$ The tombs had frequently been plundered and reused.

Although a detailed reassessment of the cemetery is not possible here, the general date of the cemetery can be determined. Bates and Dunham described only selected graves. Simple burials are not definitely
102. Zabkar and Zabkar 1982; Williams 1985, p. 178.
103. Zabkar and Zabkar 1982, p. 21.
104. Ibid., p. 112.
105. Ibid., pp. 42-47, including a black incised jar and "Academic" painted cups.
106. Stuve-Söderbergh, Englund, and Nordström, eds. 1984, pp. 127-29; Williams 1985, p. 175.
107. Säve-Söderbergh, Englund, and Nordström, eds. 1984, see tombs 66, 39, 35, 119, 130, and 76.
108. Ibid., tomb 97.
109. Säve-Söderbergh, Englund, and Nordström, eds. 1984, p. 129; Williams 1985, pp. 178, 179.
110. Säve-Söderbergh, Englund, and Nordström, eds. 1984, pl. 39, tombs 241 and 239.
111. Säve-Söderbergh, Englund, and Nordsưöm, eds. 1984, pp. 158-65; Williams 1985, p. 179.
112. Säve-Söderbergh, Englund, and Nordström, eds. 1984, pp. 167-71; Williams 1985, p. 179.
113. Bates and Dunham 1927, pp. 19-28, 34-68.
114. Bates and Dunham call it small (1927, p. 19).
115. East and west; some of the former with coffins; see ibid., pls. XIII, XIV.
116. Ibid., pp. 19-22.
represented in the record. ${ }^{117}$ There is only one west-chamber grave described, with a sherd of early Kushite wheelmade pottery. East-end chamber tomb 115 contained black incised, Kushite wheelmade, 18 and Roman period Egyptian pottery, in addition to an important collection of bronze vessels, ${ }^{119}$ indicating a date in phase IIB. Meroitic fine pottery with standard painting indicates that phases III and possibly even IV are represented; ${ }^{120}$ a date confirmed by ordinary vessels painted in the same style. ${ }^{121}$ The presence of brick vaults probably indicates that some later material was present, but none of the vessels or objects belong to the late styles (rim-band, red exterior) encountered at Ballana and Qustul. The cemetery dates largely to phases II and III, or more closely, phases IIB-IIIA

## NUBIA SOUTH OF DAL

## Abri-Missiminia Cemetery 2-V-20 ${ }^{122}$

The cemetery-complex at Abri-Missiminia began in early Napatan times and continued to receive tombs and burials into X-Group. Even in Napatan times, however, the cemetery was a group of clusters, ${ }^{123}$ so that it was not necessarily continuously in use throughout that long (1200-1300 years) period.

The Meroitic cemetery was a continuation of the late Napatan necropolis. Most tombs consisted of a long, stepped or ramped dromos leading to a chamber on the west end, ${ }^{124}$ sometimes containing wooden coffins, ${ }^{125}$ offering tables, ${ }^{126}$ or even obelisk-stelae. ${ }^{127}$ These features compare directly with phase IA at Qustul.

Although pottery and small objects comparable to other sites were found, they were not common. The most distinctive objects noted by Vila, heavy ankle bracelets, were the only objects found with the deceased in several tombs; ${ }^{128}$ as indicated by Vila these must be regarded as an early rather than late feature. Most pottery consisted of beakers that continued the earlier streak-burnished tradition, ${ }^{129}$ black incised-impressed pottery, ${ }^{130}$ and Kushite wheelmade jars and bowls, or beakers of phases IIA-B. ${ }^{131}$ A few Meroitic fine cups of types generally dated to phases IIB-IIIA at Qustul were also found. ${ }^{132}$ Later pottery occurs primarily in cist tombs. ${ }^{133}$ A single Naqada II painted jar with lug handles shows just how far from their original place and time vessels can occur. ${ }^{134}$ This cemetery dates almost entirely to phases I and II.
117. Ibid., pp. 34-68.
118. Ibid., tomb 180.
119. Including the famous Gamai bowl, ibid., pl. LXV:1-3.
120. Ibid., pl. LXI:19-22.
121. Ibid., pl. LXII:26; 25 is painted almost in "Academic" style; for other examples see pl. LXIV:27.
122. Vila 1980, 1982; Williams 1985, pp. 170-74.
123. Vila 1980, pp. 31, 32, figs. 4, 5; Williams 1985, pp. 170, 171; see OINE VII, pp. 1-27 for materials that cannot be readily identified in the great Faras cemetery.
124. Vila 1982, fig. 20; five had chambers on the east and a number had side-chambers. There were a few cists.
125. Ibid., figs. 12 and 13 .
126. Ibid., figs. 37 and 41.
127. Ibid., fig. 38.
128. Ibid., pp. 187-91 and 174 .
129. Ibid., figs. 181-83; OINE VII, pp. 7-8, see above, Nag el-Arab.
130. Ibid., tombs 11A, 115, 131, 169, 198, and 288.
131. Ibid., from tombs 29,114 (?), 190,191 (?), 213 (?), $215,269,282,315$, and 363 , some with streak burnish.
132. Ibid., from tombs $107,109,112,168,171,240,302$, and 322.
133. Ibid., tombs 168 (?), 261, 283, and 311.
134. Ibid., frontispiece.

## Abri, Amir Abdalla Cemetery ${ }^{135}$

Somewhat larger than Missiminia (another cemetery has been reported but not described), this cemetery contained mostly tombs with chambers on the east end or on the side. Pottery included black incised, ${ }^{136}$ mostly in the west-chamber tombs, while east-end and side-chamber tombs tended to contain Kushite wheelmade ${ }^{137}$ and even early Roman period Egyptian vessels. ${ }^{138}$ The chronological details are not available from this cemetery, but it is clear that it was important in phase II. A radiocarbon determination (wood) of 300 B.C. $\pm 90$ corresponds to the other evidence of date.

## Sai, Cemetery S.2.T.1. ${ }^{139}$

A small cluster of Islamic, Christian, and Meroitic tombs (side-chamber) was reported from Sai island. A destroyed tomb yielded a high-necked Kushite wheelmade jar with elaborate decoration, ${ }^{140}$ while the burial in tomb 1 was made in a rectangular coffin with a variety of later Meroitic objects. ${ }^{141}$ It was partly plundered and the tomb reused. ${ }^{142}$ Above another tomb were a Kushite wheelmade cup and a globular jar which appears to be much like a typical narrow-necked Meroitic jar. ${ }^{143}$ One cup had a rim band and representational decoration. ${ }^{144}$ The plundering and reuse of this small cluster do not permit detailed chronological statements, but the earliest material belongs to phase IIB. Burial 1 was probably made in phase IIIB, while the rim-band cup dates to phase IIIB or later.
Soleb Meroitic Cemetery ${ }^{145}$
The Meroitic cemetery consisted of 102 tombs placed in a rather open arrangement on the desert well away from the New Kingdom cemetery. The tombs consisted of end-chamber and a few side-chamber graves, with one pyramid. Many of the tombs contained simple burials with only the body and some objects of personal use, including one burial with anklets. ${ }^{146}$ Two black incised vessels were found. ${ }^{147}$ The cemetery dates to phase I, including subphases A (simple burials) and B (burials with objects and occasionally black incised pottery).

## Soleb, Reused New Kingdom Tombs

A number of New Kingdom tombs contained Meroitic burials with Egyptian pottery of Török's silhouette style-phase of the later Ptolemaic period. These tombs date to phase IIA. ${ }^{148}$

## Kerma: "La necropole de l'ecole" 149

A small group of mostly west-end chamber tombs located in the modern town contained three rows of tombs with a few other burials that may not belong to the cemetery proper. ${ }^{150}$ Burials, with the head west,
135. Fernandez 1980; 1984, pp. 427-32; 1984; 1986; Williams 1985, p. 174.
136. See especially Fernandez 1986, figs. $1,2$.
137. Ibid., figs. $3,4: 100-8,193-1,122-1,104-1,280-1,140-2,210-1$, and $170-2$; note the reused New Kingdom vessel 227-1.
138. Williams 1985, note 43.
139. Vercoutter 1979, pp. 211-31; Williams 1985, p. 174.
140. Vercoutter 1979, fig. 7.
141. Ibid., figs. 10-12.
142. Ibid., fig. 4.
143. Ibid., fig. 6.
144. Ibid., fig. 8.
145. Schiff Giorgini 1971, pp. 344-67; Williams 1985, pp. 174, 175.
146. Schiff Giorgini 1971, fig. 682.
147. Ibid., figs. 683 and 684.
148. Schiff Giorgini 1971, pp. 369-83; Williams 1985, p. 175.
149. Bonnet 1978, pp. 107-27; Williams 1985, pp. 183, 184.
150. Bonnet 1978, p. 120.
were often in anthropoid coffins, and once in a rectangular coffin. ${ }^{151}$ Pottery included Kushite wheelmade jars with low necks and smooth profiles, decorated with broad vines, a wavy band, or horizontal bands. ${ }^{152}$ The cemetery dates to phases I-IIA.
Kerma ${ }^{153}$
A cemetery found by Reisner northwest of the Lower Deffufa at Kerma was badly denuded. The tombs had varied orientations not found in cemeteries farther north or in the earlier Meroitic cemetery. Most were north-south chambers approached by a sloping shaft or ramp from the east or west. ${ }^{154} \mathrm{~A}$ few were shafts with a wall of brick blocking; these probably were shafts with side chambers that were so denuded that all trace of the shaft was removed. There was one normal Meroitic grave with a narrow east-end chamber. ${ }^{155}$
"Academic" painted pottery was prominent, as was standard pottery. ${ }^{156}$ One relatively late black incised vessel was illustrated, ${ }^{157}$ and there were Roman period Egyptian juglets. ${ }^{158}$ Late materials included redcoated jars with narrow necks ${ }^{159}$ and arrowheads. ${ }^{160}$ The cemetery can be correlated with phases III and IV, possibly phase IIB as well. It indicates that the late materials of Lower Nubia are chronological phenomena that occur in Upper Nubia also.
Sanam ${ }^{161}$
Many of the tombs at Sanam of the Napatan period were end-chamber tombs with long, stepped dromoi. Sketches indicate that many of them did not contain objects. ${ }^{162}$ It seems likely that they continued into postNapatan times, as did the Missiminia cemetery. One Kushite wheelmade jar with a rather long neck may date to phase IIB.

## SETTLEMENTS

Argin, Settlement 6-B-8 $8^{163}$
A Demotic ostracon from this site probably dates to the first century A.D.; ${ }^{164}$ but pottery included a wide variety of decoration, standard painted (phase III), curvilinear vines (phase IIB), and blob or spot-bead (phases IIIB-IVA). The site may correspond to the cemetery of Argin south.
Gezira Dabarosa, Settlement 6-G-9165
This important site contained only handmade vessels, some Roman period Egyptian juglets, and some large jars of late Napatan to Ptolemaic type. The handmade pottery may be related to some of the handmade vessels from Meroitic Abri, but the shapes are too simple to be considered chronologically exclusive. Some

[^13]vessels were also streak-burnished, a characteristic of the earlier period. ${ }^{166}$ The plan of the site may be related to the magazine compound of the "Western Palace" of Faras. 167

Pselchis
The date of the fortress does not depend on Meroitic remains. ${ }^{168}$
Dakka ${ }^{169}$
The problem of relating settlements and cemeteries is highlighted in the Dakka plain. There, simple Ptolemaic and Roman burials, almost entirely without pottery, were found in five cemeteries, two of them major and one, $98: 1$, among the largest in Lower Nubia. ${ }^{170}$ The corresponding settlement, however, consisted only of the "customs house" with nearby pottery deposits; the former was protected because it was thought to be a qubba. Some broken walls and Dakka camp remained to the south. This massive structure was itself preserved only in fragments and the interior structures had almost disappeared, leaving only the temple. ${ }^{171}$ Firth elsewhere recorded that the cemeteries were themselves in process of being destroyed by sebakh diggers. ${ }^{172}$ Thus, the cemeteries indicated the presence of settlements far more reliably than the tatters of town or fort and even these were about to be ruined.

## Wadi el-Arab

The houses may be of Meroitic date, but very little is actually Meroitic. ${ }^{173}$

## Meinarti ${ }^{174}$

Although important Meroitic remains were excavated at Meinarti, ${ }^{175}$ the excavation was not described in sufficient detail to evaluate the material chronologically.
Ibrim ${ }^{176}$
Materials from the later phases at Ibrim have not been described in sufficient detail to evaluate, except that they were found in fills between floors. ${ }^{177}$ A major body of fill material from the fortifications contained handmade incised-impressed pottery and imports belonged to the silhouette style. ${ }^{178}$ Red wares seem to include a number of vessels assigned to the Kushite wheelmade group. ${ }^{179}$ Despite statements by the excavator, ${ }^{180}$ there is Kushite pottery in the material found at Ibrim. The material from this group of deposits dates at least in part to phase IIA.

## Karanog Townsite

The houses at Karanog townsite are discussed briefly above.
166. See above, Argin north, and OINE VII, pp. 7, 8.
167. Griffith 1926, pl. XIII.
168. Firth 1915, pp. 35-38; Williams 1985, p. 185.
169. Williams 1985, p. 185.
170. Firth 1915, pp. 160-62.
171. lbid., pp. 25-38.
172. 1912. pp. 43, 44.
173. Emery and Kirwan 1935, pp. 108-22; Williams 1985, pp. 185, 186.
174. Adams 1965a; Williams 1985, p. 150, note 9.
175. Adams 1965, pp. 151, 152.
176. Adams n.d.; 1983; 1984; Williams 1985, pp. 186, 187.
177. Adams 1986, pp. 607-09.
178. Adams n.d., p. 7, fig. 3; HBR.
179. Ibid., fig. 4, center left; fig. 5, above left; fig. 6 , a jar with a very tall neck of phase IIB; the decoration for RBO, p. 31, is typical of the Kushite wheel-made group. For silhouette-style painting generally, see figs. 9 (below), 11, and 12.
180. Adams 1984.

## Napata

A sounding some 20 m northwest of the "Temple of Natakamani" yielded important evidence of Meroitic occupation, although important details of the pottery were not all presented. ${ }^{181}$ Objects of special chronological interest included burnished black incised pottery ${ }^{182}$ of phase IIA (?) and a series of painted beakers. One of these was decorated with a crosshatched band and wispy, sinuous vine of the early or silhouette stage (phase IIA), while others were decorated with Meroitic motifs very near to the early "Academic" or "Stern Pharaonic" style. ${ }^{183}$ A jar fragment was also decorated in the silhouette style. 184
181. Vincentelli 1982, p. 313.
182. Ibid., p. 316.
183. Sist 1982, figs. 1, 2. The elaborate eyes (?) do not belong to the characteristic motifs of the close or "stern pharaonic" style and are probably slightly earlier.
184. Ibid., fig. 3:F 7.1.

## APPENDIX B

# A TABULAR CONCORDANCE OF POTTERY CLASSIFICATIONS FROM CERAMIC INDUSTRIES OF MEDIEVAL NUBIA, ADAMS (N.D.), AND OINE 


#### Abstract

Above, in Chapter 2, reasons were given for continuing the practice of distinguishing groups according to intention, as has been the practice in previous volumes of this series. Classification of pottery has been the subject of considerable discussion in Nubian archaeology and it would not be possible to review all of the issues here. ${ }^{1}$ In late pottery, the most important writer, W. Y. Adams, has presented a very elaborate and complex work intended to assist in the dating of large bodies of excavated material. However, it did not include material from Ibrim which is directly connected to the Meroitic Period.

Adams' classification is constructed in three levels, Ware Family, based on fabric, Ware Groups, based on shapes and decoration, and Ware, generally based on color. ${ }^{2}$ Throughout, however, Adams recognizes the possibility of variation within a class to the extent that different classes share defining features, even at their own level. For example, different wares share colors, different ware groups share shapes and decoration, and different ware families (fabrics) share clays. ${ }^{3}$ Both from checking actual vessels and sherds against the classification and by examining publications that were based on it, it can be said that most basic units of distinction, the "wares," described elaborately by Adams, allow one to assign sherds and vessels to his groups and thus to his phases provided these vessels or groups have been included in the classification. But, even allowing for considerable variability in certain classes, Ware Families sometimes contain more than one fabric, Ware Groups contain more than one major decorative style, ${ }^{4}$ or, two groups share major classificatory features at their own level. In some cases, wares in different groups or even families have more in common with each other than they do with members of their own class. ${ }^{5}$ For the classification to be meaningful in any other situation than the rote tabulation envisioned by Ceramic Industries (p. 66), some classes will have to be realigned, others combined, and still others divided. For these reasons this volume presents the Meroitic pottery in an integrated classification that realigns most of Adams' categories. However, it is important that these categories be reconciled as far as possible and the following table presents the correspondences.


1. Williams, n.d. will contain a more extensive discussion of Adams, 1986 (Ceramic Industries of Medieval Nubia).
2. See Adams 1986, pp. 66-68 and 7.
3. These levels differ from those used by Nordström, for example, and Holthoer, who distinguish colors and surface treatments at a higher level than shapes and decoration. See Nordstrom 1972, pp. 57-68 and "Classification of the Wheelmade Wares." in Holthoer 1977, pp. 60-67; see Holthoer's own remarks, pp. 68, 69, "The Concept of Type."
4. D.I, N.I, and N.II all contain more than one style. Adams 1986, pp. 468, 469 and 562 (R1). 470 and 562 (W11).
5. So R34 (N.I, Meroitic Imitation Roman Ware, pp. 456, 457) and R30 (A.I, Aswan Graeco-Roman Ordinary Red Ware, pp. 534, 535), despite slight differences in color. The "northern" wares of group N.V have more in common with adjacent horizon phases N.IV and N.VI than they do with the "southern" wares R36 (p. 499) and W21 (p. 500) assigned to N.V.

# Table 30. A Concordance of Pottery Classifications from Ceramic Industries of 

 Medieval Nubia, Adams (n.d.), and OINE.| OINE |  |  |
| :---: | :---: | :---: |
| Ceramic Industries of Medieval Nubia (CIMN) | Pages (CIMN) | Remarks |
| I. Meroitic Fine/Ordinary Pottery ${ }^{\text {a }}$ includes: |  |  |
| R35 Meroitic Fine Red Ware | 436-38 | Red-coated W26. |
| W26 Meroitic Fine White Ware | 438,439 | R35 and 26 entire |
|  |  | groups are assigned except a few vessels. ${ }^{b}$ |
| R32 Meroitic Ordinary Red Ware | 455,456 | A.15-17, B.25, |
|  |  | G.19, W. $34,35{ }^{\text {c }}$ |
| W25 Meroitic Ordinary White Ware | 457,458 |  |
|  |  | G.19, 21, 43, and 44; |
|  |  | W. $2,3,5 ?, 34,35 ;$ X $^{\text {d }}$ |
| II. Kushite Wheelmade Pottery ${ }^{\text {e }}$ includes: |  |  |
| R32 Meroitic Ordinary Red Ware |  | See above and note c. |
| R33 Meroitic Striped Red Ware | 456,457 | Entire group? ${ }^{\text {f }}$ |
| W25 Meroitic Ordinary White Ware |  | See above and note d. |
| III. Kushite Storage Jar Potteryg |  |  |

a. The group recognizes an unbroken continuation from fine to mixed clays, and an intentional grouping. Vessels range from white to pink to red, the latter with alluvial clay.
b. Figure 254: B.5, 11, uncertain; D. possibly Kushite Wheelmade Utility; G.16, Egyptian Fine/Ord. II; L, uncertain, similar vessels are assigned to utility groups; M, Egyptian decorated by Meroites or redecorated in Nubia; N.2, probably same; P. probably not Nubian.
c. Kushite Wheelmade vessels include A.9, C.25, G.4, 13; W.30, possibly 3. Egyptian Ordinary Decorated Pottery includes A. Kushite Wheelmade Utility Pottery includes most of C. notably 90, 84, and 63, D., especially 68 and 49 , and possibly U. W. 13 and X. 16 may belong to Egyptian Fine/Ordinary Pottery with some Meroitic influence. Other vessels cannot be classified from the information available.
d. Like R32, W25 contains a variety of vessels belonging to several groups: Kushite Wheelmade vessels include A.9. C.9, G.1, 2, 5, 6 (?), and possibly W.30, although this may be a storage jar. Egyptian Ordinary vessels (decorated) include J.9, possibly K.3, U.22, X.16, and Z.26, provided they were made of alluvial clay, something which is not always clear from the publications (where they can be recovered from the generic documentation). Z. 29 probably belongs to the angular stage of Egyptian Fine/Ordinary Pottery. Handled forms I.5. 7, M, W.28, Z.13, ZZ. 2 may belong to a mixed group; they are very unusual in Meroitic contexts and some may have been repainted. C.3, 14, and 23 belong to a fine white pottery of the fourth-century Dodekaschoinos; see Ricke 1967, fig. 67:BK 135f. G. 17 is assigned in the present material to an Egyptian Fine/Ordinary II. Neither the shape nor the pottery of vessels in the present collection resemble Meroitic.
e. There was apparently some difficulty in separating white coated jars from Egypt from those of X-Group Nubia. It is, however, one group with a white-coated variant. Some cups or bowls should be added, but the illustrations were not quite clear enough. Ibrim RBR and RBO (Adams n.d., pp. 13, 14, 28-32, figs. 4 [?], 5, 6) may belong largely to this group, but some shapes appear to be ordinary Egyptian vessels.
f. G. 9 cannot be classified from the drawing (fig. 260); W. 30 may belong to the storage jar group, but the illustration is also not clear.
8. These include isolated shapes in W25 and R32; see figs. 77, 78, W.2, 3, 5, and 13. Some are decorated.

# Table 30. A Concordance of Pottery Classifications from Ceramic Industries of Medieval Nubia, Adams (n.d.), and OINE (cont.). 

| OINE <br> Ceramic Industries of Medieval Nubia (CIMN) | Pages (CIMN) | Remarks |
| :--- | :--- | :--- |
| IV. Kushite Wheelmade Utility Pottery includes: |  |  |
| U1 Pre-Christian Brown Utility Ware |  |  |
| W27 Meroitic Pale Pink Ware | 515,522 | D. $8^{\text {h }}$ |

h. Other vessels, such as G.27, W.27, and W. 30 might be assigned to this group, but they might also belong to Meroitic Ordinary Pottery. Because detailed references are not included, other vessels cannot be assigned with confidence. "Pots" assigned to the group include Egyptian vessels (U.) See p. 522 and Griffith 1924, pl. 26: type LVIa-f.
i. See note c above.
j. The groups are not distinguished except for very simple painted bands or spots. For lbrim HTU, see Adams n.d., pp. 8, 9 .
k. Coatings in the present material are very thin. The thick red, dark, or white coats described by Adams do not occur. It may be a separate group. Adams (n.d., p. 8 and 1984, p. 418) says that HBR differs from H9, but elsewhere (n.d., p. 11), he identifies a "pre-Ptolemaic" red-burnished ware that is identical with both.

1. The pottery is not domestic, however, for it is most strongly represented in the official structure known as the "Westem Palace" at Faras. See Griffith 1926, pl. 18, and p. 22. For Ibrim HBB, see Adams n.d., pp. 7, 8; 1984, p. 418.
m . The group is combined with later materials; for Meroitic period Egyptian Fine-Ordinary vessels, see figs. 298-300: B.16, 2, 8, 28; 1.9, 4, 10. 16, 23, 19. 8; L (possibly Meroitic utility); J.7; M.12, 13, 3, 11; W.9; X.6, 7; Z.28 and possibly 24 (although this may be Egyptian Ordinary) and 25. For Barbotine vessels, see B.3, 10 and D.41. For Egyptian Utility I, see J.17, W.11, and possibly Z. 5 (amphora). See notes a-d.
n. See fig. 54:M.6.

# Table 30. A Concordance of Pottery Classifications from Ceramic Industries of Medieval Nubia, Adams (n.d.), and OINE (cont.). 

| OINE <br> Ceramic Industries of Medieval Nubia (CIMN) | Pages (CIMN) | Remarks |
| :---: | :---: | :---: |
| II. Roman Period Egyptian Utility I Pottery includes: |  |  |
| R30 Aswan Graeco-Roman Red Ware |  | Utility vessels ${ }^{\circ}$ |
| W25 Meroitic Ordinary White Ware |  | White coated ${ }^{\text {p }}$ |
| Egyptian Fine/Ordinary IIA and IIB Pottery |  |  |
| No special recognized group |  | Various ${ }^{\text {q }}$ |
| Barbotine Pottery and Ancillary Vessels |  |  |
| No special recognized group. ${ }^{\text {r }}$ |  |  |
| Terra Sigillata: Convex Bowl |  |  |
| Ptolemaic-Egyptian Ordinary Pottery includes: |  |  |
| Utility vessels: |  |  |
| Ibrim RTU | Adams n.d. <br> 14, 37-39, <br> figs. 7.8 |  |
| Ordinary vessels, some decorated: |  |  |
| Ibrim RDR, RDW, RHR, RHW | Adams n.d. <br> 13, 14, 1-23, <br> figs. 4. 9-13s |  |

o. See note m . White-coated equivalents in W24 are probably included. The partial white coat he generally atributes to "Theban" pottery. See pp. 566, 567. See also Ibrim ARA (Adams n.d., pp. 44-48, fig. 14:18 and 19).
p. See note e.
q. See fig. 254:G.16 (W26?); fig. 261:G.17.
r. See note m .
s. Some of the vessels may belong to Kushite Wheelmade Pottery; the illustrations are preliminary and incomplete. As described, RBO is an unburnished Kushite Wheelmade Pottery, but one vessel (fig. 6) belongs to this group.


Figure 1. The Distribution of Phases in Cemetery Q.


Figure 1. The Distribution of Phases in Cemetery Q (cont.).


Figure 2. The Distribution of Phases in Cemetery B.


Figure 2. The Distribution of Phases in Cemetery B (cont.).


Figure 3. Major Meroitic Sites in Lower Nubia and Northem Sudan.


Figure 4. Meroitic Fine/Ordinary Bowls/Cups, I-A-H: (a) A, Cemetery B, Surface; (b) B, B 215-2;
(c) C, B 285-3; (d ) D1, Q 417-2; (e) D2, B 21-1; (f) D2, B 58-2; (g) E1, Q 469-4;
(h) E2, B 170-5; (i) E2, B 40-3; ( $j$ ) E2, B 330-1; (k) E3, B 133-1; (l) E4a,

B 182-1; (m) E4b, B 32-1; (n) G2, B 28-2; (o) G, B $248 \mathrm{Mer}-\mathrm{A}$; ( $p$ ) G1,
Cemetery B, Surface; $(q)$ G1, B 19-1; (r) G1, B 205-8; ( $s$ ) G1, B 240-3;
(t) G2, B 302-1; (u) H, Q 439-1. Scale 1:5.


Figure 5. Meroitic Fine/Ordinary Cups, I-I-S: (a) I1, B 312-8; (b) I 1, B 289-2; (c) I2, B 9-5; (d) JI, Q 137-7; (e) J2, B 252-3; (f) J2, B 205-4; (g) K1, Q 573-18; (h) K2, Q 636-6; (i) K3, Q 269-4; (j) L, Q 469-5; (k) M1, Q 636-2; (l) M3, B 226 Mer.-A; (m) N, B 309-4; (n) O, B 296-2; (o) P, B 312-6; (p) Q, B 185 Eg.-A [VI-E]; (q) R, B 129-1; (r) S, B 236-4. Scale 1:5.


Figure 6. Meroitic Fine/Ordinary Jars, 1-A: (a) A1, B 285 Mer.-C; (b) A2, B 45A-1; (c) A3, Q 636 Mer.-A; (d) A3, Q 439-5; (e) A4, B 88-l; (f) A5, B 88-2; (g) A5, B 51B-5; (h) A6, B 194-3; (i) A6, B 323-2; ( j) A6, Q 302A-3; (k) A7, B 238-1. Scale 1:5.


Figure 7. Meroitic Fine/Ordinary Jars, I-A, B: (a) A6, B 135-7; (b) B1, B 180-5; (c) B3, B $11-1$; (d) B3, B 8-2; (e) B4, B 314-3; (f ) B4, B 209-4. Scale 1:5.


Figure 8. Meroitic Fine/Ordinary Jars, I-D-F: (a) D, B 77-10; (b) E1, Q 618-4; (c) E2, B 130-1; (d) E2, B 66B-2; (e) F, B 297-1. Scale 1:5.


Figure 9. Kushite Wheelmade Bowl, Cups, and Beakers, II: (a) A, Q 661-5; (b) B1, Q 488-7; (c) B1, Q 573-15 (d) B2, Q 176-2; (e) C1, Q 488-2; (f) C2, Q 359-1; (g) D, Q 466-1. Scale 1:5.


Figure 10. Kushite Wheelmade Jars, II: (a) A, Q 499-4; (b) B, Q 485-1; (c) B, Q 475-6; (d) E1, Q 180-6. Scale 1:5.


Figure 11. Kushite Wheelmade Jars, II—D-F: (a) D1, Meroitic Settement 1a; (b) D2, B 153-2; (c) E1, Q489-1; (d) E2, Q 573-11; (e) E3, Q 308-2; (f) E3, Q 475-8; (g) F2, B 180-1; (h) F2, B 77-6. Scale 1:5


Figure 12. Kushite Wheelmade Jars, II-G: (a) G1, Q 383-3; (b) G2, Q 613-1; (c) G3, Q 488-3; (d) G3, Q 269-2; (e) G4, Q 591-2. Scale 1:5.


Figure 13. Kushite Wheelmade Jars, II-H, I: (a) H, Q 499-2; (b) I, B 209-7. Scale 1:5.


Figure 14. Kushite Storage Jars, III: (a) A, Q 301-1; (b) C1, B 179-1; (c) B2, B 135-3; (d) B1, B 40-11; (e) C2, B 209-5. Scale 1:5.

a

b
f


c

d
e


g

h

j


1

m

Figure 15. Wheelmade Utility Pottery, IV: (a) A, B 144-7; (b) B, B 31-2; (c) C1, B 15-1; (d) C2, B 312-5; (c) D1, B 315-1; (f) D2, B 34-1; (g) D2, B 26-5; (h) E, No Provenience;
(i) F1, B 12-2; (j) F2, Q 674-2; (k) F3, B 264-1; (I) G, Q 312-10;
(m) H, B 149-2. Scale 1:5.

b

Figure 16. Handmade Ordinary Pottery Bowls, V: (a) A, B 149-3; (b) B, B 184-4. Scale 1:5.

a

b

c

d

Figure 17. Sudanese-Saharan Bowls/Cups and Beakers, I: (a) A, Q489-8; (b) B, Q 417-5; (c) C, Q 573-13; (d) D, Q 406-1. Scale 1:5.


Figure 18. Sudanese-Saharan Jars, I: (a) A, Q 270-1; (b) A, Q 283-5; (c) B1, Q 439-3; (d) B2, No Provenience; (e) F, Q 613-2; (f) C, Q 475-9. Scale 1:5.


Figure 19. Sudanese-Saharan Form Group I Pottery: (a) D, B 143-2; (b) E, Q 489-2; (c) F, Q 644-1. Scale 1:5.


Figure 20. Kushite Wheelmade Stand or Platter, II, Q 322 Mer.-A. Scale 1:5.


Figure 21. Egyptian Fine/Ordinary Pipettes or Klepsydrai, I: (a) A, Q 684-2; (b) B, Q 298-2; (c) A, Q 318-1; (d) B, Q 466-4; (e) B, B 323-1. Scale 1:5.


Figure 22. Egyptian Fine/Ordinary Cups, I: (a) A, Q 488-1; (b) B, B 140-4; (c) B, Q 646-7; (d) C, B 91-5; (e) D, Q 540-5; (f) D, B 122-6; (g) E, Q 566-3; (h) F, Q 439-2; (i) F, Q 495-1;
( $j$ ) G1, Q 613-3; $(k)$ G2, Q 162-13; (l) G2, Q 574-11; (m) G3, B 292-2. Scale 1:5.

d


Figure 23. Egyptian Fine/Ordinary Juglets, I: (a) A1a, Q 670-16; (b) Alb, Q 659-1; (c) Alb, B 285-1; (d) A2a, B 282-1; (e) A2a, Q 191-3; (f) A2bii, B 111A-5; (g) A2bii, B 77-8;
(h) A2c, B 29-2; (i) A3a, B 99-1. Scale 1:5.


Figure 24. Egyptian Fine/Ordinary Juglets, I (cont.): (a) A3bi, B 47A-l; (b) A3bii, B 151-4; (c) A3biii, B 40-1; (d) A4ai, B 217-1; (c) A4aii, B 69-1; (f) A4bi, B 268-1; (g) A2bii, B 308-2;
(h) A5a, Surface D-8; (i) A5b, Q 670-5. Scale 1:5.


Figure 25. Egyptian Fine/Ordinary Juglets, I (cont.): (a) A6a, Q630-1; (b) A6b, B 32-6;
(c) A6c, B 80-2; (d) A6d, Q 303-5; (e) A7a, Q 298-3; (f) A7bi, Q 402-6;
(g) A7bii, B 12-1; (h) A7bii, B 26-2; (i) A7ci, B 35-2; (j) A7cii,

B 209-3; (k) A7ciii, B 14-10; (l) A8, Q 340-1. Scale 1:5.


Figure 26. Egyptian Storage Jugs, I-B, C: (a) B, B 312-2; (b) C, Q 490-2; (c) B, Q 634-6. Scale 1:5.

a

b


C


h


Figure 27. Egyptian Pitchers or Jugs, 1-A-F3: (a) A, Q 634-3; (b) B1, Q 162-7; (c) B2a, B 122-3; (d) B2b, B 91-2; (e) C, B 236-6; (f) D, Q 372-2; (g) E, Q 560-9; (h) F1, Q 540-3;
(i) F2, B 66A-12; (j) F3, Q 625-2. Scale 1:5.


Figure 28. Egyptian Pitchers or Jugs, I-F4-G: (a) F4, Q 574-9; (b) F5, Q 162-6; (c) G3, B 299-1; (d) G1, Q 594-2; (e) G2, Q 684-3. Scale 1:5.


Figure 29. Egyptian Pitchers or Jugs, Tankards, and Amphorae I-H-K: (a) H, B 47B-1; (b) I, Q 250-3; (c) J2, B 51B-3; (d) J1, Q 384-2; (e) K, B 66A-10; (f) K1, Q 162-11. Scale 1:5.

a

b


C

Figure 30. Egyptian Pitchers or Jugs, Amphorae I-L1-2b: (a) L1, B 152-1; (b) L2a, B 299-2; (c) L2b, B 203B-1. Scale 1:5.


Figure 31. Egyptian Pitchers or Jugs, Amphorae I-L2c-dii: (a) L2ci, Q 318-2; (b) L2ciii, Q 670-15; (c) L2ci, B 111A-14; (d) L2di, Q 488-8; (c) L2cii, B 81-4; (f) L2dii, Q 384-1. Scale 1:5.


Figure 32. Egyptian Pitchers or Jugs, Amphorae I-L3: (a) L3bi, B 111A-3; (b) L3bii, Q 683-6; (c) L3c, B 312-3. Scale 1:5.


Figure 33. Egyptian Handleless Jugs and Small Jars, I-M, N: (a) M1b, Q 417-6; (b) M2, Q 636-7; (c) M1a, Q 427-3; (d) N1, B 191-1; (e) N2, B 96-1. Scale 1:5.


Figure 34. Egyptian Pitchers or Jugs, Large Globular Jars and Variants, $\mathrm{I}-\mathrm{O}, \mathrm{Q}:($ a $) \mathrm{O} 1, \mathrm{Q} 499-1$; (b) O2, Q 573-8; (c) O3, B $111 \mathrm{~A}-13$; (d) O4, B $111 \mathrm{~B}-2$; (e) P1, Q475-3;
(f) Q, B 52-2. Scale 1:5.


Figure 35. Egyptian Utility Dishes and Bowls, II-A-G: (a) A, Q 573-9; (b) B, Q 573-16; (c) C, Q 188-1; (d) D, Q 254-1; (e) E, Q 567-2; (f) F, Q 469-9; (g) G, Q 650-3. Scale 1:5.


Figure 36. Egyptian Utility Jars and Jugs, II/II-A-C: (a) A1, B 222-1; (b) A2, B 200-4; (c) B, Q 626-5; (d) C1, Q 493-1; (e) C2, B 273-1. Scale 1:5.


Figure 37. Egyptian Utility Jars, Jugs, and Cooking Pots, II/III-D-F: (a) D, Q 284-2; (b) E, Q 573-10 (Handles Omitted see Figure 37e); (c) F1, Q 493-3; (d) F2b, Q 317-1; (c) F2a, Q 317-2; (f) F3, Q 293-3; (g) F4, Q 650-1. Scale 1:5.


Figure 38. Egyptian Amphorae: (a) I 1, Q 560-5; (b) I2a, B 146-2; (c) I2b, Q 372-1;
(d) I 3, Q 150-2; (e) I 4, B 135-2. Scale 1:5.


Figure 39. Egyptian Fine/Ordinary Pottery, Form Group V: (a) Ala, B 126-2; (b) Alb, Q 639-2; (c) A2, B 134-2; (d) A3, Q 560-1; (c) A3, B 151-3;
(f) A4, Q 646-4; (g) B, Q 670-6. Scale 1:5.

a

b

c

d

e

Figure 40. Barbotine Pottery, Form Group VI: (a) A, B 236-2; (b) A, B 282-9; (c) B, Q 560-2; (d) C, B 283-1; (e) E, B 184-5. Scale 1:5.



Figure 42. Quivers from Tombs B 213 and B 313: (a) B 213-1; (b) B 313-4;
(c) B 313-4. Scales: $(a, b)$ 1:4; (c) No Scale.


Figure 43. Quiver, B 319A-1. Scale 1:4.


Figure 44. Corpus of Beads, Ia-IIb: (a) la, Q 251-4a; (b) la, Q $365 \mathrm{~A}-2 \mathrm{~b}$; (c) la, Q 465-1i; (d) Ic, Q 270-3; (e) Id, B 77-11a; (f) If, Q 306-4a:a; (g) Ia/b/g, Q 312-8a; (h) Ig/VIh, Q 259-3b;
(i) li, Q 312-15c; (j) Ik, B 299-6b:j; (k) It, Q 312-5c; (i) IIa, Q 312-15m; (m) IIb, Q 312-4b; (n) IIb, Q 402-11a. Scales: (a-e, g-n) 2:1; (f) 4:1.


Figure 45. Corpus of Beads, IIc-Vb, c: (a) IIc, Q158-4; (b) IIe, Q 427-4a; (c) VIj, Q 312-2a; (d) Ilf, Q 312-2b; (e) IIm, B 282-4a:b:g; (f) IIm, B 282-4a:b:h; (g) IIr, Q 312-Sd; (h) IIs, Q 248-2;
(i) IIIf, Q 465-1g; (j) IIIgh, B 87-2; (k) IIIh, B 197-7b; (I) IIIh, Q 312-5w; (m) IVc, B 14-4:a:b; (n) IIv, Q 314-2a; (o) Va, Q 439-8c: (p) Vc, Q 251-4e. Scale 2:1.

a

h

b

c

d

e

g

d

e

f


1


m

$g$
Figure 47. Corpus of Beads, VIIa-XIi: (a) VIIa, B 279-2f; (b) VIIIb, Q 254-2b; (c) VIIIc, B 327-1b:d; (d) VIIld, B 328-2b:b; (e) VIIId, Q $254-2 \mathrm{a}$; (f) VIIIf, B $14-\mathrm{lc}$; (g) VIII, B 87-6k; (h) IXa, B 252-8a; (i) X, Q 312-5a; (j) X, B 328-2a:k; (k) XI, Q 322-1;
(1) XIh, Q 174-3; (m) XIi, Q 312-5n; (n) XI, Q 365A-2e.

Scales: (a, c, d, f-h, and $j-n) 2: 1 ;(b, e$, and $f) 1: 1$.


Figure 48. Corpus of Beads, XI-XVI: (a) Xj, Q 251-4d; (b) XV, Q 634-5d; (c) XVa, Q 255-1; (d) XVd, B 279-2a; (c) XVh, B 210-1a; (f) XV, B 193-6a:a; (g) XVm, B 66A-4g; (h) XVI, B 190-5a. Scale 2:1.


Figure 49. Corpus of Pendant Beads, Pla-PIIlc: (a) PIa, Q 378-7c:a; (b) Plc, Q 337-1b;
(c) PIc-e, Q 337-1c; (d) Pld, Q 634-5a; (c) Ple, B 14-4d:g; (f) Ple, B 14-4b:c;
(g) PIf, Q 465-1k; (h) PlIv, Q 298-9b; (i) Plla, b, Q 465-11;
( j) PIIb, Q 346-la; (k) PIllc, Q 465-lm. Scale 2:1.


Figure 50. Corpus of Pendant Amulets: (a) B 197-7; (b) NID; (c) NID;
(d) Surface, Cemetery B 22776. Scale 2:1.


Figure 51. Kohl Tube, B 25-5. Scale 1:1.


Figure 52. Kohl Tube, Q 592-6. Scale 1:1.


Figure 53. Kohl Tube (Exploded View and Section), Q 592-6. Scale 1:1.


Figure 54. Kohl Tubes and Lids from Tombs B 93, B 282, and B 308: (a) B 308-1; (b) B 93-1; (c) B 282-7. Scale 1:1.


Figure 55. Bronze Inlaid Kohl Tube, B 108-4. Scale 1:1.


Figure 56. Ivory Inlaid Kohl Tube, B 68-3. Scale 1:1.


Figure 57. Grooved Kohl Tubes from Tombs B 314 and Q 475: (a) B 314-1; (b) Q 475-18. Scale 1:1.


Figure 58. Ribbed Kohl Tubes from Tombs B 144 and B 173: (a) B 144-4; (b) B 173-2. Scale 1:1.

a


Figure 59. Cylindrical Boxes from Tombs B 93 and B 179: (a) B 93-2; (b) B 179-6. Scale 1:1.


Figure 60. Wooden Box with Winged Sun Discs, B 68-2. Scale 1:1.


Figure 61. Spindles from Tombs B 58, B 108, and B 182: (a) B 182-2A; (b) B 182-2C; (c) B 182-2B; (d) B 108-11; (e) B 58-8. Scale 1:1.


Figure 62. Jar, Q 81-1. Scale 2:5.


Figure 63. Cup, Q 139-4. Scale 2:5.


Figure 64. Amphora, Q 150-2. Scale 2:5.


Figure 65. Pendant and Scarabs from Tomb Q 154: (a) Lion Pendant, No. 5; Scarabs:
(b) No. 1; (c) No. 3; (d) No. 2; (e) No. 4. Scale 1:1.

b

d
Figure 66. Metal Objects and Amphora from Tomb Q 155: (a) Ring, No. 3; (b) Copper Fragment, No. 6; (c) 2 Needles, No. 9; (d) Amphora, No. 2. Scales: (a) Bezel 1:1, Ring 1:2, (b) 2:1, (c) 1:1, (d) $2: 5$.


Figure 67. Sherd, Q 159 Mer.-A. Scale 2:5.

a




C

g

Figure 68. Pottery and Plaque from Tomb Q 162: (a) No. 13; (b) No. 8; (c) No. 9; (d) No. 12;
(e) No. 7; (f) No. 5; (g) Plaque, No. 2. Scales: (a-f) 2:5; (g) 1:1.


Figure 69. Pottery and Iron Kohl Stick from Tombs Q 162 and Q 164: (a) Q 162-11;
(b) Q 162-6; (c) Iron Kohl Stick, Q 164-4. Scales: (a, b) 2:5; (c) 1:2.

FIGURES


Figure 70. Tomb Q 172: Plan and Sections. Scale: 1:40.


Figure 71. Pottery from Q 172: (a) No. 2; (b) No. 1; (c) No. 3. Scale 2:5.


Figure 72. Meroitic Fine/Ordinary Cup, Q 176-2. Scale 2:5.


Figure 73. Kushite Wheelmade Jar, Q 180-6. Scale 2:5.


Figure 74. Tomb Q 181: Plan and Section. Scale 1:40.

a

c

e

b

f

Figure 75. Pottery from Tombs Q 188, Q 191, Q 194, and Q 230: (a) Q 188-1; (b) Q 194-1; (c) Q 191-2; (d) Q 230-7; (e) Q 191-3; (f) Q 230-5. Scale 2:5.


Figure 76. Anklet and Iron Rod from Tombs Q 232 and Q 235: (a) Q 235-2; (b) Q 232-5. Scale 1:2.


Figure 77. Lid, Q 237 Mer.-C. Scale 2:5.


Figure 78. Tankard, Q 250-3. Scale 2:5.


Figure 79. Pottery from Tomb Q 251: (a) No. 1; (b) No. 2. Scale 2:5.


Figure 80. Pottery and Scarab from Tomb Q 253: (a) No. 4; (b) No. 3; (c) No. 2. Scale 2:5.


Figure 81. Amphora, Q 253-5. Scale 2:5.


Figure 82. Pottery from Tombs Q 254, Q 256, Q 257, and Q 262: (a) Q 254-1; (b) Q 256 Eg .- C;
(c) Q 257 Sud.-Sah.—A; (d) Q 257 Mer.-A; (e) Q 262-2. Scale 2:5.


Figure 83. Pottery from Tomb Q 269: (a) No. 3; (b) No. 2; (c) No. 1; (d) No. 4. Scale 2:5.


Figure 84. Pottery from Tombs Q 270, Q 278, and Q 284: (a) Q 270-1; (b) Q 278-l; (c) Q 284-2; (d) Q 284-3. Scale 2:5.


Figure 85. Pottery from Tomb Q 283: (a) No. 2; (b) No. 3; (c) No. 1; (d) No. 4; (e) No. 5. Scale 2:5.


Figure 86. Pottery from Tombs Q 293 and Q 296: (a) Q 293-3; (b) Q 293-1; (c) Q 296 Eg.-A. Scale 2:5.


Figure 87. Pottery from Tombs Q 298, Q 301, and Q 302A: (a) Q 298-3; (b) Q 301 Mer.-E;
(c) Q 298-2; (d Q 301-1; (e) Q 302A-3. Scale 2:5.


Figure 88. Tomb Q 303: Plan, Section, and Pottery: (a) Plan and Section; (b) No. 4; (c) No. 8; (d) No. 7; (e) No. 5. Scales: (a) 1:40; (b-d) 2:5.


Figure 89. Pottery from Tombs Q 304, Q 305, and Q 307: (a) Q 304 Sud.-Sah.-A;
(b) Q 307 Mcr -A; (c) Q 305-5. Scale 2:5.

b

Figure 90. Wood Fragments from Tomb Q 306 (Surface, D1): (a) No. 1; (b) No. 2. Scale 1:2.


Figure 91. Iron Kohl Stick and Pottery from Tomb Q 308: (a) Iron Kohl Stick, No. 7; (b) No. 5; (c) No. 4; (d) No. 2; (e) No. 3. Scales: (a) 1:1; (b-e) 2:5.

a


*

d

e

f

Figure 92. Pottery and Scaraboid from Tomb Q 312: (a) No. 10; (b) No. 14; (c) No. 11 ; (d) No. 12;
(e) No. 13; (f) Scaraboid, No. 7. Scales: (a-e) 2:5; (f) 1:1.


Figure 93. Tomb Q 317: Plan, Section, Pottery, and Scarabs: (a) Plan and Section; (b) No. 3; (c) No. 2; (d) No. 1; (e) Scarab, No. 5; (f) Scarab, No. 6. Scales: (a) 1:40; (b-d) 2:5; (e, f) 1:1.


Figure 94. Pottery from Tombs Q 318 and Q 319: (a) Q 318-1; (b) Q 318-2; (c) Q 319—3. Scale 2:5.


Figure 95. Pottery from Tomb Q 322: (a) No. 3; (b) No. 2. Scale 2:5.

b

Figure 96. Tomb Q 322: Pottery Stand and Tomb Q 325: Arrowhead: (a) Q 322 Mer.-A; (b) Q 325-4. Scales: (a) 2:5; (b) 1:1.


Figure 97. Pottery from Tombs Q 335 and Q 340: (a) Q 335-1; (b) Q 340-1;
(c) Q 340-3; (d) Q 340-2. Scale 2:5.


Figure 98. Tomb Q 346: Plan, Section, and Scarab: (a) Plan and Section; (b) Scarab, No. 2. Scales: (a) 1:40, (b) 1:1.


Figure 99. Jar Sherd, Q 351 Eg.-A. Scale 2:5.

b

c

e


Figure 100. Tomb Q 352: Plans and Pottery: (a) Plan of Tomb and Chapel; (b) No. 8; (c) No. 7; (d) No. 1; (e) No. 9; (f) No. 4; (g) No. 5. Scales: (a) 1:40; (b-g) 2:5.


Figure 101. Pottery from Tombs Q 353 and Q 359: (a) Q 353-1; (b) Q 353-9; (c) Q 354-1; (d) Q 359-1. Scale 2:5.


Figure 102. Tomb Q 363: Plans and Bowl: (a) Plans of Tomb and Chapel and Section;
(b) Bowl, No. 3. Scales: (a) 1:40, (b) 2:5.


Figure 103. Jar and Lead Bowl from Tomb Q 365: (a) Jar, No. 3; (b) Lead Bowl, No. 4. Scale 2:5.


Figure 104. Pottery from Tomb Q 372: (a) No. 2; (b) No. 1; (c) No. 3. Scale 2:5.


Figure 105. Arrowhead, Spearhead, and Pottery from Tomb Q 378: (a) Mer.-K; (b) Mer.-A; (c) Spearhead and Arrowhead, Nos. 7a, b; (d) Jar Sherd, Mer.-H. Scales: $(a, b, d)$ 2:5; (c) 1:1.


Figure 106. Jar, Q 383-3. Scale 2:5.


Figure 107. Pottery from Tomb Q 384: (a) No. 1; (b) No. 2. Scale 2:5.


Figure 108. Iron Objects from Tomb Q 384: (a) Dagger Fragment, No. 3; (b) Trimmer, No. 5; (c) Trimmer, No. 4. Scale 1:2.

a

b

Figure 109. Pottery from Tomb Q 392: (a) No. 1; (b) No. 2. Scale 2:5.


Figure 110. Tomb Q 402: Plan, Section, Pottery, and Bronze Kohl Stick: (a) Plan and Section; (b) No. 4; (c) No. 5; (d ) No. 2; (e) Bronze Kohl Stick, No. 10; (f) Juglet, No. 6.

Scales: (a) 1:40; (b-d, and $f$ ) 2:5; (e) 1:2.


Figure 111. Pottery from Tomb Q 402: (a) No. 1; (b) No. 3. Scale 2:5.


Figure 112. Tomb Q 406: Plan, Section, and Pottery: (a) Plan and Section; (b) No. 1;
(c) No. 4. Scales: (a) 1:40; (b, c) 2:5.


Figure 113. Tomb Q416: Plan and Section. Scale 1:40.


Figure 114. Tomb Q 417: Plans, Section, and Pottery: (a) Plans and Section; (b) No. 2; (c) No. 5; (d) No. 7; (e) No. 3. Scales: (a) 1:40; (b-e) 2:5.


Figure 115. Pouery from Tomb Q 417: (a) No. 1; (b) No. 6. Scale 2:5.


Figure 116. Tomb Q 427: Plan, Section, Pottery, and Lead Bowl: (a) Plan and Section; (b) Lead Bowl, No. 2; (c) Mer.-A; (d) No. 3; (c) No. 1. Scales: (a) 1:40; (b-e) 2:5.


Figure 117. Potuery from Tomb Q 430: (a) No. 2; (b) Mer.-A; (c) No. 1; (d) No. 3. Scale 2:5.


Figure 118. Tomb Q 432: Plan and Section. Scale 1:40.

a


b

c

f

h

j

Figure 119. Pottery from Tomb Q 439: (a) No. 2; (b) No. 1; (c) Pre-Mer.-A; (d ) No. 4; (c) No. 5; (f) Mer.-C; (g) Mer.-A; (h) Mer.-B; $(i)$ No. 3; $(j)$ Sud.-Sah.-A. Scale 2:5.


Figure 120. Pottery from Tombs Q 448, Q 449, Q 459, Q 461, and Q 464: (a) Q 448 Mer.-A; (b) Q 461 Mer.-A; (c) Q 464-2; (d) Q 459 Eg.-A; (e) Q 449 Sud.-Sah.-A. Scale 2:5.


Figure 121. Pottery from Tomb Q 466: (a) No. 1; (b) No. 3; (c) No. 2; (d) No. 4. Scale 2:5.


Figure 122. Tomb Q 469: Plan, Section, and Pottery: (a) Plan and Section; (b) No. 4; (c) No. 8; (d) No. 9; (e) No. 7; (f) No. 6; (g) No. 5. Scales: (a) 1:40; (b-g) 2:5.


Figure 123. Tomb Q 475: Plans, Section, and Metal Objects: (a) Plans and Section; (b) Spatula, No. 14; (c) Tweezers, No. 15B; (d) Tweezers, No. 15A. Scales: (a) 1:40; (b) 1:1; (c, d) 1:2.


Figure 124. Metal Objects from Tomb Q475: (a) Tweezers, No. 18A;
(b) Tweezers, No. 18B; (c) Ring/key, No. 21. Scale 1:1.


Figure 125. Iron Objects from Tomb Q 475: (a) No. 22; (b) No. 13. Scale 1:1.


Figure 126. Headrest and Metal Vessels from Tomb Q475: (a) Headrest, No. 17;
(b) No. 16; (c) No. 10; (d) No. 11 . Scale 2:5.


Figure 127. Pottery from Tomb Q 475: (a) No. 9; (b) No. 5; (c) No. 8; (d) No. 6. Scale 2:5.

FIGURES


Figure 128. Pouery from Tomb Q 475: (a) No. 7; (b) No. 3; (c) No. 2. Scale 2:5.


Figure 129. Pottery from Tombs Q 472, Q 480, Q 481, and Q 485: (a) Q 480 Eg.-A; (b) Q 481 Mer.-B; (c) Q472-1; (d) Q 485-1. Scale 2:5.


Figure 130. Pottery from Tomb Q 488: (a) No. 1; (b) No. 2; (c) No. 7; (d ) No. 4; (e) No. 8; (f) No. 3. Scale 2:5.


Figure 131. Tomb Q 489: Plan, Sections, and Pottery: (a) Plan and Sections; (b) No. 8; (c) No. 3; (d) No. 2; (e) No. 1. Scales: (a) 1:40; (b-e) 2:5.


Figure 132. Tomb Q 490: Plan, Section, and Pottery: (a) Plan and Section; (b) No. 1; (c) No. 2. Scales: (a) 1:40; (b, c) 2:5.


a

e

b

d

f

Figure 133. Pottery from Tomb Q 493: (a) No. 4; (b) No. 6; (c) No. 5; (d) No. 1; (e) No. 2; (f) No. 3. Scale 2:5.


Figure 134. Pottery from Tomb Q 495: (a) No. 1; (b) No. 2. Scale 2:5.


Figure 135. Tomb Q 499: Plans, Section, and Jar: (a) Plan and Section;
(b) Jar, No. 2. Scales: (a) 1:40, (b) 2:5.


Figure 136. Pottery from Tomb Q 499: (a) No. 6; (b) No. 1; (c) No. 2. Scale 2:5.


Figure 137. Jar, Q 499-7. Scale 2:5.


Figure 138. Pottery from Tomb Q 499: (a) No. 5; (b) No. 4; (c) No. 3. Scale 2:5.


Figure 139. Pottery from Tombs Q 523, Q 526, and Q 529 and a Plaque from Tomb Q 526:
(a) Q 523 Mer.-A; (b) Q 526 Eg.-A; (c) Q 529-1; (d) Q 529-4; (c) Q 529-2;
(f) Plaque, Q 526-2. Scales: (a-e) 2:5; (f) 1:1.


Figure 140. Tomb Q 540: Plans, Section, Pottery, and Iron Objects: (a) Plans and Section; (b) Kohl Stick, No. 9; (c) Tweezers, No. 8; (d) Tweezers, No. 7; (e) No. 5; (f) No. 3.

Scales: (a) 1:40; (b-d) 1:2; $(e, f)$ 2:5.


Figure 141. Tomb Q 547: Plan and Section. Scale 1:40.



Figure 143. Tomb Q 566: Plan, Section, and Pottery: (a) Plan and Section; (b) No. 4; (c) No. 3; (d) No. 1; (e) No. 2. Scales: (a) 1:40; (b-e) 2:5.


Figure 144. Tomb Q 567: Plan, Section, and Pottery: (a) Plan and Section; (b) No. 2;
(c) No. 1; (d) No. 5; (e) No. 4. Scales: (a) 1:40; (b-e) 2:5.


Figure 145. Pottery from Tomb Q 567: (a) No. 6; (b) No. 3. Scale 2:5.


Figure 146. Pottery and Iron Kohl Stick from Tomb Q 573: (a) Beaker, No. 18; (b) Cup, No. 13;
(c) Iron Kohl Stick, No. 6; (d) Bowl, No. 16; (e) Cup, No. 15; (f) Bowl, No. 9;
(g) Juglet, No. 1; (h) Jug, No. 7. Scales: (a, b, d-h) 2:5; (c) 1:2.


Figure 147. Pottery from Tomb Q 573: (a) No. 8; (b) No. 14;
(c) No. 10 (Handles Omitted, See fig. 37). Scale 2:5.


Figure 148. Pottery from Tomb Q 573: (a) No. 11; (b) No. 12. Scale 2:5.


Figure 149. Tomb Q 574: Plan, Section, Pottery, and Tweezers: (a) Plan and Section; (b) Tweezers, No. 12; (c) No. 5; (d ) Eg.-A (Rim Sherd); (e) No. 11; (f) No. 7;
(g) No. 1. Scales: (a) 1:40; (b) 1:2; (c-g) 2:5.


Figure 150. Pottery from Tombs Q 574 and Q 578: (a) Q 574-9; (b) Q 574-4; (c) Q 578 Mer.-A. Scale 2:5.


Figure 151. Tomb Q 588: Plans and Section. Scale 1:40.


Figure 152. Pottery from Tomb Q 591: (a) No. 1; (b) No. 2, Scale 2:5.

a


Figure 153. Tomb Q 592: Plan, Sections, Pottery, and Iron Kohl Stick: (a) Plan and Sections; (b) Bowl, No. 10; (c) Iron Kohl Stick, No. 4; (d) Bowl, No. 2; (c) Juglet, No. 8.

Scales: (a) 1:40; (c) 1:2; $(b, d, c) 2: 5$.


Figure 154. Pottery from Tomb Q 592: (a) No. 9; (b) No. 14; (c) No. 13. Scale 2:5.


Figure 155. Pottery from Tombs Q 594 and Q 595: (a) Q 594-2; (b) Q 595 Eg.-E. Scale 2:5.


Figure 156. Sherd, Q 609 Mer.-A. Scale 2:5.


Figure 157. Pottery from Tomb Q 612: (a) No. 1; (b) No. 2; (c) No. 3. Scale 2:5.


Figure 158. Tomb Q 613: Plans, Section, and Pottery: (a) Plans and Section; (b) No. 3; (c) Eg.-A; (d) No. 2; (e) No. 1. Scales: (a) 1:40; (b-e) 2:5.


b

c

Figure 159. Pottery from Tomb Q 618: (a) No. 2; (b) No. 4; (c) No. 1. Scale 2:5.


Figure 160. Jar, Q 624-4. Scale 2:5.

a


b


Figure 161. Tomb Q 625: Plan, Section, and Pottery: (a) Plan and Section;
(b) No. 2; (c) No. 1; (d) No. 3. Scales: (a) 1:40; (b-d ) 2:5.


Figure 162. Pottery from Tomb Q 626: (a) Mer.-A; (b) No. 6; (c) No. 5. Scale 2:5.


Figure 163. Jar, Q 630-1. Scale 2:5.


Figure 164. Tomb Q 634: Plan, Section, and Pottery: (a) Plan and Section; (b) No. 7;
(c) No. 1; (d) No. 3. Scales: (a) 1:40; (b-d) 2:5.


Figure 165. Poutery from Tomb Q 634: (a) No. 2; (b) No. 6. Scale 2:5.


Figure 166. Pottery from Tomb Q 636: (a) Mer.-C; (b) Mer.-D; (c) No. 6; (d) Mer.-B;
(c) Mer.-A; (f) No. 2; (g) No. 3; (h) No. 7. Scale 2:5.


Figure 167. Pottery from Tomb Q 646: (a) No. 7; (b) No. 11; (c) No. 3; (d) No. 9;
(e) No. 4; (f) No. 8; (g) No. 10; (h) No. 12. Scale 2:5.


Figure 168. Bronze Bowl, Pottery, and Scarabs from Tombs Q 647 and Q 650: (a) Bronze Bowl, Q 647-1; (b) Q 650-3; (c) Q 647-2; (d) Q 650-1; (c) Scarab, Q650-5; (f) Scarab, Q650-4. Scales: (a-d) 2:5; (e, f) 1:1.


Figure 169. Pottery from Tomb Q 661: (a) No. 3; (b) No. 8; (c) No. 5; (d ) No. 2; (e) No. 4. Scale 2:5.


Figure 170. Pottery from Tomb Q 667: (a) No. 1; (b) No. 2. Scale 2:5.


Figure 171. Pottery from Tomb Q 670: (a) No. 14; (b) No. 5; (c) No. 15;
(d ) No. 16; (e) No. 2; (f ) No. 6. Scale 2:5.


Figure 172. Pottery and Leather Archer's Brace from Tombs Q 674, Q 675, Q 676, and Q 677: (a) Q 674-2;
(b) Q 676-2; (c) Q 677 Eg.-A; (d) Leather Archer's Brace, Q 675-2. Scales: (a-c) 2:5; (d) 1:2.


Figure 173. Pottery from Tomb Q 683: (a) Mer.-J; (b) Mer.-D; (c) No. 6; (d ) Mer.-E. Scale 2:5.


Figure 174. Pottery from Tomb Q 684: (a) No. 3; (b) No. 2. Scale 2:5.


Figure 175. Tomb B 8: Plan, Section, and Pottery: (a) Plan and Section; . (b) No. 2;
(c) No. 1; (d) No. 3. Scales: (a) 1:40; (b-d) 2:5.


Figure 176. Pottery from Tombs B 9 and B 10: (a) B 9-6; (b) B 9-5; (c) B 9-4; (d) B 9—3; (e) B 10-2. Scale 2:5.


Figure 177. Pottery from Tombs B 11 and B 12: (a) B 11-1; (b) B 12-1; (c) B 12-3; (d) B 12-2. Scales: (a) 1:5; (b-d ) 2:5.

a


b


Figure 178. Pottery and Metal Vessels from Tomb B 14: (a) Copper Bowl, No. 12; (b) Copper Jar, No. 6; (c) Bronze Bowl, No. 20; (d ) No. 10; (e) No. 13; (f) No. 9. Scales: (a, c-f) 2:5; (b) 1:2.


Figure 179. Pottery from Tombs B 15 and B 18: (a) B 15-1; (b) B 15-2; (c) B 18-1. Scale 2:5.


Figure 180. Pottery from Tombs B 19, B 21, B 22, and B 24: (a) B 19-1;
(b) B $21-1$; (c) B 22-2; (d) B $24-1$. Scale $2: 5$.


Figure 181. Iron Kohl Stick, B 25-1. Scale 1:2.


Figure 182. Tomb B 26: Plan, Section, Pottery, and "Chatelaine": (a) Plan and Section; (b) "Chatelaine,"
No. 6; (c) No. 5; (d) No. 2; (e) No. 1. Scales: (a) 1:40; (b) 1:2; (c-e) 2:5.


Figure 183. Pottery and Arrowheads from Tombs B 27, B 28, B 29, and B 31: (a) B 27-1; (b) B 28-2; (c) Arrowheads, B 29-3; (d) B 31-2; (e) B 29-2; (f) B 31-5. Scales: (a, b, d-f) 2:5; (c) 1:1.


Figure 184. Pottery from Tomb B 32: (a) No. 4; (b) No. 1; (c) No. 2; (d) No. 5;
(c) No. 8; (f) No. 6; (g) No. 3. Scale 2:5.


Figure 185. Tomb B 39: Plan and Sections and Tombs B 34 and B 35: Pottery: (a) B 39, Plan and Sections; (b) B 34-1; (c) B 35-1; (d) B 39A-1; (e) B 35-2. Scales: (a) 1:40; (b-e) 2:5.


Figure 186. Pottery from Tomb B 40: (a) No. 3; (b) No. 4; (c) No. 5; (d) No. 12;
(e) No. 1; (f) No. 12. Scales: (a-e) 2:5; (f) 1:5.


Figure 187. Pottery from Tomb B 41: (a) No. 3; (b) No. 1; (c) No. 2. Scale 2:5.


Figure 188. Tombs B 42A and B 42B Plans and Sections and Tomb B 42B Pottery: (a) Plans and Sections;
(b) B 42-1; (c) B 42B-3; (d B 42-2; (e) B 42-3; (f) B 42-4. Scales: (a) 1:40; (b-f) 2:5.


Figure 189. Jar, B 43-1. Scale 2:5.

b

c

Figure 190. Pottery from Tombs B 45A, B 47A, and B 47B: (a) B 45A-1;
(b) B 47A-1; (c) B 47B-1. Scale 2:5.


Figure 191. Tombs B 49A-C Plan and Section and Tomb B 49C Pottery: (a) Plan and Section; (b) Jar, B 49C-1. Scale: (a) 1:40; (b) 2:5.


Figure 192. Pottery from Tomb B 49C: (a) No. 2; (b) No. 3; (c) Mer.-A. Scale 2:5.


Figure 193. Tombs B 47A, B 47B, B 51B, and B 52 Plans, Section, Pottery, and Iron Kohl Stick:
(a) B 51, B 52 and B 47, Plans and Section; (b) Iron Kohl stick, B 51B-8b; (c) B 51B-6; (d) B 51B-7; (e) B 51B-3; (f ) B 51B-4. Scales: (a) 1:40; (b) 1:2; (c-f) 2:5.


Figure 194. Pottery from Tomb B 51B: (a) No. 2; (b) No. 1. Scale 2:5.


Figure 195. Pottery from Tombs B 51B and B 52: (a) B 51B-5; (b) B 52-1; (c) B 52-2. Scale 2:5.


Figure 196. Tombs B 53A and B 54 Pottery and Tomb B 55B Bracelet Fragment: (a) B 53A-2; (b) B 54-2; (c) Bracelet Fragment, B 55B-2; (d) Cup, B 54-1. Scales: (a, b, d) 2:5; (c) 1:1.


Figure 197. Pottery from Tomb B 58: (a) No. 2; (b) No. 4; (c) No. 3; (d ) No. 5; (e) No. 1. Scale 2:5.


Figure 198. Juglet, B 61-1. Scale 2:5.


Figure 199. Pottery from Tomb B 64: (a) Mer.-A; (b) Mer.-B; (c) No. 2; (d) Mer.-G; (e) Mer.-C; (f) Mer.-E; (g) Mer.-F; (h) No. 3. Scale 2:5.


Figure 200. Tombs B 66A and B 66B Plans and Section and Tomb B 66A Pottery: (a) Plans and Section; (b) No. 8; (c) No. 12; (d ) No. 14; (c) No. 10. Scales: (a) 1:40; (b-c) 2:5.


Figure 201. Pottery from Tomb B 66B: (a) No. 2; (b) No. 1; (c) Mer.-A. Scale 2:5.


Figure 202. Pottery from Tomb B 67: (a) No. 5; (b) Mer.-A; (c) No. 2; (d) No. 1. Scale 2:5.


Figure 203. Tomb B 69 Plan, Section, and Juglet: (a) Plan and Section; (b) Juglet, No. 1. Scales: (a) 1:40; (b) 2:5.


Figure 204. Pottery from Tombs B 73 and B 76: (a) B 73 Mer.-B; (b) B 73-1; (c) B 73 Mer.-A; (d) B 73 Mer.-E; (e) B 73 Mer.-D; (f) B 73 Eg.-A; (g) B 73 Mer.-C; (h) B 76-1. Scale 2:5.


Figure 205. Pottery from Tomb B 77: (a) No. 2; (b) No. 7; (c) No. 4; (d) No. 8; (e) No. 3; (f) No. 6. Scale 2:5.


Figure 206. Pottery from Tomb B 77: (a) No. 10; (b) No. 5; (c) No. 1. Scale 2:5.


Figure 207. Pottery from Tomb B 78: (a) No. 2; (b) No. 7; (c) Mer.-A; (d) Mer.-H; (e) Mer.-F; (f) Mer.-B; (g) No. 5; (h) No. 1; (i)Mer.-G; (j) Mer.-D; (k) Mer.-E. Scale 2:5.


Figure 208. Pottery from Tomb B 80: (a) No. 2; (b) No. 1. Scale 2:5.


Figure 209. Pottery from Tomb B 81: (a) No. 2; (b) No. 4; (c) No. 1. Scale 2:5.


Figure 210. Pottery from Tombs B 82 and B 83: (a) B 82-1; (b) B 83-1. Scale 2:5.


Figure 211. Tombs B 87 and B 109 Plans and Tomb B 87 Pottery: (a) Plans;
(b) B 87-8; (c) B 87-9. Scales: (a) 1:40; (b, c) 2:5.


Figure 212. Pottery from Tomb B 88: (a) No. 4; (b) No. 2; (c) No. 1. Scale 2:5.

d



Figure 213. Pottery from Tombs B 81 and B 91: (a) B 81-5; (b) B 91-1;
(c) B 91-2; (d) B 91-4. Scale 2:5.


Figure 214. Pottery and Bronze Jar from Tombs B 89, B 92, B 93, and B 96: (a) B 89-5; (b) B 89-3;
(c) B 89-2; (d ) Bronze Tripod Jar, B 93-3; (e) B 92-3; (f) B 96-1;
(g) B 92-2. Scales: $(a-c, e-g) 2: 5 ;(d) 1: 2$.


Figure 215. Tombs B 105, B 108, B 112, B 141, and B 150: Plans and Tombs B 108 and B 141: Metal Objects: (a) Plans; (b) Iron Kohl Stick, B 108-5; (c) Copper Bowl, B 108-6; (d) Bronze "Feeding Cup" or "Lamp Filler," B 108-3; (e) Metal Pendant, B 141-1. Scales: (a) 1:40; (b) 1:2; (c, d) 2:5; (e) ca. 1:1.


Figure 216. Pottery from Tomb and B 108: (a) B 108-9; (b) B 108-12;
(c) B 108-8; (d) B 108-13. Scale 2:5.



Figure 218. Pottery from Tomb B 111A and B 120: (a) No. 13;
(b) No. 12; (c) No. 14; (d) No. 11. Scale 2:5.

b

Figure 219. Pottery from Tomb B $111 \mathrm{~B} / \mathrm{B}$ 125: (a) No. 1; (b) No. 2. Scale 2:5.


Figure 220. Pottery from Tombs B 99, B 112, and B 113: (a) B 99-1;
(b) B 112-1; (c) B 113-1. Scale 2:5.


Figure 221. Pottery from Tomb B 122: (a) No. 4; (b) No. 3; (c) No. 6; (d) No. 1; (c) No. 2. Scale 2:5.


Figure 222. Tombs B 126-B 130, B 133, and B 134 Pottery and Tomb B 134 Iron Kohl Stick: (a) Iron Kohl Stick, B 134-3; (b) B 126-2; (c) B 129-1; (d) B 127-1; (e) B 133-1; (f) B 134-2;
(g) B 134-1; (h) B 130-1; (i) B 128-1. Scales: (a) $1: 1 ;(b-i) 2: 5$.


Figure 223. Pottery and Arrowheads from Tomb B 135: (a) Iron Arrowheads, No. 1;
(b) No. 8; (c) No. 7. Scales: (a) 1:1; (b, c) 2:5.


Figure 224. Pottery from Tomb B 135: (a) No. 10; (b) No. 3; (c) No. 2; (d) No. 6; (e) No. 4. Scales: (a, c, d) 1:5; (b) 1:10; (e) 2:5.


Figure 225. Pottery from Tomb B 140: (a) No. 3; (b) No. 2; (c) No. 4. Scale 2:5.


Figure 226. Pottery and Bronze Bowl from Tomb B 143: (a) Jar, No. 2; (b) Jar, No. 3;
(c) Bronze Bowl, No. 1. Scale 2:5.


Figure 227. Pottery and Iron Kohl Stick from Tomb B 144: (a) Cup, No. 2; (b) Bowl, No. 7;
(c) Jar, No. 1; (d) Iron Kohl Stick, No. 10. Scales: (a-c) 2:5; (d) 1:1.


Figure 228. Pottery from Tombs B 145, B 146, B 150, and B 151: (a) B 145 Mer.-A; (b) B 151-4;
(c) B 150 Mer.-A; (d) B 146-2; (e) B 151-3. Scale 2:5.


Figure 229. Pottery from Tomb B 149: (a) No. 2; (b) No. 3; (c) No. 1. Scale 2:5.


Figure 230. Pottery from Tomb B 152: (a) No. 6; (b) No. 1; (c) No. 4. Scale 2:5.


Figure 231. Pottery and Arrowheads from Tombs B 153, B 154, B 155, and B 157: (a) B 153-2; (b) B 155 Mer.-B; (c) B 155 Mer.-C; (d ) B 155 Mer.-A; (e) Arrowheads, B 157-1; (f) Pottery Cup, B 154B-3. Scales: (a-d,f) 2:5; (e) 1:1.


Figure 232. Pottery and Iron Kohl Stick from Tombs B 162, B 164, and B 167: (a) B 162-1; (b) B 164-1; (c) B 167 Eg.-A; (d) Iron Kohl Stick, B 165-2. Scales: (a-c) 2:5; (d) 1:2.


Figure 233. Pottery from Tomb B 166: (a) No. 3; (b) No. 5; (c) No. 2; (d ) No. 1. Scale 2:5.


Figure 234. Jar, B 166-4. Scale 2:5.


Figure 235. Pottery from Tomb B 170: (a) No. 9; (b) No. 5; (c) No. 6. Scale 2:5.


Figure 236. Pottery from Tomb B 171: (a) No. 2; (b) No. 5. Scale 2:5.


Figure 237. Pottery from Tomb B 174: (a) No. 1; (b) No. 2. Scale 2:5.


Figure 238. Pottery from Tomb B 179: (a) No. 4; (b) No. 1. Scale 2:5.


Figure 239. Pottery from Tomb B 180: (a) No. 3; (b) No. 5; (c) No. 6; (d) No. 2;
(c) No. 1. Scales: $(a, c, d) 2: 5 ;(b, e) 1: 5$.


Figure 240. Pottery from Tombs B 182, B 184, B 185, B 186, and B 188: (a) B 182-1; (b) B $184-5$; (c) B $184-4$; (d ) B 185 Mcr.-A; (e) B 185-3; (f) B 185 Eg.-A; (g) B 188-2; (h) B 186-1; (i) B 186-4; ( $j$ ) B 186-5. Scales: $(a-h) 2: 5 ;(i, j) 1: 5$.


Figure 241. Pottery from Tomb B 193: (a) No. 3; (b) No. 2; (c) Mer.-A;
(d) No. 7; (e) No. 1. Scales: (a-d ) 2:5; (e) 1:5.


Figure 242. Jar, B 193-5. Scale 2:5.


Figure 243. Pottery from Tomb B 194: (a) No. 3; (b) No. 4; (c) No. 2. Scale 2:5.


Figure 244. Pottery from Tombs B 194 and B 195: (a) B 194-1; (b) B 195-1. Scale 2:5.


Figure 245. Tomb B 197 Plans, Section, and Weapon Points: (a) Plans and Section; ( $b-s$ ) Weapon Points,
B 197-3: (b) CC; (c) D; (d) E; (e) GG; (f) NN; (g) LL; (h) HH; (i) F; (j) KK; (k) JJ; (l) O; (m) N ; (n) B; (o) A; (p) C; (q) MM; (r) BB; (s) M. Scales: (a) 1:40; (b-s) $1: 1$.


Figure 246. Bronze Bowl and Pottery from Tomb B 197: (a) Bronze Bowl, No. 6; (b) No. 5; (c) No. 4. Scale 2:5.


Figure 247. Pottery from Tomb B 199: (a) Mer.-A; (b) Mer.-B;
(c) No. 1; (d) No. 3; (e) No. 4. Scale 2:5.


Figure 248. Pottery from Tomb B 200: (a) No. 5; (b) No. 1; (c) No. 3; (d) No. 4. Scale 2:5.


Figure 249. Arrowhead and Pottery from Tombs B 191, B 203, and B 208: (a) Arrowhead, B 208-3; (b) B 191-1; (c) B 203B-1. Scales: (a) 1:1; (b, c) 2:5.


Figure 250. Tomb B 205 Plans, Section, Pottery, and Objects: (a) Plans and Section; (b) Wooden Finger Loose, No. 13; (c) Arrowhead, No. 11A; (d) Arrowhead, No. 12; (e) Tweezers, No. 16; (f) No. 2; (g) No. 8; (h) No. 3; (i) No. 6. Scales: (a) 1:40; (b-d) 1:1; (c) 1:2; (f-i) 2:5.


Figure 251. Pottery from Tomb B 205: (a) No. 5; (b) No. 9; (c) No. 7; (d) No. 4. Scale 2:5.


Figure 252. Jar, B 208-1. Scale 2:5.


Figure 253. Pottery from Tomb B 209: (a) No. 3; (b) No. 6; (c) No. 5; (d) No. 1. Scales: $(a, b, d) 2: 5 ;(c) 1: 5$.


Figure 254. Pottery from Tomb B 209: (a) No. 8; (b) No. 4. Scale 2:5.


Figure 255. Pollery from Tomb B 209: (a) No. 9; (b) No. 7. Scale 2:5.


Figure 256. Iron Kohl Stick, B 211-1. Scale 1:2.


Figure 257. Pottery from Tombs B 213, B 215, and B 216: (a) B 213 Mer.-A; (b) B 213-2; (c) B 215-2; (d ) B 215-8; (e) B 216 Eg.-A. Scale 2:5.


Figure 258. Pottery from Tomb B 217: (a) No. 1; (b) No. 3; (c) No. 2. Scale 2:5.


Figure 259. Pottery from Tombs B 222, B 226, B 228, and B 233: (a) B 222-1; (b) B 226 Eg.-A; (c) B 226 Mcr.-A; (d) B $228-2$; (e) B $233-3$. Scale $2: 5$.


Figure 260. Pottery from Tomb B 236: (a) No. 3; (b) No. 4; (c) No. 6; (d) No. 2; (e) No. 5; (f) No. 1. Scale 2:5.


Figure 261. Pottery from Tomb B 238: (a) No. 1; (b) No. 2. Scale 2:5.

b

d

c

e

f

g

h

i

j

Figure 262. Tombs B 240, B 244, and B 248: Pottery, Tomb B 240: Iron Kohl Stick, and Tomb B 241 : Arrowheads: (a) Iron Kohl Stick, B 240-1; (b) B 240-3; (c) B 248 Mer.-A; (d ) B 244-1; (e) B 244 Mer.-A; $(f-j)$ Arrowheads, B 241-2: $(f) \mathrm{B} ;(g) \mathrm{H} ;(h) \mathrm{L} ;(i) \mathrm{A} ;(j) \mathrm{D}$. Scales: (a) 1:2; $(b-e) 2: 5 ;(f-j) 1: 1$.


Figure 263. Tomb B 245 Plans, Section, and Pottery Cup: (a) Plans and Section;
(b) Cup, No. 3. Scales: (a) 1:40; (b) 2:5.


Figure 264. Pottery from Tomb B 251: (a) No. 1; (b) Mer.-A; (c) Mer.-B; (d) No. 3. Scale 2:5.


Figure 265. Tomb B 252 Plans, Section, and Pottery: (a) Plans and Section;
(b) No. 3; (c) No. 5; (d) No. 6. Scales: (a) 1:40; (b-d) 2:5.


Figure 266. Pottery from Tombs B 254, B 255, and B 256: (a) B 254-2; (b) B 255-5; (c) B 255-1; (d) B 256-1; (c) B 256-2. Scale 2:5.


Figure 267. Pottery from Tombs B 261 and B 263: (a) B 261A-1; (b) B 261A-2; (c) B 261A-3; (d) В 263-7; (e) B 263-8; (f) B 263-3; (g) B 263-2; (h) B 263-1; (i) B 263-4. Scale 2:5.


Figure 268. Jar, B 264-1. Scale 2:5.


Figure 269. Pottery from Tomb B 268: (a) Mer.-A; (b) No. 1; (c) No. 3; (d) No. 2. Scale 2:5.


Figure 270. Tombs B 273, B 277, and B 278 Pottery and Tomb B 277 Iron Kohl Stick: (a) B 273-1; (b) B 278-1; (c) B 273 Mer.-B; (d ) Iron Kohl Stick, B 277-2; (c) B 277-1. Scales: $(a-c, e)$ 2:5; (d) 1:2.


Figure 271. Tombs B 281, B 282, and B 283 Pottery and Tomb B 282 Iron Kohl Stick: (a) B 281 Mer.-C; (b) B 281 Mer.-B; (c) B 281-2; (d) B 283-1; (e) B 282 Mer.-E; (f) B 281 Mer.-A; (g) B 282-9;
(h) B 282-1; (i) B 282 Eg.-A. ( $j$ ) Iron Kohl stick, B 282-3. Scales: (a-e, g-j) 2:5; (f) 1:2.

FIGURES


Figure 272. Tomb B 280 Plans, Section, and Arrowhead: (a) Plans of Superstructure and Tomb and Section;
(b) Arrowhead, No. 2. Scales: (a) 1:40; (b) 2:1.


Figure 273. Pottery from Tomb B 285: (a) Mer.-C; (b) No. 3; (c) No. 1; (d) Mer.-A. Scale 2:5.


Figure 274. Pottery from Tombs B 287 and B 289: (a) B 287-1; (b) B 289-1; (c) B 289-2. Scale 2:5.


Figure 275. Pottery from Tombs B 291, B 292, B 293, and B 296: (a) B 292-6; (b) B 291-1; (c) B 293 Mer.-B; (d ) B 292-2; (e) B 293-2; (f) B 296-2. Scale 2:5.


Figure 276. Tombs B 297 and B 298 Pottery and Tomb B 297 Leather Archer's Brace and Arrowhead:
(a) Jar, B 297-1; (b) Leather Archer's Brace, B 297-3a; (c) Arrowhead, B 297-2; (d) Cup, B 298-6; (c) Cup, B 298-3; (f) Cup, B 298-2. Scales: (a,d-f ) 2:5; (b) 1:2; (c) 1:1.


Figure 277. Tomb B 299 Plans, Section, and Pottery: (a) Plans and Section; (b) Bronze Bowl, No. 3; (c) No. 1; (d) No. 2. Scales: (a) 1:40; (b-d) 2:5.


Figure 278. Tomb B 302 Plan, Section, Potery Cup, and Arrowhead: (a) Plan and Section;
(b) Cup, No. 1; (c) Arrowhead, No. 3. Scales: (a) 1:40; (b) 2:5; (c) 1:1.


Figure 279. Tomb B 307 Plan, Section, and Pottery: (a) Plan and Section; (b) No. 1; (c) No. 2; (d ) No. 4. Scales: (a) 1:40; (b-d) 2:5.


Figure 280. Poutery from Tombs B 308, B 309, and B 310: (a) B 308-2; (b) B 310-8; (c) B 310-1; (d) B 309-1; (e) B 308-4; (f) B 309-4. Scale 2:5.


Figure 281. Pottery from Tomb B 311/316: (a) No. 6; (b) Mer.-A; (c) No. 3; (d) No. 1; (e) Mer.-B. Scale 2:5.


Figure 282. Pottery from Tomb B 312: (a) No. 3; (b) No. 8; (c) No. 5; (d) No. 1;
(e) No. 2; (f) No. 6. Scale 2:5.


Figure 283. Tomb B 313 Plan, Section, and Pottery Jar: (a) Plan and Section;
(b) Jar, No. 5. Scales: (a) 1:40; (b) 2:5.


Figure 284. Pottery from Tombs B 314 and B 315: (a) B 315-1; (b) B 314-3; (c) B 314-2. Scale 2:5.


Figure 285. Tomb B 314: Plans and Section. Scale 1:40.


Figure 286. Potuery and Bronze Bowl from Tomb B 317: (a) Jar, No. 4; (b) Cup, No. 1; (c) Cup. No. 3; (d) Bronze Bowl, No. 5; (e) Jar, No. 6. Scale 2:5.


Figure 287. Pottery from Tomb B 319A: (a) No. 3; (b) No. 5; (c) No. 4. Scale 2:5.


Figure 288. Pottery from Tomb B 319A: (a) No. 2; (b) No. 7. Scale 2:5.


Figure 289. Pottery from Tombs B 323 and B 328: (a) B 323-1; (b) B 323-2;
(c) B 328 Mcr-A; (d) B 328-1; (c) B 328-3. Scale 2:5.


Figure 290. Pottery from Tomb B 330: (a) No. 1; (b) No. 2; (c) No. 3; (d) No. 4; (c) No. 5. Scale 2:5.


Figure 291. Tomb B 331 Plan, Section, and Pottery: (a) Plan and Section; (b) No. 2; (c) No. 1; (d) No. 3. Scales: (a) 1:40; (b-d) 2:5.


Figure 292. Pottery from Tomb B 333: (a) No. 3; (b) No. 1; (c) No. 4. Scale 2:5.


Figure 293. Jar, B 334-1. Scale 2:5.


Figure 294. Pottery and Iron Kohl Stick from Tomb B 322: (a) Jar, No. 3;
(b) Iron Kohl Stick, No. 4; (c) Cup, No. 2. Scales: $(a, c)$ 2:5; (b) 1:2.


Figure 295. Cemetery B, Unprovenienced Surface Pottery: (a) Mer. Fine/Ord. Jar with Striding Birds [OIM 24140]; (b) Mer. Ord. Jar with Beads[?] and Pomegranate [OIM 33059]; (c) Mer. Fine/Ord. Jar with "Academic" Decoration on Light Slip in Red, Black, and Blue-green [Baboon and Ankh; OIM 33060]; (d) Mer. Ord Jar with Bands and Winged Sa-amulets [OIM 33061]. Scale 2:5.


Figure 296. Cemetery B, Unprovenienced Surface Pottery: (a) Mer. Ord. Jar I-B[?], Light Slip, Fish on Shoulder [OIM 24139]; (b) Mer. Ord. Jar, Light Slip, Crocodiles[?] with Red Bodies [OIM 33081];
(c) Mer. Ord. Jar with Potter's Mark [OIM 32094]; (d) Mer. Fine/Ord. Jar with Striding Birds[OIM 33062]. Scale 2:5.


Figure 297. Cemetery B, Unprovenienced Surface Pottery: OIM 24137, with Red Slip, White Band and Dogs. Scale 2:5.


Figure 298. Cemetery B, Unprovenienced Surface Pottery: (a) Mer. Fine/Ord. Jar with Light Slip, Band of Uraei [OIM 33063]; (b) Additional Sherd of the Same Vessel [OIM 33063]; (c) Mer. Fine Jar with Vine and Trefoil Flower [N/A]; (d) Mer.[?] Fine/Ord. Jar with a Secondary Painting of a Procession by the Prisoner Painter [OIM 33064]; (e) Mer. Fine/Ord. Jar with Bands and Bes[?] Faces [OIM 33065]. Scale 2:5.


Figure 299. Cemetery B, Surface Pottery: (a) Mer. Fine/Ord. Cup with Burst Vine[?] Decoration; (b) Mer. Fine Bowl with Petals Outside and Horizontal Ankhs Inside; (c) Mer. Fine Cup with Pomegranates; (d) Mer. Fine Cup with Vertical Bands of Beads in Double Frame; (e) Mer. Fine Cup with Lotus and Buds; ( $f$ ) Mer. Fine Cup with Uncertain Decoration; (g) Mer. Fine/Ord. Cup with Crescents; (h) Mer. Fine Cup with Filled Checks; (i)Mer. Fine Cup with Lotus Buds; $(j)$ Mer. Fine/Ord. Cup with Lotus and Buds; (k) Mer. Fine/Ord. Cup with Horizontal Trefoil Flowers; (1) Mer.[?] Fine/Ord. Vessel with Uncertain Floral or Linear Decoration; (m) Fine Vessel with Bands; (n) Mer. Fine/Ord. Vessel with Lotus Buds in Petals; (o) Mer. Fine Cup with Lotus Bud in Framed Band; ( $p$ ) Mer. Fine/Ord. Vessel with Uncertain Decoration; $(q)$ Mer. Fine/Ord. Cup with Rim Band and Frame; (r) Mer. Fine/Ord. Cup with Stylized Sa as Two Triangles Meeting at the Points with Ties; ( $s$ ) Mer. Fine/Ord. Vessel with Bes[?] Face; ( $t$ ) Mer. Fine/Ord. Vessel with Uncertain Decoration; (u) Mer. Fine/Ord. Vessel with Garland. Scale 2:5.


Figure 300. Ballana Settlement Pottery: Kushite Wheelmade (Mer. II) Vessels (a-g: OIM 33091; h: OIM 23565): (a) Crater [Sole Type] with Red Slip, Alternating Beads; (b) Jar B, with Uncertain Floral/Linear Decoration; (c) Bowl B1 [Large] with Frame and Stylized Vine; (d) Bowl B1 [Large] with Horizontal Trefoil Flower in Double Frame Below Rim Band; (e) Qadus-like Jar [Sole Type] with Framed Band of Vine or Serpent with Lotus Bud; $(f)$ Bowl B1 [Large] with Panels of Xs and Four-Petal Rosettes;
(g) Jar B with Red Slip, Serpent or Vine in Frame; (h) Jar D1, Ballana Settlement la. Scale 2:5.


Figure 301. Ballana Settlement Pottery: Kushite Wheelmade (II), Meroitic Fine/Ordinary (I), and Egyptian Vessels (a-c: OIM 33092, d: n/a, e-h: OIM 33093, and j: OIM 33110): (a) Uncertain Ord. Jar with Linear Decoration; (b) Mer. Fine Cup with Winged Sa[?] Amulet Decoration, Rim found in Tomb B 281;
(c) Uncertain Eg.[?] Fine/Ord. Vessel with Interior Decoration; (d) Mer. Fine Cup with Rosettes in Panels; (e) Uncertain Eg.[?] Platter with Linear Interior Decoration; (f) Mer. Fine/Ord. Jar with Framed Panels of Four-Petal Rosettes; (g) Eg. Utility I [Predominantly Alluvium] Crater Jar II-F [with Lug Handles]; (h) Eg. Utility I Miniature Amphora; (i) Eg. Pitcher Jug D, Ballana Settlement 1b; $(j)$ Ku. Wm. Jar II-B, with Reserve Garland. Scale 2:5.

d

e

f
Figure 302. Ballana Settement Pottery (a-e: OIM 33094, $f: n / a$ ): (a) Handmade Ordinary Crater $V$ with Indented Ledge and Rib Rim; (b) Handmade Ordinary Holemouth Jar V with Incised Decoration; (c) Handmade Ordinary Crater V with Ledge and Pierced Wall; (d) Handmade Ordinary Crater V with Indented Ledge and Decoration; (e) Handmade Ordinary Crater $V$ with Indented Ledge;
(f) Kushite Wheelmade Bowl (Large) II-B, with Bird and Altar or Vine. Scale 2:5.


Figure 303. Surface Poutry from Qustul: (a) Fine [I] Academic Painted Jar from Chapel C 25; (b) Mer. Storage Jar III-C1 [Large] from Tomb B 27. Scale 2:5.


Figure 304. Ballana Settlement Pottery: (a-f) Egyptian Ordinary and Utility Vessels [OIM 33095]; (g, h) Sudanese-Saharan Bowls [OIM 33096]. Scale 2:5.

## FIGURES

- 




Figure 306. Ballana Settlement Pottery: (a-d) Kushite Wheelmade and Ordinary Pottery [OIM 33100; $d: n / a] ;(e-h)$ Egyptian Ordinary and Simple Utility Pottery [OIM 33102];
(i) Kushite Wheelmade Jar [OIM 33101]. Scale 2:5.

a


Figure 307. Ballana Settlement Pottery: (a-e). Kushite Wheelmade Pottery [OIM 33103]. Scale 2:5.


Figure 308. Plan of the Meroitic Settlement at Ballana.

# ORIENTAL INSTITUTE VOLUMES IN PRINT 

Available from THE ORIENTAL INSTITUTE, Publications Sales<br>1155 East 58th Street, Chicago, Illinois 60637<br>Tel. (312) 702-9508, Fax (312) 702-9853

## ASSYRIOLOGICAL STUDIES (AS)

21 Computer-Aided Analysis of Amorite. I. J. Gelb et al. 1980. Pp. xv + 657.
22 Old Babylonian Letters from Tell Asmar. R. M. Whiting, Jr. 1987. Pp. xiii + 177; 27 plates.
23 Kaniš̌uwar-A Tribute to Hans G. Güterbock on His Seventy-Fifth Birthday, May 27TH, 1983. H. A. Hoffner, Jr. and G. M. Beckman, eds. 1986. Pp. vii + 203; frontispiece [Professor Güterbock], 39 figures.
24 The Hittite Instruction for the Royal Bodyguard. H. G. Güterbock and T. P. J. van den Hout. 1991. In Press.
25 The Hittite State Cult of the Tutelary Deities. G. McMahon. 1991. In Press.

## CHICAGO ASSYRIAN DICTIONARY (CAD)

Volumes 1 (A, pts. 1 and 2), 2 (B), 3 (D), 4 (E), 5 (G), 6 (H), 7 (I/J), 8 (K), 9 (L), 10 (M, pts. 1 and 2), 11 (N, pts. 1 and 2), 13 (Q), 15 (S), 16 (\$), 17 (S, pt. 1), and 21 (Z)

## CHICAGO HITTITE DICTIONARY (CHD)

Volume 3 (L-N): Fasc. 1 (1980), Fasc. 2 (1983), Fasc. 3 (1986), Fasc. 4 (1989)

## MATERIALS AND STUDIES FOR KASSITE HISTORY (MSKH)

1 A Catalogue of Cuneiform Sources Pertaining to Specific Monarchs of the Kassite Dynasty. J. A. Brinkman. 1976. Pp. xxiv +469 ; 11 plates.

## ORIENTAL INSTITUTE COMMUNICATIONS (OIC)

23 Excavations at Nippur: Twelfth Season. McG. Gibson et al. 1978. Pp. xiv +190 ; 92 figures, 16 tables.
24 The American Expedition to Idalion, Cyprus: 1973-1980. L. E. Stager and A. M. Walker, eds. 1989. Pp. xxiv + 516; 93 figures, 82 plates.
25 Figurines and Other Clay Objects from Sarab and Çayönü. V. B. Morales. 1990. Pp. xvi $+92 ; 2$ catalogs; 30 plates.

## ORIENTAL INSTITUTE NUBIAN EXPEDITION (OINE)

3 Excavations Between Abu Simbel and the Sudan Frontier, Part 1: The A-Group Royal Cemetery at Qustul, Cemetery L. B. B. Williams. 1986. Pp. xxxviii + 388; 190 figures, 100 plates, 43 tables.
4 Excavations Between Abu Simbel and the Sudan Frontier, Parts 2, 3, and 4: Neolithic, A-Group, and Post A-Group Remains from Cemeteries W, V, S, Q, T, and a Cave East of Cemetery K. B. B. Williams. 1989. Pp. xxvii $+141 ; 72$ figures, 55 plates, 26 tables.
5 Excavations Between Abu Simbel and the Sudan Frontier, Part 5: C-Group, Pan Grave, and Kerma Remains at Adindan Cemeteries T, K, U, and J. B. Williams. 1983. Pp. xxvi +235 ; 48 figures, 131 plates, 50 tables.
7 Excavations Between Abu Simbel and the Sudan Frontier, Part 7: Twenty-Fifth Dynasty and Napatan Remains at Qustul: Cemeteries W and V. B. B. Williams. 1990. Pp. xxvii +83 ; 33 figures, 15 plates, 16 tables.
8 Excavations Between Abu Simbel and the Sudan Frontier, Part 8: Meroitic Remains from Qustul Cemetery Q, Ballana Cemetery B, and a Ballana Settlement. (2 volumes). B. B. Williams. 1991. Pp. xivii +458 (Part 1), xiii +423 (Part 2); 308 figures, 114 plates, 33 tables.

## ORIENTAL INSTITUTE PUBLICATIONS (OIP)

3 The Edwin Smith Surgical Papyrus, Volume One: Hieroglyphic Transliteration, Translation, and Commentary. J. H. Breasted. 1930 (Reissued 1991). Pp. xxiv + 596; 8 plates.
4 The Edwin Smith Surgical Papyrus, Volume Two: Facsimile Plates and Line for Line Hieroglyphic Transliteration. J. H. Breasted. 1930 (Reissued 1991). Pp. xiii; 46 plates.
97 Nippur II. The North Temple and Sounding E: Exca vations of the Joint Expedition to Nippur of the American Schools of Oriental Research and The Oriental Institute of The University of Chicago. D. E. McCown et al. 1978. Pp. xv + 105; 15 figures, 77 plates.

98 Old Babylonian Public Buildings in the Diyala Region. H. D. Hill, Th. Jacobsen, and P. Delougaz. 1990. Pp. xxxii +257 ; 31 figures, 68 plates.

100 The Temple of Khonsu I: Scenes of King Herihor in the Court. The Epigraphic Survey. 1979. Pp. xxvii +55 ; 110 plates.
102 The Tomb of Kheruef: Theban Tomb 192. The Epigraphic Survey. 1980. Pp. xx $+80 ; 3$ figures, 88 plates ( 1 in color).
103 The Temple of Khonsu II: Scenes and Inscriptions in the Court and the First Hypostyle Hall. The Epigraphic Survey. 1981. Pp. xxiii $+93 ; 97$ plates.
104 Earliest Land Tenure Systems in the Near East: Ancient Kudurrus. I. J. Gelb, P. Steinkeller, and R. M. Whiting, Jr. Two vols. (Text, Plates) 1989, 1991. Pp. xviii +303 ; 166 plates.

105 Prehistoric Archeology Along the Zagros Flanks. L. S. Braidwood et al. 1983. Pp. ix + 695; 5 charts, 244 figures, 185 tables.
106 The Great Hypostyle Hall at Kamak I, Part 1: The Wall Reliefs. H. H. Nelson and W. J. Murnane. 1981. Pp. xxv; 267 plates.

107 Reliefs and Inscriptions at Karnak IV: The Battle Reliefs of King Sety I. The Epigraphic Survey. 1986. Pp. xxiv $+166 ; 2$ figures, 50 plates.

108 The Holmes Expeditions to Luristan. E. F. Schmidt, M. N. van Loon, and H. Curvers, with contribution by J. A. Brinkman. 1989. Pp. xv + 594; 20 catalogs, 265 plates, 32 tables.
109 Town and Country in Southeastern Anatolia I: Settlement and Land Use at Kurban Höyük and Other Sites in the Lower Karababa Basin. T. J. Wilkinson et al. 1990. Pp. xix + 315; 90 figures, 4 plates, 20 tables.
110 Town and Country in Southeastern Anatolia II: The Stratigraphic Sequence at Kurban Höyük. G. Algaze, ed. Two vols. (Text, Plates) 1990. Pp. xl $+438 ; 139$ figures, 169 plates, 50 tables.

## STUDIES IN ANCIENT ORIENTAL CIVILIZATION (SAOC)

25 The Comparative Archeology of Early Mesopotamia. A. L. Perkins. 1949 (1977, Seventh Printing). Pp. xix $+200 ; 20$ figures, 1 map, 3 tables.
36 The Hilly Flanks and Beyond: Essays on the Prehistory of Southwestern Asia Presented to Robert J. Braidwood, November 15, 1982. T. C. Young, Jr., P. E. L. Smith, and P. Mortensen, eds. 1983. Pp. xiii +374 , frontispiece [Professor Braidwood], 97 figures, 36 tables.
38 The Demotic Verbal System. J. H. Johnson. 1976. Pp. xv + 344; 51 tables.
39 Studies in Honor of George R. Hughes, January 12, 1977. J. H. Johnson and E. F. Wente, eds. 1976. Pp. xviii +282 ; frontispiece [Professor Hughes], 52 figures, 1 photograph, 9 tables.
41 Ecology and Empire: The Structure of the Urartian State. P. E. Zimansky. 1985. Pp. xv +143 ; 15 figures, 15 plates, 17 tables.
42 The Road to Kadesh: A Historical Interpretation of the Battle Reliefs of King Sety I at Kamak. W. J. Murnane. 1990 (2nd Ed. Rev.). Pp. xvi + 157; 3 maps.

43 A Neolithic Village at Tell El Kowm in the Syrian Desert. R. Dornemann. 1986. Pp. xii $+89 ; 46$ plates, 4 serial lists, 12 tables.
44 Nippur Neighborhoods. E. C. Stone. 1987. Pp. xviii $+294 ; 7$ figures, 94 plates, 24 tables.
45 Thus Wrote 'Onchsheshonqy: An Introductory Grammar of Demotic. J. H. Johnson. 1991 (2nd Ed. Rev.). In Press.

## STUDIES IN ANCIENT ORIENTAL CIVILIZATION (SAOC)

46 The Organization of Power: Aspects of Bureaucracy in the Ancient Near East. McG. Gibson and R. D. Biggs, eds. 1991 (2nd Ed. with Corrections). In Press.

47 Essays in Ancient Civilization Presented to Helene J. Kantor. A. Leonard, Jr. and B. B. Williams, eds. 1989. Pp. xxxix + 393; frontispiece [Professor Kantor], 52 figures, 72 plates, 6 tables.
48 Egyptian Phyles in the Old Kingdom: The Evolution of a System of Social Organization. A. M. Roth. 1991. In Press.
49 A Critical Study of the Temple Scroll from Qumran Cave 11. M. O. Wise. 1990. Pp. xvii + 292; 2 figures, 8 tables.
50 Subsistence, Trade, and Social Change in Early Bronze Age Palestine. D. L. Esse. 1991. Pp. xvii + 219; 36 figures, 9 plates, 6 tables.

## TITLES NOT IN ORIENTAL INSTITUTE SERIES

The Joint Istanbul-Chicago Universities' Prehistoric Research in Southeastern Anatolia 1. H. Çambel and R. J. Braidwood, et al. 1980. Pp. xv $+327 ; 49$ plates, 26 tables.

Uch Tepe I: Tell Razuk, Tell Ahmed Al-Mughir, Tell Ajamat. McG. Gibson, ed. 1981. Pp. xi + 197; 9 figures, 116 plates, 8 levels/locus summaries, 27 tables.
Uch Tepe II: Technical Reports. McG. Gibson, ed. 1990. Pp. 140; 69 figures, 5 plates, 38 tables.
Quseir Al-Qadim 1978: Preliminary Report. D. S. Whitcomb and J. H. Johnson, et al. 1979. Pp. xii + 352; 57 figures, 89 plates, 15 tables.
Quseir Al-Qadim 1980: Preliminary Report. D. S. Whitcomb and J. H. Johnson, et al. 1982. Pp. xi + 406; 29 figures, 74 plates, 5 tables.

# Available from THE UNIVERSITY OF CHICAGO PRESS 

11030 South Langley Avenue, Chicago, Illinois 60628
Tel. (1-800) 621-2736, (312) 568-1550

## ASSYRIOLOGICAL STUDIES (AS)

20 Sumerological Studies in Honor of Thorkild Jacobsen. S. Lieberman, ed. 1976. Pp. xiv +316 ; frontispiece [Professor Jacobsen], 16 figures, 12 tables.

## ORIENTAL INSTITUTE COMMUNICATIONS (OIC)

5 Medinet Habu, 1924-28. H. H. Nelson and U. Hoelscher. 1929. Pp. xv $+50 ; 35$ figures.
7 Medinet Habu Studies, 1924/28. U. Hollscher and J. A. Wilson. 1930. Pp. ix +33 ; 18 figures, 3 plates.
22 Excavations at Nippur: Eleventh Season. McG. Gibson et al. 1976. Pp. xi $+152 ; 3$ catalogs, 90 figures.

## ORIENTAL INSTITUTE ESSAYS (OIE)

The Intellectual Adventure of Ancient Man. H. Frankfort et al. 1946. Pp. vii +401; 1 figure. Kingship and the Gods. H. Frankfort. 1948. Pp. xxv +444 ; frontispiece, 52 figures, 1 table.

ORIENTAL INSTITUTE NUBIAN EXPEDITION (OINE)
1 The Beit El-Wali Temple of Ramesses II. H. Ricke, G. R. Hughes, and E. F. Wente. 1967. Pp. xvii $+39 ; 6$ figures, 49 plates ( 3 in color).
2 Ausgrabungen von Khor-Dehmit bis Bet El-Wali. H. Ricke. 1967. Pp. xvi +70 ; 81 figures, 3 plans, 30 plates.

## ORIENTAL INSTITUTE PUBLICATIONS (OIP)

10 Prehistoric Survey of Egypt and Western Asia I: Paleolithic Man and the Nile-Faiyum Divide: A Study of the Region During Pliocene and Pleistocene Times. K. S. Sandford and W. J. Arkell. 1930. Pp. xv + 77; 25 figures, 1 map, 11 plates.
24 Sennacherib's Aqueduct at Jerwan. Th. Jacobsen and S. Lloyd. 1935. Pp. xii + 52; frontispiece, 12 figures, 36 plates.
56 Key Plans Showing Locations of Theban Temple Decorations. H. H. Nelson. 1941 (second printing, 1965). Pp. xi; 38 plates.

70 Persepolis III: The Royal Tombs and Other Monuments. E. F. Schmidt. 1970. Pp. xxiv + 174; 38 figures, 105 plates, 9 tables.
74 Reliefs and Inscriptions at Karnak III: Bubastite Portal. The Epigraphic Survey. 1954. Pp. xiv; 1 figure, 22 plates.
76 Studies in Arabic Literary Papyri II: Quranic Commentary and Tradition. N. Abbott. 1967. Pp. xvi + 293; 27 plates.
77 Studies in Arabic Literary Papyri III: Language and Literature. N. Abbott. 1972. Pp. xvi +216 ; 10 plates.
79 Soundings at Tell Fakhariyah. C. W. McEwan et al. 1957. Pp. xvii +103 ; 87 plates.
84 Medinet Habu VI: The Temple Proper, Part II: The Re Chapel, the Royal Mortuary Complex, and Adjacent Rooms with Miscellaneous Material from the Pylons, the Forecourts, and the First Hypostyle Hall. The Epigraphic Survey. 1963. Pp. xix; 1 plan, 120 plates.
90 Ptolemais: City of the Libyan Pentapolis. C. H. Kraeling. 1963. Pp. xviii +288 ; 74 figures, 22 plans, 64 plates.
91 Aramaic Ritual Texts from Persepolis. R. A. Bowman. 1970. Pp. xiii + 194; 2 figures, 36 plates, 1 table.
92 Persepolis Fortification Tablets. R. T. Hallock. 1969. Pp. x + 776; glossaries.
93 Medinet Habu VII: The Temple Proper, Part III: The Third Hypostyle Hall and All Rooms Accessible from It with Friezes of Scenes from the Roof Terraces and Exterior Walls of the Temple. The Epigraphic Survey. 1964. Pp. xl; 16 figures, 108 plates.
94 Medinet Habu VIII: The Eastern High Gate with Translations of Texts. The Epigraphic Survey. 1970. xxiii $+14 ; 10$ plans, 70 plates.
95 Excavations in the Plain of Antioch II: The Structural Remains of the Later Phases: Chatal Hüyük, Tell Al-Judaidah, and Tell Ta'yinat. R. C. Haines. 1971. Pp. xiv $+66 ; 118$ plates.
99 Inscriptions from Tell Abu Salabikh. R. D. Biggs. 1974. Pp. xii $+112 ; 30$ figures, 183 plates.

## STUDIES IN ANCIENT ORIENTAL CIVILIZATION (SAOC)

31 Prehistoric Investigations in Iraqi Kurdistan. R. J. Braidwood and B. Howe. 1960 (2nd Printing, 1966). Pp. xxviii +184 ; 8 figures, 29 plates, 4 tables.

35 Studies in Honor of John A. Wilson, September 12, 1969. E. B. Hauser, ed. 1969. Pp. ix + 124; frontispiece [Professor Wilson], 8 figures.
37 The Book of the Dead or Going Forth by Day: Ideas of the Ancient Egyptians Conceming the Hereafter as Expressed in Their Own Terms. T. G. Allen, trans. 1974. Pp. x +306.


[^0]:    44. Sequences even within sites tend to be fragmentary and must still be assembled into larger chronological units by typological links, so such notions as a "stratigraphic column" must be treated as illusory. Note the problem of IA and very poor groups in the period illustrated by the Colorado sites. See Lister 1967, pp. 54, 55; see also note 33.
    45. Reisner 1910, pp. 18, 19, for example.
    46. Reisner 1923, pp. 87-98.
    47. Reisner 1923b; Dunham 1957, pp. 1-8; Hintze 1959; idem 1973; Grzymski 1984; Hintze 1984; Hofmann 1978.
    48. Kaiser 1956, 1957; Bietak 1968a.
    49. Williams 1985, p. 151.
    50. Vila 1967, fig. 168, p. 191.
    51. See pp. 97-99, tab. 17 below.
    52. See p. 100, below; see p. 94 , tab. 14 below.
    53. See p. 99, tab. 17 below.
    54. See pp. 97-99, tab. 17 below.
[^1]:    66. See p. 40 below.
    67. See pp. 38, 39 below, and Török 1987a, pp. 205, 206.
[^2]:    74. See OINE VII, figs. 23 b and 24 c .
    75. Both jars and cups of Kushite Wheelmade pottery had been red coated before, and some even had the light-colored bands, but this is the first appearance of such decoration in Meroitic Fine/ordinary pottery.
    76. Törok (1987a, pp. 203, 204) sees this polychrome figural style as earlier, but see pp. 39,40 below. The style is probably late on narrow-necked jugs.
[^3]:    145. Woolley and Maclver 1910, chapters 3,4 and site plan. Less change is obvious at Karanog, but unlike Ballana, the reuse of tombs may have been more important in that cemetery which already had hundreds of chamber tombs.
    146. See tab. 20 and p. 159 below.
    147. See Chapter 4 below.
[^4]:    74. See, for example, Frankfort 1939, figs. 31 and 32. Panels were used to depict offerings with particular frequency.
    75. Woolley and Randall-Maclver 1910, pl. 78:8457 and 8479; Griffith 1924, pl. 51:5-9.
    76. Griffith 1924, pl. 51:7.
    77. Woolley and Randall-MacIver 1910, pls. 43:8310 and 46:8159 and 8176.
    78. Woolley and Randall-MacIver 1910, pl. 43:8310.
    79. C-Group decoration was approached in this way; see OINE V, pp. 40-45.
[^5]:    163. Griffith 1924, pl. 52:4. The latter occurs in Kushite statuary and on a jar from Kerma (Reisner 1923 IV-V, fig. 340:9; Wenig 1979b, fig. 17) also related to vultures attacking the fallen, shown on bells and on a ring bezel, it is related to a series of victory-representations in A-Group and early Egypt. See, for example Kendall 1989, fig. 11d-f.
[^6]:    191. Richter 1959, pp. 305-08.
    192. Wenig 1979a, pp. 131, 132.
    193. TÖrök 1987a, pp. 190-85.
    194. Török 1987b, pp. 78, 79.
    195. Torök 1987a; the handled vessels shown in figs. 1:3-6, and 27:29, 30 are Egyptian types, wherever they were manufactured, while the long-necked jars, figs. 13, 16 (shorter), and 19 are Meroitic, for example.
    196. Griffith 1924, pls. 17:IVf; 20:XXa, XXc, XXId; and 48:6, 7. These examples indicate a kind of transition between the Alexandrian tradition and Wenig's vine group proper. See also Török 1987a, pp. 190-92, 197, 198 and figs. 1 and 29; 1987b, pp. 78.79, and fig. 1.
    197. Török 1987a, p. 200; 1987b, pp. 81, 82. Because of their association with phase III (see figs. 43 and 40 , with simple beads, identified by Torok as "Stern Pharaonic" rather than standard), the vessels with angular decoration and Meroitic-pharaonic elements are considered slightly later in the present work, probably second century A.D. See pp. 15, 16 above.
    198. See Woolley and Randall-MacIver 1910, pl. 41:8183, also with a Meroitic serpent; for leaves, see pls. 44:8172, 45:8156-8157, and 56:8182 and 8185. See also Wenig 1979a, pl. 15:1.
    199. Ibid., pl. 44:8156 and 8157, Hayes 1976, cat. 192, of the "Silhouette" phase.
    200. Woolley and Randall-MacIver 1910, pl. 54:, 8162; Wenig 1979a, pl. 15:2. Compare no. 1.
[^7]:    226. The pottery is found in varying amounts at most Meroitic sites in the Cataract Region and some in lower Nubia including Karanog, Buhen, Faras, Gamai, Aksha, Semna South and Abri. Most important occurrences were at Gebel Moya and Abu Geili. (Woolley and Randall-MacIver 1910, pls. 101, 102; Randall-MacIver and Woolley 1911, pl. 69; Griffith 1924, pls. 15, 41-44; Bates and Dunham 1927, pls. 24, 25 [with exceptions], Säve-Söderbergh. Englund, and Nordström, eds. 1982, pl. 83:4, Addison 1949, pls. 89-104, various; Crawford and Addison 1951, pls. 23, 27-29, 34-38; Arkell 1949, pl. 106; Arkell 1953, pl. 43. See also Garstang, Sayce, and Griffith 1911, pl. 53, and Shinnie and Bradley 1980, fig. 58; Vila 1982, figs. 191, 92, and Fernandez 1986, fig. 1. The pottery is particularly common in the cataract region.
    One of the most interesting objects is the burner stand. (Addison 1949, pls. 93:V2, 113:6; Dunham 1957, p. 43, fig. 20:16-2-435; Griffith 1924, pl. 31:LXXXVIa).
    227. These come from the C-Group (OINE V, pp. 40-45). Kerma, and A-Group cultures (OINE III, pp. 63-65). They are an integral part of the long-lasting tradition of incised and burnished pottery that constituted an important part of the pottery of ancient Nubia.
    228. See note 25 above, for deposits.
    229. For the method of shaping in this tradition, see OINE V, pp. 29-36, and Tobert 1984, pp. 143, 144.
[^8]:    Jars (figs. 6-8) (cont.)
    4. Lower body sometimes slightly broader, neck medium width, slightly taller
    5. Lower body wider, neck medium to narrow
    6. Broadened lower body emphasized (few globular), narrow neck
    7. Same, omphalos base
    B. Large jars

    1. Medium neck, height and width (approx. equivalent A5)
    2. Narrow neck, ovoid body (approx. equivalent A6)
    3. Pronounced widening of lower body, neck very narrow
    4. As 3 , rim everted or rolled
    C. Globular jar, tall neck, flared rim ${ }^{\text {a }}$
    D. Ovoid jar, short, medium straight neck
    E. Cylindrical jar
    5. Short wide, vertical neck (equivalent A3)
    6. Long, tapered body, vertical neck (equivalent A4)
    F. Carinated jar with flared neck (equivalent A2)
    II. Kushite Wheelmade Pottery

    Cups and Bowls (fig. 9)
    A. Medium to shallow bowls with convex sides and flat or indented bases
    B. Deep convex bowls

    1. Round base
    2. Grooved base
    C. Deep bowls with angled sides
    3. Round base
    4. Indented or flattened base
    D. Tall, V-shaped (here with flattened base)

    Jars (figs. 10-13)
    A. Holemouth jar
    B. Medium-sized, piriform, no neck-shoulder kink, tapered neck, untreated rim
    C. Globular, neck with pronounced inward taper, kink at rim
    D. Small-medium jar with cylindrical neck

    1. Smaller (equivalent A3)
    2. Larger, medium neck (equivalent $A$ )
    E. Cylindrical or slightly tapered neck, medium-large
    3. Medium
    4. Large
    5. Neck very tall
    F. Long, ovoid body, neck narrow and shorter
    6. Ovoid-elongate
    7. Piriform
    G. Body as E, neck with concave profile or flared, everted rim
    8. Medium
    9. Same, bulge at base of neck
    10. Relatively tall neck
    11. Large, neck not as well articulated
    12. Baggy, carinated shoulder, everted rim
    H. Bow-rim jars (ovoid)
    I. Ovoid jars, everted rim
[^9]:    12. True anthropoid coffins have not been published from Lower Nubian Meroitic cemeteries. Fragments of gesso with hieroglyphic inscriptions were found at Gamai (Bates and Dunham 1927, p. 27). Various types of coffins and sarcophagi appear in the Dodekaschoinos. Sce, for example, Firth 1912, p. 33, describing burials at Awam.
    13. For a register, see Mayer-Thurman and Williams 1979, pp. 54-148. A number of textiles represented only by traces or impressions were not listed. Following is a list of textiles now assigned to the Meroitic period:
    Pit Q 150-1 CAT 29 (no. changed from 3), Q $157-1$, Q 158-3, Q 159-1. Q 159-2, Q 162-4, Q 167-1, Q 172-6, Q 174-4 CAT 163, Q 176-3, Q 177-2, Q 181-2, Q 230-11 CAT 106, Q 234-2, Q 236-2. Q 240-3, Q 245-2, Q 250-2, Q 251-3 CAT 1, Q 254-4, Q 254-3 CAT 2, Q 272-2, Q 275-2, Q 287-1, Q 290-1, Q $298-7, Q 298-8, Q 298-10$, Q $298-12$, Q $300-2, Q 301-5$ CAT $110, Q 302 A-2$, Q 302B-1, Q 303-3, Q 306-3 CAT 3, Q 313-2, Q 325-3 CAT 114, Q 328-1, Q 334-4, Q 335-5, Q 339-2, Q 340-7, $\mathrm{Q} 341-2, \mathrm{Q} 347-2, \mathrm{Q} 351-2, \mathrm{Q} 353-3, \mathrm{Q} 363-2, \mathrm{Q} 371-2, \mathrm{Q} 372-8, \mathrm{Q} 402-12, \mathrm{Q} 415-6, \mathrm{Q} 415-7$, $\mathrm{Q} 416-2, \mathrm{Q} 417-10, \mathrm{Q} 430-5, \mathrm{Q} 430-7, \mathrm{Q} 447-1, \mathrm{Q} 447-6, \mathrm{Q} 467-2, \mathrm{Q} 475-24, \mathrm{Q} 492-2, \mathrm{Q} 493-8$. Q 509-2, Q $510-2, Q 512-2, Q 518-4, Q 519-2, Q 523-2, Q 524-2, Q 525-2, Q 526-1, Q 526-5$, Q 528-2 CAT 4, Q 531-2, Q 532-2, Q 534-1, Q 537-2, Q 541-2, Q 542-2, Q 544-2, Q 547-2, Q 5502, Q 552-2, Q $554-1, Q 555-2$, Q 557-2, Q 558-2, Q $560-8$ CAT 5 , Q $562-2, Q 563-2$ CAT 7, Q 564-2, Q 567-8, Q 569-2, Q 572-2 CAT 9 (no. changed from 1), Q 576-1, Q 584-2, Q 586-2, Q 590-1, Q 5913, Q 594-4 CAT 145, Q 594-8, Q 595-2, Q 599-2, Q 600-2 CAT 146 (no. changed from 1), Q 601-1, Q 607-2, Q 609-3, Q 623-2, Q 624-2, Q 636-4, Q 640-2, Q 642-1, Q 643-2, Q 646-2, Q 653-2, Q 654-2, Q 655-1, Q 661-7, Q 669-1, Q 670-4, Q 670-10, Q 675-1, Q 681-1, Q 683-5.
    В $2-1$, B $4-6$, B 9-1, B 13-1, B 13-5, B 13-7, B 14-14, B 14-17, B 17-1, B 22-1, B 29-5, B 32-9 CAT 12, В 47B-2, В $87-1$, В $87-3$, В $90-1$, В $90-2$, В $90-3$, В $90-4$, В $144-9$, В 155-1, В $179-7$, В 187-2 САТ 13, В $188-1$ САТ 14, 15, В 201-4, В 213-4 САТ 17-19, В $218-1$, В 228-4, В 234-3. В 251-2 САТ 21, В 259-1, В 284-1, B 310-9 САТ 21, В 320А-1 САТ 23-25, В 328-4.
[^10]:    32. See p. 148 below. Apedemak ring.
[^11]:    53. This mosaic technique occurs at various times in the ancient world and later. See, for example, Pinder-Wilson and Scanlon 1987, p. 71 (barrel beads).
[^12]:    113. Woolley and Randall-MacIver 1910, pl. 36:7307, 7371.
[^13]:    151. Ibid., p. 122, tomb 39, in a brick chamber added to an earlier tomb.
    152. Ibid., fig. 16.
    153. Reisner 1923, pp. 41-57; Williams 1985, p. 184.
    154. Reisner 1923, p. 41 and plan 12.
    155. Ibid., plan 12, unnumbered tomb, below center.
    156. Ibid., figs. 12, 13.
    157. Ibid., fig. 16:45.
    158. Ibid., fig. 15:34, 35.
    159. Ibid., fig. 45:V3 R-BW.
    160. Ibid., fig. 22.
    161. Griffith 1923, pls. XVII:IIg; XIII.
    162. Ibid., p. 84.
    163. Lister 1967, pp. 54-73; see also Adams 1962, p. 64; Williams 1985, p. 187.
    164. Williams 1985 , note 231.
    165. Lister 1967, pp. 62-64; Williams 1985, p. 187; Nordström 1962, pp. 49, 50; Hewes 1964, pp. 176-78.
