

# The Pottery from J. Desmond Clark's 1973 Excavations at Jebel Moya

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## Introduction

The site of Jebel Moya is well known for its mortuary complex that was first excavated by Henry Wellcome between 1911 and 1914 (Addison 1949). In 1973 J. Desmond Clark conducted a much smaller excavation at the site with the goal of checking the site's archaeological sequence and chronology (Clark 1973, 59-60). Unfortunately, Clark did not publish the results of this excavation prior to his death in 2002.

In this brief article I examine the Jebel Moya pottery from Clark's excavations, which is now housed in the Phoebe A. Hearst Museum of Anthropology (PAHMA) at the University of California, Berkeley. The article's primary aim is to describe the collection with reference to previous discussions of pottery from Jebel Moya.

## Previous Work at Jebel Moya

The Jebel Moya massif is located in the southern Gezira Plain about 250km south of Khartoum (Figure 1). The archaeological site covers around 104,000m<sup>2</sup> and about 20% of this area was excavated by Wellcome over four seasons (Addison 1949, 13). During these excavations 2,792 graves were cleared

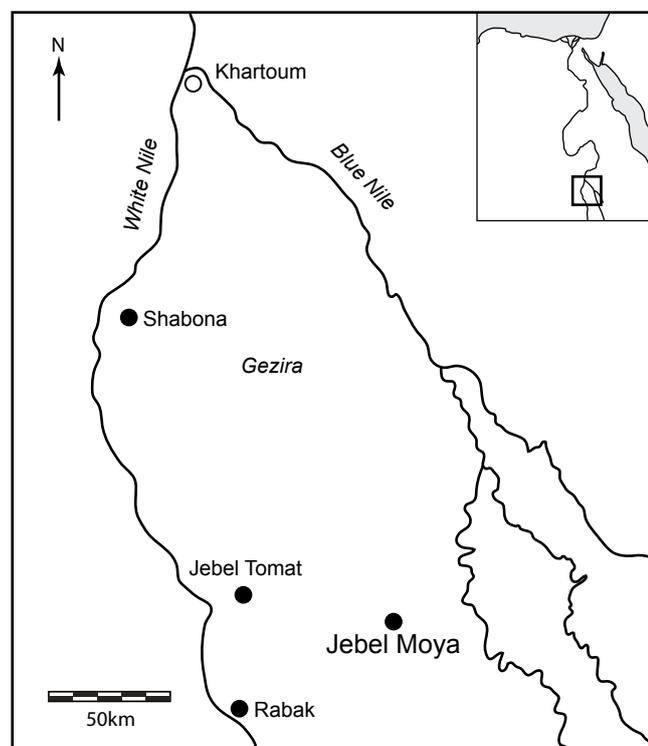


Figure 1. Map of the Gezira showing the location of Jebel Moya and other sites mentioned in the text.

containing the remains of 3,137 individuals (Mukherjee *et al.* 1955). The project recovered abundant pottery ('several tons'; Addison 1956, 4), chipped and ground stone tools, beads and other small objects (Addison 1949). Addison (1949) initially dated the occupation of Jebel Moya from about 1000 BC to 400 BC based on apparent similarities with Napatan sites but he later revised his view dating the site from about 400 BC to AD 400 due to observed parallels with Meroitic pottery (Addison 1956).

Wellcome's excavations at Jebel Moya proceeded with strong financial backing, a large team of workers, and employed field equipment that was advanced for the time, such as sifting machines and kite photography (Addison 1949, 7). However, a number of issues with the excavation and post-excavation procedures have made interpretation of the data somewhat problematic (Manzo 1995, 11). These issues include the lack of stratigraphic recording, especially during the first two field seasons; changes in field crew and recording methods over the four years of the field project; the dispersal of excavated objects and human remains to numerous institutions; and the disappearance of some maps and drawings. Furthermore, the final publication of the excavations only appeared 35 years after the last excavation season and was prepared by someone who did not participate in the excavations (Addison 1949).

As a result of these issues a number of scholars have re-assessed the Wellcome excavations based on Addison's (1949) publication or on examination of limited sets of the finds, sometimes resulting in divergent interpretations. Caneva (1991) examined material in the British Museum, focusing on the site's earliest ceramics, which include Dotted Wavy Line sherds. Based on typological similarities with other sites she dated these to the late sixth to fifth millennium BC. Manzo (1995) also re-examined material in the British Museum but focused on the later ceramics, identifying three classes of pottery that he attributed to the 'Jebel Moya Tradition' (see Clark 1984): (1) external thickened rims; (2) zoned impressed designs; and (3) rims with comb-impressed or incised bands. He also noted the presence of the earlier ceramics discussed by Caneva as well as 'later materials' (Manzo 1995, 15) but acknowledged that material from multiple phases may be mixed together as a result of disturbances caused by the digging of the site's many graves.

Gerharz (1994) saw evidence for three phases of occupation at Jebel Moya characterized by nine classes of pottery. Phase I is represented by the Dotted Wavy Line pottery discussed by Caneva. Phase II follows an occupational hiatus and begins around 3000 BC to mark the onset of the 'Jebel Moya Culture'. Pottery from this phase includes an early variant of incised and rockered pottery and 'Rabak Ware', which had previously been identified at the site of Rabak (el Mahi and Haaland 1984; Haaland 1984; 1987). Gerharz dates Phase III from around 800 BC to 100 BC and includes new forms of incised and rockered pottery as well as several other categories of ceramics (scratched ware, notched ware, red-painted ware,



channeled ware, molded pottery and several specialized vessel types). It should be noted that Gerharz's dates, like Addison's, are based on stylistic comparisons and he did not carry out any radiometric dating of the material.

Based on a re-assessment of material in the British Museum, Brass (2016; Brass and Schwenniger 2013) also identified three distinct ceramic assemblages. The results of a series of OSL dates on Assemblage 2 and 3 sherds indicate a later absolute date for Jebel Moya than suggested by Gerharz. Assemblage 1 comprises material from the late sixth or early fifth millennium BC as discussed by Caneva (1991). Assemblage 2 is dated from the mid-second millennium BC to around 800 BC and includes vessels with thick rims decorated with chevron motifs, similar to those from Rabak. Assemblage 3 follows an occupational hiatus and is dated from around 100 BC to AD 500. Assemblage 3 pottery has relatively thin walls with slipped and burnished surfaces. Decorative motifs include pendant triangles in-filled with fine stamping and cord-wrapped impressions.

While there is general agreement that mobile Mesolithic groups visited the site in the late sixth or fifth millennium BC, interpreting the later phases of occupation at the site is more challenging. Desmond Clark's (1973) excavation at Jebel Moya was intended to clarify the site's dating and stratigraphy and could have contributed to more recent discussions about Jebel Moya. Unfortunately, few insights from this project have been published. While the pottery assemblage in PAHMA is small, most of the sherds come from a stratified sequence and hopefully can add something to interpretations of the site's ceramic sequence.

### Clark's Excavation at Jebel Moya

Desmond Clark's excavations at Jebel Moya took place in early 1973 as part of an expedition to the Gezira led by Clark along with Martin A. J. Williams and D. A. Adamson who were investigating the region's geomorphological and biological background. The team also included Andrew Smith, Daniel Stiles and Kenneth Williamson from UC Berkeley. The archaeological aspect of the project focused on the sites of Jebel Tomat and Shabona (Clark 1973; 1984; 1989) but a small excavation was also conducted at Jebel Moya. Few notes related to this excavation are available for examination, either because they have been lost or were not taken in the first place. No map of the site is available so it is not possible to situate the location of the two excavated trenches relative to the earlier field work at the site, although Clark and Stemler (1975, tab. 1) note radiocarbon samples from the site derive from a 'test pit' on the 'western perimeter'.

The fullest published account of the excavation consists of just 120 words:

'In order to check the sequence at Jebel Moya and to recover charcoal for radiocarbon dating, Smith and Williamson excavated two square metres of deposit at that site. One of these, in a rock shelter, yielded nothing of significance but, from the other,

the sedimentary sequence was clearly seen and we have charcoals from each of the main occupation layers, except for the basal one, from which, however, bone is available. The site yielded cattle and goat bones. It will now be possible to date Jebel Moya and also to check the findings from the Jebel Tomat site. The radiocarbon samples we collected are now being processed by the laboratory at the University of California, Los Angeles'

(Clark 1973, 59-60).

Previously unpublished stratigraphic drawings of the south and west walls of the productive trench are illustrated in Figure 2. These indicate that the trench measured 1 x 1.3m

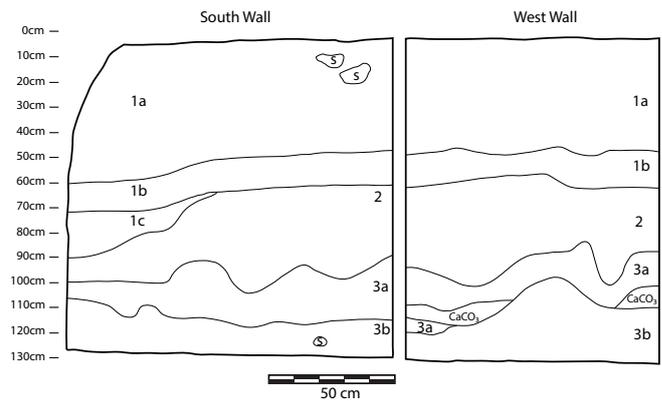


Figure 2. Stratigraphic drawings of the south and west walls of trench A1 copied from notes drawn by Clark in the field. 'S' presumably indicates a stone. 'CaCO<sub>3</sub>' indicates a 'cemented pocket of CaCO<sub>3</sub>'. The following descriptions of the strata were included with the field drawing: '1a. Light grey-brown, loose, friable clayey silt (w/ 2-3mm angular quartz grains); 1b. Dark brown silty clay, loose banded (?) (3 bands (?) in places) + possible increase in organic matter; 1c. Very loose light grey ash lens; 2. Compact grey brown gritty(?) clayey silt w/ carbonate? + charcoal (grit <2mm); 3a. Dark brown sandy silty loam grains(?) < 2mm'. No description of 3b is provided.

and was excavated to a depth of around 1.3m. This trench, named A1, had six strata (or 'units'; Clark and Stemler 1975, tab. 1), labelled from top to bottom as 1a, 1b, 1c, 2, 3a, 3b. Despite the presence of these strata, excavations proceeded according to arbitrary levels of 100mm. For the present paper these have been labelled as spits 1-13, from top to bottom. Cultural material, including pottery, was obtained even from the lowest excavated level (spit 13) suggesting that the excavation did not reach sterile deposits and may not have penetrated the site's earliest deposits.

Despite Clark's statement that samples for radiocarbon dating were collected from each occupation layer, only two dates from the excavations have been published (Clark and Stemler 1975) and no unprocessed charcoal samples are located in the PAHMA collection. The published dates are described as coming from depths of 800-900mm (spit 9) and 0.9-1m (spit 10) and presumably derive from trench A1. It should be noted that the published account indicates they are from 'unit 3' (i.e. stratum 3) though the depths indicated

by Clark and Stemler (1975) suggest they could derive from stratum 2. The published description of the source stratum ('compact light brown gritty sandy loam' [Clark and Stemler 1975, tab. 1]) does not precisely match the descriptions of either stratum included with Figure 2. Both samples produced the same date of 4200 +/- 80 BP, which when calibrated gives a range of 3010 to 2500 at 95.4% probability (Reimer *et al.* 2013). Gerharz (1994, 46) accepts these dates as support for the early dating of his Phase II but they are too early to correspond with the OSL dates published by Brass and Schwenniger (2013; Brass 2016, tab. 3.10) and should not be accepted uncritically. More dating by radiocarbon or OSL seems necessary to clarify this discrepancy.

### *The A1 Pottery*

The pottery from Clark's excavations at Jebel Moya was accessioned into PAHMA shortly after the conclusion of the project. From trench A1 there are 105 sherds from 13 excavated 100mm spits. There are also two unidentified ceramic objects from the excavation and an incompletely labeled rim sherd that cannot be assigned to a particular spit; these are not discussed here. In addition to the ceramics from A1, the collection has 19 sherds that were collected from the surface of the site but without any additional context information. No material in PAHMA comes from the second, unproductive trench.

All of the excavated sherds in the excavated collection are either rims (n=83) or decorated body sherds (n=22) (Table 1). Undecorated body sherds were either not retained in the field or discarded at some later time. Mesolithic deposits were not reached during the excavation of A1 and only one possible Mesolithic sherd was identified in the excavated collection (Figure 6H). This is a comb-impressed body sherd from spit

*Table 1. Number of rim, body and other sherds by spit. The 'other' sherds from the surface collection are two handles similar to ones illustrated by Addison (1949, pl. CV:B:1-11).*

Spit	Rim	Body	Other	Total
Surface	10	7	2	19
1	12	1		13
2	6	1		7
3	15	1		16
4	5	1		6
5	6	1		7
6	3	1		4
7	14			14
8	2	1		3
9	5	1		6
10	5	2		7
11	2	1		3
12	5	3		8
13	3	8		11
TOTAL	93	29	2	124

10 that could be a residual object from earlier unexcavated deposits. The remainder of the excavated pottery appears to be later in date with similarities to Gerharz's Phases II and III and Brass's Assemblages 2 and 3.

All the excavated pottery has inclusions that could be described as mineral or grit. A detailed petrographic assessment would be required to confidently identify the specific types of inclusions present in the collection but observation under low-powered magnification indicates the occurrence of mica, quartz and calcareous fragments. Three of the surface-collected sherds appear to have been tempered with abundant plant material (see below).

The small size of most of the excavated sherds makes confident reconstruction of vessel shape difficult. While Addison (1949, pls LXXXIX-XCIII) illustrates numerous vessel forms here I mention just three broad categories: bowls, inverted bowls, and jars. The latter is characterized by a more constricted opening and includes much of the complex rim-type pottery (see below).

Earlier analyses of Jebel Moya pottery (Addison 1949; Brass 2016; Gerharz 1994; Manzo 1995), which are all based on material from the Wellcome Excavations, influenced the current study but I did not fully adopt any single earlier typological classification. Addison's (1949) – and by extension, Gerharz's – typology is primarily based on whole forms and fine wares largely from burial contexts, which do not represent much of the pottery from Clark's excavations. Manzo (1995) only illustrates a small subset of Jebel Moya pottery from examples in the British Museum, with types that do not directly reflect much of the material from the A1 excavations. Brass (2016, 38-40) adopts an attribute-based rather than typological approach to his reassessment of pottery in the British Museum. While a focus on attributes has some distinct advantages, here I discuss the PAHMA material in terms of five broad types based primarily on an assessment of surface decoration and rim morphology. This approach was chosen because it provides a straightforward way to describe and illustrate the pottery and because the small size of the PAHMA collection makes confident statistical assessments of particular attributes and their development over time difficult. It should be stressed, however, that the types discussed here are heuristic groups that may not have had meaning to the Jebel Moya potters.

The five pottery types recognized in the A1 excavations are: (1) plain, (2) burnished, (3) appliqué, (4) complex rim, and (5) pottery with incised and impressed decoration (further divided into two sub-types; Table 2). It should be noted that the generally small size of the sherds in the collection not only impacts the reconstruction of vessel form but also how individual sherds were assigned to types. For example, plain rims may have had decoration elsewhere on the vessel that is no longer preserved and no body sherd can be assigned to the complex rim type since this is a group that is characterized by rim morphology. These are issues inherent to the analysis of any highly fragmented ceramic assemblage.



Table 2. Count of sherds of each type by spit. Note that surface finds are not included.

Spit	Type 1: Plain	Type 2: Burnish	Type 3: Appliqué	Type 4: Complex rims	Type 5a: Incised & rockd	Type 5b: Other incised and impressed	Total
1	1 (7.7%)	2 (15.4%)	1 (7.7%)	4 (30.8%)		5 (38.5%)	13
2	1 (14.3%)	1 (14.3%)		4 (57.1%)		1 (14.3%)	7
3		3 (18.8%)		8 (50.0%)		5 (31.3%)	16
4		4 (66.7%)		1 (16.7%)		1 (16.7%)	6
5		7 (100%)					7
6		3 (75.0%)		1 (25.0%)			4
7	2 (14.3%)	12 (85.7%)					14
8		1 (33.3%)		1 (33.3%)		1 (33.3%)	3
9		3 (50.0%)		1 (16.7%)		2 (33.3%)	6
10		4 (57.1%)		2 (28.6%)		1 (14.3%)	7
11					1 (33.3%)	2 (66.7%)	3
12				2 (25.0%)	5 (62.5%)	1 (12.5%)	8
13	1 (9.1%)	1 (9.1%)			7 (63.6%)	2 (18.2%)	11
TOTAL	5	41	1	24	13	21	105

### Type 1: Plain

Plain pottery comprises only five sherds in the excavated collection (e.g. Figure 3A, 5A). These are simple rims (i.e. not thickened or showing a sharp break in direction) with no observable burnishing or other surface treatment. Vessel walls range from about 4-8mm (mean 6.2mm). One example has two shallow thumb-sized impressions below the rim but it is not clear if these were intentionally applied as decoration or if they are byproducts of the manufacturing process. Forms are generally similar to the burnished type (below) but lack that characteristic surface treatment.

### Type 2: Thin-walled burnished

Thin-walled burnished-type pottery (hereafter simply 'burnished') makes up the largest group of ceramics in the assemblage with 41 pieces. These are typically thin-walled (3-9mm, mean 5.3mm) bowls and inverted bowls with simple rims and a black/gray, brown or red colour. They are always burnished, sometimes on an obvious slip, but also occasionally have incised or stamped decoration on the lip (Figure 6C-D) or on the exterior surface (Figure 6A-B). Two late examples have small ledge handles with incised decoration near the rim (Figure 3C; compare Addison 1949, pl. CIV, D4). Open forms with thin walls, simple rims and burnishing also occur commonly in Brass's (2016, 59) Assemblage 3. It should be noted that burnishing is not confined solely to the burnished-type pottery. Other types with different vessel morphology (e.g. type 4) also sometimes show evidence for burnishing but lack the simple rims and relatively thin walls that characterize type 2.

### Type 3: Appliqué

Only one sherd is included in this group, which is characterized by applied decoration (Figure 3D). It is very similar

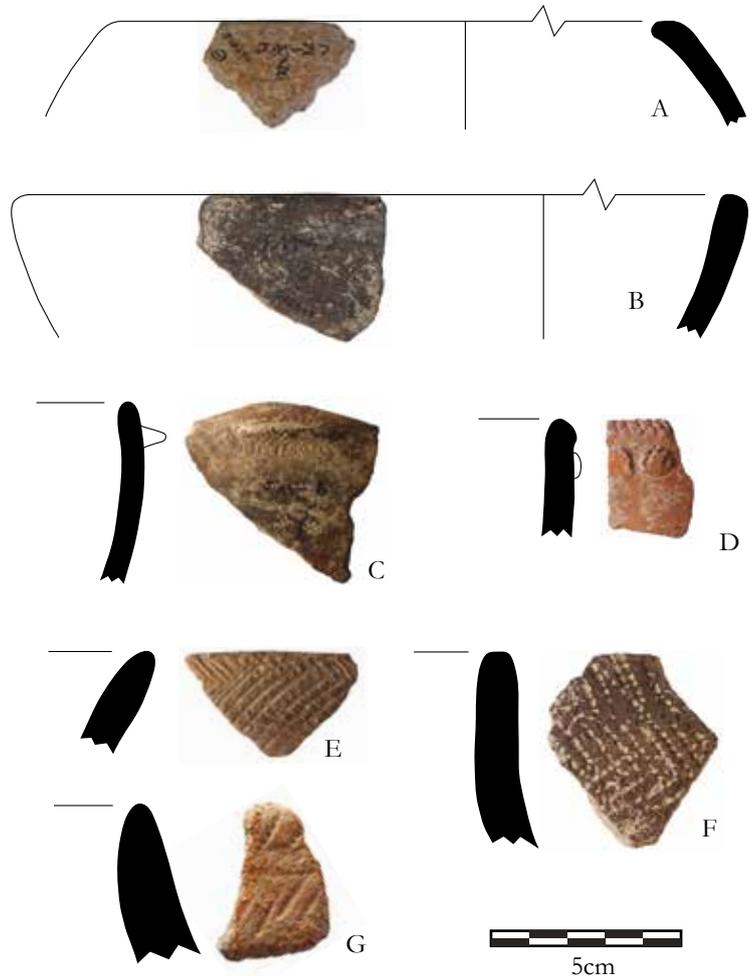


Figure 3. Pottery from spits 1 to 3, including type 1 (plain, A), type 2 (burnished, B-C), type 3 (appliqué, D) and type 5b (other impressed and incised, E-G). C is a small ledge-like handle with incised decoration above and below. D has appliqué dots covered in small impressions and the lip is incised. E has cross-hatched incisions. F and G are impressed with a comb-like implement. C-G are too small to accurately determine vessel form. B, D-F are from spit 1. A is from spit 2. C and G are from spit 3.

to a sherd illustrated by Addison (1949, pl. CIV, A10), with stylus-incised cross-hatching on a slightly thickened lip and a row of appliqué dots below. Gerharz (1994, fig. 55) includes this type of decoration in his ‘moulded pottery’ category, which he attributes to Phase III. Wall thickness is 8mm.

#### Type 4: Complex Rims

Pots with complex rims comprise 24 pieces in the assemblages. This group is characterized by rims that are more elaborate than the simple rims of the burnished and plain groups. They have rims that are either (1) thickened from being rolled outwards (Brass’s [2016, 48] ‘everted rolled’ rims, e.g. Figures 4A-B, E; 6E; 7A-C), (2) not notably thickened but

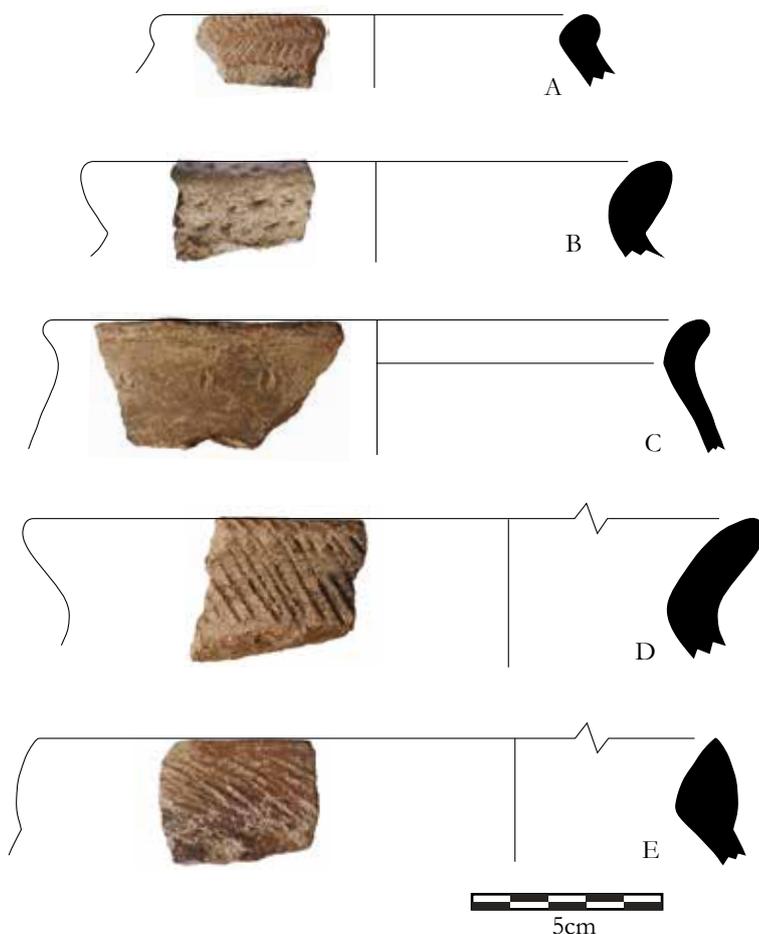


Figure 4. Type 4 (complex rim) pottery from spits 1 to 3 with impressed (A-C) and incised (D-E) decoration. C-E are from spit 1. A and B are from spit 3.

show a distinct change in direction (Brass’s [2016, 48] ‘everted’ rims, e.g. Figures 4C-D; 6F), or (3) have a more subtly thickened rim on either the interior or exterior, perhaps similar to Brass’s (2016, 48) ‘simple thick’ rims (Figure 8I). The latter are not as pronounced as the rolled rims and might simply be an unintended result of the manufacturing process. Pots with complex rims typically have incised or stamped decoration on the exterior or lip and are sometimes burnished, particularly on the interior surface of the rim. Wall thickness (below the rim) ranges from 5-11mm (mean 7mm). Some examples (Figure 7A-C) have rims with impressed or incised chevron patterns similar to examples from Rabak (Gerharz 1994, fig.

46; Haaland 1984, fig. 4e; 1987, 57). Gerharz (1994) attributes such ‘Rabak ware’ to his Phase II and Brass (2016, 58-59) attributes similar examples to his Assemblage 2.

#### Type 5: Pottery with incised and impressed decoration

This type is characterized by a range of impressed and incised motifs, and includes two sub-types based on differences in motifs.

##### Type 5a: Incised and rocked

This category is adopted from Gerharz (1994, fig. 47). The 13 examples in the PAHMA collection are similar to his ‘early variant’ of ‘incised and rocked pottery’ (see also Addison 1949, pl. C, A1-13). In this type I include bands of comb-stamped impressions, sometimes separated by incised lines (e.g. Figure 8A-C); wide incised lines cutting across narrower incised lines (e.g. Figure 8D, F); and dense zones of stamped decoration (Gerharz 1994, fig. 47). The more developed incised and rocked pottery assigned by Gerharz (1994, figs 48-50) to his Phase III is not apparent in the PAHMA collection. Wall thickness ranges from 3-10mm (mean 6mm).

##### Type 5b: Other impressed and incised pottery

This sub-type includes 21 examples with a range of other impressed and incised motifs (e.g. Figures 3E-G; 6G-H; 8G). These typically derive from relatively thick-walled vessels (6-17mm, mean 10.9mm) and the decoration is sometimes rather crudely executed, although there are exceptions particularly in the lower spits (e.g. Figure 8H). Typical motifs include parallel or cross-hatched lines, and chevron patterns, and are unlike the motifs of Type 5. They are also generally unlike the ‘late variant’ of ‘incised and rocked’ pottery that Gerharz (1994, 128-134) attributes to his Phase III but this might reflect the predominance of finer wares in the illustrations provided by Addison (1949), which forms the foundation of Gerharz’s analysis.

It is perhaps not surprising, given the small size of Clark’s excavation, that many other types of pottery illustrated by Addison (1949) and others are not represented in the A1 assemblage, including zone-impressed designs and comb-impressed rims (Manzo 1995), scratched, notched and red-painted ware (Gerharz 1994) and in-filled pendant triangles (Brass 2016, 59-60). However, examples of some of these types are included in the surface-collected material.

#### Surface finds

In addition to the pottery excavated from trench A1, Clark collected 19 sherds from the surface of Jebel Moya (Figure 9). Apart from being labelled as ‘surface’ finds, there is no additional contextual information and no indication that they were collected from the vicinity of trench A1. The surface finds generally do not fit within the pottery types discussed above. Three of the surface-collected sherds have evidence for abundant plant temper, including two gray-coloured sherds with ‘zoned impressed designs’ infilled with red pig-

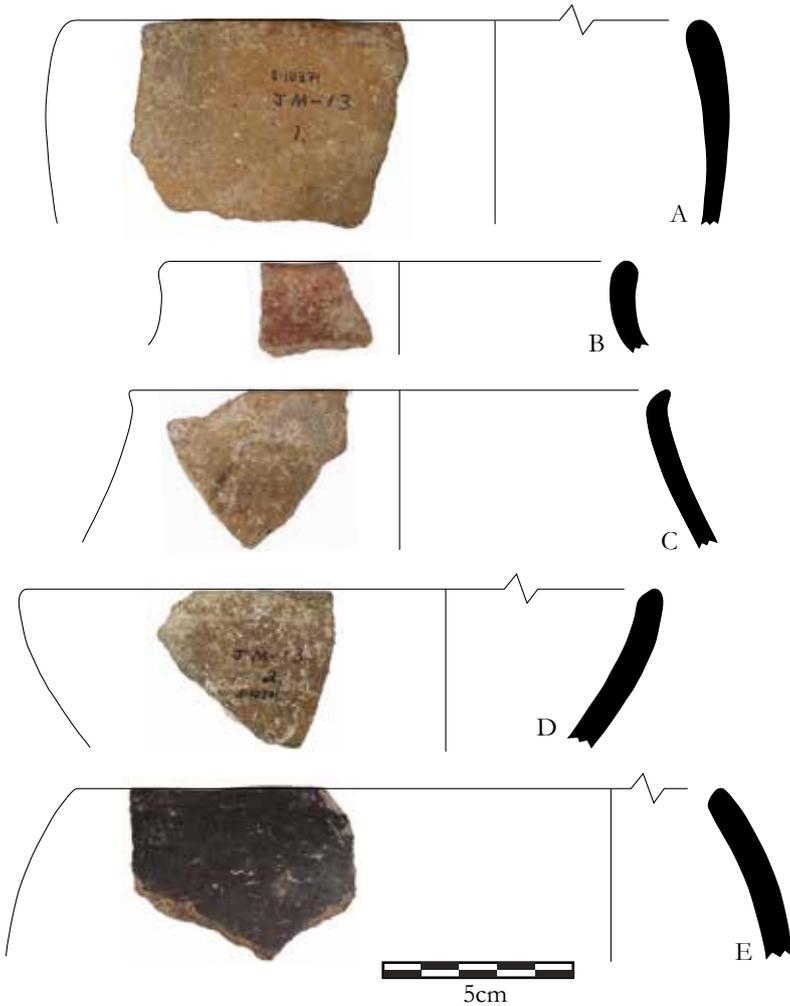


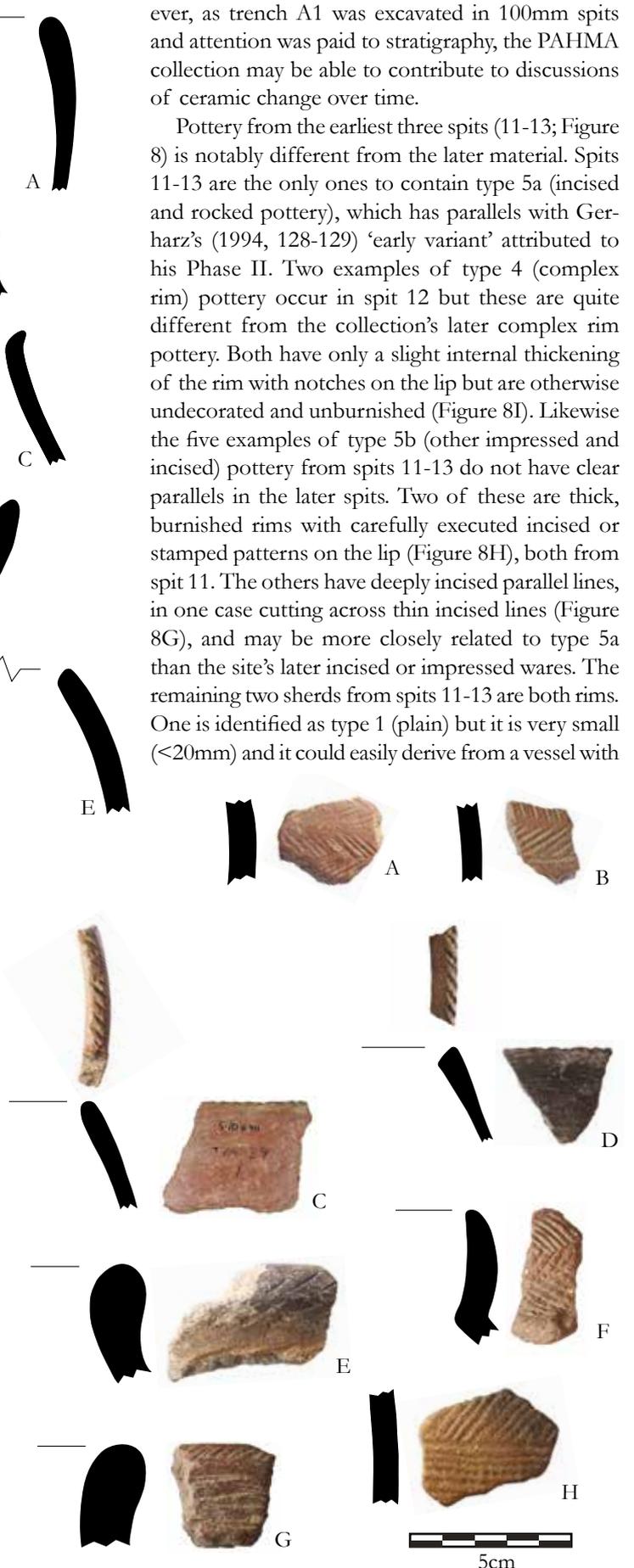
Figure 5. Pottery from spits 5 to 7, including type 1 (plain, A) and type 2 (burnished) pottery (B-E). B is from spit 5. E is from spit 6. A, C and D are from spit 7.

ment (e.g. Figure 9A; compare Manzo 1995,13-15) and a coarse, red-slipped rim sherd. This fabric is unlike the rest of the PAHMA collection, which is mineral tempered.

### Discussion

Clark's brief excavation at Jebel Moya had two related goals: to check the site's sequence and to obtain samples for radiocarbon dating. No further charcoal samples remain in the PAHMA collection so this study is unable to contribute greatly to discussions of Jebel Moya's absolute chronology. This is unfortunate as there is some disagreement about the dating of the site's later phases, as noted above. How-

Figure 6. Pottery from spits 5 to 10, including type 2 (burnished, A-D), type 4 (complex rim, E-F) and type 5b pottery (G-H). A-B have incised decoration in addition to burnish. C-D have impressions on the lip made with a spatula (C) or toothbed (D) implement. E-G have incised decoration. H is a possible Mesolithic sherd (compare Addison pl. XCIV:C:2,8) with stamped lines. C and D are inverted bowls with diameters of 200mm and 300mm. The rest are too small to determine vessel form. B is from spit 5. D is from spit 7. G is from spit 9. A, C, E, F and H are from spit 10.



ever, as trench A1 was excavated in 100mm spits and attention was paid to stratigraphy, the PAHMA collection may be able to contribute to discussions of ceramic change over time.

Pottery from the earliest three spits (11-13; Figure 8) is notably different from the later material. Spits 11-13 are the only ones to contain type 5a (incised and rocked pottery), which has parallels with Gerharz's (1994, 128-129) 'early variant' attributed to his Phase II. Two examples of type 4 (complex rim) pottery occur in spit 12 but these are quite different from the collection's later complex rim pottery. Both have only a slight internal thickening of the rim with notches on the lip but are otherwise undecorated and unburnished (Figure 8I). Likewise the five examples of type 5b (other impressed and incised) pottery from spits 11-13 do not have clear parallels in the later spits. Two of these are thick, burnished rims with carefully executed incised or stamped patterns on the lip (Figure 8H), both from spit 11. The others have deeply incised parallel lines, in one case cutting across thin incised lines (Figure 8G), and may be more closely related to type 5a than the site's later incised or impressed wares. The remaining two sherds from spits 11-13 are both rims. One is identified as type 1 (plain) but it is very small (<20mm) and it could easily derive from a vessel with

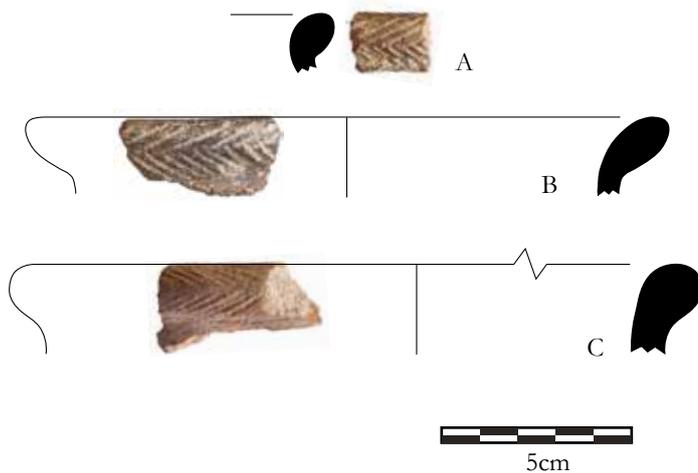


Figure 7. Type 4 (complex rim) pottery with rolled rims decorated with chevron pattern from Jebel Moya (A-C). A is too small to determine vessel form. A is from spit 3. B is from spit 8. C is from spit 9.

decoration lower on the body. Its colour and fabric are similar to the type 5a (incised and rocked) pottery in the collection. The other is a burnished rim.

Burnished pottery increases in frequency beginning in spit 10. From spits 10 to 4 type 2 (burnished) is the most abundant type, with the exception of spit 8 (n=3) which has one example each of types 2, 4 and 5b, the latter being a thick sherd decorated with a stylus-incised chevron pattern.

In the uppermost spits (1-3) type 4 (complex rim) and type 5b (other impressed and incised pottery) become dominant, the latter being characterized by fairly thick-walled vessels with stamped or incised decoration, often with chevron, cross-hatched or diagonal line motifs. Type 2 (burnished) pottery also continues. The only two examples of type 2 (burnished) rims with small ledge-shaped handles occur in spit 3 and the sole example of type 3 (appliqué) pottery comes from spit 1, suggesting that applied or moulded decoration might be late in the sequence.

Keeping in mind the relatively small size of the collection, it appears that there are two different phases of pottery identifiable from the A1 excavation. The first is represented by spits 11-13, dominated by type 5a (incised and rocked pottery). There is no apparent gap between this phase and the subsequent one, which is represented by spits 1-10. The earliest part of this later phase (spits 4-10) is dominated by type 2 (burnished) but type 4 and type 5b also occur. In the latest levels of the excavation (spits 1-3) the pattern reverses, and the dominance of type 2 is replaced by type 4 and type 5b.

With the limited sample size and the absence of clear radiometric data, it is difficult to say whether the earlier phase (spits 11-13) and the later phase (spits 1-10) correspond to the two later phases of Jebel Moya pottery, as discussed by Gerharz (1994) and Brass (2016). It is possible that pottery from A1 could reflect change within just one of Gerharz's phases or Brass's assemblages. However, the clearest parallels with the pottery from spits 11-13 are with Gerharz's early variant of incised and rocked pottery, which

he attributes to Phase II while the increase in burnished pottery in spits 1-10, particularly on open vessels with simple rims, has clearer parallels with Brass's Assemblage 3 rather than Assemblage 2.

The depths of the early phase spits (11-13) correspond fairly well to the lowest strata (or 'units') identified by Clark in the A1 excavations (strata 3a and 3b). Stratum 3a is described on the stratigraphic section drawing as 'dark brown sandy silty loam [with] grains < 2mm' but no description is provided of stratum 3b. The drawing indicates the presence of cemented deposits of calcium carbonate in and between 3a and 3b. The later phase (spits 1-10) corresponds to strata 1a, 1b, 1c and 2 as identified on Clark's drawing, with the transition from burnished-dominated to complex rim and other decorated-dominated pottery presumably occurring somewhere within stratum 1a. During the later seasons of the Wellcome excavations four strata were identified, labelled from top to bottom as A (dark brown topsoil), B (grey upper layer), C (black gravel) and D (black gebel) (Addison 1949, 14-15). Due to post-occupational erosion, not all of these

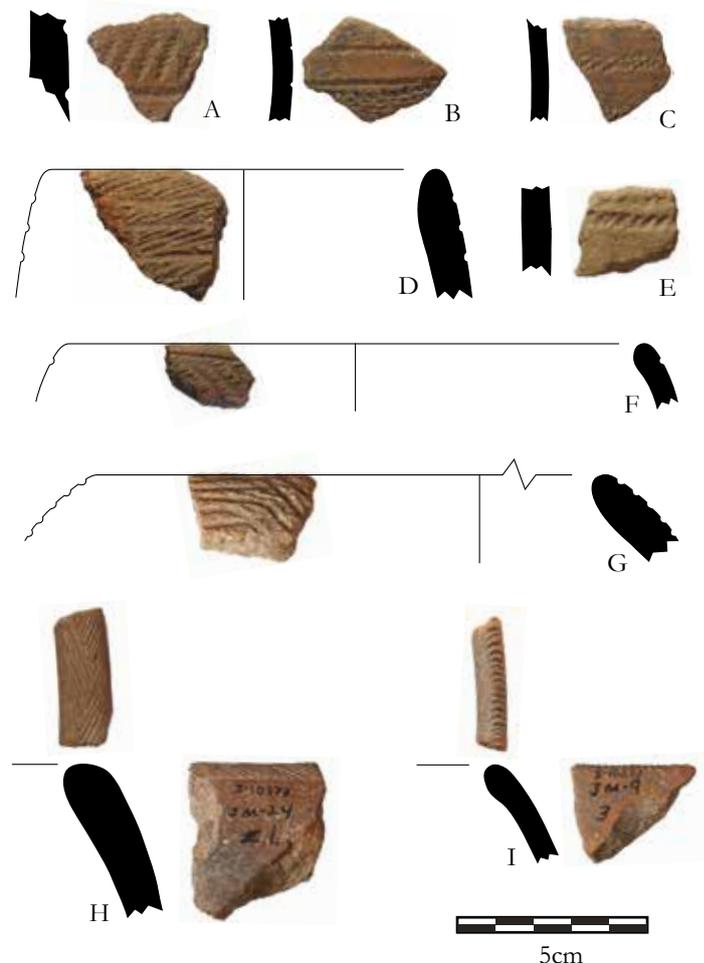


Figure 8. Pottery from spits 11-13, including type 5a (incised and rocked pottery, A-F) and type 5b (other incised and impressed pottery) with coarse (G) and fine (H) incisions, and a rim attributed to type 4 with a slightly thickened rim and spatula-impressed lip (I). A and H are from spit 11. D, E, G and I are from spit 12. B, C and F are from spit 13.

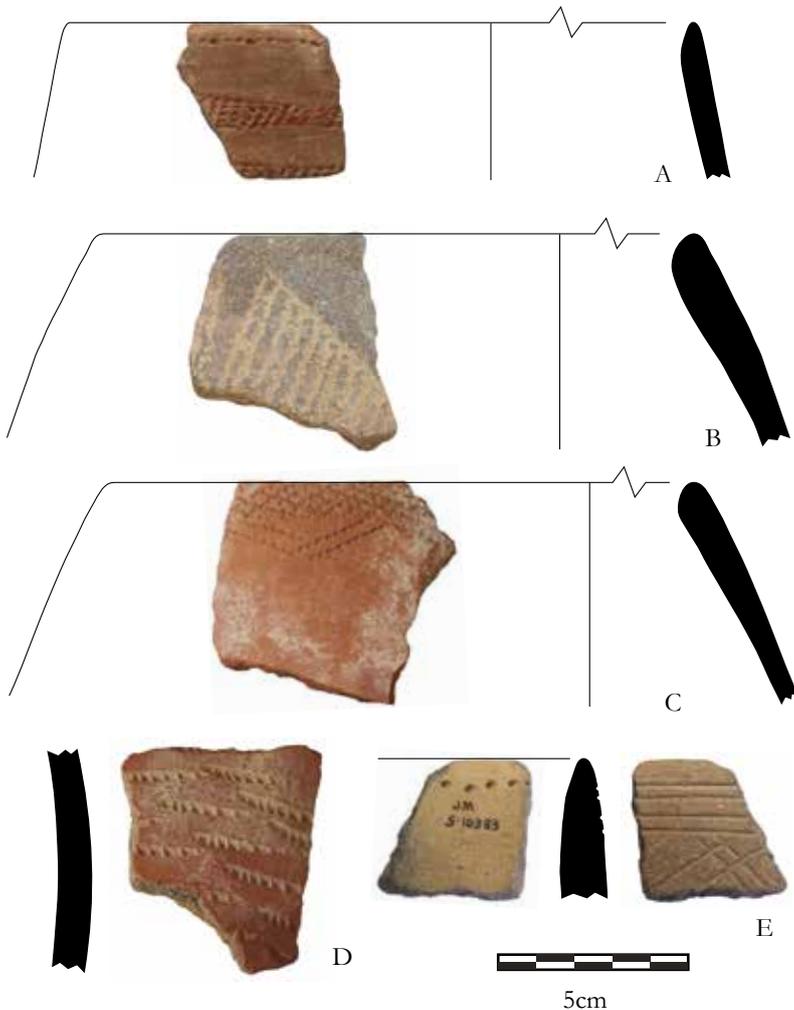


Figure 9. Examples of surface finds collected by Clark. A has impressed decoration filled with red pigment (compare Manzo 1995, 13-15); B has a band of comb stamping along the rim and a triangular motif below (compare Addison 1949, pl. CI; Brass 2016, fig. 3.13; Gerharz 1994, 134-136); C has comb stamping along the rim (compare Manzo 1995, 15); D is a body sherd with comb stamping; and E has incised lines on the exterior and a row of stylus impressions on the interior.

strata are preserved uniformly across the site (Addison 1955). Clark's drawing and descriptions suggest that the ground surface of the A1 excavations could have been stratum B (also M. Brass, pers. comm.), though this is not certain.

## Conclusion

The pattern observed here, with two phases of pottery, is in general agreement with the perspectives of Gerharz (1994) and Brass (2016) who both observed two later phases or assemblages of pottery at Jebel Moya, though with differing opinions on their absolute dating. However, the PAHMA collection has some differences. The absence of a number of ceramic types and attributes likely reflects the small size of the collection. It could also relate to spatial differences within the site (e.g. burial vs. settlement contexts). The location of the A1 excavation was at the site's 'western perimeter' (Clark and Stemler 1975, tab. 1) and evidently distant from the majority of the site's burials.

A more notable difference is the increasing frequency of type 4 (complex rim pottery) throughout the later phase of the PAHMA collection (spits 1-10) and the absence of rolled and everted rims in the earlier phase (spits 11-13). In contrast, Gerharz (1994, 126-128) assigns Rabak ware to his Phase II, which also includes his early variant of incised and rocked pottery. Rabak ware characteristically has rolled rims with stamped or incised decoration, often in a chevron pattern. Similar examples are present from the A1 excavation but these are found no earlier than spit 9 (Figure 7A-C). Brass likewise sees Rabak-like pottery as early and assigns it to his Assemblage 2. He observed a decrease or disappearance of rolled and everted rims in the subsequent Assemblage 3 (Brass 2016, 59). The different pattern observed in the PAHMA collection is difficult to interpret. It is perhaps noteworthy that a preliminary analysis of material from Clark's excavations at Jebel Tomat shows rolled rims with chevron decoration in the upper deposits of that site. These are at a shallower depth than, and should, therefore, postdate, deposits that Clark and Stemler (1975, tab. 1) attribute to the early first millennium AD (but see Brass 2016, 64).

Little archaeological fieldwork has been carried out in the southern Gezira Plain and Jebel Moya remains a key site for investigating the region's settlement, economic strategies, and its relationship with the greater Kushite state. There remain, however, important questions about the site's chronology and artefact sequences that would benefit from further investigation. Desmond Clark's excavations were intended to address these questions but, unfortunately, answers did not materialize. It is fortunate that new excavations have recently started (see Brass, this volume; French and Cutting 2017, 33).

Revisiting museum collections from old excavations can also make valuable contributions to an improved understanding of Jebel Moya (e.g. Brass 2016). The pottery collection from Desmond Clark's excavation, while small, corroborates earlier evidence for two post-Mesolithic phases of site use and provides a stratigraphic sequence to examine change over time, although at present it cannot directly contribute to discussions of the site's chronology. Given the lack of context and sample details for the dates provided by Clark and Stemler (1975, tab. 1), the OSL dates provided by Brass (2016; Brass and Schwenniger 2013) might stand as the most reliable for the site, though this should be confirmed with further analyses. The A1 excavation also indicates some differences with earlier interpretations of the site's pottery, notably the apparent late date for rolled and chevron-decorated rims in the A1 collection, which further highlights the need for additional study. Improving our knowledge of Jebel Moya is also important for investigating other sites in the region. In

particular, the Jebel Moya collection in PAHMA, along with previously published discussions of the site, is providing a framework for an ongoing assessment of the pottery from Clark's excavation at Jebel Tomat, which is also housed at PAHMA.

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### Bibliography

- Addison, F. 1949. *Jebel Moya: the Wellcome Excavations in the Sudan*. Oxford.
- Addison, F. 1955. 'Appendix I: the Stratigraphy of Site 100 at Jebel Moya', in R. Mukerjee, C. R. Rao and J. C. Trevor, *The Ancient Inhabitants of Jebel Moya (Sudan)*. Cambridge, 100-102.
- Addison, F. 1956. 'Second Thoughts on Jebel Moya', *Kush* 4, 4-18.
- Brass, M. and J.-L. Schwenniger 2013. 'Jebel Moya (Sudan): New Dates from a Mortuary Complex at the Southern Meroitic Frontier', *Azania: Archaeological Research in Africa* 48, 455-472.
- Brass, M. J. 2016. *Reinterpreting Chronology and Society at the Mortuary Complex of Jebel Moya (Sudan)*. Cambridge Monographs in African Archaeology 92, Oxford.
- Caneva, I. 1991. 'Jebel Moya Revisited: a Settlement of the 5th Millennium BC in the Middle Nile basin', *Antiquity* 65, 247, 262-268.
- Clark, J. D. 1973. 'Recent Archaeological and Geomorphological Field Studies in the Sudan: Some Preliminary Results', *Nyame Akuma* 3, 55-64.
- Clark, J. D. 1984. 'Prehistoric Cultural Continuity and Economic Change in the Central Sudan in the Early Holocene', in J. D. Clark and S. A. Brandt (eds), *From Hunters to Farmers: the Causes and Consequences of Food Production in Africa*. Berkeley, 113-126.
- Clark, J. D. 1989. 'Shabona: an Early Khartoum Settlement on the White Nile', in L. Krzyżaniak and M. Kobusiewicz (eds), *Late Prehistory of the Nile Basin and the Sahara*. Poznań, 387-410.
- Clark, J. D. and A. Stemler 1975. 'Early Domesticated Sorghum from Central Sudan', *Nature* 254, 588-591.
- El Mahi, A. and R. Haaland 1984. 'Archaeological Research in the Area of Rabak and Atbara, Sudan', *Nyame Akuma* 24-25, 28-32.
- French, J. and M. Cutting 2017. 'A Global Perspective on the Past: the Institute of Archaeology Around the World', *Archaeology International* 20, 30-43.
- Gerharz, R. 1994. *Jebel Moya*. Meroitica 14, Berlin.
- Haaland, R. 1984. 'Continuity and Discontinuity. How to Account for a Two Thousand Years Gap in the Cultural History of the Khartoum Nile Environment', *Norwegian Archaeological Review* 17, 1, 39-51.
- Haaland, R. 1987. *Socio-economic Differentiation in the Neolithic Sudan*. BAR Int. Ser. 350. Oxford.
- Manzo, A. 1995. 'Remarks on the Jebel Moya Ceramics in the British Museum and their Cultural Significance', *Sudan Archaeological Research Society Newsletter* 9, 11-19.
- Mukherjee, R., C. R. Rao and J. C. Trevor 1955. *The Ancient Inhabitants of Jebel Moya (Sudan)*. Cambridge.

- Reimer, P. J., E. Bard, A. Bayliss, J. W. Beck, P. G. Blackwell, C. B. Ramsey, C. E. Buck, H. Cheng, R. L. Edwards and M. Friedrich 2013. 'IntCal13 and Marine13 Radiocarbon Age Calibration Curves 0–50,000 years cal BP', *Radiocarbon* 55, 4, 1869-1887.