SUDAN & NUBIA

The Sudan Archaeological Research Society

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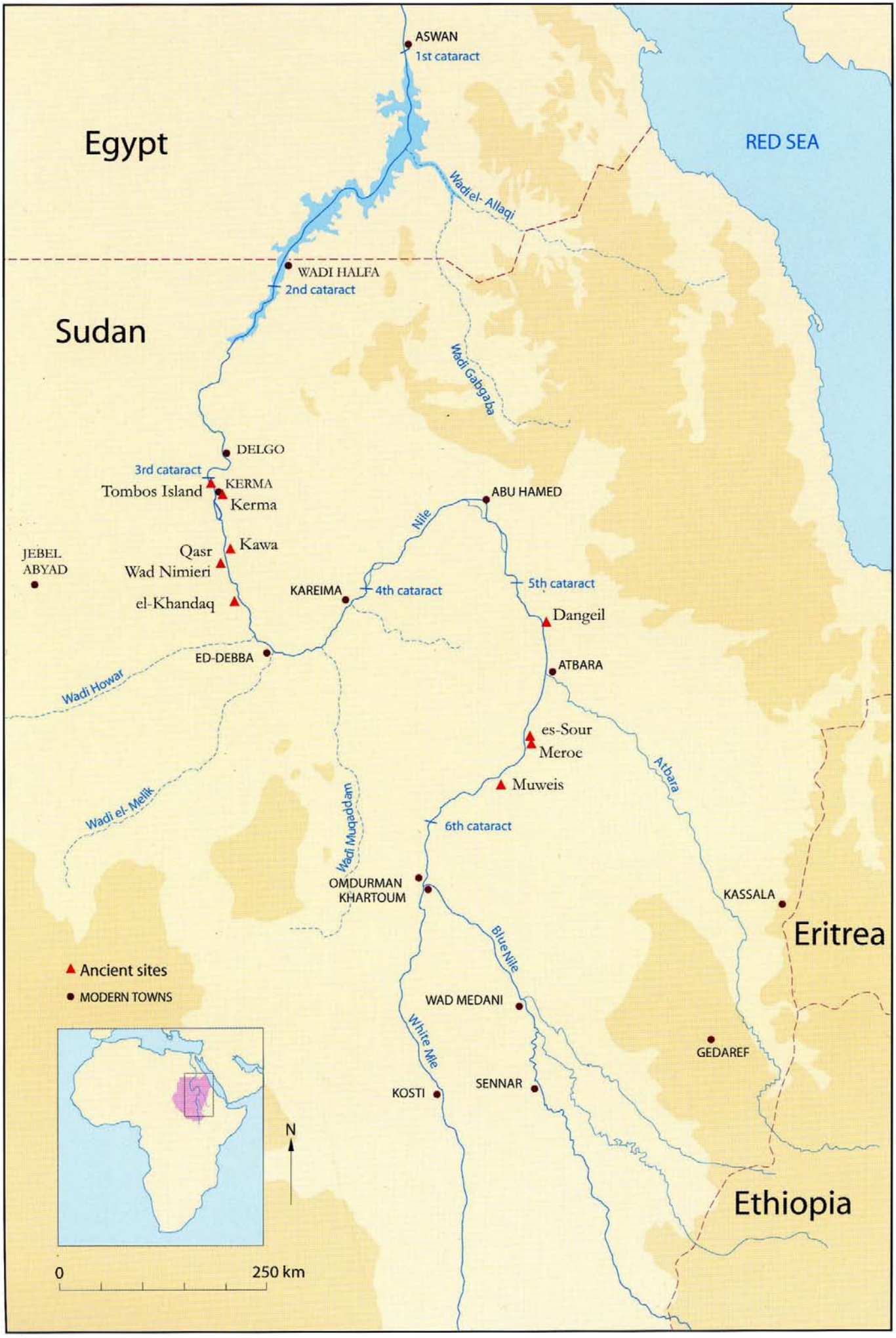
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4th cataract
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Contents

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

The origin and use of ceramics on the islands of Mis and Umm Muri, in the Late Meroitic to Christian periods

Ross Thomas

This paper discusses some preliminary research into the origin and use of ceramics from the Fourth Cataract in Sudan. This is part of a wider project to assess the introduction and changing use of ceramic technologies and forms in the Fourth Cataract region from the Late Meroitic to Christian periods (Table 1). The ceramics under consideration here are from the central area (AKSC) of The Sudan Archaeological Research Society's (SARS) concession within the Merowe Dam Archaeological Salvage Project. Overall coordination of the ceramics component of the project within the SARS concession was undertaken by Isabella Welsby Sjöström, who developed the recording process used which records a range of attributes from first principles. These pottery attributes included: form, fabric, context, open or closed, decoration, graffiti, diameter % of rim/base, number, weight and sherd type. In this manner 569kg were processed from the concession, with an additional 168kg processed by Anna Mabrey and Eric McCann. There were over 21,000 sherds in total.

Table 1. Phases used in discussion and relationship to calendar dates (after Welsby Sjöström 2001; Phillips 2003).

Phase	Date
Early Meroitic	3rd to 1st century BC
Classic Meroitic	1st to 2nd century AD
Late Meroitic	Late 2nd to mid 4th century AD
Early Post-Meroitic	Mid 4th to late 5th century AD
Late Post-Meroitic	Late 5th to mid 6th century AD
Transitional Christian	Mid to late 6th century AD
Early Christian	Early 7th to mid 9th century AD
Classic Christian	Mid 9th to mid 11th century AD
Post Classic	Mid 11th to mid 13th century AD
Late Christian	Early 13th to mid 14th century AD
Terminal Christian	Mid 14th to late 15th century AD

There are currently few detailed ceramic studies on material from Upper Nubia. Those that have been undertaken, most notably by Welsby Sjöström, Phillips and Orzechowska (Welsby Sjöström 2001; Orzechowska 2003; Phillips 2003), have a heavy medieval bias in the Dongola region (Phillips and Mason 2001; Pluskota 2006). However, this is likely to change with the various teams publishing from the Merowe dam salvage project. Until this point, one has had to rely on the more secure dating and typologies published for Upper and Lower Nubia and from the imported amphorae (Peacock and Williams 1986; Keay and Williams 2005). Adams has provided a general framework for our understanding of Lower Nubian ceramics (Adams 1986) based upon Meroitic (Adams 2000) and Christian sites (Adams *et al.* 1999; Adams 2002; 2003; 2005). Subsequent work at Wadi Qitna and Kalabsha (Strouhal 1991), Qasr Ibrim (Rose 1996) and Qustul and Ballana (Williams 1991a; b) has provided more detailed accounts. In central Sudan, at Meroe, the publication of earlier excavations (Shinnie and Bradley 1980; Ahmed 1984; Török 1997; Robertson and Hill 2004), have been complemented by more recent work (Grzymski 2003). To this can be added the study of the pottery workshop at Musawwarat es-Sufra (Edwards 1999; Seiler 1999) and of the pottery from the burials at Gabati (Rose 1998; Smith 1998). Absolute dating derived from radiocarbon analysis has also helped to establish secure dates for phases at Meroe, Musawwarat es-Sufra and Gabati.

The pottery discussed in this paper comes from a number of excavations and surveys by teams directed by Dorian Fuller (Fuller 2004), John Payne (Payne 2005) and Andrew Ginns (Ginns 2006; 2007). The majority of the material came from excavations on the islands of Umm Melyekta (4-F-16), Mis (3-J-11, 3-J-18, 3-J-19) and Umm Muri (3-J-5). Neolithic, Post-Meroitic and Late Medieval pottery was collected from structures and burials on Umm Melyekta. At Umm Muri, Meroitic and Christian pottery was retrieved during two seasons of excavation. On Mis, a late Christian church (3-J-18), nearby cemeteries (3-J-11, 3-J-18B), a Christian settlement (3-J-19) and a Medieval tumulus (3-J-12) were also studied. Sites 3-J-18 and 3-J-19 also yielded residual Meroitic material, whilst at site 3-J-11 were a number of Meroitic burials, with intact grave goods.

The origin of the pottery from AKSC

A team of ceramicists, based at Southampton, coordinated by the author, have undertaken thin section analysis of ceramics from sites in the SARS AKSC (Welsby 2003) and the Delaware University Nuri-Hamdab concessions (Sidebotham *et al.* in press), to identify the origin of both wheel and handmade ceramics. This study included analysis of over 100 thin section slides made by Rebecca Broudel, Ismini Ninou, Alison Kyle, Ben Jervis and Ross Thomas. The fabrics can be divided into four main groups: Meroitic white fabric, Nile silts, Aswan pink fabric (that can resemble the white paste, or when mixed, the Nile silts) and other imported fabrics.

Imported amphorae included fine, highly micaceous brown Late Roman 3 amphora (Peacock and Williams 1986, 188. class 45, fig. 2.16-17). They were produced from the 1st century BC into the 6th century AD, though most are likely to represent 1st to 4th century AD imports. These were produced in Asia Minor, at Ephesus, in the Meander Valley, at Kuşadasi, Miletos and possibly Pergamon (Peacock and Williams 1986, 188-9). A creamy white to orange fabric with 1mm black, red, quartz and limestone inclusions was

also found to be associated with amphora forms of both 1st to 2nd century AD 'Pompeii 5' (Figure 2.13) and 3rd century AD 'Gauloise 4 copies' (Figure 2.14-15), produced in Cilicia, probably at the Yumatalik workshops (Reynolds 2005). A sandy reddish-yellow variant of this fabric was associated with two handles, reminiscent of 4th century AD precursors of Late Roman Amphora 1, also from Cilicia (Figure 2.18-19, Reynolds 2005). Imported amphorae of 'Gauloise 4' forms (Peacock and Williams type 27) were also found in two rare fabrics, conforming to descriptions of both North African and French origins. These would date to between the 1st and 4th centuries AD (Keay and Williams 2005).

Meroitic, white, fine-ware fabrics (Figure 2.1, 2.4, Smith 1997) were very fine and well sorted and as a result were not particularly distinctive in thin section. However, basic mineral inclusions suggest a close proximity to a basic rock outcrop, such as a basalt lava flow.

There is understandable scepticism amongst many ceramicists as to the value of thin sectioning Nile silt fabrics. Nile silts are generally rich in feldspars, granitic rock fragments, hornblende, micas and limestone (Braddock 2003, 51). Due to the Sudanese basement geology of granites, gneisses and schists, the inclusion of feldspars, micas and quartz can be expected in pottery from this area (Hays and Hassan 1976, 72-3). A number of petrographical studies (Mason 1987; Smith 1990) have been attempted on Nubian Nile silt fabrics, with restricted success. Smith's thesis on Christian wheel-made fine wares from six kiln sites in Egypt and Sudan suggested that petrographical studies were successful in distinguishing between origins, when the mineralogy was quantified (Smith 1990, 136). The distinctly different bedrock geologies of northern and central Sudan suggest that the mineralogy of Nubian Nile silts should differ between different Sudanese regions and from Egyptian fabrics (Table 2). For this reason, over 100 thin sections have been produced. The preliminary results of this ongoing study suggest that from the Late Meroitic to late Christian periods two distinctly different handmade fabrics were used, with likely origins amongst the Fourth Cataract region basement complex and also from the Dongola region Nubian sandstones. Five different Nile silt wheel-made fabrics were identified. Most had frequent quartz, mica, feldspars and common iron inclusions. Three other variants also had limestone, lava (basalt), or both limestone and lava inclusions. Finally, a Late Christian coarse Nile silt fabric had acid igneous rock inclusions (granite) instead of iron inclusions, possibly from the localised Fourth Cataract basement complex. This suggests metrical analysis of minerals in pottery fabric thin sections could help to distinguish between production centres of Nubian Nile silt pottery.

The use of pottery in the AKSC settlements

The settlement (3-J-5) on Umm Muri produced reasonable quantities of pottery, dating to the Classic Meroitic period (1st to 2nd centuries AD) and the Late Meroitic period (3rd to mid 4th centuries AD). Excavations produced a stratified sequence of deposits from six building phases (Figure 1) containing *c.*1000 diagnostic sherds (Figure 2.1-8, 2.13-18). These were either generic 1st to 4th century Meroitic pottery, or Late Meroitic forms, including 3rd and 4th century AD imported amphorae. The main period of building activity occurred in phases 3 to 5 which can now be confidently dated from the 2nd to 3rd centuries AD, up to the 4th century AD. Whilst classic Meroitic material was found in phases 1 and 2, a late Meroitic date cannot be excluded for some of the material from these deposits. The Meroitic material included a large proportion of transport and storage vessels (75%), and tablewares (18%) were more common than utility wares (7%). Cooking and coarse wares were mostly handmade, and consisted of bowls, large bowls, lugged bowls,

Table 2. Overview of the geology of the Nile. Based on geological map (GMRD-BRGM 1981).

Upper and Middle Egypt	limestones with chert and clay
Aswan	'Younger Granitoids' (granite, granodiorite and ademellite).
First to Second Cataracts	'Nubian sandstones'(sandstones, siltstone, mudstone, conglomerate)
Second to Third Cataracts	'Schist group' (meta-sediment, marble, quartzite, graphite, mica schist). Volcanic intrusions (gabbro, granite, basalt).
Third to Fourth Cataracts	'Nubian sandstones'
Fourth Cataract to Abu Hammed	'Basement complex' (granitic gneiss, amphibolite, hornblende gneiss, charnockitic granite, amphibolite, pyroxene granulite)
Abu Hammed	'Kurmut series' (meta-sediment, amphibolite and hornblende schist) 'Amaki series' (sandstone, conglomerate, limestone, chert)
Fifth to Sixth Cataracts	'Nubian Sandstones'
Sixth Cataract.	'Gneiss group' (granitic gneiss, charnockitic granite, amphibolite, pyroxene granulite). Volcanic intrusions (granite)

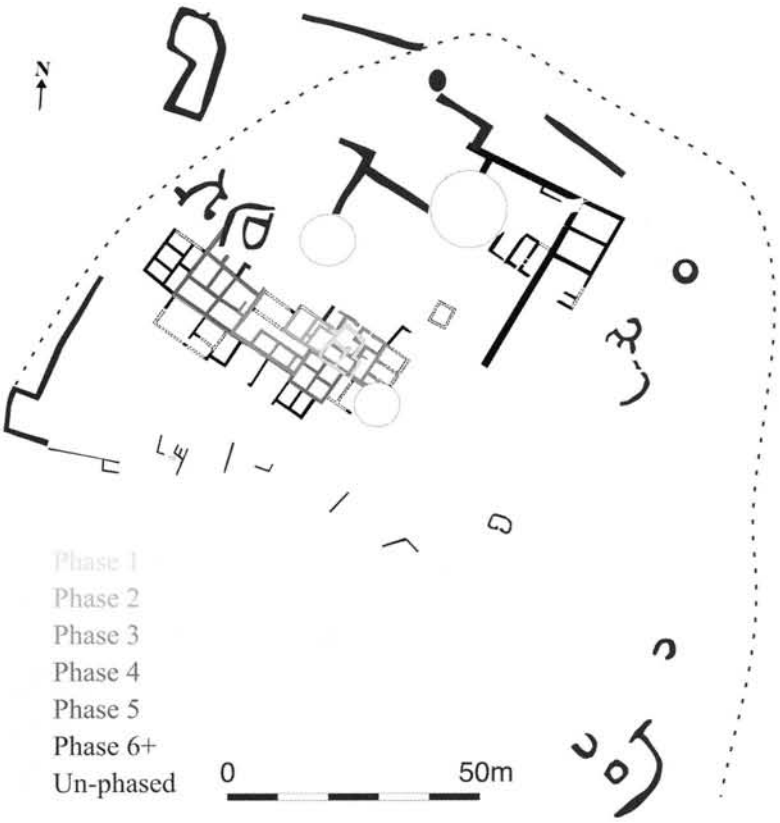

Figure 1. Plan of Umm Muri phases (after Fuller 2004; Payne 2005).

cups and *doka* (Figure 3.1, 3.7-8). The *doka* were found in all phases of the settlement and, therefore, indicate the use of *doka* in the 2nd to 3rd century AD, if not earlier.

The transport and storage vessels were dominated by red-slipped, or painted wheel-made ovoid jars (78%), with vertical or square-sectioned rims (Figure 4.1), wide-mouthed open jars were also found but rarely (Figure 4.2). Less significant; but present were handmade beer jars, globular jars and pots with everted rims (Figure 4.3, 4.4, 4.7). Imported amphorae accounted for 0.7% of the stratified Meroitic sherds (this rises to 1.7% of all identified forms if unstratified examples are included). They included the following:

- 1st to 4th century AD Late Roman 3 variants (Figure 2.16-17, PW45, Peacock and Williams 1991, 188-98)
- 1st to 2nd century AD 'Pompeii 5' (Figure 2.13)
- 3rd century AD 'Gauloise 4 copies' (Figure 2.14-15)
- Late Roman 1 - 4th century AD precedents from Turkey (Figure 2.18-19, Reynolds 2005)
- Rare 'Gauloise 4' (Peacock and Williams 27) forms with French and North African fabrics (Peacock and Williams 1986; Keay and Williams 2005) have also been tentatively identified datable to the 1st to 3rd or 4th centuries AD.

In the latest Meroitic deposits, post-dating 3rd century AD levels and associated with putative 4th century AD amphorae sherds, was a limited number (0.6%) of *qadus* sherds (Figure 4.14), suggesting that the *saqia* wheel was introduced at the very end of the Meroitic period at this site.

Meroitic tablewares included very rare black or brown burnished handmade and incised globular bowls or beakers. Meroitic painted cups in the white fabric were relatively common in cup, but also in beaker and bowl forms (Figure 2.1, 2.4). Meroitic finewares with stamped decoration were exceptionally rare. Red-slipped Nile silt beakers, bowls, globular bowls, ledge-rimmed bowls, dishes and plates were the most common tableware used on the site (Figure 2.2-3, 2.5-8). In combination, these tablewares provided a wide range of specialised forms available for use.

Ephemeral medieval structures, pits and features post-dated the Meroitic occupation. Within these disturbed sandy layers *c.* 4300 diagnostic sherds of post-Meroitic to Christian date were found. These deposits included sparse post-Meroitic (4th to 6th centuries AD) and more commonly Transitional to Early Christian pottery of the 6th to 9th centuries AD. Poorly dated coarsewares may represent later Christian occupation on the site, although conclusive evidence for activity in the Post-Classic or Late Christian periods is lacking. The vessels from these deposits were more evenly distributed between storage and transport (45%), utility (33%) and tablewares (22%). The utility wares were very similar to those found in the Meroitic period, mostly handmade bowls, large bowls, lugged bowls, dishes, large dishes, cups, lamps and *doka* (Figure 3.2-3, 3.7-8).

In the medieval period at Umm Muri transport and storage vessels included a few, probably residual, red-slipped wheel-made ovoid jars. Beer jars (25%), bag-shaped jars (20%) and pots with everted rims (44%), were found in large quantities (Figure 4.8). Beer jars may represent post-Meroitic occupation, though these jars clearly had a long period of use. All amphorae from these periods were made from Nile silt. Dongola amphora (Figure 2.20) sherds were rare, with flagons, costrols, bottles and jugs being more common (Figure 2.21-3). The *qadus* were more common than in Meroitic deposits (6%, Figure 4.10-11, 4.15). Fine-wares were restricted to Nile silt red, or white-slipped wares. Most were handmade, red-slipped, globular, or hemispherical bowl forms, although beakers were also found. Wheel-made red-slipped, goblets similar to Lower Nubian post-Meroitic forms (Figure 2.9, Williams 1991b, fig. 7a),Transitional Christian bowls (Figure 2.10, Phillips 2003, pl. 34) and Early Christian ledge-rimmed dishes (Figure 2.11, Adams 1986, Wares R5 and W2; Pluskota 2001, 361-4; Welsby Sjöström 2001, Form BO30.3) were also found.

On the adjacent island of Mis is a late Christian church (3-J-18). Approximately 50m to the east of the church is a medieval settlement (3-J-19). 3-J-19 produced just under 1000 diagnostic sherds dating from the Early to Late Christian periods, with some residual Meroitic material. The

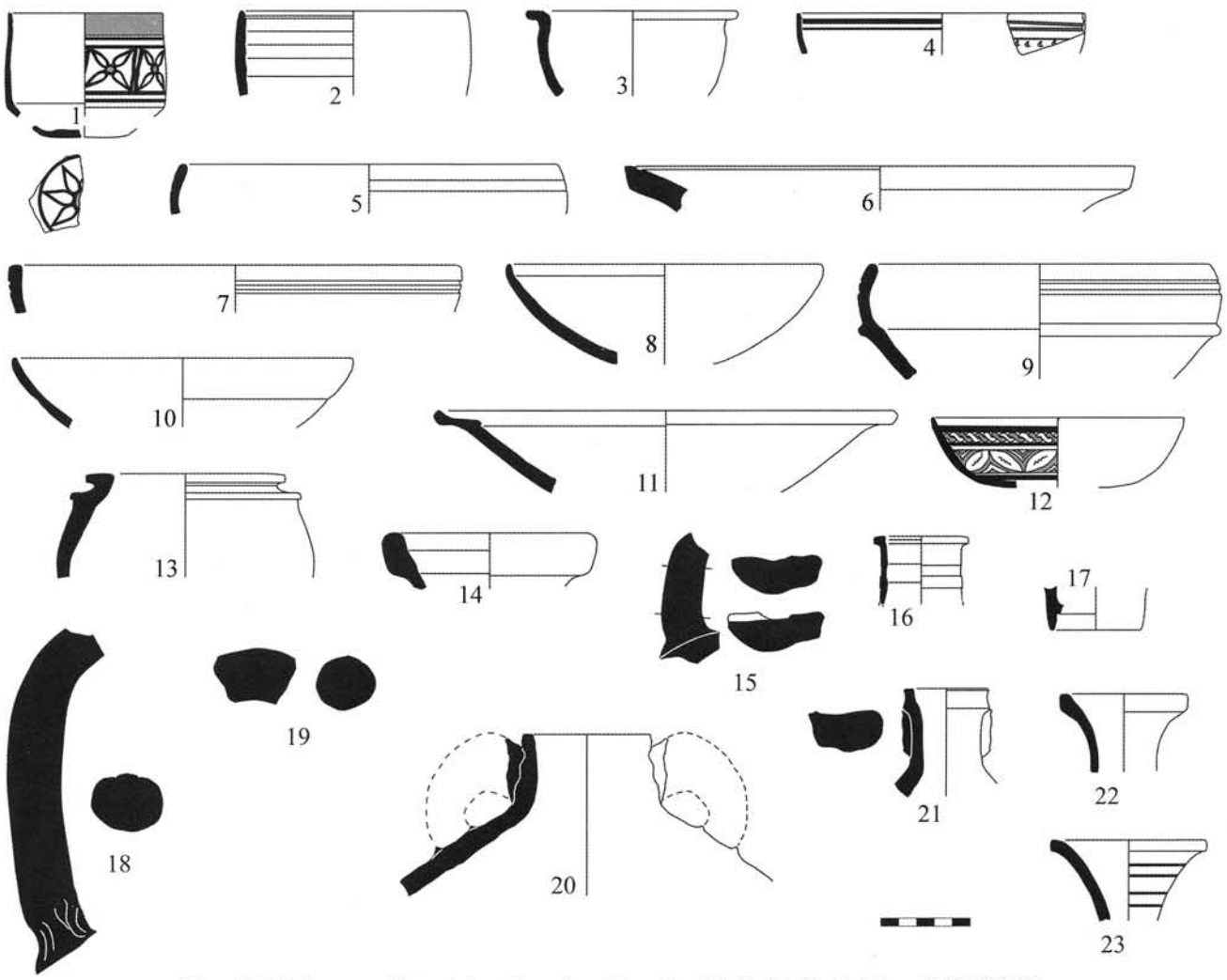

Figure 2. Tablewares and imported amphorae from Umm Muri (1-11, 13-19, 21-23) and Mis (12, 20).

majority of the pottery was storage (54%), or utility wares (41%) and many were generic handmade forms that could not be precisely dated. Utility forms were very similar to those found on Umm Muri, if a little more restricted in range. They consisted of handmade bowls, large bowls and *doka* (Figure 3.4-6). Transport vessels were very rare and storage forms were restricted to pots with everted rims (45%) and bag-shaped jars (26%, Figure 4.9). *Qawadis* were very common (21%, Figures 4.12-13, 4.16-17). Very few table-wares, all of Nile silt fabric, were present (5%). The table-wares were mostly dish and bowl forms (93%, Figure 2.11-12) of wheel-made red and white slipped fine-wares and red-slipped handmade bowl forms. A few beakers and cups were also found.

Interpretation

A number of technological changes are visible in this assemblage. The introduction of the *qadus* and the *doka* can now be better understood. *Doka* are clearly present in the earliest deposits at Umm Muri, possibly dating back to the 1st century AD and certainly were present by the Late Meroitic period. This agrees with recent evidence for *doka* from Meroe (Grzymski 2003, 61 P90). The *qadus*, a jar primarily (though not exclusively) used on cattle-driven *saqia* water wheels for irrigation, appears in Umm Muri at the end of the Late Meroitic period. The introduction of the *saqia* wheel would have enabled access to the previously unusable land on the Nile banks now known as '*saqia* lands' as well as more intensive farming (Ahmed 1984, 89). A 4th century AD date for this introduction appears to agree with contemporary evidence from Qasr Ibrim (Edwards 2004, 165), rather than an earlier introduction, in the 1st to 3rd centuries AD (Ahmed 1984, 91). Although transference of this technology along the Nile is most likely, it is also possible that the use of this technology in the Eastern Desert in the 2nd century AD may also have been a source (Tomber 2001, 255, fig. 6.3.20; 2006, MC Jar 95). However, it is not until the Christian period that the use of the *saqia* water-wheel becomes more common in the region (Welsby Sjöström 2001, J48.7; Phillips 2003, 49a-b) and also at Umm Muri and Mis.

Further information about medieval societies in the Fourth Cataract can be gleaned from this material if the social importance of eating and drinking is considered. When

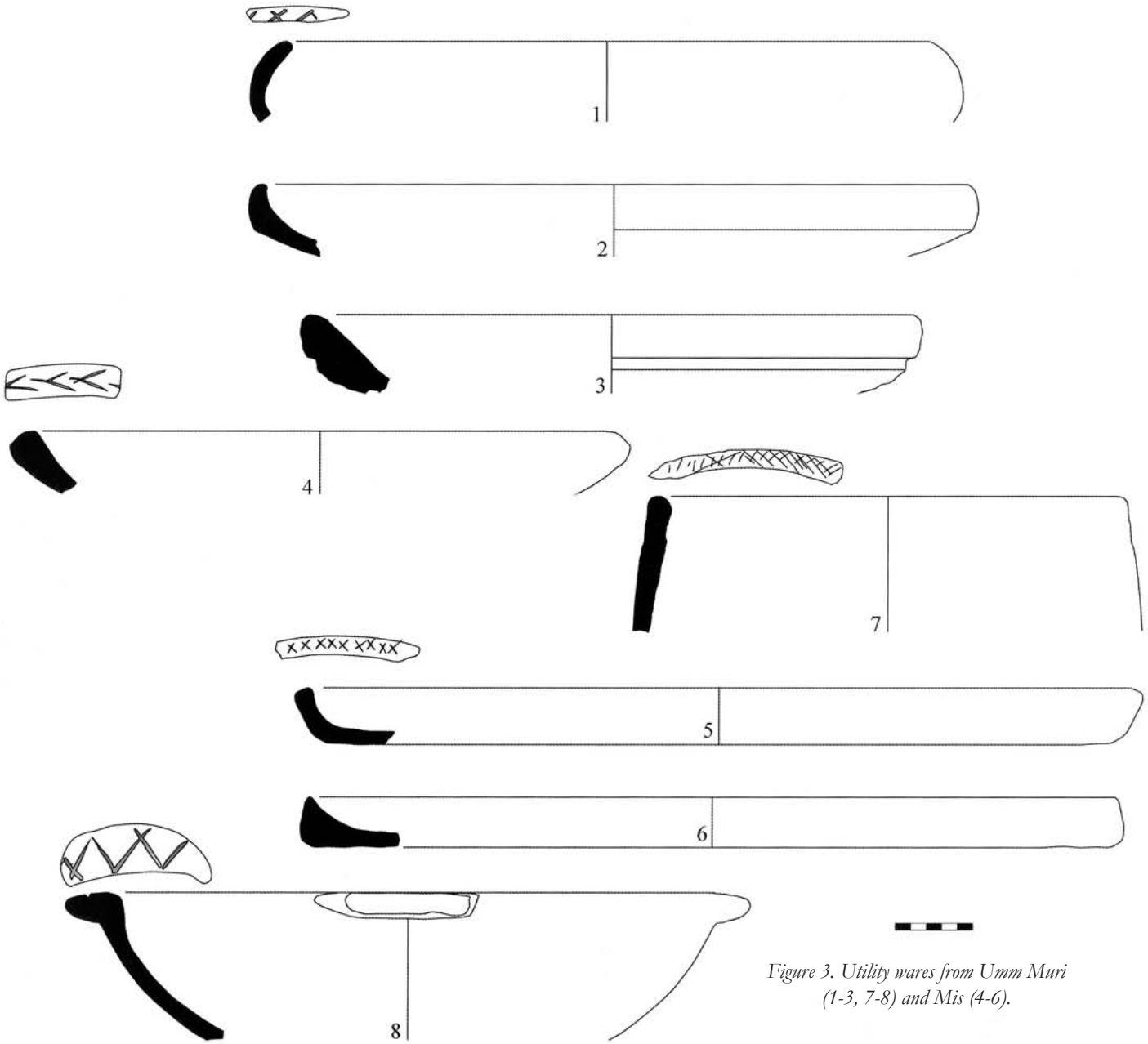

Figure 3. Utility wares from Umm Muri (1-3, 7-8) and Mis (4-6).

studying what and how food is consumed, 'culturalist' approaches used in anthropology (Sahlins 1976, 174; Falk 1994, 70-75; Lupton 1996) have revealed the extent to which food and its preparation are significant in the practice of defining the self and other. The perception of foodstuffs as taboo, or delicacies, has long been significant in distinguishing group identities, such as ethnicity (Falk 1994, 75). These form the basis of communicating 'food-based characterisation of the other' (Appaduri 1988, 15). Archaeological approaches influenced by this thinking have subsequently incorporated the artefacts used to prepare food, with faunal and botanical data (Meadows 1995, 138; Hawkes 2002, 45). Ceramics, distinctive of regional or cultural food preparation (Swan 1992) or presentation practices (Okun 1989, 124; Meadows 1995, 136-7; Perkins 2000, 203), have been recognised. Functional aspects are not always the most important and changes over time may be explained by social changes.

Comparing the presence, absence and relative frequency of different forms (Fincham 2002, 36) will produce a pattern of how ceramics were used together, such as tableware services. The form descriptions used were based on quantifiable features outlined in guidelines for ceramicists (Darling 1994), supplemented by forms specific to Sudan. The pottery is quantified by sherd number and all assemblages include between *c.* 1000 to *c.* 4000 indicator sherds.

Four assemblages are compared, for their distribution of utility forms, storage and transport vessels and tablewares. Three are from different periods in the Fourth Cataract region, including Meroitic Umm Muri, Post-Meroitic to Christian Umm Muri and Christian Mis. The fourth site is an emerald mining settlement called Nugrus in the Eastern Desert of Egypt (Sidebotham *et al.* 2004), dating from the

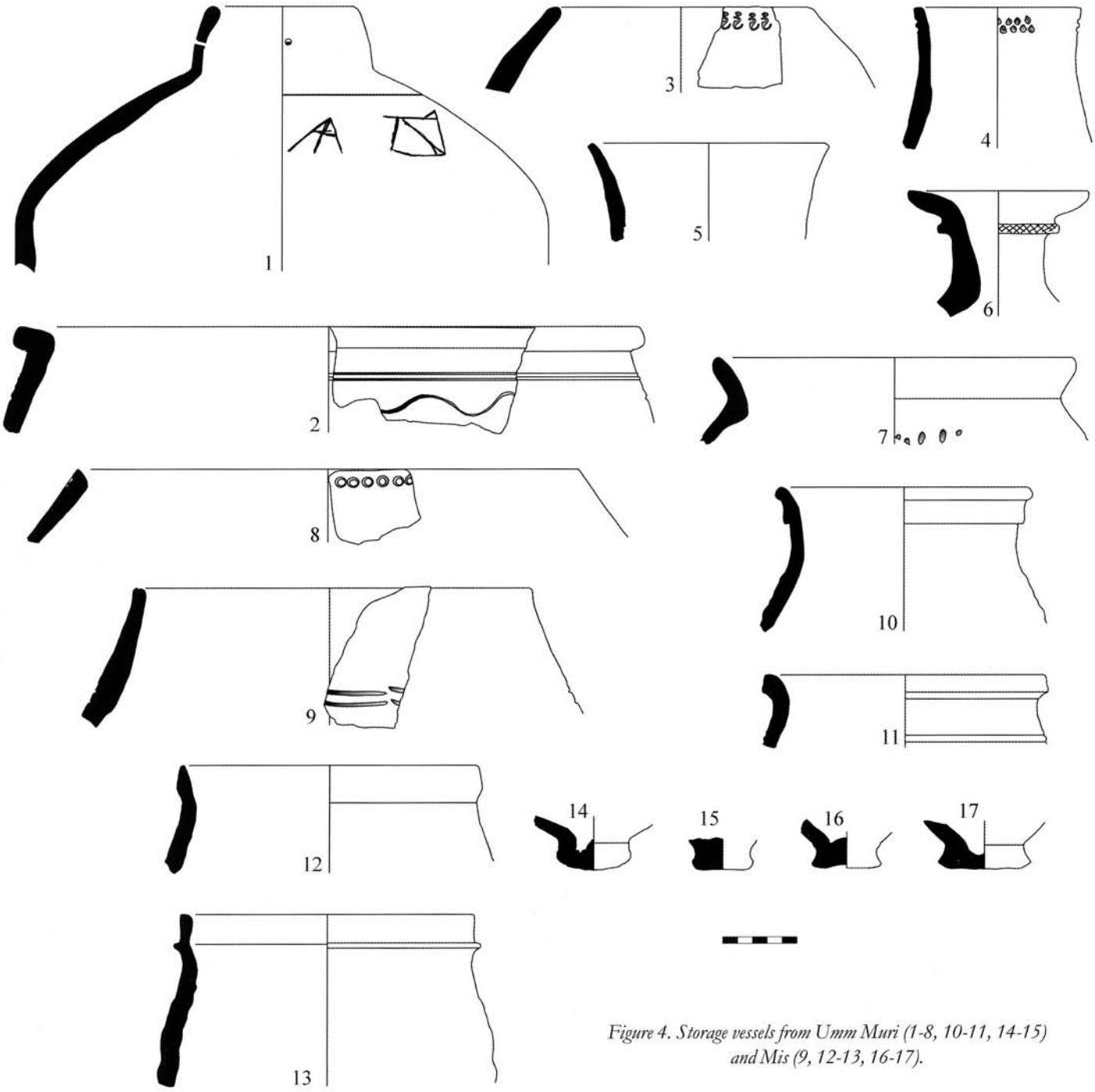

Figure 4. Storage vessels from Umm Muri (1-8, 10-11, 14-15) and Mis (9, 12-13, 16-17).

1st to 6th centuries AD. Nugrus was chosen as a comparative sample because it is contemporary with the Umm Muri site, with a peak period of activity in the 4th to 6th centuries AD. It was also chosen because it lies in an adjacent region. Contact between these regions is demonstrated by the occurrence of the same ceramic forms in both (imported amphorae, Peacock and Williams 27, Pompeii 5, Peacock and Williams 45, at Umm Muri and Nugrus and Eastern Desert Ware found in the Fourth Cataract region, Barnard 2002). However the environment and function of Nugrus are quite different from the Fourth Cataract settlements. The Eastern Desert environment of Nugrus would provide a different and more limited range of flora and fauna for consumption (Cappers 2006) while the high value of the emeralds would have funded importation of supplies from other regions, such as the Nile. For these reasons the Nugrus assemblage can be expected to show some different patterns in the use of ceramics to contrast with the Fourth Cataract material. This comparative material will help emphasise, where present, similarities in the Fourth Cataract pottery assemblage over time.

Storage and transport vessels vary significantly between periods (Figure 5). Firstly transport amphorae and flagons are very common at Nugrus. Red-slipped wheel-made storage jars are very common at Meroitic Umm Muri, although some imported amphorae are also present as well as a few

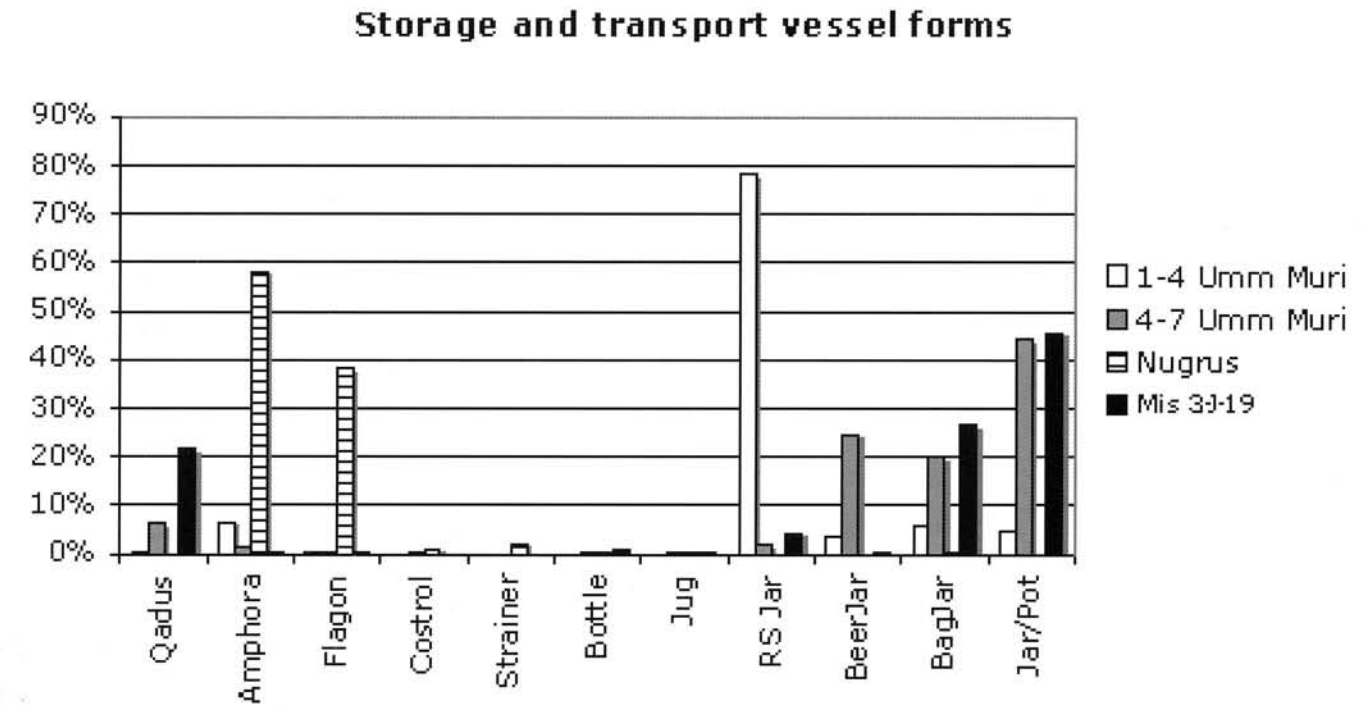

Figure 5. Distribution of storage and transport vessel sherds.

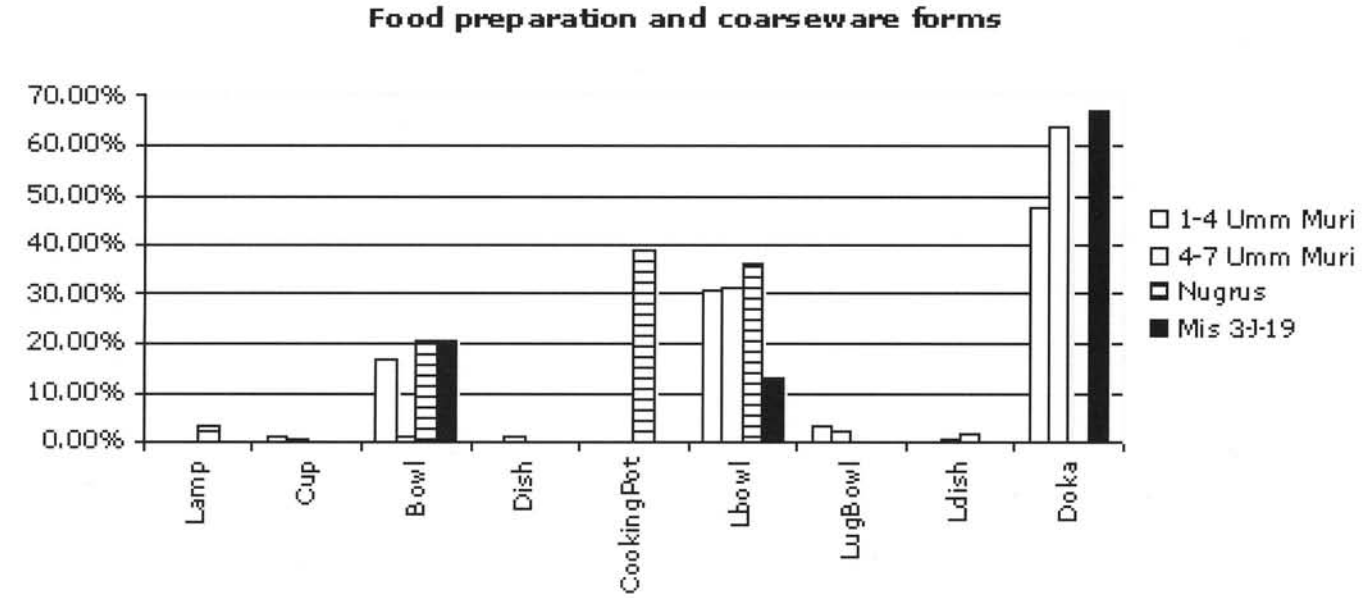

Figure 6. Distribution of utility vessel sherds.

qawadis. At post-Meroitic to Early Christian Umm Muri storage vessels are almost exclusively handmade (beer jars, globular jars and everted rim jars) with some wheel-made *qawadis*. Mis is similar to Early Christian Umm Muri, but with no beer jars and an increase in the use of *qawadis*.

Utility wares are very similar between both periods of Umm Muri and Mis, with the dominance of *doka* and large bowl forms (Figure 6). It would appear that similar vessels were being used for the preparation of food in the Meroitic to Late Christian period in the Fourth Cataract region. Nugrus is, however, very different with wheel-made, closed, carinated cooking-pot forms, representative of different food preparation practices.

Table-ware forms were used very differently over time in the Fourth Cataract region (Figure 7). The overall proportion of table-wares drops, in this region, in the post-Meroitic and Christian periods. There is also a significant drop in the variety of table-wares used over time. The Meroitic assemblage involved a wide range of elaborate, decorative and fragile forms, including cups, beakers, plates, dishes and ledge-rimmed, globular and hemispherical bowls. In the Christian period and at Nugrus, more versatile dish

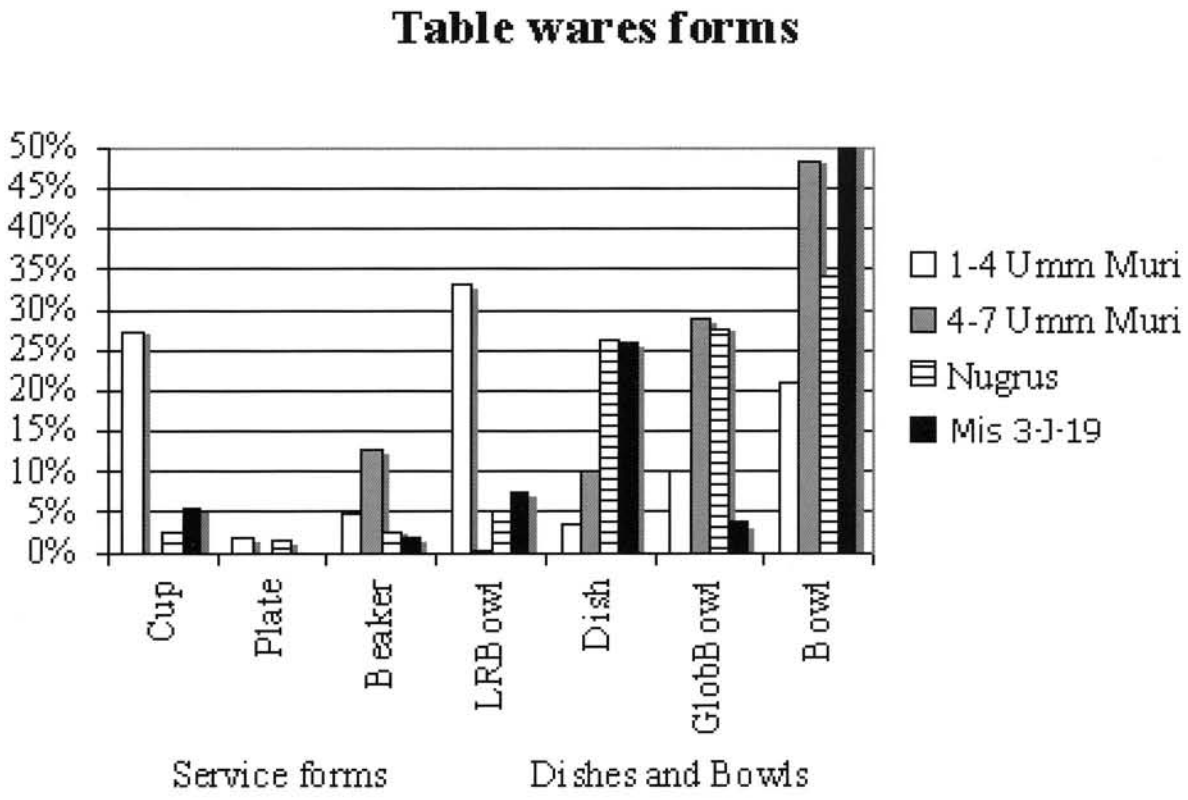

Figure 7. Distribution of table-ware sherds.

and bowl forms were generally used. This represents a very different way of serving, presenting and consuming food. This is particularly significant as this represents a social act. A change from using a wide variety of decorative specialised forms to a limited range of versatile forms may indicate changes in communal and individual eating practices. The disappearance of Meroitic fine-wares may represent changes in the organisation of society at these sites. Explanations for this pattern could be linked to the changing fortunes and role of Umm Muri's inhabitants during the 1st millennium AD, before and after the decline of the Meroitic state, its palace compounds and related ceramic factories (Edwards 2004).

Conclusions

To conclude, this preliminary study of pottery from the Mis and Umm Muri settlements suggests that there was

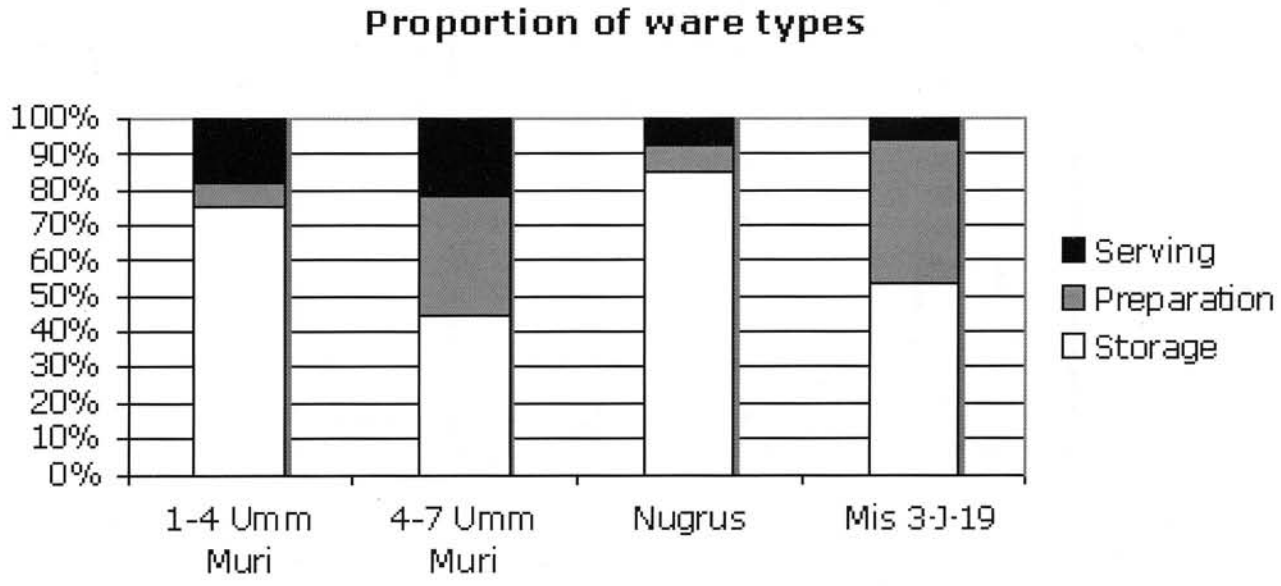

Figure 8. Proportion of ware types.

little change in the utility wares used to prepare food in the Meroitic to Christian period and this was very different to the Nugrus example from the Eastern Desert. The situation with the storage and transport vessels was very different, with a reduction in the number of transport vessels being used and the absence of imported amphorae in the Christian period. Also, in the Meroitic period, a large number of storage vessels may indicate greater storage capacity in Meroitic Umm Muri than was present afterwards. The occurrence of *qadus* sherds increases significantly over time, as a proportion of all storage/transport vessels, from 0.6% (4th century AD deposits only) to 6%, then 22% in the Christian period. Finally, the use of table-wares was distinctly different, with a reduction in the number, availability and variety of table-wares in the post-Meroitic and Christian periods (Figure 8). Ultimately, explanations for these preliminary results will require a larger study with more inter- and intra-regional comparisons with tight chronological controls. Exploration of how the changing use of ceramics relates to the fauna and flora will be important, along with understanding how the introduction of new technology such as the *saqia* wheel (Welsby 2002, 187), or the introduction of new fauna or flora (such as Egyptian varieties of wheat, Welsby 2002, 186) will have influenced consumption practices. This could also be extended to question how, at some sites, regional tastes (for sheep/goat, cattle and hunted taxa) and taboos (such as pigs or fish, Welsby 2002, 163) influenced what cooking vessels and table-wares were used in their preparation and consumption.

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