

Heiko Riemer and Peter Schönfeld

The prehistoric pottery of Abu Tartur, Western Desert of Egypt

1. Introduction

Abu Tartur (“father of the cone-shaped head”) is a sub-plateau of approximately 1,200 km² at the southern edge of the Egyptian Limestone Plateau (or Abu Muhariq-Plateau), separating the oases of Dakhla and Kharga in the Western Desert of Egypt (Fig. 1A-B). It was named after a conical hill at the northern caravan connection between Kharga and Dakhla, the so-called Darb el-Ain Amur. The generally flat-topped plateau surface has an absolute elevation of 540-570 m a.s.l. (Hussein 1990: 260) gently dipping to the north where it is joined by the northern parts of the Limestone Plateau. The plateau surface is a plain Hamada covered with stone gravel, interrupted in many parts by small wind-shaped hills. To the south and east the Plateau is surrounded by a steep escarpment up to 400 m high that drops down to the oases’ depression. The southern escarpment stretches out over some kilometres into the depression forming the Abu Tartur foot hills.

The sites mentioned in this paper are situated within an area of approximately 25 by 15 km in the south-eastern sector of the Abu Tartur Plateau (Fig. 1C), about 50 km west from the centre of Kharga Oasis. This is an area where rich phosphate deposits have attracted a large scale mining venture since the 1960s (Said 1971; Wassef 1977). After a decade of geological surveying and prospecting, the south-eastern plateau sector (“Maghrabi-Liffiya sector”) was the subject of a systematic exploratory programme on the large phosphate reserves in the early 1970s conducted by the Egyptian Geological Survey and Mining Authority (EGSMA) (Hermina & Wassef 1975; Wassef 1977; Hussein 1990). During the following years more than 100 km² of the plateau surface and the scarp face were topographically mapped, and within a perpendicular grid system a

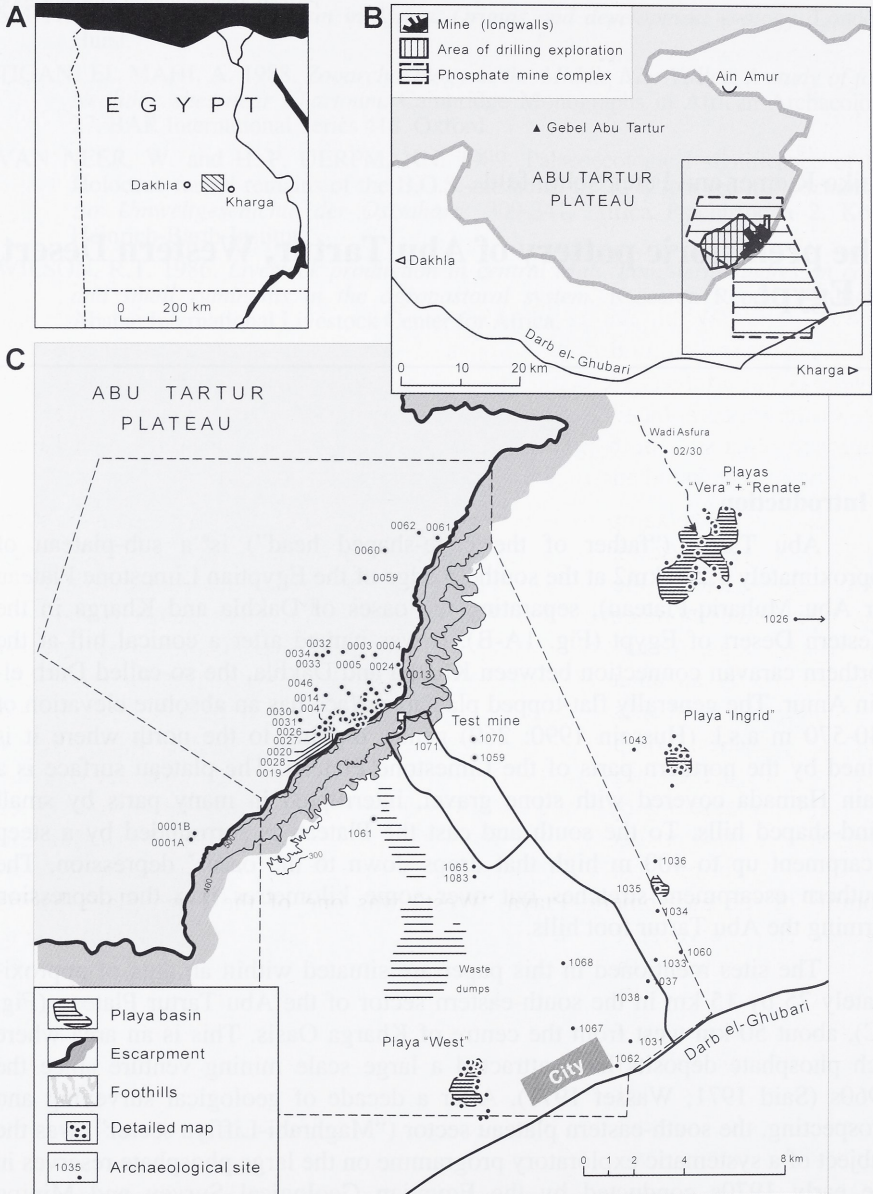


Fig. 1. A-B Location of Abu Tartur Plateau and the study area in the south-eastern section of Abu Tartur; C Study area showing the distribution of archaeological sites recorded at Abu Tartur.

drilling program was conducted to evaluate the position and potential of the phosphate deposit. An underground pilot mine was then advanced into the phosphate bed which now serves as an air adit for the major underground run-of-mine southwest of the pilot mine. During this time the large industrial complex around the test mine was erected in order to meet the extensive infrastructural needs.

The archaeology of Abu Tartur has much benefited from the enthusiastic work of Siegbert Eickelkamp. After a first activity in the late 1970s at Abu Tartur, he was the mining engineer of the Abu Tartur phosphate mine between 1981 and 1987. He was the first who discovered a large number of sites on top of the escarpment. Within the tracks of heavy drilling trucks covering the entire test area, artefacts and cultural layers became visible. In the following years, the sites as well as the artefacts were fully registered, and site maps were drawn on the base of the topographical maps that were available from the geological surveys. Moreover, other sites in the low land plains and playas in front of the Abu Tartur escarpment were found and registered by the same techniques.

Even if Eickelkamp could not carry out any excavation, his documentation is that of a systematic research programme of the surface sites, as he not only completely registered the surface tools found on a site, but also developed a systematic and comprehensive recording of topography, artefact clusters and geo-scientific settings. About 20 years ago it became visible, that his investigations despite done by an amateur archaeologist were also a contribution to rescue archaeology, as most sites of Abu Tartur were destroyed in the mean time by the growing industrial complex. The sites on top of the Plateau were already destroyed when they were found by Eickelkamp. Now after two decades the progressed weathering by wind erosion has left nearly nothing behind. Sites along the road that connected the mine with the paved road between Dakhla and Kharga, were entirely lost, as this area has been heavily built-up. At the western foothills of the escarpment, Playa "West" was one of the large playa basins systematically surveyed by Eickelkamp. The new village that was built during the last years reaches the eastern border of the basins, and many sites were destroyed throughout. The waste dumps that resulted from the processing of phosphate concentrates will probably reach the playa basin within a couple of years. Land reclamation for farming areas as well as new paved roads are under construction all around the mining complex. Moreover, looting and destruction of the archaeological sites can be observed as a consequence of the rapid population increase in this area.

136 sites have been recorded at Abu Tartur by Eickelkamp of which 62 sites lay on the plateau surface while 74 sites are located at playa depressions and on the sandstone plain in front of the escarpment. The sites at Abu Tartur (or AT) are indexed with a numerical code starting with AT 0001 for the sites on the

Plateau while the playa and plain sites have numbers from AT 1001 upwards. A critical re-examination of the Abu Tartur documentation and collection is now under way. The present paper gives a preliminary report on the examination of the pottery found on the Abu Tartur sites. The pottery collection comprises a total of 416 sherds recorded at 68 individual sites, which make up 50% of all sites registered for the Abu Tartur area (Table 1). Accordingly the mean value is about 6 sherds per ceramic site. In fact the number and quality of potsherds found on the surface sites is rather low. The sherds are generally small in size and often corroded. Only 10% of the potsherds consist of decorated pottery which complicated the classification. Therefore, a fabric analysis has been established based on the major tempering agents as defined by macroscopical identification of the sherds combined with a binocular examination of selected samples.

Table 1. Abu Tartur: Ceramic sites and their local distribution.

Location of sites	Total sites	Ceramic sites	%
Plateau	62	37	59.7
Foothills and plains	74	31	43.1
<i>Playa West</i>	16	10	62.5
<i>Playa Ingrid</i>	13	6	18.5
<i>Playa Renate + Vera</i>	27	5	46.2
<i>Sandstone plains</i>	18	10	55.6
Total	136	68	50.0

2. Fabrics

Five basic fabrics have been distinguished. With minor exceptions, they can be synchronized with the fabrics determined for the southern Limestone Plateau area at Abu Gerara (Riemer 2003). The following list of fabric types and possible variants can be given as a conclusion of the pottery analysis:

Fabric 1

Non-tempered or moderately tempered sherds with a dense closed matrix. The paste consists of a homogenous fine calcareous material (reactive to hydrochloric acid). Surface and core colours may range from reddish brown to pale brown and grey, however the core is mostly grey. Two variants have been ob-

served on the basis of non-plastic inclusions which in most cases probably represent accidental intrusions:

Fabric 1A = temper with plant grains visible as black burned-out voids,
Fabric 1B = rounded sand grains.

The variants as defined above do not display distinct groups, as on most sherds a combination of the two components can be observed.

Fabric 2

This fabric is characterized by a fine shale temper that can hardly be identified with the naked eye. The shale particles have a length that often does not exceed 0.5-0.7 mm (Fig. 2). In most sherds a certain amount of sand and/or other minerals have been added. The colours can vary from yellowish brown to brown.

Fabric 3

Fabric 3 contains sand, and may additionally have other minerals. The sherds are less porous than fabric 2, but not as dense as fabric 1. A great variety in colours occurs.

Fabric 4

Fabric 4 is the "coarse shale fabric", which geomorphologically speaking is, in fact, a "very coarse" fabric, as the shale particles can range up to 10 mm length. Although fine- and medium-grained shale make up the highest proportion among the shale particles, the larger grains are more significant for the fabric. Regarding the largest particles that can be observed on a sherd three variants have been defined (Fig. 2):

Fabric 4A = shale particles > 2-3 mm length (in the absence of the other variants, this group has been defined as fabric 4 at Abu Gerara).

Fabrics 4B and 4C = In contrast to fabric 4A, the shale pieces in these variants do not exceed 2 or 2.5 mm. Though these two variants seem to be completely different when studied with the naked eye, the microscopic examination does not reveal any difference on the base of shale grain size. The fabric 4B paste is of yellowish colour and relatively hard fired. In contrast, fabric 4C is reddish or red-coated with a soft, crumbly paste. The fabric 4B and 4C variants are previous, as they comprise a very small number of sherds.

Fabric 5

This fabric is characterized by a vegetal component of plant fibres, that may be combined with sand or angular quartz.

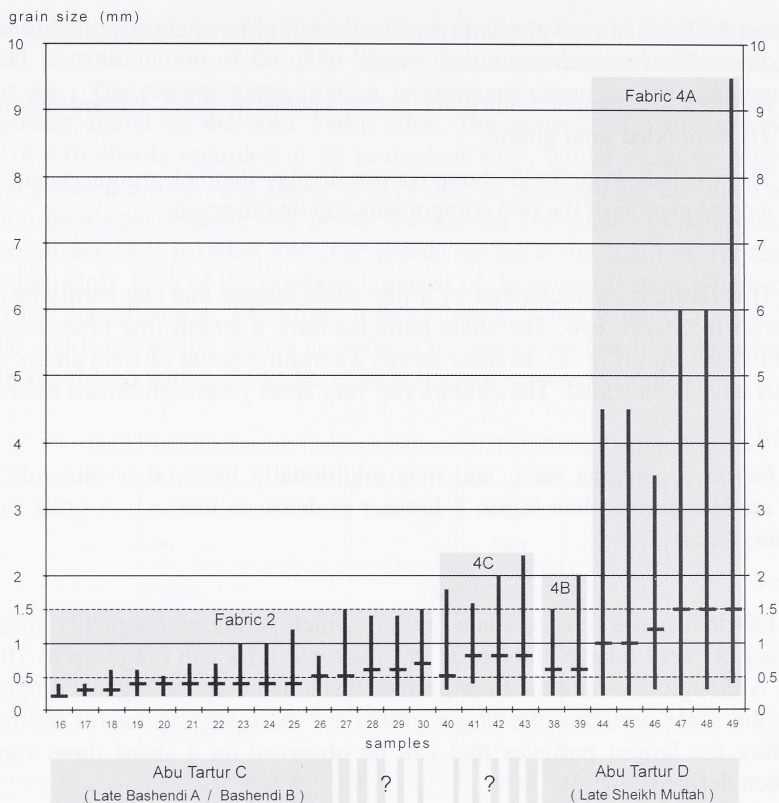


Fig. 2. Maximum, minimum, and mean value of grain size of shale particles used as tempering agents.

3. Ceramic attributes

3.1 Vessel shape

Due to the mostly small-fragmented condition of the collected ceramic material of Abu Tartur the original shape and size of the vessels is only reconstructable in a few cases. As far as discernible the majority of potsherds in all fabrics, with the exception of fabric 5, represent a very simple morphology that gives little base for detailed comparison. This morphology is dominated by open bowls with differing deepness and moreover by globular or slightly restricted jars (Fig. 3A). Although some differences exist, these seem mostly caused by the individual production of the pottery. Generally the number of vessels in all fabrics is too small to recognize any significant relations between fabric and shape.

Nevertheless a closer connection between fabric and shape is suspected concerning some cups with wide mouth made from fabric 4C. While flat cups are quite common in the fabric 4C, this shape is lacking completely in the fabric 4A and 4B-production which only represents the bowls and jars mentioned above.

The clearest relation between shape and fabric exists for the organic tempered fabric 5 where all potsherds belong to globular, decorated jars. These quite distinctive jars have a short everted neck and a thickened rim. As already assumed for similar jars found in Dakhla Oasis (Hope 2002) the uncommon fabric and shape clearly shows a non-local provenance.

3.2 Vessel size and wall-thickness

Due to the bad preservation of the Abu Tartur pottery only few potsherds allow the measurement of size. In no case is it possible to get any data concerning the former height of the vessels. For this reason the only hint on the vessel sizes is given by a small amount of potsherds still allowing the measurement of the rim diameter (Fig. 3B).

The available data for vessels made in fabric 1 are at least suited to show the small size of vessels which only show small rim diameters of maximal 150 mm. Despite the poor preservation of the pottery the wall-thickness can mostly be detected (Fig. 3C) and seems suited to verify the relation between vessel size and fabric. Indeed the small size of the vessels in fabric 1 correlates with the thin walled production of the potsherds which are usually less than 6 mm in thickness.

For fabric 2 at least eight vessels could still be measured, showing rim diameters between 140 and 280 mm and therefore a clear tendency to larger vessel sizes than fabric 1. The wall-thickness of fabric 2 potsherds mostly ranges from 4 to 7 mm but there are also examples up to 10 mm thick.

The few data available for fabric 3 give evidence of rim diameters between 140 and 210 mm but is certainly not enough to reflect the whole range of vessel sizes in this fabric. The wall-thickness is similar to fabric 2 but shows even thicker potsherds up to 12 mm. Among the thicker fabric 3 potsherds some examples decorated with packed dotted zigzag are to be mentioned.

For fabric 4A rim diameters between 200 and 290 mm show that evidently larger bowls were made in this fabric. Matching with the large size of the vessels and the coarse tempering the fabric 4A production also has the largest wall-thickness which often comes to 9 mm but in some examples also reaches 13 mm. Despite this, even thin-walled production is made in fabric 4A that on the whole shows the widest range among all fabrics. The amount of data for fabric 4B and C is too small even to show tendencies concerning the size.

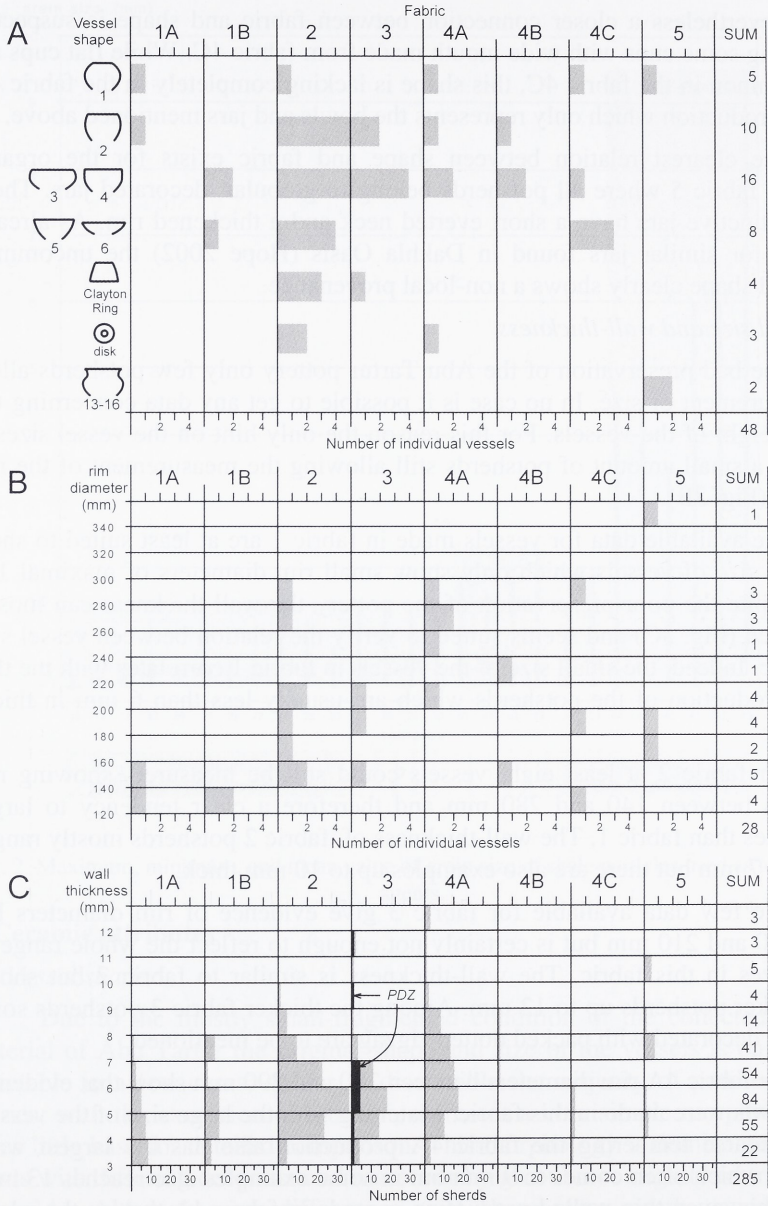


Fig. 3. Ceramic attributes related to fabrics: A Vessel shape; B Rim diameter; C Wall thickness (PDZ = Packed Dotted Zigzag sherds).

The rim diameter of fabric 5 vessels is between 157 and 350 mm and therefore shows a wide range based on a quite small amount. Nevertheless this impression is confirmed by the wall-thickness of fabric 5 potsherds between 4 and 10 mm, showing the same wide range.

3.3 Decoration

As in neighbouring regions of the oases and the Limestone Plateau decoration is very rare in the prehistoric pottery of Abu Tartur. Among the total number of 416 potsherds only 42 examples are decorated on the body. Rim decoration is even more rare and just evident on 22 sherds (Tab. 2).

Table 2. Abu Tartur: Frequencies of potsherds related to fabrics and decorations.

Body decoration	Fabrics								Total	%
	1A	1B	2	3	4A	4B	4C	5		
undecorated	29	23	141	71	97	2	7	4	374	90.0
Packed dotted zigzag				12					12	2.9
Rippled ware			9						9	2.2
Geometric motives		1	2						3	0.7
Brush						1			1	0.2
Mat-impressions								17	17	4.1
<i>Total</i>	29	24	152	83	97	3	7	21	416	100.1
<i>%</i>	7.0	5.8	36.6	20.0	23.3	0.7	1.7	5.0	100.1	
Rim decoration										
Black-topped			7	1	5				13	3.1
Thumb impressions			2						2	0.5
Carved rim			1	2					3	0.7
Cross-carved rim			4						4	1.0

Particularly in fabric 1 decoration is nearly absent both on the body and on the rim. The only exception is a fabric 1B potsherd with incised hanging triangles beneath the rim (Fig. 4.13).

Most variations of decoration are visible in fabric 2 where rippled body decoration (Fig. 4.16) and incised geometric motives beneath the rim (Fig. 4.14-15) occur. In addition to that, the rim can be decorated by blackening (Fig. 4.17),

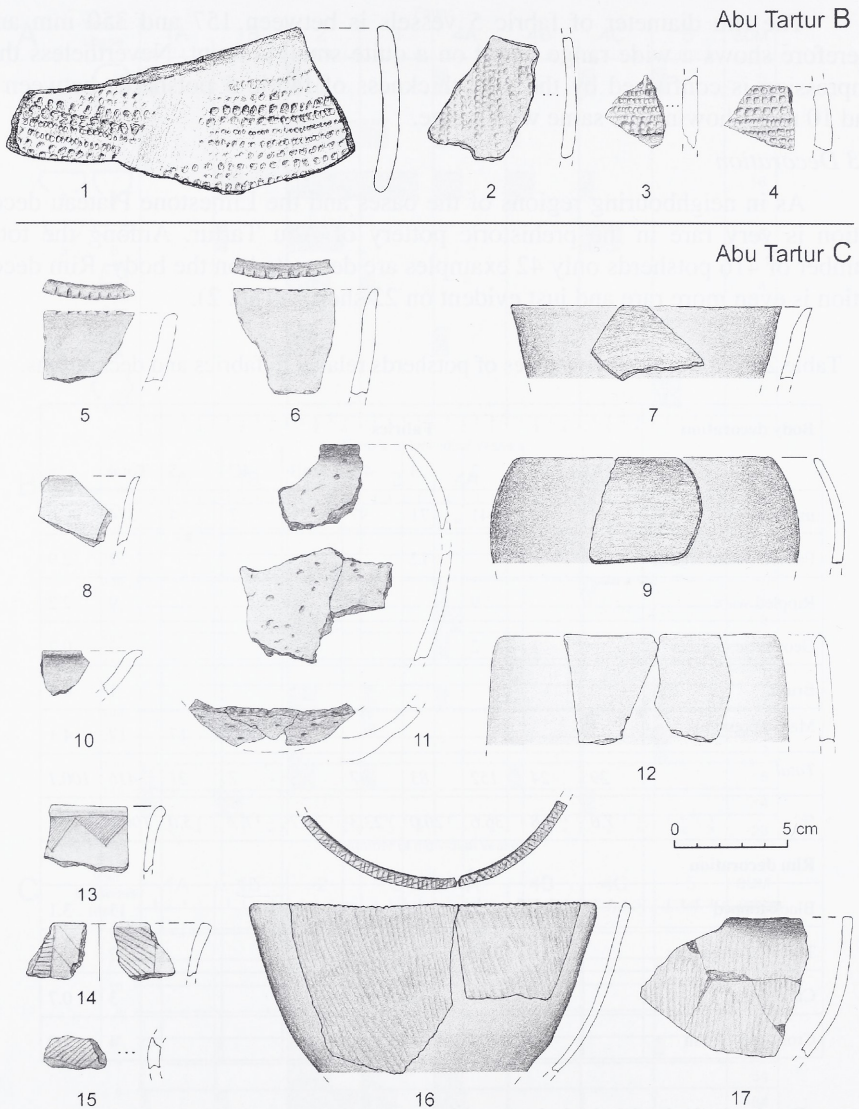


Fig. 4. 1-4 Abu Tartur B: AT 1004, 1017, 0006, 0007, Packed dotted zigzag decoration (fabric 3); 5-17 Abu Tartur C: 5-6 AT 0003, carved rim (fabric 2); 7-12 AT 0021, 0026, 0004, 0010, 0062, 0026, undecorated (fabric 1); 13-15 AT "034", AT 0062, AT 0062, beakers with incised geometric decorations (13 fabric 1; 14-15 fabric 2); 16 AT 0032, rippled surface (fabric 2); 17 AT 0014 black-topped red-polished with rippled surface (fabric 2).

Abu Tartur D

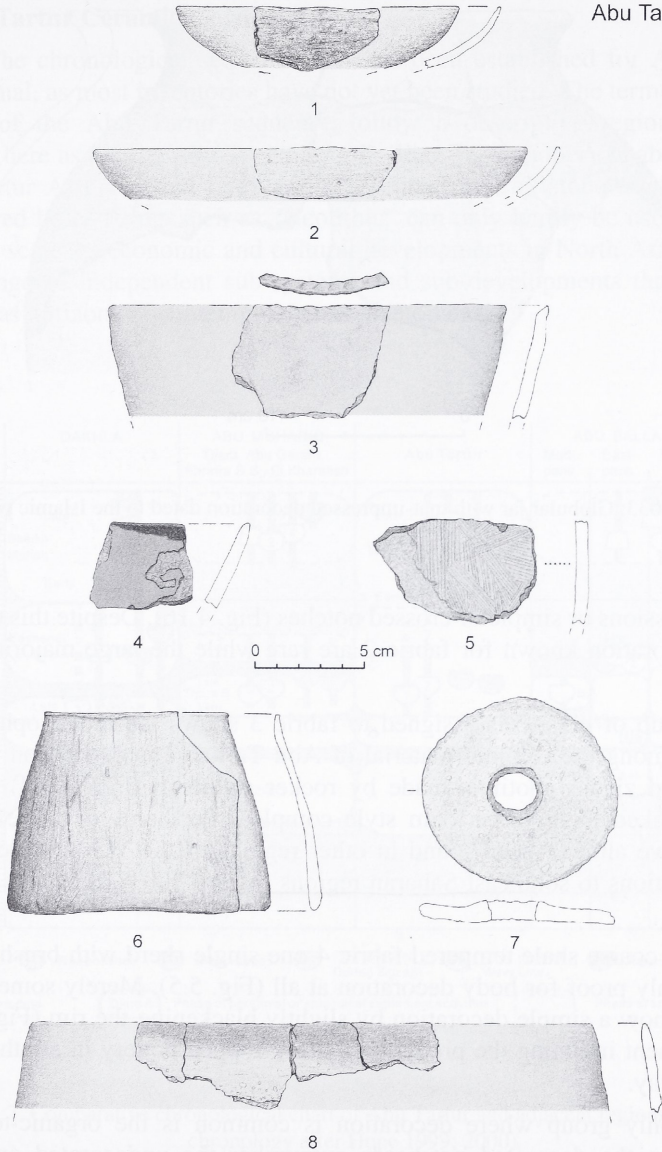


Fig. 5. Abu Tartur D (Sheikh Muftah): 1 AT 0014 (fabric 4C); 2 AT 0034 (fabric 4C); 3 AT 0049 (fabric 2); 4 AT 0003, black-topped red-slipped (fabric 4B); 5 AT 0003 "brush" decoration (fabric 4B); 6 AT 1006, Clayton ring (fabric 2); 7 AT 1029, Clayton disk (fabric 4A); 8 refitted from AT 0018 and AT 0049 (fabric 4A).

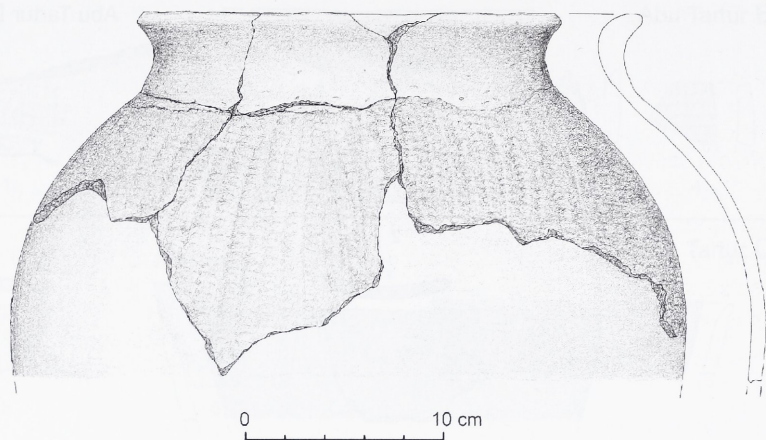


Fig. 6. AT 1033: Globular jar with mat-impressed decoration dated to the Islamic period.

thumb impressions or simple or crossed notches (Fig. 4.16). Despite this range all kinds of decoration known for fabric 2 are rare while the large majority is undecorated.

A group of potsherds assigned to fabric 3 shows the most sophisticated decoration among the ceramic material of Abu Tartur. The decoration with the packed dotted zigzag motif is made by rocker stamping (Fig. 4.1-4) and can clearly be linked to the Khartoum style complex. Potsherds decorated in this technique have already been found in other regions of the Western Desert and show connections to southeast Saharan regions (Warfe 2003; Riemer & Jesse in press).

In the coarse shale tempered fabric 4 one single sherd with brush decoration is the only proof for body decoration at all (Fig. 5.5). Merely some rims of 4A vessels show a simple decoration by slightly blackening the rim (Fig. 5.8), a stylistic element imitating the predynastic black-topped pottery in a rather unsophisticated way.

The only group where decoration is common is the organic-tempered fabric 5 where the decorated potsherds outnumber the undecorated ones. The dominating kind of decoration here is extensive impressions on the body of the vessel, resembling a basket (Tangri 1991; Hope 1999) (Fig. 6). Nevertheless the decoration seems to be made by a tool or mat and for that reason better is named “woven mat design” (Hope 2002: 45).

4. Abu Tartur Ceramic Chronology

The chronological sequence that has been established for Abu Tartur is provisional, as most inventories have not yet been studied. The terms used for the phases of the Abu Tartur sequence follow a descriptive regional approach labelled here as phases Abu Tartur A to D (Fig. 7). As pottery is absent in Phase Abu Tartur A this period is exclusively represented by stone artefacts and not considered here. Terms such as “Neolithic” can only hardly be used in a supra-regional scale, as economic and cultural developments in North Africa display a wide range of independent sub-systems and sub-developments that can not be defined as horizons of contemporaneous phenomena.

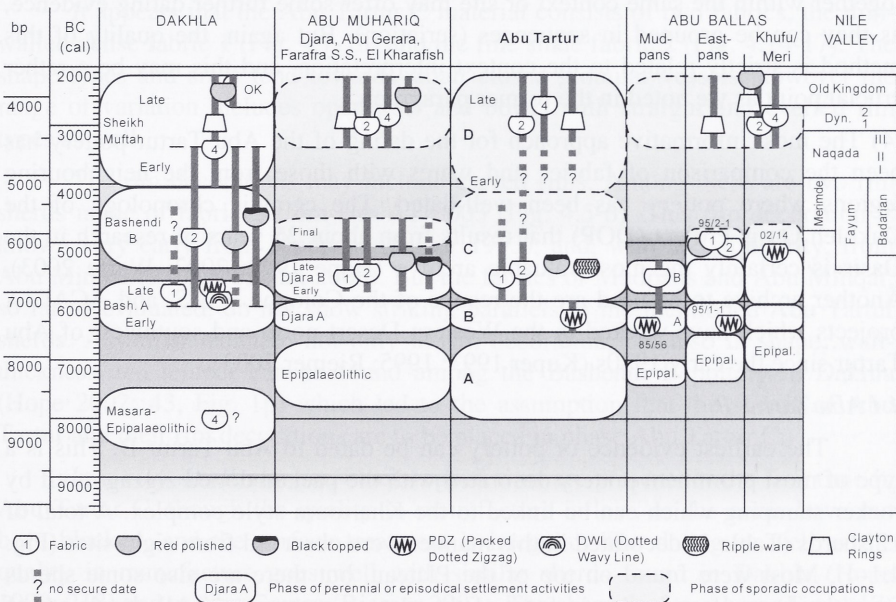


Fig. 7. Comparative chronological chart of Abu Tartur and adjacent regions (Dakhla chronology after Hope 1999; 2000).

Dating evidence for the Abu Tartur pottery derives from four sources listed here in increasing order of importance:

(1) Direct dating of the pottery has not yet been realized to a greater extent. Unfortunately plant temper which can be used for 14C-dating is rare among the

Abu Tartur pottery. Only in one case a sample of soot adhering to a potsherd (Fig. 7) was dated by conventional radiocarbon analysis, however, it yielded a date within the Islamic time.

(2) Context dating either performed as typo-chronological comparison or with connected absolute dates may offer an alternative if direct dates are missing. Most potsherds examined here were found on archaeological sites in connection with other artefacts, especially stone tools. In many cases, the context a site can provide is of great value as chronological indicator, though only a small number of sites have yet been completely studied. Moreover, the tool assemblages often yielded no definite clues as most collections are from surface scatter, and many assemblages are mixed up by intrusions of different phases.

(3) To some extent sherds and related ceramic attributes that have been observed together within the same context or site may offer some further dating evidence, as they can be grouped in sequences (seriation). But again, the quality of this method is strictly related to the context interpretation, and this may be a rather crucial point as we noted in the former paragraph.

(4) The most informative approach for the dating of the Abu Tartur pottery has been the comparison of fabrics and wares with those from the neighbouring regions where pottery has been well-dated. The ceramic chronology of the Dakhleh Oasis Project (DOP) that results from about 25 years of research in the Oasis is certainly the most valuable archive (Hope 1999; 2002; Warfe 2003). Another archive to be used are the results of the Cologne B.O.S. and ACACIA projects which have worked in the Western Desert north and southwest of Abu Tartur since the early 1980s (Kuper 1993; 1995; Riemer 2003).

4.1 Abu Tartur B

The earliest evidence of pottery can be dated to Abu Tartur B. This is a type of most prominent pottery decorated with the packed dotted zigzag motif by rocker stamping which can be linked to the Khartoum style complex. A total of 12 sherds (Table 2) decorated in this manner were observed from eight sites (Fig. 4.1-4). Most were found on top of the Plateau, but there are also some sherds from the large playa basins in front of the plateau escarpment. All sherds are of identical fabric. They are medium-walled (6-8 mm) and tempered with angular sand (fabric 3) that has been dated elsewhere in the Western Desert to about 6400/6300 BC (Riemer & Jesse in press). A ¹⁴C-date from site AT 1004 (cf. Fig. 4.1) falls to about 6400 BC, two dates from AT 0006 and AT 1017 (cf. Fig. 6.2-3) to about 6100 BC. With regard to the lithic material found on AT 1004 and AT 1017, an age within Abu Tartur B can be distinguished on the basis of the retouched tools. The evidence known from Dakhla where similar decorated potsherds have been found has recently been summarized in an article by Warfe

(2003). The sherds found on two sites in Dakhla contain “profuse, coarse sand inclusions”, and in one case they also contain “red, black and white pebbles”. 14C-dates available for one of the sites range from 6300-5700 BC. The possibly younger horizon of Khartoum style pottery that is characterized by a vegetal temper has been dated to about 5500-4800 BC in Egypt (Riemer & Jesse in press). However, it has not yet been observed at Abu Tartur.

At the moment it is hard to say, if there is any non-decorated pottery present for the B phase. As there is no other than the decorated pottery reported from Dakhla and neighbouring regions, we tend to assume, that the local tradition of undecorated ceramic vessels did not start before Abu Tartur C, contemporaneously to the Late Bashendi A unit in Dakhla.

4.2 *Abu Tartur C*

It appears that the Abu Tartur C material consists of two fabrics, the thin-walled dense fabric 1 (Fig. 4.7-13) and the fine shale fabric 2 (Fig. 4.14-17). The shape types and sizes tend towards small closed globular vessels, however the range of variation includes open pots and bowls with straight and everted rim types as well.

The rim decorations may include carved rims. Among these are two rim sherds made of fabric 2 from site AT 0003 (Fig. 4.5-6). This rim decoration is known very early from Mudpans (Kuper 1993); and, with less similarity, from Abu Minqar (Zach-Obmann 2003). But the fabrics of Mudpans and Abu Minqar, so far as evaluated, do not show striking parallels to the mentioned Abu Tartur sherds. A similar example not only in rim decoration, but also in shape, wall-thickness and temper can be found among the Bashendi B pottery in Dakhla (Hope 2002: 43, Fig. 1p) which led to the assumption that the sherds of Abu Tartur and their rim decorations are to be placed in phase Abu Tartur C.

In a very small number, black-topped rims are present for the first time in Abu Tartur C, though the quality in manufacture is low, as the cores have not been blacked, and the surface treatment is irregular. The dating as well as the quality in manufacture goes well with similar sherds found in Dakhla (Hope 1999: 218) and at Abu Gerara (Riemer 2003). The sherd depicted here (Fig. 4.17) is the best preserved specimen at Abu Tartur, however, it is rather uncharacteristic, as it has a light rippling of the surface, which displays some improvisation of the technique known from the Early Predynastic. The site from which this sherd comes, AT 0014, has most probably a mixture of sherds from Abu Tartur C and D (cf. Fig. 4.1). Therefore the age of the black-topped rippled bowl can only be affiliated through the fabric that tentatively points to Abu Tartur C. Another vessel (Fig. 4.16) has in common with the former bowl the roughly rippled surface and the fine shale fabric (fabric 2). However, the surface has neither been

red-polished nor black-topped. An elaborate cross-carved decoration occurs on the flattened rim. The rippling has been performed as a kind of incised striation that has not been polished afterwards.

Two sherds are from one or two small beakers (Fig. 4.14-15) for which parallels can be found among the Tasian-like beakers from the Eastern Desert and Upper Egypt (cf. Friedman & Hobbs 2002). The incised geometric decoration is applied to the inner and outer surface. The surfaces are burnished and pale brown in colour. Paste and temper are identical to the local fine shale fabric (fabric 2). The sherds have been found at AT 0062 where a small scatter of lithic material exists that can be associated to phase Abu Tartur C (as well as the fabric 1 vessel in Fig. 4.11).

Another thin-walled everted rim sherd that has been listed at site AT 034 carries a carefully incised design of filled triangles on its outer surface (Fig. 4.13). The fabric is hard and well fired with reddish-brown well-burnished surfaces and a grey to black core slightly tempered with quartz grains. The fabric resembles the thin-walled dense sherds from phase Abu Tartur C (fabric 1B), though surface treatment and temper are slightly different. The AT "034" ensemble contains a number of Sheikh Muftah sherds (Abu Tartur D) that might point to a younger age of the decorated rim sherd, but without further information about the context the chronological setting is quite uncertain.

4.3 *Abu Tartur D*

Phase Abu Tartur D can be synchronized to the Sheikh Muftah cultural unit in Dakhla. As the most characteristic ceramic attribute of this phase, a very coarse shale temper (fabric 4A) occurs in large pots and bowls (Fig. 5.8). Although sherds of that kind can often be found at Abu Tartur, the number of reconstructed or refitted vessels is very small. As a principle the vessels have straight or slightly everted rims; therefore, they are rather open than in the former periods (a good selection of possible vessel shapes from Dakhla are published in Hope 2002).

Among the Sheikh Muftah pottery, a finer fabric can be observed that may contain a fine shale component, sand, and/or other mineral particles of varying colours. This fabric has been designated as fabric 2, as sherds can hardly be separated from those of fabric 2 sherds found on the Abu Tartur C site. As a guideline to separate the fabric 2 traditions of phase C and D, two attributes can be listed here: The Abu Tartur D sherds tend towards a higher porosity while the phase C sherds are rather dense. The proportion of shale seems to decrease from phase C to phase D while the amount of other minerals may be higher in the later phase.

At the moment, the transition from Abu Tartur C to D and the early D phase (or Early Sheikh Muftah) lack valuable comprehensive material, as

archaeological sites in the desert outside the oases are missing during this time period. The only data base that can be used is the material found in Dakhla (Hope 2002), however, only very little dating information is available for the transition from Bashendi B to Early Skeikh Muftah, and following Hope (2002: 45) an overlapping of Bashendi B with the Early Sheikh Muftah can not be excluded.

Comparing the grain size of the shale inclusions in different samples found at Abu Tartur, we noticed that there are a small number of sherds with coarse shale particles that do not exceed 2 or 3 mm in length. This is, in fact, longer than the fabric 2 maxima, but shorter than the fabric 4A maxima. They have been observed in a number of thin-walled cups and shallow bowls with compacted and well-burnished or polished yellowish surfaces (Fig. 5.1-2). As this kind of fabric that was defined as fabric 4C as well as the related cups and bowls have not yet been found on the desert sites elsewhere, we believe that we are dealing with a transition phase between Bashendi B and the Late Sheikh Muftah, or Abu Tartur C and D, respectively. Parallels have been found in Dakhla connected to sites which are defined as Early Sheikh Muftah (Hope 2002: 46-48).

Decorations occur on two sherds found together on site AT 0003 (Fig. 5.4-5). The sherds are again made out of a coarse shale fabric combined with various other minerals that have been defined as fabric 4B. The rim sherd (Fig. 5.4) has a black rim and a red-polished (or slipped) compacted surface. A brushing in various directions, that occurs on the body sherd appears to represent a decorative element (Fig. 5.5). As no identical parallel can be found among the Late Sheikh Muftah pottery elsewhere, we tend to assume an Early Sheikh Muftah age or Early Abu Tartur D age. This might be underlined by a brushed sherd that has been found on an Early Sheikh Muftah site at Dakhla (Hope 2002: 47, Fig. 4s).

The repertoire of the Abu Tartur pottery comprises two bowls or open pots which have a regular light notching of the flattened inner rim part (Fig. 5.3) that may have been performed with the thumbnail. The dating of these sherds remains uncertain. Surface treatment and fabric resemble the dense variant of fine shale fabric (fabric 2) and the roughly burnished surfaces of the Abu Tartur C pottery. However, the sherds were found on site AT 0049 together with characteristic (Late) Abu Tartur D (or Late Sheikh Muftah) pottery. The rim decoration neither occurs on Abu Tartur C nor on Late Abu Tartur D pottery which may suggest an Early Abu Tartur D age. Looking for parallels among the Dakhla pottery, rim type and rim notches may suggest affinities with the Early Sheikh Muftah (Hope 2002: 47, Fig. 4).

Clayton rings and discs have also been found at Abu Tartur (Fig. 5.6-7). They occurred as single finds within the surface scatters, but never within deposits as discovered on many desert sites (Riemer & Kuper 2000). The rings were made of the fabrics 2 and 3 whereas fabric 4A has never been used for the

rings. This is in good accordance to rings found elsewhere. As the coarse shale temper makes the vessels resistant against thermal shock, they most probably were used as cooking pots. In turn, the Clayton rings as well as the fabric 2 and 3 vessels obviously have never been used within a camp fire or in contact with high temperature. The discs can be made of all possible fabrics, as most of them are secondarily worked out of old vessel sherds. An unusual specimen is, therefore, a disc made out of a clay lump which was tempered with coarse shale (fabric 4A) (Fig. 5.7).

4.4 Historic pottery

The jar in question here (Fig. 6) is nearly identical to the jar found at Loc. 135 in Dakhla (Hope 2002: fig. 5b and pl. 58). It came from site AT 1033 which yielded no other artefacts. The vessel shows the characteristic mat-impressed globular body as well as the everted ovoid rim, such as observed on the Dakhla jar. Moreover, vessel size and fabric (sand and straw) have striking similarities to the Dakhla specimen. With reference to the general dating of site 135 in Dakhla, the jar has been placed into the Early Sheikh Muftah cultural unit, tentatively dated to the final 6th or 5th millennium BC (Hope 2002: 46). Charcoal adhering to the surface of the Abu Tartur sherds has now been dated by radiocarbon to 640 +/- 50 BP (KN-3725) which definitely falls into Islamic time (1330 +/- 50 cal AD), most likely into the Mamluks dynasty (1250-1517 AD).

5. Conclusion

Pottery appeared in Abu Tartur from about 6400 BC onwards. The 12 sherds distinguished for this early phase (Abu Tartur B) are decorated with a packed dotted zigzag pattern which can be connected to the Khartoum style tradition that occurs at other southern Egyptian sites during this time. While only a very small number of sherds are known for Abu Tartur B, potsherds are common on sites during the following phase C. Most pottery of Abu Tartur B is undecorated and can be linked closely to the shapes and fabrics that occur in Dakhla and Abu Gerara.

The examination of the pottery of Abu Tartur is the first step towards a complete study of the archaeology of Abu Tartur. It is to be hoped that the study of the lithic material and the context in which all the artefacts were found on the sites will once support a better assessment of the ceramic chronology. However, the lithic material represents the largest artefact group at Abu Tartur that surmounts the number of potsherds by far, and more time is needed for this second step. Therefore, it seems to us that this preliminary report on the pottery of Abu Tartur may serve as a valuable source throughout the next years.

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