The utility ware assemblage from the hermitage in tomb MMA 1152 in West Thebes
Selected issues, provisional characteristics, research methodology*

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Abstract: The text concerns a pottery assemblage from one isolated site (a hermitage installed inside a Pharaonic tomb) in Sheikh Abd el-Gurna, inhabited by monks from the end of the 5th to the beginning of the 8th century. The specific nature of the place, that is, its isolation, rocky terrain and lack of clear stratigraphy, called for different research and documentation methods compared to those used on extensive settlement sites. Less attention was paid to taxonomic research in favor of observations regarding the function and importance of vessels in the everyday life of the monks living in the hermitage, a reconstruction of their dietary habits and the nature of the work that they did.

Keywords: pottery, utility ware, transport containers, vessel usage, monasticism, hermitage, Sheikh Abd el-Gurna

Pottery dominates the bulk finds from the hermitage that was installed inside the Pharaonic tomb MMA 1152, and there can be no question that in this case, save for the evident finds of Pharaonic date, all of the artifacts coming from the area of the tomb can be associated with the latest users, that is, the monks. The location of the tomb, one of two virtually identical Middle Kingdom tombs (the other one being MMA 1151) that the monks adapted for their purposes, is of key importance. Both tombs were cut into the highest parts of a rocky hill rising above the rock massif,¹

* This study is presented posthumously, the Author having died suddenly while preparing the contribution. However, the synthetic approach to the material the Author was studying in recent years, from his excavation project in the hermitage in Sheikh Abd el-Gurna, prompted the editors to undertake the task of bringing the paper to print. The Author's original text has been respected, limiting the editing to essentials and taking into account only the most obvious of the reviewers' comments. We would like to thank the Author's family for help in completing the print-quality illustrations, which the Author had selected.

¹ For a detailed description of the two tombs, see Górecki 2004; 2005; 2007; 2010; 2011; Górecki and Szpakowska 2013. A third and much smaller tomb lies a few dozen meters to the south of MMA 1152. It may be of Middle Kingdom date (P. Chudzik, personal communication) and could have belonged to a lower-rank official subordinate to the noble buried in MMA 1152. For the most detailed plan of this tomb-turned-hermitage, see Wipszycka 2009: Fig. 48.
and they were off the beaten track, creating little opportunity for obtrusive (from our modern point of view) finds to enter the assemblage. Hence anything found inside the hermitage was used one way or another by the monks residing in this unit. With the exception of some objects left in the past one hundred years by modern tourists and archaeologists, nothing at the site was brought there intentionally or unintentionally by later travelers. There is nothing to cloud the issue of the local stratigraphy and its proper interpretation.

A “pure” archaeological context of this kind is rare in the Theban necropolis with researchers usually having to distinguish between artifacts used at a given site versus ones dropped there by chance. Lower-lying tombs changed into hermitages may also be contaminated by the archaeological dumps from tombs/hermitages at higher elevations. In the case of the hermitage inside tomb MMA 1152, there is no shadow of a doubt that each and every ceramic vessel found there belonged to the resident monks. This has important implications for the pottery data collection program and the documentation methodology that was applied. The choice of research methods was driven by this archaeologically significant observation. The goal was to collect all the pottery material from the area within reason in order to be able to date with the greatest possible precision the monastic unit as a whole and perhaps also individual phases. Other issues that were apparent for research on the nature of the assemblage included a reconstruction of the monks’ dietary habits, meal preparation practices, the nature of the meals and the quantities of food involved.

**MOST IMPORTANT AND EVIDENT POTTERY GROUPS**

Surface pottery: The first group collected in 2004 and 2005 comprised vessels found on the slope. Separate collection points, seven in all, were formed on the ground below the courtyard terrace. In the case of

Fig. 1. Collection points below the courtyard terrace (PCMA Sheikh Abd el-Gurna Project/drawing M. Trzeciecki and J. Górecka)

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2 Including adapted objects coming from the pre-Christian furnishings of tomb MMA 1152 and brought to the hermitage by monks scavenging for goods in the close vicinity, see Górecki 2014: 19–40.

3 The terracing of the tombs in Sheikh Abd el-Gurna is the reason why lower-lying rows of tombs were buried under the debris, including missed or unwanted artifacts, generated by early archaeologists and before that by robbers plundering the tombs located higher up on the slope.
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each point potsherds were collected from a radius of a few meters [Fig. 1]. The pottery was mainly domestic in kind and one of the largest groups in this assemblage was formed by characteristic light-colored late containers/amphorae from Tunisia. These were initially misinterpreted as being “early Islamic” of uncertain chronology.

Stratified pottery: Secure contexts/loci were determined once a provisional stratigraphy of the site was in place following the first seasons of excavations. These contexts varied in size and were distinguished as separate deposits based on distinctive features such as location, structure and color of the deposits [Fig. 2]. The extent of these loci was verified in the course of archaeological investigation and their boundaries were much less regular than in this schematic illustration.

Sealed deposits were the most important, e.g., leveling layers under the floor of tower B (loci 86–93), fill inside the tower (locus 5), pottery leveling the upper

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Fig. 2. Secure contexts/loci distinguished in the hermitage (PCMA Sheikh Abd el-Gurna Project/ drawing M. Trzeciecki and J. Górecka)

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4 Letter identification according to the plan in Wipszycka 2009: Fig. 48; for a different plan, see Górecki 2011: Fig. 4.
sections of the rock slope to construct the lowest of the steps leading to the hermitage alongside the north wall of the tower (locus 3), an assemblage of pottery from the layer (locus 108) above the rock kitchen units (so-called kitchen D), pottery from bank F in front of the small tomb (loci 40–46), pottery from a subterranean chamber (cache for models?) in corridor A of the tomb (locus 60). Another group of loci was made up of extensive deposits without strictly determined boundaries and a depositional history that was more extended in time: pottery from the hermitage courtyard (H) (locus 70), from the rubbish dump below the tower (B, loci 86–93), steps (E) and unit G (loci 1, 7, 19, 24, 49, 55), pottery from the North Wadi (locus 100) and the South Wadi (locus 99) (Górecki 2013: Fig. 1).

The collection and identification of particular pottery groups was governed by a numerical coding system, a separate number from 1 to 108 being assigned to each distinguished group. Sherds were first labeled with these identification numbers and then assigned to different formal groups. The labels were useful in successive seasons when reconstructing vessels from the same or adjoining deposits. Once this stage was over, it was possible to compare the contents of the loci. The presence of the same kind of vessels in different contexts pointed to their chronological similarity, thus determining the contemporaneity or lack thereof for selected deposits and parts of hermitage architecture. A distribution analysis of the deposits also gave an idea of how dispersed the vessels were throughout the hermitage.

FINDSPOTS OF THE POTTERY
Pottery was found in the following findspots:

a) Rubbish dump (east of B, E, G; loci 1, 6, 13–15, 20, 23, 26) occupying a large area, 15 m by 40 m, on the rock slope in front of the hermitage, from 0.30 m to 0.60 m thick. It yielded all kinds of vessel types, the prevalent forms encompassing LRA 7 and late Roman tableware. Sherds belonging to African containers were found in the topmost layers of this context.

b) North and south wadis: different vessel types, represented mostly by large sherds, which had either rolled downslope directly or had been washed out by the rains from the rubbish dump and moved downhill.

c) "Rock kitchen" (D, locus 108) consisting of three small cooking installations in rock crevices a few meters to the north of the tomb entrance and filled with ceramics from the last phase of the occupation of the hermitage, coming from unidentified, perhaps temporary cooking sites. The deposits contained primarily cooking and domestic wares, and African transport containers/amphorae. They were mixed with small rock debris and large amounts of ashes.

d) Tower (B). Working in MMA 1151, Herbert Winlock noted a preserved vaulted ceiling inside the tower, over the ground-floor room (Winlock and Crum 1926: 10–11). Bins of dried and baked

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5 Suggested by Patryk Chudzik (2013: 194–195, Fig. 1, section A-A). The entrance to this niche is illustrated in Górecki 2010: 301–303, Fig. 5.

6 Practically 100% of the pottery was found in the area occupied by the hermitage (courtyard, rubbish dump, wadi).

7 The biggest concentration of finds was recorded opposite the entrance to the hermitage. Rubbish accumulated in this area until the construction of tower B, which is located in part on the rubbish layers; the clay floor of the tower covered part of the dump.
mud evidently filled this room⁸ and were destroyed when the ceiling fell sometime in the 1930s. The remains of these containers constituted most of the finds from the tower fill, mixed in with fragments of baskets and mats.

e) Cache for models (locus 60), which may have been used by the monks as a convenient underground store, perhaps also as a refugium, meaning a place of isolation for meditation. Not many vessels were discovered in the fill of this unit, but one should note the presence of five well preserved water containers (bottles and qullae with filter necks).

f) Niche (funerary?) in corridor A (not marked on the plan), adapted as a small store closed probably with a wooden door. This was the only place in the hermitage to yield a set of 20 to 30 mud-stoppers, attesting to the storage of wine in amphorae in this place [Fig. 3].

Fig. 3. Mud stopper (PCMA Sheikh Abd el-Gurna Project/photo T. Górecki)

⁸ Identical mud grain-bins, decorated in much the same way, were discovered in the Monastery of Cyriakus (Winlock and Crum 1926: Fig. 11).

DOCUMENTATION STRATEGY AND METHODS

Most of the vessels preserved either completely or to a large extent were drawn. The most typical vessels for given types were also photographed. The Munsell color scale was used mainly in the case of containers identified as transport vessels for olive oil, coming most probably from the territory of modern-day Tunisia. This ensured credible comparison with material similarly documented from other sites, permitting easier identification of imported vessels, assuming of course that this method of description was used at the Tunisian or Libyan sites. The Munsell scale was not used for describing vessels made of Nile silt or the so-called Aswan (Upper Egyptian) ware, due to the fairly typical surface color of both groups, sufficiently well researched and described in other publications (Gempeler 1992: 19–23).

Color determinations for small sherds is a simple procedure, as all ceramologists know. It is not so for many whole vessels, the surface color of which may be different in different parts due mainly to the vessel’s place inside the kiln and/or direct contact in the furnace with other vessels; the Munsell scale in these cases notes a range of colors. To test this idea, a Munsell color identification of all individual fragments before restoration of the vessel was made, resulting in variable color identification.

For the same reason, hardness on the Mohs’ scale was not applied, the hardness of baked silt not being that different for all products of Nile silt. In this wide group, a similar hardness is shown for all the plates, which is different from that for cooking pots, and even more different.
(the softest) in the case of household bowls and storage jars, which were frequently made of poorly baked or often even unfired clay. The hardness of different ceramic types from the large Upper Egyptian (Aswan) product group is also very similar.

**GENERAL CHARACTERISTIC OF EGYPTIAN FABRICS**

The alluvial fabric is not unlike that from other sites in the region (Gurna, Edfu, Tod, Shenhur, Esna, etc.). All the domestic, cooking and storage vessels (found inside tomb MMA 1152) were made of Nile silt and coated with a red-brown slip. The quality of the fabric (degree of cleaning and the kind of temper used) is directly dependent on the function of the end product and the intended aesthetic effect. Tableware has minimal amounts of thick mineral temper and small quantities of plant temper, among other reasons because of the desire to achieve a smooth surface. Water containers needed to have enough plant temper to make them porous in order to ensure good cooling properties.

Vessels were all painted before firing using paint of either cream, red or black colors. Different combinations of geometric motifs were used, mainly zigzags, waves, dotted arcades with the dots on the lines or in the loops. No figural motifs were recorded on the pottery from the hermitage.

Not all examples of a given form were made of the same fabric. *Saqiya*h pots (for drawing water) were produced of both silt (this being more often the case) and marl clay. Tableware is represented most commonly by products of Aswan clay (both plates and bottles); a significantly smaller group was made of Nile silt. The reverse is true with regard to amphorae for transporting wine, which were made mainly of Nile silt, both the typical LRA 7 and the so-called Pseudo-Aswan vessels imitating Aswan amphorae (Bavay 2007: 395–397, Fig. 10). Real Aswan amphorae are clearly in the minority. As for cooking pots, Nile silt is the sole fabric used for their production. The same is true of all kinds of basins, bottles, *qullae*, trays, ladles, funnels and most of the pottery found in the hermitage.

**SELECTED ISSUES**

Selected issues discussed here include user–vessel relations, vessel usage, division by function, identification of function based on formal criteria and use traces, and finally vessel capacity and weight. These issues have largely given direction to the research, and relate to social archaeology and ethnoarchaeology. A descriptive (typological) classification seemed insufficient to the present author when considering the material from the hermitage. It was deemed important to determine not only distinctive features, including morphological differences, but also changes in vessel function over time, especially with regard to the possibility of a second life in a different, later context. In terms of a second life, one needs to consider reuse of vessels by other residents of the hermitage at a later time, as well as reuse by adaptation to a new purpose. Experimental archaeology and ethnography may be quite helpful in the interpretation of pottery artifacts from the hermitage.

A “biographical” approach (that is, describing the whole lifespan of the pottery) is important in the case of some of the finds, and more weight is put on a reconstruction of user–vessel relations than a perfect quantification of the ceramic material.
Hence the present tabular presentation [Table 1], which is still in need of improvement and not final, is more a functional than a formal division, despite the temptation to put them on par. Vessels like plates, cups, jars and bottles, that is, forms directly associated with the “table” in the sense of food consumption, evidently need to be included in the tableware group. Yet they are treated separately here, the author having chosen to consider them as a separate group because of the formal criterion.

Plates with their considerable repertoire of forms are definitely the largest...
group among the tableware. Cups and beakers constitute a separate group, although the wide small bowls could have also been used for drinking. The group of vessels for holding water (or other beverages) includes at this stage of the study vessels for the storage of liquids (bottles, including table bottles), their distribution (pots, jugs, qullae) and transport (flasks) (Górecki 2013: Fig. 9) [Fig. 4]. Thus, a simplified functional criterion was applied here, grouping together vessels of different shapes, but used for the same purpose. In turn, some of the carinated bowls (always furnished with a base) that look like tableware might well be tableware still considering the diameter, but those of larger size could be vessels of household use. All the other bowls, for the most part plain or decorated very modestly, were assigned provisionally to a single group of vessels intended for mixing and storing food and for other domestic purposes.

Two groups of cooking pots were distinguished within the functional priority category of cooking, because of significant formal differences. One group was formed of globular cooking-pots (closed forms), the other of open vessels of different heights and with slightly flaring walls (pans). Cooking and heating food is a shared function for both groups, but they differ clearly in how the intended effect was achieved. Cooking in a covered vessel with a rim diameter lesser than the maximum diameter aims at retaining the moistness of meals, whereas cooking in a wide and open pan has the opposite effect, namely allowing the food to lose its liquid content (frying, for instance). The same dual nature is true of the convex lids. Most of them do not have apertures for letting steam out, because their purpose was to seal the vessel tightly. A few have one opening in the knob to permit very limited escape of steam, some others have several holes all over the surface for intensive evaporation. The last items in the tableware are “silos” and other miscellaneous objects: stands, incense burners, lamps etc., that cannot be classified as vessels belonging to one category.

It is an interesting exercise to reconstruct the usage of three different vessels intended for one specific purpose: straining wine. A shallow strainer has the same diameter as a funnel, the lower end of

Fig. 5. Reconstruction of strainer usage (PCMA Sheikh Abd el-Gurna Project/Drawing T. Górecki and J. Górecka)
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Fig. 6. Vessels adapted for other use: top left, a closed form adapted into a vessel; top right, small bowl turned into an open oil lamp; center, large pottery sherds used for shoveling rubbish; bottom, two examples of small bases reused as lids for storage vessels (PCMA Sheikh Abdel-Gurna Project/photos D. Dąbkowski and T. Górecki, photo processing J. Górecka; drawing T. Górecki and J. Górecka)
which fits an amphora neck (much smaller funnels were used for pouring liquids into qullae and jars). It is easy to imagine the strainer being placed on the funnel, which was inserted into an amphora neck [Fig. 5], and then filling an amphora. Perhaps wine was also poured out in this way.

This equipment looks much more suitable for straining wine when filling or refilling an amphora. Otherwise how would this apparatus of three separate vessels be held together when pouring wine? A full amphora is heavy and manipulating an amphora while trying to hold two different vessels at its neck would be extremely difficult, even with two people doing it.

Determining vessel function is obfuscated to some degree by the practice of re-modeling vessels to serve other purposes (Peña 2007: 61–208). Closed forms (large bottles or jars, for example) were adapted most often into vessels of different size and height [Fig. 6 top left]. The damaged or unwanted part, such as the upper half of a pot, would be struck off and the sharp break polished smooth. The effect was a vessel that could then be used as a bowl. Small bottles were thus changed into bowl-like cups or open oil lamps [Fig. 6 top right]. Large sherds from shallow vessels/plates could have served for mixing mortar or plaster, for shoveling rock debris or for dumping rubbish. Two sherds (from a plate produced of Aswan fabric and from a bowl made of Nile silt) had sharp edges at the break where they were held by the user, while all the other edges were blunted and smoothed from dragging rubbish, for example, over a rock surface [Fig. 6 center].

Another category to consider are the ring bases of various vessels, which were usually preserved intact when a vessel was shattered. The body walls around the ring base were struck off, sometimes regularly and sometimes summarily. Small bases [Fig. 6 bottom] were used as lids to cover the mouths of certain water vessels and storage amphorae. Those with a diameter of no more than 7–8 cm evince this use. Once the lower parts had been cut away and the handles broken off, the upper part of amphorae turned upside down was used as a funnel. Necks of LRA 1 amphorae with an evenly broken lower edge served as stands for small vessels. Many vessels, especially containers for liquids, had a presumed second life without being modified in any way; containers emptied of their contents were reused by local communities for transporting water and as storage vessels. Hence the need for a different approach to this group. Research on the pottery material from the site involved standard studies (from the author’s point of view): a) measuring capacity of containers/amphorae, used for transporting liquids (water, wine, olive oil) and estimating volume of appropriate storage vessels (amphorae, qullae, jars), and b) calculating the weight of empty containers.

In connection with the author's research at other sites (Naqlun, Abu Fano, Shenhur), it is of importance to know how much liquid filled a container. If the weight of the content is added to the weight of the container, we get the weight of a full container and an idea as to how many full containers could have been packed on a camel or donkey. Water supplies and

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9 Sets of this kind (strainer and funnel, but made of bronze) are known from the Roman world, see Baratte 1984: Fig. 17.
10 The most reliable methods are pouring water into complete vessels and, for damaged vessels, a mathematical-computer reconstruction.
“means” of transport are attested in some Theban ostraka (Heurtel 2003: 297–306). It should be kept in mind that water was needed not just for drinking, but also for building work (making mortar) in the hermitage. Bottle and cup capacities may also be useful for studies of beverage consumption in the hermitage. Weighing vessels was applied solely to containers.

Of greatest accuracy when calculating the volume of whole vessels was the simple method of measuring the water that was poured into them. The best effect for reconstructed vessels with gaps and cracks in them was obtained with mathematical and computer methods applied to drawings giving the full dimensions. Weight was determined based on the specific gravity of the clay used (after firing). This method, developed by Mariusz Caban with guidelines from the author, was applied by the author primarily to the study of containers from Naqsh and Gurna (Górecki 2016).

**STATISTICAL RESEARCH METHOD**

The outcome of statistical research is the most reliable for vessel types preserving elements typical of one specific vessel category. The best and most precise results concern the following ceramic product groups, the vessel parts given in parentheses being the most typical of a given group: LRA 7 amphorae (spike), Aswan and pseudo-Aswan amphorae (small circular bulge of clay in the very center of the bottom exterior surface), saqiyah-pots (knob base), qullae (neck sections with strainers are apt to be well preserved), ladles (massive handles, Fig. 7), cooking vessels (characteristic bulge in the center of the floor) and lids (knob handles).

Statistical calculations for categories such as plates, shallow bowls, pans and storage vessels with large rim diameters are more difficult. Reconstruction drawings of whole forms helped in these cases to distinguish groups of sherds with the

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**Fig. 7. Ceramic ladle**

*(PCMA Sheikh Abd el-Gurna Project/photo D. Dąbkowski)*
Table 1. Preliminary statistics: minimum number of vessels and ceramic artifacts in use by successive groups of monks living in the hermitage from the end of the 5th through the early 8th century

<table>
<thead>
<tr>
<th>Vessel categories</th>
<th>Nile silt</th>
<th>Marl clay</th>
<th>Minimum vessel number</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Late Roman tableware [Fig. 8]</td>
<td>✓</td>
<td>✓</td>
<td>406</td>
</tr>
<tr>
<td>2 Water containers (jars, bottles, qullae, flasks) [Fig. 4]</td>
<td>✓</td>
<td>✓</td>
<td>125</td>
</tr>
<tr>
<td>3 Beakers, cups [Fig. 10 top left]</td>
<td>✓</td>
<td>✓</td>
<td>42</td>
</tr>
<tr>
<td>4 Carinated bowls</td>
<td>✓</td>
<td></td>
<td>12</td>
</tr>
<tr>
<td>5 Domestic bowls (conical and semi-globular)</td>
<td>✓</td>
<td></td>
<td>60</td>
</tr>
<tr>
<td>6 Cooking vessels: closed (pots) and open (pans)</td>
<td>✓</td>
<td></td>
<td>300</td>
</tr>
<tr>
<td>7 Convex lids* [Fig. 10 top right]</td>
<td>✓</td>
<td></td>
<td>50</td>
</tr>
<tr>
<td>8 Ladles [Fig. 7]</td>
<td>✓</td>
<td></td>
<td>18</td>
</tr>
<tr>
<td>9 Funnels [Fig. 9 top]</td>
<td>✓</td>
<td></td>
<td>8</td>
</tr>
<tr>
<td>10 Strainers [Fig. 9 bottom]</td>
<td>✓</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>11 Transport containers (amphorae)** [Fig. 11]</td>
<td>✓</td>
<td>✓</td>
<td>4928</td>
</tr>
<tr>
<td>12 Cylindrical pot stands*** [Fig. 10 bottom right]</td>
<td>✓</td>
<td></td>
<td>9</td>
</tr>
<tr>
<td>13 Shallow flat-bottomed trays (oval or round)</td>
<td>✓</td>
<td></td>
<td>11</td>
</tr>
<tr>
<td>14 Mobile cookers or heaters</td>
<td>✓</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>15 Vessels for watering fields (saqiyah-pots) [Fig. 12]</td>
<td>✓</td>
<td></td>
<td>188</td>
</tr>
<tr>
<td>16 Pigeon pots [Fig. 12]</td>
<td>✓</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>17 Long clay basins (for soaking palm leaves?) [Fig. 13 bottom]</td>
<td>✓</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>18 Round basins</td>
<td>✓</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>19 Large mud-bins (dried) (for grain or as caches for objects of daily use)</td>
<td>✓</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>20 Large mud-bins (fired)</td>
<td>✓</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>21 Ceramic bread-baking oven</td>
<td>✓</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>22 Incense burners [Fig. 13 top right]</td>
<td>✓</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>23 Lamps</td>
<td>✓</td>
<td>✓</td>
<td>9</td>
</tr>
<tr>
<td>24 Lamp shade? [Fig. 13 top left] ****</td>
<td>✓</td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>

TOTAL  6199

Key: * Concave lids are absent entirely; ** in this count, LRA 7 constitute 91.46 %, Pseudo-Aswan 4.31 %, Aswan 2.84 %, African (conical) 1.74 %, African or Aegean (globular) 0.35 %, LRA 1 0.20 %, LRA 4 0.06 %, LRA 5/6 0.04 %; *** three of these (the lower ones) may be older and reused; **** the bell-shaped object had no bottom and no pierced holes hence it was not a lantern and was not used for burning incense, for example.
same profile (section) and approximately the same diameter (e.g., diameters from 18 to 20 cm, next 21–23 cm, 24–27 cm, etc.). Then, the percentage of the preserved rim circumference was determined for each group separately, giving a minimum number of plates and bowls present at the site, taking into account their function without dividing them into different type and their variants. For the sake of an example, five plate fragments (same color, fabric, profile and diameter), each constituting 20% of the circumference, add up to 100%. There is a minimum of one such vessel on site at this time or five identical or almost identical vessels. Another example: measuring as a percentage the preserved rim on four sherds of an Aswan ERSW plate of Hayes type 84 gives a result of more than 100% (17% + 38% + 11% + 43% = 109%).

Fig. 8. Fine ware: a – ARS; b–d – ERS-A Ware plates  
(PCMA Sheikh Abd el-Gurna Project/drawing T. Górecki and J. Górecka)
Fig. 9. Functional pottery categories from the hermitage assemblage: top, funnels; bottom, strainer (PCMA Sheikh Abd el-Gurna Project/photos D. Dąbkowski and T. Górecki; drawing T. Górecki and J. Górecka)

Fig. 10. Functional pottery categories from the hermitage assemblage: top left, three examples of cups; bottom left, shallow tray; top right, three different lids; bottom right, cylindrical pot stand (PCMA Sheikh Abd el-Gurna Project/photos D. Dąbkowski and T. Górecki, processing J. Górecka; drawing T. Górecki and J. Górecka; tray reconstruction M. Caban)
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Fig. 11. Amphoras/transport containers:

a – LRA 7; b–c – Aswan amphoras; d – LRA 5/6; e–b – conical IA; i–k – conical IB; l–m – globular IIA; n – globular IIB (PCMA Sheikh Abd el-Gurna Project/photos D. Dąbkowski and T. Górecki, processing J. Górecka; drawing T. Górecki and J. Górecka, digitizing J. Górecka and M. Momot)
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From a statistical point of view, there must have been a minimum of two plates or a maximum of four that were morphologically indistinguishable on the whole.

Statistics require a minimum number of vessels to be given for each group. An ideal determination of the correct number of vessels is impossible, but it is equally unfounded to treat each fragment as a separate vessel.

**CHRONOLOGICAL SPAN OF THE POTTERY FROM THE HERMITAGE**

A large set of well dated pottery of the Late Roman type gives hope for a precise dating

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**Fig. 12. Qawadis (sajiyah pots): a–d – regular qawadis; e – pigeon pot**

(PCMA Sheikh Abd el-Gurna Project/drawing T. Górecki, J. Górecka and K. Danys)
of the monastic complex. Yet it is difficult to establish the chronological boundaries of particular occupation phases of the hermitage. The evidence argues in favor of an interrupted occupation of the tomb by the monks, but the actual length of periods of occupation and the intervals cannot be determined easily. The ceramic material merely gives a provisional and hypothetical date for when the monks first adapted the tomb for their purpose and when they left it for good.

The hermitage was founded most probably in the end of the 5th century. The date is attested by fragments of two ARS plates (Hayes form 82.2 or 86.2; Fig. 8:a) found in the early layers of the rubbish dump. These plates could have been found somewhere by the monks and brought back to the hermitage at a slightly later date, but the end of 5th century date for the earliest phase of the hermitage is confirmed by ERS-A Ware plates copying ARS forms Hayes 61–62, 82.1 [Fig. 8:d, 8:b–c], which are present in the assemblage and which are known to begin around the end of the 5th century. A large number of examples of ERS-A Ware forms 84 and 91 are not helpful in terms of a more precise dating, because they were long in production in Egypt, at least until the mid 7th century. Their number in layers of importance for the hermitage chronology merely indicates that the occupation of the hermitage was at its most intense.

![Fig. 13. Miscellanea: top left, lamp shade; top right, incense burner; bottom, clay basin (PCMA Sheikh Abd el-Gurna Project/photos T. Górecki and D. Dąbkowski) not to scale](image-url)
from the mid 6th through the end of the 7th century. At the other end of the time spectrum, the date for the abandonment of the hermitage is marked by a large group of containers for olive oil probably imported from Tunisia (see Appendix below) dated to after the mid 7th century [Fig. 11:e–n], and two fragments of bag-shaped Egyptian amphorae from the 7th–8th century [Fig. 11:d]. The dating emerging from an examination of the pottery is supported by the early results of papyrological studies. Anne Boud’hors and Esther Garel, who are studying the set of ostraka from the hermitage, have found that a certain group of texts may be dated securely to the first half of the 7th century and a second rather distinct set to the early 8th century (Garel 2016). At this stage of their research, the case is hardly settled, but (unlike the pottery) there are no earlier texts from the 6th century. Therefore, the chronological span of the residency in the hermitage could have been fairly broad, from the end of the 5th to the beginning of the 8th century.

APPENDIX

African and Aegean (?) packaging containers (amphoras)

Initial surface sherding provided a sizable collection of typical transport containers. It turned out later that these particular types were practically “unknown” and seldom published from sites of late Roman date from Egypt.11 They are considerably different from other amphoras produced in Egypt in terms of production technique (and the product itself) and the clay color in the break and on the surface. The fabric is hard, the breaks clean with fairly regular arched or straight edges. Outer surface of three measured containers (28.1, 28.4 and 164.1 respectively) is usually pink (10YR8/2–8/4; 7.5YR8/3; 10R8/3), while inner surface and break are light to pale red (10R6/6; 10R7/4–6; 7.5R7/4–6). Recognizing sherds coming from the

11 Gempeler 1992: Fig. 128.6–7 (globular), 129.1 (conical); Shenhur (personal observation of the author); Lecuyot and Pierret-Bonnefois 2004: 175, Pls 9.124–125 (conical), 9.126 (globular); Winlock and Crum 1926: Pl. 30A; Myśliwiec 1987: 176–178, Nos 2156–2159, 2163–2164, Pl. XXX,6–7 (mid 7th–mid 8th century); Bavay 2007: 393–394; Beckh 2007: 210, Fig. 3 (mistakenly compared to form Egloff 167 in my opinion); Beckh 2013: 75–78 (the author presents different views on the provenance of these containers), Pls 97–102 (conical), 106–108 (globular); Jacquet-Gordon 1972: Pl. CCXXVII.13. These publications demonstrate clearly that there are no finds of such containers from the region north of Tod and Shenhur. A prosaic explanation is that sherds of this kind went unobserved in other archaeological material than that cited above. A different explanation is possible, if we verify our views on the routes by which commodities were transported to territories to the west of Egypt. Goods could have been transported to Alexandria and up the Nile to the regions in the south, but they could also have been brought by caravans coming from the west via the oases of Siwa, Bahariya, Farafra and Dakhlah (Wilson 2012) to the Theban region and then further to the south; for a similar view, see Ballet, Bonifay, and Marchand 2012: 115–117, Figs 9–10. This other delivery route for oil imports to Upper Egypt could explain why these containers are missing from sites in the north.
relatively thin walls of these vessels (for the transport containers, the thickness is from 0.6 cm to 1.0 cm) led to the observation that the sherds of this “new” group gave out an exceptional metallic clang when struck, completely different from the typical Nile silt sherds which have a rather muted sound due to the porosity of the clay and presence of organic temper.

Two groups of these containers could be distinguished: conical (Type IA, IB) and globular (Type IIA, IIB). The morphological traits of the conical group (about 90 vessels) include a distinct profiled rim, pushed inward (rim diameter from 13 cm to 16 cm) [Fig. 11:e-h] or a simple and rounded one, a cylindrical or slightly flaring neck and a cylindrical–conical body (Diam. max. from 27 cm to 35 cm) terminated in a spike, sometimes slightly profiled. The handles have an oval section and are regular and neatly formed. The surface is very smooth, covered with a skin (Peacock 1984: 263–264), the evidence of turning is smoothed vertically, mostly with almost imperceptible traces of a tool from the line of the maximum diameter towards the bottom. The inner surface is also quite characteristic, covered with clear parallel and very shallow grooves that are a reflection of the turning process. Most of the containers feature a clearly visible rope impression around the maximum vessel diameter (3–5 rows); it shows that the pots were tied for the duration of the drying process. Most of the vessels bear decoration in the form of various engraved motifs (single lines around the vessel circumference in different places) or combed ornaments forming either horizontal straight or wavy lines, horizontal on the shoulders or vertical (Type IB), sometimes at a slight angle (X-shaped) on the body [Fig. 11:i-k].

Globular amphoras form a much smaller group (about 30 pieces, Type IIA). They have a rounded bottom [Fig. 11:l-m], cylindrical neck (Diam. 7.0–8.5 cm) with extended collar located 2.5–3.0 cm below the rounded rim. The maximum diameter of the container occurs above the mid-height of the body. The containers are not decorated. Apart from globular containers with narrow necks, there are a few vessels of similar shape (Type IIB) with a wide neck (Diam. 12–13 cm) and slightly profiled rim [Fig. 11:n]. The handles are smaller relative to the high handles of amphoras of Type IIA. The origin of containers of Type IIB is difficult to determine.

None of the containers of either type (altogether about 120 vessels) preserved traces of bitumen inside, something that was typical of most Egyptian containers of the LRA 7 type intended to hold wine. The conical containers were produced most probably in Tunisia (Byzacena), possibly Libya (Tripolitania), as indicated by the turning technique, color

12 Identical characteristics were observed by the present author in the small assemblage of African cylindrical containers from excavations in Athribis/Tell Arthib, dated to the 5th–6th century. One of them had an inscription distinctly indicating oil as its content (unpublished material).

13 Only one vessel (No. 163.2) preserves traces of painted decoration on the body (oblique beige bands ending in a spiral?). A similar decoration can be observed on bag-shaped containers from Beisan (second half of 7th–beginning of 8th century?), see Młynarczyk 2013: Figs 12, 15, 17, 20. It is hard to tell whether the comparison is justified, considering how fragmentary the decoration from Gurna is.

14 This hypothesis regarding the place of production of these containers was proposed in Górecki 2004: 179, Fig. 6 (the scale for both these vessels in Fig. 6 was incorrect).
of the clay and use of salty water for clay production, a characteristic trait of the pottery production process in this region. The place of origin of these containers suggests that they contained something other than wine, especially as the inside surface was not resinated. None of the amphorae had apertures pierced in the neck or upper body (the holes were either for fermentation or wine tasting, see Vogt et al. 2002), a characteristic element of some wine containers in Egypt. These containers may have been produced locally for olive oil pressed in North Africa already for several centuries. As for the globular vessels, their form suggests that one should look for their place of origin in places where containers of the LRA 1 and LRA 2 types were produced (southern Asia Minor, Cyprus, Aegean region?); with this assumption in mind, wine should be considered as a commodity imported into Egypt despite the absence of resination.

Such a large number of African containers (about 90) in the hermitage in MMA 1152 cannot be explained by the simple need to supply a few monks with imported oil for dietary purposes. Oil was used as fuel for lighting, but it is unlikely that the excellent oil from North Africa would have been imported for such a prosaic purpose, if cheaper and inferior oils (such as castor or radish oils) from Egypt were available locally. I am convinced that empty containers of both Type I and Type II, capacious as well as very durable (see the capacity of selected amphorae in Table 2), may have been reused for transporting potable water to the hermitage. Alternately, water would have been used in some quantity for soaking palm leaves used for basketwork and for preparing clay mortar for building purposes to bond the mud bricks of which the hermitage walls were constructed. Looking at the data in Table 2, we see that the vessels were lighter

<table>
<thead>
<tr>
<th>Number</th>
<th>Weight in kg</th>
<th>Capacity in liters</th>
<th>Weight to volume proportions</th>
<th>Diam. rim cm</th>
<th>Diam. max. cm</th>
<th>Height in cm</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>28.1</td>
<td>5.58</td>
<td>18.5</td>
<td>01:03.3</td>
<td>13.2</td>
<td>30.2</td>
</tr>
<tr>
<td>2</td>
<td>28.4</td>
<td>9.18</td>
<td>28.5</td>
<td>01:03.1</td>
<td>13.0</td>
<td>32.6</td>
</tr>
<tr>
<td>3</td>
<td>164.1</td>
<td>5.77</td>
<td>17.8</td>
<td>01:03.1</td>
<td>8.2</td>
<td>29.0</td>
</tr>
<tr>
<td>4</td>
<td>233.1</td>
<td>9.65</td>
<td>35.0</td>
<td>01:03.6</td>
<td>14.8</td>
<td>34.5</td>
</tr>
<tr>
<td>5</td>
<td>162.0</td>
<td>2.78</td>
<td>10.9</td>
<td>01:03.9</td>
<td>12.1</td>
<td>27.0</td>
</tr>
<tr>
<td>6</td>
<td>247.1</td>
<td>3.35</td>
<td>10.8</td>
<td>01:03.2</td>
<td>7.7</td>
<td>28.2</td>
</tr>
<tr>
<td>7</td>
<td>236.0</td>
<td>3.70</td>
<td>12.0</td>
<td>01:03.2</td>
<td>8.6</td>
<td>32.4</td>
</tr>
<tr>
<td>8</td>
<td>251.0</td>
<td>3.90</td>
<td>12.4</td>
<td>01:03.2</td>
<td>–</td>
<td>32.5</td>
</tr>
</tbody>
</table>

On the later than currently assumed termination of the end of production of olive oil and ceramic containers for its transport after the Arab conquest, see Leone 2003: 24–26; Fenwick 2013: 9–33, especially 13, 20, 25, 28, 30, 32.
The utility ware assemblage from the hermitage in tomb MMA 1152 in West Thebes
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and much more capacious (from 10 liters to 35 liters) than the Egyptian containers. It could mean that they were considered as very eco-nomical when reused for water transport because they held more water than Egyptian containers.\(^\text{16}\) Thus, the same quantity of water could be transported in a fewer number of containers of African (or Aegean?) origin, rather than the heavy LRA 7.

The reuse of most of the imported African containers does not exclude the possibility that at least some of them had held oil, either for consumption or as fuel for lighting purposes, or (in the case of globular amphorae) possibly wine.

REFERENCES


\(^{16}\) On Egyptian wine containers, see the assemblage of medieval LRA 7 amphoras and wine containers/bottles, Górecki 2016.


