In Search of the Origins of Lower Egyptian Pottery:
A New Approach to Old Data
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# Appendix
# Neolithic pottery of Lower Egypt in the collections of museums and other institutions

## 1. Introduction

In 2014, the author received a financial grant from the National Science Centre Poland for a project entitled *The Development of the Early Neolithic societies in Lower Egypt in the 5$^{th}$ millennium BC and their Interactions with the Southern Levant*. The project's point of departure was a hypothesis presented by the author at the *Egypt at its Origins 5* conference, held in Cairo in 2014. It assumed the existence of a single pottery-making tradition, shared by all known Neolithic cultures in Lower Egypt (see Mączyńska, 2017). The source base for the project included technological and typological descriptions of Egyptian Neolithic pottery, as well as actual pottery from the Egyptian Neolithic sites, deposited and available in the collections of museums or other institutions. Therefore, the author visited five institutions that offered access to part of their collections, thus enabling an analysis of the Lower Egyptian Neolithic ceramic assemblage, namely the Petrie Museum of Egyptian Archaeology in London, the British Museum in London, the Museum of Mediterranean and Near Eastern Antiquities in Stockholm (Medelhavsmuseet), the Institute of Prehistory and Historical Archaeology of the University of Vienna and the Egyptian Museum in Cairo. Since each of these institutions has its own rules regarding access to materials, the size of the analysed collections was different in all cases. The small amount of ceramics analysed in the Egyptian Museum in Cairo resulted from its internal regulations in effect in 2016. Apart from access to ceramics, the author had an opportunity to use an on-line catalogue containing the basic information about artefacts and other remains from the collections.

Only in the Egyptian Museum in Cairo was access to the EMC registry possible exclusively in the museum.

**2. The method of pottery analyses**

Macroscopic analyses of potter were carried out according to modern ceramological standards (see Rice, 2005; Orton *et al.*, 2010; Wodzińska, 2010). The choice of non-destructive method in this case is dictated by the special character of the material (pottery from the museum/institution collections), on the one hand, and the available funds, on the other.

The analysed pottery was fully documented, including information on measurable features (if any). The pottery analyses were divided into three stages:

1. technological analyses (clay, tempers, shaping method, surface treatment, surface colour, firing conditions)
2. typological analyses (shapes – vessel, base, rim, decoration)
3. pottery documentation – (description, drawings, pictures)

All features were recorded whenever possible. In the case of complete vessels, observation of some features was difficult or unfeasible. The colours were recorded using the Munsell colour chart. Finally, all the analysed ceramics were aggregated in a tabular database (Tables 7abc-9abc). The terms used in the tables are consistent with those proposed for pottery analyses by A. Wodzińska (2010), unless otherwise noted.

**3. Fayumian pottery** (Tables 7abc)

The author had an opportunity to study the pottery collection of the excavations of G. Caton-Thompson and E. Gardner at Kom W now housed in the Petrie Museum of Egyptian Archaeology, University College London. Courtesy of the British Museum, the author was also offered access to the ceramic assemblage from site E29H2, Trench 2 (part of the Wendorf Collection of the Department of Egypt and Sudan).

The explorations by Caton-Thompson and Gardner in the Fayum Depression in the area north of Lake Qarun between 1924 and 1928 were aimed at an archaeological and geological reconnaissance of this *terra incognita*. The two researchers identified both traces of prehistoric human activity and remains dated to the Pharaonic period. Nevertheless, the Fayum is best known for the remains of the earliest farming communities in Egypt discovered at the sites named Kom K, Kom W and the Upper K Pits, located on the northern shore of Lake Qarun. The exploration of stratified deposits of the sites provided rich archaeological evidence, including pottery. However, the excavation methods of the early 20$^{th}$ century had immense effect not only on the site's exploration, but also on the handling of artefacts recorded during investigations. All materials underwent a selection process.

As far as pottery is concerned, the assemblage only contains complete and almost complete vessels or fragments of diagnostic and typological significance, as well as those that stood out for aesthetic reasons. Artefact collections removed from the sites of Kom K, Kom W and the Upper K Pits were distributed among different institutions/museums around the world.

In 1969, the Fayum area was also investigated by the Combined Prehistoric Expedition headed by F. Wendorf and R. Schild (1976). Their key objective was to conduct a preliminary verification of the site's stratigraphy and chronology, as well as to understand the geomorphology of this area. The excavations were carried out pursuant to contemporary standards and all artefacts were collected.

### *3.1. The Petrie Museum of Egyptian Archaeology, University College London (Figs. 11-12)*

More than 1,800 objects linked the Fayum Neolithic are now housed in the Petrie Museum of Egyptian Archaeology.[1] Most of them are part of the assemblage recorded by Caton-Thompson and Gardner on the northern shore of Lake Qarun. The author analysed in detail 35 ceramic items (vessels and sherds). Most of them come from Kom W. Some of them were recorded in the Upper K Pits. Site T is indicated as a source for one base fragment. In two cases, the location is unknown. All studied sherds are generally dated to the Neolithic period.

### *3.2. British Museum (Figs. 13-15)*

In 2001, Professor Fred Wendorf donated his entire collection of artefacts and environmental remains excavated over a period of 40 years to the British Museum.[2] The collection also features pottery from the Fayum, excavated at site E-29-H2 in Trench 2 located just beside the trench of Caton-Thompson and Gardner at Kom W. The collection features 76 sherds (21 Museum ID numbers), 64 of which were analysed. The pottery from the collection was recorded in layers 1 to 10 and on the surface. It is all dated to the Neolithic, parallel to the occupation recorded at Kom W by Caton-Thompson and Gardner (Wendorf & Schild, 1976).

### **4. Merimde pottery** (Tables 8abc)

The author had an opportunity to study part of the collections from the Institute of Prehistory and Historical Archaeology of the University of Vienna and the Museum of Mediterranean and Near Eastern Antiquities in Stockholm (Medelhavsmuseet).

The prehistoric site at Merimde Beni Salame was discovered by H. Junker during a survey of the 'Westdelta Expedition' organised by the Austrian Academy of

[1] http://petriecat.museums.ucl.ac.uk/

[2] http://www.britishmuseum.org/research.aspx

Science in Vienna. Excavations at Merimde Beni Salame were carried out between 1929-1939 pursuant to early 20th century standards. All finds from Merimde Beni Salame were recorded within a 200 × 240 m grid, with numbers along the X-axis and letters along the Y-axis. Depth was expressed in centimetres below the surface. However, due to the lack of excavation records indicating the depth of layers, it is not possible to establish a more detailed chronology on the basis of depth alone. The preserved collection of Merimdian pottery underwent a selection process, not unlike the Fayumian collection. It is housed in institutions/museums around the world.

***4.1. The University of Vienna*** *(Figs. 16-17)*
The study collection of the Institute of Prehistory and Historical Archaeology at the University of Vienna features 664 artefacts from the site at Merimde Beni Salame, including 515 ceramics, namely vessels, vessel fragments and sherds.[3] A total of 34 ceramics of the collection, including eight complete or almost complete vessels and 26 fragments, were studied by the author. All of them are dated to the Neolithic, but may come from all phases of the settlement.

***4.2. Medelhavsmuseet in Stockholm*** *(Figs. 18-20)*
Given that from 1931 to 1934 the excavations at Merimde were carried out in cooperation with the Egyptiska Museet of Stockholm, a considerably large part of the artefact collection was sent to Sweden, in return for the participation of Swedish researchers. A huge collection of approximately 6,000 items and other remains from Merimde Beni Salame is now housed in the Medelhavsmuseet in Stockholm. A total of 2,310 ceramics, including complete or almost complete vessels and sherds are part of this collection.[4] The author studied 68 items – 9 vessels and 51 fragments – rims, bases and decorated sherds. Only in 14 cases was the original location of the item not recorded.

**5. El-Omari pottery in the Egyptian Museum in Cairo** *(Tables 9abc, Fig. 21)*
The author was offered an opportunity to study a small part of ceramic assemblage of the Area A, originally collected by F. Debono during the excavation season of 1943-1944. The collection is housed now in the Egyptian Museum in Cairo.

The Neolithic site on a gravel terrace in Wadi Hof near the rocky spur known as the Ras el-Hof was discovered by Amin el-Omari, a young Egyptian mineralogist, who explored the region of Helwan at the request of the French archaeologist Fr. P. Bovier-Lapierre. The works began in 1924 and were continued after his death in 1925 by Fr. Bovier-Lapierre. In 1936, the site was once again explored by F. Debono,

[3] on the basis of the Unidam database on https://unidam.univie.ac.at
[4] on the basis of http://collections.smvk.se/carlotta-mhm/web

who identified several small separate camps with non-homogenous flint industries. Debono returned to Helwan during the war in order to protect it from damage. In 1943 and 1944, he explored it on behalf of the Egyptian Department of Antiquities. When the war ended, excavations continued in 1948 and 1951. However, the results of the works carried out at the Neolithic settlement were published only in 1990.

The entire site stretched over a surface of 750 x 500 m and was divided into eight areas, named A, B, C, D, E, F, G, and H. The excavations concentrated in Areas A and B, whereas soundings were made in Areas D, E, F, G, and H. The material including the pottery of Areas A and D was sent to the Egyptian Museum in Cairo while that from Area B was sent to Giza.

Due to the regulations of the Egyptian Museum in Cairo, only six complete vessels and three fragments of vessels made available for analysis. All of them came from Area A. Six ceramics, including complete vessels and rim fragments, were found in burials, and two complete vessels and one rim fragment were collected during pit exploration. Pits and burials are dated to different occupation phases of Area A. The el-Omari culture lasted for approximately 200/300 years (4,600-4,400/4,300 BC). The earliest occupation in Wadi Hof was registered in Area BIII. Area A was settled during the next occupation phase. However, human activity in Wadi Hof was not concentrated in one place. People moved around a wider area, consisting of many structures related to habitation, storage or other activities. For this reason, it is difficult to date the studied pottery collection. The oldest item seems to be a vessel fragment JE87546 found in pit A132 dated to the first occupation phase. A small jar JE87541 from burial A35 was found together with its famous wooden stick and is dated to the 4$^{th}$ phase. Other ceramics are associated with the 7$^{th}$ and 8$^{th}$ phases of Area A.

**4. Summary**

Analyses of pottery from the above collections have confirmed the current state of research on pottery production during the Neolithic in Lower Egypt, as presented in Chapters 5 and 6. Moreover, they have allowed us to take a closer look at some specific features of pottery production. In all three assemblages, the attention of the author was drawn to a large number of organic inclusions added to clay. Voids of burnt straw are sometimes large and can be up to 2 cm in length. On the surface of the vessels there are visible voids formed after other plant remains (including grains) were burnt out. A very coarse organic temper is present even in paste used for the production of thin-walled vessels, covered with slip before firing. As a result, this kind of temper causes the slip to crack, peel and damage the surface of the vessels. A large amount of plant remains added to clay indicates that pottery was produced within households, where remains of crops or other plants were probably available in large quantities, as they were in common use.

Pottery with a rough surface differs considerably from that decorated with the herringbone pattern, known from phase 1 of the Merimde site (Fig. 22). Its non-tempered clay is very compact. The surface of the sherds is additionally covered with red or brown slip and strongly smoothed with a hard object. The decoration pattern was made after the vessel was covered with slip, but before burnishing. Importantly, the herringbone pattern zone was not burnished.

Another interesting feature observed on ceramics are the marks of smoothing the inner surface of vessels by means of a bunch of grass or straw (Fig. 23). Such marks are visible only on a few studied items and it is difficult, therefore, to judge how often this particular method was used.

The opportunity to study the ceramic assemblages of the Fayumian, Merimde and el-Omari cultures consolidated the author's views on the existence of a single, region-wide cultural tradition shared by all Lower Egyptian societies which developed throughout the 6$^{th}$ and 5$^{th}$ millenniums BC. Although the archaeological map of Neolithic Lower Egypt was divided into three independent parts referred to as archaeological cultures, in opinion of the author, all of them represent different stages of the development of single, region-wide cultural tradition. This tradition changed over time and space, probably being transformed through day-to-day living, and influenced by internal and external factors. Consequently, each of the cultures had some common features of the Lower Egyptian cultural tradition, as well as its unique characteristics distinguishing it from the other cultures (for details, see Mączyńska, 2017). Moreover, in the opinion of the author, the pottery production in the Neolithic is closely linked to the pottery tradition in the Chalcolithic of Lower Egypt (for details, see Mączyńska, 2018b). Analyses show that although ceramic assemblages from both periods do differ, they also indicate some common technological features which could be explained as a result of a common cultural background of the societies occupying the region in question from the 6$^{th}$ to 4$^{th}$ millenniums BC. The adaptation to, and the use of local resources, simple pottery-making techniques, a limited number of vessels shapes and a household mode of production can all be observed in both periods. The rough surface of pottery, self-slip and burnishing observed in the studied samples of the Neolithic assemblages are parallel to those observed on Chalcolithic pottery. The studies of the assemblages from old surveys quickly verified the research questions that had to be asked upfront. Their selective nature, the lack of contextual details, as well as the absence of a detailed chronology limit their scientific value. However, it should be stressed that, in most cases, the data contained in the tables include ceramics, in particular, sherds, which have not been published in detail. Together with data from other studies (see Emmitt, 2011; 2017; Emmitt *et al.*, 2018), they may be the subject of detailed research on the Egyptian Neolithic pottery in the future.

**Abbreviations for Tables 7abc-9abc**

***Location*** – location of collection
- PM – the Petri Museum of Egyptian Archaeology
- BM – the British Museum
- EMC – the Egyptian Museum in Cairo
- MS – Medelhavsmuseet in Stockholm
- UV – the Institute of Prehistory and Historical Archaeology of the University of Vienna

***ID*** – identification number assigned to every ceramic item – a vessel or a sherd in a database or registry

***Item no.*** – assigned when more than one item have the same ID

***Site*** – archaeological site

***Context*** – archaeological context: area, grid, layer, feature (only if available)

***Chronology*** – chronology, including chronology established by excavator/s

***Vessel part***
- V – complete vessel (with rim and body present)
- R – rim sherd
- RC – complete or almost complete profile of a vessel
- N – neck sherd
- B – base sherd
- F – sherd
- H – handle

***Catalogue description*** – as stated in a registry, database or publication

***Vessel shape***
- O – open
- C – closed

***Shaping method***
- HM – handmade
- PD – pinching and drawing technique (only if clearly visible)

***Rim shape***
- P – pointed
- F – flat
- R – rounded
- RC – recurved
- ST – straight
- F – flaring
- N – narrowing

***Body shape***
S – sphere
E – ellipsoid
O – ovaloid
C – cylinder
H – hyperboloid
CN – cone

***Base shape***
R – round
SF – slightly flat
F – flat
P – pointed
R – ring base
K – knobbed base

***RD*** – rim diameter (mm)

***MD*** – maximum vessel body diameter (mm)

***BD*** – base diameter (mm)

***H*** – height (mm)

***WT*** – wall thickness (mm)

***Clay***
N - Nile clay
C - calcareous clay

***Temper***
S – organic
SD – sand
G – grog
C – calcite
F – fibrous organic temper
M – mica (natural) (only if abundant and clearly visible)

***Temper size*** (according to Orton *et al.*, 2010: 240, fig. A.4)
S – small
M – medium
C – coarse
VC – very coarse

***Temper %*** – percentage of tempers in paste (according to Orton *et al.*, 2010: fig. A.4)

***Break EXT/M/INT*** – colours of break section exterior-middle-interior
- R – red
- DR – dark red
- YR – yellowish red
- B – brown
- LB – light brown
- DB – dark brown
- RB – reddish brown
- BL – black
- G – grey

***PF*** – post-firing marks
- P – pierced
- B – burnt

***Ext. surf. colour*** - external surface colour according to a Munsell colour chart

***Int. surf. colour*** – internal surface colour according to a Munsell colour chart

***Slip colour*** – slip colour according to a Munsell colour chart

***Ext. surf. treat.*** – external surface treatment

***Int. surf. treat.*** – internal surface treatment
- S – smoothing
- B – burnishing
- R – roughening
- H – horizontal burnishing
- V – vertical burnishing
- C – in the upper part horizontal burnishing, in the lower part vertical burnishing
- O – oblique burnishing
- X – identification not possible

***Dec. pattern*** – decoration pattern
- KN – knob
- HB – herringbone
- L – line
- HL – horizontal line
- N – nail impression

***Dec. technique*** – technique of decoration
- APP – applied
- INC – incised
- IMP – impressed

***Dec. location*** – location of decoration
E – exterior
R – rim
UR – under rim
U – upper part of the vessel
SH – shoulders

***Drawing*** – reference to a drawing

***References*** – reference to original publications (only if possible)