STUDIES ON OLD KINGDOM POTTERY

edited by
T. I. RZEUSKA
A. WODZIŃSKA

ZAŚ PAN

STUDIES ON OLD KINGDOM POTTERY

[This page is intentionally blank.]

Centre d'Archéologie Méditerranéenne de l'Académie Polonaise des Sciences
avec la collaboration de l'Institut d'Archéologie de l'Université de Varsovie

STUDIES ON OLD KINGDOM POTTERY

edited by
T.I. RZEUSKA
A. WODZIŃSKA

ZAŚ PAN

Wydawnictwo Neriton
Warsaw 2009

Editors
Teodozja I. Rzeuska and Anna Wodzińska

Layout and setting
Elżbieta Malik

Cover design
Anastazja Stupko

Cover photo
Maciej Jawornicki

ISBN 978-83-7543-121-6

Published with financial support from Ministry of Science and Higher Education
Tytuł dotowany przez Ministerstwo Nauki i Szkolnictwa Wyższego

Published by Wydawnictwo Neriton
Rynek Starego Miasta 29/31, pok. 33, 00-272 Warszawa
tel. 22 831-02-61 w. 26
www.neriton.apnet.pl
neriton@ihpan.edu.pl

Printed in Poland, 330 copies
1st edition – Warsaw 2009

CONTENTS

[This page is intentionally blank.]

ACKNOWLEDGMENTS

The present book is a result of cooperation between the Institute of Archaeology, University of Warsaw and Research Centre for Mediterranean Archaeology of the Polish Academy of Sciences. The editors representing both institutions are deeply grateful to following persons for help and support during work on the present studies, Prof. dr hab. Karol Myśliwiec *(Director of the Research Centre for Mediterranean Archaeology, Polish Academy of Sciences), Prof. dr hab.* Włodzimierz Godlewski *(Head of the Department of Egyptian and Nubian Archaeology, Institute of Archaeology, University of Warsaw), Prof. dr hab.* Kazimierz Lewartowski *(Director of the Institute of Archaeology, University of Warsaw), Prof. dr hab.* Jolanta Młynarczyk *(Institute of Archaeology, University of Warsaw), Prof. dr hab.* Krzysztof Ciałowicz *(Institute of Archaeology, Jagiellonian University, Cracow). Moreover, the editors are greatly appreciative of Prof. dr hab.* Ewa Laskowska-Kusztal's *(Research Centre for Mediterranean Archaeology, Polish Academy of Sciences) involvement in the process of editing this book.*

[This page is intentionally blank.]

ABBREVIATIONS

AA	*American Anthropologist*, Arlington, Virginia
AAMT	Advances in Archaeological Method and Theory, University of Arizona, Tuscon
AANT	*American Antiquity,* Washington, DC
ACE Reports	The Australian Centre for Egyptology Reports, Sydney
ADAIK	Abhandlungen des Deutschen Archäologischen Instituts Kairo (Ägyptologische Reihe), Glückstadt, Hamburg, New York, Mainz am Rhein
Ä&L	*Ägypten und Levante,* Wien
Archaeometry	*Archaeometry,* Oxford
Archeologia	*Archeologia,* Warsaw
Archeologia Geographica	*Archeologia Geographica*, Hamburg
ARCUS	*Berichte aus Archäologie, Baugeschichte und Nachbargebieten*, Potsdam
ArOr	*Archiv Orientální, Quarterly Journal of African and Asian Studies,* Praha
ASAE	*Annales du Service des Antiquités de l'Égypte,* Le Caire
AV	*Archäologische Veröffentlichungen des Deutschen Archäologischen Instituts Abteilung Kairo*, Berlin, Mainz am Rhein
ÄA	Ägyptologische Abhandlungen, Wiesbaden
ÄAT	*Studien zu Geschichte, Kultur und Religion Ägyptens und des Alten Testaments,* Wiesbaden
BAR	*British Archaeological Reports, International Series*, Oxford
BASOR	*Bulletin of the American Schools of Oriental Research,* Ann Arbor
BÄ	Beiträge zur Ägyptologie, Wien
BÄBA	Beiträge zur ägyptischen Bauforschung und Altertumskunde, Kairo
BCE	*Bulletin de liaison du groupe international d'étude de la céramique égyptienne*, Le Caire
BdÉ	*Bibliotèque d'Étude, Institut français d'archéologie orientale*, Le Caire
BES	*Bulletin of the Egyptological Seminar*, New York
BIFAO	*Bulletin de l'Institut français d'archéologie orientale,* Le Caire
BMFA	*Bulletin of the Museum of Fine Arts,* Boston
BP	*Biology and Philosophy*, Dordrecht
BSAK	Studien zur altägyptischen Kultur, Beihefte, Hamburg
BSFE	*Bulletin de la Société française d'égyptologie*, Paris
CA	*Current Anthropology,* University of Chicago, Chicago
CCE	*Cahiers de la céramique égyptienne,* Le Caire
CdE	*Chronique d'Égypte, Bulletin périodique de la Fondation Égyptologique Reine Elisabeth,* Bruxelles
CRAIBL	*Comptes rendus de l'Académie des inscription et belles-lettres*, Paris
EA	*Egyptian Archaeology. Bulletin of the Egypt Exploration Society*, London

EEF	Egypt Exploration Fund, London
EES	Egypt Exploration Society, London
ÉtTrav	*Études et Travaux du Centre d'Archéologie Méditterranéenne de l'Académie Polonaise des Sciences*, Varsovie
FIFAO	Fouilles de l'Institut français d'archéologie orientale, Le Caire
Genèva	*Bulletin du musée de Genève. Musée d'art et d'histoire*, Genève
GM	*Göttinger Miszellen,* Göttingen
HdO	Handbuch der Orientalistik, Leiden
Hesperia	*Journal of the American School of Classical Studies at Athens*, Athens
IBAES	*Internet-Beiträge zur Ägyptologie und Sudanarchäologie*
JAMT	*Journal of Archaeological Method and Theory,* Dordrecht
JAR	*Journal of Archaeological Research,* New York
JARCE	*Journal of American Research Center in Egypt,* Boston
JAS	*Journal of Archaeological Science*, New York
JEA	*Journal of Egyptian Archaeology*, London
JFA	*Journal of Field Archaeology*, Boston University, Boston
JSSEA	*Journal of the Society for the Study of Egyptian Antiquities*, Toronto
LA	*Louisiana Archaeology,* Springhill
LÄ	Lexikon der Ägyptologie, vols. I-VII, Wiesbaden
MDAIK	*Mitteilungen des Deutschen Archäologischen Instituts Kairo,* Berlin, Wiesbaden, Mainz am Rhein
MIFAO	Mémoires publiés par les membres de l'Institut français d'archéologie orientale, Le Caire
OLA	Orientalia Lovaniensia Analecta, Leuven
OMRO	*Oudheidkundige Mededelingen uit het Rijksmuseum van Oudheden te Leiden,* Leiden
OrAnt	*Oriens Antiquus. Rivista del Centro per le antichità e la storia dell'arte del Vicino Oriente*, Roma
OrMonsp	Orientalia Monspeliensia, Montpellier
PAM	*Polish Archaeology in the Mediterranean*, Warsaw
Památky archeologické	*Památky archeologické*, Praha
PP	*Perception and Psychophysics*, Austin
PR	*Psychological Review*, Washington, DC
Radiocarbon	*Radiocarbon*, Tucson
SAAC	Studies in Ancient Art and Civilization, Cracow
SAGA	Studien zur Archäologie und Geschichte Altägyptens, Heidelberg
SAK	*Studien zur Altägyptischen Kultur*, Hamburg
SAOC	Studies in Ancient Oriental Civilization, Chicago
Science	*Science,* Washington, DC
SDAIK	Sonderschriften des Deutschen Archäologischen Instituts Abteilung Kairo, Mainz am Rhein, Berlin
TMO	Travaux de la Maison de l'Orient et de la Méditerranée, Lyon
WES	Warsaw Egyptological Studies, Warsaw
WB	A. Erman, H. Grapow, Wörterbuch der ägyptischen Sprache, vols. I-VI, Berlin und Leipzig
ZÄS	*Zeitschrift für ägyptische Sprache und Altertumskunde*, Berlin, Leipzig

FOREWORD

Egypt has been the object of uninterrupted exploration for the past two centuries. Successive expeditions, regardless of whether they were working in archaic cemeteries or in a medieval Coptic monastery, focused on the study and publication of the most spectacular finds: architecture, decoration and texts. The artefacts was rarely the subject of in-depth research and pottery was no exception. Despite being the most numerous group in the archaeological finds assemblage, ceramic material has long waited, and actually continues to wait, for more suitable interest on the part of archaeologists. The modest literature on the subject is sufficient proof of the slight interest in this category. In most publications concerning particular funerary complexes, especially of Old Kingdom date, the information on the pottery is scarce, if included at all. One may be forgiven for thinking that material is selected for publication based on criteria of intactness and "prettiness".

This state of affairs is due not so much to limited interest in pottery as to the huge quantities of sherds unearthed during even a single season – from a few to several thousands of diagnostic fragments. Not without significance is the fact that most of the tombs and temples were plundered already in Antiquity, often repeatedly, and many were reused in later periods, leaving the ceramic material in a disturbed and fragmentary condition. The complex situation requires from potential ceramologists not just patience, but also knowledge of pottery ranging from the Archaic period through the Middle Ages, including imports from the Mediterranean area. Many archaeologists are overwhelmed by the mass of material and prefer to leave it for "future" research, which is usually belated. Furthermore, analyses of Old Kingdom pottery are often based on accidental and frequently erroneous observations. One lingering conviction is that pots made of "poor" clay represent offering or cult pottery, while vessels of "good quality" clay (particularly of Nile A, and B1) are referred to as "red ware" or "Meidum ware", come from burial chambers. However, it is not the quality of the pottery that answers questions about its provenance or original function. Where a pot came from, and what specific event it is witness to, can be determined only from the archaeological context.

The subject of the present study is a technological, chronological and cultural analysis of pottery of the Old Kingdom. Some chapters refer to technological issues of pottery manufacture in the late Old Kingdom; the authors discuss the results of analyses of the

materials used in pottery production, shaping techniques and surface treatment, while the others present a cultural analysis of the pottery. The authors did not wish to leave this important material exclusively as a typology accompanied with the dating of particular groups of pots and the function of individual vessels. The pottery proved to be one of the most important testimonies concerning burial customs, funerary cult, plunder, and daily life of the Ancient Egyptians.

For the past several years one may observe a slow but constant increase in interest in Old Kingdom ceramics. In order to deepen our knowledge it is important not only to publish and to read older publications, but also exchanging ideas during meetings in groups of specialists. Such meetings allow vivid discussion, exchange of thoughts and new ideas, as well as international cooperation.

The present publication was inspired by the workshop on ceramics from the Old Kingdom organized by Teodozja I. Rzeuska and Anna Wodzińska in 2007 in the Institute of Archaeology (University of Warsaw). The meeting was very successful, however, the organizers realized that the subject is much more complex and requires further studies. In order to receive different views on the material, more ceramicists were invited to participate in the publication devoted solely to ceramics dating from the Old Kingdom.

Teodozja I. Rzeuska, Ph.D.
(Polish Academy of Sciences,
Research Centre for Mediterranean Archaeology)

Anna Wodzińska, Ph.D.
(University of Warsaw,
Institute of Archaeology,
Department of Egyptian and Nubian Archaeology)

STUDIES ON OLD KINGDOM POTTERY
T.I. Rzeuska, A. Wodzińska (eds.)
Warsaw 2009

WORK ORGANIZATION IN THE OLD KINGDOM POTTERY WORKSHOP. THE CASE OF THE HEIT EL-GUROB SITE, GIZA

ANNA WODZIŃSKA (University of Warsaw)

INTRODUCTION

A modern pottery workshop displays a systematic organization of work. Each workshop produces a certain number of ceramic types according to the demand of local or surrounding communities. The number of types is limited to those manufactured over many generations, or those which are result of a specific need.

The pottery assemblage of the Heit el Gurob site provides a good sample for ceramic type studies with approximately 200 types represented. The site existed during a very short time between the end of the reign of Chafre through Menkaure's reign. It is very likely that the workshops there produced a limited number of types, as is standard procedure in the modern times.

I do not intend to prove that all the aspect of modern pottery production can be applied to the ancient ceramic manufacture, but rather to show that there may be similarities in pottery making between modern and ancient times, some of which might explain certain phenomena of Old Kingdom ceramics, especially from the Giza area.

MODERN POTTERY WORKSHOP

Pottery workshops still exist in modern Egypt, although traditional pottery production has diminished due to more frequent usage of the pots made of metal, especially aluminum.

Several modern workshops have been the subject of scientific research, one of which, the pottery workshop at el-Qasr in Dachla oasis, was published by Nessim Henein.[1] Other pottery workshops mentioned in the present paper are Fustat (Pls. XVI.A, XVII), located in Old Cairo,[2] el-Nazla in the Fayum oasis (PL. XVIII),[3] and Deir el-Gharbi[4] and Taramsa,[5] both in the Qena region.

---

[1] NESSIM HENEIN 1997.

[2] GOLVIN, THIRIOT, and ZAKARIYA 1982; WENDRICH and KOOIJ 2002.

[3] WENDRICH and KOOIJ 2002.

[4] LACOVARA 1985; NICHOLSON 2002; NICHOLSON and PATTERSON 1985.

[5] Personal observation, spring 1999.

An individual workshop was part of a larger industrial center and displays specific division of labor, in the manner of an assembly-line.[6] It includes a master potter, several helpers who prepare the clay, and various assistants who prepare the clay and help in various other tasks.[7] The presence of such apprentices is very important, because in the process of their daily tasks they learn the "craft and have to pass through the different stages of potter activities."[8]

The modern pottery workshops can be divided into two general groups. One is associated with workshops that produce several types of vessels, such as at el-Nazla, Fustat,[9] or el Qasr.[10] The second group of workshops, especially those from the Qena area, are characterized by highly specialized production limited to only one vessel type called Ballas jar (Pl. XIX.A).[11] It was also observed that jar rims made by different potters display some variety.[12]

If the production center produces various types, each of the smaller workshops within the center makes a different repertoire of pots. Moreover, individual potters are responsible for a limited number of shapes,[13] an indication of work specialization.

Ceramic types bear distinct name, which "often combine several dimensions simultaneously: size, shape, specific functions, and contents".[14] For example, the Nazla potters "make a wide range of products, distinguished according to basic technique."[15] The Nazla ceramic group includes nine basic types, each of them with a different name.[16]

The number of types in a given workshop are limited to those manufactured over generations, or to those that are the result of a specific demand, such as the recent increase of the tourist market.[17]

POTTERY WORKSHOP IN THE TOMB OF TI

The well known representation of a pottery workshop from the Fifth Dynasty tomb of Ti in Saqqara (Fig. 1, starting on the right) can be divided into three mutually complementary parts.

The scene was designed symmetrically, the line of symmetry passing straight through the vessel, which constitutes part of a hieroglyphic inscription. Sitting on the right is a man holding a vessel before him and possibly forming its interior shape. The man standing next to him is leaning over another vessel. Standing with her back to him is woman (?), also leaning over another similar jar. The man depicted on the left appears to be putting

---

[6] RICE 1987, p. 190.
[7] RICE 1987; WENDRICH and KOOIJ 2002, p. 149.
[8] WENDRICH and KOOIJ 2002, p. 149.
[9] WENDRICH and KOOIJ 2002.
[10] HENEIN 1997.
[11] NICHOLSON and PATTERSON 1985, p. 222.
[12] NICHOLSON and PATTERSON 1985, p. 234; LACOVARA 1985, pp. 58-59, Fig. 11.
[13] Personal observation, Fustat, 1996.
[14] RICE 1987, p. 278.
[15] WENDRICH and KOOIJ 2002, p. 157.
[16] WENDRICH and KOOIJ 2002, p. 157.
[17] Personal observation, el-Nazla 2002, 2005.

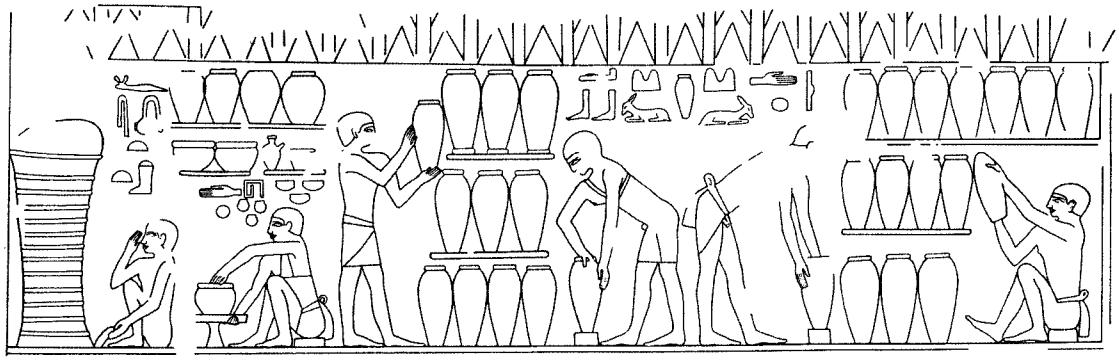

Fig. 1. Depiction of a pottery workshop, tomb of Ti, Saqqara. After ARNOLD *et al.* 1993, 39, Fig. 39.

a finished vessel aside for drying. The scene was complemented with a representation of a row of drying vessels. The hieroglyphic text reads:

From the right: *ḳd ḏwiw* – "making (literally "building") *ḏwiw* jars."

From the left: *bb ḏwiw* – perhaps the text is a label for the activity shown below: "the forming of the rim of a *ḏwiw* jar."

In the second part of the relief a sitting potter is forming a vessel on a potter's wheel. The inscription just above it reads: *ḳd hnw*: "manufacturing bowls (as indicated by the determinative) of the *hnw* type", presumably Meidum-type bowls.[18] Another batch of drying vessels is seen above the wheel.

The last scene shows the firing of dried vessels. Sitting in front of a kiln is a man who is protecting his face with his hands. The scene is accompanied by the text: *fšt t3* – "firing a kiln."[19]

It seems that the pottery production reproduced in the tomb of Ti resembles an 'assembly-line' like work organization known from modern times, in which several people are involved in the production. It is also interesting to note that the depicted pots have their own names, such as *hnw*, and *ḏwiw*.

HEIT EL GUROB CERAMICS[20]

Directly behind the Wall of the Crow at Giza (Fig. 2) lies Heit el Gurob (Fig. 3), excavated by the Ancient Egypt Research Associates (AERA). The settlement is divided into three main areas, namely the gallery complex, Eastern and Western towns.

The Heit el-Gurob pottery assemblage gives a good sample for ceramic type studies. The site existed during a very short time, that is between the end of Khafre and end of Menkaure's reigns.[21] The ceramic material does not display much chronological variation in such a short time. It rather seems that the differences in the shape of pots represent probably different workshops or even different potters employed in the pottery production.

---

[18] BALCZ 1933, p. 24.

[19] The description of the scene based on ARNOLD *et al.* 1993, pp. 39-41; HOLTHOER 1977, p. 7; HOPE 1987, p. 13.

[20] WODZIŃSKA 2007.

[21] LEHNER 2002, p. 34.

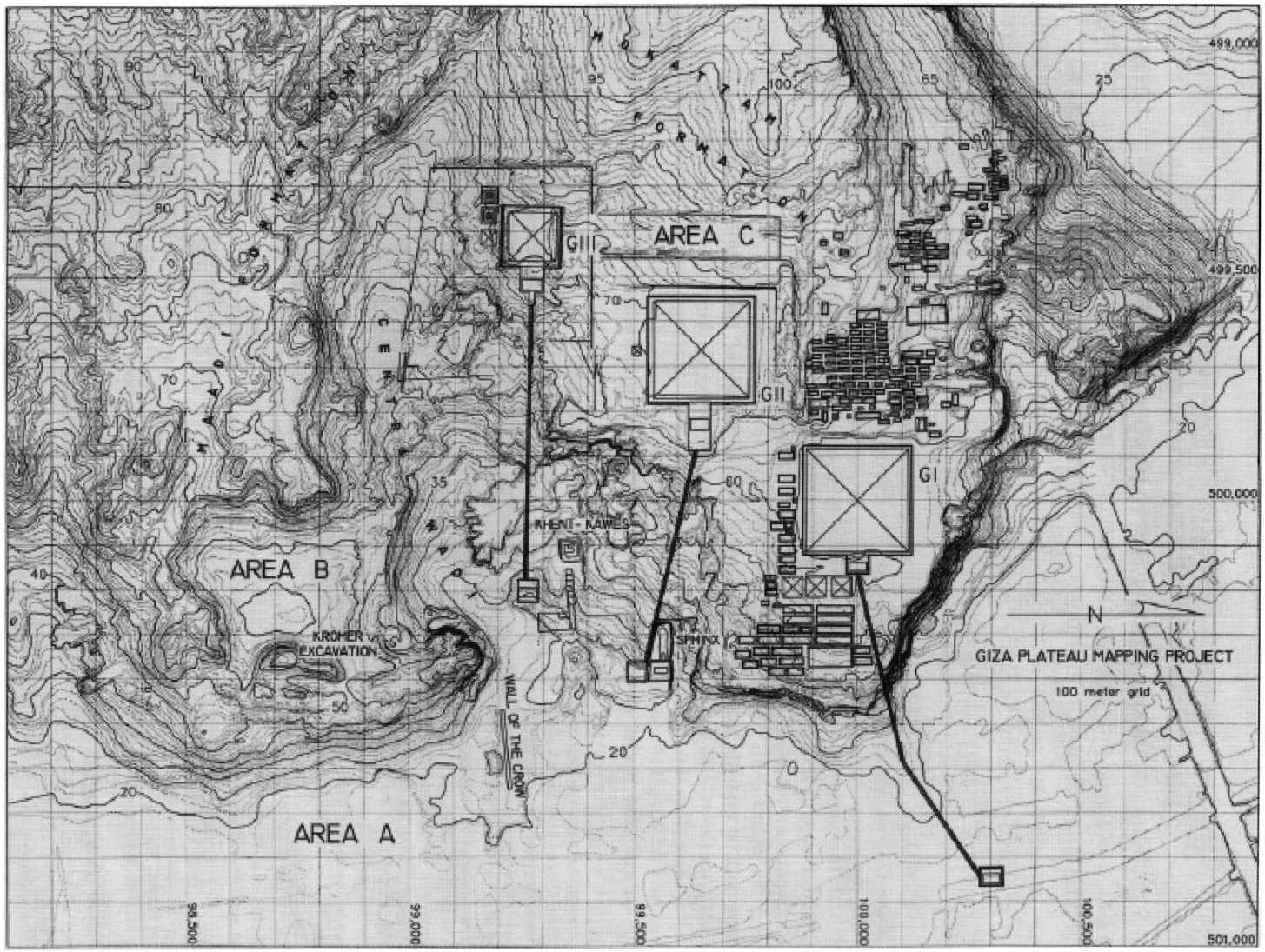

Fig. 2. General plan of the Giza Plateau – WETTERSTROM and LEHNER 2007, p. 4, Fig. 1.2.

There is also the problem with shaping methods. The Fourth Dynasty pots were mostly hand made or hand made and wheel finished. The lack of fast speed turning devise results in a larger variety of shapes even if potters kept in mind a very specific type.

According to Rice[22] there are two ways of type classification, namely scientific and folk. The scientific classification "is created by analyst" and folk classification is "used by the producers and consumers". As it is observed in modern times the different folk types have distinctive names. It is very difficult to identify the folk classification in an archaeological material. We have at our disposal the physical properties but also Egyptian tomb reliefs and texts that mention several vessel names, known from the Old Kingdom, such as *bḏ*[23], *ḏwiw*[24], *nmst*[25], *dšrt*.[26] The determinatives *sur*[27] and *hnw*,[28] for instance, may represent a vessel in the shape of a Meidum bowl.

Approximately 200 types were distinguished within the Heit el-Gurob ceramic material (Pl. XIX.B).[29] The types were described in an analytical way on the basis of shape, clay, surface treatment and shaping method used. In the case of hand made pottery the shape is the weakest criterion, though, it still must be taken under consideration.

Here I present six Heit el-Gurob vessels, which according to their properties can also be called folk types, since they display very uniform surface treatment, clay, manufacturing technique and shape: AB1, AB4, AB7, CD7, CD22, and F2.

AB1[30] (Fig. 4) is a jar with simple and straight rim and a short neck. The egg-shaped body narrows towards the rounded base. Ordinarily, the vessel was made of Nile B1, less often of Nile B2. The body of the jar must have been hand made by the coiling method; the rim, neck and upper part of the shoulders were thrown on a turning devise or a simple wheel. The external surface is smoothed, as is the rim on the inside, and both were coated with an even thin layer of white or pinkish wash.

AB4[31] (Fig. 5) is a well known beer jar with rounded or sometimes pointed bases. The jars were made of Nile C clay. The body was presumably hand made by the coiling method. Surface treatment is rather careless with visible evidence of manufacture both inside and outside.

AB7[32] (Fig. 6) are jars characterized by a simple cylindrical neck, occasionally flaring. Its rim is convex. A clear groove is visible just under the rim on the inside. The walls of the conical body fall steeply towards a rounded bottom. Jars of AB7 type were made ordinarily of marl clay (70%), especially marl C and marl A1. The vessels were most likely handmade by the coiling method. The rim and neck were finished on a simple wheel. Overall, AB7 jars have carefully smoothed external surfaces, leaving no production-related traces; these are apparent only on the inside of the vessel.

---

[22] Rice 1987, pp. 275-277.
[23] WB I, p. 488 [11].
[24] WB V, p. 551 [6-7].
[25] WB II, p. 269 [7-8].
[26] WB V, p. 493.
[27] Balcz 1933, p. 24; Brovarski 1982, p. 37.
[28] WB II, p. 493.
[29] Wodzińska 2007.
[30] Wodzińska 2007, pp. 295-296, Fig. 11.7.
[31] Wodzińska 2007, pp. 296-297, Fig. 11.10.
[32] Wodzińska 2007, pp. 297-298, Fig. 11.11.

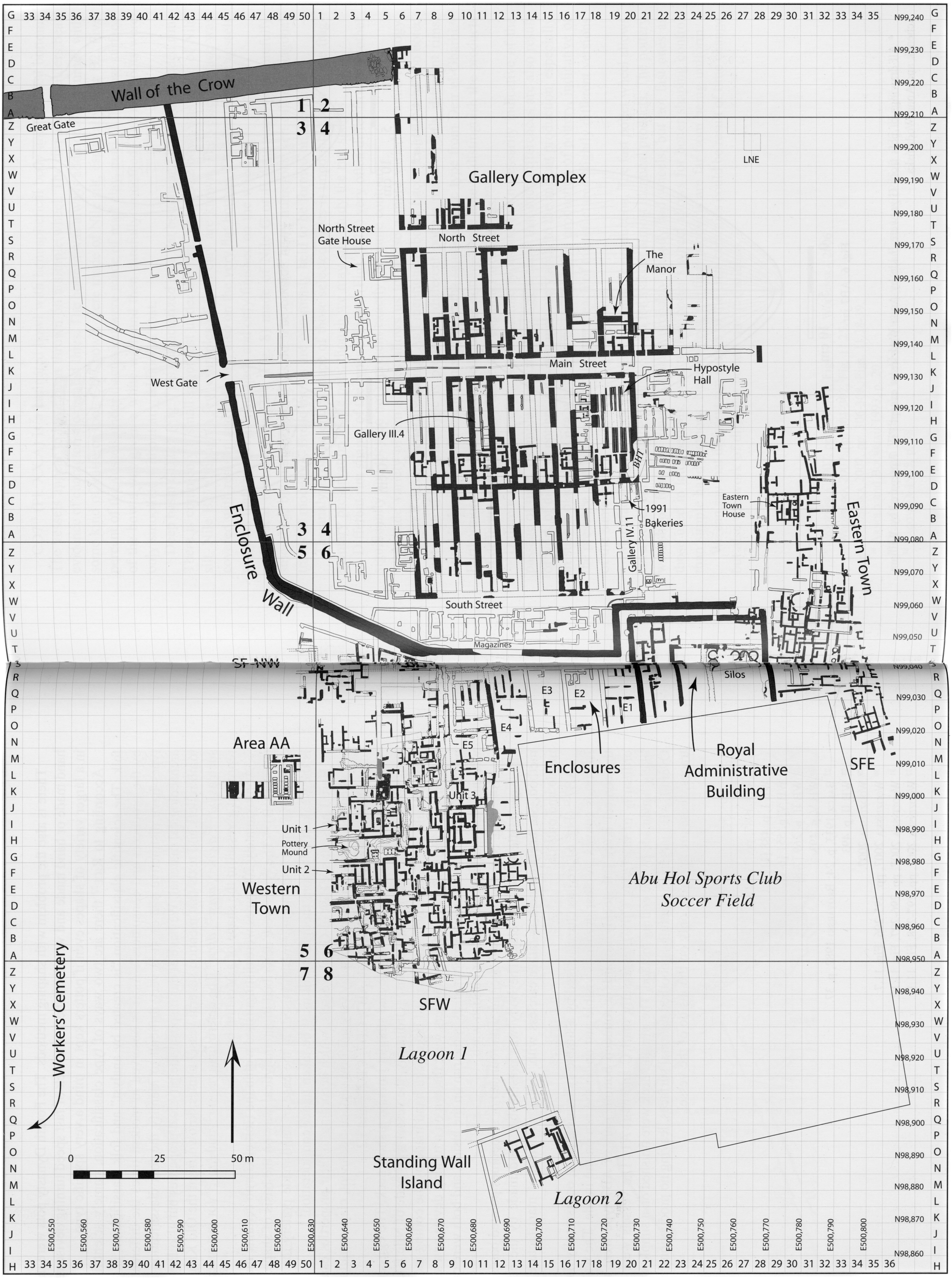

Fig. 3. Plan of the Heir el-Gurob area A – WETTERSTROM and LEHNER 2007, p. 14, Fig. 1.9.

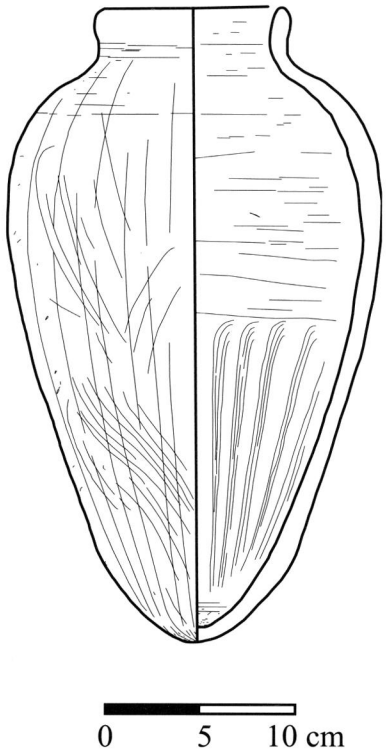

Fig. 4. AB1 jar.*

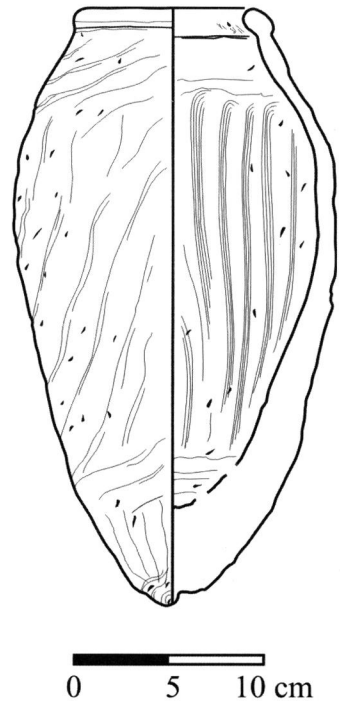

Fig. 5. AB4 jar.

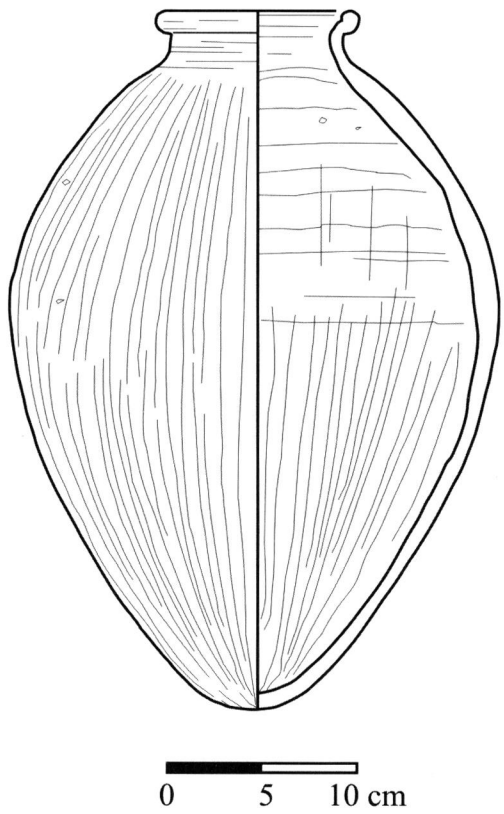

Fig. 6. AB7 jar.

* All drawings of pots from Giza were made by Anna Wodzińska except Fig. 7 prepared by William Schenck and Anna Wodzińska.

CD7[33] (Pl. XX.A) is a carinated bowl with hemispherical body and rounded bottom. The vessels appear to have been thrown on a simple wheel. The rim and shoulders bear evidence of characteristic parallel lines. The bottom was always additionally trimmed with some kind of knife or tool. CD7 bowls were made of Nile silt, especially Nile B2. Five percent of the vessels under discussion were made of marl clay, marl C. The mat surface of the bowls was given a white wash and then carefully smoothed. The marl pots were only smoothed without any additional coat.

Deep basin CD22[34] (Fig. 7) is characterized by a flat bottom and inturned, rounded rim. There is commonly a small spout just under the rim. The CD22 bowl was made of Nile silt, Nile B2, although a few examples of marl clay are known. The vessel surface was covered with red slip and polished, also on the very flat bottom. The size of these vessels suggests that they were handmade and only finished on the wheel.

Conical bread molds, F2[35] (Fig. 8) made of Nile C or E clay were very carefully smoothed, but mainly on the inside. The outside bears numerous vertical and diagonal traces of modeling. Bread molds are commonly held to be formed on a core.[36]

The analysis of the entire shape of those selected types is impossible, due to the fragmentary preservation of the pots, though we may still study the rim shapes.

Different rim shapes of the types selected (Figs. 9-14) very often differ from one other significantly and they do not represent exactly the same contours.

A wide variety of rim shapes allows us to devise a more varied ceramic typology. However it can be very misleading. As I mentioned above, Lacovara and Nicholson noted that even if the same type is produced, different potters make slightly different rims. Fig. 15 shows four different rim shapes of the same ceramic type from Deir el-Gharbi.[37] Furthermore, Lacovara mentioned that the potters "were able to distinguish the products of different potters in the village and examples from Ballas."[38]

Different rim shapes of the same ceramic types are not necessarily indicative of the passage of time. Examples from modern Egypt show that such differences are also result of work of different potters. This can apply very aptly to the ancient production, especially in such a place like Giza where we observe massive production of pottery, indicative of the presence of a large number of potters, each of manufactured slightly different versions of the same form.

Manufacturing methods also influence ceramic production. The fast potter wheel allows for a better control of the production and for making almost identical products. The pottery workshops from the Fourth Dynasty probably already had wheels, but not fast ones as those used in later periods. Even a slow potter's wheel allows for better shaping control than simple hand methods. Nevertheless, the final products are far from being uniform.

We can say that different rim shapes of the Giza ceramics could be result of time change but also the work of different potters and techniques.

---

[33] Wodzińska 2007, pp. 299-301, Fig. 11.21; Wodzińska 2006.

[34] Wodzińska 2007, pp. 301-302, Fig. 11.25.

[35] Wodzińska 2007, pp. 306-308, Figs. 11.38-39.

[36] Arnold and Bourriau 1993, p. 20.

[37] Drawing by Anna Wodzińska based on Nicholson and Patterson 1985, p. 237, Fig. 8.

[38] Lacovara 1985, p. 58.

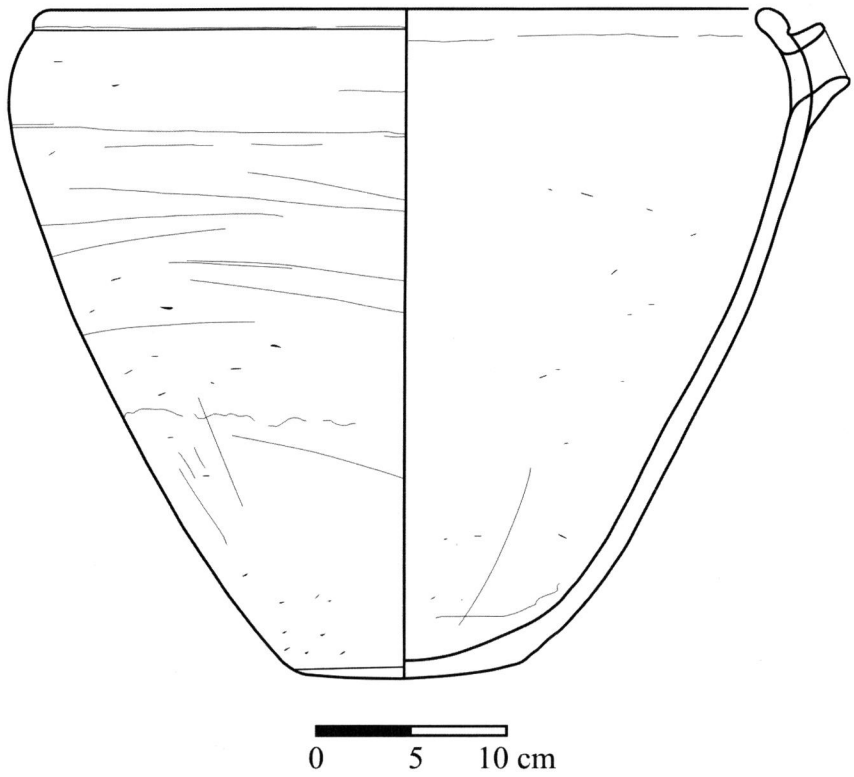

Fig. 7. CD22 basin.

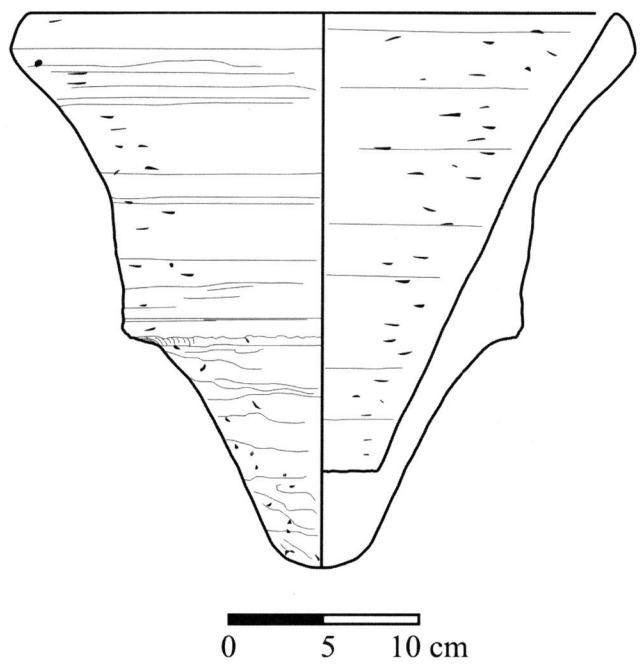

Fig. 8. F2 bread mold.

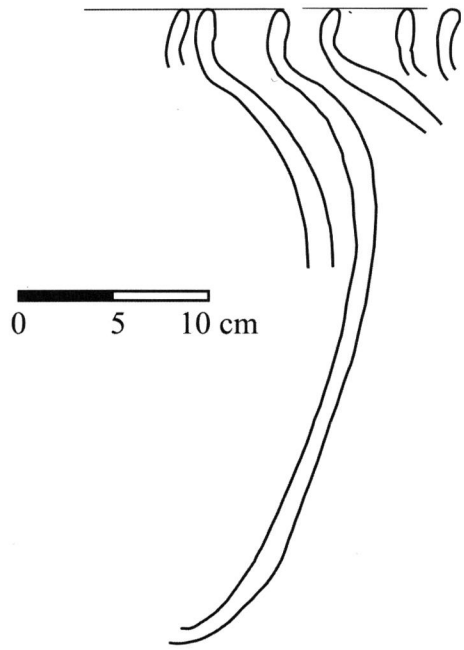

Fig. 9. Variants of rim shapes of AB1 jar.

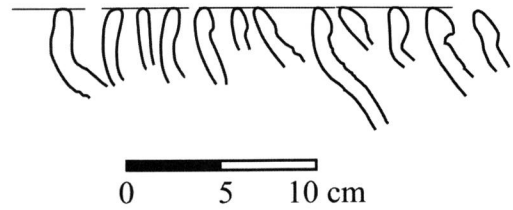

Fig. 10. Variants of rim shapes of AB4 jar.

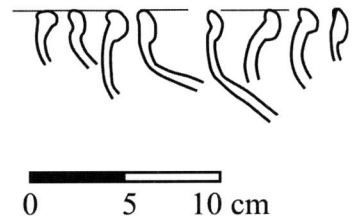

Fig. 11. Variants of rim shapes of AB7 jar.

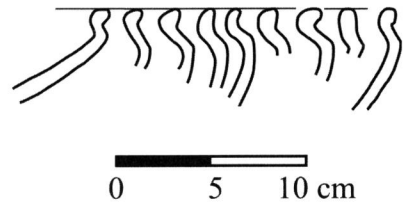

Fig. 12. Variants of rim shapes of CD7 bowl.

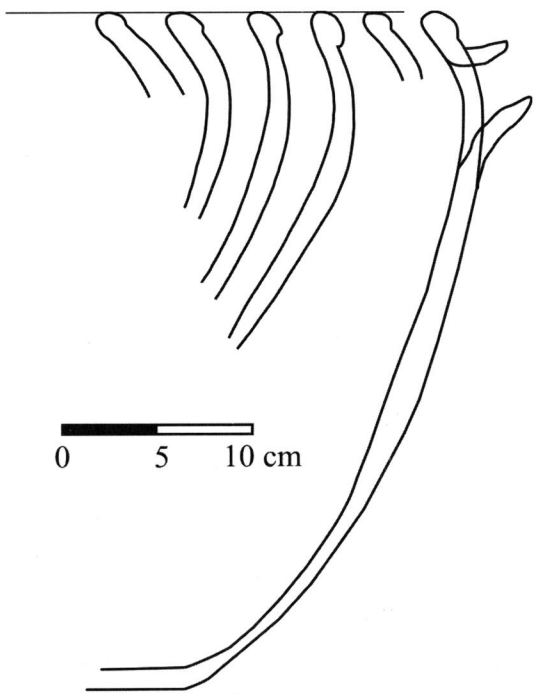

Fig. 13. Variants of rim shapes of CD22 basins.

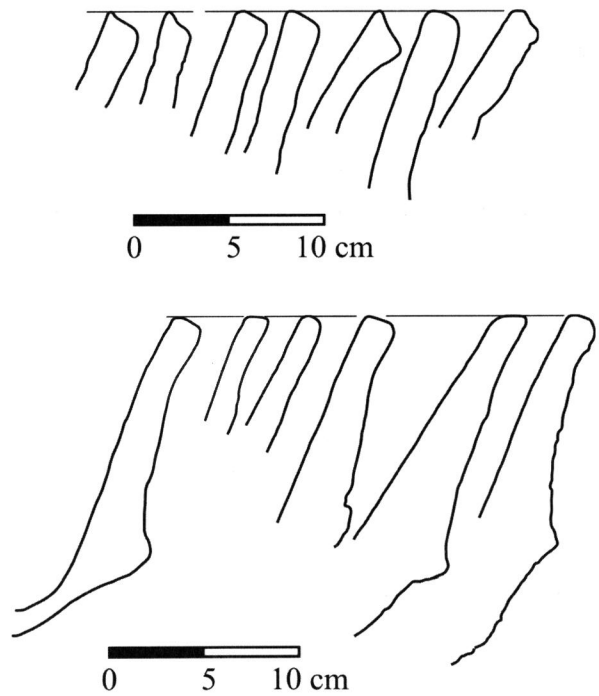

Fig. 14. Variants of rim shapes of F2 conical bread molds.

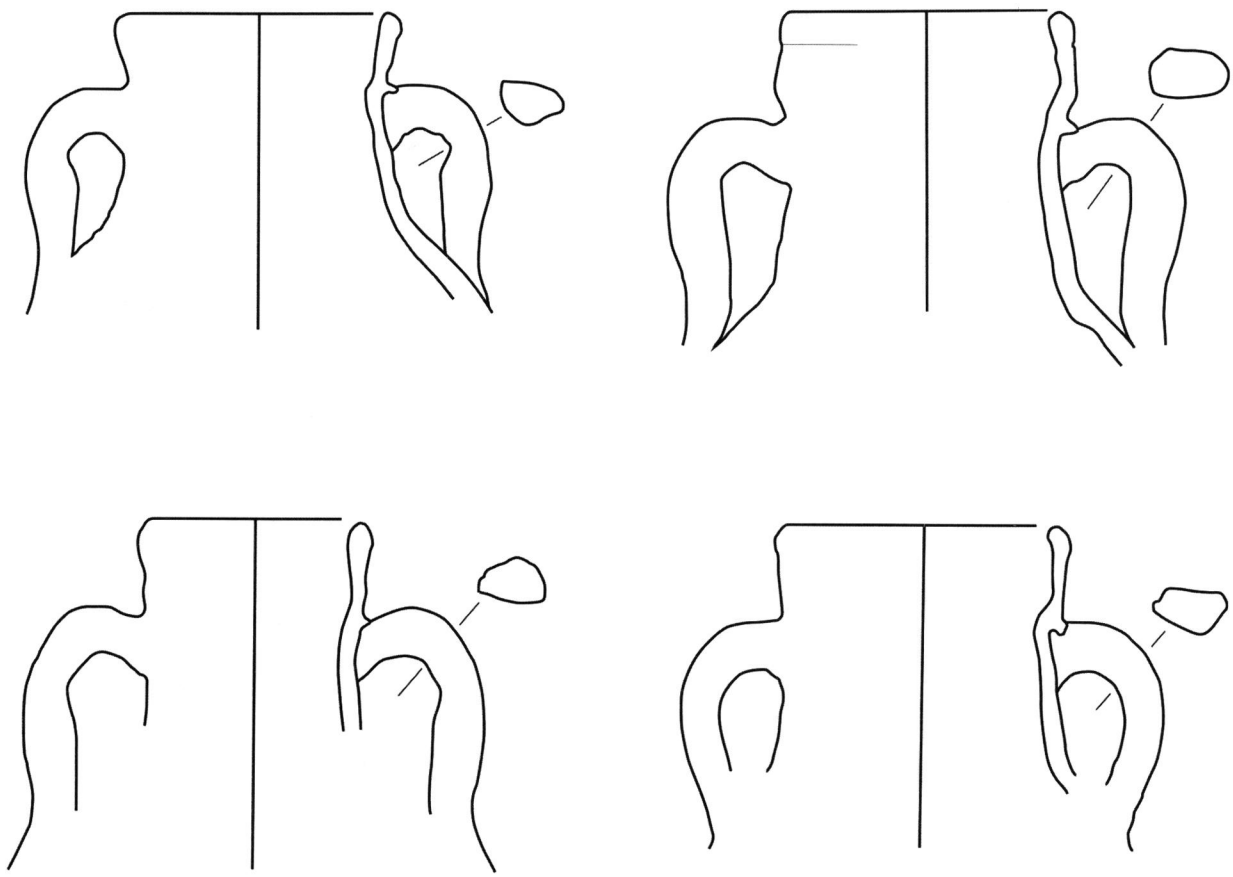

Fig. 15. Rim variants of 'Ballas" jars from Deir el-Gharbi (not to scale).

FABRIC DESCRIPTION – WORKSHOP PROBLEM

Heit el-Gurob ceramics are made mostly of Nile clay. Marl clay vessels make up less than 2% of the entire corpus.[39]

Nile clays are easy to obtain and prepare for pottery production, given their availability practically anywhere in Egypt. There is a different situation with marls. The Heit el-Gurob pottery is characterized by four kinds of marl clay, that is GM1 (marl A2 in the Vienna System), GM2 (marl A1), GM3 (probably marl C), and GM4 – a very rare clay probably known only at Giza.[40]

It is likely that workshops making pots of marl were probably located in a different area than ones using Nile alluvium, as noted in the case of Amarna workshops and their products.[41]

Similarly, it is likely that at Giza vessels made of Nile and marl clay were made in different workshops. Local Giza marls do not appear to have been used, indicating perhaps that the marl industry was located elsewhere, such as Upper Egypt. The exact place is unknown since the source of marl clays used in the Old Kingdom is unknown, especially for vessels deriving from the Delta and the Memphite region.

---

[39] WODZIŃSKA 2007, p. 290.

[40] WODZIŃSKA 2007, p. 289, Table 11.3.

[41] NICHOLSON 2002, p. 144.

Two types of pottery known from the Heir el-Gurob site are especially interesting, namely the red carinated "Meidum" bowl – CD6 (see Pl. XX.B), and the white carinated bowl – CD7. They are both attested in Nile alluvium and marl.

Meidum bowls from the Heit el-Gurob site are known in two general shapes, namely the CD6A, characterized by its angular shoulder (Fig. 16), and the CD6B, which has a rounded shoulder (Fig. 17). The shoulder shape is one of the dating criteria of Meidum bowls.[42]

It is interesting to note that most of the Giza bowls with angular shoulders are made either of A1 or A2 marl clay. On the other hand, most of the bowls with rounded shoulders are made of Nile alluvium – NA, Nile B1, and less frequently of Nile B2.

It seems that we are dealing with two different groups of Meidum bowls. The ones with angular shoulder are made of marl and those with a rounded one of Nile clay. Furthermore, it appears that those groups were made in different workshops by different potters using different materials.

It is possible to suggest that the marl examples derive from Upper Egypt and are the successors of the marl bowls known in that region that developed from small carinated jars known from Elephantine, for instance.[43]

The bowls with rounded shoulder and made mostly of Nile clay seem to be the products of a different tradition, made in a different region by different potters. Sterling[44] states that two production lineages existed in the Old Kingdom, one from Elephantine and the second one from Meidum. The Meidum lineage described by Sterling is a bit problematic though it seems that we are dealing with a different production tradition of Meidum bowls in Lower Egypt.

So if the marl pots from Giza were made in a different region, would this indicate that the marl Meidum bowls with angular shoulder were imported to the Memphite area from Upper Egypt? What about the Nile alluvium bowls? They could have been made anywhere in Egypt or could be a local product of Giza potters.

White carinated bowls, CD7, were also made of different materials. The Nile alluvium used in their production is Nile B2 in the Vienna System (Fig. 18). Marls, on the other hand, can be divided into two groups (for an exemple of marl CD7 see Fig. 19).[45] One of them seems to be very similar to marl C but its exact origin is not known. Probably this same material was used in the manufacture of large storage jars, AB7. The second marl kind used for white hemispherical carinated bowls is marl A2.

The difference in shape between marl and alluvial bowls is not as clear as in the case of red carinated bowls. However slight variations can be observed. It appears that Nile and marl pots were made by different hands. By comparing it to other marl products, the marl C carinated bowls do not seem to be made locally. The clay is quite distinctively different than marl A2 fabrics, indicating that the workshops making such pots were probably located in different regions. Marl C is commonly associated with the Fayum oasis.[46]

---

[42] For instance Op De Beeck 2004, pp. 262-268.

[43] Raue 1999, pp. 178-181, Figs. 36.1 and 37.1.

[44] Sterling 2004, pp. 219-223, 229.

[45] See contribution of M. Ownby in this volume.

[46] Nordström and Bourriau 1993, p. 180; Bader 2002, p. 31; Bader 2001, pp. 35-36.

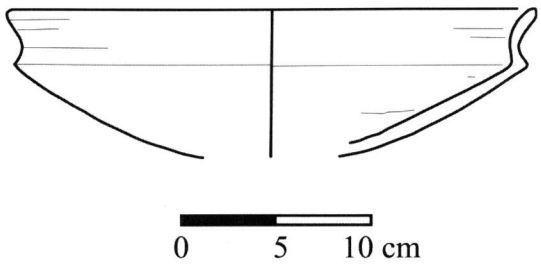

Fig. 16. CD6 bowl with angular shoulder made of marl clay.

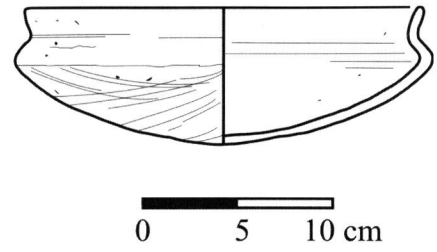

Fig. 17. CD6 bowl with rounded shoulder made of Nile clay.

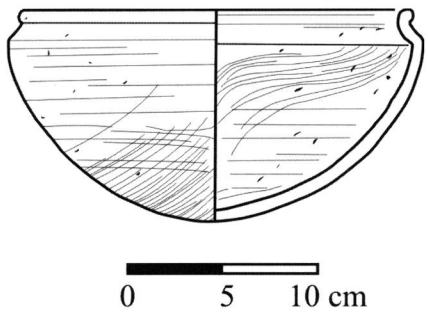

Fig. 18. CD7 bowl made of Nile clay.

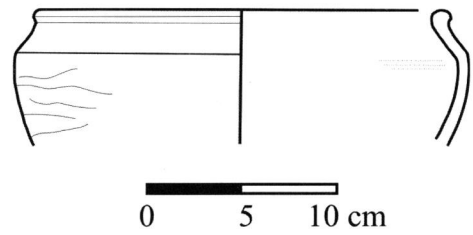

Fig. 19. CD7 bowl made of marl clay.

WORK SPECIALIZATION

Deir el-Gharbi represents a highly specialized workshop producing vessels made of local marl clay.[47] RICE writes that "specialization may occur when certain household, barrios, workshops, or communities concentrate on manufacturing particular functional, formal, or decorative categories of pottery."[48]

As for the Heit el-Gurob site the production of white carinated bowls, CD7, appears to be highly specialized. CD7, even if still partly handmade is characterized by a uniform product, produced fast and relatively cheaply. The production of white carinated bowls seems to be intended specifically for the Giza community.[49] They are not known in any other Old Kingdom sites except Sheikh Sa'id in the Middle Egypt.[50]

Several of the bread molds known from the Heit el-Gurob site were found unfired, which might indicate that they were made directly at the site without being associated with any special pottery making facilities. Their production seems to be closely connected to the bread baking in the numerous Heit el-Gurob bakeries.

---

[47] NICHOLSON 2002, p. 139.

[48] RICE 1987, p. 190.

[49] WODZIŃSKA 2006.

[50] Personal communication – Belgian Mission to Deir al-Bersha, especially Stefanie Vereecken, Marleen De Meyer, and Zoe De Kooning.

CONCLUSIONS – GIZA POTTERY WORKSHOPS

It is very difficult to distinguish pottery types within archaeological material. Many criteria are taken into consideration, such as shape, which is usually the most difficult component of the description.

The rim shapes of the Heit el-Gurob vessels differ from one another although in many cases we have at our disposal numerous variants of the same vessel type. The different shapes of pots can be a result of several factors, mainly time change but also different potters' hands and used technology.

The large number of pots from Heit el-Gurob indicate massive ceramic production. It seems that the vessels were made in the assembly-line method. The work in such places seems to be well organized, divided between several individuals responsible for different stages of production. This would enable the pottery industry to make fairly uniform products in large quantities in a relatively short time. Additionally, based on the discovered material, it is possible to infer that the Heit el-Gurob ceramics were not made in one workshop but in several places.

Alluvial pots were made at Giza in the workshops that used only local materials. Those workshops were most probably concentrated in one area where several ceramic types were produced. Furthermore, it appears that some workshops within the center specialized in the manufacture of a single type, the white carinated bowl, CD7. Additionally, the production of bread molds took place directly at the site without special workshop facilities.

Marl vessels were most probably not manufactured at Giza but in off-site workshops perhaps located in Upper Egypt. It seems that there may have been manufactured in two separate localities, one of which used marl A1 and A2 clays, while the other produced pots of marl C clay.

There remains the lingering question of the location of the Giza pottery center. Unfortunately, as of yet there are no visible traces of any pottery facilities in the area.

ACKNOWLEDGEMENTS

I would like to thank Mark Lehner, the Ancient Egypt Research Associates (AERA) and the kind donors who support AERA's work for making my study possible.

BIBLIOGRAPHY

ARNOLD, D., NICHOLSON PAUL, T., HOPE, C., and ROSE, P.
1993 Techniques and Traditions of Manufacture in the Pottery of Ancient Egypt, in: D. ARNOLD and J. BOURRIAU (eds.), *An introduction to Ancient Egyptian Pottery,* SDAIK 17, Mainz am Rhein, pp. 6-141.

BADER, B.
2001 *Typologie und Chronologie der Mergel C-Ton Keramik*, Tell el-Dab'a XIII, Wien.
2002 A Concise Guide to Marl C Pottery, *Ä&L* XII, pp. 29-54.

BALCZ, H.
1933 Die Gefässdarstellungen des alten Reiches, *MDAIK* 4, pp. 18-36.
1934 Die Gefässdarstellungen des alten Reiches, *MDAIK* 5, pp. 205-227.

BROVARSKI, E.
1982 Lexicographical Studies in Egyptian Pottery, *BCE* VII, pp. 36-37.

GOLVIN, L., THIRIOT, J., and ZAKARIYA, M.
1982 *Les potiers actuels de Fustat*, Bd'É 89, Le Caire.
HENEIN, N.H.
1997 *Poterie et potiers d'al-Qasr, Oasis de Dakhla*, Bd'É 116, Le Caire.
HOLTHOER, R.
1977 *New Kingdom Pharaonic Sites. The Pottery*, Scandinavian Joint Expedition to Nubia 5.1, Lund.
HOPE, C.
1987 *Egyptian Pottery*, *Shire Egyptology* 5, Aylesbury.
LACOVARA, P.
1985 The Etnoarchaeology of Pottery Production in an Upper Egyptian Village, in: W.D. KINGERY (ed.), *Ancient Technology to Modern Science. Ceramics and Civilization*, vol. 1, Columbus, Ohio, pp. 51-60.
LEHNER, M.
2002 The Pyramid Age Settlement of the Southern Mount at Giza, *JARCE* 39, pp. 27-74.
NICHOLSON, P.
2002 Deir Mawas and Deir el-Gharbi. Two Contrasting Traditions, in: W. WENDRICH and G. KOOIJ VAN DER (eds.), *Moving Matters. Ethnoarchaeology in the Near East*, CNWS publications 111, Leiden, pp. 139-146.
NICHOLSON, P., and PATTERSON, H.
1985 Pottery Making in Upper Egypt. An Ethnoarchaeological Study, *World Archaeology* 17 (2), pp. 222-239.
NORDSTRÖM, H.-Å., and BOURRIAU, J.
1993 Ceramic Technology: Clays and Fabrics, in: D. ARNOLD and J. BOURRIAU (eds.), *An Introduction to Ancient Egyptian Pottery*, SDAIK 17, Mainz am Rhein, pp. 143-190.
OP DE BEECK, L.
2004 Possibilities and Restrictions for the Use of Meidum-Bowls as Chronological Indicators, *CCE* 7, pp. 239-280.
RAUE, D.
1999 Ägyptische und nubische Keramik der 1.-4. Dynastie, in: W. KAISER *et al.*, Stadt und Tempel von Elephantine. 25./26./27. Grabungsbericht, *MDAIK* 55, pp. 174-189.
RICE, P.M.
1987 *Pottery Analysis. A Sourcebook*, Chicago.
STERLING, S.L.
2004 Social Complexity in Ancient Egypt: Functional Differentiation as Reflected in the Distribution of Apparently Standardized Ceramics. PhD thesis, Anthropology, University of Washington.
WENDRICH, W., KOOIJ VAN DER, G.
2002 The Potters of el-Fustat (Cairo) and el-Nazla (Fayoum), in: W. WENDRICH and G.V.D. KOOIJ (eds.), *Moving matters. Ethnoarchaeology in the Near East*, CNWS publications 111, Leiden, pp. 147-158.
WETTERSTROM, W., and LEHNER, M., (eds.)
2007 *Project History, Survey, Ceramics, and the Main Street and Gallery III. Operations. The Giza Plateau Mapping Project,* Giza Reports 1, Boston.
WODZIŃSKA, A.
2006 White Carinated Bowls (CD7) from the Giza Plateau Mapping Project. Tentative Typology, Use and Origin, in: M. BÁRTA, F. COPPENS and J. KREJČÍ (eds.), *Abusir and Saqqara in the Year 2005. Proceedings of the Conference Held in Prague (June 27-July 5, 2005)*, Prague, pp. 405-429.
2007 Preliminary Ceramic Report, in: W. WETTERSTROM and M. LEHNER (eds.), *Project History, Survey, Ceramics, and the Main Street and Gallery III. Operations. The Giza Plateau Mapping Project,* Giza Reports 1, Boston, pp. 283-324.

A. Funerary gifts from the burial in shaft 15J15/1A.

B. Area of the pottery workshops, Fustat, photo by Rafał Meszka, fall 1996.

A. Inside one of pottery workshops, Fustat, photo by Rafał Meszka, fall 1996.

B. Inside one of pottery workshops, Fustat, photo by Rafał Meszka, fall 1996.

A. Modern pottery workshops in el-Nazla, Fayum oasis, photo by Yukinori Kawae, spring 2005.

B. Modern pottery workshops in el-Nazla, Fayum oasis, photo by Anna Wodzińska, spring 2002.

A."Ballas" jars from Taramsa near Dendera. Taramsa is one of Qena region pottery production places similar to Deir el-Gharbi. Photo taken by Anna Wodzińska, spring 1999.

B. Selection of Heit el-Gurob ceramic types. Photo by Yukinori Kawae.

A. CD7 bowl. Photo by Yukinori Kawae.

B. CD6 bowl. Photo by Yukinori Kawae.