Bulletin de liaison de Céramique Égyptienne 24

Responsable de la publication : Sylvie Marchand

Avis aux futurs auteurs

Bulletin de liaison de la céramique égyptienne
BCE 25, Ifao, Le Caire

Il serait souhaitable que les textes parviennent à l'Ifao fin septembre 2014 au plus tard. Les normes pour la publication seront données aux futurs auteurs sur simple demande, nous sollicitons l'application stricte de ces normes dès la remise des manuscrits.
Chaque article sera soumis à l'approbation du comité de lecture.

Contact : smarchand@ifao.egnet.net

Bulletin de liaison de Céramique Égyptienne 24

INSTITUT FRANÇAIS D'ARCHÉOLOGIE ORIENTALE

BCE 24 – 2014

ISBN 978-2-7247-0650-5 ISSN 0255-0903

Sommaire

W. Raymond Johnson
In Memoriam Helen Jacquet-Gordon (1918-2013) IX

Alain Arnaudiès
Bibliographie de Helen Jacquet-Gordon (1951-2012) XIII

Sylvie Marchand
Avant-propos XXIII

Carte XXIV

Repères chronologiques XXV

I. Parcours régional 1

Littoral méditerranéen 3

Julie Monchamp
Céramiques romaines de Smouha (Alexandrie), IIe siècle apr. J.-C. 5

Delta 13

Nicholas Hudson
Preliminary Report on the Pottery at Tell Timai (Thmuis) 15

Sylvain Dhennin, Sylvie Marchand, Julie Marchand, Aude Simony
Prospection archéologique
de Kôm Abou Billou/Térénouthis (Delta) - 2013 51

Région memphite 69

Katarína Arias Kytnarová
Ritual Ceramic Deposit from the Tomb of Prince Werkaure?
A Tentative Interpretation 71

Susan J. Allen
Pottery from the Pyramid Complex of Senwosret III
and Middle Kingdom Mastabas at Dahshur 2003-2010
(The Metropolitan Museum of Art, New York) 85

Région thébaine et Haute-Égypte 93

Gábor Schreiber
Late Dynastic Pottery from Theban Tomb No. -61- 95

Guy Lecuyot
La céramique du Ramesseum et de ses abords,
état des recherches 101

Julia Budka
Zîr Vessels from the Tomb of Osiris at Umm el-Qaab 121

Valérie Le Provost
Fouilles récentes d'un habitat à Tell Edfou,
la céramique de la fin de la Première Période Intermédiaire
au début de la XII^{e} dynastie : une séquence de transition 131

Oasis de el-Hayz 151

Stanislava Kučová, Květa Smoláriková
Roman Transport Amphorae from Bir Showish,
el-Hayz, Bahariya Oasis 153

Oasis de Dakhla 161

Clementina Caputo
Amheida/*Trimithis* (Dakhla Oasis):
Results from a Pottery Survey in Area II 163

Nord-Sinaï 179

Silvia Lupo, Claudia Kohen
2010 Season at Tell el-Ghaba, North Sinai. Preliminary Report 181

2. Inventaire des sites de production céramique en Égypte et en Basse-Nubie 199

Sylvie Marchand
Inventaire archéologique des sites de production céramique
du Prédynastique à l'époque moderne. Égypte et Basse-Nubie 201

Valérie Pichot, Kaan Şenol
The Site of Akademia: The Amphora Workshop of Apol(l)ônios.
First Excavation Campaign (July-August 2012) 225

Nicholas Hudson
Late 4th Century BC Pottery from Tell Timai (Thmuis) 241

Zulema Barahona Mendieta
La producción cerámica en Medamud.
Estudio de la cerámica procedente de los hornos del Reino Nuevo,
Baja Época y Época Ptolemaica 267

Bibliographie 281

Index chronologique 313

Adresses des auteurs 315

Nicholas Hudson

Late 4th Century BC Pottery from Tell Timai (Thmuis)

During the course of the 2010 excavations at Tell Timai under the auspices of the University of Hawaii a series of kilns were explored on the northern spur of the tell closest to its mother-city of Mendes, located about 800 meters to the north.[1] Investigation of these kilns produced evidence of the earliest occupation at the site documented so far. The best preserved components of the kilns belong to the early to mid-Hellenistic phase at Thmuis (third-early 2nd century BC), though remnants of earlier kilns were found beneath the Hellenistic levels. Approximately 40 kilograms of pottery, much of it well-preserved, was found in features associated with the earliest kiln phase in the area. The pottery, while not from a single feature, belongs to a single phase within a limited physical context at the site and so is presented as one group. As will be argued later, the chronological range for the material is likely tight, represents activities at the site that belong to the very end of the Persian Period and hints at the next historical period of Egypt.

Context and Chronology

The only contexts in which pre-Ptolemaic material has so far been identified at Tell Timai are in the surviving northern spur of the tell where approximately six medium-sized kilns have been uncovered (Area O, fig. 1).[2] The stratigraphy of the kilns indicates multiple kiln phases, easily identifiable by the stacking of kiln on

1. I wish to thank excavation director Robert Littman and field director Jay Silverstein for their permission to publish the 4th century BC material.
2. The kilns were excavated primarily by the Supreme Council of Antiquities with subsequent exploration and recording by the University of Hawaii mission, both as part of a rescue operation in advance of the construction of a sports facility.

top of kiln along with associated sequences of pottery. The latest use phase dates to the later third century BC, possibly as late as the beginning of the second century, when the kilns were covered with debris from a large destruction event of the early 2nd century BC that was identified to the west of the kilns (Area N). Evidence that the kilns were covered with the destruction debris comes from joining fragments of a storage jar from the destruction deposit in Area N with sherds from a lens covering one of the kilns in Area O. The Hellenistic productions from the kilns remain unknown. This is principally because no pottery was found *in situ* within the kilns. Additionally, while occasional wasters were found in the surrounding fill, including examples of Hellenistic incurved rim bowls, everted rim bowls, thickened rim saucers, and oinochoai, no waster dump has been located. This is likely the result of the post-kiln activities in the area, which saw the abrupt cessation of industrial activities and potentially the repurposing of the area as part of a larger public space that included a limestone temple approximately 100 meters to the west of the kilns. It is not yet known if the kilns were in use throughout the entirety of the 3rd century and into the 2nd leading up to the destruction and covering, or if they were out of commission prior to the catastrophic event. What is clear is that the lowest levels of the kilns represent the earliest archaeological identification of an occupation/use phase of the northern spur of the tell.[3]

The dating of the lowest kiln levels rests primarily on a single sherd of an Attic Red Figure krater (no. 1). The sherd preserves a fragment of a wing above a head with curly hair and a diadem defined by white dots. Comparanda of the style of the wings and the hair with diadem belong to the mid fourth century BC.[4] The confident date provided by the Red Figure sherd is bolstered by the nature of the pottery found in the lowest contexts, which typologically belongs to the pre-Ptolemaic delta assemblage, generally of the fourth century BC. Even with this congruity, the Attic sherd is likely residual, considering its poor state of preservation (a single small body sherd) compared to the high level of preservation of the bulk of the pottery from the lower kiln levels (in some cases whole). For this reason, the Attic sherd is not considered as part of the primary assemblage, but is presented as a fourth century chronological marker. As the latest datable object from the lower features, it is possible to argue a date for the assemblage of the second half of the fourth century BC. Limiting the date of the assemblage to the second half of the fourth century BC places the activities in Area O in a dynamic moment in Egypt's history, when control of Upper and Lower

3. Herodotus mentions the site of Thmuis, suggesting that something of the town existed well before the kilns were established (Herodotus II.166).

4. Moore 1997, stylistically most similar to no. 524 by the Filottrano Painter, dated ca. 350 BC.

Egypt fluctuated back and forth between external powers and native hands and then ultimately to the Ptolemies. As will be discussed below, the typological composition of the assemblage may reflect the turbulent times.

Assemblage Characteristics

Typologically, the pottery from the lower kiln levels is internally consistent across different features, strongly suggesting a common deposition history which places the features in the same phase at Tell Timai. As an assemblage, six functional categories are present, represented by seventy-five vessels. The functional categories consist of table vessels (27%), cooking vessels (3%) kitchen vessels (16%), personal vessels (40%), storage vessels (7%), and other (7%) (fig. 2).

The high proportion of personal vessels (40 %) and the low proportion of cooking vessels (3%), suggests the assemblage represents something other than a living domestic context. Rather, the high concentration of perfume bottles and the proximity of the finds to the kilns suggest the pottery is from a production context. This likelihood is strengthened when other characteristics of the features are considered. In particular, two large plain ware bowls were found with six and five small bowls stacked neatly inside each (nos. 2-12). The stacking was likely part of the firing process and serves to highlight the kilns and production activities that define the later Persian and Hellenistic levels in Area O.

In addition to typological considerations, the assemblage can be characterized in terms of the different wares that are present. The probability that the assemblage represents a production tradition at Tell Timai adds another dimension to the consideration of the different fabrics and wares that make up the assemblage as a whole. The seventy-five vessels that make up the late Persian assemblage can be divided into five different wares defined by fabric, treatment, decoration, and vessel types. The variety of wares present within this small assemblage, so closely connected to production contexts at Tell Timai, suggests that workshops produced a range of wares rather than specialize in any single one.

What follows is a preliminary identification and description of the five most common wares from the assemblage. The physical descriptions are the result of simple observations of fresh breaks with the naked eye and a small handheld loop with a 10x magnification. Following the ware descriptions are brief summaries of the different functional categories (table, kitchen, personal, and storage) present in the assemblage, accompanied by a catalogue.

Descriptions of common wares in the Late Period assemblage

Ware 1 (Nile B2)

Ware 1 is among the most common in the assemblage and represents the basic building blocks for all other Nile silt-based wares. The ware is most similar to the Vienna System Nile B2. It is produced from Nile silt to make a wide variety of thick-walled plain vessels. The finished product results in a hard, coarse ware that is roughly gritty with a texture similar to brick. Shallow, long voids from cut chaff are abundant throughout the matrix and visible on surfaces. Many small white sub-angular inclusions are visible throughout, as are some small lumps of lime. The matrix is slightly micaceous. Vessel walls are consistently thick and there is usually a thick grey core, indicating a lower firing temperature or incomplete firing process. Most often, the grey core extends to the entirety of the biscuit. Surfaces are left plain, leaving shallow voids from chaff and white mineral inclusions clearly visible. Surface colors are a relatively consistent reddish brown, ranging from 2.5YR 5/6 to 2.5YR 4/6.

Ware 2 (Nile B1)

Ware 2 is made of a Nile silt fabric similar to the first, but has fewer inclusions. Within the Vienna System the ware is most similar to Nile B1. At Tell Timai the ware is used to make smaller, thinner-walled vessels than the heavier Ware 1. The fabric is loosely packed and slightly micaceous with frequent small white sub-angular mineral inclusions (some may be crushed shell?). Occasionally, small to medium lumps of lime are present. Some small angular voids are present from finely cut chaff. Both the small size and limited quantity of chaff in the ware set it apart from Ware 1. Vessels are fired hard and completely, giving a consistency of color between biscuit and surfaces, which are all brownish-red (2.5YR 5/6 to 5/8; 4/4 to 4/8). The loose packed quality of the clay matrix gives vessels a sandy, bricky texture. Surfaces tend to be smoothed, either with light wet-smoothing or, occasionally, with a spatula. The most common shapes produced in Ware 2 are small bowls with simple string-cut bases (nos. 2-12) that are most likely vessels for food and drink.

Ware 3 (Sandy Nile silt Blend)

Ware 3 is a Nile silt that appears to have been blended with another material. The fabric may be a mixture of well-levigated Nile silt and a sandy marl. The fabric's matrix has a looseness to how packed it is that is similar to Nile silts, along with expected very small rounded white mineral inclusions. But it is also finely sandy, like a marl, and has occasional tiny black or grey angular inclusions. In section, vessels in Ware 3 tend to be fired fully to a pinkish-brown color (ranging from 5YR 6/2-5YR 6/4 with outliers at 10YR 7/3). Exterior surfaces are almost always covered with a dull pale cream-colored slip (generally 2.5YR 8/3). Kiln blush is common, leading to patches of pale pink (7.5YR 7/3). The slip can be applied thickly and evenly, or thinly and unevenly, and all variations in between. All but one observed instance of the ware were closed forms, especially small bottles of various types (nos. 14-16). The use of a dull whitish slip appears to be common in the Timai assemblage and is not limited to the Late Period material with numerous examples found in the Hellenistic and Roman deposits at the tell, almost always limited to jars and bottles.[5]

Ware 4 (Nile D)

Ware 4 is a simple Nile silt with frequent small and occasional medium-sized lumps of lime visible in section. Its physical characteristics fit best with Nile D in the Vienna System. Some medium-sized elongated voids from chaff are also present. The ware is fired very hard and has a rough bricky feel to it. The biscuit is fully fired red (10R 5/4). Surfaces are covered with a thin dull white slip (7.5YR 8/2). On one occasion the slip was likely applied when the clay was still wet so that the slip mixed with the vessel fabric, resulting in a streaky application with wispy bands of red (2.5YR 5/6) (no. 21). The texture of Ware 4 is distinct in that it is coarsely gritty to the touch and porous, like brick.

All observed examples of Ware 4, but one, were closed forms (nos. 17, 19-21, 32). Three examples are small pouring vessels suitable for the table (nos. 17, 19-20). The porous nature of the ware has suitable properties to keep liquids cool, which suggests the vessels were intended for water service. A small wide mouth collar-rim jar (no. 32) in Ware 4 is here classified as a kitchen vessel and may have been used to store liquids for food preparation.

5. N. Hudson, « Preliminary report on the pottery at Tell Timai (Thmuis) » in this volume, p. 15-49.

Ware 5a (Marl A3)

Ware 5a is made from an imported desert marl likely from the Edfu/Esna region in Upper Egypt. [6] The clay was imported to Timai where it was used to produce a singular class of small bottle (nos. 48-54). Whereas a direct parallel within the Vienna System is lacking, the fabric of the ware is similar to Marl A3, though with a much higher rate of vitrification within the matix. The ware is defined by fabric made up of extremely fine grained clay with densely packed particles. Very few small plated and elongated grey inclusions are visible in section. The ware is fired hard which, combined with the density of the matrix, produces surfaces (both treated and untreated alike) that are very smooth and soapy to the touch. The overall texture is similar to soapstone. All examples were unevenly fired, producing clear banding in the section. This may be because all examples may have been wasters (at least two were positively identifiable as such). In the thickest sections, usually at the ring foot, the core is light grey, otherwise the core is fired pale yellowish pink (5YR 6/5). The margins of the section tend to be fired pale pink (2.5YR 5/6).

The interior surfaces of the bottles produced in Ware 5a are left plain, as can be expected of closed vessels which are the only types of vessels so far observed in the ware. They are, nonetheless, distinctive with clearly defined, sharp, and tightly bound rilling near on the lower portions of the walls and floor. Though untreated, the texture of the interior surfaces remains soapy-smooth due to the fine grain of the clay. The interior surfaces are fired a uniform pale pink (7.5YR 7/4).

The exterior of vessels in Ware 5a is carefully smoothed and highly burnished on the lower portion of the body and the entirety of the foot, with the exception of the underside of the floor within the ring foot. The effect of the burnishing creates a glossy, soapy texture and appearance. The upper portions of the same vessels are smoothed, but not burnished. The surface color is a soft yellowish red (5YR 6/6). The rich color of the vessels, with their subtle mottling throughout, is reminiscent of fine alabaster bottles, and it is conceivable that this was the desired effect, attempting to link visually the vessels with the more costly stone containers.

Ware 5b (Marl A3)

Ware 5 b is identical to Ware 5a in all respects (color ranges, burnishing, interior wall rilling, etc.) except for texture, which is distinctly sandy by comparison. This may be the result of mixing the imported desert marl with local Nile silt, which may have been an attempt to stretch the limited quantity of imported clay or simply an attempt

6. Hudson, Trampier, forthcoming.

to modify the plastic properties of the fine desert marl.[7] Mica is present in Ware 5b, but in small quantities. Mica is common and abundant in Nile silts but absent from the fine imported marl of Ware 5a. The presence of mica in Ware 5b suggests that the ware is a blend of 5a and local Nile silt.

Functional groups of pottery

Table vessels

Table vessels consist of items intended to be used as part of food service, whether or not food consumption occurred at an actual table. Within the spectrum of the table vessel category are dishes for individual use and service for both food and drink. In the fourth century assemblage, table vessels consist of small bowls for personal use and closed forms that may have been for serving liquids.[8]

Small bowls (nos. 2-12)

Two types of small bowls are found in the late Persian assemblage. The most common type is a small carinated bowl with a stumpy string-cut base (nos. 5-12). All observed examples are produced in Ware 2 and were found stacked inside two large bowls (nos. 24-25) found *in situ* next to one another. Small carinated bowls such as these are common in fourth century assemblages in both Upper and Lower Egypt.[9] The second most common bowl is a small simple cup-like bowl with thin vertical walls that terminate in a simple rim and meet at a flat string-cut floor (nos. 2-4). Like the carinated bowls, the small flat-bottomed bowls were found stacked inside a large bowl. Cup-like bowls such as these are also common in Late Period assemblages throughout Egypt, especially in fourth century contexts.[10] Both the small carinated bowls and the cup-like bowls are commonly found together.

7. On procurement patterns and clay mixing strategies, see Bishop *et al.*, 1982, p. 317-318.
8. The identification of the closed forms as table vessels is based primarily on their finer quality in relation to the rest of the assemblage, though their inclusion in this category is uncertain.
9. E.g., Tebtunis (Marchand 1996, p. 180, fig. 15); Tanis (Marchand, Roussel 1994, no. 7); el-Muqdam (Redmount, Friedman 1997, fig. 9a); Saqqara (French, Ghaly 1991, nos. 73-75).
10. E.g., Mendes (Wilson 1982, XIV.II); Tebtunis (Marchand 1996, fig. 1); Tanis (Marchand, Roussel 1994, no. 8); Saqqara (French, Ghaly 1991, no. 10).

Closed forms (nos. 13-21)

Closed forms make up nearly half of the table vessels in the assemblage. Two primary types of closed vessels are present: 1/ small collar-necked jars (nos. 13-15), and 2/ strap handled jugs (nos. 16-17). Both types are found in Late Period ceramic assemblages in Lower Egypt.[11] A single example of what may be a toe to a small amphoriskos-like vessel is included with the table vessels because of its size, which is too small to serve as a storage vessel and too large to practically act as a personal vessel. The decision to include the amphoriskos in with the table vessels is made tentatively. Indeed, identifying any of the closed forms as table vessels is problematic as our understanding of the functional aspects of Late Period pottery shapes is poor, though future excavations will hopefully shed more light on the issue.

Cooking vessels

Only two examples of cooking vessels could be positively identified within the late Persian assemblage. Of these, one is a large open cooking bowl with horizontal ribbon handles and a plain squared rim (no. 22). The identification of the bowls as a cooking vessel rests on the fabric, which is sandy and gritty with frequent mineral inclusions, making it suitable for direct exposure to flames. The presence of blackening from fire on the lower portions of the vessel is also suggestive of a cooking function. In form, the cooking bowl is simple, with tall vertical walls that reach a sharp point of carination that begins a rounded bottom. In general, the form is not dissimilar to Greek casseroles, though it lacks the specific typological traits associated with them, such as the ledge rim with support for a lid and the rounded horizontal strap handles.

The second cooking vessel from the late Persian contexts is a Greek style casserole (no. 23). The deep casserole, with its tall vertical walls and horizontal handles attached midway between rim and point of sharp carination, is of the same type that is common in Hellenistic levels in sites throughout the Delta.[12] Rather than being intrusive to the later fourth century levels at Timai, the casserole appears to be an early example of what will be the Hellenistic form. In certain specific features the casserole differs from Greek casseroles of the fourth century BC. Specifically, the vertical walls are significantly taller and the horizontal loop handles are attached to the vertical walls midway between point of carination and rim, without touching the rim.[13] Unlike Greek casseroles of the fourth century, the handles do not extend above the rim. Though the casserole belongs to the

11. E.g., small collar-necked jars at Saqqara (French and Ghaly 1991, no. 30); strap handled jugs at el-Muqdam (Redmount, Friedman 1997, fig. 9b).
12. E.g., Naukratis (Berlin 1998, fig. 2.22-23).
13. Compare casseroles from the Athenian Agora, Lopas forms 1 (Rotroff 2006, p. 179).

same basic type of Greek/Hellenistic cooking vessel, the typological differences seem to blend it with the indigenous Egyptian form, if we can call the cooking bowl from the same assemblage an indigenous form. It is possible that the casserole from these low levels at Tell Timai is a transitional or experimental form that transforms the tall-walled carinated cooking Egyptian cooking bowl into a Hellenized casserole.

Kitchen vessels

Kitchen vessels consist of pottery of utilitarian purposes associated with food preparation. This includes plain ware smaller jars, pouring vessels, and bowls. Bowls are by far the most common shape of all kitchen vessels (nos. 24-28), comprising fifty percent of the category. All bowls are thick-walled, heavy vessels, some of which are appropriate for grinding foods, much like a mortar. Large bowls in the assemblage include two large whole vessels (nos. 24-25) that were found with small table vessels stacked inside. Both are produced in Ware 1. Despite their size and plain ware, they are both well-formed and neatly described with well-defined rims, squared and thickened, and each has a small ring foot. Large, deep bowls of similar shape and features are common in Late Period assemblages at other Egyptian sites.[14] Most common are similar large bowls with rounded bottoms without feet. The presence of the neatly described ring foot on the Timai examples may be a chronological marker for the type that appears only near the end of the later fourth century BC.[15]

Closed form kitchen vessels consist of small collar-neck jars (nos. 31-32) and miscellaneous jars or pouring vessels (nos. 33-35). The general shapes of kitchen vessels found in the fourth century assemblage at Timai share many common characteristics with fourth century pottery at sites throughout the delta and Nile valley. While strong typological similarities exist across sites, it is worth noting that there does not appear to be a hard and fixed typological model for the period. Rather, forms of plain kitchen vessels share general characteristics in fifth and fourth century contexts throughout Egypt in a wide variety of examples.[16] Morphological disparity among plain wares is to be expected, as they tend to be produced more locally and by more workshops–and so increasing the level of differences within a single shape class–than finer wares, which tend to be mass produced by select production centers that can have greater over shape and form control.

14. See catalogue for parallels.
15. The addition of a ring foot to the type is noted as a late transformation within the late Persian assemblage by Aston, Aston 2010, p. 186, appearing in their Phase D assemblage at Saqqara.
16. Compare, for example, the assemblages at Mendes (Wilson 1982), Tanis (Marchand, Roussel 1994), Saqqara (French, Ghaly 1991), Tebtunis (Marchand 1996), and Dashur (Allen 2000).

Personal vessels

Personal vessels make up the largest single category in the assemblage. These can be defined as vessels associated with personal use in private contexts beyond food consumption. The most common type of personal vessel in the assemblage is a small, squat bottle most likely intended to hold perfumed oils (nos. 36-65). Examples of wasters of this type from the lowest levels of the kilns suggest that these small bottles were produced at Timai. In terms of shape, the bottles are similar to Greek squat lekythoi, though the general form is consistent with small bottles produced both in Egypt and throughout the southern Levant in the fourth century BC.[17] The small bottles are unique in the late Persian assemblage in that they represent the only form that appears in multiple wares. Examples are most abundant in Wares 5a and 5b, but the same bottle type is also present in Ware 2 and Ware 3.

The function of the small bottles is suggested not only by the shape, but also by their capacities, which can be linked to epistolary references to Mendisian perfume found in the mid-third century Archives of Zenon. Two letters from this archive specify the amount of perfume distributed in common measures. In a report of the distribution of Mendisian perfume to the personnel of Apollonius, treasurer of Ptolemy II Philadelphus, we see that a common Greek measure for perfume was one *kotyle*, which generally measures about 0.27 liters.[18] Another letter relates the receipt of perfume by Zenon's agent, Heraclides. Here an Egyptian unit of measure is used, with Heraclides receiving ten *hins* of perfume.[19] A *hin* is roughly the equivalent of 0.46 liters.[20] The letter details that the ten *hins* of perfume received by Heraclides were contained in 21 alabastra. If the alabastra were of equal size, the capacity for each individual vessel would be approximately 0.22 liters. This would mean that a common volume for alabastra containing perfume was equal to about one half *hin*, which would be similar to the *kotyle* (0.27 liters). At Timai, measurement of well-preserved squat bottles yielded a range of capacities of about 0.21 to 0.24 liters, approximately the same as Heraclides's 21 alabastra.[21]

17. Egypt: Tell el-Herr, generally 4th-1st century BC (Gratien, Soulié 1988, fig. 6.g); Mendes, "Late Period," (Wilson 1982, fig. XVIII.6); Saqqara, first half 4th century BC (French, Ghaly 1991, fig. 38); Thebes, painted versions dated 4th-2nd century BC (Schreiber 2003, nos. 60-65). Israel: Tell el-Hesi, late Persian Period (Coogan 1975, fig. 8.2).

18. Zenon Papyri, CGC 59089 (dated 257 BC); for the metrics of the *kotyle*, see Lang, Crosby 1964.

19. Zenon Papyri, PSI 533 (dated 256 BC).

20. Sobhy 1924, p. 283.

21. The perfume bottles are the subject of a separate study in preparation by Hudson and Trampier that includes an analysis of imported raw clay found in a transport amphora during the 2010 season.

Storage

Only three storage jars were identified as part of the late Persian assemblage at Tell Timai. Each is a variant of the same tall-necked jar with a simple groove that describes the rim (nos. 66-68). Compared to the rest of the assemblage, the storage jars are less well preserved so that their overall shape is less discernible. In addition to the jars, two small saucers are included in this category as possible lids for the storage vessels (nos. 69-70). These are tentatively identified as lids because they are very shallow, making them unlike table vessels or kitchen ware bowls, and they are produced in a very coarse fabric, which suggests a utilitarian purpose. They are also of sizes that are similar to the diameters of the storage vessels, which would make them suitable lids.

Other

Seven percent of the fourth century assemblage cannot be placed with confidence in any of the functional categories. These include three small closed vessels, two of which may be medicine bottles (nos. 72-73) based on similarities they share with fourth century forms from Athens.[22] Also included in this catch-all category is a fenestrated lid or, perhaps, a small strainer (no. 74). The largest vessel is a large open bowl with straight flaring walls and a large omphalos boss on the interior floor (no. 75). The vessel is reconstructed here with a tall pedestal based on a parallel to the form from the mother-city of Mendes.[23] The purpose of the bowl is not clear. The form suggests possibly a ritual function, but it is produced in a very coarse fabric that is underfired, resulting in a solid black core. There may be some evidence of burning on the interior of the bowl, suggesting it could have been used to burn some material, perhaps incense.

Discussion

Nearly all of the pottery from the fourth century context at Tell Timai fits well within the typological parameters of late Persian Period Egypt. The presence of a Greek style casserole (no. 23) in the assemblage hints at events to come at the end of the century. The presence of the casserole may be taken as a chronological indicator that the assemblage dates to the latter part of the fourth century BC, which is not inconsistent with the rest of the assemblage.

22. Rotroff 1997, p. 198; nos. 1309-1313
23. Wilson 1982, fig. XXI.2.

Beyond the typological makeup of the assemblage, the distribution of wares across the functional categories presents a few interesting observations. With the exception of the clay used for Wares 5a and 5b, the raw materials used to produce the Timai assemblage are familiar Egyptian productions. When form and ware are considered together it is possible to see a loose categorization of ware by function. Specifically, table vessels appear most commonly in Ware 2, where the ware makes up approximately 55 percent of the category (fig. 3), represented entirely by small bowls (nos. 2-12). Closed table vessels appear evenly in either Ware 3 (25%) or Ware 4 (20%). Among kitchen vessels – excluding cooking vessels, which are not produced in any of the common wares – Ware 1 is the most common (67%) followed by equal proportions of Wares 3 and 4 (17% each). Storage vessels are produced entirely in Ware 1, which is of a coarser, heavier fabric suitable for producing thick-walled vessels. Personal vessels, represented uniquely by small squat perfume bottles, are predominately produced in Wares 5a and 5b (60% together).

Despite the small size of the assemblage, a striking pattern is present that highlights certain relationships between some wares and forms. Specifically, it appears that there was an attempt to produce a single and distinct final product for certain vessel forms regardless of the ware groups they were produced in. An example of this are pouring vessels produced in the Nile silt blend, Ware 3 (nos. 16 and 18) and the white slipped Ware 4 (nos. 17, 19). The two tall-necked jugs are similar morphologically, and both share similar surface treatments of a dull pale cream-colored or white slip. Despite having very different fabric building blocks, the end results are similar to each other. The added morphological similarity of the vessels suggests the visual similarities between wares was intentional, at least when producing this particular type of jug.

Another example of this can be found between Ware 3 and the fine imported Ware 5 used to produce small perfume bottles. When Ware 3 was used to produce the same perfume bottles (nos. 44-47) the vessels were more finely and delicately treated than other vessels produced in Ware 3. The end product is something that is similar in color and surface treatment to the dominant ware for the bottles (Ware 5). The phenomenon is similar to what is seen with the jugs in Ware 3 and 4. In very general and preliminary terms, the pattern may represent an attempt to make the finished products for certain forms look the same regardless of the wares in which they were produced. Put in another way, there may have been certain expectations of the appearance of certain vessel forms according to use. A similar phenomenon of manipulating wares to produce certain outcomes according to function has been observed by Redmount amongst the Middle Bronze Age pottery at Tell el-Maskhuta.[24]

24. Redmount 1995, p. 185.

The assemblage from the lower kilns in Area O offers the first ceramic evidence of pre-Hellenistic settlement at Tell Timai. Because the sample is so small, both in terms of the size of the assemblage and in terms of the area of the tell that was exposed, any attempt to interpret the assemblage in a broader context is tentative. Nonetheless, the abundance of small perfume bottles in the assemblage hint at the ancillary nature of Thmuis to Mendes. The current picture is that of a burgeoning industrial suburb to the south of the more ancient city. Undoubtedly, further excavations will reveal more about the early phases of Tell Timai and its relationship with its mother-city.

Organization of the catalogue

The catalogue of vessels is organized according to functional categories, presented in the following order: Table Vessels, Cooking Vessels, Kitchen Vessels, Personal Vessels, Storage Vessels, and Other. Within each section the vessels are organized according to shape, where open vessels such as bowls are presented first, ending with closed vessels, such as for pouring. Following the structure of the functional organizations, similar shapes of vessels are presented together. Whenever a shape is present in more than one ware, the wares are kept together only within the confines of keeping similar shapes together. This is done in preference to organizing the assemblage by ware so that the functional aspects of the assemblage can be considered more easily as a conceptual whole within a living context. A separate chart that organizes the vessels by ware is provided at the end.

Imported

fig. 4.1
Attic RF Krater (TM10.0243; O7-11-503)
Body sherd with thick, lustrous black slip on interior and exterior surfaces. Preserved RF wing, possibly from Nike figure, over head of curly hair with diadem highlighted by added white dots.
Parallels: Moore 1997, nos. 524, 533, and 539, mid 4th century BC
Likely residual and not part of assemblage.

Table Vessels

fig. 4.2
Small bowl with string-cut base, intact (TM10.0298; O7-12-483)
(found inside TM10.0295)
D. 7.5-8.5; H 3.0-3.5; D. base 4; Wth 0.5. Ware 2. Lopsided, probably from being picked up by rim between thumb and fingers while still wet.
Parallels: Mendes, "Late Period," (Wilson 1982, XIV.II); Tebtynis, not later than last quarter 4th century BC (Marchand 1996, fig. 1); Tanis, 30th Dynasty (Marchand, Roussel 1994, no. 8); Saqqara, first half 4th c BC (French, Ghaly 1991, no. 10).

fig. 4.3
Small bowl with string-cut base, intact (TM10.0299; O7-12-483)
(found inside TM10.0295)
D. 8.4; H 3.1; D. base 6; Wth 0.5. Ware 2.

fig. 4.4
Small bowl with string-cut base, near complete (TM10.0300; O7-12-483)
(found inside TM10.0295)
D. 8; H 3.2; D. base 4; Wth 0.4. Ware 2.

fig. 4.5
Small carinated bowl with string-cut base, intact (TM10.0296; O7-12-483)
(found inside TM10.0295)
D. 10; H 3.1-4.4; D. base 3.5; Wth 0.7. Ware 2. Warped in firing, causing cracking on surfaces.
Parallels: Tebtynis, Late Period-beginning Ptolemaic (Marchand 1996, fig. 15, p. 180); Tanis, 30th Dynasty (Marchand, Roussel 1994, no. 7); el-Muqdam, late 5th c BC (Redmount, Friedman 1997, fig. 9a); Saqqara, first half 4th c BC (French, Ghaly 1991, nos.73-75).

fig. 4.6
Small carinated bowl with string-cut base, intact (TM10.0297; O7-12-483)
(found inside TM10.0295)
D. 10.5; H 3.5-4.6; D. base 4; Wth 0.6. Ware 2.

fig. 4.7
Small carinated bowl with string-cut base, intact (TM10.0256; O7-12-483)
(found inside TM10.0255)
D. 10; H 3.5-4.0; D. base 3.5; Wth 0.6. Ware 2.

fig. 4.8
Small carinated bowl with string-cut base, intact (TM10.0257; O7-12-483)
(found inside TM10.0255)
D. 10; H 4; D. base 3.5; Wth 0.6. Ware 2.

fig. 4.9
Small carinated bowl with string-cut base, intact (TM10.0258; O7-12-483)
(found inside TM10.0255)
D. 10; H 3.7-4.1; D. base 3.8; Wth 0.6. Ware 2.

fig. 4.10
Small carinated bowl with string-cut base, intact (TM10.0259; O7-12-483)
(found inside TM10.0255)
D. 10; H 3.2-4.4; D. base 3.5; Wth 0.6. Ware 2.

fig. 4.11
Small carinated bowl with string-cut base, intact (TM10.0260; O7-12-483)
(found inside TM10.0255)
D. 9; H 4.5; D. base 3.5; Wth 0.7. Ware 2.

fig. 4.12
Small carinated bowl with string-cut base, near complete (TM10.0261; O7-12-483)
(found inside TM10.0255)
D. 10; H 4.3; D. base 4; Wth 0.6. Ware 2. Vessel under-fired with soft, denuded surfaces fired light brown (7.5YR 6/4).

fig. 4.13
Small stumpy foot jar, complete (TM10.0305; O7-12-493)
D. 8; D. base 1.5; H 12.7; Wth 0.4-0.5. Ware 2.
Parallels: Saqqara, first half 4th century BC (French, Ghaly 1991, no. 30).

fig. 4.14
Bottle with small stumpy foot (TM10.0311; O7-12-493)
D. base 2.4; PH 3.8; Wth 0.5. Ware 3.

fig. 4.15
Small bottle with offset shoulder (TM10.0306; O7-12-493)
D. base 4; PH 9; Wth 0.4. Ware 3.

fig. 4.16
Flask/bottle (TM10.0309; O7-12-493)
D. 3.5; PH 6.5; Wth 0.5. Ware 3.
Parallel, shape only: el-Muqdam, late 5th century BC (Redmount, Friedman 1997, fig. 9b).

fig. 4.17
Jug (TM10.0308; O7-12-493)
D. 3; PH 4.5; Wth 0.4. Ware 4.
Parallel, shape only: el-Muqdam, late 5th century BC (Redmount, Friedman 1997, fig. 9b).

fig. 4.18
Bottle/jug base (TM10.0314; O7-12-493)
D. base 6; PH 3.8; Wth 0.4-0.5. Ware 3. Exterior surface carefully burnished and fired red (2.5YR 4/6).

fig. 4.19
Bottle/jug base (TM10.0334; O7-9-544)
D. base 5; PH 4; Wth 0.4. Ware 4.

fig. 4.20
Bottle/jug base (TM10.0313; O7-12-493)
D. base 4; PH 3.4; Wth 0.5. Ware 4. Slip covers all exterior surfaces, including under floor and ring foot.

fig. 4.21
Toe from jar/amphoriskos (TM10.0326; O7-12-493)
D. toe 3.5; PH 9; Wth 0.5. Ware 4.
Parallel, shape only: Saqqara, first half 4th century BC (French, Ghaly 1991, no. 115).

Cooking Vessels

fig. 5.22
Cooking bowl with horizontal strap handles (TM10.0321; O7-12-493)
D. 32; PH 7; Wth 0.5-0.6. Hard, sandy fabric, micaceous, with some small to medium-sized rounded white inclusions. Thin grey core, otherwise fired dark red throughout (10R 4/6). Large patch of what may be black pigment present on outer wall next to horizontal handle.

fig. 5.23
Greek Casserole (TM10.0304 O7-12-489)
D. 30; PH 10; Wth 0.8. Hard, sandy fabric with few visible inclusions. Slightly micaceous with tiny flecks of gold mica. Fully fired brown (5YR 5/4).

Kitchen Vessels

fig. 5.24
Large deep bowl, complete, multiple joining fragments (TM10.0295; O7-12-483)
D. 22; H. 14.9; D. base 8.5; Wth 0.8. Ware 1.
Parallels, general shape: Mendes, "Late Period" (Wilson 1982, fig. XVII.4); Tanis, 30th Dynasty (Marchand, Roussel 1994, no. 25; Saqqara, first half 4th century BC (French, Ghaly 1991, nos. 57-60).

fig. 5.25
Large deep bowl, seven large sherds preserve nearly complete vessel (TM10.0255; O7-12-483)
D. 22; H 15; D. base 8.4; Wth 0.8. Ware 1.
Parallels: as previous.

fig. 6.26
Bowl with collar rim (TM10.0341; O7-9-477)
D. 16; PH 3.1; Wth 0.7. Ware 1.

fig. 6.27
Bowl with collar rim (TM10.0331; O7-9-486)
D. est. 21; PH 6.5; Wth 0.8. Ware 1.

fig. 6.28
Small basin/bowl (TM10.0324; O7-12-493)
D. 21; PH 6.7; Wth 1.2. Ware 1.

fig. 6.29
Large Basin (TM10.0302; O7-12-489)
D. est. 45; PH 14; Wth 0.6-1.0. Ware 1.

fig. 6.30
Deep bowl/small basin (TM10.0335; O7-9-544)
D. 16; PH 7.5; Wth 0.4. Over-fired Ware 4. Section fired bluish grey. Surface covered in thin, streaky white slip (2.5YR 8/1). Interior surface badly cracked from firing. Waster.

fig. 6.31
Small jar (TM10. 0323; O7-12-493)
D. 11; PH 8.1; Wth 0.7. Ware 1.

fig. 6.32
Small jar (TM10.0307; O7-12-493)
D. 9; PH 5.7; Wth 0.3-0.5. Ware 4.

fig. 6.33
Jug/small jar, base (TM10.0325; O7-12-493)
D. base 4.5; PH 4.5; Wth 0.6-1.2. Ware 1.

fig. 6.34
Jar/jug base (TM10.0316; O7-12-493)
D. base 5.5; PH 2; Wth 0.4. Ware 3.

fig. 6.35
Bottle with pointed base (TM10.0310; O7-12-493)
PH 8.3; Wth 0.3-0.5. Ware 3.

Personal Vessels

fig. 7.36
Small squat bottle, near complete, missing neck, handle, and rim (TM10.0269; n/a)
D. base 3.6; PH 8.2; Wth 0.3. Ware 2. Surfaces generously wet-smoothed in attempt to smooth out grittier inclusions. Lower portion of body has large crack from firing.
Parallels: Egypt: Tell el-Herr, generally 4h-1st century BC (Gratien, Soulié 1988, fig. 6.g); Mendes, "Late Period," (Wilson 1982, fig. XVIII.6); Saqqara, first half 4th century BC (French, Ghaly 1991, fig. 38); Thebes, painted versions dated 4th-2nd century BC (Schreiber 2003, nos. 60-65). Israel: Tell el-Hesi, late Persian Period (Coogan 1975, fig. 8.2).

fig. 7.37
Squat bottle (TM10.0317; O7-12-493)
D. 1.7; PH 4; Wth 0.2-0.3. Ware 2.

fig. 7.38
Small squat bottle, rim, neck, and handle preserved (2010-not inventoried; O7-9-477)
D. 1.7; PH 2.3 (2.6 with handle); Wth 0.4. Ware 2.

fig. 7.39
Small squat bottle, rim and neck (2010-not inventoried; O7-9-486)
D. 1.4; PH 1.6; Wth 0.3. Ware 2.

fig. 7.40
Small squat bottle, neck, rim, and part of handle preserved (2010-not inventoried; O7-9-486)
D. 1.7; PH 2.6; Wth 0.4. Ware 2.

fig. 7.41
Small squat bottle, rim, neck, and handle preserved (2010-not inventoried; O7-9-486)
D.1.7; PH 1.9 (2.2 with handle); Wth 0.3. Ware 2.

fig. 7.42
Small squat bottle, rim, neck, and handle preserved (2010-not inventoried; O7-9-486)
D. 1.6; PH 1.7; Wth 0.3. Ware 2.

fig. 7.43
Small bottle base, ring foot (TM10.0343; O7-9-477)
D. base 3.5; PH 2.7; Wth 0.3. Tight rilling around interior floor. Ware 2.

fig. 7.44
Small squat bottle with stumpy foot, near complete (TM10.0264; O7-11-492)
D. base 2.9; PH 8.3; Wth 0.2-0.4. Ware 3.

fig. 7.45
Small squat bottle with stumpy foot, near complete (TM10.0315; O7-12-493)
D. base 3.2; PH 7.9l Wth 0.4. Ware 3.

fig. 7.46
Small bottle base (TM10.0265; O7-11-502)
D. base 4; PH 1.6; Wth 0.2-0.5. Ware 3. One of four examples from same feature.

fig. 7.47
Small bottle base, ring foot (TM10.0344; O7-9-477)
D. base 4.2; PH 2.2; Wth 0.3. Ware 3.

fig. 7.48
Ring foot juglet (TM10.0065; O7-11-379)
D. base 3.5; PH 4.26; Wth 0.2-0.3. Ware 5a.

fig. 7.49
Ring foot juglet (TM10.0059; O7-11-379)
D. base 5; PH 1.9; Wth 0.3-0.4. Ware 5a.

fig. 7.50
Ring foot juglet (TM10.0072; O7-11-379)
D. base 4; PH 1.9; Wth. 0.7. Ware 5a.

fig. 7.51
Ring foot juglet (TM10.0058; O7-11-379)
D. base 4; PH 1.8; Wth 0.2-0.5. Ware 5a.

fig. 7.52
Ring foot juglet (TM10.0070; O7-11-379)
D. base 5; PH 2.3; Wth 0.3. Ware 5a.

fig. 7.53
Ring foot juglet (TM10.0062 ; O7-11-379)
D. base 6; PH 1.9; Wth 0.4-0.7. Ware 5a.

fig. 7.54
Ring foot juglet (TM10.0061; O7-11-379)
D. base 5; PH 2.5; Wth 0.5. Ware 5a.

fig. 7.55
Juglet (TM10.0071; O7-11-379)
D. 1.3; PH 3.4; Wth 0.3. Ware 5b.

fig. 7.56
Juglet (TM10.0060; O7-11-379)
D. 1.9; PH 3.54; Wth 0.25. Ware 5b.

fig. 7.57
Juglet (TM10.0063; O7-11-379)
D. 1.7; PH 2.55; Wth 0.34. Ware 5b.

fig. 7.58
Ring foot juglet (TM10.0057; O7-11-379)
D. base 5; PH 3.9; Wth 0.5-1.0. Ware 5b.

fig. 7.59
Small bottle base, ring foot (TM10.333; O7-9-544)
D. base 4.8; PH 1.7; Wth 0.3. Ware 5b.

fig. 7.60
Ring foot juglet (TM10.266; O7-11-501)
D. base 4; PH 2.4; Wth 0.4. Ware 5b.

fig. 7.61
Ring foot juglet (TM10.0069; O7-11-379)
D. base 4; PH 2.2; Wth 0.52. Ware 5b.

fig. 7.62
Ring foot juglet (TM10.0067; O7-11-379)
D. base 5; PH 1.6; Wth 0.5. Ware 5b.

fig. 7.63
Ring foot juglet (TM10.0064; O7-11-379)
D. base 4; PH 2.9; Wth 0.3-0.5. Ware 5b.

fig. 7.64
Ring foot juglet (TM10.0066; O7-11-379)
D. base 4; PH 2.9; Wth 0.3-0.5. Ware 5b.

fig. 7.65
Ring foot juglet (TM10.0068; O7-11-379)
D. base 4; PH 1.0; Wth 0.5. Ware 5b.

Storage Vessels

fig. 8.66
Jar (TM10.0303; O7-12-489)
D. 13; PH 7.5; Wth 0.7-0.8. Ware 1. Thick bands of irregular, light burnishing present around neck.

fig. 8.67
Jar (TM10.0322; O7-12-493)
D. 10; PH 5.4; Wth 0.8. Ware 1.

fig. 8.68
Jar (TM10.0342; O7-9-477)
D. 10; PH 6.1; Wth 0.7. Ware 1.

Other

fig. 8.69
Lid? with vertical rim (TM10.0267; O7-11-501)
D. 12; PH 2.9; Wth 1.0. Ware 1.

fig. 8.70
Lid? with vertical rim (TM10.0268; O7-11-501)
D. 12; PH 2.4; Wth 0.8. Ware 1.

fig. 8.71
Small bottle? (TM10.0312; O7-12-493)
D. base 3; PH 5.6; Wth 0.4-0.8. Ware 2. Fully fired grey.

fig. 8.72
Ink well? (TM10.0318; O7-12-493)
D. 2; H 5.1-5.4; D. base 2; Wth est. 0.6. Ware 2. Exterior generously wet-smoothed, creating a look of a plasticized surface. Fired streaky dusky reddish grey (2.5YR 4/3).

fig. 8.73
Ink well? (TM10.0319; O7-12-493)
D. 2.5; PH 5.2; Wth 0.4. Ware 2.

fig. 8.74
Fenestrated lid/strainer, near whole (TM10.0320; O7-12-493)
D. 7; D. base/handle 2.6; H 5.8-6.2; Wth 0.4-0.6. Ware 3. Three holes are preserved near base/handle. Holes made while clay still wet.

fig. 8.75
Stand/bowl with omphalos (TM10.0301; O7-12-489)
D. 38; PH 10; Wth 1.1. Poorly levigated and poorly fired Nile silt with many small to medium-sized white and grey rounded inclusions. Occasional large amorphous lumps of crushed slag (?). Abundant chaff. Section fired brown (7.5YR 5/4) with thick dark grey core. Exterior surface plain, fired brown (7.5YR 5/4) with many medium to large shallow voids from chaff. Interior surface covered with thin, dull red slip (10R 5/6), badly worn. Interior smoothed, but still an abundance of small to medium shallow voids present from chaff.
Parallel: Mendes, "Late Period" (Wilson 1982, fig. XXI.2).

Ware 1	Ware 2	Ware 3	Ware 4	Ware 5a	Ware 5b	other
24	2	14	17	48	55	22
25	3	15	19	49	56	23
26	4	16	20	50	57	75
27	5	18	21	51	58	
28	6	34	30	52	59	
29	7	35	32	53	60	
31	8	44		54	61	
33	9	45			62	
66	10	46			63	
67	11	47			64	
68	12	74			65	
69	12					
70	36					
	37					
	38					
	39					
	40					
	41					
	42					
	43					
	71					
	72					
	73					

Tabl. 1. *Concordance of catalogued vessels organized by ware.*

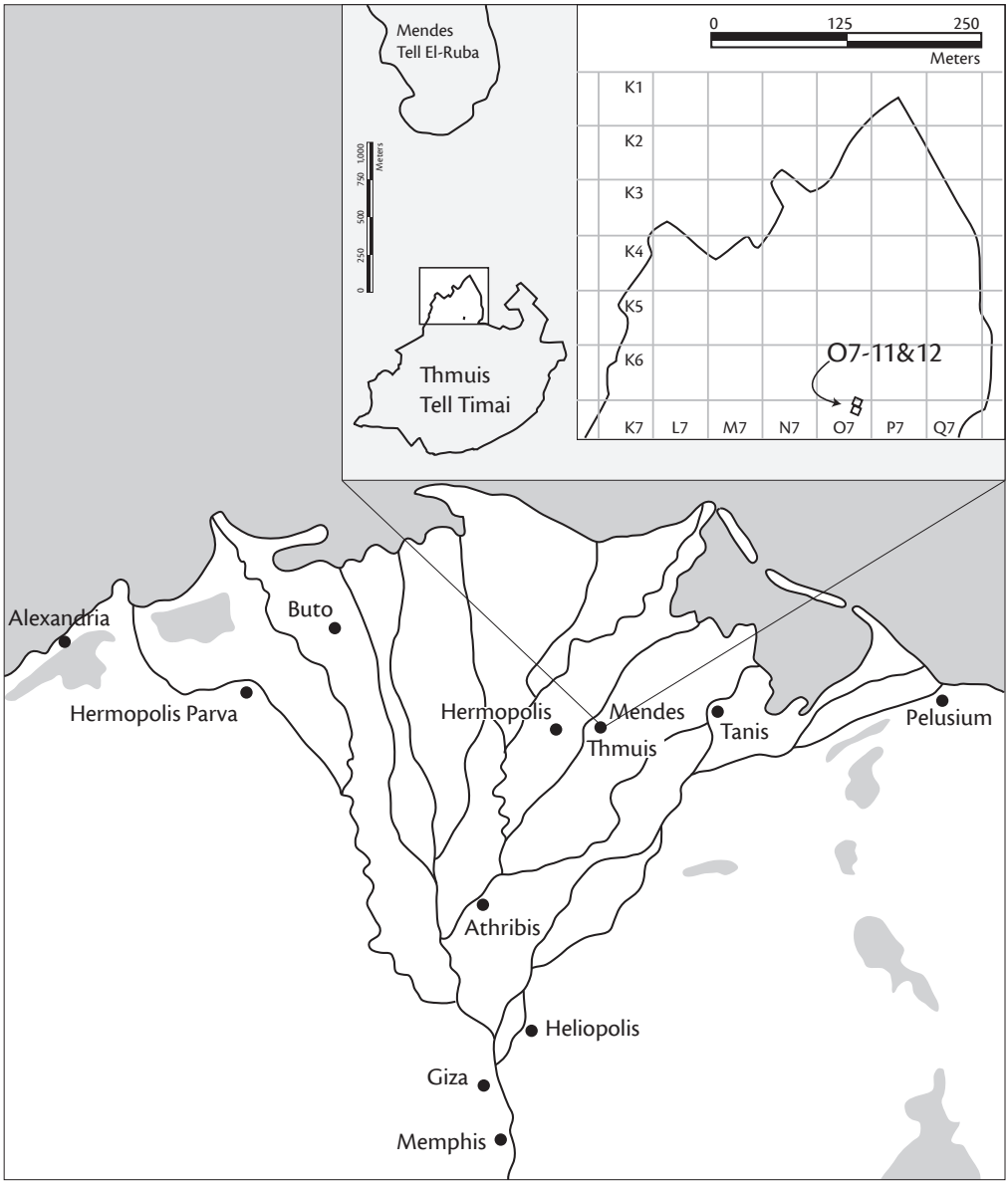

Fig. 1. *Map of the Delta with Tell Timai with inset of detail of the northern spur.*

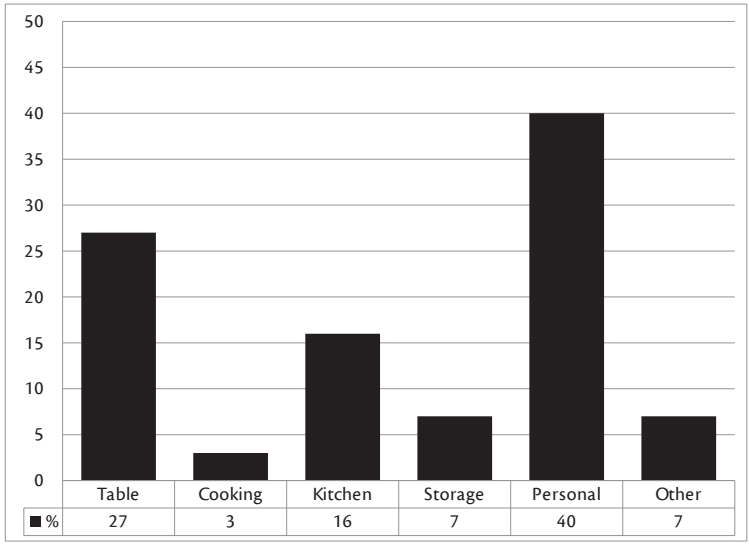

Fig. 2. *Proportions of functional categories present in the 4th century assemblage.*

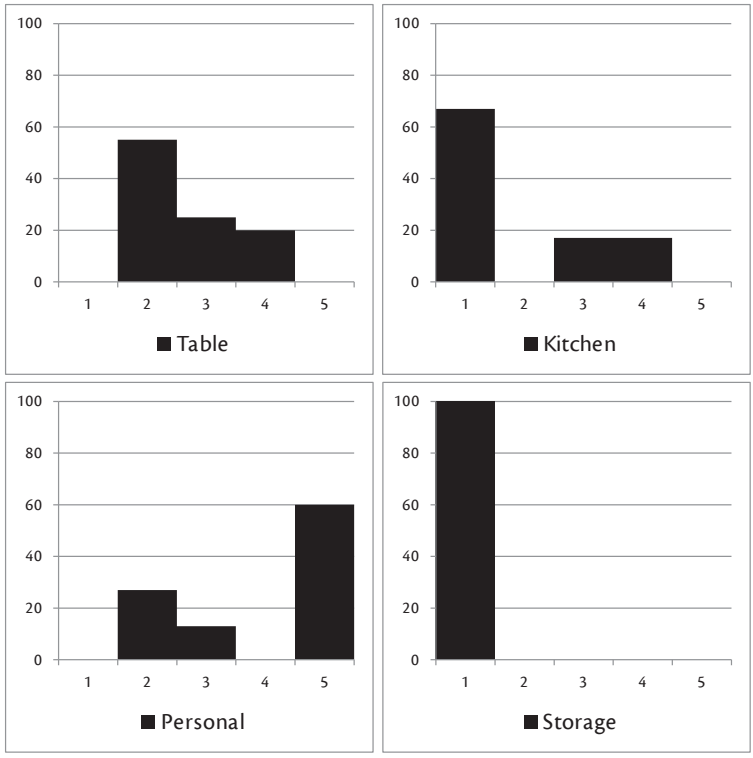

Fig. 3. *Proportions of different common wares present in each functional category.*

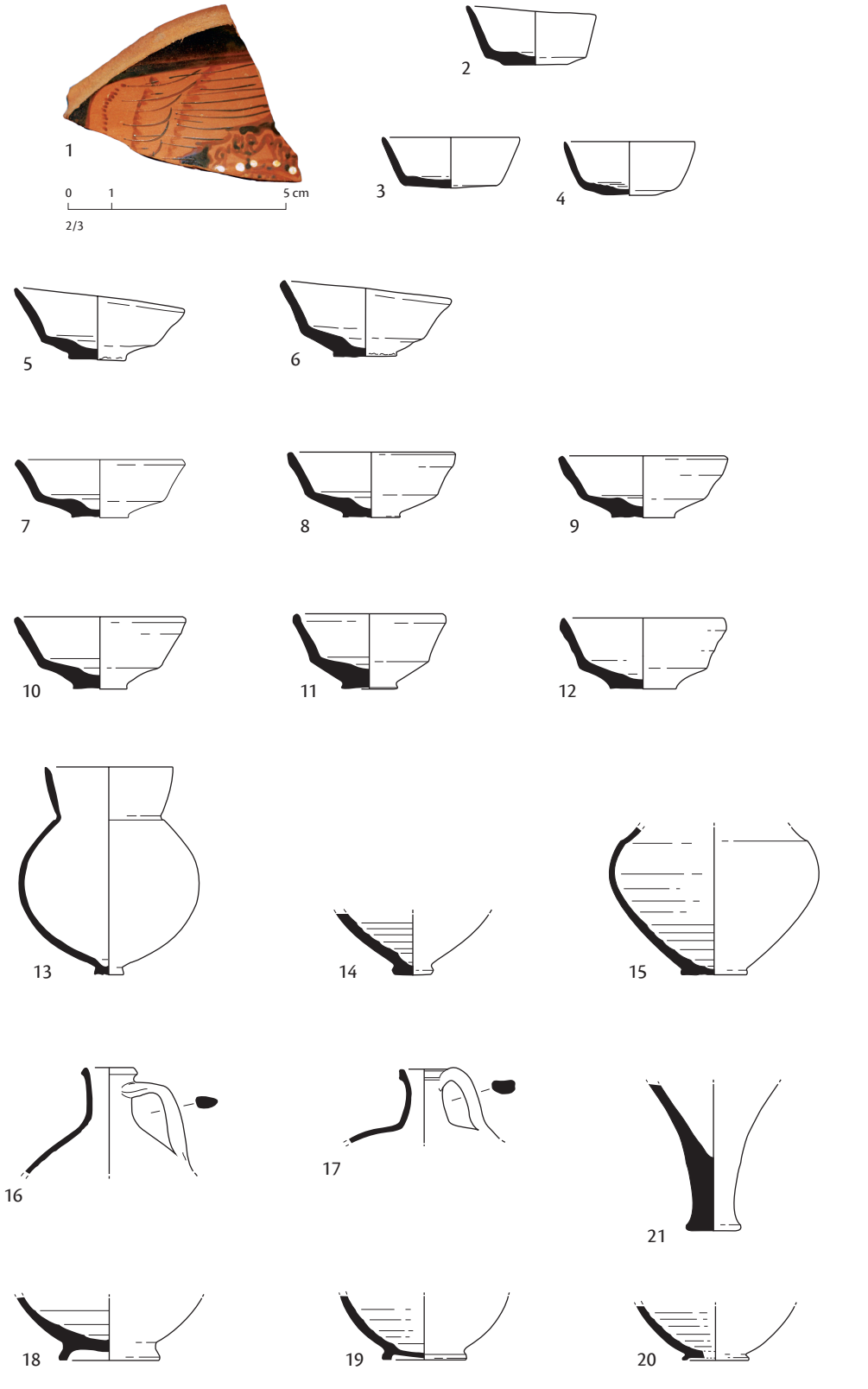

Fig. 4. *Table vessels (1-21).*

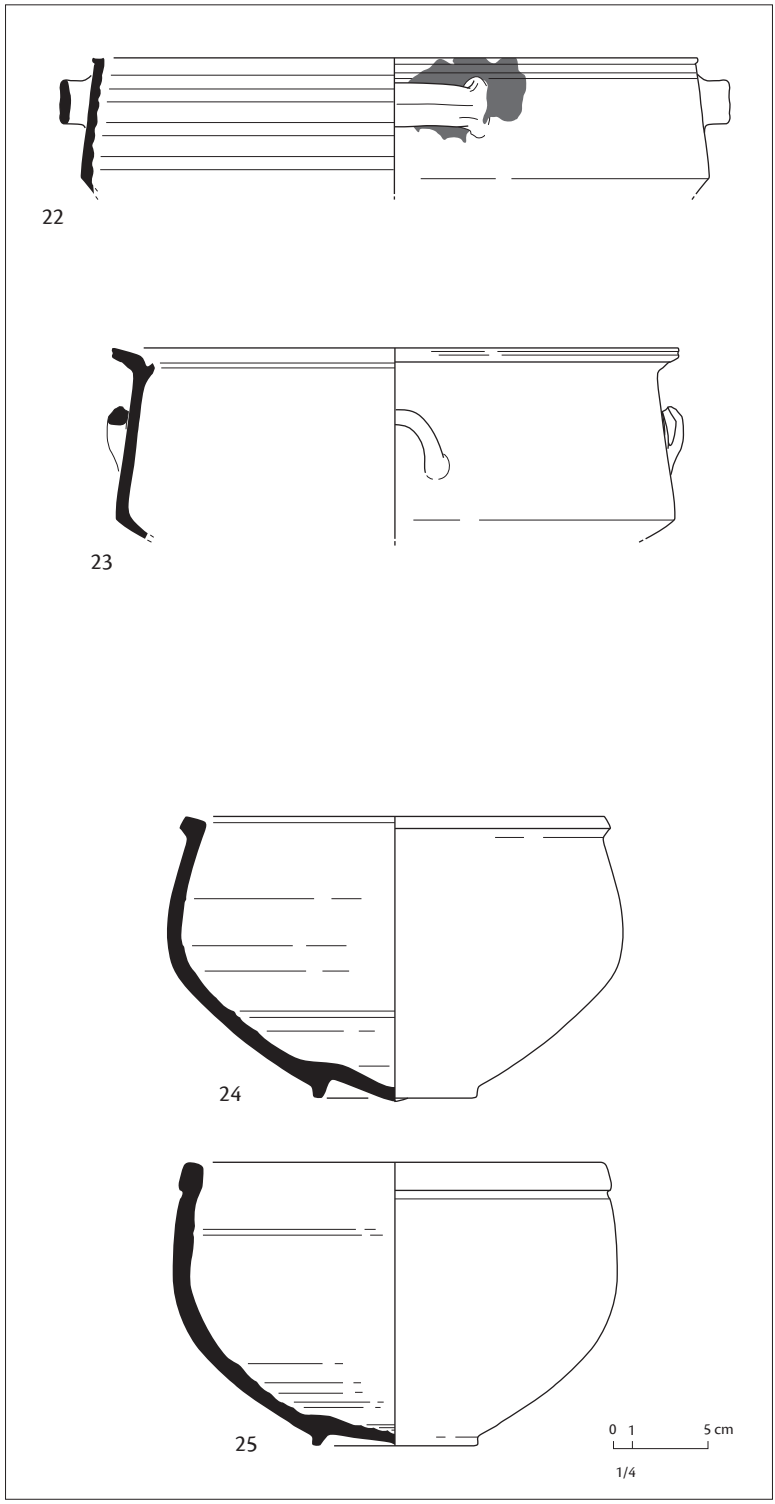

Fig. 5. *Cooking vessels (22-23); kitchen vessels (24-25).*

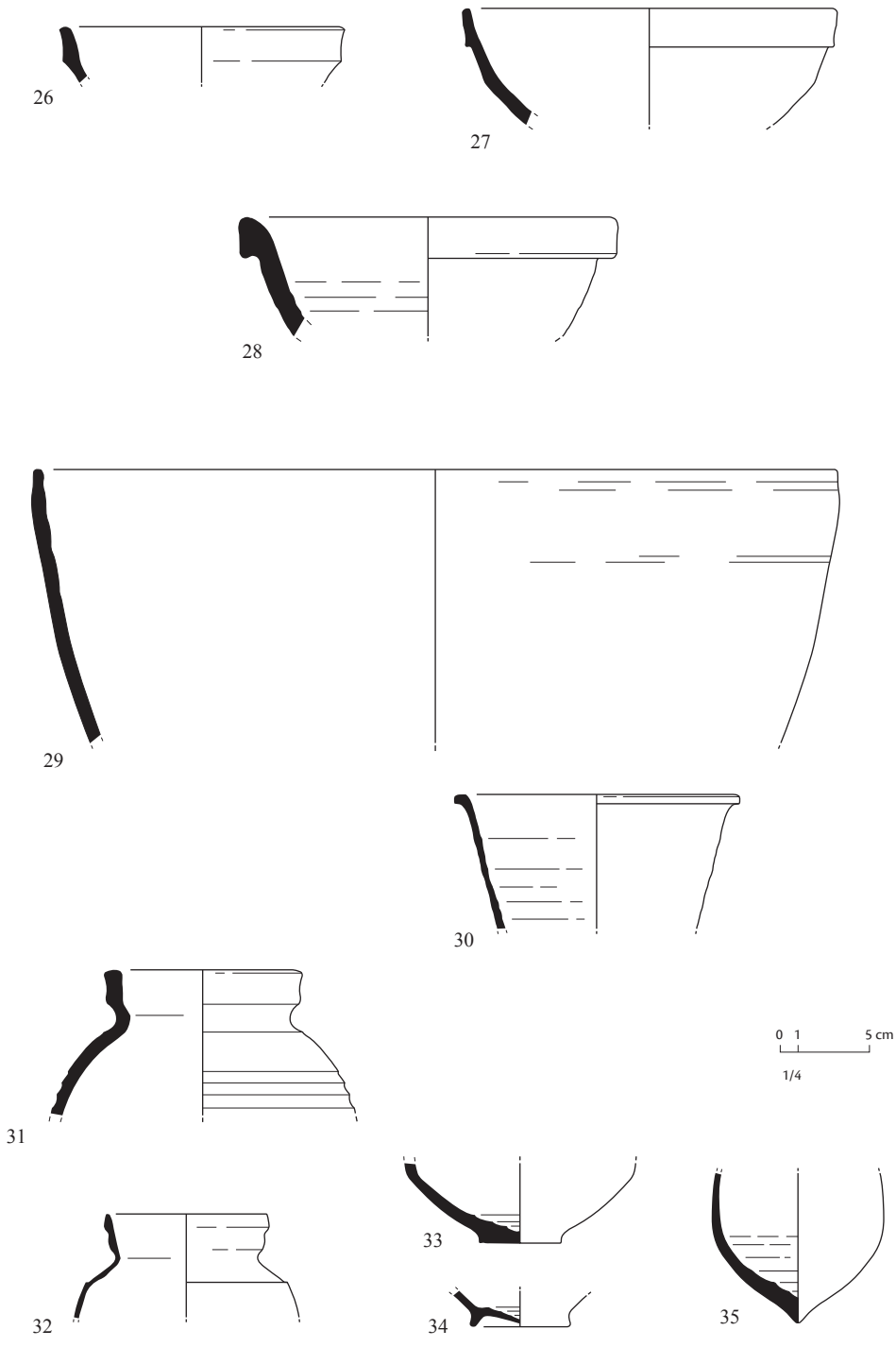

Fig. 6. *Kitchen vessels (26-35).*

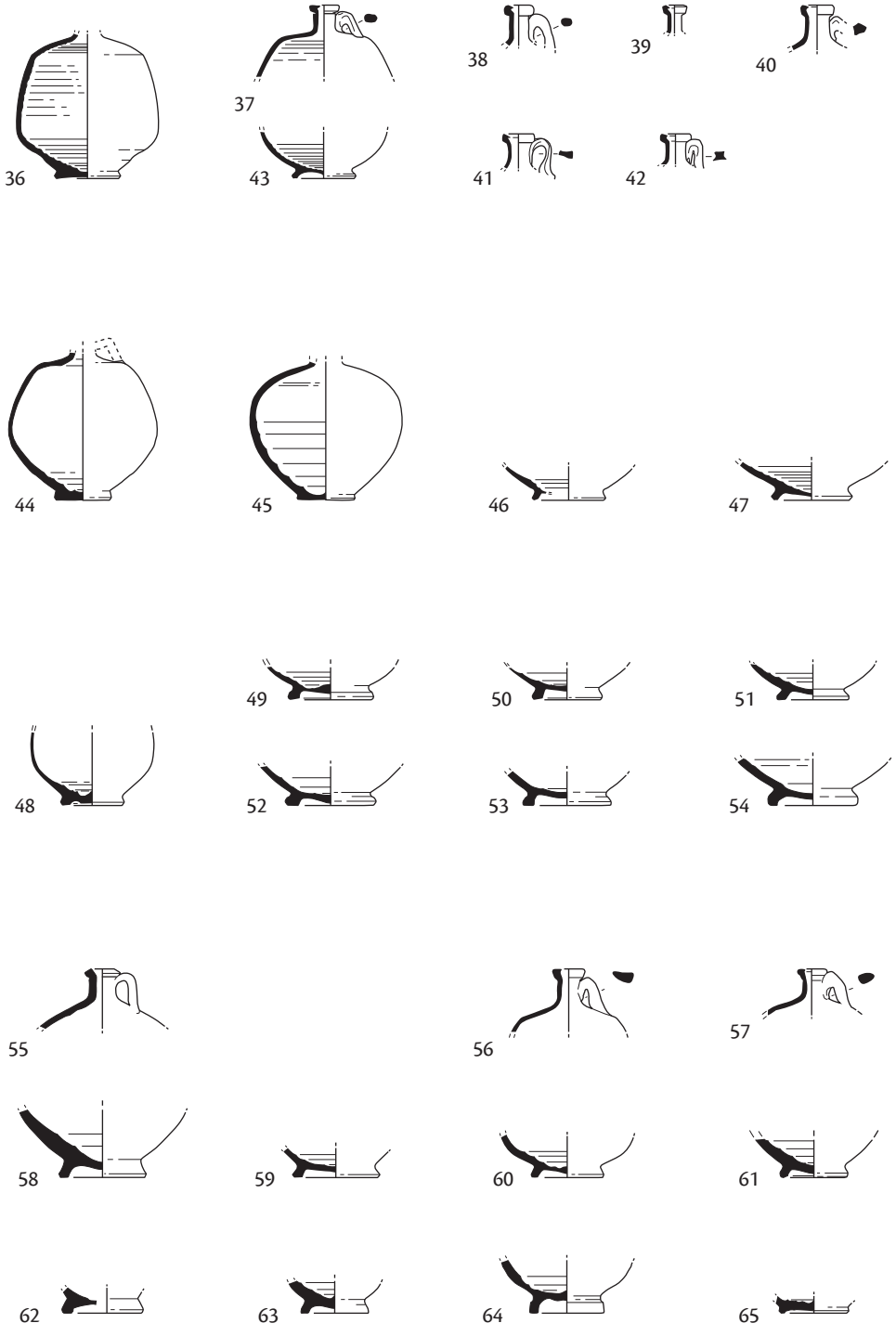

Fig. 7. *Personal vessels (36-65).*

0 1 5 cm
1/4

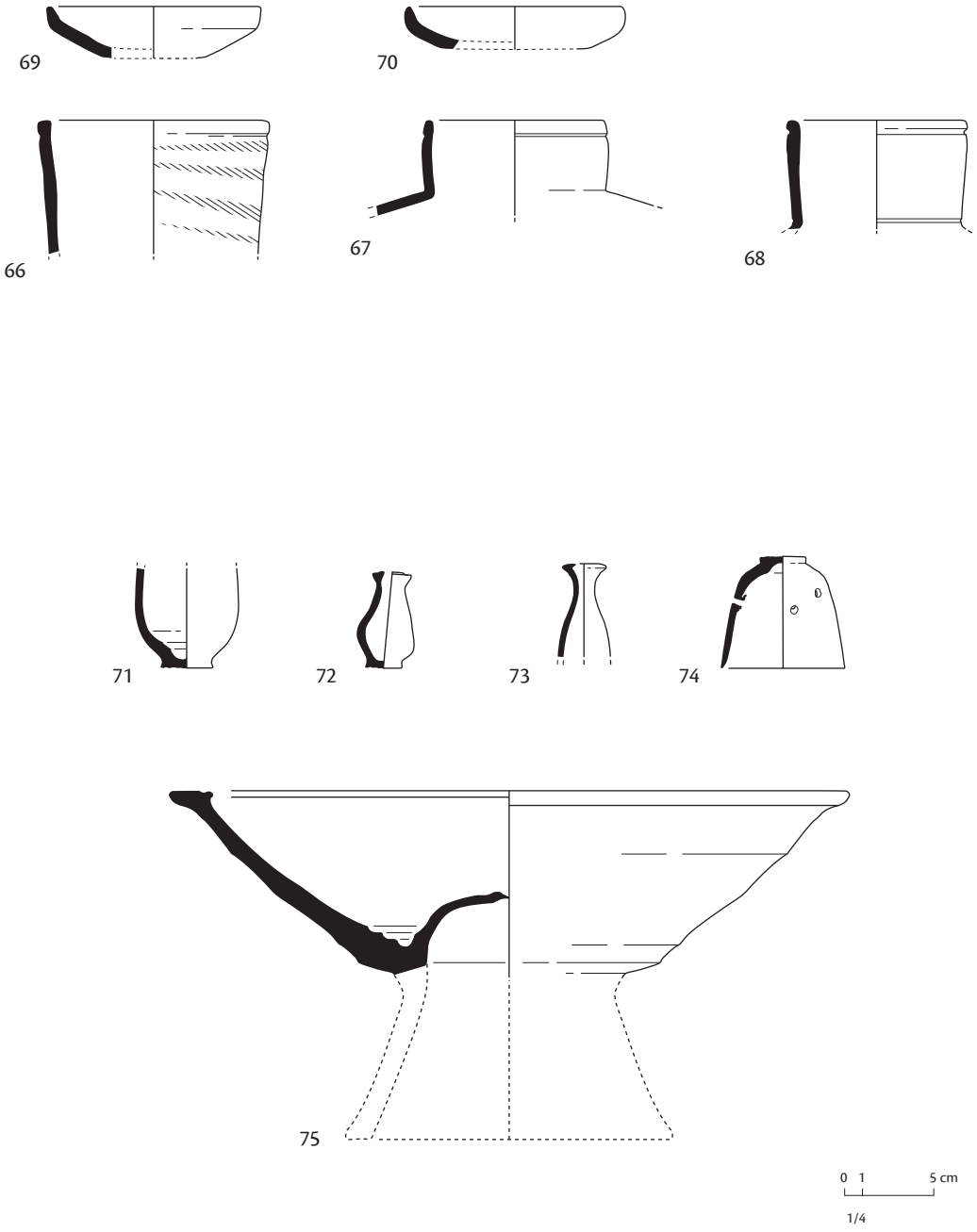

Fig. 8. *Storage jars* ***(66-68)****; lids?* ***(69-70)****; other vessels* ***(71-75)****.*