# LATE ROMAN CERAMICS FROM THE PANAYIA FIELD, CORINTH (LATE 4TH TO 7TH C.): THE LONG-DISTANCE, REGIONAL AND LOCAL WARES IN THEIR ECONOMIC, SOCIAL AND HISTORICAL CONTEXTS

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by

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Dissertation Supervisors

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The undersigned, appointed by the dean of the Graduate School, have examined the dissertation entitled

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and hereby certify that, in their opinion, it is worthy of acceptance.

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Professor Kathleen W. Slane

Professor Susan Langdon

Professor Lawrence Okamura

Professor Dennis Trout

***This work is dedicated to the memory of***

***Danielle A. Parks,***

***mentor and friend***

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All photographs of fabric details appearing in Plates 1 to 10 were taken by the author, as were photographs of **16**, **18**, and **19** on Plate 12, and **28** and **109** on Plate 13. All remaining photographs of catalogued pieces appearing in Plates 11 to 16 were taken by Petros Dellatolas, and are courtesy of the American School of Classical Studies at Athens, Corinth Excavations.

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## LIST OF PLANS

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# CHAPTER I. INTRODUCTION AND BACKGROUND

## INTRODUCTION AND OBJECTIVES

The Roman city of Corinth, founded by Julius Caesar upon the site of the ancient Greek city in 44 B. C., was one of the most important cities of Greece in Late Roman and Byzantine times (Map 1). Ancient Roman authors such as Strabo hailed the city for its geographical position on the Isthmus of Corinth, favorably placing it as a central node of distribution between the eastern and western halves of the Mediterranean (Strabo 8.6.20). Corinth is a site worthy of scholarly attention, as the discoveries revealed for over one hundred years of excavation by the American School of Classical Studies at Athens (hereafter ASCSA) clearly attest. While much can be said about an ancient site through the testimony of ancient authors and its standing remains, the study of properly excavated ceramics can add economic, social and historical details that would otherwise be invisible. The excavations at Corinth are notable in that much care has been dedicated to understanding its ceramic record, including that of the Late Roman period, setting the foundations for studies such as this to be possible.

This dissertation deals with the presentation of the Late Roman (late 4$^{th-}$ to 7$^{th}$-century) ceramic material recovered from the Panayia Field in Corinth. Through careful examination of the fabrics, including petrographic analysis, the long-distance, regional and local wares important to the site are fully characterized, including a reconstruction of the mechanisms and networks responsible for their distribution. A typological presentation of their associated forms is provided, aimed at documenting the range of

vessels manufactured in each ware, and is followed by a consideration of what their presence or absence reveal about the various activities practiced by Corinth's residents on or near the site. Additionally, a comparative analysis of contemporary assemblages from other regional sites illustrates that similar, but unique, relationships with long-distance, regional and local networks were practiced at other neighboring sites during the Late Roman period. This study concludes with the application of these results to broader issues of economic, social and historic significance. It explores Corinth's relationship with its regional ceramic workshops (the ceramic *koine*) and argues that a context of economic stability, as opposed to decline, was responsible for the intensification of local production and regional networks. Finally, it examines how the study of these ceramics and the various networks that distributed them can contribute to the understanding of the history of Corinth and the northeastern Peloponnese at the end of antiquity, offering a possible economic context for the material changes noted during the 7$^{th}$ century.

Although spanning the late 4$^{th}$ through 7$^{th}$ century, in many ways the nature of the evidence presented here will be of the most consequence for the period covering roughly the mid-6$^{th}$ century (perhaps as early as the first third) to the early 7$^{th}$ century. This was not intended as such, but is reflective of the sporadic and inconsistent use of the site before the organized construction projects that were completed roughly by the mid-6$^{th}$ century, as well as a gap of perhaps as much as 50 years that separates the last clear activity associated with these buildings and the deposition of a large, but otherwise isolated, context of the mid- to third quarter of the 7$^{th}$ century. Not unhappily, the period of clearest chronological focus would seem to coincide with the rebuilding of Corinth's circuit wall, and presumably repair of the city, during the reign of the emperor Justinian

as recorded by Procopius (*Aed.* 4.2.23-24); according to the latest survey evidence, the Panayia Field was in close proximity with the proposed western edges of this new wall (Plan 1) (but see discussion below). Despite various other investigations into Late Roman Corinth that have occurred over the decades and the publication of numerous preliminary reports and articles, the presentation of the material here, collected through full-scale open area excavation employing modern methodology, is the first exhaustive single treatment dedicated to late 4th- to 7th-century ceramic wares from the site. These wares, their associated networks of distribution, the activities that their presence implies, and the understood use of the area of the Panayia Field all contribute to an increased understanding of the city of Corinth in the Late Roman period.

The significant contribution of this study is the characterization of regionally- and locally-produced wares and the preliminary reconstruction of the networks through which they were distributed (Chapter 4), as well as the typological presentation of the known forms associated with each ware presented alongside those from long-distance sources that are better recognized in the scholarship of the Late Roman period (Chapters 5 and 6). This study is indebted to the preliminary studies of regional and local ceramics from Late Roman Corinth that have appeared elsewhere and have set the foundation for a synthetic presentation of this nature.[1] Products obtained via regional and local networks are not inconsequential; as Horden and Purcell have hypothesized, the volume of "low commerce," or "connectivity across 'short distances'" (in other words, regional and local distribution), was always higher than that of "high commerce" (long-distance distribution) with the individuals who operated within local networks capable of dealing in high varieties and quantities. This short distance movement of goods was the constant

[1] See *Corinth* XVIII.2; Sanders 1999; Slane 1994, 2000, 2008b, 2009, 2014; Slane and Sanders 2005.

"background noise" of Mediterranean exchange with which high commerce occasionally came into contact; fluctuations in the latter are most usefully approached and explained "from the bottom up," through the recognition that high commerce depended on, arose from, declined into, and overlapped with low commerce in phases of intensification and abatement.[2] The "glitter of high commerce" should not be allowed to devalue these regular routines of distribution as it was, in reality, an outgrowth from, or intensification of, these routine patterns.[3]

The regular tendency of scholarship to view the fine wares and amphoras carried by means of long-distance distribution as proxy evidence for even more significant systems of distribution (see below, this chapter) is equally applicable to ceramics procured through regional and local distribution. They reveal the sources from which a given site's networks of exchange regularly drew (perhaps even on a daily basis) for its practical and utilitarian needs, as opposed to the sources of the long-distance products whose appearance is less locally-important and contributes more to the understanding of empire-wide patterns of distribution in which a site may only play a supporting role. Regional and local systems have for the most part remained less visible than their long-distance counterparts, as the products carried by the latter can be found on a greater array of sites lending themselves to comparative analyses that refine their understanding and chronology, and thereby increase their likelihood of recognition at other sites. The need to prioritize the study of long-distance distribution is, of course, vital as their associated chronological understanding can be applied to the other material in the contexts from

[2] Horden and Purcell 2000, pp. 150-151. For a similar sentiment, see also Poblome 1996, p. 92.
[3] Horden and Purcell 2000, pp. 365-366. The authors go on to view long-distance exchange and state involvement as an intensification of local and small-scale distribution systems, thus stressing the need to consider the antecedents present in a "microregion" before production and distribution dramatically increase, leading to large, bulk movements of a specific product.

which they were recovered.[4] The study of the products of "low commerce" has less to recommend itself in these regards, and is often reliant on the dates provided by the associated imports; but these products and the sources of distribution that they reveal are important components to unveiling the full economic and social character of any particular site, and the nature of its connectivity with the surrounding region. The need to recognize regional and local products is especially important in the study of Late Roman archaeology in which the sudden absence of imports may lead to conclusions arguing for economic decline and/or site abandonment.

## EVIDENCE AND METHODOLOGY

### *Primary Data: The Excavations of Panayia Field, An Overview*

The ceramics upon which this study is based were recovered from the late 4th to 7th century contexts of the Panayia Field, which rests in an area southeast of the forum and civic center of Corinth (Plans 1 to 3). Several test and rescue excavations took place sporadically in and around the area for nearly fifty years before systematic excavation began in 1995. R. Scranton first dug a pair of test trenches in the area in 1947 along the north and west sides of the now-demolished Panayia church, which had been severely damaged by earthquakes in 1928 and 1930 (Plan 2).[5] Above the Classical and early Roman levels Scranton discovered two "shops," destroyed by fire probably in the 3rd

[4] Cau, Reynolds and Bonifay 2011a, p. ix.
[5] Results of these investigations were published in Broneer 1947, pp. 243-246, pls. LXIV:28, LXV:29-31. This area corresponds with "area E" discussed in Sanders 1999, pp. 441-443 (see also Plan 3), who also states that that Panayia Church was later demolished in the early 1950s.

century,[6] followed by a large Late Roman building with a marble floor that may have been used into the 5th century before being abandoned and partially dismantled.[7]

Other associated investigations were undertaken by the Greek Archaeological Service before 1995 (Plan 3).[8] To the south of the Panayia Field (labelled "A") was found a *nymphaeum* complex, complete with a marble-revetted pool set within a mosaic pavement, and flanked by apsidal dining rooms. To the west, a smaller excavation revealed part of the southern extension of the Lechaion Road (labelled "B"). The Service also conducted two excavations within the Panayia Field itself which initially revealed the *impluvium* courtyard of the Panayia *domus*, and part of the Panayia Bath (labelled "C" and "D").

The ceramics presented here derive from the systematic excavations of the Panayia Field which were carried out between 1995-2007, under the auspices of the ASCSA and under the direction of G. Sanders. Apart from the Neolithic to Modern finds,[9] the most substantial remains dated to the Roman and, especially, Late Roman periods (Plan 4). A north-south street located on the eastern side of the site along with a large urban *domus* (marked in lighter ink on Plan 4) account for the most conspicuous remains of the Middle Roman period. The road was maintained, at least to some degree, from the 1st century B.C. to the 6th century A.D.,[10] while the *domus* is believed to have

[6] Sanders 1999, p. 442, n. 3, reports that the 3rd-century date is supplied by the presence of Broneer type XXVII lamps and a coin of Alexander Severus (221-231).
[7] Sanders 1999, p. 442, n. 5. Numismatic evidence for this date includes two mid-5th-century coins found in the layer of the broken-up flooring; one is identified as a Vandal coin, and the other of Marcian (450-457).
[8] These are summarized in Sanders 1999, p. 441; each investigation is identified, respectively, as "area A" through "area D."
[9] Few studies related to earlier periods from the site have appeared. For the Geometric graves, see Pfaff 2007; for the Hellenistic pottery, see James 2010, 2014; for the report on the Neolithic to Hellenistic phases, see Sanders et al. 2014.
[10] See Palinkas and Herbst 2011, for full report on the life and afterlife of the road.

been erected after ca. 260 and destroyed by fire after the reign of Julian (361-363).[11] During its lifetime, the building was adorned with mosaic and marble floors, pools, wall-paintings, and small-scale sculpture.[12] Following the destruction of the *domus*, the area was put to various uses and witnessed the construction and abandonment of several architectural features from the late 4th to 7th century. Modern property boundaries prohibited further extension to the south, east, and much of the west, although a narrow strip extending west from the pool (outlined on Plan 2) was excavated in a failed attempt to locate the next anticipated north-south street on the Roman grid plan.[13] The area to the north of the pool and the bath was the focus of the investigation of an Ottoman and early modern cemetery that was associated with the old Panayia church.[14]

A thorough recounting of the Late Roman history of the site as revealed through its ceramic deposits and various features will be the focus of the following chapter. In brief, dumping, stone quarrying and small-scale agriculture were practiced in the period immediately after the destruction of the *domus*, as well as the construction and prompt abandonment of buildings to the southwest (a "philosopher's house") and center (evidenced by two parallel north-south orthostate walls) of the site. Dumping and random accumulations of material continued to occur up to ca. 500 (and probably later), until at some time in the first half of the 6th century the area underwent preparatory work for

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[11] Sanders 2004, p. 176, 2005, p. 420; Slane and Sanders 2005, p. 246; Stirling 2008, p. 127; Brown 2008, p. 93; Palinkas and Herbst 2011, pp. 304-307. Examination of the contents recovered from Well 1999-001 (Lots 1999-044, 1999-045, and 1999-046), filled prior to the construction of the *domus*, confirms the construction date. For evidence of fire destruction, see Corinth Notebook 918, basket 115, for layers of tile and ash above the octagonal fountain court.

[12] Sanders 2004, p. 176, 2005, pp. 420-424; Stirling 2008, p. 127; Palinkas and Herbst 2011, p. 306. For the mosaics, see Sweetman and Sanders 2005; for study of the cache of statuettes, see Stirling 2008; for the wall paintings see Lepinski 2008, 2014.

[13] For the grid plan, see Romano 2003. This narrow extension is not illustrated in the official ASCSA plan of the site (Plan 4), but the area of excavation is demarcated on Plan 2.

[14] See Rohn et al. 2009, for a full report on the cemetery.

large-scale construction projects. These activities included the further quarrying of old walls, the final in-filling of the pool associated with the earlier *domus*, the excavation of foundation trenches for the bath and the Long Building, the quick construction and almost immediate in-filling of a cement feature that was used to mix cement for the construction projects, and use of surfaces preserved beneath the floor of the bath's entrance hall for the working of stone. Little evidence was preserved from the actual period of use of the bath and Long Building, which only lasted from the mid- to sometime in the second half of the 6th century, and included hypocaust cleaning, some floor and repair deposits from the Long Building, the digging of burials, and possibly the construction of a structure to the northeast, above the in-filled cement feature, as represented by a L-shaped wall. Abandonment occurred in the late 6th century, as attested by large amounts of dumped deposits within the buildings and over the site generally. Some post-abandonment activity, in the form of a small structure built against the bath, probably dates to the early 7th century, while the latest Late Roman activity consists of the fill of a large pit in the mid- to third quarter of the 7th century toward the southwest of the site. The Late Roman ceramics from the site, including the publication of some material from the bath and the 7th-century pit,[15] have received only preliminary study.

*Systems of Storage at Corinth Excavations: Pottery Lots*

The presentation of the ceramic material from the Panayia Field requires a brief review of the systems of recording and storage used by the ASCSA, Corinth Excavations. Individual contexts, excavated in an open area context as single baskets and consecutively-numbered in a given notebook, are either saved or thrown depending on

[15] Sanders 1999, for the bath; Slane and Sanders 2005, "assemblage 4," for the pit.

their stratigraphical integrity and level of useful information that can be gleaned. Saved baskets are then lotted during post-excavation study with the purpose of grouping the material collected from a single, understood feature or context. In such a case, several baskets can be combined as a lot if they are later understood to be related to the same event, such as a destruction deposit or a foundation trench. The contents of these baskets are then placed into permanent storage, and given a unique lot number prefaced by the calendar year it was excavated, followed by the next available sequential number.[16] So, for example, "Lot 1995-061" signifies that it was the sixty-first lot generated during the 1995 excavation season.[17]

*Dating and Typological Analysis*

The present study began with a typological analysis of the ceramic finds from the Panayia Field, first distinguishing them by class (e.g. lamps, fine wares,[18] amphoras,[19] cooking wares, plain wares), by shape (or type, if pre-established), and then fabric (see

[16] Sanders et al. (in prep.), pp. 39-40.
[17] The numbering of individual pieces within the lots, as well as the selection strategy behind the creation of the catalogue, is described at the beginning of Chapter 5.
[18] Fine wares are defined here by any vessel that received any purposeful, decorative treatment, most often in the form of a consistent coating of slip and/or painted decoration. Although few vessels classed here as plain wares, and even fewer classed as amphoras, also received varying degrees of slip (in some cases only an inconsistent, thin layer), it was decided to place them along with other, similar shapes in order to allow the reader of the catalogue to more readily compare the similar shapes of different wares.
[19] Amphoras are loosely defined here as any vessel that may arguably have been employed in the transport and/or long-term storage of other goods. In regards to use as a storage container, amphoras are differentiated from plain wares which would have been used for short-term storage, such as serving water from a pitcher. Although most amphoras presented here are fragmentary in nature, some attempt was made to distinguish (transport) amphoras from table amphoras; the former are typically larger, more durable, and their rounded (or pointed) bases are better suited for stacking on board ships. Table amphoras, on the other hand, are generally smaller and their bases are often capable of supporting the vessel upright on a flat surface; bases were not always preserved here, often leaving the distinction open. Their function is not entirely certain, but their use in lower-volumes of storage (such as in a crowded pantry) is possible; it is also reasonable that they may have been employed in the transportation of local agricultural goods within small-scale local or regional networks, as their smaller size may have accommodated their distribution by means of human porters, small wagon or cart, beast of burden, or small coastal vessels. The use of table amphoras in transmitting the contents of long-distance transport amphoras off-loaded at major harbors to urban consumers and rural markets may also possible.

below). Due to decades of ceramic research conducted throughout the Mediterranean, the most common long-distance imports are generally well-known and dated, and with the presence/absence of these forms/types the associated contexts can be dated.[20] Dating was also supported by a consideration of the coins, architectural finds, and general archaeological contexts that were painstakingly recorded during excavation. Quantified data specific to the site could not be collected during the course of the study of the Panayia Field material as the systems of excavation and storage did not lend themselves to such an analysis.[21]

*Methodology of Macroscopic Fabric Description and the Identification of Wares*

It quickly became evident that the material presented the opportunity to identify specific, recurring fabrics that represented local, regional and long-distance sources of production and distribution. Ceramic fabrics offer a unique way to achieve this as clay resources and potting practices (such as the addition of certain kinds of temper) are particular to each area of production. Even if a fabric cannot be sourced to a specific kiln site it can still be characterized so as to be recognizable, while study of a fabric's known distribution can give some idea of the general area of production.

The characterization of the fabrics, conducted concurrently with the typological analysis, was made on empirical evidence that could be presented and tested by others. The method of macroscopic fabric description used here is generally based on standards

[20] Research on Late Roman pottery in the Mediterranean, and at Corinth specifically, has progressed rapidly since the 1970s. The present analysis has been able to build especially upon the study of the long-distance fine wares and amphoras, for which previous typological, quantitative, and scientific analyses have set the foundations for the chronology and origins of these imports. These sources are cited throughout Chapters 3 through 6.

[21] The discarding of baskets that were not lotted makes quantified study impossible. Whenever possible, reference is made to other quantified studies of Corinthian material from other areas of the site; see Slane 2000, 2003.

published by G. Sanders that are currently employed in the description of catalogued ceramics at the ASCSA's Corinth Excavations.[22] This method draws on practices used in geology and petrology, and provides a detailed, objective description that can easily be applied in differentiating fabric groups using a hand lens with a fair level of certainty. Whenever possible, fabric details were made by examination of a fresh break in natural light and color was described using the *Munsell Soil Color Charts*. Inclusions and voids were examined using a 10x, 0.021 m hand lens, and were described according to quantity (rare, few, frequent, common, abundant), size (very large, large, medium, small, fine),[23] and shape.[24] The profile of the break is described accordingly (laminar, hackly, granular, conchoidal, smooth),[25] while the hardness, a test of the cohesiveness of the fabric, is measured by scratching the surface of the break with a small penknife (very hard, hard, medium hard, soft, very soft).[26]

In several cases, the definition of these various fabrics, some defined previously,[27] then allowed for an organization by *ware*, here defined as a range of different forms (even spanning different ceramic classes) that share the same fabric. Within each defined ware, allowance is made for some variation in fabric which may, for example, account for any refinement of the standard recipe for special ceramic classes (such as the modification of a fabric employed for amphoras in the production of lamps), or factors

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[22] See Sanders 1999, pp. 477-478; see also Sanders et al. in prep.
[23] Sanders 1999, fig. 19:2. In terms of quantity, rare = 1% of visible inclusions; few = 3%; frequent = 5%; common = 10%; abundant = 20%. In terms of size, very large = >0.0010 m; large = 0.0005 to 0.0010 m; medium = 0.0002 to 0.0005 m; small = 0.0001 to 0.0002 m; fine = <0.0001 m. "Very fine" was also employed here for extremely minute particles.
[24] Sanders 1999, fig. 19:3. Modifiers may include rounded, sub-rounded, and angular.
[25] Sanders 1999, fig. 19.1. Laminar = a platy, layered appearance; hackly = large, angular irregularities; granular = fine, more rounded irregularities; conchoidal = large, smooth, angular facets; smooth = even, without apparent irregularities.
[26] Sanders 1999, p. 477, table 4. Very hard = penknife will not scratch; hard = penknife just scratches; medium hard = penknife scratches; soft = fingernail scratches; very soft = fingernail scratches easily.
[27] The history of scholarship for each ware is provided in Chapters 3 and 4. For the most recent publications that defined various fabrics in Corinth, one is referred to Sanders 1999 and Slane and Sanders 2005.

involved in firing that may account for superficial variations such as color. In cases where a regionally-distinct form appears in different (sub-)fabrics that are nevertheless understood to derive from the same general geographic area, and aspects of their production and distribution are more usefully discussed together (such as the case, for example, of the forms associated with the various Palestinian amphora fabrics), the fabrics are discussed as sub-groups within each ware.

*Petrography: Methods and Selection Strategy*

Some of the fabrics of certain proposed wares were tested by petrographic analysis, while others are still officially pending.[28] In the text, samples that were submitted for petrographic analysis are indicated with the prefix "P-" (for example, P-1). These correspond with the list of petrographic samples provided in Appendix 1. Petrographic analysis is an ideal technique to obtain precise data on the composition of ceramic fabrics. In this process the sample is mounted to a microscope slide, cut to a very thin section (ca. 25-30 micrometers), and the fabric is examined using a polarizing light microscope; mineral inclusions become transparent and can be identified based on their characteristic optical properties. The mineralogy of the ceramic fabric can then be classified and a fabric's geological place of origin can then begin to be explored.[29]

Not all petrographic samples are included in the catalogue presented in Chapter 5. Due to the destructive nature of the analysis, petrographic samples tended to be selected

[28] These samples are being analyzed by H. Graybehl (University of Sheffield). See Graybehl 2010, and Graybehl et al. 2013, for preliminary results. Additional appreciation is extended to P. Day (University of Sheffield) for the original impetus, support, and overall supervision of the scientific analysis.
[29] Graybehl's method of describing quantities of inclusions in her petrographic analysis, cited in the appropriate sections of Chapters 3 and 4, differs slightly from the method employed for the macroscopic descriptions used at Corinth Excavations (described above); the order of Graybehl's frequency of inclusions, from lowest to highest, proceeds as very rare, rare, common, frequent, and dominant.

from fragmentary (when possible) examples of identifiable forms from ceramic lots that seemed the most chronologically secure, whereas pieces that were ultimately catalogued tend to represent the best preserved examples of representative forms, with preference for chronologically-secure contexts whenever possible (see introduction to the catalogue, Chapter 5). In some instances, a more complete profile of a vessel was recognized only after the petrographic analysis of a unique form had taken place, thus replacing it in the catalogue. In cases where the petrographic sample does not appear in the catalogue, the closest catalogued parallel to its fabric and form are indicated in Appendix 1.[30]

The petrographic analysis was organized into two parts. The first pilot project of 62 samples was executed soon after the pottery lots from the Panayia Field began to be read in the autumn of 2009; the analysis was carried out by H. Graybehl and appeared as the subject of her thesis.[31] The second project seeks to analyse an additional 32 samples of various local and regional fabrics and is currently still officially pending. A complete list of all 94 samples is provided in Appendix 1.

The goal of the first project was to reach an understanding of the two major fabrics found in these lots, namely Northeast Peloponnesian cooking fabric and southern Argolid fabric. A range of vessels from different classes in Northeast Peloponnesian cooking fabric was selected; as the fabric had already by that time been macroscopically recognized to have been employed in a range of shapes, the analysis aimed to test the homogeneity of the fabric across the various ceramic classes and chronologically

[30] Presentation of all petrographic samples, including profile drawings, will appear in a future article by H. Graybehl and the present author.
[31] Graybehl 2010. This resulted in the identification of eight fabric groups: 1. Chert Group; 2. Micrite & Fine Mica Group; 3. Schist Group; 4. Chert & Igneous Rock Group; 5. Igneous & Metamorphic Rock Group; 6. Quartz & Plagioclase Group; 7. Biotite & Granitic Rock Group; 8. Fine Mica & Quartz Group. Groups 3 and 4, however, may be closely related to the first group. For discussion, see the relevant sections in Chapters 3 and 4.

throughout the Late Roman period.[32] Five additional samples of supposed Late Roman micaceous Aegean ware, the fabric of the next largest group of cooking wares found in Late Roman Corinth, were also selected in order to better define the major, locally-available cooking fabric against an imported one. The selection of samples of southern Argolid fabric concentrated on fragments of LR Amphora 2, the shape in which this fabric is most commonly recognized; again, homogeneity over time was tested, as well as the presence of any LR Amphora 2 forms from different sources through the selection of samples with characteristics that diverged from the standard fabric description.[33]

The second project was envisaged at a time when the collection of primary data (by means of reading the pottery lots) was nearing its end, and it was recognized that scientific analysis was required to confirm the various local and regional fabric groups that had been identified macroscopically. Limited funding necessitated the selection of a significantly smaller group of samples than that made for the first analysis, but selection was made with the aim of ensuring that the most frequently occurring ceramic classes manufactured in Attic, Boiotian, and LR Corinthian lamp fabrics were represented, as well as including a number of plain wares and lamps in southern Argolid fabric in order to confirm its use in the manufacture of other classes of ceramics in addition to amphoras.[34] While official results are still pending, preliminary observations are included in the relevant sections of Chapters 3 and 4.

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[32] See Slane and Sanders 2005 for the range of vessels manufactured in Northeast Peloponnesian cooking fabric, there identified as "Corinthian cooking fabric" (C. c. f.)
[33] See Slane and Sanders 2005, p. 286, for their call for a badly needed study of the LR Amphora 2 in light of the increasing number of supposed manufacturing sites. See Chapter 4 for further discussion.
[34] The author wishes to thank G. D. R. Sanders and Corinth Excavations for supplying the funding necessary to prepare the thin-sections for this second group of samples.

*Visits to Comparative Regional Collections*

Once the wares were characterized and could be recognized through macroscopic examination, a series of comparative site visits were arranged in order to examine museum and archaeological collections in the surrounding regions with the aim to begin to understand the patterns and limits of distribution that certain wares experienced.[35] From north to south, these sites included: Delphi (material from the Roman Agora, and the sector to the southeast of the peribolos);[36] the sites of Thespiae, Koroneia, and Tanagra in Boiotia (as surveyed by the Leiden-Ljubljana Ancient Cities of Boeotia Project); the Athenian Agora;[37] Sikyon (Sikyon Survey Project);[38] Isthmia (various material from the Ohio State excavations);[39] Nemea;[40] Kounoupi in the southern Argolid (as surveyed by the Argolid Exploration Project);[41] and the cave at Andritsa, to the south of ancient Lerna.[42] Plans to visit the collections from Kenchreai[43] and Argos could not be realized before the completion of this study, although brief examination of some

[35] I once again thank the directors and/or administrators overseeing these various collections for facilitating my access to examine them. See the acknowledgements for a complete list.
[36] This material was most fully treated in Pétridis 2010.
[37] Various material published by the ASCSA in *Agora* V and *Agora* XXXII.
[38] The ceramic material has been presented in Trainor 2012 and Tzavella, Trainor and Maher 2014.
[39] A selection of the material examined will appear in a petrographic study conducted by the present author and H. Graybehl.
[40] Various material published in Miller (Stella) 1983, Miller (Stephen) 1978, 1979, 1980, 1988, and *Nemea* II. Comparative data were also attained through comparative petrographic analysis of material recovered during the Nemea Valley Archaeological Project (NVAP), currently studied by C. Cloke; see Graybehl et al. 2013.
[41] Examination of this material occurred while sampling material for a petrographic study to be conducted by the author and H. Graybehl that is intended to extend the work presented in Graybehl 2010. Kounoupi, originally surveyed as site B-19 of the Argolid Exploration Project, has appeared briefly in various publications; see Rudolph 1979, p. 304, n. 23; Megaw and Jones 1983, pp. 246-247; Munn 1985; Jones 1986, p. 206; Jameson, Runnels and van Andel 1994, pp. 256, 307, 402, 443-444, map (foldout) 8, fig. A.9.
[42] The cave consists of clusters of deposits associated with a group of more than 40 individuals who may have been trapped inside while using the cave as a place of refuge in the late 6th or early 7th century; see Kormazopoulou and Hatzilazarou 2010, for a brief report of the ceramic material.
[43] Although some pieces published in *Kenchreai* IV are on display at the museum at Isthmia and could be personally examined.

archaeological material from the site of Pyrgouthi, in the Berbati Valley in the Argolid, was able to be accomplished.[44]

## CORINTH IN THE LATE ROMAN PERIOD

### *Corinth as Capital*

The importance of characterizing the various levels of network connections intersecting with Corinth has importance for more than just the city itself. Indeed, Corinth's importance to the northeast Peloponnese imbues the study of its ceramic material with major implications on a regional level. This was due mainly to the city's probable role as the provincial capital of Achaea during the earlier centuries of Roman control.[45] Following the reforms of Diocletian, Achaea had become part of a three-tiered administrative system, being contained within the diocese of Moesia (later Macedonia) with its capital at Thessaloniki, which in turn was within the prefecture of Illyricum, with its capital at Sirmium.[46] Others have assumed that Corinth's probable status carried on in the Late Roman period,[47] with support from the literary and epigraphic records only dating as late as the late 4th to early 5th century.[48]

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[44] Some material is on display at the museum in Nauplio, while comparative petrographic data, generously provided by I. Whitbread to H. Graybehl, allowed for some examination of the fabrics. The material is fully published, with detailed fabric descriptions, in Hjohlman 2005.
[45] See Alcock [1993] 1996, p. 133, noting that "while no incontrovertible evidence exists to seal this identification, the colony is generally agreed to have served as the provincial capital of Achaia;" see also pp. 166-168. For a brief summary of the debate regarding Corinth's official status, see Brown 2008, p. 59.
[46] Brown 2008, p. 57.
[47] *Corinth* III.2, p. 129; *Corinth* XVI, p. 6; Avraméa 1997, pp. 35, 37. Sanders 2004, p. 165, identifies Corinth as "the capital of the Byzantine theme of *Peloponnesos*," and p. 171, stating that "Corinth was the capital of the province of Achaia." See also Brown 2008, p. 57, 2010, p. 232, and 2012, throughout.
[48] For a summary, see Brown 2008, pp. 58-60. For perhaps the latest testimony, see Sironen (1992) who publishes an inscription found to the southwest of the amphitheater that is reconstructed as a regulation passed in the early 5th century by a "provincial assembly consisting of representatives of various cities meeting in the capital of their province, in our case Corinth" (p. 225). This is a partial piece of an inscription that is preserved in full at Megara; Sironen 1992, p. 225. For discussion, see Brown 2008, p. 60; Jacobs 2014, p. 87, n. 86.

While documentation of Corinth's actual status in the Late Roman civil government is unavailable, various saints' *Lives*, such as that of Perigenes of Corinth and St. Kyriakos the Anchorite, reveal that Corinth was the seat of the metropolitan bishop in the early 5th century, with literary evidence extending through the 7th century.[49] In the ecclesiastical hierarchy, a province's metropolitan bishop was only out-ranked by an ecclesiastical exarch, which roughly corresponded to a civil vicar who ruled a diocese and answered to a praetorian prefect who ruled a prefecture. In the case of Corinth, even though its civic administration was oriented towards the east and Constantinople, ecclesiastically-speaking the entirety of the prefecture of Illyricum was under the authority of the bishop of Rome, a situation that remained unchanged until at least the early 8th century. Papal control over Greece was controlled through the bishop of Thessaloniki, who acted as the pope's vicar.[50] Whether or not Corinth was still the administrative center of the province of Achaea, it was the province's ecclesiastical center whose nearest authority was in Thessaloniki. As local civic authority waned during the Late Roman period, the power of the bishop and the Church assumed many of the responsibilities of the old *curiales* and local *boule*.[51] In several respects the presence of the metropolitan bishop in Corinth must have resulted in a large amount of civil authority in addition to its ecclesiastical authority over the province of Achaea, ultimately resulting in a similar, if redefined, level of power as that wielded in earlier Roman times.

There is some evidence to suggest that Corinth's position within the province of Achaea might have been (temporarily?) overshadowed by Athens during the first half of

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[49] Limberis 2005, pp. 447-449, 455-456. See also *Corinth* XVI, pp. 6-7, 12, 28; Brown 2008, pp. 61-62, 2010, p. 232.
[50] Limberis 2005, pp. 444-445.
[51] See Dagron 1977, p. 20; Whittow 1990, pp. 28-29; Limberis 2005, pp. 456-457; Brown 2008, p. 66.

the 5th century, coinciding with the time that the literary and epigraphic record becomes silent regarding any evidence that Corinth retained its status as provincial capital.[52] The evidence is mainly in the form of epigraphic dedications honoring very high-ranking figures with building projects in Athens, such as the restoration of the Diogeneion by Severus Aëtius, proconsul of Achaea, during the reign of Arcadius and Honorius,[53] and inscriptions belonging to statues of Herculius, praetorian prefect of Illyricum in 408-410 (or 407-412), in both the porch of the Library of Hadrian and on the Acropolis beside the statue of Athena Promachos.[54] Construction of the so-called "Palace of the Giants" at this time can possibly be attributed to the empress Eudocia, wife of Theodosius II and possibly a native of the city of Athens,[55] as also might be the building of the Tetraconch Church within the Library of Hadrian, the first church built within the monumental fabric of the city.[56] In 424, Theodosius II scaled down the tax of Achaea to a third and that of the other provinces of the Macedonian diocese to a half, in response to complaints from delegations;[57] while these measures have a wider significance, it is tempting to speculate upon any influence that the emperor's new, Athenian, wife had in such a decision. The concentration of such prestigious patronage in the city of Athens at the end of the 4th century through the first half of the 5th is indeed striking, and is brought into even sharper

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[52] Brown 2008, 60-61; Jacobs 2014, p. 88.
[53] Frantz 1979; *Agora* XXIV, p. 61.
[54] *Agora* XXIV, pp. 63-64.
[55] See *Agora* XXIV, pp. 111-112, where Thompson interprets the grand structure as "an official residence, maintained by the Imperial government" for use by high-ranking officials. Sironen 1990, p. 374, reports that fragments of an inscription honoring the empress were found immediately in front of the building's façade and suggests that Eudocia may have been the benefactress, perhaps in close association with her brother, Gessius, who was made Praetorian Prefect of Illyricum after his sister's marriage to Theodosius II in 421; see also Fowden 1990, p. 498.
[56] See *Agora* XXIV, pp. 72-73, where Frantz had supposed imperial patronage, additionally supported by Fowden (1990, p. 499); Karivieri 1995, pp. 899-900, envisions a less ambiguous connection with the empress.
[57] Jones [1964] 1986, p. 453, who reports that this reduction was permanent as it still appeared in Justinian's law code.

focus when one considers that this period roughly coincides with the concentrated appearance of Athenian ceramics in the Late Roman Panayia Field (see Chapter 4).[58]

Whatever Corinth's actual role in the provincial hierarchy, it was undoubtedly a very important city with significant religious and administrative influence. Any observations regarding the local, regional and long-distance networks that supplied the city are bound to have greater repercussions for other sites in the immediate region.

*Corinth in the Late Roman Period: A Brief History and Review of the Circuit Wall*

Widespread destruction is generally noted in Corinth at the end of the 4th century in addition to the Panayia *domus* (noted above). The Sanctuary of Demeter,[59] the theater and the area east of the theater,[60] and the area near the Kenchreai Gate on the east side of the city[61] all suffered damage dated to this time, while major renovation of several buildings in the forum area and along the Lechaion Road are considered to have been

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[58] See *Corinth* XVIII.2, p. 3, where Slane reports that Attic imports as documented at the Sanctuary of Demeter, with the exception of lamps, are not seen at all during the 1st to 2nd centuries, and only a "few" pieces are noted for the 3rd to 4th centuries; see also p. 57, nos. 118-119, fig. 10. About half of the fine wares, including some closed shapes, of a Tetrarchic-era pit in Corinth, however, were Attic imports, thus suggesting that they were already arriving in some number; see Slane 1994, pp. 132-134, 147, nos. 8-15, figs. 3-4, pl. 33. Slane 2000, p. 303, describes Athens as an "important supplier of fine wares and lamps" to Corinth from the second half of the 3rd to late 5th centuries.

[59] For the destruction at the Demeter sanctuary, see *Corinth* XVIII.3, pp. 438-440, tentatively stating that the initial destruction may have been caused by the earthquake of 375, with further human acts of destruction undertaken by Christians or Alaric's armies; see now also Slane 2008, p. 492, who maintains only that the cessation of cult occurred in the second half of the 4th century, leaving open the possibility that actual destruction was due to an "unrecorded Christian attack" or the earthquakes of 365 or 375. See also Brown 2008, p. 93, who maintains that destruction came before Alaric, either due to the 375 earthquake or anti-pagan violence.

[60] Williams and Zervos 1987, p. 31, attribute the destruction of the theater to the earthquake of 375; see also *Corinth* IX.3, p. 166; Brown 2012, p. 159. Palinkas and Herbst 2011, n. 37, reported that Williams was reevaluating the date of the 375 earthquake in the context of his earlier excavations, but this was not yet discussed in his report (Williams 2013) of the west hall of the theater.

[61] Gregory 1979, p. 269, n. 11, reports on a destruction layer into which a tower and segment of the eastern face of the fortification wall was sunk into; based on the numismatic evidence, Gregory felt that the destruction was due to Alaric's sack in 396, rather than the earthquakes of 365 and 375, but with acknowledgement that there were other earthquakes in 395/396. Above the destruction layer was about a half meter of dumped fill of broken material that went up to the very end of the 4th century. Slane and Sanders 2005, n. 101, offer a reassessment of the dating criteria from this destruction layer.

undertaken in the late 4th and early 5th century, with maintenance activities continuing into the 6th century thus illustrating the continued importance of the center of the old Roman city.[62] These early destructions, and the subsequent repairs to the city, have been attributed to a variety of factors including earthquakes in 365 and 375,[63] the invasion of Alaric and his army of Visigoths in 396,[64] and anti-pagan violence practiced by overzealous Christians.[65] While none of these factors can be attributed to any one of these instances of destruction or repair without debate, it is clear that the activities proceeding the destruction of the *domus* in the Panayia Field in the late 4th and early 5th century occurred in a context of general renovation and repair to the fabric of the city as a whole.

The 5th century witnessed troubled times for the western empire, as Rome was sacked in both 410 and 455, Carthage and North Africa were lost to the Vandals by 439, and the last western emperor was deposed in 476. In Greece, an invasion of Huns only reached as far as Thermopylae in 447, while in 467 or 477 the Vandal king Gizeric, with Moorish support, plundered Illyricum, the Peloponnese and several nearby islands

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[62] *Corinth* XVI, pp. 9-26, but noting that the basilica on the Lechaion Road, Temple E, and the South Basilica were not rebuilt; see also Slane and Sanders 2005, pp. 292-293; Brown 2008, pp. 110-111. For the continued dedication of honorary portraits, the Late Antique *chlamydati*, in these areas through the 5th and early 6th century, see Brown 2008, pp. 111, 114-115, and 2012.

[63] Literary sources do not specifically name Corinth in relation to the often-cited earthquakes of 365 and 375, and their impact, if they did occur, has been seriously cast into doubt by various scholars. For damage (or repair) attributed to earthquakes in the second half of the 4th century, see *Corinth* VIII.3, pp. 165-166, no. 504, for an inscription that might be related to the re-erection of the colonnade of the West Shops following an earthquake of 365; Williams and Zervos 1983, p. 24, n. 19, 1987, p. 31. For discussion and reassessment of these earthquakes, see Rothaus 2000, pp. 16-21; Sanders 2004, pp. 170-172; Slane and Sanders 2005, p. 244, n. 2; Brown 2008, pp. 94-96; Palinkas and Herbst 2011, p. 308, n. 37.

[64] For Alaric in Athens, see *Agora* XXIV, pp. 49-56; for Corinth, see Brown 2008, pp. 83-94. For a recent reassessment of the damage that Alaric's forces did to Athens and Corinth, see Jacobs 2014, who concludes that Alaric's invasion seems to have had no long-lasting effects on either city, and any incidence of violence seems to have been conducted in order to procure tribute in the form of levies, especially food. Any actual damage that Alaric inflicted was either minimal or quickly repaired.

[65] For Christian violence in the context of the Sanctuary of Demeter, see note above. Brown 2008, p. 66, downplays Christian destruction in the late 4th and early 5th century at Corinth generally, stressing the slow closure of temples at Corinth over the course of the 5th century and persecutions of non-Christians only under Justinian in the 6th century. Stirling 2008, p. 129, briefly considers Christian violence in the destruction of the statuettes from the Panayia *domus* but finds earthquake damage more likely.

including Zakynthos.[66] In the first half of the 6th century, Corinth and its surrounding area are mentioned as having been ravaged by a number of natural catastrophes, including several possible instances of earthquakes and at least one outbreak of bubonic plague. The first of these catastrophes is variously dated to 521 to 525, or even 532, when Procopius specifically records that an earthquake destroyed Corinth (*Aed*. 4.2.23), and stating elsewhere that the earthquake was followed by an outbreak of plague (*Anec*. 18.41-44).[67] Laws issued by Justinian in 535 or 536 respond to a crop failure in Thrace and Illyricum generally,[68] and the major outbreak of bubonic plague which is understood to have originated in Egypt in 541 may have hit Corinth in 542.[69] Another earthquake is recorded by Procopius (*Bell*. 8.16-23) for the year 551/552, detailing devastation in Boiotia, Achaea, and the Crisaean (Alkioides) Gulf (north of the Perachora peninsula in the greater Gulf of Corinth) in countless towns and eight cities including Chaironeia and Koroneia in western Boiotia, and Patras and Naupaktos (modern Lepanto) at the western end of the Gulf of Corinth. Procopius also records that the cities of Echinus and Scarphea in the Malaic Gulf (on the mainland northwest of Euboea) were destroyed by tsunami. In the past, Corinthian scholarship has connected certain finds with this event, believing that the earthquake devastated the city, even though it is not explicitly mentioned by

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[66] See *Agora* XXIV, pp. 56, 78, n. 146; Brown 2008, p. 94; see Procop. *Bell*. 3.5.23 and 3.22.16 for brief descriptions of Gizeric's attacks. In the latter account, Procopius places the Vandals at Taenarum, at the southern tip of the Mani peninsula in the Peloponnese (Cape Matapan); the fact that they then proceeded to the island of Zakynthos suggests that they may have only been conducting raids along the southern and western coasts of the Peloponnese.

[67] See *Corinth* XVI, p. 8, for a date of 522; Sanders 1999, p. 474, for a date of 522 or 532; Sanders 2004, p. 172, for a date of 524 or 525; Slane and Sanders 2005, pp. 291-292, n. 94, for a date of 525; see Brown 2008, p. 96, dated 521/522, additionally citing the historian Malalas (17.15) who records that Justin sent aid to the city afterwards.

[68] Sanders 2004, p. 172; Brown 2008, p. 98, citing *Nov*. 32 to 34.

[69] See *Corinth* XVI, p. 8; Sanders 1999, p. 474; Sanders 2004, p. 172; Brown 2008, pp. 97-98; see also Slane and Sanders 2005, pp. 290-291, for a reassessment of the physical evidence of the plague at Corinth.

Procopius.[70] Modern scholarship, however, has cast doubt that any major damage was inflicted on Corinth by the earthquake of 551/552.[71] Another earthquake may have occurred in the later 6th century, as attested by two bodies with associated coins, the latest legible belonging to Justin II (565-578), found to the west of the Lechaion Road, in a room behind the hemicycle courtyard.[72] An inscription, first re-used as an epitaph before it was re-used a second time in a built-tomb at the west end of the old forum (east of the later church of St. John), and which mentions the emperor Tiberius II (574-582), was considered to have commemorated reconstruction efforts following earthquake damage.[73] A late-6th century earthquake, if one did occur, might be useful in explaining the short lifespan of both the Panayia Bath and the Long Building.

The military reconquests under the emperor Justinian also took place in the 6th century, with Africa regained in 533, and Italy over the course of 535-553 (although large parts of the latter were quickly lost to the Lombards during 568-572). Although Corinth was not physically involved, it would be logical to assume that some conveyance of troops and supplies (as well as any spoils of war) over the isthmus and through the gulf occurred during this time. In 540 "Hunnic" raiders outflanked the defenses at Thermopylae but were unable to cross the Gulf of Corinth and were left to ravage central

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[70] Edwards (1937, pp. 248-249), followed in *Corinth* XVI, pp. 7-8, had associated several coin hoards to earthquake destructions. One hoard, found west of the Kenchreai Gate at the site of the 1930 excavations of the tower (see below), was interpreted as belonging to a man escaping the city during the earthquake of 522 who was crushed when the fortification wall fell on him; the hoard, found disturbed throughout the plow zone, contained 742 coins (only 336 survived by the time they were examined) with the latest, excepting an intrusive coin of Baduila, being 148 coins of Anastasius. Other hoards found in the South Stoa bath and West Shops were associated with the earthquake of 551. Gregory (1979, pp. 272-274) re-examined the hoard from the tower excavations; in addition to disassociating the single skull bone fragment from the hoard, he believes that the hoard was purposely buried at the time of the 551 earthquake if the Baduila coin is re-integrated and new readings of two coins are re-identified as issues of Justin or Justinian.
[71] Sanders 1999, pp. 474-475; Sanders 2004, pp. 170-172; Slane and Sanders 2005, pp. 291-292; Brown 2008, pp. 96-97.
[72] Broneer 1926, pp. 52-53; *Corinth* XVI, p. 8, 15-16
[73] *Corinth* VIII.1, pp. 117-118, no. 195; *Corinth* XVI, p. 8; see also Brown 2008, p. 111.

Greece. Justinian responded to this event with the reinforcement of the fortifications at Thermopylae,[74] as well as refortifying many of the cities of Greece north of the isthmus and the Trans-Isthmian (Hexamilion) wall itself.[75]

At this point it is necessary to consider the fortification wall at Corinth. Procopius' text is somewhat ambiguous as to whether or not Justinian restored Corinth's circuit walls; while he is explicit in stating that Justinian did not refortify any of the cities of the Peloponnese, finding it more expedient to simply rebuild the Trans-Isthmian/Hexamilion Wall and install forts and garrisons along it (*Aed*. 4.2.27-28),[76] he does specifically mention Corinth among the cities within the walls of Thermopylae that he did refortify (*Aed*. 4.2.23-24). The attribution of at least one of these projects to Justinian is also supported by epigraphic evidence, which also makes mention of his associate Victorinus.[77] Very little of the various identified components of the Late Roman wall have been the focus of excavation. The stretch of wall known as the "Epistyle Wall" (see Plan 1) was briefly investigated; it was considered to have been constructed just before Alaric's attack in 396 (or possibly later), but quickly fell into disuse and was quarried for building material in the 5th century, and was largely destroyed in the mid-6th century by an earthquake.[78] One section of wall and a tower were excavated in 1930 to

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[74] Rosser 2001, pp. 33-34; Procop. *Bell*. 2.4.10-11; *Aed*. 4.2.2-16; *Anec*. 26.31-34.
[75] Procop. *Aed.* 4.2.23-28.
[76] This reading of Procopius' text was employed in both *Corinth* III.2, pp. 128-129, and Gregory 1979, p. 272. However, Bon went on to state that "it is hardly imaginable that the capital city would not have been included in the neighboring defenses of the Isthmus…," and feels that the walls of Acrocorinth were restored as well in the 6th century due to the natural strategic location and ability to house an entire garrison, but leaves in question the extent of Justinian's repairs; see *Corinth* III.2, p. 129.
[77] For *IG* IV, 205, an inscription that was possibly built into the new wall of Corinth, see *Isthmia* V, p. 14; but see also Caraher 2014, pp. 160-161, who thinks it more likely that this inscription was built into a gate over the Hexamilion Wall. For *IG* IV, 204, an inscription from the Hexamilion Wall, see *Isthmia* V, pp. 12-13, where the construction of the wall is dated between 548 and 553-560; see also Caraher 2014, p. 160, with further references.
[78] Wiseman 1972, pp. 5-7; see also Brown 2008, pp. 73-74, who states that the "Epistyle Wall" is only one of three stretches of wall built of *spolia* in the area. One of these is located in the area of the theater; recent

the west of the Kenchreai Gate (see Plan 1), revealing two wall faces with a rubble and concrete core dated to the late 4th century.[79] Reanalysis of the wall by T. Gregory allowed him to argue that the destruction layer that served as the wall's foundation could be dated to the time of Alaric's sack, with the wall being built within the first two decades of the 5th century.[80] The wall was traced as running west along the southern slopes of Acrocorinth roughly on line with the Hadji Mustafa fountain, turning north running through Anaploga, with the northern face following the line of the ridge and incorporating the "Epistyle Wall;" the amphitheater was not included within the circuit. Gregory further argued that the wall quickly turned into a quarry for building materials in the 5th century, but was then reconditioned for use in the 6th with reconfigured towers.

Sanders later re-assessed the datable material from the wall's foundations as well as the excavation notebooks, finding that the placement of the finds was not secure and that several lamps of "Broneer type XXVIII" were produced well into the 6th century.[81] Resistivity survey by the ASCSA Corinth Excavations and the Fitch Laboratory (British School at Athens) from 2000-2005 revealed stretches of what are interpreted as the Late Roman wall circuit and significantly altered Gregory's reconstruction.[82] The new plan (Plan 1) not only encloses a smaller area, but illustrates a significant shift eastward, leaving behind the old Roman civic and cultural center of the city to be used as a quarry

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excavations by Williams (2013, pp. 546-547) have dated it to the time of Justinian, but it is unclear how this stretch relates to any of the reconstructions of the Late Roman wall circuit (see below).

[79] Reported by Carpenter in *Corinth* III.2, p. 127, who reported no coins later than the 4th century; see also p. 129, where Bon states that Procopius' (*Aed*. 4.2.23) remark that an earthquake had toppled the walls of Corinth likely refers to the 4th century walls. The excavation was briefly noted in Wiseman 1972, p. 7. For a detailed summary of the 1930 excavation, see Gregory 1979, pp. 264-269.

[80] Gregory 1979.

[81] For reassessments of the datable material from the 1930 excavations of the tower, see Sanders 2004, p. 179; Slane and Sanders 2005, p. 293, n. 101.

[82] See Blackman 2002, pp. 19-20; Whitley 2003, p. 20; Sanders 2002, pp. 648-649, n. 8, 2004, p. 179; Slane and Sanders 2005, pp. 246, 293; Brown 2008, pp. 74-75.

and cemetery.[83] Based on the presence of burials in the forum, dated no earlier than the late 6th or 7th century, Sanders dates this wall to the time of Justinian.[84] Rescue work by the 25th Ephorate of Byzantine Antiquities discovered the remains of various monumental structures within this circuit, namely within the Kraneion district, attesting that urban life continued unbroken from the Late Roman period to the Frankish period.[85] Whether or not the Panayia Field was within the Late Roman walls is currently unclear, as the resistivity survey did not clearly illustrate the position of the western length of the wall. Although the investigators tentatively place it to the west of the Panayia Field (Plan 1), the presence of graves within the site might argue for its position outside of the wall circuit, as is the case for the forum area.

Until recent decades, archaeology in the northeastern Peloponnese was conducted with the belief that settlement was severely disrupted in the later 580s, when the invasion and settlement of the Slavs (or Avars) beginning in 584 caused Corinth's population to desert the mainland for the island of Aegina.[86] The dramatic decline of occupation witnessed throughout the Corinthia and Argolid has often been attributed by others to the Slavic invasions of the late 6th century,[87] but more recent scholarship is finding evidence

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[83] For the burials, see discussion in Sanders 2004, pp. 180-184. The forum graves were earlier discussed by Scranton who felt that the burials in the Peirene fountain were 7th or 8th century, and identifying the graves at the west end of the South Stoa and south end of the West Shops as beginning in the 7th century; *Corinth* XVI, pp. 29-31, with a description of grave types on pp. 126-128.
[84] Sanders 2004, p. 179; Slane and Sanders 2005, pp. 292-293.
[85] Athanasoulis et al. 2010, pp. 172-177. Already in the mid-20th century, Scranton was reluctant to declare any widespread abandonment of the site, and even allowed for the possibility that the population had shifted to an as yet un-explored location; *Corinth* XVI, p. 32.
[86] The bibliography concerning the Slavic invasions is vast and is well beyond the scope of this analysis. For works that deal with the issue from the perspective of Corinth, see: Finley 1932; Davidson and Hovarth 1937; Setton 1950, 1952; Charanis 1952, 1955; *Corinth* XVI, pp. 27-28; Hood 1970; Weinberg 1974; Kardulias, Gregory and Sawmiller 1995; Curta 2001, 2005, pp. 118-125; Sanders 2004. For a recent discussion of the primary text, the so-called *Chronicle of Monemvasia*, see Anagnostakis and Kaldellis 2014, pp. 106-115.
[87] For Isthmia and a general brief historical treatment, see Gregory 1993, pp. 149-151. For Nemea see Miller 1983, pp. 86-87, 1984, p. 187; Miller 1976, p. 202, 1979, p. 99, 1980, p. 200, 1988, p. 5; *Nemea* II,

that settlement continued at least into the 7th century.[88] The extent of the effects that the Slavic incursions had upon Greece continues to be a matter of debate, as the literary and archaeological sources sometimes present conflicting accounts, and allowances must be made for individual sites. For now, however, it is clear that Corinth survived at least into the 7th century.

In addition to the rescue excavations conducted by the 25th Ephorate of Byzantine Antiquities mentioned above, there are various other indications of 7th-century activity in other areas of Corinth. In addition to the material in the Panayia Field (see Chapter 2), other 7th-century deposits have been found in Corinth, including one from east of the theater,[89] a mid- to late 7th-century pit excavated in the west end of the forum,[90] and several deposits from the great bath on the Lechaion Road dated up to the early 7th century.[91] A luxurious house of the 6th century, built just north of the Peribolos of Apollo, continued to be renovated into the early 7th century as attested by coins of the emperor Phokas (602-610) found beneath the latest layer of floor tiles,[92] and coins of Constans II were discovered associated with the chapel in the Lerna Spring, behind the Asklepieion.[93]

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pp. 132-134. For Argos, see Aupert 1980a, 1980b. For the cave at Andritsa, see Kormazopoulou and Hatzilazarou 2010.

[88] For general discussion, see Slane and Sanders 2005, pp. 266, 294, n. 108, who also argue for a later re-dating of the assemblage from Argos published in Aupert 1980b; see also Armstrong 2009. The re-occupation of the Hellenistic tower at Pyrgouthi comes to an end in the first half of the 7th century; Hjohlman 2005, p. 253. The Late Roman re-occupation of Classical Halieis is dated at least as late as a coin of Phokas (605-606); Rudolph 1979, pp. 303-304. The latest numismatic evidence at the kiln site at Kounoupi is also a coin of Phokas (602-610); Jameson, Runnels and van Andel 1994, p. 444. The latest numismatic evidence on the island of Dokos dates to about the third quarter of the 7th century; Blackman 1997, p. 26.

[89] See Williams and Zervos 1983, pp. 29-32, nos. 76-86, figs. 14-16, pl. 11; re-study of this material in 1998 was reported in Slane and Sanders 2005, p. 273, n. 34.

[90] See Williams, MacIntosh and Fisher 1974, pp. 7-13, for the report of the 1973 excavations in that area, also including several burials datable to the late 6th and 7th century; the pit is discussed in Slane and Sanders 2005, p. 273.

[91] See *Corinth* XVII, pp. 94-105, Groups 15, 17-19, 21, 23-26, 29, and 32.

[92] *Corinth* XVI, pp. 17-21.

[93] *Corinth* XIV, p. 169; *Corinth* XVI, p. 27.

Historically-speaking, the metropolitan bishop of Corinth is recorded as having attended the Sixth Ecumenical Council in 680, while in 689 the Patriarch sent an embassy to Rome which included the bishop of Corinth.[94] The emperor Constans II is known to have visited the city in the year 662/663 while travelling from Athens to Italy and Sicily, or perhaps earlier when he may have been responsible for ridding Corinth of a Bulgar occupation in 657/658, although this latter event has been contested.[95] A base for a bronze statue was found in a manhole in the forum between the bema and the propylaea; the inscription was carved on a re-used cylindrical altar decorated with garlands and bucrania that was turned upside down. The abbreviated name of an emperor led early scholars to associate it with Constans II,[96] thus arguing that the forum area was still the setting for dedications in the late 7th century. More recent reassessment of the statue base and its letter forms, however, now associates the venerated person as being Constans I, the son of Constantine I, and dated to the 4th century.[97] In any case, the continuity of settlement within the city of Corinth through the 7th century seems to be clear, even though the urban space may have undergone radical transformations perhaps as early as the mid-6th century.

## A BRIEF REVIEW OF THE LATE ROMAN ECONOMY AND THE MECHANISMS OF DISTRIBUTION

### *Introduction*

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[94] *Corinth* XVI, p. 28.
[95] Kent 1950; Setton 1950, pp. 521-523; see also Charanis 1952, who deconstructs Setton's argument of Bulgar occupation in Corinth and the later reconquest; see Setton 1952, for a reply. In 1957, Scranton (*Corinth* XVI, pp. 27-28, 32-33) was hesitant to agree with any period of desertion or abandonment of the city, which would be necessary to fully ascribe to Setton's scenario of Bulgar occupation. For Constans II wintering in Athens during 662 to 663, see Frantz 1965, pp. 197-199; *Agora* XXIV, p. 117.
[96] See Kent 1950.
[97] Feissel and Philippidis-Braat 1985, p. 271, no. 3; see also Brown 2008, pp. 58, 111, n. 471.

The important role of private commercial exchange in the Roman economy has been increasingly stressed in recent decades, overturning the "primitivist" and "minimalist" views of M. I. Finley and A. H. M. Jones,[98] which allowed for only a modicum of private enterprise constrained within an economy dominated by central authority.[99] Within the Finley/Jones model, private merchants could not gain wealth anywhere near to what aristocratic landowners possessed,[100] while a major difference was marked between the status of the Roman *collegia* of merchants and the political power and wealth wielded by medieval merchant guilds.[101] Other arguments stressed that the Late Roman Empire was dominated by a phenomenon of "internal supply," in which wealthy landowners, the Church and the state increasingly satisfied their own needs through movement of their own supplies; Jones believed that the tendency of the upper classes to meet their own needs severely diminished the trade in foodstuffs and other raw materials.[102] Hopkins later accepted the basic structure of the Finley/Jones model but

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[98] Finley 1985, a revised edition of his 1973 work; Jones [1964] 1986, 1974. Their work was in reaction to what they regarded as the overly simplistic equations made between aspects of antiquity and the modern age as appeared in works such as Rostovtzeff 1957 (after originally appearing in 1926).

[99] Their views are summarized by others, including Greene [1986] 1992, pp. 14-16; Poblome 1996, pp. 89-90; Horden and Purcell 2000, pp. 146-150; Kingsley and Decker 2001, p. 3; Wickham 2005, pp. 700-701. The main points of their model can be enumerated as follows (after Poblome 1996, p. 89): 1.) an agriculturally-based economy, the products of which were mostly consumed locally; 2.) maintained by land-owning elites; 3.) towns as centers of tax administration, religion, and markets of only modest, local importance; 4.) elite status was dependent on taxes and rents, not trade or industry; 5.) uniform conditions over the empire minimized the need for more than just local trade, and transportation was in any case expensive; 6.) long-distance trade consisted only of luxury goods and support for the army, court, or very large urban populations; 7.) the empire's administration and defense depended on taxes, with farmers, traders, and artisans being low on the social scale; 8.) fortunate individuals invested in land, bringing advancement and wealth displayed in private consumption; 9.) wealth returned to the community in the form of private benefactions and not commercial investment.

[100] Jones [1964] 1986, pp. 865-866, 870-871.

[101] Finley 1985, p. 138. See also Jones [1964] 1986, pp. 865-866 for the miniscule political posts that "wealthy" Late Roman merchants could aspire to. For comment on Finley's guilds, see Horden and Purcell 2000, p. 359.

[102] Jones [1964] 1986, pp. 840-841; see also Whittaker 1983, pp. 171, 177-178. Whittaker later maintained that production and exchange did not diminish, nor did a "closed economy" form, as the movement of goods among these groups was still substantial and that long-distance exchange was not dependent on the presence of markets or market economy.

modified it so as to be less static, and showed that genuine economic growth did occur, especially during the Early Roman Empire, in the areas of production, consumption and trade.[103]

What was generally agreed among previous models was that the role of private commerce in what remained of the market was strangled-out during the Late Roman period. Jones felt that private commerce was impeded by the cost and slow pace of transport and the generally low purchasing power exhibited by the masses,[104] while Finley was adamant that manufacture for export on the free market had always been a negligible component of the ancient economy in general.[105] Even later, Whittaker stated that the growth of internal supply caused a "decommercialization" involving a concentration of control, exploitation, and wealth in the hands of the upper class and a diminishment of any already insignificant entrepreneurial activity.[106] Although merchant middlemen did exist in the Late Roman world, Whittaker viewed their roles as essentially agents whose activities were dictated by the requirements of who or what they were acting for.[107]

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[103] Hopkins 1980; 1983; 1995-1996; see also Greene [1986] 1992, pp. 14-16; Poblome 1996, pp. 89-90. See also Poblome 2004, p. 500, who believes that the ancient economy allowed for some growth in production, but rarely led to "flexible modes of collaboration between workshops or centres of manufacture, which tapped into wider markets." As a craft's economic impact increased, so too did the involvement of the elite landowners who held onto access to the raw materials, and probably owned the means of production as well, which need not be an impressive infrastructure.

[104] Jones [1964] 1986, p. 841. Jones [1964] 1986, pp. 840-841, also concedes that wealthy landowners sometimes relied on commercial shipping in order to distribute their products among their own estates or granaries; in this case, ship owners are only acting as delivery agents for the landowner's "internal supply."

[105] Finley 1985, pp. 135-140. See also Jones [1964] 1986, pp. 856-858 for his own appraisal of the small role that manufacture held in the Late Roman period.

[106] Whittaker 1983, pp. 176, 178.

[107] Whittaker 1983, pp. 173-174. He sums up the insignificant role of merchant middlemen in the Late Roman economy with three observations: the comparatively low wealth that they could amount to; the decline of cities in the later 4th century led to a decline in purchasing power; and, many of the seemingly private entrepreneurs were actually only agents for the upper classes.

The Finley/Jones model was formed through a very thorough treatment of the literary sources by trained historians; in the aftermath of their work the relevancy of incorporating archaeological evidence into the reconstruction of the Roman economy became increasingly clear.[108] Over the recent decades, the integration of archaeological data has made it clear that the economy was less prohibitive than once thought and there was room for more commercially-based distribution.[109] Many of these sources are included in the following section.[110] It is now generally felt that state-controlled systems and free markets existed simultaneously in complex interrelations and blurred lines of definition,[111] with much movement even dictated by opportunism.[112]

Many recent works have been aimed towards achieving a greater understanding of, and creating models of, connectivity. The work of Braudel has been foundational in this regard.[113] Although aimed at illustrating later periods in time, Braudel opened his work with a geohistorical study which examined the Mediterranean over the *longue durée*, exploring the history of "man in his relationship with the environment, a history in which all change is slow, a history of constant repetition, ever-recurring cycles," using the environment as a complex but enduring framework that determined the human action that could take place within it.[114] His work may have been too early for its time, as its full potential has begun to be realized and explored in very recent decades. Chief among them

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[108] See Wickham 2005, p. 700, who comments that the written sources tend to focus more on luxuries, and less on bulk goods; see also Horden and Purcell 2000, p. 147. See Greene [1986] 1992, pp. 14-16.
[109] Poblome 2004, p. 500, feels that agriculture was always the main economic activity, but it left a gap that could be filled with other activities that determined the characteristics of local, regional and larger economies.
[110] Some useful studies in which aspects of the economy were effectively addressed through the use of archaeological material include Pucci 1983; Hodges and Whitehouse [1983] 1989; Greene [1986] 1992; Fulford 1987; Panella 1993; Reynolds 1995. Wickham's (2005) more historically-based treatment made extensive use of archaeological data; see especially his chapter 11.
[111] Horden and Purcell 2000, p. 376; Opaiţ 2004b, p. 101; Wickham 2005, pp. 789-790.
[112] Horden and Purcell 2000, pp. 342-343.
[113] Braudel 1972, which first appeared in French in 1949.
[114] Braudel 1972, p. 20.

is the work by Horden and Purcell who attempt to build a history of, as opposed to in, the Mediterranean, exploring the connectivity among environmentally-defined "microregions."[115] Scheidel, building upon the field of network analysis,[116] has been able to advance Braudel's "cost contour maps" through geospatial modeling thanks almost entirely through the technology that is now available.[117] His cost simulations are intended to gain a more systematic understanding of connectivity in the Roman world, taking into account a number of variables (geography, speed and means of movement, time of year) in order to illustrate the cost constraints behind the movement of goods.

The following section is merely intended to illustrate the probable mechanics behind the movement of ceramics in the Late Roman world along long-distance, regional and local networks; it does not ascribe to any one theoretical model as each lends itself differently according to the scale of distribution that is being discussed. The older models, when the conclusions made from study of the literary sources are buttressed with archaeological data, can continue to prove themselves useful for the understanding of long-distance distribution, while the geohistorical approaches focusing on the concept of connectivity have proven to be more fruitful when attempting to tease out the complexities of the movement of goods on the regional or local scale, for which the written record is silent. Generally-speaking, this section will attempt to answer questions that include why ceramics may have moved, who moved them, and by what means they may have moved, thus setting a foundation for Chapters 3 and 4 in which the major wares

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[115] Horden and Purcell 2000; see especially their chapter 5. In some sense, their work represents a major advancement as they were able to incorporate more forms of data than Braudel was able to, including archaeological and scientific analyses.
[116] For a recent, general introduction see Knappett 2013.
[117] Scheidel 2014; his on-line program, "ORBIS: The Stanford Geospatial Network Model of the Roman World," can be accessed freely at: http://orbis.stanford.edu/. It should be noted, however, that ORBIS represents mainly the major sites and routes of the Roman Empire, with currently little resolution for smaller provincial areas such as the Northeast Peloponnese.

found in the Panayia Field are fully characterized, including attempts to reconstruct the details related to their movement.

*The State-Sponsored* Annona *System and Long-Distance Commercial Distribution*

The mechanics of long-distance distribution are best understood in relation to the state-sponsored *annona* system and the informal commercial exchange that developed alongside of it. The word *annona* came to designate the provisioning of large communities, whether a capital city (*annona civica*) or military units (*annona militaris*). In the Late Roman Empire it became generally the tax in kind that supplied for such needs (*res annonaria*); the *annona militaris* was integrated with the land tax to allow for a more direct supply to troops, with provincial garrisons drawing as much as possible from local resources. Most references to the *annona* refer to the supply of grain; by the early 5th century Africa, and possibly Sicily, supplied Rome while Constantinople's main source was Egypt.[118] After the Vandal conquest of Carthage in 439, Rome probably relied more on Sicily for its grain supply, while the reconquest of Africa after 533 brought the grain *annona* to Constantinople.[119] Grain from Thessaly is attested to have supplied Thessaloniki in the 670s,[120] and may have become an important source for the empire by the end of the period under study here. Excepting the capitals, the state did not

[118] Carrié 1999, pp. 301-302; Wickham 2005, p. 708. In addition to grain, Rome was supplied with pork from southern Italy, oil from Africa, and wine from Calabria and the Aegean; Constantinople is recognized to have been supplied with oil and wine from Cilicia/Syria and the Aegean. Fulford 1987, pp. 66-68, states that in the 1st century B.C. grain sources from Sicily, Sardinia and Africa supplemented the production of the Italian mainland. See also Wickham 2005, p. 713, who remarks that unlike the African grain source, reliance on Egyptian grain never led to any dominance of fine ware, but secondary exports possibly included papyrus, linen and textiles. For a detailed overview, see also Reynolds 1995, pp. 106-139.
[119] Wickham 2005, pp. 711-712.
[120] Wickham 2005, p. 788.

see that it was its responsibility to guarantee necessary staples to other cites, but appeals could be made in individual circumstances.[121]

In the Late Roman period, the collection of taxes for the *annona* was variable over the empire.[122] From the late 4th century and continuing over the course of the 5th century, payment in kind began to be commuted to gold for certain territories at certain times, until finally in 498, under the emperor Anastasius, the bulk of the land tax was converted to gold while the government still collected in kind whatever was necessary for feeding the cities and army.[123] Official land transport was conducted along the *cursus publicus*, the official routes of the imperial post, either by means of the express post (*cursus velox*) by horse, or the slow ox-wagon post (*cursus clabularis*), usually for the conveyance of military supplies or building materials meant for public works.[124] *Annona* supplies were more often carried by ship.[125] Up to at least the early 5th century sea transport was conducted by shipping guilds (*corpora navicularioruum*), organized by diocese, and controlled directly by the praetorian prefects, or through the intermediaries

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[121] Reynolds 1995, p. 123.

[122] For details on the collection of *annona* taxes, see Jones [1964] 1986, pp. 396-398, 458-459, 626-627, 671.

[123] The commutation to gold seems to have already occurred in Africa on the eve of the Vandal invasion, as well as in Italy under the reign of Majorian (457-461) and continuing under Ostrogothic rule. The situation was more mixed in the east; a law of 409 commuted all payments to gold in the three provinces of Palestine, and payments to all higher officials was commuted to gold in 423 with high ranking civic and military officers following in 439, although soldiers still drew their rations in kind. Generally in the east, the commutation of the land tax to gold was generally a rare and special privilege in 436. After the reforms of 498, the grain required to feed Constantinople and Alexandria continued to be collected in kind. See Jones [1964] 1986, pp. 459-461, 629-30; see also Whittaker 1983, p. 170.

[124] Jones [1964] 1986, pp. 830-831; the Antonine Itinerary and Peutinger Table give an idea of the cities and *mansiones* along these routes, with further details derived from pilgrim accounts. See also Sanders and Whitbread 1990; Kingsley and Decker 2001, p. 7.

[125] Jones [1964] 1986, p. 829. Up to the time of a law issued under Valens in the 4th-century, ships employed in the regular service of the *annona* had to be of a minimum tonnage of 10,000 *modii*; later laws indicate that ships with a tonnage as small as 2,000 *modii* (under 15 tons deadweight) could be chartered, regardless of the owner's rank, for the transportation of the *annona*, implying that the existence of these smaller ships was common in the later centuries or that the needs of adequate food supply had grown severe; see also p. 843, where Jones makes the point of comparison that troop transports for Belisarius' army to Africa ranged in volume from 18,000 to 30,000 *modii*.

of the *praefecti annonae* in the case of Africa and Alexandria. Membership in these guilds constituted a form of liturgy and was based on the ownership of certain land subject to the *navicularia functio*.[126] In addition to any income that their allotted land would generate, they were compensated for the cargoes they delivered with cash payment according to the amount of cargo as well as a certain percentage of the total shipment, but these rates were rather low. Compensation was mainly in the form of various privileges and exemptions, chief among them immunity from (other) curial duties and liturgies. Furthermore, the *navicularii* were allowed to carry their own cargoes alongside *annona* supplies and were granted significant tax and tariff exemptions at the ports.[127]

The church offered the framework for another official system of long-distance distribution. Based on the massive land donations that it had been acquiring since the time of Constantine, ecclesiastical authorities were able to produce enough to maintain themselves, donate to the poor, and acquire a large measure of financial success. It had its own means to move supplies, with the church of Alexandria even operating a large fleet of Nile boats and seagoing ships in order to export its own surpluses and acquire

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[126] The land could be passed to heirs or be alienated, but guild membership transferred to the new owners and required active participation, or at least the obligation to contribute monetarily, even if under ecclesiastical ownership. The state, in the interests of maintaining this system, even had the authority to reclaim for the guilds land whose owners failed to contribute, or could compulsorily enroll those who possessed the sufficient landed wealth when guild numbers thinned out; see Jones [1964] 1986, pp. 827-828. See also Garnsey 1983, p. 126 and 127-128 where he argues that the ship owners upon whom the state relied to deliver the *annona* were actually free agents serving specific contracts in the early empire; these ship owners did not become tied to this state-sponsored system of compulsory service until the late 3rd and early 4th century.

[127] Jones [1964] 1986, pp. 827-830; Whittaker 1983, pp. 165-167; Wickham 2005, pp. 710-711; Lewit 2011, p. 324. In the earlier centuries of the Empire, grants of citizenship also served as another form of compensation; see Garnsey 1983, pp. 123-124. The *navicularii* were the ship owners who financed the building, repair and operation of the ships but did not navigate the ships themselves. A constitution of 326 envisaged the status of *navicularii* as either decurions or plebeians of some status, but after 371 the praetorian prefect of the East was directed to enroll *curiales*, retired provincial officials and ex-governors, other *honorati*, and to allow senators to volunteer; Jones [1964] 1986, p. 829. The allowance for men of senatorial rank to participate marks a sharp break from earlier centuries when senators could not technically own ships and thereby claim exemption from onerous liturgies; see Garnsey 1983, p. 126, and pp. 125-127 for more on the status of the *navicularii* in the Early Roman Empire.

imported supplies. Clerics and monks, banned from open market activity as merchants (*negotiatores*) were allowed to engage in low-levels of commerce if the proceeds went to the church or to the poor. Commercial agents of the Church were also exempted from the commercial tax known as the *collatio lustralis* and received immunities on long-distance exchange.[128] Archaeological evidence also connects ecclesiastical complexes with redistributive activities such as that on Samos and at Ostrakine in the Sinai.[129]

Whether employed by the church or the state, the opportunity for private, commercial activity (mercantile opportunism) was built into the *annona* system, as the actual agents undertaking the physical transportation of goods were not only allowed to carry their own cargoes along with their official shipments, but also received various tax exemptions at ports. The system thereby generated opportunities for other goods to travel to long-distance markets, with the *navicularii* operating in both an official state capacity and as commercial merchants simultaneously. The established grain routes to the capitals were by no means direct and had various stops along the way, whether planned or unexpected, with the result that a specific enterprise could have economic impacts in numerous harbors en route.[130] Besides that, the *annona civica* had always been meant for

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[128] Whittaker 1983, pp. 167-169, 177; Church holdings by the time of Pope Gregory the Great in the late 6th century were substantial, and its granaries on the Tiber, supplied by their Sicilian estates, were evidently large enough to supply all of Rome in case of emergency. For the Church of Alexandria's fleet, see also Jones [1964] 1986, pp. 840-841. For the connection between clerics and commerce as evidenced by the epitaphs from Korykos, Cilicia, see Trombley 1987, p. 17; for the possible ecclesiastical position of the captain of the 7th-century ship that sank at Yassi Ada, see van Alfen 1996, p. 212. See also Kingsley and Decker 2001, pp. 9-11; Opaiţ 2004b, p. 101; Lewit 2011, p. 327.

[129] For Samos, see Steckner 1989; for the Sinai, see Arthur and Orem 1998, p. 210.

[130] Horden and Purcell 2000, p. 172, regarding their "channels of connectivity." Wickham 2005, pp. 709, 711, referred to the *annona* routes as the "tax spines" of the Roman Empire. Speaking more generally, McCormick (2001, pp. 67-68) refers to "corridors" in which several routes, including those over land and sea, exist side-by-side; see also Papaioannou 2011, p. 200.

only a portion of the population of only the two capitals, thus leaving a sizable share of urban markets to free trade.[131]

The opportunities for the private merchant in long-distance distribution increased after the reforms enacted under Anastasius in 498. The monetary reforms enacted under Constantine had all but disappeared; silver had passed out of use, bronze coinage was reduced to the miniscule *nummus*, and only the gold *solidus* remained upon which to base the economy. The value of the *nummus* to the *solidus* was incredibly unbalanced, with many thousands of the former equal to one of the latter. Anastasius introduced the bronze *follis* in three different denominations based on multiples of the *nummus*, followed by a doubling of the size of their weights in 512 in order to allow for a new five-*nummus* piece. Hence, a dynamic introduction of a new series of small change took place.[132] The *collatio lustralis*, the tax on the *negotiatores* that apparently hit the middle-class merchant hardest, was also abolished in 498. Finally, in that same year Anastasius also converted the bulk of the land tax from payments in kind to gold, retaining payment in kind only for what was necessary for the *annona civica* and *militaris*, and forbade compulsory state purchases (*coemptio*) except in emergencies and only with his authorization. These were only part of his efforts to regulate and streamline the workings of the empire.[133]

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[131] Carrié 1999, p. 301; Wickham 2005, pp. 710-711. Arnaud (2011, p. 73) allows for such stops within the system of direct trade that dominated the Early Roman period, but stresses that these stops were consciously planned in advance, making reference to the complications involved in loading and unloading heavy cargoes which could have disastrous consequences if conducted improperly; either space had to be left in advance, or goods to be sold were placed on top and in the middle of the hull.
[132] Grierson 1982, pp. 1-4, 59-60. Many numismatists consider the reign of Anastasius as marking the end of Roman coinage and the beginning of the "Byzantine" period; Grierson 1982, p. 3.
[133] Jones [1964] 1986, pp. 235-237. Anastasius also enacted military reforms, having endured invasions of Bulgars, Persians and a rebellion during his reign, ensuring efficiency and spending much on fortifying the borders; see pp. 231-232, 234-236. Jones further notes (p. 461) that the commutation of the land tax into gold was beneficial for the state in simplifying the collection and distribution of the revenues, as well as

All three of the major financial reforms undertaken by Anastasius, the introduction of small change, the abolishment of taxes on middle-class merchants, and the reduction of state-sponsored transportation, can be argued to have had the effect of encouraging commercial activity. Of particular importance was the commutation of the land tax to gold; although cutting unnecessary movements of goods by official means, archaeological evidence informs that long-distance commerce in the 6th century was thriving, thus implying that the transport of bulk goods must have been assumed by less-official means. Private merchants likely rushed to fill the lacuna where state-sponsored transport used to be.[134] Under Anastasius the state lessened its costly involvement in bulk transport and relied instead on the efforts of private merchants, knowing that their endeavors would inevitably supply the markets with goods that could be purchased directly with the gold collected from taxes. The resulting 'privatization' of long-distance trade that developed in place of a bureaucracy-laden state-sponsored system might even have been a more reliable source of (and a greater variety of) goods for Late Roman cities that knew how to entice merchants into their ports.

As a result of these changes, the employment of the official *navicularii* had vanished by the reign of Justinian; the state relied more on private transporters and requisitioned transports when needed, with evidence of eastern entrepreneurs taking up the reigns of exchange in the west.[135] Recent scholarship has argued for substantial

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reducing the wastage of perishable goods collected in excess and the unnecessary transport of bulk goods. It also built up a reserve of gold.

[134] Jones [1964] 1986, p. 840, only briefly mentions that without payment in kind the private merchant would then need to be sought out by the state or military for necessary goods, but he underplays the merchants' role by focusing his discussion on *coemptio*. Regular reliance by the state on the *coemptio* is simply an unreasonable assumption, especially in regards to the eastern empire.

[135] Carrié 1999, p. 301. For the last legal attestations of the *navicularii* in 523-526, and eastern merchants in the west, see Keay 1984, pp. 426-427. Arnaud (2011, p. 75, n. 141) views the Late Roman *nauclerus*, involved in the transportation of the *annona*, as both a shipowner and a merchant.

horizontal social mobility for merchants in the Late Roman Empire, where in place of models of government stranglehold, private entrepreneurs operated a complex economy that satisfied the demands for a wide-range of commodities.[136] Ship construction is also thought to reflect this situation, as ships of the 4th to mid-7th century, much smaller compared to their counterparts of the early empire, are characterized by a 'frame-first' method of construction that is thought to be more economical and suited to the status and means of independent ship owners.[137]

Thus, there can be no question that goods were moved long-distance through both official systems as well as through private merchants with commercial motivations.[138] The degree to which the two overlapped can only be speculated, but it is clear that official systems could have a profound, stimulating effect on market systems. When goods moved due to the requirements of the state, the official routes created an infrastructure that then appealed to private commerce. Ports might be created where no existing ports previously existed, harbor facilities may be renovated, and sea lanes may be properly policed. Distribution routes associated with the *annona* had general economic benefits and were used by private traders as confirmed by an increased number of shipwrecks that also reveal cargoes of non-*annona* goods.[139] The same applies to land routes; in Syria, maintenance of the supplies for the needs of an increased *annona*

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[136] Carrié 1999, p. 301; Kingsley 2001, pp. 45-46; Kingsley and Decker 2001, pp. 12-13; Ward-Perkins 2001, p. 173; Arnaud 2011, p. 76. Ward-Perkins (2001, pp. 172-173) maintains the possibility of state-led models in the West, usually starting from Africa and diffused from the *annona*, but only before 439.
[137] Kingsley and Decker 2001, p. 13, with references; Morrisson and Sodini 2002, p. 209; Arnaud 2011, p. 76.
[138] Opaiţ 2004b, p. 101; Wickham 2005, pp. 789-790; see also Horden and Purcell 2000, p. 376.
[139] Kingsley 2009, pp. 33-35; see also Lewit 2011, p. 324. Horden and Purcell 2000, p. 369, comment on the potential movement of other goods as promoted by specialized high commerce.

*militaris* along the *cursus publicus* stimulated major demographic and mercantile growth.[140]

Long-distance distribution was also not entirely dependent on the presence of the *annona* system, as private merchants must have been responsible for the instances of imported goods appearing in places unconnected to known *annona* routes, such as at rural sites or in areas no longer controlled by the Roman Empire, where there was knowledge of their demand or least some notion regarding their marketability.[141] African Red Slip (hereafter AfRS) fine wares continued to be exported (even if in smaller quantities) from Africa during the Vandal occupation, and the best penetration of Late Roman C ware (hereafter LRC) into the west also occurred between ca. 450-550, reaching even Britain, during a time when the institutional mechanics of the Western Empire were rapidly deteriorating before being lost entirely in 476.[142] Likewise, the range of J. Riley's LR Amphora series found in Carthage during the Vandal occupation cannot be attributed to state-controlled networks and must have been dependent on private entrepreneurs.[143]

But long-distance, or even interregional, commercial exchange could not long survive the demise of the infrastructures established by the central authority, which

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[140] Kingsley and Decker 2001, pp. 8-9. It bears to mention that when the *cursus clabularis*, the slower ox-cart post, was abolished throughout the diocese of the East under Leo I (457-474), wagons were hired from professional carters as needed; see Jones [1964] 1986, pp. 833-834. This, however, does not necessarily imply that the roads were open to anyone without warrants, but may be seen as a move towards the privatization of land-based exchange in that area.

[141] "Mercantile opportunism" deviated from the official patterns of directed trade even at the height of the empire, securing numerous and diverse outlets in a similar way to a market-oriented system; Horden and Purcell 2000, p. 374. See also Wickham 2005, p. 711.

[142] For the distribution of AfRS and LRC fine wares, see the relevant sections in Chapter 3.

[143] Riley 1981, pp. 115-122; Fulford 1987, p. 60; Decker 2001, p. 83; Kingsley and Decker 2001, p. 13; Morrisson and Sodini 2002, pp. 210-211; Lewit 2011, p. 329. Ideally, any exchange beyond the territories of the Late Roman Empire was strictly controlled, with heavier taxes in place and attempts at regulation by forcing such movement of goods through a few key ports or land stations. Various edicts ban certain items from export, including arms and armor, gold, iron and bronze, and even wine and oil; see Jones [1964] 1986, pp. 826-827. Obviously, these edicts were not always followed.

provided the security and framework for its co-existence alongside state-systems.[144] "High commerce" has been described elsewhere as the investment of the elite in primary production resulting in an intensification of pre-existing local or small-scale distributive systems; merchants were suppliers of the ruling power.[145] While commerce was not simply a consequence of official state systems, even developing complex interrelationships on its own, the presence of state systems is a necessary prerequisite of long-distance distribution.[146]

For example, while local producers of fine wares existed throughout the eastern and western empire and throughout early and later periods, opportunity only allowed few, such as AfRS or LRC, to become empire-wide exports.[147] In other words, the infrastructure for fine ware production was not invented for export - specific opportunity just happened to expand the output of pre-existing industries. The presence of a valuable resource could transform a regional ware into an internationally-distributed item, such as alum may have done for LRC (see Chapter 3) but any disruption to the production of the same resource could easily have upset the supply of the ceramic wares that travelled as secondary cargo. A case in point is the dearth of AfRS during the late 5th and early 6th century during which time the grain *annona* was disrupted by the Vandal occupation; during this time Corinth imported fine wares, such as LRC, from other sources, but had the African grain ships not been directed to Constantinople following the reconquest in

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[144] Opaiţ 2004b, p. 101; Wickham 2005, pp. 789-790, 791.
[145] Horden and Purcell 2000, pp. 366, 374. See also Whittaker 1983, pp. 171-178, for a slightly more oppressive view.
[146] Wickham 2005, pp. 718, 823.
[147] For discussion of the following, see Poblome 1996, p. 91, 2004, p. 501, and 2006; Lewit 2011, pp. 313-315. Roman Corinth, too, had its own fine ware industry, but production is not attested in the time period under analysis here. Its distribution was not particularly far-reaching (with the possible exception of its relief-ware bowls), but local products accounted for a substantial proportion of the fine wares on site from the mid-1st to third quarter of the 3rd century, only diminishing in the early 4th century; see Slane 2003, p. 330.

533, one is left to speculate whether or not AfRS would have returned at all. This poses the question, to what extent was a particular ceramic product actually 'in demand,' or was its distribution completely dependent on the presence of a convenient outlet for export or other favorable circumstances? In other words, while merchants certainly operated with a view to profit, opportunity may have played a greater role than strategy, and opportunity may have been greatly dictated by the official systems that were in place.

*Local and Regional Distribution: Transportation by Land*

The existence of local and regional networks implies a certain degree of land-based transportation. Many previous discussions of the use of land transportation have focused on discrediting its use as a cost-effective form of long-distance conveyance in favor of maritime transport. Scholars like M. Finley severely criticized the role of land transportation in the ancient economy, noting that moving large bulk shipments was vastly cheaper by ship than by the slower wagon that also required beasts of burden to be fed. While the state or the army could afford the costs involved in employing ox-teams, Finley strongly asserts that individuals could not move bulky merchandise, such as cereals, pottery, metals, and timber, long distances by land on a regular basis.[148] In applying the values set in Diocletian's price edict, Jones illustrates that it was actually

[148] Finley 1985, p. 126. Peacock 1982, pp. 38, 158-159, follows others in acknowledging water transport as the cheapest mode, but recognizes that other costs, such as repeated loading and off-loading at various transfer points, may have offset the savings. Jones [1964] 1986, p. 842, also admitted that the risks of shipwreck, jettison, spoilage by sea water, or even storms or contrary winds could negate the typical benefits of maritime transport. Scheidel 2014, pp. 9-10, reasserts the massive difference in price between land and maritime transport over long distances.

cheaper to ship grain all the way across the Mediterranean, from Syria to Lusitania, than to cart the same load only 75 miles.[149]

The practicality of land transport in long-distance distribution is not being argued here; rather, the intention is to illustrate the high value of land transport in its use in shorter distances.[150] Using the same figures that Jones does, one notes that carting grain over only 20-30 miles still results in a substantial profit margin. For the merchant who was dealing strictly within his own region, or perhaps even with neighboring ones, the costs of land transportation held a far lesser degree of worry. Recent scholars have remarked on the misplaced conception of roads, remarking instead on their high importance to the flow of people and goods between different regions as well as the psychological importance of proclaiming and encouraging interaction between "microregions."[151] The application of graph theory and network analysis further show that both land and sea routes played a primary role in the determination of "central places" in the Peloponnese, among which Corinth was determined to be "the most connective point within the whole area."[152] It is hoped that geospatial modeling will, in the future, be able to comment further on Corinth's situation.[153]

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[149] Jones [1964] 1986, pp. 841-842; see also Wickham 2005, p. 709, who agrees that interregional exchange by land was prohibitively more expensive and "was almost always far less important." Horden and Purcell 2000, p. 377, comment that there were different reasons for transport by land, and while the expense of the oxen was constant, the "social overheads" could vary.

[150] Frayn 1993, pp. 76-78, has already recognized the varied systems of land transport required to supply local markets in Italy in the earlier centuries. Poblome 1996, p. 94, writing in regards to the mountainous area of Sagalassos, points out that some areas would not have choice; the coastal city of Perge, for example, could only receive Sagalassos Red Slip Ware through land transport. Various factors could affect the cost: personnel, animals, packing material, vehicles, road infrastructure, border dues, market taxes, and accidental losses. See also Decker 2009, pp. 248-257, for a re-assessment of land transportation in the East and an argument for its profitability.

[151] Horden and Purcell 2000, pp. 126-132, 150, 151; see also Morrisson and Sodini 2002, p. 207.

[152] Sanders and Whitbread 1990; see especially pp. 348-349. For the application of central place theory to the Corinthia, see also Engels 1990, especially pp. 173-178.

[153] See Scheidel 2014 for details. "ORBIS: The Stanford Geospatial Network Model of the Roman World" (http://orbis.stanford.edu/, accessed January 27, 2015) at present does not include enough sites within

In order to conceptualize the underrated potential of land-based distribution networks within the Northeast Peloponnese, one may briefly consider interregional exchange in Pre-Columbian Mesoamerica. The contexts and overall conditions between the two areas are admittedly vastly different;[154] unlike the northeast Peloponnese, Pre-Columbian Mesoamerica was evidently lacking both in a reliable road network and beasts of burden on which to carry products and resources.[155] Despite these comparative deficiencies, historical, ethnological, and archaeological data reveal a vibrant, profit-driven, interregional economy that was able to develop strictly through the use of human porters. These porters are documented to have carried a variety of goods traversing the coastal lowlands and the highlands with loads of at least 23 kg, with 16th-century reports documenting loads of twice that carried in the steeper highlands. Modern ethnographic evidence reported loads of 40 to 70 kg with maximum loads reaching 85 to 90 kg.[156] These land-based merchants often operated in trade circuits commonly covering 50 to 150 km, with distances of 200 km or more known for certain goods or circumstances; shorter-distance movements of only 20 to 30 km, however, were enough to establish a

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inland southern Greece to create a truly accurate picture. Interestingly, however, areas within Corinth's immediate level of connectivity (travel within seven days, as calculated on foot or oxcart for land, or civilian-level maritime transport) include the eastern Adriatic coast as far north as Corcyra, southern and central Greece (essentially Achaea), Crete and the Aegean islands as far north as the Sporades and Chios, and the western coast of Asia Minor south of Lesbos.

[154] Hirth's (2013) main concern is the place of household-level economies within an established market-place; the ceramics analyzed from the Panayia Field, such as those in Northeast Peloponnesian cooking fabric, are undoubtedly products of specialized workshop production, given the consistency of shape and fabric, with very little evidence here for any products of household production. In terms of Roman pottery, production and industry on the household level have been viewed as the least complex mode of production possible; Peacock 1982, p. 8.

[155] Hirth 2013, p. 85. For the Northeast Peloponnese, see Wiseman 1978, and Alcock [1993] 1996, pp. 121-124, both of whom make note of the reliable road networks in Greece, and more specifically in the Corinthia. For beasts of burden in the Greco-Roman world, see Horden and Purcell 2000, p. 131; Landels 2000, pp. 171-173. Libanius (*Or*. L.4) records instances of "professional carriers" who owned their own beasts of burden on which agricultural produce was carried into the cities; he protests that these men were also pressed into carrying out builders' rubbish on their outbound journey; see also Jones [1964] 1986, p. 856.

[156] Hirth 2013, p. 92.

foundation of linked interregional exchange networks.[157] Put into perspective, the modern route from Ancient Corinth to Athens (measured to the Acropolis) covers a distance of 89.7 km, to Nemea is 24.6 km, to Argos is 51.7 km, and to Sparta is 130 km. A land-based network for the distribution of ceramics in the northeast Peloponnese, which would have had access to roads and beasts of burden, or even carts, is thereby easily imagined.[158]

Other examples from the Mediterranean world help to illustrate the potential for short-range land transport. Evidence for the importance of land-based supply can be found in the works of Thucydides (VII.28.1) who remarks that Oropos, on the northern coast of Attica, operated as a minor anchorage for Athens in the 5th century B. C.; although situated roughly 50 km away from the city over hilly terrain, the establishment of the fort at Decelea by the Spartans during the Peloponnesian War succeeded in disrupting a major route for the transshipment of goods to the Athenians.[159] In the 2nd century A. D. the Roman province of Achaia was the beneficiary of a major new road network, which might have been in connection with improvements made on the Via Egnatia. A large program meant to connect the Early Roman colonies of Corinth, Patras and Nikopolis was also fully completed, including milestones, during the reign of Trajan. Following Hadrian's improvements on the Skironian Road (linking Athens to the Peloponnese), 2nd-century Corinth served as a major hub for land transportation with

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[157] Hirth 2013, pp. 97-98. Compare this to what some textbooks on the technology of the classical world relate regarding human porters at the docks of Ostia, namely that the maximum practical load would be 23-27 kg for a distance of only 275-365 m.; see Landels 2000, p. 171. See also Frayn 1993, p. 79, who differentiates the well- organized *saccarii*, the dock workers, from the *geruli*, the workforce of human porters at the Early Roman markets in Italy who are identified as only unloading wagons and mule trains, and shifting products among the stalls.

[158] Although of admittedly little scientific value, it is worth noting anecdotally a fictional episode provided by Apuleius (*Met*. 9.5-7) in which a seller of a used *dolium* (pithos) is willing to carry it to the buyer's house himself.

[159] See also Horden and Purcell 2000, p. 128.

connections to the northeast to Attica and Boiotia, west to Patras and Elis, south to Argos, Mantineia and Sparta, and southeast to Epidauros and Troizen.[160] In light of a recent re-evaluation, the *diolkos* would have been crucial to this land network; traditionally thought of as a portage road for the transshipment of ships and cargoes between Corinth's two ports, it was recently argued to have served more as a general-purpose road linking Corinth's two separate harbors, providing a means for moving building materials or various products to market, or carriage access to Isthmia, with tolls being collected on the land traffic that moved through the isthmus.[161] The *diolkos*, integrated as it was into Corinth's land-based and maritime networks, would certainly have been maintained throughout the Roman period.[162]

While the actual mileage of land-based distribution might not be that impressive when compared to sea-borne distribution, it would be erroneous to assume that imported goods did not move much farther than the ports. It seems sensible to assume that complex systems of land-based distribution, the backbone of local and regional levels of exchange, were constantly in place and facilitating the flow of necessary foodstuffs or utilitarian goods to inland communities or markets. In addition to whatever variety of local and regional products were already traveling within these systems, imported goods could occasionally be injected from the ports to reach rural consumers.[163]

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[160] Alcock [1993] 1996, p. 121; see also Sanders and Whitbread 1990, p. 348, for Corinth's level of connectivity. For evidence from 6th-century epitaphs for the possible presence of an official, named Theodoros, connected to the functioning of the *cursus publicus* in the area of Corinth, see Walbank and Walbank 2006, p. 283.
[161] Pettegrew 2011, 2014.
[162] Pettegrew 2011, p. 559, believes that that the road, at least in some form, was likely in use until the 7th century.
[163] The availability of long-distance products within regional and local networks is discussed within the context of the movement of regional and local wares in Chapter 4.

*Local and Regional Distribution: Markets and Fairs*

It is unlikely that either producers and/or merchants had to constantly travel directly to the consumer to distribute their wares, or that the customer had to always seek out a single center where these ceramics were sold.[164] One alternative form of distribution is the possibility of the rural market or fair.[165] In studies of such events in Italy in earlier centuries, distinction is made between the periodic rural fairs and the regularly scheduled markets; for the most part both were referred to as *nundinae*, but the former have also been referred to as a *conventus* or *mercatus* which often coincided with a specific holiday, or *feriae*. Some fairs were associated with sacred sites, whether pagan or later Christian, and stalls selling varying merchandise were regularly gathered within such sacred precincts.[166] Isthmia and Nemea could easily have hosted such events while their respective sanctuaries were still active.

Jones believed that craftsmen in large villages (e.g. potters, carpenters, smiths, weavers, and fullers), as well as dealers in foodstuffs (e.g. bakers, butchers, beekeepers, vegetable sellers), could exchange their products at rural fairs where travelling merchants could also sell imported goods and buy the local specialties to sell elsewhere.[167] Literary evidence exists that documents the existence of such fairs in the Late Roman world;

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[164] Although instances of high-quality craftwork in late Republican and early imperial Italy are felt to have been sold directly from the workshop or an associated shop, or were even home-delivered in the case of upper-class patrons; Frayn 1993, p. 159.

[165] For the distribution of pottery in the region of Sagalassos, see Poblome 1996, pp. 92-95, esp. p. 92; "In our opinion, the most important kind of trade in antiquity was of the regional sort, in which several towns and villages belonged to a rotating system of markets, and market days were scheduled on different days in different towns. Festivals and other official occasions on which fairs were organized were also of great importance. Local or regional production of goods thus fulfilled the needs of most people. We do not wish to deny the existence and importance of long-distance trade over land or by sea … but this kind of trade played a very specific role in the economic life of the period."

[166] Frayn 1993, p. 133; see also pp. 134-142 for numerous literary references to fairs in Italy, with Greek authors using the term *πανήγυρις*. For rural markets in Africa, see Shaw 1981.

[167] Jones [1964] 1986, p. 855; Frayn 1993, pp. 159-160, also identifies the *circitores* who were known to vend specialty products in villages and hamlets. For the idea of peddlers bringing imported fine wares to rural markets, see Abadie-Reynal 1989, p. 157; see also Morrisson and Sodini 2002, p. 210.

Libanius' (*Or.* 11.230) panegyric on Antioch notes numerous surrounding large villages with their own craftsmen who exchange their products with one another through fairs, Theodoret (*Hist. Rel*. 7) describes another fair near Antioch, and Cassiodorus (*Var*. 8.33) describes a fair on St. Cyprian's day in Lucania, describing in detail the variety of goods for sale there that were brought in from various regions of Italy.[168] Some shippers and merchants also plied wholesale trades, buying goods from their areas of production and selling them to importers. Goods could also be purchased at large merchants' fairs, such as the annual fair in Aegae in Cilicia that lasted 40 days and was free of toll; even after the Vandal invasions western merchants are still attested there, buying goods imported from as far as Persia or local products of the region.[169] Although specific references for the Corinthia and Argolid are lacking, there is no reason to deny the possibility that some markets and fairs of a regional scale may have occurred and aided in the distribution of at least some ceramic wares.[170] Temporary markets could also be effected directly by water-borne merchants, as literary and artistic evidence from Africa attests to small ships pulling up onto the beach and selling their wares to the crowd congregated there.[171]

*Local and Regional Distribution: Transportation by Water*

Less is known regarding the routes and facilities related to local or regional water transport in the area of Corinth, although evidence from other areas of the Mediterranean may prove insightful. Special craft were often employed in riverine transport, such as in

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[168] See also Jones [1964] 1986, pp. 847, 855-856, for discussion of Libanius, Theodoret, and Cassiodorus; see Frayn 1993, pp. 142-143, for discussion of Cassiodorus.
[169] Jones [1964] 1986, p. 867.
[170] Pettegrew 2014, p. 138, also accepts the likelihood of "high-frequency periodic markets for the sale of basic provisions."
[171] See McCormick 2001, pp. 84-85, fig. 4.1, for a mosaic scene from Sousse, Tunisia, depicting this very type of exchange. The implications of this mosaic are further discussed by Wilson (2011, pp. 49, 53).

the case of the various guilds of barge- and boatmen known from imperial Rome.[172] Evidence for the use of coastal vessels may come from southeastern Sicily where the recently reconsidered Pantano Longarini shipwreck of the early 7th century was reinterpreted as a specialized coastal barge. Its heavy construction was meant to bear loads of local industrial or agricultural products, or even livestock. The size is recognized as being large for the period, and would have represented a major investment on the part of the single or communal ship owners thus implying a thriving coastal commerce at the time.[173] Other methods of small-scale water transport include the use of small sailing vessels such as caïques which proliferated in great number in the island ports of early modern Greece and may be representative of a similar transportation technology that was available in classical antiquity.[174] Local, small vessels engaged in activities from tramping,[175] human transport or even piracy, although affected by seasonal conditions and individually operating on a small-scale, in the aggregate were likely responsible for more of the movement of people and goods than large-scale maritime traffic.[176]

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[172] Jones [1964] 1986, p. 829.
[173] Kampbell 2007, see especially pp. 103-109.
[174] Casson 1938, p. 466.
[175] Tramping (or cabotage) is a process in which a small cargo ship moves from port to port, constantly buying and selling according to local market opportunities to the point that the cargo becomes completely altered from that which was first loaded; see Braudel 1972, pp. 104, 123; Horden and Purcell 2000, p. 140. Wilson (2011, pp. 53-54) severely downplays the role of tramping in earlier Greek and Early Roman periods in favor of direct trade between emporia, or emporia and small ports. Arnaud (2011) goes further, arguing that up through the Early Roman Period direct trade dominated the maritime transport of goods, with routes and specific destinations clearly determined and closely controlled; although some intermediary deviation was allowed for, the cargoes and start- and end-points were known in advance. Only in the Late Roman Period did political fragmentation allow for more speculative enterprises, such as port-to-port tramping, characterized by smaller ships bearing lower volumes of higher value goods. Arnaud (2011, p. 62) additionally clarifies the terminology that has been misused in previous scholarship, and differentiates "grand cabotage" (international commerce following the coast) and "cabotage" (commerce along only national coasts) from "tramping" (*commerce forain*) (the sailing from port to port in search of markets for parts of the cargo). Tramping (pp. 71-73) was most effectively conducted when the market is less certain, such as in winter when ships are generally fewer and local shortages will vary from market to market.
[176] Horden and Purcell 2000, pp. 140-142; Braudel 1972, pp. 105, 296.

Despite the low variety of western wares recovered from the Panayia Field after the 5th century (almost completely consisting of AfRS), the Gulf of Corinth was nevertheless a conduit for the distribution of goods as well as a heavily-trafficked communication route.[177] A wealth of literary testimony from the 9th century reveals that passage through the gulf remained a popular route, especially for travellers and lines of communication.[178] For example, details from the life of Hosios Loukas the Steiriot give some indication of the level of small-scale movement that was possible throughout the Corinthian Gulf. In ca. 829 pirate raids forced Loukas' grandparents to flee from Aegina to the Gulf of Corinth, with further raids forcing movement to Phocis and the region of Chryson. First settling in Bathys, a cove just north of Itea (the port servicing Amphissa and Delphi) where Loukas' father was born, the family then moves to Kastorion/Kastri (the site of Delphi), where Loukas is born. Later, Loukas briefly stays in Athens where he takes the monastic habit before returning home to Kastri, and then seeks solitude on Mt. Ioannitza, east of Itea. An invasion in 917/8 forces Loukas to seek refuge on an unspecified island in the Gulf of Corinth before attending school in Corinth. He would spend the next ten years in the service of a stylite in Patras before returning in ca. 927 to Mt. Ioannitza for several years. He then sought isolation in the port of Kalamion, east of ancient Anticyra, near the hamlet of Aspra Spitia (in the next major bay to the east of Itea). Three years later he and other peasants took refuge on the barren island of

[177] The ecclesiastical authorities in Corinth were undoubtedly in constant communication with their superiors in Rome (see above for the ecclesiastical division of the empire) through this route, and Corinth was very likely one of the major staging grounds from which Justinian could maintain his long war in Italy. For the route of Constans II which took him through the gulf in 663, see Setton 1950, p. 523.
[178] For a review of the literary sources, see McCormick 2001, pp. 531-537; for the lack of bulk goods along this route, see pp. 536-537, although a variety of light-weight luxury goods are noted. See also Horden and Purcell 2000, p. 162, for the route from Corinth to Calabria in the early 9th century.

Ampelona in the same bay, and in another three years, in 946, he returns to the mainland to an isolated spot near Steiris where his church now stands.[179]

Although Loukas' movements are not concerned with commerce, the means by which he and his family travelled were likely of similar means by which goods were distributed regionally in the area in the Late Roman period. Loukas' movements, like those of Late Roman commercial distributors, were likely conducted on land by foot or beast of burden, or by water with small craft such as a caïque that could have put into the small harbors of the coastal settlements or islands of the Corinthian Gulf. Nevertheless, if the various movements that constitute Loukas' life story even remotely indicate the potential for regional land and maritime movement in central Greece during an era of repeated invasions, one can imagine that the level of traffic during times of stability and economic prosperity was much greater.

*A Model for Local and Regional Production and Distribution: Sagalassos*

In his investigations surrounding the local production and regional distribution of red slipped wares at Sagalassos, in the region of Pisidia in Asia Minor, J. Poblome has isolated various features that may be broadly applicable to other examples of local and/or regional ceramic production and distribution.[180] The manufacture of amphoras and other coarse and cooking wares in the same vicinity enriches the tradition of ceramic manufacture in the area, while the generally low number of imports into this mountainous

[179] Miles 1964, pp. 3-4; Oikonomides 1992, pp. 252-254. The accounts depict the area as a crossroads of traffic, making mention of the ease by which people in Boiotia and Phokis could move southward and westward in the early 10th century, with travelers going to or from Rome and Athens on the route to Jerusalem, and even monasteries in the area maintaining contacts with ship owners; see Oikonomides 1992, p. 252.
[180] The typological presentation of Sagalassos Red Slipped Ware appeared in Poblome 1999.

zone ensures that the focus of investigation remains on the local and regional scale. The following is a brief summary of Poblome's research into Sagalassos' local ceramic production that may serve as a point of departure for considering Corinth's own local and regional production in later chapters.

At the initial stages of pottery production only a low, initial capital investment is needed to get started as one or two skilled workmen can produce much and demand might be limited. Resources are simple and easily found in nature, while the infrastructure of the workshop is felt to be neither complicated nor expensive.[181] When industries such as that producing Sagalassos Red Slip Ware were intensified for mass-production, units of small-scale production were multiplied rather than expanding an already existing facility; it was evidently not cheaper or more efficient to group craftsmen under one roof.[182] It would have been necessary that potters have access to a considerable resource of clay, wood and water; availability and quality of such resources may restrict the number of sites able to engage in such level of production.[183] Poblome also stresses that these workshops also needed to be situated in relation to an urban center, as it would not only offer a concentration of raw materials, workspace, labor and markets, but it is the relationship between a busy town and a prosperous, productive countryside that makes any craft production sustainable, especially if it is to reach markets beyond its local orbit.[184] Poblome considers that the potters involved were likely specialized professionals who were organized into guilds, or professional associations of some

[181] Poblome 1996, p. 85, however, the accessibility of resources can still determine the location of the workshop.
[182] McCormick 2001, p. 58; Poblome 2004, p. 500, and 2006.
[183] Poblome 1996, p. 86, 2004, p. 498. Sagalassos potters were willing to go 8 km outside of the city in order to obtain naturally more refined clay rather than use that which was available in their own quarter.
[184] Poblome 1996, pp. 85-86, 2004, p. 501, and 2006.

kind;[185] guilds are attested in some papyrological sources and were a "structural feature in craft production" even in small towns and villages, and a means by which potters could maintain a level of social visibility.[186] Following Peacock's model for modes of production,[187] production centers of red slip ware are considered to have consisted of nucleated workshops.[188] Such a model of manufacture requires that transportation and trade were not the concerns of the potters themselves, and a strong relationship with traders and middlemen of the *collegium* to sell in shops, markets or fairs is postulated otherwise the potters could not respond to customer demand. A second model sees the potters selling to independent traders or *negotiatores* who would then trade these wares to shops, markets, and fairs; but these men would acquire a broad range of products to lessen risk, resulting in a less personal relationship between the trader and the potters, and the items would be priced higher in order to support both the potters and traders.[189]

Poblome, however, has identified many unknowns at the stage of mass-production, a stage which suggests a considerable input of capital in both personnel and

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[185] Urban craftsman and shopkeepers were universally organized into guilds (*collegia*), and were often found useful in organizing compulsory service of various kinds. In an attempt to revive the declining numbers of craftsmen in highly skilled trades, Constantine made several exempt from various personal burdens that other craftsmen were still subject; this rule lasted into the 6th century. The list of trades includes some professionals and a long list of skilled crafts, and includes potters. Various edicts from 395 onwards show that the *collegiati* were finding ways to leave the guilds, whether by enrolling in the *officia*, the army, taking up agriculture in the country, or taking up orders in the church, and that the government had to recall them to the guilds. In the West the decay of urban guilds was so severe that they tried to make craftsmen and shopkeepers hereditary; this did not happen in the East where membership remained free; see Jones [1964] 1986, pp. 858, 861-862.

[186] Poblome 1996, p. 92; 2004, pp. 495, 499; see also 2006. Some evidence for potters' guilds are known from papyrological sources, especially for the 4th century; see, for example, Cockle 1981, p. 91; Gallimore 2010, pp. 159, 161.

[187] Peacock 1982, pp. 8-11.

[188] These were thoroughly organized, ceramic production was the only source of income, many workshops shared resources, year-long (or nearly) production was practiced, the highest technology possible was strived for, production was standardized, the workmen were specialized, quality control was conducted in relation to the tastes of the consumers, "for such products are commercialized as far as the distribution network extends and as much as any possible competition will allow." See Poblome 1996, p. 85; see also 2006.

[189] See Poblome 1996, pp. 92-95, esp. p. 95; see also Poblome 2004, pp. 495-498.

resources. Who owned estates where the clay was dug or trees were cut? How is one to explain the communal investment for infrastructure, such as an aqueduct meant to bring water for potters? Who owned the workshop, infrastructure, or kilns? To what extent were the local, provincial, land-owing elites mobilized?[190]

Central to his model of pottery production is the high level of involvement and control that was exercised by local elites. Although the ancient economy allowed for some growth in production, it rarely led to large-scale collaborative efforts to tap into wider markets. As a craft's economic impact increased, so too did the involvement of the elites who held onto the access to the raw materials as landowners, and who probably owned the means of production as well if they invested in the construction of the production infrastructure. Overall, government interest in craft industries was minimal, as long as needs were being met, and thus large-scale production was more dependent on local elites who sought to make the most of their capital and property. Contracts for *locatio-conductio* are known from Egyptian papyri involving high-status landlords and their independent, free tenants; the landlord puts a possession into the hands of a tenant for a short duration (5 years or less) in return for a specific good or service at a fixed price. The landlord could determine the pottery to be produced and the quantity. Any profits made from the sale of the pottery likely flowed back to the elites who owned the means of production and controlled distribution, minus any cost in contracting out the marketing to *negotiatores* or *institores*.[191]

Of interest is Poblome's idea of a "model of negotiation" that becomes apparent when one considers the similar typology of the common types of widely-distributed

[190] Poblome 1996, pp. 86-88.
[191] Poblome 1996, pp. 78-79, 96; 2004, pp. 499-500; 2006.

Roman table wares as well as amphoras and common wares to a lesser extent. Again, he sees the role of the elite landowners who had a substantial amount of control in the shapes of the vessels, but had to take into account the level of craftsmanship and technological constraints. The elites and the potters had to consider the desire of the customers, who represented the "main-stream," even though the typologies were linked to the socio-cultural contexts of the local elites who also took fashion and design into account. Poblome thus sees a ceramic typology as the result of a model of negotiation between fashion and mainstream, which was mediated by technology.[192]

When locally-produced amphoras first appeared at Sagalassos in the 4th century, it was the landowners who are considered to have taken into account the region-specific content, the logistics of making a container like this to store and transport the contents, and the ability of third parties to recognize or associate the shape with the contents and/or region of origin. Once again, it is felt that the landholders would have been in close communication with the potters they employed, within the framework of the *locatio-conductio* contracts in order to develop the morphology. Despite a general similarity among the fabrics employed in these amphoras, their compositional variety, as well as the recognition of four different shape types, investigators were led to consider it more a "group" than a single "fabric," and presume that they were a product of the wider region with a multitude of workshops in the hinterland focused on the production of amphoras used to pack agricultural goods, with the supplemental production of other common wares such as cooking vessels and jugs in the same fabric group.[193]

[192] Poblome 2006.
[193] Poblome et al. 2008; see also Poblome 2006.

Although Sagalassos is far removed from Corinth geographically and in its level of connectivity to the greater Roman Empire, its isolation has resulted in a research agenda that has prioritized understanding its local ceramic production. It is clear that numerous questions remain unanswered and that continued research is required, but Poblome's reconstructions serve as a starting-point for the understanding of Corinth's own rich local and regional wares. Some of the features that Poblome has identified, namely the proximity to resources, urban centers, and markets/commercial networks, a nucleated workshop model of production, the involvement of elite landowners, and a knowledge of outside forms (fashions) when devising a local morphology, can be tested against the regional and local wares characterized among the finds from the Panayia Field.

## CONCLUSION

This chapter has set forth the necessary background from which an analysis of the Late Roman wares recovered from the Panayia Field may proceed, including a contemporary administrative, historical and physical treatment of the city of Corinth, a brief introduction to the various economic and geohistoric works that can usefully be employed in order to understand the movement of goods in the Late Roman world on various scales, a review of the various mechanisms and means by which those goods moved, and the presentation of a case study from Sagalassos that may aid in understanding the production and distribution of the lesser-known local and regional wares found in Corinth. Before these wares can be discussed, however, the following

chapter continues to provide further background by examining in detail the archaeological contexts from the Panayia Field from where these wares were recovered.

# CHAPTER II:
# ARCHAEOLOGICAL CONTEXTS OF THE POTTERY LOTS FROM THE LATE ROMAN PANAYIA FIELD

## THE PANAYIA FIELD: THE POTTERY LOTS OF THE LATE 4TH TO 7TH CENTURY IN CONTEXT

*Introduction*

The sequence of Late Roman features in the Panayia Field and their related lots of ceramic material form a complicated narrative. In the following, the lots are discussed in roughly chronological order, framed in a broadly-structured, episodic series of events. These generally-defined episodes are unequal, both in chronological extent and in the amount of material associated with each. It should also be stressed that the majority of the lots here were redeposited, being divorced from their context of primary use and with the actual date of deposition occasionally being somewhat ambiguous. Finally, several lots are noted as having been recovered from the area of the western extension of the Panayia Field; this area is not detailed in the official ASCSA plans of the site that follow, but is demarcated on Plan 2.

*Ceramic Lots and Graves, with Key to Their Location as Illustrated in Plans 5 to 10:*

Lots marked with an asterisk (*) could not be located.

| | | | | | |
|---|---|---|---|---|---|
| 1 | 1995-061 | 35 | 1998-023 | 68 | 2001-038 |
| 2 | 1995-062 | 36 | 1998-024 | 69 | 2001-039 |
| 3 | 1995-063 | 37 | 1998-029 | 70 | 2002-004 |
| 4 | 1995-064 | 38 | 1999-007 | 71 | 2002-006 |
| 5 | 1995-065 | 39 | 1999-008 | 72 | 2002-007 |
| 6 | 1995-066 | 40 | 1999-023 | 73 | 2002-008 |
| 7 | 1995-067 | 41 | 1999-026 | 74 | 2002-009 |
| 8 | 1995-068 | 42 | 1999-030 | 75 | 2002-010 |
| 9 | 1995-069 | 43 | 1999-031 | 76 | 2002-011 |
| 10 | 1995-070 | 44 | 1999-033 | 77 | 2002-018 |

| | | | | | |
|---|---|---|---|---|---|
| 11 | 1996-039 | 45 | 1999-038 | 78 | 2002-023 |
| 12 | 1996-040 | 46 | 1999-055 | 79 | 2002-028 |
| 13 | 1996-041 | 47 | 2000-003 | 80 | 2002-030 |
| 14 | 1996-043 | 48 | 2000-006 | 81 | 2003-021 |
| 15 | 1996-044 | 49 | 2000-007 | 82 | 2004-002 |
| 16 | 1996-045 | 50 | 2000-008 | 83 | 2004-006 |
| 17 | 1996-070 | 51 | 2000-010 | 84 | 2004-007 |
| 18 | 1996-071* | 52 | 2000-011 | 85 | 2004-008 |
| 19 | 1996-072 | 53 | 2000-017 | 86 | 2004-052 |
| 20 | 1996-073 | 54 | 2000-018 | 87 | 2005-009 |
| 21 | 1996-074 | 55 | 2000-021 | 88 | 2005-022 |
| 22 | 1996-076 | 56 | 2000-029 | 89 | 2006-025 |
| 23 | 1997-050 | 57 | 2000-038 | 90 | Gr.98-29 |
| 24 | 1997-051 | 58 | 2001-003 | 91 | Gr.98-30A-E |
| 25 | 1997-052 | 59 | 2001-004 | 92 | Gr.98-31 |
| 26 | 1997-053 | 60 | 2001-005 | 93 | Gr.98-32 |
| 27 | 1997-054* | 61 | 2001-008 | 94 | Gr.98-33 |
| 28 | 1997-057 | 62 | 2001-009 | 95 | Gr.98-34 |
| 29 | 1998-013 | 63 | 2001-010 | 96 | Gr.99-05 |
| 30 | 1998-014 | 64 | 2001-011 (B16) | 97 | Gr.99-06 |
| 31 | 1998-015 | 65 | 2001-011 | 98 | Gr.99-09 |
| 32 | 1998-019 | 66 | 2001-032 | 99 | Gr.00-01 |
| 33 | 1998-021 | 67 | 2001-035 | 100 | Gr.00-02 |
| 34 | 1998-022 | | | | |

*Early Activity, to the Second Half of the 5th Century* (Plan 5)

Following the destruction of the *domus*, the area of the Panayia Field seems to have been used for stone quarrying and some agriculture. The ceramics from the earliest lots can all be characterized by their lack of both LR Corinthian lamps and LRC fine wares. Lot 2005-009 (87), to the north of the *domus* pool, was the fill of a robbing trench; the pottery was inconclusive, but the wall's removal pre-dated the immediate area's use as a garden, as suggested by the presence of rows of north-south planting pits.[194] The fill of another robbing trench, represented in Lot 2004-002 (82), likely robbed out a colonnade that surrounded the pool; this robbing trench disturbed an earlier Tetrarchic-period bothros[195] through which the pool was originally cut, mixing the artifacts among

[194] Corinth Notebook 967, baskets 49-52, 65, with summary on p. 129. See also Notebook 969, basket 38 for similar evidence even further to the north.
[195] Excavated as Lot 2005-023.

the two lots. Near this lot was a fill, Lot 2004-052 (86), that was re-deposited (?) along the northern side of the pool. Lot 2002-023 (78), just west of the bath, and Lots 2002-030 (80) and 2000-029 (56), both associated with the octagonal fountain court of the *domus*, represent other robbing events on the western side of the site that likely belong to this period of early activity. Lot 2002-007 (72) consisted of a floor layer (pre-dating the later L-shaped wall nearby) that was later cut by the robbing of wall 234 (see below, marked by 73 on Plan 5); the floor surface contained material of the first half of the 5th century while packing below was mainly pre-Roman.[196] Lot 2004-006 (83), an accumulation of fill over a wall on the eastern side of the road, indicated that the road was no longer maintained by the first half of the 5th century.[197] Planting pits (plow furrows?) were also noted just to the west of the road and south of the later site of the southern *baptisterium* of the bath,[198] thus furthering the evidence that this area was used for some level of agriculture in the years following the destruction of the *domus*.

Remaining early lots in which LR Corinthian lamps and LRC were absent include those associated with a partially excavated building in the southwest of the site with an apsidal exedra; the plan may belong to the Late Roman "philosopher's house," with the exedra used for dining by means of a D-shaped "sigma table," also known as an "agape table."[199] Within the rooms to the west of the exedra, a series of floors were excavated

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[196] Examination of the lot revealed that only material contained in basket 74 of Corinth Notebook 952, the floor surface, contained any Late Roman material.
[197] See Palinkas and Herbst 2011, for a full history of the road. The wall is wall 258 in the notebooks.
[198] Corinth Notebook 908, baskets 84, 90 and 93; the pits were dated to the late 4th or early 5th century. See also Notebook 920, baskets 68 to 72, there dated to the late 5th/early 6th century.
[199] Sanders 2004, p. 176, 2005, p. 426; Slane and Sanders 2005, p. 246. For a fragment of one such table in the Panayia Field, see MF 1996-038 (Corinth Notebook 892, basket 7), from a potentially contaminated context in the octagonal fountain court that can at least be dated after the mid-4th century. Another, MF 1999-018, was found in the upper fills of Well 1999-001 (Notebook 918, basket 97), the deposition of which should be dated to just before the mid-6th century; for the date, see discussion below regarding Lot 2000-003 (47).

numbering one through six, with floor 1 being the earliest and belonging to the *domus*.[200] A robbing event, Lot 1996-043 (14), cut through this early floor, while Lots 1996-041 (13), 1996-039 (11), 1996-040 (12), represent the ceramic material from floors 4, 5, and 6, respectively.[201] Crucial evidence for dating was obtained from floor 2 which yielded a coin of Valentinian III, dating to 425-455; all succeeding series of floors must therefore be dated at least after the first quarter of the 5th century, despite the lack of LRC fine ware that may have begun to be imported to the site sometime around this time (see Chapter 3).

The earliest lots containing LR Corinthian lamps and LRC fine wares pertain to a variety of dumps, robbing events, and one instance of water maintenance. Most significant is a pottery dump to the east of the 5th-century building; this deposit, Lot 1996-045 (16), contained a possible fragment of a LR Corinthian lamp and an early LRC form 1/3, accompanied by AfRS form 53B and large amounts of cooking wares in Late Roman micaceous Aegean ware.[202] A LR Corinthian lamp appeared in Lot 1996-070 (17), described as a lens of tile and earth pre-dating construction of the bath's entrance hall, and both LR Corinthian lamps and LRC (form 2B and a body sherd) were found associated with the fill of a pit and its overlying tile destruction debris in Lots 2000-007 (49) and 2000-006 (48), respectively, excavated to the west of the pool.[203] Contemporary robbing events are located just to the west of the road and include the robbing of the north-south wall 53, of which Lot 2000-018 (54) represents the fill in the northern half,

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[200] Excavated as Lot 1996-042.
[201] A circular tile-built construction, possibly an oven, might have been associated with floor 4; see Corinth Notebook 885, baskets 99 and 102.
[202] Late Roman micaceous Aegean ware already appeared earlier, in Lots 1996-039, 1996-040, 2000-029 (one body sherd), 2002-007, and 2002-023.
[203] Lot 1996-070 additionally contained Late Roman micaceous Aegean ware, but Lots 2000-006 and 2000-007 did not.

and Lot 2000-011 (52) the fill of the southern half.[204] The robbing trench of an east-west wall, which cut the floor deposit in Lot 2002-007 (see above), was represented by the fill material recovered in Lot 2002-008 (73).[205] A fill in the road that revealed a drain pipe, possibly the result of repair work of the water system, represented by Lot 2004-007 (84), produced a LRC floor fragment, as well as two sherds of Late Roman micaceous Aegean ware. Possibly contemporary is the fill from inside the *castellum* of the pool, Lot 2006-025 (89), which might suggest continued use into the later 5th century (or later?), and Lot 1996-076 (22), the fill of a robbing trench to the south of the *impluvium* of the *domus*.[206]

A final feature of the early re-appropriation of the area following the destruction of the *domus* are two parallel north-south orthostate walls, protruding from beneath the southern side of the later bath, associated with some fragmentary remains of earthen floors. These were cut through by the later construction and are the only indicators that a structure predated the bath. Two fills, Lots 1996-072 (19) and 1996-073 (20), were dumped against the east side of the eastern orthostate wall, the lowest containing LRC form 1D and a base of possibly form 3. A late 5th- (to 6th-?) century Vandalic coin,

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[204] It should be noted that neither lot contained any LR Corinthian lamps (three possible fragments, fired completely black, appeared in Lot 2000-018), while all of the LRC, including a from 1A, a form 2A, a possible base of form 3, and one body sherd, all belonged to Lot 2000-018. Both lots contained Late Roman micaceous Aegean ware.

[205] The robbing of wall 234. This lot contained only one LRC base; a rim of LRC form 2, listed in the original lot notes, was missing at the time of examination. No LR Corinthian lamps were noted, and only two or three fragments (including one rim) of Late Roman micaceous Aegean ware were present.

[206] The date of the robbing trench is somewhat debatable. Much of the preserved material could be dated to the 4th or 5th century, with a handful of sherds providing a stronger argument for robbing activity in the 5th century, including a sherd of a white-painted Palestinian baggy amphora in "Gritty Red Fabric" (possibly 4th century?), an amphora rim with grooved lip (**220**), an amphora similar in form to the *Agora* V, M 325 (**221**), the handle of a white-gritted stewpot as **308** (4th or 5th century?), a rim of a stewpot similar to **334** and **335 (P-9)** (the form begins in the late 4th century but continues into the 5th), and a rim of a bell-lid in Northeast Peloponnesian cooking fabric (**368**). The serious issue of proper dating involves the presence of a rim of a basin in Northeast Peloponnesian cooking fabric as **459**, belonging to a form that does not date earlier than the first half of the 6th century. While this basin might provide the actual date of the robbing event, Corinth Notebook 892, basket 7, gives warning that this lot was excavated beneath the layer exposed by earlier excavations conducted by the Archaeological Service, and that there existed the possibility of contamination from "pockets of wash."

recovered from associated layers excavated between the two walls, provided a *terminus post quem* for succeeding activity.[207]

None of the features outlined thus far show any evidence of surviving into the 6th century, with the possible exception of whatever structure had been related to the orthostate walls. The material related to the 5th-century building, the planting pits, and the marble-floored building in Scranton's earlier trench (see Chapter 1) all seem to point to some form of abandonment, or at least fundamental change in site use, by the end of the 5th or early in the 6th century.

*Pre-Construction and Construction Activity* (Plan 6)

In the time leading up to the construction of the Panayia Bath and Long Building in the mid-6th century, the area witnessed much preparatory work as suggested by the lots. Robbing events that removed the walls of the *domus* continued and dumps of re-deposited material proliferated, especially in the open area on the eastern side of the site. One reason for these dumps was the excavation of the foundations for each of the later 6th-century structures; the method involved digging one large pit against the sides of which the foundations of each building were built, thus explaining why the preserved exposed faces have such an irregular texture.[208] But not all of these dumps necessarily derive from construction activity; some dumps contain no evidence of 6th-century ceramics and may have been random dumps that occurred for any number of reasons.

Potentially earlier dumps and accumulations include Lots 1998-015 (31), 2000-017 (53), 2000-038 (57), 2001-032 (66), 2001-038 (68), and 2001-039 (69), all located

[207] For the orthostate walls, see Sanders 1999, p. 458. For the coin, 1996-184, see Corinth Notebook 881, basket 107.
[208] My thanks to G. Sanders (pers. comm.) for explaining the process.

just to the west of the road with material dated to the second half of the 5th century or ca. 500. Similarly-dated material was recovered from a fill, Lot 2002-009 (74), found under the later L-shaped wall and from the fill above a robbed marble floor in the western extension of the site saved as Lot 2002-018 (77).

Lots containing early 6th-century material, namely LRC form 3F and/or the first triangular-rimmed stewpots manufactured in Northeast Peloponnesian cooking fabric, include the dumps in Lots 2001-035 (67), 1998-013 (29) and 1998-014 (30), the latter dumped over (and bounded by) a still-standing east-west wall (marked with 47 on Plan 6).[209] Further fills below the later L-shaped wall in the northeast of the site include Lot 2002-011 (76), and likely basket 16 of Lot 2001-011 (64).[210] Fills from the pool should be dated to this period and include Lots 2001-004 (59), 2001-005 (60), and 2005-022 (88), as well as Lot 2001-008 (61), the fill of the robbing of the stylobate and its foundations from the south of the pool. Finally, Lot 2003-021 (81), a fill in the road related to an intrusion into a stone channel, contained a stewpot of this period.

Certainly, several of the above lots represent activity undertaken in the mid-6th century immediately before the construction of the Panayia Bath and Long Building.[211] Of more certain connection is Lot 2002-010 (75), also underneath the later L-shaped wall; this lot represents the fill of a cement feature that excavators believed was used to mix the cement for the two building projects.[212] Lot 1999-026 (41), a robbing event of the north wall of the octagonal fountain court, also contained a mid-6th-century stewpot.

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[209] Wall 54 in the notebooks. This wall was later robbed out and filled with the contents of Lot 2000-003 (47), see below.
[210] Basket 16 of Lot 2001-011 is discussed separately here because the ceramic material contained within it is markedly different from the remaining material in the lot. Examination of the notebook entry revealed that basket 16 did not make physical contact with other baskets in the lot.
[211] G. Sanders (pers. comm.) believes that overall construction of the bath would have taken about one year.
[212] This cement feature was dug through Lots 2002-009 and 2002-011.

Upon the completion of the Long Building, the still-standing east-west wall immediately to the north was robbed out and filled with the contents of Lot 2000-003 (47)[213] before the final leveling fill, Lot 1999-031 (43), was set against the Long Building's northern face. Remaining construction deposits relate to the bath,[214] beneath the entrance hall of which were recovered a series of lots. Above the 5th-century lens of tile and earth described above (Lot 1996-070) was another level of compact earth and tiles, Lot 1996-071 (18), that contained 6th-century LRC forms 3F and 3H.[215] Also beneath the entrance hall was a fill of earth, Lot 1997-051 (24), that when removed revealed the fills of a robbing trench, Lots 1997-052 (25), 1997-053 (26), and 1997-054 (27).[216] This robbing trench robbed out an earlier wall of the *domus*, above which the construction workers evidently built a make-shift L-shaped wall that was associated with finds of moon-shaped grinding stones and deposits of cement chips; the working surface is represented in Lot 1997-050 (23).[217] Finally, although the bath was built as closely against the wall of its foundation trench as possible, gaps nevertheless occurred, as is attested by Lot 1996-074 (21), the fill of the foundation trench in the area of the southwest corner of the south *baptisterium* of the *caldarium*.

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[213] The eastern extension of wall 54R was originally built over Well 1999-001 after it was filled in the 3rd century in preparation for the construction of the *domus*. The robbing of this wall would have provided the opportunity for 6th-century material to have slumped down into the upper layers of the fill of the well, including the fragment of the "sigma table" (MF 1999-018) noted above, as well as other marble fragments found in Notebook 918, basket 97, and ceramics such as **49**.

[214] For publication of the Panayia Bath, see Sanders 1999. See also Sanders 2004, p. 176, 2005, pp. 426-428; Slane and Sanders 2005, p. 246.

[215] This lot was apparently later thrown, or has since gone missing, as it was not available for examination; the lot sheet records a summary of the ceramic material when it was read during post-excavation analysis. The situation is unfortunate as all other examples of supposed LRC form 3H only appeared in late 6th- or early 7th-century contexts (see Chapters 3 and 5). See also Sanders 1999, p. 460, who also makes mention of Corinth Notebook 881, basket 133, from immediately below this missing lot, which contained an example of AfRS form 104A.

[216] Lot 1997-54, a clayey, light yellowish brown fill, possibly above the continuation of the robbing trench, was also missing.

[217] Differentiated from the L-shaped wall, numbered 199 in the notebooks, that appears on the plans in the northeastern corner of the site and mentioned several times above.

*Period of Use of the Panayia Bath and Long Building* (Plan 7)

Lots connected with the short period of actual use of the bath and Long Building are few, mainly due to the fact that neither structure survived into the 7th century. Use-context deposits related to the bath were recovered from the exterior of the building in what should be interpreted as (slightly subterranean) service areas for the hypocaust system.[218] Deposits of ash layers found above this area, namely Lots 1995-070 (10) and 2000-021 (55), likely represent the efforts to clean the heating system.[219] A section of floor at the southwest corner of the south *baptisterium* possibly indicates a similar function, and was excavated as Lot 1995-067 (7).

The so-called Long Building, stretching for almost 50 m in an east-west direction, was only partially excavated, revealing a series of basement rooms with one ground level room (at the western end) along the northern side of the building;[220] one window in the northern face helped illuminate these lower rooms.[221] Room numbers in the Long Building were assigned in the notebooks as they were excavated, thus from west to east, and following the westernmost (ground-level) room, one encounters room 2, 1, 3 (divided into eastern and western halves), followed by the northeast and southeast rooms. Two deposits from the Long Building should be seen as deriving from its period of use, including a small pit dug in the corner of the westernmost basement room, Lot 1999-023

[218] Most of what is currently exposed on the south and east sides of the bath are foundations, except for the service area south of the *tepidarium* and east of the south *baptisterium* of the *caldarium*; G. Sanders (pers. comm.).
[219] Sanders 1999, pp. 460-461, also included Lot 1995-062 among this activity; my own study of the material noted the presence of spacer tubes, used to separate the veneer from the wall, among the contents of the lot; these should be associated with destruction debris, as their presence indicates that the structure was in disrepair. Additionally, joins were also found with Lot 1995-063, interpreted by the excavators as destruction fill and containing LRC, Hayes form 10A.
[220] For the Long Building, see Sanders 2004, p. 176, 2005, p. 428; Slane and Sanders 2005, p. 246.
[221] The ground level in front of the building evidently jogged down to accommodate it.

(40), and the floor of the next basement room to the east, Lot 2004-008 (85); although both are dated contextually to the mid-6th century, contemporary material in these deposits are few. Towards the east on the road, the fill of a pit dug in order to service a drain, Lot 2002-004 (70), contained stewpots of the mid-6th century. Probably belonging to this date is also the construction of wall 199, the L-shaped wall which runs west from the Roman road.[222]

Several graves belong to the period of use of the site. Chronology is not is always exact, and it should be noted that some of these graves could date into the 7th century, but it is clear that they all must date after the construction of the Long Building as several are dug against its north face (or are in line with it), or dug through the construction dumps lining the west side of the road to the north of the building. From north to south, Grave 1998-32 (93) is a tile grave, Lot 2001-003 (58) marks the place of a 5th- to early 6th-century dump that was cut through by a Gaza amphora burial (and was in turn later disturbed), Grave 1998-29 (90) is a built tomb, and Grave 1998-34 (95) is another tile grave. From east to west, and dug against the north face of the Long Building, are Gaza amphora burials such as Grave 1999-06/Lot 1999-055 (97/46) and Grave 1999-05 (96), while Grave 2000-02/Lot 2000-010 (100/51) is a Gaza amphora burial within a double-layered tile grave. Following this is the tile Grave 1998-31 (92), while two more tile graves, Graves 2000-01 (99) and 1999-09 (98), were built along a continuation of the north wall of the Long Building that was robbed out in the late 12th or 13th century; Grave 1998-33 (94), another tile grave, was built along the south side of the same wall with its eastern end touching the western wall of the Long Building. Finally, Grave 1998-30A-E

[222] G. Sanders (pers. comm.) believes that it is contemporary with the bath. He also notes that this L-shaped wall is actually a foundation that supported a thinner wall, thus explaining why its angle is not 90 degrees. For the phasing of wall 199, see also Corinth Notebook 952, basket 29, p. 59.

(91) was dug within the western (ground-level) room of the Long Building and consisted of a cist grave with one articulated skeleton and four bundles of bones arranged within two layers of tiles (an *osteotheke*?).

The function of the Long Building has yet to be adequately explained, but some evidence exists that might suggest an ecclesiastical character.[223] First and foremost are the position of the graves that were interred during the building's use; while graves could be dug in and round derelict public buildings,[224] graves associated with functional buildings tend to suggest that the structure is a church. Comparanda within the vicinity of Corinth include, for example, the graves abutting the Lechaion, Kraneion, Kodratos, and Skoutela Basilicas.[225] Also in connection with the Lechaion Basilica is the presence of similar incised fish on the wall plaster of the basement rooms of the Long Building but, as Sanders points out, these need not exclusively be associated with ecclesiastical contexts and notes public buildings with similar features.[226] Finally, within the material excavated from the basement rooms, dumped after the building was abandoned, were many marble architectural pieces, including several fragments of a marble screen,[227] an

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[223] Sanders 2005, p. 428, also hypothesizes an ecclesiastical function.
[224] For recent discussion of the graves in Corinth's forum, see Sanders 2004, p. 179, fig. 6.4.
[225] For the Lechaion Basilica, see Pallas 1961, pp. 173-174, pls. 72:β, 72:γ, 73:a; Sanders 2004, p. 184, 2005, p. 440; Slane and Sanders 2005, p. 291. For the Kraneion Basilica, see Shelley 1943; Skarmoutsou 2010; Meleti 2013. For the Kodratos Basilica, see Stikas 1964. For the Skoutela Basilica, see Sanders 2005, p. 440.
[226] The incised fish of the Long Building were uncovered during excavation of Lot 1998-029 (in the eastern half of room 3) and are discussed in Corinth Notebook 914, basket 10. Sanders 2005, p. 428, fig. 16.6, discusses the Panayia Field fish, and notes comparanda from the Trans-Isthmian wall, the South Stoa and the hemicycle on the Lechaion Road in Corinth, a small bath in Sparta and a basilica on the island of Chersonisos on Crete, in addition to those on the Lechaion Basilica. For the incised fish of the Lechaion Basilica, see Pallas 1961, p. 169, pl. 69:β.
[227] Joining and non-joining fragments of a white-marble screen, composed of downward-opening interlocking half-circles, were found in various contexts of the Long Building fills, including Lots 1998-022 (room 3, west), 1998-023 (northeast room), 1998-029 (room 3, east), 1999-038 (southeast room), as well as three joining fragments stored in Lot 1999-005 ("Good Things from Bad Places") recovered in Corinth Notebook 914, baskets 68 and 95 (northeast room); fragments in Lots 1998-23 and 1999-038 were discovered to join. Other fragments were discovered in Lot 2001-010 (against wall 199) and in fill that

Early Christian white marble gravestone,[228] and a marble impost block with cross relief.[229] While the basement fills were very likely dumped from elsewhere, and at a later date (see below for discussion), there exists the possibility that a church existed somewhere on or near the site.[230] The Long Building might have served as an associated building within an ecclesiastical complex, but this interpretation must remain conjectural until more of the Long Building can be excavated.

*Abandonment* (Plan 8)

Numerous deposits of dumped material attest to the abandonment of the area at some point in the late 6th century. The largest dump was retrieved from the service area of the *tepidarium*, Lot 1995-061 (1), accompanied by Lots 1995-068 (8) and 1995-069 (9), while fill also accumulated in the hypocaust system as attested by Lot 1995-062 (2), and over the service area floor against the southwest corner of the south *baptisterium* in Lot 1995-066 (6). Lot 2001-010 (63), and baskets 18 and 20 of Lot 2001-011 (65), also show that fill was dumped against the L-shaped wall 199.[231] To the south of the bath, near the north wall of the Long Building, tiles and other debris fill the two pits represented in Lots 1999-030 (42) and 1999-033 (44), while in the western extension of the site another large

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abuts the south wall of the bath, found in Corinth Notebook 920, basket 87 and stored in Lot 1999-036 ("Good Things from Bad Places").

[228] Corinth Notebook 911, basket 76.

[229] Corinth Notebook 914, basket 68.

[230] Additional evidence may include various Christian inscriptions made on some bell-lids (**374** to **377**), found in the destruction fills in the bath, Long Building and against wall 199, and on a plain ware vessel (**491**) from the 7th-century pit. But the question remains as whether to interpret these as indicators of ecclesiastical ownership or apotropaic symbols used in secular contexts.

[231] Although the wall foundations that constitute wall 199 were only fully exposed following the excavation of Lot 2001-010, this lot was evidently bounded by the still-standing super-structure of the wall and was thus dumped against it. Baskets 18 and 20 of Lot 2001-011, situated as they are directly against the east face of wall 199 in two separate semi-circular deposits, might possibly be interpreted as part of foundation fills for the wall or pits/depressions that were filled in prior to the deposition of Lot 2001-010.

pit was filled with debris in Lot 2002-006 (71).[232] Lot 2000-008 (50), also in the western area, was interpreted as a "plow-zone" and may suggest the return to agricultural activity in the area around this time, or slightly later.

A significant problem of interpretation is faced when one turns to the dumped debris in the basement rooms of the Long Building. All of the basement rooms were filled with roof tiles and other debris, including: Lot 1998-019 (32) in room 2; 1998-021 (33) in room 1; 1998-022 (34) in room 3 (west); 1998-029 (37) in room 3 (east); 1998-023 (35), 1998-024 (36), 1999-007 (38), and 1999-008 (39) in the northeast room; and, 1999-038 (45) in the southeast room. Inexplicably, the fill in room 2, Lot 1998-019 (32), seemed to bear no similarity with the other fills, appearing to be mainly composed of earlier (ca. 500?) material. Based on the ceramic material alone, the remaining dumps in the various rooms dated generally between the mid-6$^{th}$ and early 7$^{th}$ century, but fragments of 7$^{th}$- and 8$^{th}$-century, and later (12$^{th}$ century) Byzantine, sherds regularly appeared among them.[233] Furthermore, ceramics confidently dated to the late 6$^{th}$ or early 7$^{th}$ century were comparatively infrequent, with the majority of the material more comfortably dated to about the mid-6$^{th}$ century. Comparison of the entirety of the Long Building basement fills with the late 6$^{th}$-century dump in the *tepidarium* service area (Lot 1995-061, above) revealed that cooking and plain wares that are characteristic in the latter were on the whole less numerous in the former, a notable problem if the

[232] The presence of AfRS from 99C in Lot 2002-006 may date it into the 7$^{th}$ century; see **52**.
[233] Based on the pottery alone, the remaining lots appear to have the following dates: 1998-021, mid- to second half of the 6$^{th}$ century with 12$^{th}$ century material; 1998-022, mid- to second half of the 6$^{th}$ century with Byzantine material; 1998-023, late 6$^{th}$ to early 7$^{th}$ century with Byzantine material; 1998-024, third quarter of the 6$^{th}$ century and Byzantine material; 1998-029, late 6$^{th}$ to early 7$^{th}$ century with Byzantine material; 1999-007, mid- or late 6$^{th}$ to early 7$^{th}$ century; 1999-008, late 6$^{th}$ century; 1999-038, late 6$^{th}$ to early 7$^{th}$ century.

abandonment of the two buildings should be considered contemporary.[234] Finally, joins of several reconstructable 6th-century vessels, and even marble fragments, were found among various rooms, often even rooms separated by a great distance.[235]

One possibility, therefore, is that much of the fill in the Long Building basement rooms was redeposited from elsewhere sometime in the Byzantine period. The date of the material that was moved was likely mid-6th century, but the late date of the activity inevitably allowed for the introduction of later material to be mixed in.[236] An alternative scenario that should be addressed is the possibility that these fills represent the collapse of the upper floors into the basement, but this less satisfactorily explains the presence of multiple joins among disparate rooms. This theory was also discounted by the excavators of Lot 1998-021 (33) (in room 1), who noted the lack of joins among the roof tiles, of which there were also two different types, implying that the deposit is not representative of the in situ collapse of a single roof.[237] The date of the abandonment of the Long Building is therefore not entirely clear, but the debris-filled pits immediately to the north of the building represented by Lots 1999-030 and 1999-033 (see above), both dated to the late 6th or early 7th century, may be some indication.[238]

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[234] These include stewpots with overhanging near-vertical or half-round rims ("type 3"), and basins with outwardly-rolled rims ("type 5"), see Chapters 4 and 5; the totality of the Long Building dumps (179.105 kg from the material saved in lots) only produced ten examples of the former, and nine of the latter. Comparatively, Lot 1995-061 (only 80.850 kg), from the *tepidarium* dump, alone produced 14 examples of the former, and at least nine examples of the latter.

[235] For example, several joins with material in the southeast room were made with rooms 1, 3 west, and 3 east. Fragments of the same marble screen were found in room 3 (east and west), and the northeast and southeast rooms; joins were made with the latter two rooms (Lots 1998-023 and 1999-038). Oddly, material from Lot 1998-019 in room 2 did not join any other lots.

[236] The filling of these basement rooms might be associated with the layer of debris excavated as Lot 1999-022, immediately to the north of the Long Building, dated to the late 8th or early 9th century. This deposit was interpreted as demolition debris related to the Long Building and, like the basement fills, contained tiles, marble and stone fragments, and a large proportion of 6th-century ceramic material.

[237] See Corinth Notebook 909, p. 192.

[238] It is also of some significance that these two pits were dug in the same area that had been used for burials. If the placement of the graves was dependent on the presence of the (functioning) Long Building,

*Post-Abandonment Activity* (Plan 9)

Shortly after this period of abandonment, some evidence appears for some small-scale activity in the area that does not date later than the early 7th century. This post-abandonment activity is characterized by the appearance of LRC, Hayes form 10A that has not appeared in any previously-discussed deposits. After the bath ceased to function in a proper sense, a short-lived building, attested by the fragmentary remains of two walls and a floor level, was built against its east side but still managed to utilize the hypocaust system.[239] The material from the floor of this building is represented in Lot 1995-065 (5), while Lot 1995-064 (4) contains the material from the fill that quickly covered it. The material from a final destruction fill of powdery cement over the hypocaust ash layers appears in Lot 1995-063 (3). Finally, Lot 2001-009 (62) contains the dumped fill that was deposited next to the L-shaped wall 199; although excavators had not yet uncovered the top of the wall, the abrupt edge of the deposit makes it clear that the wall's superstructure was still standing at the time of deposition.

*Late Activity* (Plan 10)

No deposits containing material dated between the beginning and the middle of the 7th century have been identified here. In the mid- to third quarter of the 7th century a sizeable pit was filled with a large ceramic deposit to the west of the Long Building as contained within Lots 1996-044 (15) and 1997-057 (28).[240] The fill over a floor in the

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the re-allocation of burial space for waste disposal may be strongly suggestive that the Long Building had ceased to function.

[239] Sanders 1999, p. 462; see also Slane and Sanders 2005, p. 246.

[240] Much of the material from this pit appeared in Slane and Sanders 2005 as their "assemblage 4."

western extension of the site contained in Lot 2002-028 (79), which included a rare occurrence of a so-called "Slavic ware" beaker, may be generally dated to the 7th century.[241]

## CONCLUSION

Between the late 4th and 7th century, the Panayia Field witnessed a complex history of use as revealed by its major features. These various stages of use and abandonment have resulted in a lack of continuous stratigraphic sequences; the chronological gaps are clear, with the period from roughly the late 5th century to ca. 550 lacking clear definition and the existence of a lacuna between the early to mid-7th century. As a result, the ceramics from the Panayia Field cannot stand as a definitive representation of what was available to the city of Corinth as a whole between the late 4th through 7th century. Despite the chronological gaps, the material represented here is nevertheless sufficient to characterize the major long-distance, regional and local ceramic wares, thereby illustrating the major sources of distribution and Corinth's network connections during the period under study (Chapters 3 and 4), and to present a typological study of the forms found with consideration of what their presence reveals about activity on the site (Chapter 6).

[241] See **524** for the "Slavic ware" beaker. This lot also contained an unnumbered pitcher rim similar to **481** or **483**, as well as **327**, a rim of an imported stewpot of unknown origin.

# CHAPTER III:
# LONG DISTANCE WARES FROM THE PANAYIA FIELD

## INTRODUCTION

This chapter presents the major ceramic wares from long-distance sources encountered in the Late Roman Panayia Field. Although some are technically not wares, appearing here in only one or two attested forms, they are presented in the same manner. Most entries are representative of a ware or fabric that occurred with regularity in the Panayia Field while those which occurred only rarely are generally not presented unless they were selected for petrographic analysis.[242] Each recognized ware is first fully characterized by means of thorough macroscopic fabric descriptions, followed by descriptions derived from petrographic analysis when available,[243] and an account of the range of vessel shapes. A section on dating and identification provides the chronological limits for each ware,[244] and establishes a concordance with previous publications. The final section for each entry discusses the ware's history of production, currently-known places of distribution,[245] and any other relevant features.

In order to fully characterize each ware, this chapter concludes by building upon the systems of distribution outlined in Chapter 1 and attempts to outline the mechanisms

[242] Other, recognizable long-distance wares which appeared infrequently but did not receive any petrographic analysis are discussed within the geographical summary below; their fabrics are described within their individual catalogue entries in Chapter 5.
[243] Petrographic descriptions for this chapter are infrequent, as such analyses were focused on the less well-known regional and local wares discussed in the following chapter. For the selection strategy used for the petrographic analysis, see Chapter 1. The discussion of petrographic results also includes mention of the cases in which petrographic data (when available) required the re-attribution of macroscopic observations.
[244] For a detailed account of the appearance of individual forms in the pottery lots from the Panayia Field, see Chapter 6.
[245] This was compiled by means of review of the pertinent scholarship and personal observations made through visits to other sites and collections where possible. These observations cannot serve to provide the ultimate *limits* of a ware's distribution, but should rather be seen to represent a first step in mapping where these wares appeared.

and routes by which these wares moved. Exploring why and how a specific ware travelled is a vital component of its characterization, and can be illustrative of the trends, choices and/or conditions in place at the point of consumption. Each ware is considered within the context of its geographic area of origin in order to take account of other products that they may have been distributed with, and Corinth's place within these distribution networks and its role as an emporium is briefly assessed.

Although many of these long-distance wares have been previously recognized, and some are very familiar components of Late Roman sites elsewhere in the Mediterranean, their full presentation here is vital as they account for a significant component of the Panayia Field's locally-important wares. Understanding the imported wares and their corresponding mechanics of distribution will also provide broader contexts for discussion of the regional and local wares discussed in the next chapter.

## AFRICAN RED SLIP (AfRS) WARES

*Ware*

Fabric Description

AfRS fabric C (Pl. 1.1): Red (10R 5/8) to light red (approx. 2.5YR 6/8) fabric; red (2.5YR 5/8) slip. Characterized by few very fine sub-rounded white grits; rare fine to small rounded black grains; few to frequent fine (to small) rounded and sub-rounded voids. Occasionally noted are rare medium sub-rounded calcareous white lumps. Rarely noted are rare to few small elongated white flecks; rare fine to small translucent white clumps. Granular (occasionally near-smooth) break; medium hard to hard fabric.[246]

AfRS fabric D (Pl. 1.2): Red (usually 2.5YR 5/8, but 10R 5/8 or 2.5YR 4/8 or 5/6 are also noted) fabric; red (similar variations as fabric) slip. Characterized by (rare to) few fine (to small) white flecks; few (to frequent) fine (to small) round black grains; few to

[246] Based on examination of 96-76:9 (Hayes form 50A or 50 A/B), an unnumbered sherd in Lot 1996-076, three unnumbered rims in Lot 1998-015 (Hayes form 50B), 96-45:25a-b (Hayes form 53B), 96-45:26 (Hayes form 53B), **35**, and **36**.

frequent fine rounded and sub-rounded voids. Occasionally noted are few fine red pellets, and few fine sparkling bits. Granular to hackly break; medium hard (to hard) fabric.[247]

The major difference between AfRS fabrics C and D is primarily one of coarseness,[248] with fabric C appearing more refined and appearing in generally thinner-walled vessels, while fabric D is much coarser and grittier and typically appears in thicker-walled vessels (see range of vessel shapes below). While AfRS fabrics C and D were the most commonly encountered, another fabric, AfRS fabric E, was also rarely encountered. The fabric is generally in keeping with the previous two, but is darker fired (near-brown), contains better-sorted inclusions especially white (calcareous) flecks, the break is less granular (granular to smooth break, occasionally slightly conchoidal), and the fabric is medium hard.[249]

The fabric varieties of African Red Slip are generally universally-recognized. The classifications employed here are essentially based on Lamboglia's fabric classifications, with the refinements introduced over the decades by Hayes and Carandini (see below for further discussion);[250] sub-fabrics within fabrics C and D, although characterized by others, were not identified here. While no petrographic analysis was conducted on AfRS during the course of this study, various scientific studies have been conducted by others that have supported these macroscopically-identified classifications.[251]

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[247] Based on examination of 00-29:1 (Hayes form 50B), C-2000-013 (Hayes form 67), **45**, **49**, **51**, **54**, **55**, **65**, **67**, and **69**.
[248] The classificatory system was originally devised by Lamboglia (1950, p. 29, 1958, 1963), which at the time only consisted of fabrics A through D; see discussion below. A and B are not discussed in this analysis as their floruit pre-dates the late 4th century.
[249] These observations are based on examination of the only two examples from the Panayia Field, **41** and an unnumbered rim in Lot 1998-015 (Hayes form 67). See also *LRP*, pp. 291-292; *Atlante* I, p. 119.
[250] Lamboglia 1950, p. 29, 1958, 1963; *Ostia* I, pp. 28-37; *LRP*, pp. 287-292; *Atlante* I, pp. 19-122.
[251] See Taylor and Robinson 1996a and 1996b for the neutron activation analysis of both AfRS from four kiln sites, and of samples of AfRS collected from Carthage and Rome, respectively; distinct reference groups for each kiln site were created in the first, while in the second report various samples of AfRS were

Range of Vessel Shapes

As noted, AfRS fabrics C, D, and E appear in the Panayia Field in a range of fine ware dishes and bowls. Attested forms include Hayes form 50B (**34**), 53B (**35**; **36**), 59B (**37**; **38**), 61A (**39**), 61B (**40**), 66/68 (or 76A) (**41**), 67 (**42**), 68 (**43**), 73A (**44**), 88 (**45**; **46**), 91B (**47**), 91C, possibly 93A, 93B (**48**), 94 (**49**), 99A or B (**50**), 99B (**51**), 99C (**52**; **53**), 103A (**54**), 103B (**55**; **56**), 104A (**57**; **58**), 104B (**59**; **60**), 104B (late) (**61**), 104C (early) (**62**; **63**), 104C (**64**; **65**), 105 (early) (**66**), 105 (**67**; **68**), 105 (large variant) (**69**), and form 109 (**70**; **71**). Non-joining stamps were limited to a single example of Hayes Style A (i-iii) (**72**).

A small number of amphoras of African origin (as identified in previous publications) were also recovered from the Panayia Field, although their fabrics bear no resemblance to that of the AfRS, or even to one another (see the individual descriptions in Chapter 5). Thus it is clear that these fine wares and amphoras were not manufactured in the same workshops.[252] No finds of African cooking wares that were contemporary with the period under analysis,[253] and no lamps or plain wares at all, were recovered from the Late Roman deposits of the Panayia Field.[254]

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linked to specific kilns sites or narrow regions of production. See Mackensen and Schneider 2002, whose chemical analysis showed that fabrics $D^1$, $D^2$, and $C^{1-5}$ are indeed distinguishable; for the chemical analysis of 2nd- to 3rd-century AfRS, see Mackensen and Schneider 2006. For the study of a large body of AfRS samples collected from both sites of importation and kiln sites through petrographic thin-sectioning, see Capelli and Bonifay 2007.

[252] Therefore, all individual fabric descriptions are given within each amphora's catalogue entry.

[253] African cooking ware was limited to a single find of a lid identified as Hayes form 182 (C-2000-005), appearing as a residual find in Lot 2000-003. See *LRP*, p. 203, for the dating of form 182 to the second half of the 2nd to first half of the 3rd century.

[254] The manufacture of these classes in the same area as AfRS is well-attested; for the most complete summary, see Bonifay 2004.

*Dating and Identification*

AfRS had been arriving in Corinth since at least ca. 125, becoming the dominant fine ware from the early 3rd to 5th century.[255] In the late 4th- and early 5th-century deposits in the Panayia Field, AfRS, appearing in fabrics C, D, and E, accounts for much of the fine wares alongside Attic RS. After a period of severely decreased import of African products that spanned the mid-5th to first quarter of the 6th century, AfRS returns in large quantity, but now only in fabric D, and continues to appear down to the time of the 7th-century pit.[256] Quantified evidence from elsewhere in Corinth indicates that AfRS numbers fall dramatically from the early 5th century onward, further exacerbated during the Vandal occupation of Africa; by ca. 450, quantities of AfRS are third in place to LRC and Attic RS.[257] From the mid-6th century, when an increase in the ware's appearance is noted, and into the 7th century, AfRS continues to appear in reduced quantity but outnumbers LRC.[258] The ebb and flow of AfRS imports into the Panayia Field with reference to specific forms is discussed in Chapter 6.

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[255] Slane 2000, pp. 300-303, fig. 10.

[256] The conquest of Carthage by the Arabs in 698 is considered to have spelled the final end of the production and distribution of AfRS; *Supplement*, p. 517.

[257] See Slane 2000, pp. 303, 307, fig. 10, who reports a sharp fall in AfRS quantities at Corinth between 350 and 450; see also Slane 2003, fig. 19.8. Slane and Sanders 2005, p. 283, report that even after the introduction of LRC, AfRS still outweighs the latter by two to three times in their "assemblage 1," dated to the first half of the 5th century.

[258] See Slane 2000, pp. 304-305, fig. 10. A similar mid-6th-century rise in AfRS is noted on other eastern sites, but western sites show a significant decrease or total absence; see Lewit 2011, p. 323. For western sites, see Reynolds 1995, p. 34, who notes that "exceptional" quantities of AfRS are only seen at Marseilles, Cartagena, and the fort at S. Antonino di Perti in northwestern Italy at this time. In Italy, from 550 to the 7th century, overall AfRS distribution decreases only to find spots within Byzantine-held territory; see Tortorella 1998, fig. 8. Finds from Argos, on the other hand, show a sharp rise after 500 compared to late 5th-century numbers, and grow to outnumber LRC for the second half of the 6th century; see Abadie-Reynal 1989, p. 155, fig. 16. AfRS "is markedly more common in levels of the mid-6th century and later" in Constantinople where it continues in popularity into the 7th century; see *Saraçhane*, p. 7. At Kalavasos-*Kopetra* on Cyprus, most identifiable AfRS forms belong to the 6th and 7th centuries; Rautman 2003, p. 166.

AfRS has been the subject of study for nearly a century.[259] Waagé's work in both the Athenian Agora and at Antioch were the first to present classifications that included what would later be considered to be African Red Slip ware, characterizing fine-grained fabrics with his Late Roman A ware, and coarse-grained fabrics with his Late Roman B ware.[260] Lamboglia supplied the next significant contribution, identifying the ware as a whole as *terra sigillata chiara* and devising four fabric divisions named *t. s. chiara* A-D.[261] The two systems can be equated in the following manner: *t. s. chiara* A is the same as early examples of Late Roman B ware; *t. s. chiara* C is the same as Late Roman A ware; and *t. s. chiara* D is the same as the middle and late phases of Late Roman B ware.[262] Carandini's study of finds from Ostia retained Lamboglia's system but introduced major refinements in the form of numerous subdivisions.[263] Hayes, in his seminal work on Late Roman fine wares, was able to draw upon all of these classification systems, describing each fabric anew and even identifying new ones; no new classification system was introduced with this work, however, as Hayes preferred the make his basic classification of this ware, now dubbed African Red Slip, by form and introduced a new typology.[264] Carandini and his collaborators introduced further refinements to their earlier classification of the ware based on the finds from Ostia with the introduction of even further subdivisions that were based almost entirely on the fabric

[259] For useful summaries, see *LRP,* pp. 2-8, 287-288; *Agora* XXXII, pp. 67-68.
[260] Waagé 1933, pp. 293-308, 1948, pp. 45-47. Late Roman B ware was additionally subdivided into early, middle and final phases and several pieces were identified as being of an intermediate phase.
[261] Lamboglia 1950, p. 29, 1958, 1963. *T. s. chiara* B has since been identified as a Gaulish fabric; see *LRP*, p. 288 for the amendment.
[262] See *LRP*, p. 288; *Agora* XXXII, p. 67.
[263] *Ostia* I, pp. 28-37.
[264] *LRP*, pp. 13-299, with the fabrics described on pp. 287-292.

descriptions provided by Hayes.[265] These fabric divisions continue to be referenced in current scholarship while Hayes' typology has remained essentially unchanged.[266]

*Discussion*

Due to the amount of scholarship that AfRS (and other African products) has received, much is known regarding its production;[267] its treatment here is meant to remain brief and not substantially add to the scholarship. Although the amphoras of identifiable African origin are not discussed with this fabric group, elements of their production can be discussed *vis–à–vis* that of AfRS.

Vessels manufactured in AfRS fabric C, of which only the latest products are treated in the analysis here, have been securely sourced to central Byzacena, with the major workshop site of Sidi Marzouk Tounsi located over 100 km from Leptiminus on the eastern coast, and roughly 150 km from Carthage to the north.[268] Production of AfRS fabric E is less understood, but is tentatively placed just south/southeast of the area of production of AfRS fabric C.[269] AfRS fabric D, which was employed in the manufacture of the majority of AfRS finds in the Panayia Field, has been sourced to two major areas

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[265] *Atlante* I, pp. 19-122, in which the fabric subdivisions are as follows: A (subdivided into $A^1$, $A^{1/2}$, $A^2$), A/D, C (subdivided into $C^1$, $C^2$, $C^3$, $C^4$, $C^5$), D (subdivided into $D^1$ (first phase), $D^1$ (second phase), $D^2$ (first phase), $D^2$ (second phase), $D^{1/2}$ (an ill-defined fabric)), C/E, and E.

[266] Bonifay 2004, see esp. pp. 45-53 for production and fabrics, and pls. 1-3 for color images of the various fabrics; although Bonifay introduces a new typology, he is careful to correlate it to Hayes' in *LRP*. See also Reynolds 1995, pp. 6-7 ("t. s. clara A," *etc*.); *Agora* XXXII, pp. 67-69 ("terra sigillata chiara/africana A," *etc*.). For recent comments on the debate regarding the retention of Carandini's fabric classification system, see Cau, Reynolds and Bonifay 2011b, p. 4; it is now generally agreed that the classification of $C^1$-$C^5$ "is not easily usable."

[267] Among the most recent treatments of ceramic production in Late Roman Africa is Bonifay 2004, who treats a variety of ceramic classes in addition to the fine wares in regards to their production, typology and chronology; see also Bonifay 2007. For further discussion of the Late Roman production centers of AfRS, see also Peacock, Bejaoui and Ben Lazreg 1990; Mackensen 1998; Mackensen and Schneider 2002, 2006. For discussion of pottery-making tools and kiln furniture associated with AfRS production, as well as general comments on workshop organization, see Mackensen 2009.

[268] Bonifay 2004, pp. 50-51, fig. 22, 2007, p. 153.

[269] Bonifay 2004, p. 51, fig. 22.

within the hinterland of Carthage, namely the Mejerda Valley to the east (fabric $D^1$), and the site of Oudhna to the south (fabric $D^2$).[270] Evidence for the manufacture of lamps, of which no examples were imported to the Panayia Field from Africa, seems to generally correspond with the locations of the major manufacturers of AfRS fabrics C and D.[271]

The majority of evidence for amphora production in North Africa has mainly been found near the coast.[272] Agricultural products were seemingly brought from the interior in other, less archaeologically traceable, types of containers (such as skins) before being re-packed into amphoras for overseas transport.[273] Fine ware production in the interior of North Africa, especially the workshops employing AfRS fabric C in central Byzacena, benefited from the renewable fuel source that intense olive cultivation would have provided in the form of the trimmings and other refuse to fire the kilns, as high-quality red slip ware requires high temperatures and thereby more fuel. Finished fine ware products can be stacked and transported easily, whereas amphoras are more difficult to move and require less fuel to fire thus making their manufacture on the coast more practical.[274] Even the makers of vessels in AfRS fabric D, situated in the Mejerda Valley and at Oudhna roughly 30-45 km from the coast, worked farther inland than the majority of amphora manufacturers and were still likely to directly benefit from proximity to intense agricultural zones. Cooking and plain wares were also manufactured in this same

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[270] Bonifay 2004, pp. 48-50, fig. 22, 2007, p. 153. See also Bonifay 2004, p. 49, for discussion of the workshop of Sidi Khalifa, to the south of Oudhna, which produced fabric "C/D" as well as another unattributed source known as "*atelier* X." AfRS fabric D is related to the earlier fabric A, which has been tentatively sourced to broadly the same area of manufacture in northern Africa Proconsularis, perhaps near Carthage; see Bonifay 2004, pp. 45-48, 2007, p. 153.
[271] Bonifay 2004, pp. 77-81, fig. 40.
[272] Bonifay 2004, pp. 8-44, fig. 2.
[273] See Lewit 2011, p. 320. Mattingly 1988, pp. 41, 48, provides similar information and also supplies comparative evidence from Spain where amphora kilns are situated inland on the banks of navigable rivers in highly-developed olive-growing areas.
[274] Lewit 2011, pp. 320-322. See also Mackensen 2009, p. 38, who additionally mentions proximity to corn production in one case.

general area; plain ware production centers were strictly limited to coastal sites, overlapping with several amphora production sites, while cooking ware production took place in a mixture of coastal and inland sites.[275]

In addition to the access to fuel sources related to olive cultivation, T. Lewit has also recognized that access to state sponsored distribution routes was another major prerequisite that was vital to the popularity of AfRS on the fine ware market.[276] At the beginning of the period under analysis here, the African provinces had already been relied upon in order to supply Rome with grain for the *annona*; this relationship had been in place for centuries until the time of the Vandal conquest. After the Byzantine re-conquest, the same supplies were then directed towards Constantinople (see Chapter 1). The agricultural products that were harvested in this area were in near-constant demand by the empire's capitals, thus, a major outlet for export existed that allowed the products of the North African potters to travel along with bulk shipments of agricultural goods.[277] While other factors may certainly have played a role in the popularity of various fine wares,[278] the opportunity to travel directly from the major *annona* source certainly allowed for a growth in the consumer base of AfRS. That the fine wares were not distributed in their own right,[279] but relied heavily on such circumstances, is possibly illustrated by the lack of African lamps, cooking wares and plain wares in the Panayia Field; if African ceramics were being distributed for their own intrinsic value and not as

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[275] See Bonifay 2004, pp. 71-75, fig. 36, for the distribution of plain ware producers, and pp. 67-71, fig. 33, for cooking wares; for producers of African cooking wares, see also Leitch 2011.
[276] Lewit 2011; see also Fulford 1987.
[277] See also Mattingly 1988, p. 48, n. 70, who feels that that the growth of the production of AfRS may have been in response to the export opportunities already offered by the substantial movement of olive oil.
[278] See Lewit 2011, pp. 322-329.
[279] See, for example, Poblome 2004, pp. 496, 498. "Pottery was rarely, if ever, exchanged on its own beyond the local sphere, and the distribution patterns that we study are not the result of simple marketing, but of an interplay of different exchange patterns and mechanisms." Fine wares were part of the transactions, but were not directing economic flow.

additional cargo on agricultural supply ships, one might expect to see a greater array of ceramic classes, as opposed to only the easily stackable fine ware forms.[280]

The areas to which AfRS were distributed were far-reaching and need not be detailed here.[281] Generally, AfRS had established a major place on the markets since the 2nd century (in earlier fabrics) and could be widely found on sites ringing the Mediterranean by the mid-4th century, as well as being found in Britain and Ethiopia.[282] Of greater relevance here is its distribution to sites in the northeast Peloponnese, as well as along the shores of the Saronic and eastern Corinthian Gulfs, in the Late Roman period. Publication from the sites in this general area is uneven, but a few examples of the more thorough investigations will suffice to provide a general impression. AfRS forms present on the northern shores of the Gulf of Corinth seem to have been comparable to the range present at Panayia Field.[283] A similar statement may be made for Athens but, curiously, AfRS imports become rare after Hayes form 105 with no later forms reported.[284] Some Late Roman forms have been published from the Saronic Gulf,[285] while reported AfRS finds from Kenchreai were surprisingly few.[286] In the vicinity of Corinth, the Eastern Korinthia Archaeological Survey documented a significant range of

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[280] Armstrong 2009, p. 158.
[281] For studies concerning the distribution of AfRS, see *LRP*, pp. 414-424, maps 1-12, 19-30; *Supplement*, pp. 521-523; Reynolds 1995, pp. 14-34; Bonifay 2004, pp. 445-462; *Agora* XXXII, p. 71, n. 30.
[282] *Agora* XXXII, p. 71; Lewit 2011, p. 316.
[283] For Delphi, see Pétridis 2010, pp. 126-127, figs. 220-223, pl. 41, who notes few examples of AfRS, Hayes forms 8, 32, 44, 45, high numbers of Hayes forms 50, 52, 53, 58, 59, and 61, few 5th-century forms including Hayes form 70/71, and, in the 6th and 7th centuries, Hayes forms 67, 87, 88, 90, 99, 103, 104, 105, 108, and 109. For AfRS, Hayes form 104A among the survey finds from southern Boiotia, see Vroom 2003, p. 100, no. 6.1, fig. 6.1. For another AfRS, Hayes form 104 from Diporto on the island of Makronisos, see Gregory 1986, p. 295, no. 1, fig. 13:a.
[284] See most recently *Agora* XXXII, especially p. 81.
[285] For Aegina, see Felten 1975, pp. 68-69, nos. 97, 99-100, figs. 7, 9-10, for AfRS, Hayes forms 91B/C, 105. For the villa site of Akra Sophia, see Gregory 1985, p. 426, nos. 21, 22, fig. 4, for AfRS, Hayes forms 99A and possibly 17.
[286] *Kenchreai* IV, pp. 92, 95-98, nos. LRB 24-LRB 32, pls. 22-24, which include among the fragmentary material the Late Roman Hayes forms 52B, 61, 84, 104B, 104C, and 105; see also Rife et al. 2007, p. 173, n. 74, for an early 5th-century rosette stamp and Hayes form 61B.

Late Roman forms,[287] while survey of the territory surrounding Sikyon revealed none at all.[288] Based on published finds alone, other areas of Corinth besides the Panayia Field seem to have been supplied with a similar range of AfRS as presented here.[289] Inland sites, such as Nemea[290] and Pyrgouthi in the Berbati Valley[291] reveal very little evidence for the penetration of African imports. In the Argolid, diverse ranges of AfRS forms are present at Argos,[292] Asine,[293] and generally in the Methana peninsula,[294] while other, smaller, sites revealed little to none.[295]

## LATE ROMAN "C" (LRC) (PHOCEAN RED SLIP) WARE

### *Ware*

#### Fabric Description

LRC1 (Pl. 1.3): Light red (10R 6/8 to 2.5YR 6/8) to reddish yellow (5YR 6/8) fabric; light red (10R 6/8) to red (10R 5/6 to 5/8, and 2.5YR 5/8) slip.[296] Characterized by rare to

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[287] Finds include AfRS, Hayes forms 50, 99, and 104-106; see Pettegrew 2007, tables 4, 13; 2010, table 2.
[288] Lolos 2011; see esp. p. 336. Recent excavations at the site of Sikyon (The Sikyon Excavation Project) have revealed that AfRS finds on the plateau were dominated by 3rd- to 5th-century forms, while late 6th- and 7th-century forms are almost unattested, being represented by only a few body sherds in fabric D and only a single diagnostic sherd (form 104); S. Gallimore (pers. comm.), reporting on the 2013 and 2014 excavation seasons.
[289] See, for example, Slane 2000; Slane and Sanders 2005.
[290] For excavations at the site, see Miller 1983, p. 86, n. 80, pl. 26:a, for a "rare" example of AfRS, Hayes form 104B; for the finds from the Nemea Valley Archaeological Project, see Wright et al. 1990, p. 655, n. 189, where the latest AfRS find is only Hayes form 67 or 68.
[291] Hjohlman 2005, pp. 132, 134, 208, 211, 235-236, nos. 1 and 2 (bases, Hayes form 58 and 61), 211 (rim, Hayes form 50A or A/B) figs. 4, 74.
[292] Abadie-Reynal 1989, pp. 144, 150, 155, 156, figs. 1, 15, 16, who notes the presence of AfRS, Hayes forms 45, 48, 50, 88, 91, 97, 99A and C, 103B and 104A. See also Aupert 1980b, pp. 415-417, nos. 81-120, fig. 35, for examples of AfRS, Hayes forms 91C, 91D, 99, 104C, 105, 87C/109, and 110 (a cup). For AfRS vessels at Argos dating up to the end of the 4th century, see Abadie-Reynal 2007, pp. 156-175.
[293] Höghammar 1984, pp. 88-89. Unfortunately, the author did not make extensive use of J. Hayes' typologies in *LRP*. Of the rim profiles published on p. 93, fig. 8, AfRS, Hayes forms 67 (nos. 3301:3, 4179:1, and 5633:1), 78 or 94 (no. 1299:1), 104A or B (no. 3192:1), and 104C (no. 4347:2) are present.
[294] Bowden and Gill 1997, pp. 84-86, table 8.2, for AfRS, Hayes forms 31, 50, 50B, 52, 53, 53B, 62?, 64, 67, 84, 87A, 91, 91C, 99, 99A, 99B, 103B, 104A, 104B, stamp type 25, and lamp type II.
[295] For Late Roman Halieis, see Rudolph 1979, p. 310, nos. 20-22, fig. 7, for AfRS, Hayes form 105. Personal examination of the finds from the cave at Andritsa detected no AfRS; see also Kormazopoulou and Hatzilazarou 2010.
[296] Various degrees of discoloration of the slip are occasionally noted at the rim, likely due to the stacking of the vessels in the kiln.

few fine to small rounded and sub-rounded white grits; few to frequent very fine to small rounded and sub-rounded voids; rare to few fine to small elongated voids. Occasionally noted are rare to few fine sparkling bits; rare fine rounded dark grains. Smooth (sometimes slightly granular) to slightly conchoidal break; medium hard fabric.[297]

LRC2 (Pl. 1.4): Red (10R 5/6 to 2.5YR 5/6) fabric, occasionally appearing light reddish brown (slightly lighter than 2.5YR 6/4); red (10R 5/6 to 5/8, and 2.5YR 4/8 to 5/8) slip.[298] Characterized by frequent to common (very fine to) fine to small rounded and sub-rounded yellowish-white lumps (rare to few with exploded centers); rare to few fine sparkling bits (usually in direct sunlight); rare fine rounded black grains; rare very fine to fine (to small) rounded white grits; (few to) frequent fine (to small) rounded and sub-rounded voids. Rarely noted are rare small sub-rounded red pellets; few fine elongated voids. Smooth (sometimes slightly granular) to slightly conchoidal break; medium hard fabric.[299]

LRC2? (Hayes, LRC form 3H) (Pl. 1.5): As LRC2 fabric, but fired slightly darker, and with common to abundant very fine to fine sparkling silver flakes and rare to few fine sparkling gold flakes. Granular (slightly conchoidal) break; medium hard fabric.[300]

LRC wares did not undergo any petrographic analysis during the course of this study. The fabric descriptions of LRC employed here are borrowed from the descriptions published by G. Sanders (further discussed below).[301] In brief, LRC1 is typically lighter red, with rare white inclusions, whereas LRC2 is typically darker red, with frequent white/off-white inclusions. In the course of studying the material from the Panayia Field, the fabrics of LRC vessels (other than those of Hayes form H) were found to be rather consistent in their identification with one of these two groups. Unfortunately, they do not show any tendency toward either LRC1 or LRC2 fabrics in terms of form or chronology,

[297] Based on examination of 95-61:28 (Hayes LRC form 3C), **91**, **96**, and **105**.
[298] Often displaying the same discoloration of the slip at rim as vessels in LRC1.
[299] Based on examination of 96-72:3 (Hayes LRC form 1D), 96-72:4 (Hayes LRC form 3 (?), base), 95-68:1 (Hayes LRC form 3F), and **106** (Hayes LRC form 10A). 96-72:3, while still generally in keeping with the description of LRC2 fabric, differed in that the fabric is reddish yellow (5YR 6/6 to 6/8), with few to frequent fine to small rounded and sub-rounded white grits, and rare to few fine sub-rounded yellowish white lumps. As this piece derives from an earlier form (Hayes form 1D), it may be possible to associate this difference with Hayes' earlier observation that earlier phases of the ware could less frequently exhibit lighter-colored fabrics; see *LRP*, pp. 323-324, 336.
[300] Based on examination of **98** and **99**.
[301] Sanders 1999, p. 465, n. 39 and 40.

thus implying that at least two sources (or traditions) of production were concurrently manufacturing the same forms and at approximately the same scale.[302]

Range of Vessel Shapes

LRC finds in the Panayia Field include a number of shallow bowls and dishes. These include Hayes forms 1/3 (**73**), 1A (**74**), 1B, 1D (**75**), 2A (**76**), 2A or B (**77**), 2B (**78**; **79**), 2C (**80**), 2C variant (**81**), form 3, small (**82**; **83**), 3B (**84**; **85**), 3C (**86**), 3D, 3E (**87**), 3E/F (**88**; **89**), 3F (**90**; **91**; **92**; **93**; **94**), 3F (transitional to form 10) (**95**), 3F/G (**96**; **97**), 3H (**98**; **99**; **100**), 5A, 5B (**101**), and 10A (**102**; **103**; **104**; **105**; **106**). A few non-joining fragments of stamps were also found including a base of a Hayes form 2A stamped with concentric circles (**107**), lotus bud stamps of Hayes Group II (**108**), Hayes Group III stamps of crosses (**109**) and dolphins (**110**), and a rare stamp of a bird (**111**).

*Dating and Identification*

The original dating of LRC, Hayes forms 1A and 2A, based on finds from the Athenian Agora, placed the ware's first appearance there in the late 4th century,[303] but these dates were later revised, and a later, 5th-century date is now preferred.[304] The

[302] Whether this implies different clay sources or simply different clay recipes is a question to be answered through future scientific analysis.
[303] For form 1A, see *LRP*, p. 327, no. 1.3, and for form 2A, p. 328, no. 2.1; the republication of both in *Agora* XXXII revised these dates only slightly, see, respectively, p. 237, fig. 37, no. 1231, and p. 237, fig. 37, no. 1237. In the republication, Hayes still maintained that the ware first appeared there in the later 4th century, with regular importation coinciding with a "marked slump" in AfRS imports ca. 390-400, and LRC then becoming far more common in the 5th century; see *Agora* XXXII, p. 85. The evidence from the Panayia Field is not sufficient to comment on this "marked slump" of AfRS, nor can it comment on early 5th-century deposits in the Agora that show competition between LRC and AfRS forms 62 and 68 in fabrics C and E.
[304] In Constantinople, LRC was the preferred fine ware in the early 5th century, remaining popular until the 7th when its late products, namely form 10, are reportedly rare, with AfRS and some local wares gaining renewed popularity; see *Saraçhane*, p. 7. Reynolds 1995, p. 35, dates the first appearance of LRC on sites in the western Mediterranean from ca. 450, although with the earlier forms of the series generally absent;

evidence from the Panayia Field seems to suggest that LRC appears between the second quarter and mid-5th century, becoming the dominant fine ware by the end of that century.[305] It is continuously imported into the Panayia Field throughout the 5th and into the early 7th century, but contemporary finds do not appear in the 7th-century pit. Quantified evidence from elsewhere in Corinth shows that that arrival of LRC sometime in the early 5th century was quickly followed by its dominance over AfRS by mid-century; this relationship was reversed during the second half of the 6th century, with numbers becoming equal by the mid-7th.[306] For the discussion of the chronology of specific forms, see Chapter 6.

In an early report of Roman and Byzantine pottery from the Athenian Agora, W. O. Waagé had first identified pieces of this ware as Late Roman C ware.[307] Later, based on finds from Antioch, Waagé presented the first type-series of this ware and offered some discussion for dating.[308] When J. W. Hayes published the present-day foundational typology of this ware nearly a quarter century later, he retained Waagé's generalized designation ("'Late Roman C' Ware") due to the continued uncertainty of the center of

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he cites the deposit at S. Giacomo degli Schiavoni (Molise), on the Adriatic coast of central Italy as significant in this regard for the presence of early LRC, namely forms 1A, 1D, 2A, and small variants of form 3; see Albarella, Ceglia and Roberts 1993, pp. 167-171, nos. 18-22 figs. 6-7, there dated to the 420s-430s, but recently re-dated to the mid-5th century in Reynolds, Bonifay and Cau 2011, p. 29, no. 45. Hayes (2005, pp. 11-12) has since remarked that after a review of the Athenian Agora evidence upon which his original dates were based, he now considers that all of the LRC shapes from these Agora contexts may belong exclusively to the 5th century. Hayes is also cited as reporting in a personal communication that he now "considers LRC intrusive before ca. 400 in Athens;" see Slane 2008b, p. 476, n. 37. See also Cau, Reynolds and Bonifay 2011b, p. 6, for further discussion, especially in regards to "a lean towards a later, 5th century starting date for" LRC form 2.

[305] The earliest lots from the Panayia Field with LRC include 1996-045, 2000-006, 2000-007, 2000-018, 2002-008, and 2004-007. Among various sherds, the identifiable pieces include forms 1/3, 1A, 2A, and 2B; a base (diam. 0.100 m) in Lot 2000-018 might belong to Hayes form 3B, but the identification is not certain.

[306] Slane 2000, pp. 303-305, fig. 10.

[307] Waagé 1933, pp. 298-304.

[308] Waagé 1948, pp. 51-58, figs. 32-34, pls. X, XI.

production;[309] this situation was quickly amended when evidence for manufacture was discovered at Phocea in western Asia Minor (see below), and within a decade Hayes was able to offer the designation "Phocaean (Phocean) Red Slip Ware."[310] Nevertheless, both designations (often abbreviated LRC or PRS) have survived and continue to appear in ceramic reports. LRC is employed in this analysis, as it is both the preferred nomenclature in recent publications of Corinthian material,[311] as well being a better reflection of the ambiguities surrounding the centers of production of this ware that have appeared in recent years (see below).

*Discussion*

When J. W. Hayes classified LRC, he noted no major differentiation in the fabric, with the exception of that of his form 3H,[312] and the identification of the less frequent, softer and lighter-colored fabrics that occur "mostly in the earlier phases of the ware."[313] As a result, LRC products were considered to essentially be a homogenous group. Soon thereafter, evidence of kiln sites in Phocea in western Asia Minor came to light, supplemented with chemical analyses that confirmed the site as the primary source of production.[314] Like North Africa and its production of AfRS (see above), Phocea, in

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[309] *LRP*, pp. 323-370.
[310] *Supplement*, pp. 525-527. Hayes has retained this designation up to his recent publications of the ware; see, for example, *Agora* XXXII, pp. 83-88.
[311] See *Corinth* XVII, p. 79, no. 121; *Corinth* XVIII.2, pp. 57-58 (where it appeared as "Phocaean red-slip ware/Late Roman C"); Sanders 1999; Slane 2000, 2003 (fig. 19.8), 2008b; Slane and Sanders 2005.
[312] The fabric of the thicker-walled form 3H has been described as being coarser than that employed in other LRC vessels, with occasional gold mica flakes and a thicker, glossier slip, leading Hayes to postulate that they might be products of a subsidiary, regional workshop; see *LRP*, p. 336; *Agora* XXXII, p. 88.
[313] *LRP*, pp. 323-324, 336. More recently, see *Agora* XXXII, p. 84, where Hayes refers only tangentially to variations in color and differing amounts of inclusions, and using the former as a very general indicator of date.
[314] *Supplement*, p. 525, with references; see also *Agora* XXXII, pp. 83-84. For the chemical analysis, see Mayet and Picon 1986, who tested a variety of samples collected from a number of sites throughout the western Mediterranean, Portugal and Britain. Recent macroscopic examination of pottery excavated from

addition to possessing direct access state-sponsored distribution routes, is agriculturally rich in olive production, the trimmings from which could easily supply a useful source of kiln fuel for the manufacture of high-quality red slipped fine wares.[315]

The remains of workshops with evidence for the production of both late Çandarli wares and a variant of LRC were later found at the site of Grynion, 40 km north of Phocea, where the potters employed a fabric that was chemically proven to be different from the 'Phocean' LRC that is typically encountered.[316] Chemical analyses of material collected from the Lower Habur Survey in northeastern Syria, supplemented by LRC from Ephesos, showed that the LRC from Ephesos chemically subdivided into the same Phocea and Grynion/Çandarli groups, while samples from Syria either matched the production from Phocea or suggested another possible center of production of LRC shapes in Syria.[317] Later chemical analyses of LRC samples from Ephesos, Çandarli and Priene subdivided chemically and could again be attributed to the same Phocea and Grynion groups, but the wide variation among the samples, confirmed by heavy mineral analyses, might indicate the presence of more than one production center.[318] Further macroscopic observations confirmed the distinctiveness of the Grynion fabric.[319] Systematic chemical and petrographic analyses were also conducted on samples of LRC as well as identified "imitations" manufactured in Ephesos, "Ephesian Red Slip Ware

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Phocea adds confirmation to the homogeneity of the fabric as well as confirmation of the presence of LRC wasters among the archaeological material collected there; see Vaag 2005, p. 132. See also Lewit 2011, pp. 317-318, with further references.

[315] See Lewit 2011, pp. 318-319.

[316] Empereur and Picon 1986.

[317] See Schneider 1996, p. 196, fig. 5; the possibly Syrian LRC samples were chemically different from the LRC that was sampled from Ephesos and other areas of western Asia Minor which matched the known reference group of LRC published by Empereur and Picon (1986).

[318] Schneider 2000, p. 533, table 3; production from Phocea and Grynion was again identified based on Empereur and Picon's (1986) chemical groups.

[319] See Vaag 2005, pp. 132-133, 136, who macroscopically confirmed the "difference in mineralogical composition" between the fragments from Grynion and material from Phocea.

(ERSW)." The results reveled that *two* macroscopically different fabrics *both* represented chemically-similar products from Phocea, displaying only some variances in mineralogy and firing, while a third fabric, from Grynion, was chemically different but chronologically and typologically similar; at least two other fabrics were employed in the manufacture of a local, Ephesian production of LRC.[320]

The Grynion workshop, along with the more localized workshops in northern Syria and Ephesos, has therefore been revealed to have employed a distinct fabric in its manufacture of LRC that is different from the fabric (or fabrics) used in Phocea. It is also the only workshop to demonstrate any evidence of continuity between the production of earlier Çandarli ware and LRC.[321] The question now being asked is the extent to which these other manufacturers exported their wares; while LRC-related products manufactured in the Habur Valley and Ephesos were almost certainly for local markets, those from Grynion are more uncertain. Earlier scholarship seemed to source the LRC that travelled long-distance distribution routes to Phocea, but more recently some

[320] See Ladstätter and Sauer 2002, 2005. In the earlier report the authors define two fabrics (LRC-Fabric A and B) that are both found to be similar to the known mineralogical composition of LRC from the production centers at Çandarli and Phocea, despite the significant differences in firing temperature and the slight differences in mineralogy noted between them; three other fabrics (LRC-Fabric C-E) were found to be completely different and represented a local Ephesian production of interpretations of LRC forms. In the later report the authors again defined two, only slightly differing fabrics (LRC type A and B, equated to the earlier LRC-Fabric A and B) that are typologically and petrographically identified with commonly-identified LRC products and chemically formed a single group determined to come from Phocea, while another fabric (LRC type C), containing volcanic temper and clearly chemically different, is sourced to Grynion. There was no difference in typology or chronology among types A, B and C, and the authors were left to assume that a number of centers operated concurrently over a long period of time. The local fabric ERSW-A is equated to LRC-Fabric C in the earlier report, while ERSW B is comprised of both LRC-Fabric D and E.

[321] Vaag 2005, p. 132. Hayes (*Agora* XXXII, p. 83) is in support of the theory that LRC is "a successful offshoot" of production at Çandarli, but the issue is still a source of debate among others; see most recently Cau, Reynolds and Bonifay 2011b, p. 6. Due to the period of the deposits from the Panayia Field under study here, no new information can be added to the debate regarding the possibility of the development of LRC directly from earlier Çandarli wares.

scholars are beginning to feel that LRC from Grynion had a larger role in the imports recovered from distant sites.[322]

In light of this research, recent publications are now de-emphasizing the homogeneity of the ware and are calling for revisiting both the original material gathered from the kiln sites and the earlier chemical analyses.[323] The situation is in agreement with current research at Corinth; during the preliminary publication of the Panayia Bath, G. Sanders identified two fabric sub-groups of LRC, LRC1 and LRC2, which were adhered to, and further confirmed, in this analysis (see descriptions above).[324] It might be possible that LRC1 and LRC2 are both products of workshops in Phocea, equated with the LRC-Fabric A and B identified during the analyses of samples from Ephesos, but scientific analysis of the Panayia Field examples is needed in order to confirm this hypothesis.[325] Until all of the major variations of this ware that moved along long-distance networks have been properly sourced, it would appear that a return to the term "LRC" is in order, rather than the more restrictive "Phocean Red Slip."[326]

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[322] LRC samples tested from various western provinces, as well as the sites of Apamea, Seleucia, Antioch, and the Habur Valley in northern Syria seem to only chemically match the Phocean workshop; see Mayet and Picon 1986; Schneider 1996, p. 196, 2000, p. 533. Vaag 2005, p. 133, believes that the products of the Grynion workshop saw only regional distribution and did not travel with overseas exports. Hayes, on the other hand, entertains the possibility that a few LRC examples from the Athenian Agora, "in variant fabric," might be products from Grynion; *Agora* XXXII, p. 84. Others now consider Grynion as among the various sources that supplied a large percentage of long-distance products; see Cau, Reynolds and Bonifay 2011b, p. 6.

[323] Cau, Reynolds and Bonifay 2011b, p. 6, with references. Papaioannou 2011, p. 199, states that in addition to Phocea, secondary production centers of LRC were located at Pergamon, Grynion, "and even near Priene in the Maeander Valley." Recently, J. Hayes (pers. comm.) offered that Phocean sources for the ware actually diminish over time as other sources for this ware appear.

[324] Sanders 1999, p. 465, n. 39 and 40.

[325] Some features of the macroscopic descriptions of these fabrics in Ladstätter and Sauer 2002, p. 324, seem potentially similar, but a definite correspondence cannot be made at present.

[326] A similar argument has been made for the abandonment of the term "Cypriot Red Slip," and a return to "LRD," in light of the regional variation in red slipped fine wares noted in Cyprus and southern Asia Minor; see most recently Poblome and Fırat 2011. This argument for the renaming of Cypriot Red Slip has become even more valid with the publication of kilns that manufactured the ware in Pamphylia; see Jackson et al. 2012.

Like AfRS, LRC was widely distributed, but specific fabric descriptions are rarely provided. Generally-speaking, the ware's distribution seems to have been focused primarily in the eastern Mediterranean and, while it is comparatively rare in the west (especially at Carthage), it was the dominant fine ware on specific sites in Italy and Spain from ca. 450 to the 6th century and did occasionally manage to reach as far as Britain and Ireland.[327] Its distribution to sites in the northeast Peloponnese during the Late Roman period, including those along the shores of the Saronic and eastern Corinthian Gulfs, shows some differences to that of AfRS. LRC is little present on the northern shores of the Gulf of Corinth,[328] while no LRC was noted during the survey of the territory surrounding Sikyon on the southern shores.[329] On the opposite side of the isthmus, LRC displays such a significant presence at the Athenian Agora that the site served as the type-site for this ware.[330] Some later forms of LRC have been published from sites in the Saronic Gulf,[331] while LRC finds from Kenchreai seem to greatly outnumber AfRS in terms of frequency.[332] In the vicinity of Corinth, the Eastern Korinthia Archaeological Survey documented the presence of forms 3 and 10.[333] The same range of forms of LRC

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[327] For studies concerning the distribution of LRC, see *LRP*, pp. 414-424, maps 14-16, 32-34; *Supplement*, pp. 525-526; Reynolds 1995, pp. 34-36, fig. 162; *Agora* XXXII, p. 86. See also Papaioannou 2011, pp. 206-207.
[328] For Delphi, see Pétridis 2010, p. 128, fig. 225, pl. 41, who notes only Hayes forms 1 and 3, otherwise being little represented at the site. LRC seems to have not been a major component of finds collected during survey of southern Boiotia; see Vroom 2003. Nor was LRC noted among the finds from Diporto on the island of Makronisos; see Gregory 1986.
[329] Lolos 2011; see esp. p. 336. Recent excavations at the site of Sikyon (The Sikyon Excavation Project) have revealed that LRC finds on the plateau were rare, and consisted of only a few examples of form 3, and no examples of form 10; S. Gallimore (pers. comm.), reporting on the 2013 and 2014 excavation seasons.
[330] See *LRP*; *Agora* XXXII. Like finds from the Panayia Field, finds from the Athenian Agora do not seem to go beyond Hayes form 10A. However, one example of LRC form 10C was published from Porto Rafti on the east coast of Attica; see *LRP*, p. 343, fig. 71, no. 10.12.
[331] For Aegina, see Felten 1975, p. 69, no. 99, fig. 9, for LRC form 10C. For the villa site of Akra Sophia, see Gregory 1985, p. 424, nos. 1, 3, fig. 4, for LRC, Hayes forms 3F, 10B.
[332] *Kenchreai* IV, pp. 92, 98-99, nos. LRB 33-LRB 35, fig.10, pls. 23-24, including instances of LRC, Hayes forms 3C, 3H, 10A (or form 1), and several stamps.
[333] See Pettegrew 2007, tables 4, 13, and 2010, table 2.

as noted in the Panayia Field are noted in other areas of Corinth,[334] although examples of Hayes form 10C, absent here, have been recovered from the area east of the theater.[335] Finds from the inland sites of Nemea and Pyrgouthi in the Berbati Valley have thus far revealed a complete absence of LRC.[336] In the western and central Argolid, there is only some evidence for the significant import of LRC beyond the mid-6th century,[337] while coastal Aegean sites in the Argolid have supplied finds including the latest LRC products.[338]

## LR AMPHORA 1 FABRIC

*Ware*

Fabric Description

Standard fabric (Pl. 1.6): Reddish yellow (5YR 6/6 to 7.5YR 6/6) or yellowish red (5YR 5/6) fabric. Characterized by frequent to common fine to small (sub-) rounded and angular black grits; few to frequent fine to small bluish-gray chips with smooth surfaces; rare to few (to frequent) very fine to fine (to small) sub-rounded white grits; rare to few fine to small sub-rounded and angular red pellets and chips; few to frequent fine to small round and sub-rounded voids. Rarely noted are few to frequent very fine fugitive sparkling bits. Granular (to hackly) break; medium hard (to hard) fabric.[339]

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[334] See, for example, Slane 2000; Slane and Sanders 2005.
[335] Slane and Sanders 2005, p. 273, n. 34.
[336] Based on the various preliminary reports of excavations at Nemea as well as those for the Nemea Valley Archaeological Project; for Pyrgouthi, see Hjohlman 2005.
[337] For Argos, see Abadie-Reynal 1989, pp. 144, 155, figs. 14, 16, who emphasizes the presence of Hayes forms 3E and 3F; her fig. 16 charts the significant decline of LRC imports into Argos during the second half of the 6th century, which continued to decline throughout the 7th. But see also Aupert 1980b, pp. 418-419, nos. 127-156, fig. 36, for several examples of Hayes forms 3F and 10A from Argos. For Asine, see Höghammar 1984, pp. 88-89; while not making extensive use of J. Hayes' typologies in *LRP*, the rim profiles published on pp. 93, 95, figs. 8, 10, testify to the presence of LRC, Hayes forms 2B (no. 1567:1), 3B (no. 1506:1), 3B or E (no. 705:1), 3C (nos. 706:1, 1493:1), 3E (no. 707:1), and 3F (no. 4347:3). Personal observation detected no LRC among the finds from the cave at Andritsa; see also Kormazopoulou and Hatzilazarou 2010.
[338] For sites surveyed within the Methana peninsula, see Bowden and Gill 1997, p. 86, table 8.3, for LRC, Hayes forms 2A, 3, 3B?, 3C, 3E, 3F, 3H, 5?, 10A, 10B, 10B/C. For Late Roman Halieis, see Rudolph 1979, pp. 310, 313, nos. 23-32, figs. 7-8, for LRC, Hayes forms 3, 3B, 3H, 10B, 10C.
[339] Based on macroscopic examination of various unnumbered fragments in Lot 1996-045 and **158**, an unnumbered rim-handle in Lot 1998-029 (form as **159**; **160**; **161**), an unnumbered handle in Lot 2001-004, and **161**.

Regularly-occurring variations of this fabric have also been noted, including a 'white-flecked' variation in which the Munsell readings and fabric are as described, but with the additional appearance of frequent fine to small sub-rounded white flecks, especially clustered near to, and on, the exterior surface (Pl. 1.7).[340] In a second variation, the fabric is again as described, but is fired to near-white on the surface (Pl. 1.8).[341] These are not different fabrics, but rather variations that took place during production that affected the standard description.

Range of Vessel Shapes

Vessels appearing in this fabric in the Panayia Field are limited to amphoras of the LR Amphora 1 type. These include some examples of an earlier version with a narrow mouth and (typically) an ovoid body (**158**), as well as later versions with a wider mouth and an ovoid or (near-)cylindrical body (often narrowing slightly at mid-section) (**159**; **160**; **161**).

*Dating and Identification*

The LR Amphora 1 begins to appear in the Panayia Field by the second quarter to mid-5th century (at the latest) in narrow-mouthed amphoras, increasing in quantity through the 5th century. It becomes a notable presence in deposits by about the mid-6th century, by then appearing in a later version with a wider mouth. The fabric continues to appear in amphoras in the early 7th century, as well as in one near-complete, but isolated,

[340] Based on macroscopic examination of an unnumbered rim-handle in Lot 1998-029 (different from previous). Other examples of this variation, such as **159**, exhibit white flecks throughout the fabric.
[341] Based on macroscopic examination of an unnumbered handle in Lot 1998-021; the fabric of **161** is very pale brown (approx. 10YR 7/3), with the color of the surface ranging from white (2.5YR 8/2) to between pink (7.5YR 7/4) and reddish yellow (7.5YR 7/6).

example in the 7th-century pit. Quantified studies of material from other areas of Corinth place the first appearance of the LR Amphora 1 at roughly the same time; quantities of the form then steadily rise from the second half of the 5th to first half of the 6th century, fluctuating only slightly as it continues into the 7th century.[342]

The LR Amphora 1 has enjoyed a long history of scholarship as one of the major recognized Late Roman amphora types; as a result, multiple designations have appeared that ultimately have come to refer to the same general form.[343] This analysis employs the appellation utilized in recent Corinth publications, which ultimately derives from J. Riley's work at Carthage (and Benghazi).[344]

*Discussion*

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[342] Slane 2000, pp. 304-305, 310; her fig. 13 illustrates the presence of low numbers of the amphora dating as far back as ca. 310, likely representing the amphora's earlier antecedents. See also Slane and Sanders 2005, p. 285.

[343] For the Ballana 6, see Kirwan 1938a, pp. 388-389, pl. 111 (wide, near-cylindrical body, wide mouth); for the British Bii, see Thomas 1959, pp. 92-93 (not illustrated); for the Beltrán 82, see Beltrán Lloris 1970, pp. 579-580, fig. 238:5 (wide, near-cylindrical body, wide mouth); for the Kuzmanov XIII, see Kuzmanov 1973, fig. 1 (wide, cylindrical body, wide mouth); for the Caesarea Amphora type 5, see Riley 1975, pp. 31, 33 (not illustrated); for the Rădulescu type 10, see Rădulescu 1976, pp. 108-109, 114, pl. XI: 1-1a, 2-2a (wide, near-cylindrical body, wide mouth); for the Scorpan type VIII-B, see Scorpan 1976, pp. 163, 178-179, pls. VIII:1-3, XXXIII (nos. 1: wide, cylindrical body, wide mouth; no. 2: ovoid body, narrow mouth; no. 3: narrow, cylindrical body, wide mouth); for the Egloff 164, see *Kellia* III, p. 112, pls. 19:5, 19:6:c, 19:7:d, 57:4 (ovoid body, wide mouth); for the Egloff 169, see *Kellia* III, p. 113, pls. 4:16, 19:1-3, 19:6:a-b, 19:7:c, 58:2, 62:5 (ovoid body, narrow mouth); for the Zemer 63, 64, and 65, see Zemer 1977, pp. 76-78, nos. 63-65, pl. 23 (narrow, near-cylindrical bodies, wide mouths); for the Zemer 66, see Zemer 1977, pp. 76-78, no. 66, pl. 23, (ovoid body, wide mouth); for the Benghazi LR Amphora 1, see Riley 1979, pp. 212-216, nos. D337-D345, figs. 42, 91 (ovoid body, wide mouth); for the Benghazi LR Amphora 1a, see Riley 1979, p. 216, nos. D346-D347, fig. 91 (narrow, near-cylindrical body, wide mouth); for the Carthage LR Amphora 1, see Riley 1981, p. 120, fig. 14 (see also Hayes 1976, p. 116) (ovoid body, wide mouth); for the Yassi Ada type 1, see Bass 1982, pp. 155-157, nos. CA 1-CA 12, figs. 8-1 to 8-3 (wide and narrow cylindrical bodies, wide mouths); for the Fulford and Peacock form 2, see *Carthage BM* I.2, pp. 119, 121, fig. 34:1-2 (no. 1: wide, near-cylindrical body, wide mouth; no. 2: ovoid body, wide mouth); for the Keay LIII, see Keay 1984, pp. 268-278, figs. 116-120 (wide variety); for the Peacock and Williams class 44, see Peacock and Williams 1986, pp. 185-187, fig. 104, "Class 44" (fig. 104:A: wide, near-cylindrical and ovoid bodies, wide mouths; fig. 104:B: narrow cylindrical bodies, wide mouths); for the *Saraçhane* type 5, see *Saraçhane*, pp. 63-64, 103, nos. 30.156-157, fig. 47 (near-cylindrical body, wide mouth); for a 7th-century "imitation" of the *Saraçhane* type 5, see type 21 (pp. 69, 104, nos. 30.193-194, fig. 49 (near-cylindrical body, wide mouth); for a possible derivative of the *Saraçhane* type 5 found in a mid-/late (?) 8th-century deposit, see *Saraçhane* type 34 (pp. 71, 111, no. 34.76, fig. 23.12) (wide mouth, body not preserved).

[344] See for example, Slane and Sanders 2005.

The LR Amphora 1 finds in the Panayia Field and in other areas of Corinth belong to a long typological evolution of the form. Earlier versions of the LR Amphora 1 produced in western Cilicia were exported via Laodicea since the 3rd and 4th centuries,[345] and other amphoras manufactured in Pamphylia and Cilicia were exported since even earlier centuries of the Roman period.[346]

The publication of various fabric descriptions associated with the LR Amphora 1 type suggests that the form was manufactured at numerous centers in different fabrics.[347] The origin of the amphora form was debated for some time, with both Egypt and Cyprus originally suggested before north Syria was most often considered.[348] The amphora is now recognized to have been produced in numerous geographic areas; already in the late 1980s, 20 workshop sites producing the amphora were identified, located at Kourion and Amathous on Cyprus, on Rhodes and on the facing mainland at Işmeler in Caria, and with the remaining workshops identified on coastal sites stretching along the coast of Cilicia to the Orontes River but centering in the Bay of Iskenderun. Observations made at each workshop indicated that other wares were often made at the same sites, and at least

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[345] Reynolds 2005, pp. 575-576.
[346] See Rauh and Slane 2000; Rauh 2004; Autret and Rauh 2010; Autret 2012.
[347] For some published fabric descriptions, see Riley 1979, p. 212; Peacock and Williams 1986, p. 187; Touma 1989, p. 873; van Alfen 1996, pp. 192-201, who also distinguishes morphological features; Rautman 2003, pp. 168-171; Williams 2005; Burragato et al. 2007.
[348] In publications of ceramics recovered from Tocra and Carthage, J. Hayes originally identified this amphora type as Egyptian; see Boardman and Hayes 1973, p. 116, and Hayes 1976, p. 116, respectively. *Dipinti* noted on some, but not all, examples of LR Amphora 1 recovered from the Athenian Agora were identified as Cypriot by M. Lang; see *Agora* XXI, pp. 58, 62, 63, nos. Ha 36, Ha 44, pls. 34, 35, both identified as belonging to a LR Amphora 1 similar to that published in *Agora* V, p. 115, no. M 333, pls. 32, 58. Heavy mineral analysis reported in Williams 1979, p. 181, conducted on an amphora sample from Tintagel revealed that it must have originated in an area of ultra-basic rock, of which small tracts exist on Cyprus, Lesbos and Euboea, with larger deposits in southwest Asia Minor and northern Syria. Based on petrographic data the Egyptian source was later reconsidered in favor of the southwestern coast of Asia Minor or the region around Antioch and, together with Lang's evidence of the *dipinti*, a general source in the northeast Mediterranean was suggested; see Riley 1979, p. 212. Riley (1981, p. 120) later favored northern Syria in connection with the agricultural development occurring in the Antioch region during the Late Roman period noted by Liebeschuetz (1972, pp. 79-81).

one site had a long history, with evidence of manufacture of earlier amphora forms.[349] New LR Amphora 1workshops have since come to light, especially along the southern coast of Cyprus that include a kiln complex at Paphos and another kiln at Zygi, both of which also manufactured the LR Amphora 13; at least two other unidentified sources on the island have also been recognized.[350] More kiln sites continue to be discovered in Cilicia, with one more at Soli/Pompeiopolis,[351] and several more at Elaiussa-Sebaste which were additionally accompanied by scientific fabric analyses.[352] Egypt has also been shown to be a possible source of the amphora form as well.[353] In the Aegean, five kiln sites, perhaps dated to the 5th century, have been discovered on Paros that manufactured a similar amphora type,[354] and production from the second half of the 6th century to the mid-7th century at Halasarna on Kos seems to mirror the production on Cyprus in its manufacture of both LR Amphoras 1 and 13.[355] It is considered by some that production of the form in general continued, at least at select centers, into the 9th century, and perhaps even later.[356]

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[349] Empereur and Picon 1988, p. 33, fig. 21, which shows 20 sites in a paper delivered in 1987; 1989, pp. 236-243, figs. 18-19, from a paper delivered in 1986 which shows only 15 sites, having not yet identified(?) the coastal sites in Pamphylia and Pisidia. For comments, see Reynolds 2005, pp. 565-566, where he argues against the Kourion production site, and further argues that non-Cypriot production was in fact limited to the province of Cilicia; for further comments, see also Williams 2005, pp. 616-619, who reproduces (in fig. 5) Empereur and Picon's (1988, fig. 21) map with the comment that "the geology of some of the more westernly kiln sites is different" (p. 617), and retaining the kiln site at Kourion (p. 618); see also Elton 2005; Pieri 2007, fig. 2, and fig. 4 which reproduces and updates Empereur and Picon's (1988, fig. 21) original map.
[350] Demesticha 2000, 2003; see also Rautman 2003, pp. 169-170 with further references; Pieri 2007, fig. 5.
[351] Autret, Yağci and Rauh 2010.
[352] Iacomi 2010; Ferrazzoli and Ricci 2013, pp. 217-218. For the petrographic and chemical analysis, see Burragato et al. 2007.
[353] Empereur and Picon 1992, p. 149. Recent research has documented the production of the LR Amphora 1 type, but with handles attached diagonally, in a calcareous clay at 'Uyun Musa, located on the northernmost tip of the Red Sea in Egypt; see Ballet and Dixneuf 2004, pp. 70-71, fig. 12. Reynolds 2005, pp. 565-566, however, omits any discussion of Egyptian production.
[354] Picon and Empereur 1986, pp. 506-507, type IV; see also Arthur 1998, p. 164.
[355] See recently Diamanti 2010a, 2010b, 2012.
[356] Arthur 1998, p. 165.

The exact source of the LR Amphora 1 fabric found in the Panayia Field is unconfirmed, given the large number of known production centers in the eastern Mediterranean.[357] The fabric of the LR Amphora 1 examples here, despite some noted variations (see fabric descriptions, above), seem fairly standardized and a single source for all seems likely. Other examples of this amphora form from other areas of Corinth have been remarked to come from northern Syria.[358] Based on the available published fabric descriptions, a general source in the area of the Bay of Iskenderun, in Cilicia or northern Syria, seems likely.[359]

In light of its manufacture over vast areas, it is striking that the amphora form was nevertheless able to be produced according to standardized specifications. Study of a large body of LR Amphora 1 examples from the 7th-century Yassi Ada shipwreck was able to illustrate the technical skill involved in their manufacture, as they appeared in a number of specific volumetric sizes, possibly denoting its use for a number of different commodities with varying degrees of value.[360] The manufacture of the LR Amphora 1 is thereby illustrative of a highly-evolved, shared ceramic tradition that was spread throughout much of the eastern Mediterranean.

Generally speaking, the form of the LR Amphora 1, independent of differences in fabric, is among the most widely-distributed amphora form throughout the Late Roman Mediterranean and beyond.[361] It is also found on numerous other sites in the region

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[357] Arthur 1998, p. 165, calls attention to the problem.
[358] Slane 2000, p. 304; Slane and Sanders 2005, p. 285.
[359] The fabric may agree with that described as "LR1(3)" at Kalavasos-*Kopetra* on Cyprus, identified as a product of Cilicia or Syria; see Rautman 2003, p. 170. See also a comparison of various fabric descriptions published by Williams (2005, pp. 616-619, pls. 1-5).
[360] See van Alfen 1996.
[361] For Constantinople, see *Saraçhane*, p. 64, where it is noted that the LR Amphora 1 is common in the 5th century, and is the commonest type of amphora in 6th- and 7th-century deposits and "throughout the eastern Mediterranean in Early Christian contexts;" for a 7th-century example, cf. p. 103, nos. 30.156-157, fig. 47,

around Corinth.[362] The distribution of specific productions of the LR Amphora 1, however, is very difficult to trace through the published scholarship given the multiplicity of production sites. Comparative first-hand examination and comparative scientific analyses of examples of this type are necessary if the distribution of the fabric present in the Panayia Field is to be traced.

## MICACEOUS WATER JAR (LR AMPHORA 3) FABRICS

*Ware*

Fabric Description

Gray Fabric (Pl. 1.9): Dark gray fabric and surfaces. Abundant very fine to fine silver sparkling flakes; frequent very fine to fine sub-rounded voids. Rarely noted are rare fine sub-rounded white and/or gray grits. Granular to conchoidal break; medium hard fabric.[363]

Red Fabric (Pls. 1.10, 1.11): Red (10R 4/8 to 2.5YR 4/8, with 2.5YR 4/6 and 5/6 also noted) fabric. Abundant fine silver sparkling bits; (rare to) few very fine to fine rounded black grains; few (very fine to) fine sub-rounded voids. Occasionally noted (in the amphoras) are rare to few very fine to fine rounded bright red pellets; rare very fine to

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type 5; for a 7th-century imitation, cf. p. 104, nos. 30.193-194, fig. 49, type 21. Among the finds on Cyprus, it has been thoroughly documented in Late Roman levels at Kalavasos-*Kopetra* where it appears in several fabrics, and at Saranda Kolones in Paphos in a mid-7th-century deposit; for Kalavasos-*Kopetra*, cf. Rautman 2003, pp. 168-171; for Saranda Kolones, cf. Hayes 2003a, p. 492, no. 264, fig. 25. It often appears in the Aegean and Adriatic Seas; for the Yassi Ada shipwreck of ca. 625, see Bass 1982, pp. 155-157, nos. CA 1-CA 12, figs. 8-1, 8-2, type 1; for Thasos, see *Thasos* XIII, pp. 53-56, nos. CC210-CC283, figs. 23-24, in at least two different fabrics; for Torone, see Papadopoulos 1989, pp. 87-89, no. 3, fig. 12, and 2001, pp. 555-558, nos.14.413-14.419, figs. 151-153, "type II;" for Butrint, see Reynolds 2004a (with catalogue in Reynolds 2004b), pp. 230-231, nos. 292-305, fig. 13:174-184; for Durrës (ancient Dyrrachium), see Shkodra 2006, pp. 436, 439, 453-454, nos. 29-31, fig. 6, where no. 29 represents an earlier form, who also notes that the LR Amphora 1 is noted as frequently appearing on Albanian sites. The amphora type enjoyed wide distribution in the west, even reaching Ireland; see Riley 1981, p. 120, especially for its appearance at Carthage; Reynolds 1995, p. 71; Arthur 1998, p. 164. Its strong presence on sites along the Black Sea coast and on the Danube has resulted in the identification of no less than six subtypes, some with their own series of variants; see Opaiţ 2004b, pp. 8-10.

[362] For Argos, see Abadie 1989, p. 52, fig. 10; see also Abadie-Reynal 1989, pp. 151-153, fig. 8; for survey of the Methana peninsula, see Bowden and Gill 1997, p. 88; for the Eastern Korinthia Archaeological Survey, see Pettegrew 2007, table 5, 2010, table 3; for Kenchreai, see *Kenchreai* IV, pp.117-118, nos. RC 23a-e, and likely other fragments depicted in pls. 30-32; for Megara, see Korosis 2014, p. 305, fig. 4; for Athens, see *Agora* V, p. 115, nos. M 332, M 333, pls. 32, 58, layers X-XII re-dated late 4th to mid-5th century (*Agora* XXXII, p. 300).

[363] Based on examination of **162** and **163**.

fine white flecks. Rarely noted (in the amphoras) are rare (to few) very fine to fine sub-rounded gray grits; rare fine sub-rounded white grits; rare fine sub-rounded beige (clay?) pellets. Granular break; soft to medium hard fabric.[364]

Various other fabrics were also utilized for the manufacture of micaceous water jars, but these are limited to earlier Roman periods and pre-date the parameters of this analysis.[365] Residual body sherds belonging to these early fabrics occasionally appear in the Late Roman deposits from the Panayia Field. The fabrics described above were contemporary with these earlier fabrics, but were ultimately longer lived. Other amphoras from late 6th-century contexts are possibly related to the micaceous water jar, but show enough differences in fabric to cast doubt on confirming such an identification (**169**; **170**) (Pls. 1.12, 2.1).[366]

Range of Vessel Shapes

The gray fabric only appears in the Panayia Field in one-handled micaceous water jar amphoras (**162** and **163**), while the red fabric appears in one-handled (**164**; **165**; **166**) and two-handled micaceous water jars (**167**; **168**), as well as in a type of unguentarium (**392**).

*Dating and Identification*

Both gray and red fabrics, used in one-handled micaceous water jars, appear in the earliest deposits analyzed here, but the gray fabric does not seem to last beyond the

[364] Based on examination of **164**, **165**, **166**, **167**, **168**, and **392**. The fabric description of the unguentarium (**392**) might be revelatory of slight differences in the preparation of the clay; the sparkling bits appear more plate-like, black grains are few to frequent, and there are frequent to common fine sub-rounded and elongated voids.
[365] See Lang 1955, pp. 277-278.
[366] See Chapter 5 for fabric descriptions.

mid-5th century.[367] Although isolated fragments of the red fabric occur consistently throughout nearly all later deposits, fragments preserving more than simple body sherds do not appear again until the late 6th century, suggesting a break in importation.[368] When the micaceous water jar does return, it appears with two handles and employs only the red fabric.[369] Micaceous water jars appear to be residual again in the Panayia Field in the 7th century, but the unguentaria only appear in the Panayia Field in the late 6th and 7th century.[370] Quantified data from other areas of Corinth show that two-handled micaceous water jars (presumably in the red fabric) appear sometime in the first half of the 5th century alongside the earlier fabrics as the latter are becoming (or already are) residual, then displaying steady growth until a peak in the second half of the 6th century before plummeting in the 7th.[371]

The associated amphora forms have appeared in various publications under a variety of appellations,[372] while the commonly-used term "micaceous water jar" is

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[367] Although fragmentary sherds continue to be seen in later deposits, these are certainly residual.
[368] Similar breaks in importation were noted at Tocra, in the Sinai, Constantinople, and Argos; see, respectively, Boardman and Hayes 1973, p. 116-117, Arthur and Orem 1998, pp. 199-201, *Saraçhane*, p. 63, and Abadie-Reynal 1989, p. 151. Riley 1979, p. 230, following Boardman and Hayes, states that the form declined rapidly after the mid-6th century in the eastern Mediterranean generally.
[369] Two-handled types similar to those in the Panayia Field appear in the Athenian Agora in the early 6th century; see *Agora* V, p. 119, no. M 373, pls. 34, 41; see *Agora* XXXII, p. 300, for the re-dating of layer XIII. This type appears elsewhere in Corinth already in 5th-century deposits; see Slane and Sanders 2005, pp. 255, 264. At Topraichioi, Scythia, a two-handled version is noted to appear at the end of the 4th century; see Opaiţ 2004b, p. 13. Peacock and Williams 1986, p. 189, also date the two-handled type to the late 4th century; see also Papaioannou 2011, p. 202. See also Riley 1981, p. 118, for a similar date for the start of the two-handled type.
[370] For another example, more complete than **392**, cf. C-1933-1512, as well as the more fragmentary C-1933-1513, both recovered from Grave 33 (G273) of the Hill of Zeus cemetery in Corinth; for a date of ca. 600 for Grave 33, see Slane and Sanders 2005, p. 291, n. 90. Elsewhere this unguentarium form seems to have spanned the 5th to 7th centuries with no dramatic change in typology, although there is evidence for size variations; see Lochner, Sauer and Linke 2005, p. 650. Other unguentaria published from the Shrine of the Seven Sleepers in Ephesos are similar in form, but display a more careful level of execution, and much more bulbous bodies; cf. *Ephesos* IV.2, p. 96, fig. 107.
[371] Slane 2000, pp. 304, 310, fig. 13.
[372] For the Ballana 13a, see Kirwan 1938a, p. 390, pl. 111 (two-handled); for the British Biv, see Thomas 1959, p. 93 (not illustrated); for the Beltrán 81, see Beltrán Lloris 1970, p. 579, fig. 238:4 (two-handled); for the Kuzmanov VIII, see Kuzmanov 1973, fig. 1 (two-handled); for the Caesarea Amphora type 4, see

retained here in conjunction with its usage in previous publications of Corinthian material.[373] The unguentaria have not appeared as extensively in typological studies, but have been briefly discussed.[374]

*Discussion*

Although no kiln sites have yet come to light, the micaceous water jar has been suggested to have possibly come from the region of Ephesos (Meander River valley) or Sardis (Hermos River valley) in western Asia Minor.[375] The red fabric of the unguentaria has previously been remarked to appear to be the same as that of the micaceous water jars, an observation now supported by scientific analysis,[376] and is also thereby sourced to the area around Ephesos.

Although not as widely distributed as some other Late Roman amphora types, the micaceous water jar nevertheless played a significant role in the markets of the Mediterranean and beyond,[377] as well as the regional markets surrounding Corinth.[378] The

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Riley 1975, p. 31, no. 19 (two-handled); for the Scorpan type V-O, see Scorpan 1976, pp. 158-159, 177, pls. V:1-6, XXXI (nos. 1-4: one-handled; nos. 5-6: two-handled); for the Egloff 181, see *Kellia* III, p. 116, pls. 22:7-8, 60:2 (two-handled); for the Benghazi MR amphora 3, see Riley 1979, pp. 183-186, figs. 31, 83 (one-handled); for the Benghazi LR amphora 10, see Riley 1979, pp. 229-230, fig. 48 (two-handled); for the Carthage LR Amphora 3, see Riley 1981, p. 118, fig. 12 (see also Hayes 1976, p. 117) (two-handled); for the Fulford and Peacock form 3, see *Carthage BM* I.2, p. 121, figs. 34:4-5 (two-handled); for the Keay LIV/Bis (variants A-C), see Keay 1984, pp. 286-289, fig. 124 (all with two handles); for the Peacock and Williams class 45, see Peacock and Williams 1986, pp. 188-190, fig. 107 (one- and two-handled); for the *Saraçhane* types 3A-C, see *Saraçhane*, p. 63, figs. 22:9 (type 3B), 48:178-180 (types 3B, 3C) (type 3A, one-handled; type 3B, two-handled; type C, two-handled with solid toe and wide, short neck).

[373] See, for example, Slane 2000; Slane and Sanders 2005.

[374] *Saraçhane*, p. 11; *Agora* XXXII, p. 117. For recent dedicated studies of these "'Ephesian' Early Byzantine amphoriskoi," see Lochner, Sauer and Linke 2005; Linke and Stanek 2005; Metaxas 2005, pp. 97-101, fig. 9, pls. 3-4; Sauer and Ladstätter 2005.

[375] Riley 1975, p. 31; *Saraçhane*, p. 63; Reynolds 1995, p. 71; Arthur 1998, p. 165; Opaiţ 2004b, p. 14; Papaioannou 2011, p. 199.

[376] Lochner, Sauer and Linke 2005, p. 650; Sauer and Ladstätter 2005; *Agora* XXXII, p. 117.

[377] For a recent appraisal of its distribution, see Papaioannou 2011, pp. 202-205. The micaceous water jar is noted as widespread throughout both halves of the Mediterranean and the Black Sea, but never in any large quantities, and less so in the area of the Levant and Cyprus. For Caesarea, see Riley 1975, p. 31; for Cyprus, see Rautman 2003, pp. 171-172; for Scythia and the Black Sea, see Opaiţ 2004b, pp. 13-14; for

unguentaria also enjoyed some notable distribution, but generally show a greater concentration in the east than the west,[379] with some distribution to nearby sites.[380]

## GAZA AMPHORA (LR AMPHORA 4) FABRIC

*Ware*

Fabric Description

Gaza Amphora Fabric (Pl. 2.2): Reddish yellow (5YR 6/6) or yellowish red (5YR 5/6) to strong brown (7.5YR 5/6) fabric. Characterized by few (to frequent) fine sub-rounded and sub-angular gray clumps with smooth surfaces and/or few fine to small sub-rounded colorless/white translucent clumps; (rare to) few (to frequent) fine sparkling bits (examination in direct sunlight is often required in order to obtain an impression of these fugitive inclusions); (rare to) few (to frequent) very fine to fine sub-rounded white grits; few (to frequent) fine to small (to medium) sub-rounded voids. Occasionally noted are few (to frequent) fine to small (sub-) rounded black grains; few very fine to small elongated voids. Rarely noted are small to large (sub-) rounded gray pebbles. Granular (to hackly) break; medium hard fabric.[381]

Range of Vessel Shapes

The fabric's appearance is limited to amphoras. In the Late Roman deposits of the Panayia Field, the amphora appears in a shorter, cylindrical shape identified with

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Torone, see Papadopoulos 1989, pp. 93-95, nos. 8-9, figs. 14:c-d, and 2001, pp. 562-564, nos. 14.433-14.434, fig. 154, "type V," in red fabric; for Constantinople, see *Saraçhane*, p. 63, type 3, where it appears mainly in pre-church contexts and is "relatively uncommon" afterwards (by the mid-6th century); for Carthage, where it appears from the late 4th to the late 6th century, see Riley 1981, p. 118; for the west, see Reynolds 1995, p. 71, where it is only a regular import during the 5th century, declining afterwards.

[378] For Athens, see *Agora* V, pp. 17, 55-56, 79, 88, 95-96, 106-108, 110, 112, 115-116, 119, nos. F 65, F 66, J 46, J 47, L 50, L51, M 45, M 46, M 125, M 126, M 240-M 242, M 255-M 259, M 275-M 282 (all one-handled), and nos. M 307, M 335, M 373 (all two-handled), pls. 2, 11, 17, 20, 23, 28, 29, 31, 33, 41, 58; for Megara, see Korosis 2014, p. 305, fig. 8 (two-handled); numerous examples of micaceous water jars were personally noted at Isthmia; for Kenchreai, see Rife et al. 2007, pp. 169-170, 173, in 2nd- to 3rd-century and 5th- to 6th-century contexts; for Argos, see Abadie-Reynal 1989, pp. 151-153, fig. 11, where two-handled types show a dramatic drop from late 4th-century numbers of one-handled types in deposits of the start of the 6th century; see also Abadie 1989, pp. 48-49, 50, figs. 2, 6.

[379] Unguentaria in red micaceous water jar fabric reached the Black Sea, Danube, Rome, and Ravenna, but with a particular concentration in the east; see Lochner, Sauer and Linke 2005, p. 650, with references.

[380] For a similar example from Kenchreai, see *Kenchreai* IV, pp. 122-123, no. RC 39, pl. 38; for Athens, see *Agora* XXXII, p. 117, 288, no. 1814, pl. 91, in an early to mid-6th-century context, which republishes *Agora* V, p. 118, no. M 369, pl. 34.

[381] Based on macroscopic descriptions of an unnumbered handle in Lot 2001-005, an unnumbered rim in Lot 1997-050, **171**, and a rim numbered 01-03:6.

Majcherek's form 2 (**171**; **172**), before appearing in the taller, more torpedo-shaped form 3 (**173**; **174**; and possibly **175**) and form 4 (**176**; **177**; **178**; **179**).

*Dating and Identification*

Gaza amphora fabric begins to appear in the Panayia Field by the second quarter to mid-5th century at the latest, first appearing in limited number and then increasing noticeably by about the mid-6th century. It lasts until the early 7th century but appears only residually in the 7th-century pit. In other areas of Corinth, fragments of Gaza amphoras appear in ca. 450 or 460, with complete examples of Majcherek's form 3 appearing by the turn of the century;[382] quantities of Gaza amphoras begin to show steady increases from the mid-5th to early 7th century before witnessing a sharp decline.[383] Following recent Corinth publications,[384] Majcherek's published typology of Gaza amphoras is followed here.[385] Before Majcherek's typology, the Gaza amphora appeared under various different designations.[386]

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[382] See Slane and Sanders 2005, p. 255, and p. 263, nos. 2-25, 2-26, fig. 5, reproducing material from Williams and Zervos 1982, p. 140, nos. 73-74, fig. 3, pl. 44.
[383] Slane 2000, pp. 304, 310, fig. 13.
[384] See, for example, Slane and Sanders 2005.
[385] See Majcherek 1995; for form 1, see p. 166, pls. 3:1, 4, 9:1; for form 2, see pp. 166-168, pls. 3:2, 5, 9:2; for form 3, see pp. 168-169, pls. 3:3, 6, 9:3; for form 4, see p. 169, pls. 3:4, 7-8, 9:4-6.
[386] For the Ballana 10, see Kirwan 1938a, pp. 390, pl. 111 (Majcherek form 3); for the Almagro 54, see *Ampurias* III.2, pp. 320, 411, fig. 305, dated 4th century (Majcherek form 3); for the Beltrán 54, see Beltrán Lloris 1970, p. 547, fig. 224:1 (Majcherek form 3), fig. 224:2 (Majcherek form 2), p. 548, fig. 224:3 (Majcherek form 4); for the Kuzmanov XIV, see Kuzmanov 1973, fig. 1 (Majcherek form 4); for the Caesarea amphora type 2, see Riley 1975, pp. 27, 29-32, nos. 12-13 (Majcherek form 3), 14-15 (possibly Majcherek form 4); for the Scorpan XIV-J, see Scorpan 1976, pp. 165, 180, pls. XIII:3 (Majcherek form 3), XIII:4 (Majcherek form 4), XXI:4 (Majcherek form 2 or 3), XXXV (distribution map); for the Egloff 182, see *Kellia* III, pp. 116-117, pls. 4:18, 21:1, 60:3 (Majcherek form 3); for the Egloff 183, see *Kellia* III, p. 117, pl. 61:1 (Majcherek form 4); for the Zemer 36, see Zemer 1977, pp. 43-45, no. 36, pl. 12 (Majcherek form 1); for the Zemer 49-50, see Zemer 1977, pp. 61-63, pl. 18 (Majcherek form 3); for the Zemer 51, see Zemer 1977, pp. 61, 64-65, pl. 19 (Majcherek form 4); for the Zemer 52-53, see Zemer 1977, p. 61, nos. 52-53, pl. 19 (Majcherek form 2); for the Benghazi LR Amphora 3, see Riley 1979, pp. 219-223, nos. D351-D356, fig. 92 (possibly all Majcherek forms 3 and 4); for the Carthage LR Amphora 4, see Riley 1981, p. 120, fig. 13 (see also Hayes 1976, p. 117) (Majcherek form 3 or 4); for the Fulford and Peacock type 5, see *Carthage BM* I.2, p. 121, fig. 35:12-13 (Majcherek form 3 or 4); for the Keay LIV, see Keay

*Discussion*

Following a period of speculation as to the origin of these amphoras and their fabric, the recognition that they are indeed products from southern Palestine, specifically the famous wine-making area of Gaza and Ashkelon, has been largely accepted for about the past forty years.[387] The fabric of these amphoras has also been the subject of petrographic analysis by others, lending scientific support to their attested origins,[388] with survey of the hinterland around Gaza and Ashkelon additionally revealing the presence of numerous kiln sites.[389] Although some production of this amphora type has been suggested to have occurred in the area around Alexandria in Egypt,[390] XRF analysis of finds of Gaza amphoras recovered from the site of Kom el-Dikka in Alexandria indicated a non-local source and led the investigators to argue against any Egyptian production.[391]

Excavation of the site of ʻArd el-Mihjar, roughly between the coastal sites of Gaza and Ashkelon, revealed 70 Gaza amphoras that were awaiting shipment before they were abandoned in what can be interpreted as one of any number of coastal warehouses

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1984, pp. 278-285, figs. 28, 31, 121-123 (variants A-F) (mainly corresponding with Majcherek forms 3 and 4); for the Peacock and Williams class 48, see Peacock and Williams 1986, pp. 196-197, fig. 115 (Majcherek form 2); for the Peacock and Williams class 49, see Peacock and Williams 1986, pp. 198-199, fig. 116 (Majcherek form 3); for the *Saraçhane* type 6, see *Saraçhane*, pp. 64-65, figs. 22.4-5, 47 (Majcherek form 4?).

[387] Most critically, see Riley 1975, pp. 27-31, 1979, pp. 219-223. For a brief review of the scholarship, see Majcherek 1995, pp. 163-164.

[388] For the results of a petrographic study carried out by D. P. S. Peacock, see Riley 1975, p. 30; see also Peacock and Williams 1986, p. 199. Fabian and Goren 2001, pp. 215-216, have shown that Gaza amphoras recovered from a coastal site between Ashkelon and Gaza are petrographically related to a roughly rectangular-shaped region covering the area between these two sites and roughly 10 km inland. See also Kingsley 2001, pp. 49-51; Reynolds 2005, pp. 574-575.

[389] For the excavation of a large estate with kilns, as well as the survey which accompanied this investigation, see Israel 1995a and 1995b, respectively. See also Pieri 2007, figs. 8-11.

[390] Empereur and Picon 1989, p. 243, 1992, pp. 149-150.

[391] Majcherek 1995, pp. 164-165. Some studies continue to cite the evidence of Egyptian production; see Arthur 1998, p. 161, who reports that the small production in the Nile delta has no evidence of being traded in any quantity; see also Opaiţ 2004b, p. 20. However, as the former is based on a paper delivered in 1995, and the latter is a revision of a 1996 work, Majcherek's publication may not have been able to be integrated.

that must have marked the coastline and facilitated the export of these amphoras.[392] The logistics of land transport of the finished products from their place of manufacture to their place of export would have been an important consideration, as most of the identified production sites have been located 10 to 20 km inland, with one even found ca. 60 km inland.[393] A depiction on a mosaic floor from a basilica dated to 576/578 in Kissufim, near Ashkelon, may provide some insight into how these amphoras might have moved after manufacture; a man is shown leading a camel loaded with undefined "vessels" strapped to a contraption on its back.[394] The tall, near-cylindrical form and pointed bottoms of these "vessels" appear very similar to Majcherek's form 3 or 4 Gaza amphoras. One could be tempted to speculate that the earlier, baggier, Majcherek forms 1 and 2 were less suitable for such forms of transport;[395] thus, considerations of distribution may have affected how the potters manufactured their forms.

The fabric, as employed in the Gaza amphora form, was well-distributed throughout the Mediterranean and beyond.[396] In addition to Corinth, distribution within

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[392] Fabian and Goren 2001. The amphoras were sealed with stoppers made from a mixture of loess and straw, with several preserving red *dipinti*, generally rarely seen for this type; the *dipinti* (p. 213), in Greek characters, were not deciphered at the time of publication. For recent publication of a Gaza amphora sherd from Megara with *dipinto* marks, see Korosis 2014, pp. 305-306, fig. 10, also in Greek characters.
[393] Israel 1995b, p. 106, fig. 111.
[394] Ovadiah and Mucznik 1983, p. 276, pls. CLXXXIII, CLXXXIV; see also Cohen 1977, 1980. The man, labelled Orbicon, holds a bunch of grapes in his other hand; another mosaic depicting a Gaza amphora beside grapes may further support the association this amphora has with wine; see Kingsley 2001, p. 51.
[395] Such round-bottomed amphoras would have required carts and well-maintained roads for their transportation; that such accommodations were available is evident by the manufacture and distribution of baggy Palestinian amphoras from the same general region (see below). Those responsible for the manufacture of Gaza amphoras may have found it more expedient and/or cost-effective to transport their agricultural goods by camel, which would have been far less dependent on roads.
[396] Gaza amphoras were commonly distributed to Egypt before 400, where they remained popular for the Late Roman period; see Riley 1981, p. 120; Majcherek 1995; for unpublished finds from Karanis, see *Saraçhane*, p. 65. On sites in Scythia on the Black Sea and Danube, they appear in some number, especially in the cities, from the 4th to 6th century, displaying a range of subtypes; Opaiţ 2004b, pp. 20-22. At Constantinople, they appear from the second quarter of the 5th to late 6th century (with earlier and later dates possible), are noted as being common in the 5th century, and are the second most common amphora in construction deposits of ca. 525; see *Saraçhane*, pp. 64-65, type 6. The amphora was also very popular on numerous sites in the Aegean and eastern Mediterranean in addition to Corinth; for Cyprus, see Rautman

the immediate region has been attested at Argos,[397] and at Megara,[398] but with little evidence published from elsewhere.

## PALESTINIAN AMPHORA FABRICS

*Ware*

Fabric Description

Early Carrot Amphora Fabric: Reddish yellow (7.5YR 7/6) fabric, with a pale white/pink surface slip. Characterized by frequent to fine small angular and sub-rounded black inclusions; rare fine sparkling bits. Overall sandy texture. Granular break; medium hard fabric.[399]

Gritty Red Fabric (Pls. 2.3, 2.4): Normally reddish yellow (5YR 5/8, or 7/6 to 6/6) fabric. Abundant fine to small rounded and sub-rounded black grains and sub-rounded to angular translucent reddish/grayish sand particles; rare to few fine to small (to medium) sub-rounded (calcareous?) white lumps; frequent to common (to abundant) fine rounded and sub-rounded voids. Occasionally noted are few (to frequent) elusive fine sparkling bits (in direct sunlight only). Granular (to hackly) break; (medium hard to) hard fabric.[400]

Buff Fabric (Pl. 2.5): Red (10R 5/6 to 2.5YR 5/6) to reddish yellow (5YR 6/6 to slightly lighter than 7.5YR 6/6) fabric. Characterized by few to frequent fine to small sub-

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2003, p. 172; for Saranda Kolones in Paphos on Cyprus, see Hayes 2003a, p. 494, no. 271, fig. 25, dated to the mid-7th century, possibly in "Sinai" fabric; for Torone, see Papadopoulos 1989, pp. 92-93, nos. 6-7, figs. 14a-b, and 2001, pp. 561-562, nos. 14.422-14.432, fig. 153-154. It also penetrated into the Adriatic; for Butrint, see Reynolds 2004a (with catalogue in Reynolds 2004b), p. 229, nos. 280-286, fig. 13:165-171, including examples as early as late 4th or early 5th century; for Durrës (ancient Dyrrachium) see Shkodra 2006, pp. 439, 441, 454, nos. 37-43, figs. 7, 14, where the later cylindrical shape is common but only one example of the earlier baggier shape was found, and two fabrics are distinguished. In the west, it appears in the late 4th, with major exports from the early 5th to end of the 6th, with lesser quantities appearing in the early 7th century; Reynolds 1995, p. 71. At Carthage, it maintains modest numbers from the late 4th to late 6th century, but appears as the commonest type of amphora in one large 5th-century deposit; Riley 1981, p. 120. It also reached Cornwall, some large urban and defensive sites in Italy in the 6th and 7th century, and showed steady increase in Naples from the late 4th to early 6th century, declining again in the late 6th/early 7th century; see Arthur 1998, p. 162. Overall, its export seems to have dramatically declined following the early 7th century, although Gaza amphoras continued to be produced into the 8th century under Umayyad rule; see Arthur 1998, p. 162, reporting a personal communication from B. Johnson.

[397] Abadie 1989, p. 54, fig. 11, where they increase through the 5th century to significant numbers in the 6th; Abadie-Reynal 1989, p. 151, fig. 9; see also Ivantchik 2002, p. 383, no. 125, fig. 18, for the appearance of a Majcherek form 3 in a 5th-century well.

[398] Korosis 2014, pp. 305-306, figs. 9, 10; fig. 10 illustrates a body sherd with the remains of a *dipinto*.

[399] Based on macroscopic examination of **180**.

[400] Based on macroscopic examination of unnumbered sherd in Lot 1996-076, an unnumbered sherd in Lot 1996-039, an unnumbered sherd in Lot 1995-061, and **181**; the latter was evidently overfired, with a light brown (approx. 7.5YR 6/4) fabric.

rounded white lumps; rare to few (to frequent) fine elusive sparkling bits (in direct sunlight); few to frequent fine to small rounded and sub-rounded voids; rare to few fine to small elongated voids. Occasionally noted are few to frequent fine to small sub-rounded translucent colorless/gray clumps; rare to few fine to small sub-rounded to rounded red pellets; rare (to frequent) fine to small rounded black grains. Granular (to smooth and sometimes slightly conchoidal) break; medium hard (to hard) fabric.[401]

Gritty Brown Fabric (Pl. 2.6): Light brown (7.5YR 6/4) to brown (7.5YR 5/4) fabric. Characterized by frequent fine (to small) sub-rounded calcareous white lumps; few to common fine to small rounded black grains and sub-rounded to rounded colorless translucent clumps; rare elusive very fine to fine sparkling bits (appearing frequent to common in direct sunlight); (few to) frequent fine to small rounded and sub-rounded voids. Rarely noted are rare small sub-rounded red pellets. Granular to hackly break; medium hard fabric.[402]

White-Flecked Fabric (Pl. 2.7): Red (2.5YR 5/6 to 5/8) to reddish yellow (5YR 6/6 to 7.5YR 6/6) fabric. Characterized by frequent fine to small sub-rounded and/or elongated white lumps/flecks; (rare to) few to frequent fine elusive silver sparkling bits (mainly in direct sunlight); few fine to small sub-rounded translucent white/gray clumps (occasionally reddish); rare to few fine (to small) sub-rounded black grains; few to common fine (to small) sub-rounded voids. Occasionally noted are few small sub-rounded off-white lumps (grog?). Granular break; medium hard fabric.[403]

Late Palestinian Carrot Amphora Fabric (Pl. 2.8): Red (2.5YR 5/8) to reddish yellow (7.5YR 6/6) fabric. Characterized by abundant fine sub-rounded and angular translucent colorless chips (obscured by the matrix); rare to few (to frequent) very fine to fine elusive sparkling bits; rare to few fine sub-round gray lumps; rare (to few) very fine rounded black grains; rare fine to small (to large) sub-rounded calcareous white lumps (with rare surface spalling); frequent to common fine sub-rounded voids; rare small elongated voids. Rarely noted are rare small rounded black pebbles. Granular (slightly conchoidal) break; soft to medium hard fabric.[404]

Although no petrographic analysis was conducted on the various fabrics that were used in the manufacture of Palestinian amphoras, the multiplicity of fabrics recognized in

[401] Based on macroscopic examination of an unnumbered sherd in Lot 2001-005, an unnumbered sherd in Lot 1995-061, an unnumbered rim in Lot 1995-061, and **184**. The latter two are overfired examples, which occur often in the Panayia Field; the fabric is generally much paler, appearing pinkish gray (approx. between 7.5YR 7/2 and 7/3) to light gray (approx. 2.5Y 7/2), or brownish gray (2.5Y 6/2).
[402] Based on macroscopic examination of **188** and **189**.
[403] Based on macroscopic examination of **190** and an unnumbered rim-handle-shoulder in Lot 1997-057. Color horizons exhibiting a lighter central core are sometimes noted in which the white flecks take on a grayer color.
[404] Based on macroscopic examination of **191** and **192**.

the Panayia Field alone demonstrates the need for systematic scientific study.[405] The identification of all of these fabrics as broadly "Palestinian" is based solely on the association of the shapes with published comparanda.

Range of Vessel Shapes

These "Palestinian" fabrics only appear in the Panayia Field in various forms of amphoras. The first fabric, seemingly isolated to a single find of the 5th century, likely belongs to a carrot-shaped amphora (**180**). The second fabric, labelled here as "Gritty Red Fabric," might have been employed in the manufacture of the carrot-shaped *Agora* V, M 334 amphora (appearing only in a single example in fragmentary condition in the Panayia Field), but is characterized by its use in the manufacture of a baggy amphora type (LR Amphora 5) with white-painted decoration.[406] It was also later employed in the manufacture of small, vertical-walled amphoras (**181**; **182**; **183**). Three other fabrics were additionally employed in the manufacture of baggy Palestinian amphora (LR Amphora 5) types, including a "Buff Fabric" (**184**; **185**; **186**; **187**), "Gritty Brown Fabric" (**188**; **189**), and a "White-Flecked Fabric" (**190**). A fifth fabric was employed in a type of late 6th- and 7th-century carrot amphora (**191**; **192**).

*Dating and Identification*

Early Palestinian carrot amphoras do not appear in the Panayia Field often enough to comment on their chronology. Amphoras in the "Gritty Red Fabric" are already noted

[405] Any such future analysis would benefit greatly from also testing samples of Gaza amphoras in order to further explore the superficial, macroscopically-observed similarities between that fabric and that of the LR Amphora 5 shapes manufactured in "Gritty Brown" fabric.
[406] Diagnostic sherds of baggy amphoras in this fabric were generally rare here.

in the 4th century, appearing in small numbers of painted baggy Palestinian amphoras which continue up to the time of the construction deposits related to the bath and Long Building; thereafter the fabric appears in the regularly-occurring, small, vertical walled types and continues into the 7th-century pit. The fabric's possible use in the carrot-shaped *Agora* V, M 334 amphora is limited here to a single example in a deposit of about the second quarter to mid-5th century.[407] While the "Buff Fabric" may first appear in baggy amphoras as early as the late 5th century, it is much more frequent in deposits of the late 6th and 7th century along with the "Gritty Brown Fabric" and "White-Flecked Fabric," with all three also appearing in the 7th-century pit. Elsewhere in Corinth, amphoras as *Agora* V, M 334 evidently continued to appear from the 5th century into the second half of the 6th,[408] while Palestinian baggy amphoras appear together with the small, vertical-walled type, and also with carrot amphoras, in a deposit of the second half of the 5th century to ca. 500 or later.[409] Quantified data show that quantities of various types of Palestinian amphoras dramatically rise in the mid-5th century, greatly outnumbering all other amphoras, and only decrease slightly from the first half of the 6th century while continuing well into the 7th century.[410]

Of the various forms of Palestinian amphoras presented here, the baggy Palestinian amphora has received by far the most scholarly attention. As a result, several

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[407] Cf. Slane and Sanders 2005, p. 255, no. 1.24, fig.4, for another example from Corinth in a nearly contemporary deposit. The same type is discussed in Reynolds 2005, pp. 569, 571-572, fig. 114, and dated to the 4th and early 5th century, and identified as a product of the territory of coastal Akko, between Caesarea and Tyre.
[408] Slane 2000, p. 304.
[409] See Slane and Sanders 2005, p. 263, nos. 2-20-2-24, fig. 5, with the carrot amphora having already appeared in the first half of the 5th century (p. 255, no. 1-24, fig. 4). For Argos, where these are discussed together with the baggy amphoras, see Abadie 1989, p. 54, fig. 12.
[410] Slane 2000, pp. 304-305, 310, fig. 13.

different designations have been offered,[411] although the variety of fabric descriptions makes it difficult to associate any one published form with the fabrics outlined above (for some attempt, see below). It should be noted that the baggy Palestinian amphoras discussed here are most often associated with the Carthage LR Amphora 5; the Carthage LR Amphora 6, another baggy-shaped amphora characterized by its gray fabric and red core,[412] is absent from the Panayia Field. Palestinian carrot amphoras have been the subject of far fewer systematic typological studies.[413]

*Discussion*

Palestinian baggy amphoras in general have been reported to have been produced over a vast area of northern Palestine, with kilns known from the area near modern Tel Aviv to the area west of the southern tip of the Dead Sea.[414] Reynolds has envisaged a level of territorial production of amphoras that may have occurred in the Levant, structurally divided by major cities and their immediate territories; the carrot-bodied amphoras seem restricted to the province of Phoenice (including Akko, Beirut, and Amrit), while the baggy LR Amphora 5 was produced in Palestina I and II (including

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[411] For the Kuzmanov VI, see Kuzmanov 1973, fig. 1; for the Caesarea amphora type 1, see Riley 1975, pp. 26-27, nos. 1-11; for the Scorpan VI-H, see Scorpan 1976, pp. 159, 177, pls. VI:1 (nearly vertical-walled), VI:2-3 (probably LR Amphora 6), VI:4 (LR Amphora 5), XXXI; for the Egloff 186, see *Kellia* III, pp. 117-118, pls. 19:4, 60:4; for the Zemer 54-56, see Zemer 1977, pp. 66-69, nos. 54-56, pl. 20; for the Zemer 60, see Zemer 1977, pp. 73-75, no. 60, pl. 22; for the Benghazi LR Amphora 4, see Riley 1979, p. 223 (for similar, see also Benghazi LR Amphora 5, p. 224, fig. 92); for the Carthage LR Amphora 5, see Riley 1981, p. 121 (see also Hayes 1976, p. 117); for the Fulford and Peacock type 4, see *Carthage BM* I.2, p. 121, fig. 35:6-11; for the Keay LXVI, see Keay 1984, pp. 357-358, fig. 166; for the Peacock and Williams class 46, see Peacock and Williams 1986, pp. 191-192, fig. 110; for the *Saraçhane* type 8, see *Saraçhane*, pp. 65-66, figs. 47, 49.
[412] Riley 1981, p. 121.
[413] Originally identified in *Agora* V, p. 115, no. M 334, pl. 33, similar, but later, examples have appeared in a few other studies. For the Yassi Ada shipwreck, see Bass 1982, p. 186, no. P 80, figs. 8-20, 8-22; for the *Saraçhane* type 15, see *Saraçhane*, pp. 67, 98, fig. 22.6.
[414] Kingsley 2001, p. 50, with references; see also Panella 1993, pp. 664-665, n. 217-219; Reynolds 2005, p. 574.

Caesarea and Beth She'an/Scythopolis) as well as southern Phoenice (Akko), with the small vertical walled types also placed in Caesarea.[415]

Independent evidence has been published elsewhere that may place the "Gritty Red Fabric" in the area of Caesarea. The fabric noted in *Agora* V, M 334 amphoras recovered from Akko, situated between Caesarea and Tyre, has been connected there with a series of baggy LR Amphora 5 manufactured in the same area.[416] A kiln site was discovered just east of Akko that manufactured "red fabric vessels with white painted decoration."[417] Evidence for the manufacture of both the baggy LR Amphora 5 and the small, vertical-walled types was also noted at Caesarea, the profiles of which products appear similar to the examples found in the Panayia Field in "Gritty Red Fabric."[418]

Five specific sources for the production of the baggy amphora form have recently been proposed by Pieri: baggy amphoras with painted decoration are placed in the area of Caesarea;[419] baggy amphoras with a distinctive tall rim (the LR Amphora 6, not seen in the Panayia Field) were produced in Beth She'an/Scythopolis; the hinterland surrounding Jerusalem is another source; and two types of baggy amphoras were produced in the area of Alexandria, one large and one small, with the small types additionally being manufactured along the Nile in Middle Egypt.[420]

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[415] Reynolds 2005, pp. 573-575, map 2.
[416] Arthur 1998, p. 160; Reynolds 2003, p. 539, 2005, p. 573; Pieri 2007, fig. 2, who places *Agora* M 334's production at Ptolemais, just north of Caesarea. But see also Opaiţ 2010 who presents a range of 4th and early 5th-century carrot amphoras of similar shape from Sinope in the Black Sea.
[417] Arthur 1998, p. 159, with references.
[418] Riley 1975, p. 26; *Carthage BM* I.2, p. 24; Reynolds 2005, p. 573, figs. 143-144, 151-152; see also Arthur and Orem 1998, who describe the bag-shaped vessels "in a reddish fabric" as perhaps from the Caesarea region; see also Arthur 1998, p. 159, where baggy amphoras of the Caesarea area are described as having a "sandy orange fabric."
[419] The more oval profile of these is echoed in the examples published from the Athenian Agora, which were personally confirmed to be in "Gritty Red Fabric."
[420] Pieri 2007, fig. 2. Regarding Egypt, production sites have been published in the area of Lake Mareotis near Alexandria and along the Nile in Middle Egypt; see Empereur and Picon 1989, p. 243, 1992, 1998; see also Kingsley 2001, p. 57, n. 73. Recent research has documented the production of the LR Amphora 5/6

Based on all of the published data, it may be possible to propose the following sources for the various "Palestinian amphoras" found in the Panayia Field. The "Gritty Red fabric," both the earlier painted baggy amphoras and the later small vertical-walled types, may be sourced to the region around Caesarea,[421] while the various carrot amphoras should possibly belong to a more northerly source, perhaps the area of Akko and modern Lebanon.[422] The origin of baggy amphoras in the "White-Flecked Fabric" is less certain, but it *might* belong to production in the Abu Mena region of Egypt as characterized by its visible lime inclusions.[423] The baggy types in "Buff fabric" likely belong to the greater area around Jerusalem and the Negev,[424] while those in "Gritty Brown fabric" possibly belong to Egyptian production, or even the area around Gaza.[425]

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type in a calcareous clay at a monastery at Abu Mina, 50 km southwest of Alexandria, as well as in an alluvial clay at a workshop at Kom Abu Billu (Terenouthis) situated in the southern Nile Delta; see Ballet and Dixneuf 2004, pp. 67, 69-70, figs. 3, 8, 10.

[421] Reynolds 2004a, p. 229, describes the Caesarean fabric as containing coarse sand and lime, and maintains (n. 14) that it is present in Athens and Corinth.

[422] A mosaic floor on display at the Apamea Archaeological Museum in Syria depicting carrot amphoras being loaded into a boat have been identified with the *Agora* V, M 334 produced in Akko, or possibly with a series from Beirut; see Reynolds 2005, p. 572; see also Decker 2001, p. 77, fig. 4.5. In regards to the production of the late 6th-/7th-century carrot amphoras, published comparanda of a wine amphora from Beirut may be indicative of its source, but noted to have enjoyed only limited export; cf. Reynolds 2005, pp. 569-570, especially figs. 80, 82-83, ranging in date from 551 to ca. 640/650; cf. also Reynolds 2003, fig. 1:2-3. See Reynolds 2000 for further discussion of the series, but without any comparable profiles.

[423] See Reynolds 2004a, p. 229, where he describes the fabric as having a "hard, fine, and very finely sandy, buff fabric containing fine lime visible on its inner wall face (here, as often, fired with a greenish tint) – and with characteristic pronounced ribbing;" for the catalogue entry see Reynolds 2004b, no. 291. While the fine lime seems in agreement here, the greenish surface does not. Baggy amphoras with visible lime inclusions have been noted in Beirut; see Reynolds 2004a, p. 229. See also Reynolds 2005, p. 574, for a (different?) baggy amphora that appeared in Beirut for only a short time in the early 5th century, described as being in a "fairly fine red fabric with moderate lime spalling and reduced surfaces with painted decoration (but not deriving from Beth She'an);" examples from the Panayia Field in "White-Flecked fabric," however, have produced no traces of painted decoration and were not reduction-fired, but as Reynolds is describing an early 5th-century product, this might have been an earlier feature of production.

[424] Examples in a "cream fabric" have been suggested to possibly derive from the Negev region, and may correspond with the "Buff fabric;" see Arthur and Orem 1998, p. 201.

[425] See Reynolds 2004a, p. 230, who identifies a "Gazan version" of the baggy amphora type. "Gritty brown fabric" is somewhat similar to that of the Gaza amphora, but it also bears some similarity to the fabric of the Egyptian LR Amphora 7 (see **226**), and the amount of published evidence testifying to the production of baggy amphoras employing Nile fabrics is difficult to ignore.

While the small vertical-walled and carrot amphoras seem to have been produced in coastal areas, some varieties of baggy amphoras were produced a good distance inland. Unlike the late forms of Gaza amphoras whose long, slender shapes might have been appropriate for travel by camel (see above), the shape of baggy amphoras seems less conducive to such modes of transport. The wide, convex-bottomed shapes might have demanded transportation by cart, presupposing the existence of well-maintained road networks.[426] Whatever the method of conveyance for this amphora, it is also unclear if amphoras travelling overland from the hinterland to the coast were empty or full. Amphoras from different manufacturing centers were likely collected in central coastal locations before being exported overseas; the 5th-century mosaic floor in the Jewish House of Kyrios Leontis in Beth She'an/Scythopolis depicts a boat loaded with two baggy Palestinian amphoras but, interestingly, each is depicted in a different color: black and red.[427]

As with most other internationally-distributed amphoras, tracing the distribution of specific fabrics employed in similar forms across the Mediterranean and beyond is very difficult; fabrics are not always described and descriptions rarely easily correspond among different publications even when they are provided. The *Agora* V, M 334 form

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[426] See Woolf 1992, p. 286, who comments on the flat-bottomed amphoras manufactured in Gaul in the 1st century A. D. as being suitable for transportation by cart. See Jones [1964] 1986, pp. 833-834, for the imperial edicts of the late 5th and 6th century under Leo I and Justinian which relate the removal of imperial sponsorship in the eastern provinces for, first, the *cursus clabularis* (the official wagon-trains) and then generally the *cursus publicus* (the imperially-maintained post routes), after which reliance was made on local professional carters for the movement of official goods. While imperial sponsorship and maintenance might have been removed, the road networks were evidently still maintained as attested by the continued distribution of Palestinian baggy amphoras through the 7th century.

[427] Zori 1966, pl. 11; Kingsley 2001, p. 52, n. 48, with color reproduction on the cover of Kingsley and Decker 2001.

appears in several diverse locations,[428] but is currently attested in Corinth's immediate region only at Athens.[429] In addition to the various references given above from Egyptian and Levantine production sites, the baggy amphora form is comparatively much more widely distributed throughout the Mediterranean,[430] with distribution within the region of Corinth including the sites of Athens,[431] Isthmia,[432] and Argos.[433]

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[428] It was quite prominent at the glass factory site of Jalame, Israel, unsurprisingly as the site is in proximity to the proposed production area of these amphoras; see Johnson 1988, pp. 209-211, nos. 717-728, figs. 7-49, 7-50. It also appears at several Italian sites, as well as southern France, Carthage, Cyprus, Egypt and Asia Minor, with later examples of ca. 625 on the Yassi Ada shipwreck; see Arthur 1998, p. 160, fig. 3; for Cyprus, see Hayes 2003a, p. 489, no. 234, fig. 27, dated 5th-(mid?) 6th century; for the Sinai in Egypt, see Arthur and Orem 1998, p. 201, fig. 7.3; for Yassi Ada, see Bass 1982, p. 186, no. P 80, figs. 8.20 and 8.22.
[429] Cf. *Agora* V, p. 115, no. M 334, pl. 33.
[430] Baggy Palestinian amphoras appear at the glass factory at Jalame, Israel, in a number of fabrics (based on exterior surface color) including red (with painted decoration), a black (with painted decoration), and a soft light red fabric (evidently without painted decoration?); see Johnson 1988, pp. 214-215. The form is present on Cyprus; for Saranda Kolones in Paphos, see Hayes 2003a, p. 494, nos. 269-270, fig. 25, for a "hard-fired light orange-brown" fabric, and another in a hard brown fabric with lime and the exterior fired cream-buff, both in 7th-century contexts; for Kalavasos-*Kopetra*, see Rautman 2003, p. 172, where only a "red version" appears consistently. Baggy Palestinian amphoras are rare in Constantinople, with the rare examples described as having gray surfaces, red cores and painted decoration and likely products of Beth She'an/Scythopolis; see *Saraçhane*, pp. 65, 104, nos. 172-173, fig. 168, type 7, from a deposit of the 7th century. Finds in Scythia are described as having a soft, brownish-orange fabric; see Opaiţ 2004b, p. 23, where the baggy Palestinian amphora appears on many sites in Scythia but not in large quantities. At Butrint, the baggy LR Amphora 5 appears in a fabric Reynolds identifies specifically as having come from the Akko region rather than Caesarea (north, rather than south), as well as examples in what he identifies as both Egyptian and Gazan fabrics; see Reynolds 2004a (with catalogue in Reynolds in 2004b), pp. 229-230, nos. 288-290, figs. 13:172-173 (Akko), no. 291 (Egypt), and an unnumbered fragment (Gazan). At Durrës (ancient Dyrrachium) also on the eastern Adriatic coast, baggy Palestinian amphoras in a "sandy buff to reddish fabric, occasionally yellow on the outer surfaces" with painted decoration are "characteristic" on the site, while others in a harder, "gritty orange fabric" are "common;" see Shkodra 2006, p. 441, but citing the (painted) *Agora* examples as comparanda for the (unpainted?) amphoras in "gritty orange fabric" and also identifying them as related to the LR Amphora 6. Also noted in the region are rare occurrences of similar amphoras in a "hard, compact grey fabric, usually with painted decoration" that may more properly be identified with the Beth She'an/Scythopolis products. At the British excavations at Carthage, baggy Palestinian amphoras in orange and grey fabrics occur; see *Carthage BM* I.2, pp. 22, 24, where the orange fabric, seen on amphoras with white-painted decoration, seems to fit the description of "Gritty Red Fabric" quite well, while the grey fabric (with no white-painted decoration noted) might be that employed by the potters from Beth She'an/Scythopolis. Palestinian baggy amphoras are additionally noted to be the most frequent amphora in a deposit of the mid-5th century at Carthage and are well-attested until the late 6th century; Riley 1981, p. 121. The form is rare in the west outside of Marseilles and Carthage; Reynolds 1995, p. 182; Arthur 1998, p. 174.
[431] For baggy Palestinian amphoras with painted decoration, cf. *Agora* V, p. 115, nos. M 329, and M 330, pls. 32, 35 and 58, layers X-XII re-dated to the late 4th to mid-5th century (*Agora* XXXII, p. 300). The fabric of the Athenian examples was confirmed to be "Gritty Red Fabric" through personal examination.
[432] Personal examination of one example in possibly "Buff Fabric." Another, reconstructed example (also in "Buff Fabric"?) is on display in the museum at Isthmia, having been recovered from the area of the fortress.
[433] A baggy Palestinian amphora with white-painted decoration appears in a 5th-century well at Argos; see Ivantchik 2002, p. 383, no. 126, figs. 16-17. The fabric is unconfirmed.

## SAMOS CISTERN AMPHORA FABRIC

*Ware*

Fabric Description

Samos Cistern Amphora Fabric (Pls. 2.9, 2.10, 2.11): Red (2.5YR 5/8) to yellowish red (5YR 5/6) fabric. Characterized by elusive common to abundant fine sparkling bits and flakes;[434] (rare to) few fine (to small) rounded and sub-rounded black grains; rare to few very fine (to fine) sub-rounded white grits;[435] (rare to) few to frequent fine sub-rounded voids.[436] Rarely noted are rare to few fine sub-rounded translucent gray clumps; rare small sub-rounded red pellets.[437] Granular (occasionally slightly conchoidal to smooth) break; medium hard to hard fabric.[438]

The fabric of the amphoras is characterized by its deep red color and elusive sparkling inclusions, and can be distinguished from the superficially similar red fabric of micaceous water jars by its comparatively larger sparkling inclusions and harder fabric.

Range of Vessel Shapes

Examples of vessels from the Panayia Field in this fabric include amphoras (**193**; **194**; **195**) and a single example of a plain ware jug (**393**).

*Dating and Identification*

Amphoras in this fabric appear as early as the mid-6th century, before becoming more common in the late 6th century, but not lasting (far?) into the 7th century. Elsewhere in Corinth, fragments might possibly appear as early as ca. 450 or 460.[439] The one-

[434] These often require direct sunlight in order to be properly observed.
[435] These appeared as frequent in **193**, and as fine angular chips in **393**.
[436] In **393**, the voids are recorded as being common to abundant, fine and rounded.
[437] The presence of red inclusions is greatly obscured by the color of the fabric.
[438] Based on macroscopic examination of **193**, **194**, **195** and **393**.
[439] Slane and Sanders 2005, p. 255.

handled jug, currently unattested elsewhere,[440] testifies that vessels in this ware were still reaching the Panayia Field by the time of the 7th-century pit.

The amphora type that characterizes this fabric was first identified on Samos where a large concentration was found in a 6th-century cistern deposit.[441] Since that time, the name "Samos Cistern Amphora" has been applied to designate this form.[442] Compared to the previous amphora-producing wares discussed above, the Samos cistern amphora has not been the focus of many systematic typological studies.[443]

*Discussion*

The circumstances surrounding the production of vessels in this fabric, including the location of kiln sites, remains unknown. The amphora form regularly shows inconsistencies such as warped rims and pronounced concavities on the exterior surface where the handle was forcibly attached; these may possibly be suggestive of hurried manufacture. The presence of **196**, a similar amphora form in a different fabric, supports the idea that the form may have been produced on a number of Aegean sites.[444] While similar jugs in this fabric have yet to be attested elsewhere, the amphora shape appears on coastal Aegean sites and at Constantinople.[445] Notably, it was also distributed to the west,

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[440] When this vessel was originally published in Slane and Sanders 2005, p. 278, no. 4-25, fig. 11, citation was made to another Corinth example published in Williams and Zervos 1983, p. 32, no. 82, pl. 11; personal observation of the latter found that the two fabrics are not the same.
[441] Isler 1969, pp. 206-207, pls. 85-88.
[442] Arthur 1985, pp. 252-255; see also Arthur 1998, pp. 167-168.
[443] For the *Saraçhane* type 17, see *Saraçhane*, p. 69, which is identified with the products published in Isler 1969; but see also type 16 (pp. 67-69) for a similar shape, and type 18 (p. 69) for a similar fabric.
[444] Arthur 1998, p. 167. Variations in fabric and form were also reported at Adriatic sites; for Butrint, cf. Reynolds 2004a, pp. 232-234; for Durrës (ancient Dyrrachium), see Shkodra 2006, pp. 441, 444.
[445] The amphora has been identified at Torone, in northern Greece, but the profiles of the necks and rims differ from the Panayia Field examples; see Papadopoulos 1989, pp. 89-92, nos. 4-5, fig. 13, and 2001, pp. 558-561, nos. 14.420-14.421, fig. 151, "type III." It is present in Constantinople in the late 6th and 7th century, but is noted as being rare; see *Saraçhane*, p. 69, type 17.

and appears at Adriatic sites as well as on several Byzantine-controlled sites in Italy.[446] Closer to Corinth, the amphora is thus far only attested at Argos.[447]

## UNIDENTIFIED AMPHORA 1 FABRIC

*Ware*

Fabric Description

Unidentified Amphora 1 Fabric (Pls. 2.12, 3.1, 3.2): Reddish yellow (5YR 6/6 to 6/8 and 7.5YR 6/6 to 6/8), rarely yellowish red (5YR 5/8), fabric occasionally with gray horizons, and usually with pinkish (approx. 5YR 7/6 to 7.5YR 7/4) surfaces. Characterized by frequent to common very fine to fine elusive sparkling bits;[448] (rare to) few very fine to fine (to small) rounded black grains; rare (to few) fine to small sub-rounded gray inclusions; rare (to few) very fine to fine sub-rounded and rounded red pellets; few to frequent very fine to fine (to small) sub-rounded (and rounded) voids. Occasionally noted are few (to frequent) very fine to fine sub-rounded white grits; rare to few fine (to small) plate-like silver sparkling flakes. Rarely noted are frequent very fine white flecks. Granular, slightly conchoidal (and laminar), break; medium hard fabric.[449]

The amphora fabric initially bore some superficial similarities to Boiotian fabric, but the high amount of sparkling inclusions was later considered to discount a shared source. Petrographic analysis includes two samples, **P-91** (**201**) and **P-92** (**197**), of this amphora type, and while official results are still pending, preliminary observations reveal that these may be consistent with Boiotian Ware (see Chapter 4).[450] Due to the extremely

[446] It is noted as an important feature of 6th-century deposits at Butrint where it appears in two sizes, and numerous variants; cf. Reynolds 2004a, pp. 232-234. For Durrës (ancient Dyrrachium), see Shkodra 2006, pp. 441, 444, 455, nos. 48-54, fig. 9, where it is frequent. It appears at numerous Italian towns and *castra* post-dating the Justinianic re-conquest, including Naples and the nearby *castra* of Cumae and Puteoli, Velia in southern Campania, Kaukana in Sicily near Syracuse, Rome, and in the upper Adriatic at Classe, Marano and Oderzo; see Arthur 1998, p. 175.
[447] For a narrower example from Argos, see Aupert 1980b, p. 440, no. 324b, fig. 46, in a late 6th century or later context; see also Arthur 1998, p. 167.
[448] These often require direct sunlight in order to be properly observed.
[449] Based on macroscopic examination of **197 (P-92)**, **198**, **199**, **200**, **201 (P-91)**, and an unnumbered rim in Lot 02-06.
[450] H. Graybehl (pers. comm.).

fine nature of the fabric, chemical analysis might prove to be more fruitful in characterizing it.

Range of Vessel Shapes

At present, only cylindrical amphoras (**197 (P-92)**; **198**; **199**; **200**; **201 (P-91)**), have been attested in this fabric. Complete forms have not yet been recovered, but the fragments suggest an amphora with a long, hollow toe, tall cylindrical body, and open, flaring mouth.

*Dating and Identification*

The amphoras that characterize this ware have only been recognized in late 6th-century contexts in the Panayia Field. Further refinement of this date is not possible until other, dated, examples are recovered (or recognized) from other parts of Corinth or other sites. Although the amphora has not been definitively recognized elsewhere, other published pieces might offer some possible comparanda.[451]

*Discussion*

Nothing is presently known regarding the manufacture of vessels in this fabric, nor the distribution of its products.

[451] For rims of the Keay LXIIR, see Keay 1984, p. 334, 337, fig. 156:1, but with a diameter of 0.131 m. Keay equates this to the Beltrán 67 (see Beltrán Lloris 1970, p. 572, fig. 235:2-3), but the illustrated knob-like toe is not as the hollow-toed Panayia Field examples. Keay further offers a reconstruction of this amphora that consists of a cylindrical body 1.18 m tall, 0.35 m wide, and terminating in a narrow base with a stubby foot with thickening at the center, as a base fragment published by Almagro in *Ampurias* III.2, p. 320, fig. 306; see also *Ampurias* III.2, p. 326, fig. 310, for another similar example. A final possible parallel was published from Halieis, but the fabric description of the published piece seems to imply local manufacture in the southern Argolid; see Rudolph 1979, p. 309, no. 10, fig. 4.

## LATE ROMAN MICACEOUS AEGEAN WARE

*Ware*

Fabric Description

Late Roman micaceous Aegean ware fabric (Pls. 3.3-3.6): Brown (7.5YR 4/4) fabric, but often fired completely gray to dark gray throughout. Characterized by frequent to common fine sparkling flakes (especially on the surfaces); rare to few fine (to small) sub-rounded white/whitish/gray translucent clumps; (rare to) few fine to small sub-rounded to sub-angular black bits; few fine (to small) sub-rounded voids. Rarely noted are rare fine rounded red pellets; few fine to small elongated voids. Granular to hackly, occasionally conchoidal, break; soft to medium hard fabric.[452]

Petrographic analysis of samples P-16, P-17, and P-36, all from casseroles with the rim form most characteristic of Late Roman micaceous Aegean ware,[453] formed H. Graybehl's Fine Mica & Quartz Group. Monocrystalline quartz was dominant in the coarse fraction (3-10%), with frequent plagioclase feldspar, and rare instances of metamorphosed feldspar with mica, weathered igneous phenocrysts, chert, and siltstone. The fine fraction (25-35%) was dominated by biotite, muscovite, quartz and plagioclase, with common red clay pellets and opaque iron inclusions, and rare instances of hornblende and metamorphosed feldspar with mica. The matrix (54-76%) is non-calcareous (except for the presence of some secondary calcite), is very homogeneous, and is very optically active. Voids (1%) consist mostly of macrovughs with few macrovesicles and no alignment to margins.[454] This fabric was possibly made from residual clays related to metamorphic rocks, while the inclusions may derive from a combination of acid or intermediate igneous and metamorphic rocks. Based on the homogeneity in the type of inclusions, this fabric may also be related to the Quartz and

[452] Based on macroscopic description of P-16, P-17, P-36, and **298**. It should be noted that the typically dark color of the fabric makes accurate readings of the inclusions difficult.
[453] Slane 2000, p. 309, fig. 12; Slane and Sanders 2005, pp. 255, 264, nos. 1-28, 2-35, 2-36, figs. 3, 6.
[454] Graybehl 2010, p. 93.

Plagioclase fabric (P-13) (Unidentified Plain Ware 1), but due to the differences in the mixes the comparison may only indicate their manufacture within a similar geological environment as opposed to the same workshop.[455]

Care should be taken to differentiate this ware from other imported cooking wares, which are also micaceous and typically fired similarly dark gray to near-black on the exterior; **P-6** (**316**) (belonging to Graybehl's Igneous & Metamorphic Rock Group, see Unidentified Cooking Ware 3) and **P-7** (**321**) (belonging to Graybehl's Biotite & Granitic Rock Group, see Unidentified Cooking Ware 4) were petrographically proven to be distinct from this ware.

Range of Vessel Shapes

The appearance of this fabric in the Panayia Field is limited to cooking wares, mainly casseroles with sharply carinated bodies; two standard sizes have been noted, a "tall-rimmed" (**298**; **299**; **300**) and a "short-rimmed" (**301**; **302**).[456] Various other casserole shapes, as well as non-joining bases, have also less-frequently appeared (**303**; **304**; **305**; **306**; **307**).

*Dating and Identification*

Late Roman micaceous Aegean ware first appears in the Panayia Field sometime in the early 5th century, perhaps as early as the first quarter. It attains a high level of

[455] Graybehl 2010, p. 94.
[456] The "tall" is defined by a distance of ca. 0.070 m between the rim and the carination, while the "short" preserves a distance of ca. 0.050 m. The paucity of examples with these segments preserved makes it impossible to definitively state whether or not the two types have any difference in diameter size, but based on the few examples from the Panayia Field, "tall" types seem to range from ca. 0.180-0.215 m, while the "short" types range from 0.140-0.200 m.

popularity by about the mid-5th century, after which the increasing use of Northeast Peloponnesian cooking fabric in the manufacture of cooking vessels dominates the market. The deposits related to the construction activity preceding the bath and Long Building, and possibly during the period of use of the latter, might represent the latest contemporary appearances of the fabric on the site. The ware is found in other areas of Corinth in deposits of the 5th century and perhaps into the early 6th century,[457] while quantified data reveals that the ware accounts for as much as 30% of all cooking ware found between 450 and 525 or 550.[458]

Little is currently known regarding this fabric. Profiles, presumably in this fabric, were first published from the fill of a cistern excavated at the Contrada S. Pietro site, nearby the modern village of S. Giacomo degli Schiavoni (Molise), on the Adriatic coast of central Italy, where they were identified among other "'Aegean' wares."[459] The name "Late Roman micaceous Aegean ware" was applied in later publications of excavated material from Corinth.[460] The number of shapes belonging to this specific fabric group has since been reduced, with the recognition that other sources of superficially similar micaceous coarse fabrics also existed.[461]

*Discussion*

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[457] Slane and Sanders 2005, p. 255, no. 1-28, fig. 3 and p. 264, no. 2-35, fig. 6.
[458] Slane 2000, p. 303.
[459] Albarella, Ceglia and Roberts 1993, pp. 180-184, figs. 11-12.
[460] Slane 2000, pp. 309-310; Sanders 1999, pp. 469-470, no. 17, fig. 12, with a description of the fabric on p. 463, n. 31 ("Fabric C"); Slane and Sanders 2005, pp. 255-256, 264, 287, nos. 1-28-1-31, 2-34-2-36, figs. 3, 6, with a description of the fabric on p. 255, n. 21.
[461] See the results of the petrographic analysis regarding **P-6** (**316**, Unidentified Cooking Ware 3), **P-7** (**321**, Unidentified Cooking Ware 4), and the Late Roman micaceous Aegean ware samples P-16, P-17, and P-36. Recently, see Slane and Kiriatzi 2014, p. 910.

At present, no kiln sites have been identified for this ware. While an Adriatic source cannot be completely ruled out, the coast of western Asia Minor, in the area south of Pergamon, might present a more likely candidate.[462] The petrographic analysis conducted by H. Graybehl was informative regarding certain manufacturing aspects. The fine fraction clay pellets might indicate clay mixing, but it does not appear that the potter added any additional temper (thus, all inclusions are naturally occurring); however, the clays were possibly sieved in order to remove larger inclusions and rocks before being mixed. The lack of alignment of either the inclusions or voids denies any insight into how the vessel was formed, but macroscopic examination testifies that the samples were (at least partially) wheel-made. Finally, the red color of the hornblende indicates that the fabric was fired to at least at 750 degrees Centigrade in an oxidizing atmosphere.[463]

For these, and other, cooking vessels which do not present a strong alignment in their petrographic thin-section but do display macroscopic evidence of having been wheel-made, a combination technique may have occurred. A mixed technique was noted to have been employed on Attic and Aeginetan cooking vessels of the Archaic and Classical periods which involved the formation of the upper body and rim on the wheel (or by coiling) followed by the formation of the lower body through the bat-and-anvil technique. Petrographically, the bat-and-anvil technique has the effect of destroying any

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[462] Slane 2000, pp. 309-310; Slane and Sanders 2005, p. 287, n. 71, who see it travelling alongside LRC. Examples of "Aegean cooking ware" from various sites, including Marseilles, Beirut and Alexandria, have been recently proposed to have originated from Ephesos; see Waksman and Tréglia 2007, but these profiles do not closely parallel the finds of LR micaceous Aegean ware from the Panayia Field. In regards to a possible Adriatic source, the distribution map of "Aegean coarseware" (but without differentiating between fabrics) published in Albarella, Ceglia and Roberts 1993, fig. 12, shows a heavy distribution along eastern and western Italian and Adriatic coasts. Other forms of Early Roman "Aegean cooking wares" are also heavily concentrated on Adriatic sites, but are sourced to western Asia Minor and perhaps other Aegean sites; see Istenič and Schneider 2000, p. 343, fig. 1.

[463] Graybehl 2010, p. 94.

orientation to the inclusions or voids as seen in thin-section.[464] It might also be possible that these, and other, cooking vessels were formed through the bat-and-anvil technique, and then only finished on the wheel.

Given the recognition that several sources of Aegean cooking wares existed, tracing this specific fabric based on published material alone is difficult. In addition to the distribution on Adriatic and Italian sites (see manufacturing discussion, above), others have reported this ware's presence in Athens, Argos, Olympia, possibly Sparta, and possibly at Knidos and Didyma in southwestern Asia Minor.[465] Finds from Aegean island sites are currently lacking, and would be useful in reconstructing distribution routes and, potentially, the region of origin.[466] Within Corinth's surrounding region, at least one rim of a casserole in this fabric was personally noted at Isthmia, while a profile similar to the rims of the majority of casseroles in this fabric was published from the site of Diporto on the island of Makronisos, just off the south coast of Boiotia.[467]

## UNIDENTIFIED COOKING WARE 1

*Ware*

Fabric Description

[464] Farnsworth 1964, p. 225, who remarks specifically on broad, round-bottomed stewpots in which the rim an shoulders show clear signs of being wheel-made, but the lower portion is hand-finished and joined at the angle of the shoulder. Such rounded bottoms may alternatively have been beaten over a form of "mushroom mold" rather than finished by bat-and-anvil. The bat-and-anvil technique has the added benefit of making the fabric of cooking wares less porous.

[465] Slane and Kiriatzi 2014, p. 910; the distribution map in their fig. 14 also places this ware, or related forms, at Carthage and possibly southern Spain. For Argos, see Abadie-Reynal 2007, p. 220-221, pl. 58, nos. 372.1-2, although her dating which places the ware as early as the 4th century cannot be substantiated with the material from the Panayia Field. For profiles similar to **307** found in Sparta, cf. Pickersgill and Roberts 2003, p. 570, nos. 48a-b, fig. 8, dated late 4th century, in fabric "C6" (fabric commonly found locally); cf. also p. 585, no. 119, fig. 17, dated to the early 5th century, in fabric "C12" and identified as an "Eastern Aegean cooking dish."

[466] For a typological variant of this ware from the site of Kastri on Kythera, see Slane and Kiriatzi 2014, p. 910, fig. 8.

[467] Gregory 1986, p. 297, no. 10, fig. 12, but the fabric is unconfirmed; the profile is similar to **301**.

Stewpot fabric (Pl. 3.7): Completely dark gray fabric and surfaces, often exhibiting signs of vitrification. Characterized by frequent very fine to small (to medium) sub-rounded and angular white and gray chips; rare fine to small rounded and sub-rounded red pellets; frequent to common very fine to fine (to small) sub-rounded voids. Hackly break; hard to very hard fabric.[468]

Lid fabric (Pl. 3.8): Reddish yellow (5YR 6/6) fabric with a pale brown (10YR 7/4) core. Characterized by frequent very fine to small (to medium) sub-rounded and angular white and gray chips; few to frequent fine to small rounded and sub-rounded red pellets; rare (to few) fine (to small) rounded black grains; rare fine sparkling bits; frequent (to common) very fine to small sub-rounded voids. Hackly break; medium hard fabric.[469]

This ware was not petrographically analyzed during the course of this study, but careful macroscopic examination seems to suggest that both the stewpots and the lids share the same fabric. The stewpots appear to be fired higher/longer (to the point of vitrification, and in a reduced atmosphere?) than the lids, thus possibly accounting for the differences in color, the presence of sparkling bits in the lids (evidently burned out in the case of the stewpots), and the harder fabric of the stewpots. The fabric of this ware is easily distinguished from Northeast Peloponnesian cooking fabric by the frequency of the white chips visible on the break and on the surface and, normally, by the standard profiles of the stewpots and lids in this ware.[470]

Range of Vessel Shapes

Stewpots (**308**; **309**) and lids (**310**; **311**) are presently recognized in this ware. All of the stewpots in the Panayia Field appear in a tall ovoid form, reminiscent of the stewpots that were available in Corinth in the early 4th century,[471] with a short, everted

[468] Based on macroscopic description of **308**, **309**.
[469] Based on macroscopic description of **310**, **311**.
[470] Although it should be noted that the Panayia Field did produce a single find of this form of stewpot, **331 (P-15)** manufactured in Northeast Peloponnesian cooking fabric (confirmed petrographically).
[471] See *Corinth* XVIII.2, p. 77, for discussion of the transition of the shapes of stewpots that took place in the second half of the 4th century.

oval rim. Finds from other areas of Corinth additionally testify to both casseroles and baggy stewpots with square rims.[472] The lids are distinctive in that their rims are consistently folded underneath, but no associated handles (or knobs) were recovered from the Panayia Field with which to reconstruct the full form.

*Dating and Identification*

This ware appears in the Panayia Field in the late 4th- and early 5th-century deposits, with finds in any later contexts considered to be residual. K. Slane, however, has dated this ware to no earlier than the 5th century, based on other finds from Corinth.[473] This ware has yet to appear in any major systematic typological or fabric study.

*Discussion*

The fabric of these vessels has been loosely connected with that associated with cooking ware finds recovered during survey at Nikopolis,[474] while K. Slane has offered that this white-gritted cooking ware is probably from Epirus or Elis. Finds from Butrint, including stewpots and lids from 3rd- to 4th-century contexts matching the profiles here, have fabrics that have been described as local.[475] No kiln sites have been found but, based

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[472] Slane and Sanders 2005, p. 256, nos. 1-34, 1-35, fig. 3; although they were fired to an orange color, the fabric was personally confirmed.
[473] Slane 2008a, p. 240. See also Slane and Sanders 2005, p. 256, nos. 1-34, 1-35, fig. 3, where examples appear in a context of the first half of the 5th century.
[474] M. Morison (pers. comm.); see also Moore 2001 and Morison 2005, but the illustrated profiles (in the former) are not comparable to the forms recovered here.
[475] Reynolds 2004a (with the associated catalogue in Reynolds 2004b), p. 227, no. 131, fig. 13:78 (stewpot, fabric CW 1C/CW 2), no. 135, fig. 13:80 (lid, fabric CW 1C2), no. 181, fig. 13:110 (lid, fabric CW 2A), and no. 531, fig. 13:316 (lid, fabric CW 1C/CW 2). Fabrics CW 1C2, CW 1C/CW 2, and CW 2A are described (Reynolds 2004b, p. 333) as local fabrics; the CW 1 fabrics are characterized by chert, quartz, lime and flint (but no mica in these two sub-groups), but CW 1C2 is oxidized while CW 1C/CW 2 is

on the color differences between the stewpots and lids (discussed above), it was evidently the practice of the manufacturers of this ware to fire these two forms separately. This ware has reportedly also been found in Nikopolis and Athens.[476]

## UNIDENTIFIED COOKING WARE 2

*Ware*

Fabric Description

Unidentified Cooking Ware 2 fabric (Pl. 3.9): This ware displays significant variation in color, both among different vessels, and the array of horizons observable within individual pieces. Towards the interior of the vessel, the fabric is redder, with yellowish red (approx. 5YR 5/6), red (2.5YR 5/6), reddish brown (2.5YR 4/3) and weak red (10R 5/2) all noted. Towards the exterior, the fabric tends to become a deeper red, or browner, before the exterior surface darkens to gray, with strong brown (7.5YR 4/6), brown (7.5YR 5/3), and red (2.5YR 5/8 and 10R 5/6) noted. Characterized by few to frequent very fine to small sub-rounded and angular translucent gray (and white) chips and clumps (chert or quartz?); rare (to few) (very fine to) fine (to small) sub-rounded (calcareous?) white grits; rare fine sparkling bits; few to frequent very fine to fine sub-rounded voids. Occasionally noted are rare to few very fine to fine sub-rounded black grits. Rarely noted are few fine to very fine rounded red inclusions; few small angular red chips (on surface only); one instance of a fine sub-rounded (crystalline) red inclusion; few to frequent very fine to small elongated voids. Hackly (to granular) break; medium hard (to hard) fabric.[477]

This ware was not petrographically analyzed during the course of this study. Beyond careful macroscopic examination of the fabric, it is primarily distinguished from Northeast Peloponnesian cooking fabric through the very distinctive rim forms which have not been identified in the latter fabric.

Range of Vessel Shapes

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reduction-fired; fabric CW 2A is characterized by large chert and lumps of lime and iron oxide, mica, and occasional flint, and is reduction-fired. Based on the correspondence with the oxidized lids and reduction-fired stewpots in the Panayia Field, nos. 131 and 135 offer the best comparanda from Butrint.

[476] Reported to K. Slane in a personal communication by J. Hayes; see Slane 2008a, p. 240.

[477] Based on macroscopic description of **312**, **314**, and **315**.

Only cooking vessels with large, sloping rims with a deep groove in the exterior rim-face have been identified in this fabric, including casseroles (**312**), (tall?) straight-sided forms (**314**), and large (round-bodied?) stewpots (**315**). Another stewpot (**313**) might be an earlier, related, form in this series, but its fabric showed enough variation to exclude it from discussion here.[478]

*Dating and Identification*

The inconsistent appearance of the fabric of this ware does not allow for any definitive remarks regarding chronology, but it is unlikely to have lasted beyond the 5th century. This ware has not appeared in any major systematic typological or fabric studies.

*Discussion*

The origin and details of production of this ware are unknown, but stewpots of similar profile to **313** have been recovered from 3rd- to 4th-century contexts at Butrint in fabrics identified as being local.[479] Some forms similar to **312**, **314**, and **315** have been noted at Sparta, but these are manufactured in a micaceous fabric that was recognized there as being local to the area.[480] Closer to Corinth, these forms have been noted to appear at Sikyon in both stewpots and casseroles, and in a variety of fabrics that suggest

[478] Its fabric description is provided within its corresponding entry in Chapter 5.
[479] Reynolds 2004a (with the associated catalogue in Reynolds 2004b), p. 227, no. 122, fig. 13:73 (fabric CW 1B), no. 126, fig. 13:74 (fabric CW 1B), and no. 127, fig. 13:75 (fabric CW 1C2). Fabrics CW 1B and CW 1C2 are described (Reynolds 2004b, p. 333) as local fabrics; CW 1B is characterized by chert, quartz, lime and flint, and gold mica; fabric CW 1C2 is characterized by chert, quartz, lime, iron oxide lumps and some flint, but no mica, with a tendency to oxidized.
[480] A profile roughly similar in shape and diameter to **315** was published from an early 5th-century context at Sparta but with a micaceous fabric; cf. Pickersgill and Roberts 2003, p. 585, no. 113a, fig. 16, in fabric "C2," a common local fabric. Another stewpot, p. 570, no. 55, fig. 9, (cited in Tzavella, Trainor and Maher 2014, p. 93), bears no resemblance at all to the examples from the Panayia Field.

various centers of manufacture.[481] As Sikyon and Corinth very likely belonged to different distribution networks in the Late Roman period (see especially the discussion of Northeast Peloponnesian cooking fabric, Chapter 4), it may be reasonable to consider this cooking ware series as being from a source somewhere to the west of Corinth that arrived through the gulf.

## UNIDENTIFIED COOKING WARE 3

*Ware*

Fabric Description

Unidentified Cooking Ware 3 fabric (Pl. 3.10): The fabric is faintly red, but the color is greatly obscured by heavy burning; outer surfaces are blackened. Characterized by abundant very fine sparkling bits; few fine to small sub-rounded white grits; few fine sub-rounded yellow inclusions; few small sub-angular white/gray chips; rare fine rounded red pellets; few small rounded voids. Hackly break; medium-hard fabric.[482]

Based on superficial similarities in fabric, sample **P-6** (**316**) had originally been macroscopically identified with LR micaceous Aegean ware,[483] but the petrographic analysis revealed its distinctiveness and placed this sample in H. Graybehl's Igneous & Metamorphic Rock Group. Monocrystalline quartz was dominant in the coarse fraction (15%), with common coarse-grained igneous rock fragments (characterized by plagioclase, quartz and orthoclase, with small amounts of (red) hornblende and biotite),

[481] C. Trainor and E. Tzavella (pers. comm.); see also Trainor 2012, pp. 151-152, "stewpot" and "casserole with oblique rectangular or square rim," dated to the 3rd to 5th century and identified as not local. Most recently, see recently Tzavella, Trainor and Maher 2014, pp. 93-94, fig. 12, citing similar finds from various sites in the Adriatic and western Greece, but their citation of comparanda from Corinth (in Slane and Sanders 2005) is incorrect, as the pieces actually relate to vessels in the white-gritted fabric employed in Unidentified Cooking Ware 1 (see above); of the various fabrics, the authors hypothesize that one might be a local, or at least regional, product.

[482] Based on macroscopic description of **316 (P-6)**.

[483] The micaceous fabric of the pan was thought to bear a superficial similarity to the array of ceramics identified in earlier Corinth publications as "LR micaceous Aegean ware;" see Slane 2000, p. 309; Slane and Sanders 2005, pp. 255-256, 264, 287. Although not illustrated in these publications, K. Slane had also once originally classed this pan form together with LR micaceous Aegean ware, but decided later that the fabric was in fact different; for discussion, see Slane and Kiriatzi 2014, p. 909.

and rare instances of plagioclase, fine-grained metamorphic rock (consisting of recrystallized polycrystalline quartz; possibly phyllite), and textural clay features (clay pellets). The fine fraction (20%) was dominated by monocrystalline quartz and plagioclase, with frequent hornblende and biotite, and common weathered alkali feldspar with hornblende and biotite inclusions, textural clay features (clay pellets), and secondary calcite. The matrix (64%) is non-calcareous (except for the presence of some secondary calcite), is very homogeneous, and is very optically active at the core, but less so at the margins. Voids (1%) consist mainly of meso- to macrovughs with no apparent alignment to the margins.[484]

The metamorphic rock in the coarse fraction and the high amount of hornblende in the fabric greatly distinguishes this fabric from that of the other 61 samples studied in the first petrographic project and its identification as an import is confirmed by its total dissimilarity with the known geology of the Corinthia. The abundant quartz, plagioclase and coarse-grained igneous rock fragments that characterize this fabric are likely granitic in origin. The nature of the inclusions within the textural clay features and their presence in the fine fraction suggest that the clay is related to the igneous rock inclusions present in the coarse fraction, and the overall sub-angular to sub-rounded nature of the fine fraction inclusions show that the clays were residual in the outcrops, and not found near a water source.[485]

Range of Vessel Shapes

[484] Graybehl 2010, pp. 90-91.
[485] Graybehl 2010, p. 91.

At present, only cooking pans (**316 (P-6)**) with flanged rims have been identified in this fabric.

*Dating and Identification*

Pans in this fabric appear in the Panayia Field in a context of the second quarter of the 5th century to ca. 450, as well as residually in later deposits. Elsewhere in Corinth, the same pan appears in 4th-century deposits.[486] Based on published comparanda of finds of very similar pan forms (see distribution, below), it is strongly suggested that this was a 4th-century shape that might have survived into the early years of the 5th century.

*Discussion*

The petrographic analysis yielded some information regarding the manufacturing processes behind this vessel. The high percentage of fine fraction inclusions suggests a lack of fine levigation or sieving, while the red clay pellets present within the coarse fraction suggest that the fabric is the product of clay mixing. The bimodal nature of the inclusions suggests that additional temper was added to the fabric; the temper was possibly derived from an outcrop of acidic igneous rocks, although intermediate igneous rocks remain another possibility. Although macroscopically the vessel appears to have been (at least partially?) wheel-made, no alignment in either inclusions or voids was noted to corroborate this. Based on the high optical activity and the presence of the red hornblende, the sample was most likely fired in an oxidizing atmosphere at over 750

[486] Cf. *Corinth* XVIII.2, p. 79, no. 167, fig. 16, dated to the second half of the 4th century, with note of another unnumbered example from the early 4th-century Pit 66-1 (contents published in Slane 1994).

degrees Centigrade. Finally, variances in color and optical activity noted throughout the sample testify to the vessel's repeated use over a fire.[487]

The source of production is unknown, but its manufacture and primary distribution somewhere in the Aegean basin seem likely based on published find spots of the same pan form, including Constantinople,[488] Thasos,[489] Argos,[490] Sparta,[491] various sites on Crete,[492] and at the site of Kastri on Kythera.[493] A similar micaceous pan form is also noted at Benghazi,[494] as well as at Stobi,[495] Butrint,[496] Aquileia,[497] and the eastern Adriatic generally,[498] giving some idea of its distribution.

## UNIDENTIFIED COOKING WARE 4

*Ware*

Fabric Description

Unidentified Cooking Ware 4 fabric (Pl. 3.11): Red (2.5YR 5/6) fabric with slightly darker interior core; interior surface slightly darker than core, exterior surface blackened. Characterized by common to abundant fine sparkling bits; few to frequent fine to small

[487] Graybehl 2010, p. 91.
[488] Cf. *Saraçhane*, pp. 91-92, nos. 2.1, 4.6, fig. 30, in contexts of the 4th and first half of the 5th century.
[489] Cf. *Thasos* XIII, p. 40, nos. CC36-CC39, fig. 16, and Malamidou 2005, p. 65, nos. 1463-1465, fig. 98.
[490] Cf. Abadie-Reynal 2007, pp. 221-222, pl. 59, nos. 374:1-2.
[491] Cf. Pickersgill and Roberts 2003, p. 585, no. 120, fig. 17 (descriptions for nos. 120 and 121 appear to have been mismatched).
[492] For Eleutherna, cf. Yangaki 2005, p. 180, no. 196, fig. 46:b; for Rethymnon, cf. Gavrilaki-Nikoloudaki 1988, p. 55, no. Π4331; for Knossos, cf. Sackett 1992, p. 252, no. U67, pl. 193; for Gortyn, cf. *Gortina* V.3, p. 550, types C V 2.1 and C V 2.1/2, pl. 197:n, p; for Ierapetra, cf. Gallimore 2011, pp. 316-317, nos. 372-374, figs. 5:30-5:31.
[493] Cf. Slane and Kiriatzi 2104, p. 909, figs. 5, 11, who provide additional find spots of the "MR flanged pan" at Sardis, Troy, Knidos and Ostia.
[494] Cf. Riley 1979, p. 276, no. D588, fig. 108.
[495] Cf. *Stobi* I, p. 140, no. 1243, pl. 144, although lot 150 is dated to the second half of the 5th century.
[496] Reynolds 2004a (with the associated catalogue in Reynolds 2004b), p. 227, no. 116, fig. 13:68, in a fabric with common gold mica flakes that was interpreted as possibly south Italian, from a 3rd- to 4th-century context.
[497] Cf. Mandruzatto, Tiussi and Degrassi 2000, p. 360, fig. 4.4.
[498] Cf. Istenič and Schneider 2000, p. 341, fig. 5.3.

gray inclusions; rare fine to small white grits; frequent fine to small rounded and sub-rounded voids. Hackly break; soft fabric.[499]

Based on attributions made for a similar form in previous Corinth publications, **P-7** (**321**) had originally been macroscopically identified with Late Roman micaceous Aegean ware,[500] but the petrographic analysis revealed its distinctiveness and placed this sample in H. Graybehl's Biotite & Granitic Rock Group. Biotite (the larger pieces of which might also contain small amounts of chlorite or muscovite) was dominant in the coarse fraction (10-15%), with frequent granitic rock fragments (most likely acid granitic rock with quartz, biotite and orthoclase inclusions) and polycrystalline quartz (likely related to the granitic rock fragments), and common orthoclase (alkali feldspar; related to the granitic rock fragments). The fine fraction (20-30%) was dominated by biotite, with frequent quartz, common orthoclase, rare textural features (clay pellets; slightly opaque, possibly iron-rich), and very rare opaque iron fragments. The matrix (59-70%) is non-calcareous, relatively homogeneous, and is very optically active. Voids (1%) consist of two macro-elongate vughs and one meso-equant vugh (with possible secondary calcite on the interior edges) and are slightly aligned to the margins. Based on the inclusions, the fabric cannot be of Corinthian origin.[501]

Range of Vessel Shapes

At present, only a stewpot with a distinctive stepped-rim (**321 (P-7)**) is attested in this fabric.

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[499] Based on macroscopic description of **321 (P-7)**. Another similar rim, numbered 04-08:5 (not catalogued), might be of the same fabric. It is described as follows: dark gray fabric with blackened surfaces; frequent to common fine to small sparkling bits; rare sub-rounded brick-red lumps (grog?); few small to medium sub-rounded white/grayish clumps; one small angular crystalline white chip; possibly few fine sub-rounded dark grits; few fine sub-rounded voids. Hackly break; soft to medium hard fabric.
[500] Slane 2000, p. 309, fig. 12; Slane and Sanders 2005, p. 256, no. 1-30, fig. 3. This was later corrected in Slane and Kiriatzi 2014, p. 910.
[501] Graybehl 2010, pp. 99-100.

*Dating and Identification*

In the Panayia Field the ware appears only in a second quarter to mid-5th-century context, in a stewpot form that has not been the subject of any major typological study. The same form appears in another area of Corinth in a context of the first half of the 5th century.[502]

*Discussion*

While the ware's origins are unknown, aspects of the manufacturing process were gleaned through the petrographic analysis. The size and shape of the coarse inclusions (the grain size distribution of the fabric is highly bimodal) suggest that temper was added, consisting of granitic rock of which the biotite inclusions may be a part (the biotite inclusions match the mica present within the granitic rock fragments). The inclusions in the fine fraction are similar to the temper and thus suggests that at least one of the clays that was mixed into the fabric (attested by the clay pellets) must be from the same source as the temper. No evidence of the formation process of the vessel is observed in this sample due to the overall poor alignment of the inclusions to the margins as noted in the matrix. That the vessel was not highly-fired is suggested by the high level of optical activity observed in the sample, while a slight color difference in the center of the sample may have resulted from an incomplete reduction firing. Finally, evidence for its use as a cooking vessel might be preserved in the form of a thin, dark layer along the exterior

[502] Cf. Slane and Sanders 2005, p. 256, no. 1-30, fig. 3, but identified there as Late Roman micaceous Aegean ware.

edge.[503] Although instances of stewpots with stepped rims also occur in other fabrics (see **322**), specific examples of such stewpots with noted micaceous fabrics have been found at Torone,[504] Sparta,[505] and Carthage.[506]

## UNIDENTIFIED PLAIN WARE 1

*Ware*

Fabric Description

Unidentified Plain Ware 1 fabric (Pls. 3.12, 4.1): Gray fabric and surfaces. Characterized by frequent very fine to small sub-rounded white and beige/yellowish-brown pellets; few to frequent very fine to small sub-rounded red/reddish-yellow pellets; rare to few fine to small sparkling bits; few to frequent fine sub-rounded and elongated voids. Occasionally noted are rare fine sub-rounded white (crystalline) clumps; rare fine sub-rounded black grits. Hackly break; hard (to very hard) fabric.[507]

P-13, originally macroscopically identified as Northeast Peloponnesian cooking fabric due to its coarse, non-micaceous, gray fabric, was found to be petrographically distinct, and was placed in H. Graybehl's Quartz and Plagioclase Group. Quartz was frequent in the coarse fraction (5-10%), with common plagioclase feldspar, textural clay features (red clay pellets with extremely fine quartz inclusions within), and rare instances of mudstone and weathered volcanic rock.[508] The fine fraction (20-30%) was dominated by quartz, with frequent plagioclase feldspar, rare weathered feldspar and possible weathered volcanic rock, and very rare hornblende. The highly vitrified matrix (50-70%)

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[503] Graybehl 2010, pp. 99-100.
[504] Cf. Papadopoulos 2001, pp. 543-545, nos. 14.328-14.329, figs. 140-141, "type 2."
[505] Cf. Pickersgill and Roberts 2003, p. 585, no. 121, fig. 17, dated to the early 5th century, appearing in fabric "C12" and identified as an "Eastern Aegean cooking pot" (descriptions for nos. 120 and 121 appear to have been mismatched).
[506] Cf. *Carthage BM* I.2, pp. 187, 189, fig. 70, nos. 35.1-2, but appearing in deposits there of the early 6th century with the fabric described (pp. 25-26) as containing metamorphic inclusions, with gold mica clearly being visible.
[507] Based on macroscopic description of 00-18:2 (P-13), **515**.
[508] Consisting of several fragments of possible basic igneous rock (basalt?) with crystal lathes, possible hornblende, phenocryst (in one inclusion); otherwise no minerals other than feldspar are present.

appears non-calcareous (although with secondary calcite along the edges of the sample[509]), is homogeneous throughout, and is only slightly optically active (due to the secondary calcite and very fine quartz inclusions, and red textural features). Voids (1%) consist of very few meso- and macrovughs, with strong alignment to the margins. The igneous rock-based inclusions exclude the area of the Corinthia as a possible place of origin.[510]

The fabric of this sample might be related to Graybehl's Fine Mica and Quartz Group (Late Roman micaceous Aegean ware), but this vessel was fired to a higher temperature, either during or after production,[511] which might have resulted in the breakdown of the mica. However, the Fine Mica and Quartz Group did not possess any volcanic rock inclusions, and it is thus more likely that the two fabrics were manufactured in separate places.[512]

Range of Vessel Shapes

At present only trefoil/pinched-mouth pitchers are attested in this fabric (**515**).

*Dating and Identification*

Finds from the Panayia Field suggest that vessels in this fabric belong to the first half of the 5th century. The dating cannot currently be refined by means of comparanda from other sites, as none have as yet been recognized.

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[509] This might possibly be the result of the depositional context of the sample and high levels of carbonate minerals in the Corinthian soil; Graybehl 2010, p. 97.
[510] Graybehl 2010, pp. 96-97.
[511] Post-production is less likely; the very presence of another example (**515**), which possesses the same fabric characteristics, argues against such an accidental post-production incident.
[512] Graybehl 2010, p. 43.

*Discussion*

Aspects related to the manufacturing process were revealed in the course of the petrographic analysis. The fabric likely resulted from the mixture of two clays; the clay pellets in the matrix suggest that one clay was red with very fine quartz inclusions, while the characteristics of the second are obscured due to the high level of vitrification. The slightly bimodal nature of the inclusions, and the overall homogeneity of the coarse and fine fractions, suggest that additional temper was not added to the fabric; the angular to rounded inclusions might have been naturally-occurring in the raw clay which was likely not sieved or levigated. Finally, the dark gray matrix suggests a high firing temperature, possibly in a reducing atmosphere, reaching over 750 degrees Centigrade as evidenced by the red color of the hornblende.[513]

## UNIDENTIFIED PLAIN WARE 2

*Ware*

Fabric Description

Unidentified Plain Ware 2 fabric (Pls. 4.2, 4.3): Brown (7.5YR 5/2), and slightly grayer, inner fabric, with strong brown (7.5YR 6/4) fabric near surface; light brown surface (approx. 7.5YR 6/4). Characterized by frequent to common fine (gold?) sparkling bits; frequent to common fine to small white flecks; few fine black grits; rare fine gray inclusions; rare fine off-white inclusions; few fine pin-hole voids. Granular break; soft to medium-hard fabric.[514]

A Boiotian source was originally considered but was later discounted due to the large amount of silver and gold sparkling inclusions. The single instance of this fabric was submitted for petrographic analysis (**P-84** (**511**)) and, while official results are still

[513] Graybehl 2010, p. 97.
[514] Based on macroscopic description of **511 (P-84)**.

pending, preliminary observations reveal that it might be consistent with Boiotian Ware (see Chapter 4).[515] Due to the extremely fine nature of the fabric, chemical analysis might prove to be more fruitful in characterizing it.

Range of Vessel Shapes

At present, only a large pitcher is attested in this fabric (**511 (P-84)**).

*Dating and Identification*

The single example of this ware came from a context of the second quarter to mid-5th century; the date cannot currently be refined further as the form has not been recognized in any other typological studies.

## LONG DISTANCE IMPORTS BY GEOGRAPHICAL AREA AND THE MECHANISMS OF THEIR DISTRIBUTION

*Introduction*

The above groups represent the main, imported ceramic wares and major fabric groups recovered from the Panayia Field, but these do not represent the totality of the ceramic material. Various other, isolated finds from all ceramic classes in rare or unknown fabrics also appeared, and are listed in the catalogue (Chapter 5), with further discussion in Chapter 6; some are also included in the following discussion if their general area of origin is known to be from a long-distance source. The remainder of this chapter builds upon the general introduction to the mechanics of distribution provided in Chapter 1 and explores the empire-wide distribution networks and the specific mechanics

[515] H. Graybehl (pers. comm.).

that were responsible for conveying the identified long-distance wares from their places of origin to their place of consumption and/or discard in the Panayia Field. This discussion is arranged geographically rather than by ware or ceramic class as several wares, along with all of their contingent classes of pottery, as well as varieties of other commodities, may have travelled together along the same networks.

*Western Imports*

Ceramics from western sources, with the exception of AfRS, comprise a comparatively small amount of the material recovered from the Late Roman Panayia Field. The division of the empire following the death of Theodosius in 395 had major repercussions on long-distance networks;[516] the re-allocation of Egyptian grain from Rome to Constantinople must have been made official then if not already during the years of the latter capital's foundation, while African grain continued to be earmarked for Rome's supply. The decrease in AfRS quantities noted at the end of the 4th century in Athens and Corinth,[517] at one time attributed to the Vandal invasions,[518] is now taken as a symptom of the empire's division and the political and administrative changes that were taking place.[519]

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[516] In regards to a decrease in AfRS noted at the Athenian Agora, Hayes (*Agora* XXXII, p. 72) states that "it can now be argued that the political and administrative changes in the Empire ca. A.D. 400 affected the supply of fine wares much more than did the arrival of the Vandals." The trade embargoes Stilicho placed on merchants from the east in 408 present another possible factor for consideration; see Jones [1964] 1986, p. 824, n. 1. Perhaps not coincidently, in the very next year all *annona* supplies paid by the three provinces of Palestine were commuted to gold; see Jones [1964] 1986, p. 630. The timing between the two events raises suspicion and further analysis might reveal a connection.
[517] For AfRS decline in Corinth, see Slane 2000, p. 307.
[518] *Supplement*, pp. 516-517.
[519] See Hayes 2005, p. 12; *Agora* XXXII, p. 72. The British excavators at Carthage noted early on that a variety of less widely-travelled AfRS forms were already being manufactured before ca. 425 and were appearing in local markets; the implication is that the export of AfRS was already declining prior to the Vandal invasion, and that it was this environment of decline that invited the Vandals to invade in the first place. Furthermore, changes in AfRS typology and the expansion of distribution was noted to begin again

Regardless of any effects of this political division, from the late 4th century through at least the first half of the 5th century, some goods from North Africa and the western Mediterranean in general still managed to reach Corinth. K. Slane commented that western products likely arrived at Corinth by means of an intermediary Italian port, such as Ostia or on Sicily, while Adriatic routes and ports deserve further exploration.[520] Sicily's reputation as a source of grain, in addition to its geographic position between the eastern and western halves of the empire, may additionally have made it an attractive stop along major distribution routes.[521]

The low numbers but high diversity of western imports recovered from the Panayia Field pre-dating the mid-/late 5th century bespeak the piecemeal and indirect manner of their import and preclude interpreting their presence here as having been part of any officially-sponsored arrangement. Specific forms of North African amphoras, although greatly varied, are individually poorly attested in the Panayia Field, although this situation is in contradiction to that seen in the east of theater deposits in Corinth where quantities of African amphoras witness a slow but steady increase until ca. 500.[522] In addition to the massive amounts of grain that Africa produced for the *annona* (see Chapter 1), olive oil was among its other major agricultural products and might have

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in about the last quarter of the 5th century, *during* the Vandal occupation, with a new range of forms, including Hayes forms 103 and 104, that emerged in ca. 500; see *Carthage BM* I.2, p. 113. Furthermore, study of particular regions in the west has shown that AfRS was in fact exported during ca. 430-475, but only towards distinct, regional markets where the range and quantities of individual forms are uneven; see Reynolds 1995, pp. 17, 25, 2010, pp. 85-86, 93-100. From ca. 475-535, during the latter half of the Vandal occupation, AfRS shows a general increase (although comparatively still low and uneven) in the quantity that was exported, probably connected to a renewed export of agricultural surplus from Vandal Africa; see Reynolds 1995, pp. 28-29, 2010, pp. 100-105; Bonifay 2004, pp. 480-482; Lewit 2011, p. 316.

[520] Slane 2000, p. 306.

[521] For the Sicilian grain supply to Constantinople, see Morrisson and Sodini 2002, p. 209; Wickham 2005, p. 716; for the supply to Rome, see Lewit 2011, p. 325. For the role of Sicily along east-west distribution routes from Hellenistic to Late Roman times, see Malfitana 2004. For the role of Sicily in regards to Mediterranean connectivity, see Braudel 1972, pp. 116-117, 133-134.

[522] Slane 2000, fig. 13.

been shipped out in the Keay XXV/Africaine IIIB (**202**)[523] (Pl. 4.4), Keay XXXVB (**203**)[524] (Pl. 4.5), Keay LXIA (**204**)[525] (Pl. 4.6), and other amphoras (**205**)[526] (Pl. 4.7) that appear to be African in origin.[527] The small range of *spatheion* amphoras from Africa (**206**;[528] **207**[529]) might have carried oil or wine.[530] Amphoras from western areas other

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[523] For the "contenitori cylindrici della tarda età imperial," see *Ostia* IV, pp. 40, 178-179, figs. 153-155, pl. XXIII, with the full form of a similar amphoras depicted on pp. 263-264, "*Anfore* n. 3," with profile drawings on p. 116, no. 3, and p. 258, no. 23, and photograph in fig. 582, pl. LXXVIII. For further discussion, see also Panella 1982, pp. 176-178, especially fig. 13. **202** generally corresponds to several variants of *Keay* XXV (Keay 1984, pp. 184-212, figs. 77-89), with possible morphological parallels found in *Keay* XXVL:2, 4 (p. 187, fig. 81), XXVN:5, 6 (p. 187, fig. 81), XXVO (p. 187, fig. 81), and XXVQ (p. 188, fig. 83); *contra* Keay 1984, pp. 188-189, figs. 83-84, where he equated the *Ostia* IV, 153-155, with his Keay XXV variants Q, and S to V. Keay's variants L, N, O, and Q are generally dated (pp. 196-197, 212) to the late 4th to mid-5th century. See also Bonifay 2004, p. 119, fig. 64, "Type 28" / "Africaine III B," including *Ostia* IV, 149-156, and variants K to V of *Keay* XXV within this type; Bonifay's Type 28 is dated (p. 122) to the 4th century. This amphora enjoyed wide distribution; see Whitehouse et al. 1982, p. 69, no. 135, fig. 10, for a similar example from the 5th century Schola Praeconium deposit in Rome; for a similar example from a 5th-century well at Argos, see Ivantchik 2002, p. 383, no. 127, figs.16, 18; for another similar example from Saranda Kolones in Paphos, Cyprus, see Hayes 2003a, p. 487, no. 226b, fig. 21:b, dated 5th or early 6th century, also noting its presence in Athens. Bonifay 2004, p. 119, cites other find spots including Ostia, southern Gaul, and the Athenian Agora.

[524] For the Keay XXXVB, cf. Keay 1984, pp. 234-235, figs. 101-102, who notes that it appears mainly between the mid-5th to mid-6th century (p. 240); Keay's association with the Almagro 50/51 does not appear to bear any resemblance. Cf. also Bonifay 2004, pp. 134-135, figs. 72:a-b, "Type 41," dated to the 5th century. Possibly cf. also the Keay XXXV C, possibly from Tunisia, and dated from 5th to 7th century; Keay 1984, p. 242, fig. 102.7.

[525] Possibly as Keay LXIA with suggested Tunisian origin, dated after the mid-5th century in Spain and lasting into the 6th century; cf. Keay 1984, pp. 303-309, fig. 132.

[526] For similar profiles, cf. Bonifay 2004, pp. 129, 132, figs. 70-71, "Types 34-36," ranging in date from the late 4th to 5th century.

[527] For the export of African olive oil see, for example, Mattingly 1988. For the contents of these amphoras, see Keay 1984, pp. 193, 235, and 305, respectively. Keay also notes that his type XXV might have also carried fish paste or wine.

[528] For the "contenitori detti *spatia* della tarda età imperial," see *Ostia* IV, pp. 41, 211-221, figs. 162-165, pls. XXIV-XXV, for early discussion of the type, with a profile drawing on p. 259, no. 24, and photograph in fig. 573, pl. LXXVII. For further discussion, see also Panella 1982, pp. 178-180, fig. 14. For a similar toe, see also *Ostia* III, p. 109, 608, fig. 111, pl. XXII; see also p. 623, 630, no. 32, for full profile. For the Keay XXVI, cf. Keay 1984, pp. 212-219, with 13 identified variants, but see especially fig. 91:10 for a similar spike toe. For the *Saraçhane* type 14, cf. *Saraçhane*, pp. 67, 104, no. 30.187, which illustrates a similar toe. See also Bonifay 2004, pp. 125, 127 figs. 67-68, "Type 31 or 32" / "*Spatheion*" 1 or 2 amphora; Bonifay's types span the 5th to 6th centuries. For a similar fragment of a toe found at Butrint, cf. Reynolds 2004a, p. 229, fig. 13:161, recovered in a deposit of ca. 500-550. For Argos, see Abadie 1989, p. 52, fig. 8, dated to the 4th century.

[529] For the "contenitori detti *spatia* della tarda età imperial," see previous note. For the Benghazi LR Amphora 8a, see Riley 1979, pp. 226-227, no. D363, fig. 92, for a similar rim from 6th-century levels. For the Keay XXVIG, see Keay 1984, p. 213, fig. 90, dated (p. 216) to the 6th century. For the Fulford and Peacock form 67, see *Carthage BM* I.2, p. 135, fig. 42:101, the earliest context being ca. 500. For the *Saraçhane* type 14, see *Saraçhane*, pp. 67, 104, no. 30.186, for a similar rim. See also Bonifay 2004, pp. 125, 127, fig. 68, "Type 32," Variant A, "*spatheion*" 2 amphora, dated (p. 127) to the second half of the 5th century. A similar example was also found on Aegina; cf. Felten 1975, p. 68, no. 95, pl. 21.

than North Africa include the rare occurrence of amphoras similar to the Keay XXIII/Almagro 51C amphora (**208**),[531] as well as similar forms in different fabrics (**209**; **210**); the Keay XXIII may have been a container of fish sauce from Lusitania in Portugal.[532] Fragments of the Keay LII amphora, possibly from Sicily or southern Italy, were also found in the Panayia Field in 5th-century contexts;[533] fragments of these amphoras or similar forms (such as **223**) were noted to be in three different fabrics.[534] The form is generally considered to have carried wine, but honey is also attested.[535] No lamps or plain wares have been confirmed to be from western sources, but the cooking

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[530] Keay 1984, p. 215, noting also the circumstantial papyrological evidence that mentions the *spatheion* amphora mostly in relation to wine, but also mentions garum, honey, and lentils. See also Reynolds 1995, p. 50, who places more emphasis on fish products.

[531] Amphoras with this profile have been noted elsewhere in Corinth in a deposit of the first half of the 5th century; see Slane and Sanders 2005, p. 254, no. 1-19, fig. 3, and p. 285, n. 58, who also note the poor dating of Keay XXIII (late 3rd to 5th century). For the Keay XXIII, see Keay 1984, pp. 172-179, figs. 69-72, but his association with the Almagro 51C (see *Ampurias* III.2, pp. 312, 411, fig. 289) should be re-considered as the Ampurias amphora has a much more vertical handle that attaches just below the lip. The amphora also appears in other ceramic typologies: for the Dressel 23, see *CIL* XV.1, no. 23, table II; for the Beltrán 51, see Beltrán Lloris 1970, pp. 540, 542-543, fig. 221:1-3; for the *Ostia* III, 135, see *Ostia* III, p. 117, 533, 615, fig. 135, pl. XXIV; for the Ostia IV, 255-256, see *Ostia* IV, p. 56, 179, figs. 255-256, pls. XXXIV-XXXV. It was widely exported in the Middle to Late Roman periods, from the 2nd to early 5th centuries, showing a peak in Rome either after ca. 300 or ca. 350-390, and becoming residual by ca. 425; see Reynolds 1995, pp. 62, 83, who, like Keay, also notes that at least four different fabrics have been recognized.

[532] Keay 1984, p. 178; Reynolds 1995, p. 62.

[533] Keay 1984, pp. 267-268, fig. 114; Pacetti 1998, p. 185, who places the form as late as the 7th century; Slane and Sanders 2005, p. 285, n. 58. Keay (1984, p. 267) originally postulated an eastern source based on the micaceous fabric, but a general source in Calabria or Sicily, where it is considered to have been manufactured at several centers, is now generally accepted; see Pacetti 1998, who also considers the amphora as part of state-sponsored systems of distribution. Keay LII amphoras have been found on various western and eastern sites dating from the mid-4th to later 6th century. The amphora appears in the 5th-century Schola Praeconium deposit in Rome; see Whitehouse et al. 1982, p. 69, fig. 11:153, 158. For the Keay LII in Corinth, see Slane and Sanders 2005, pp. 254, 285, no. 1-22, fig. 4. For Athens, cf. *Agora* V, p. 106, no. M 234, pl. 28, there dated to the early 4th century, p. 112, no. M 302, pl. 31, there dated to the early 5th century, and perhaps p. 77, no. L 31, pl. 16, there dated to the early 4th century (dates retained in *Agora* XXXII). For Kenchreai, cf. *Kenchreai* IV, p. 114, no. RC 12, pl. 26, dated to the 4th century; for Argos, cf. Abadie 1989, p. 49, fig. 5, 4th century; see also Aupert 1980b, p. 442, no. 328a, fig. 46, in a late 6th-century context.

[534] See Capelli 1998, for the petrographic characterization of three different fabric groups. See also Slane and Sanders 2005, p. 285, for mention of three different fabrics.

[535] Keay 1984, pp. 267; Pacetti 1998. Slane and Sanders 2005, n. 58, mention its use for honey; see *Agora* V, p. 106, no. M 234, pl. 28, and p. 77, no. L 31, pl. 16, where both amphoras contained honey, with the contents of the latter specifically identified as Hymettan. For discussion of the inscriptions, see *Agora* XXI, pp. 79-80, nos. He 29, He 36, pls. 45, 46. After their arrival in Athens, the amphoras were obviously re-purposed for use as containers of local honey, complete with new labels detailing their contents.

wares belonging to both Unidentified Cooking Ware 1 and 2 very likely came from somewhere towards the west of Corinth. Both cooking wares seem to have been imported already at the beginning of the period under study, but neither shows any indication of either attaining high numbers or out-living the 5th century. Additionally, a unique stewpot from a late 5th- to early 6th-century context (**324**) might have travelled through the Adriatic based on comparative finds.[536]

These amphoras and cooking wares were all likely collected in a piecemeal fashion from intermediary ports or emporia along western routes and arrived with the significant quantities of AfRS. During the later 5th to early 6th centuries, AfRS imports dwindled to the point that only rare occurrences of certain forms appear in the Panayia Field, and western amphoras and cooking wares seem to vanish altogether in this part of the site.[537] In 533, following the re-conquest of North Africa, the grain *annona* was now directed towards Constantinople,[538] and with it followed a renewed export of AfRS, although African amphoras (with the possible exception of the *spatheion* amphoras) are not attested at all here. Other areas of Corinth, however, show a dramatic increase of African amphoras at this time, increasing to the point that they account for 25% of all amphoras after ca. 600.[539] The re-establishment of eastern connections with Africa,

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[536] See Shkodra 2006, pp. 448, 456, nos. 61-64, fig. 11, for finds from Durrës (ancient Dyrrachium) in a similar fabric, with mention of the form at other nearby sites of the 5th to 6th century.
[537] Slane 2000, fig. 13, illustrates that in other areas of Corinth African amphoras only decreased in numbers during the first half of the 6th century, but were still present.
[538] Sirks 1991, pp. 165-168; Kingsley and Decker 2001, p. 4, n. 23; Morrisson and Sodini 2002, p. 209; Lewit 2011, p. 323. Recall that the soon-to-be-emperor Heraclius seized grain ships in 608 at Carthage bound for Constantinople in his revolt against Phokas.
[539] Slane 2000, pp. 304, 310, fig. 13.

directed through the Aegean, is reflected in the increase of AfRS noted at Constantinople and other Aegean sites after this date.[540]

The 6th-century grain ships likely left Africa skirting Sicily before entering the Aegean and continuing up the eastern coast of Greece. The increase of AfRS in the Panayia Field after the re-conquest of Africa is in line with this scenario, given that the harbor of Kenchreai could have served as a convenient stop on route to Constantinople.[541] The new grain route was very likely responsible for the revitalization of ports and commercial facilities all along the eastern coast of Greece as this route had become one of the primary supply lines to the capital.

*Black Sea (?) and Aegean Imports*

Finds in the Panayia Field from the Black Sea are rare and, like many of the western imports pre-dating the 6th century, may represent infrequent or even accidental acquisitions. Possible amphoras from the Black Sea region are exceedingly few, limited to two from a context of ca. 500 (**218**; **219**), and one from a late 6th-century context (**224**). Two imported stewpots found in a late 6th-century deposit (**325**; **326**) may be residual imports from the Black Sea (or Adriatic?) region.[542]

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[540] Abadie-Reynal 1989, p. 155; *Saraçhane*, p. 7; Reynolds 1995, p. 34; Tortorella 1998, p. 54; Wickham 2005, p. 712; Lewit 2011, p. 323.
[541] Despite the low numbers of AfRS as reported in *Kenchreai* IV; see the discussion of AfRS, above.
[542] Cf. *Saraçhane*, p. 93, no. 10.7, fig. 31, and p. 94, no. 13.2, fig. 32, from deposits of the second quarter of the 5th century; for finds from Scythia, cf. Opaiţ 2004b, p. 45, pl. 35:1-6, pot type II, dated to the 4th century with lower numbers noted in the first half of the 5th century; similar profiles at Torone on the northern Aegean might confirm such a movement; see Papadopoulos 2001, pp. 546-547, no. 14.360, fig. 145, dated early 4th to early 5th century. A similar profile with a similar fabric also appears at Durrës (ancient Dyrrachium) in contexts of the late 5th to 6th century, where the fabric is noted as "the same as the majority of the coarse ware present at the Macellum Forum deposits (Fab. B-8b);" see Shkodra 2006, pp. 448, 457, no. 71, fig. 12.

Aegean sources are better attested here. Some of these imports of the late 4th and 5th century seem to be either hold-overs from the earlier 4th century, or only sporadic acquisitions by ships coming from the eastern Mediterranean through the Aegean, such as the various individual micaceous cooking vessels of Unidentified Cooking Ware 3 and 4 whose published comparanda may suggest Aegean sources (see above). The profile of another, non-micaceous stewpot (**322**), is also very likely an Aegean product, with the number of published parallels possibly suggesting that it might be a Cretan product.[543] Certain one-handled jars first published among finds from the Athenian Agora,[544] have since been attributed to an east Laconian origin (**215**; **216**; **217**)[545] (Pls. 4.8, 4.9).These are probably dated to the 5th century and, based on the infrequency of their appearance in the Panayia Field, likely represent other occasional acquisitions moving along major distribution routes.[546]

Other imports such as the Niederbieber 77, likely an Aegean product, is certainly a continuation of 3rd- and 4th-century imports;[547] that the form did continue into the 5th

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[543] Profiles of non-micaceous versions with thicker rims appear repeatedly on Crete; for Ierapetra, cf. Gallimore 2011, p. 314, no. 357, fig. 5:28 (with further references), in a context of the first half of the 4th century; for Eleutherna, cf. Yangaki 2005, pp. 53, 173, nos. 101, 105, 155, 160, figs. 32:i, 38:b-c (with further references), appearing in the 4th century; for Knossos, cf. Hayes 1983, p. 126, nos. 94, 98, fig. 8, where it is noted as being common in the 4th or early 5th century with parallels in Athens and other Aegean sites; but cf. also for Knossos Hayes 2001, p. 440, no. A 35, fig. 4, there dated later, to ca. 525-550, and identified as the "Asia Minor" type.

[544] Cf. *Agora* V, p. 113, no. M 315, pls. 33, 58, and p. 116, no. M 336, pl. 33, layers X-XII re-dated to the late 4th to mid-5th century (*Agora* XXXII, p. 300).

[545] K. W. Slane (pers. comm.).

[546] Ivantchik 2002, pp. 392-393, nos. 144-155, figs. 23-25, publishes similar examples from a 5th-century well at Argos, additionally referencing other finds (pp. 353-354) from the end of the 3rd to 5th century in the east cemetery of Argos, and considering the possibility that they were locally-made; see also Abadie-Reynal 2007, p. 232, no. 406.1, pl. 64, who notes their appearance in the 4th and beginning of the 5th century at Argos. Similar profiles also appear at Sparta in the early 5th century; see Pickersgill and Roberts 2003, p. 586, nos. 128a-d, fig. 18, but especially no. 128c.

[547] This amphora has been suggested to have been exported from an Aegean source and has been noted at Corinth in contexts of the 3rd and 4th centuries; see *Corinth* XVIII.2, pp. 108-109, 116, no. 254, fig. 29, pl. 15; Slane 1994, pp. 136, 147-148, nos. 21-22, fig. 6; Slane 2000, pp. 301-302; Slane 2004, pp. 364-365, fig. 3; see also Peacock and Williams 1986, p. 193. Of further relevance, the Niederbieber 77 shares a similar distribution as the regionally-produced LR Amphora 2 (discussed in the following chapter), appearing on

century in Corinth is clear,[548] but there exists difficulty in assigning a secure date for individual fragments due the high probability of a residual nature.[549] Its contents are unknown, but wine has been strongly suspected.[550] Given the prevalence of this amphora type in the deposits of the Panayia Field, it must have been imported in significant quantity during the preceding periods.

The various cooking ware imports of the late 4th and early 5th century, from both Aegean and western sources, were overshadowed between the second quarter to mid-5th century by the petrographically distinct Late Roman micaceous Aegean ware. Its concentrated appearance seems to have been much more purposeful and intended to fill a need in cooking wares. The ware's origin is not certain, but it was most recently suggested that it was produced in an area to the south of Pergamon where LRC was manufactured and with which it could travel.[551] Evidence from the Panayia Field might indicate that the cooking ware became popular before LRC did; if this is correct, this could either suggest that it arrived by a different route, or that it was the early versions of LRC (such as **73**, for example) that first arrived travelling on the back of the cooking

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sites throughout the Roman Empire but with a focus in the eastern Mediterranean and with concentrations at Roman military sites in Dacia and along the Danube; see Peacock and Williams 1986, p. 193; Negru, Bădescu and Avram 2003, pp. 212-213; Opaiţ 2004b, pp. 13. Others have offered the possibility of a late 2nd century start date and suggested other possible sources, such as the western coast of Asia Minor or more generally in the eastern Mediterranean; see Negru, Bădescu and Avram 2003, p. 213, with references; see also Peacock and Williams 1986, p. 194. The type is predominant in deposits of the end of the 4th century at Argos, but is residual by the start of the 5th century; see Abadie 1989, p. 47, fig. 1.

[548] For a nearly complete specimen that was recovered from a fill of the first half of the 5th century, see Slane and Sanders 2005, p. 254, no. 1-15, fig. 3.

[549] Differences are better noted in complete examples; a mid-3rd-century example from the Panayia Field like C-1999-041 is both taller, and the maximum diameter is at a higher point, than the 5th-century example noted previously. For further notes on dating and typology, see Slane 1994, p. 148, n. 18; Negru, Bădescu and Avram 2003.

[550] Peacock and Williams 1986, p. 194; Negru, Bădescu and Avram 2003, p. 213.

[551] Slane and Sanders 2005, p. 287, n. 71.

ware.[552] Whatever the relationship this ware had with LRC, its import did not survive much past ca. 500, by which time local/regional production in Northeast Peloponnesian cooking fabric accounts for all of the cooking wares found here.

A small handful of vessels from unconfirmed sources may have origins specifically on the island of Crete. A possible example of an Eleutherna type MRC2a/b amphora from an early 6th-century context (**222**),[553] two *Saraçhane* type 22 amphoras (LR Amphora 14) from mid-/late 6th- and 7th-century deposits (**230**, **231**) (Pls. 4.10, 4.11),[554] and a possible TRC2 amphora (**233**) from the 7th-century pit,[555] have fabrics

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[552] See Armstrong 2009, p. 158, who argues that while fine wares typically travelled as ballast, reliable "fireproof cooking pots" represent a specialized operation of production "dependent on highly technical potting and sources of suitable clays" which could be distributed for its own sake. See also Slane 2014, p. 123, who discusses cooking wares as commodities that could be motivators of long-distance distribution.

[553] Its fabric was provisionally identified as Constantinopolitan White Ware in the original lot notes, but parallels with the Eleutherna type MRC2a/b on Crete might argue for a different source; cf. Stampolidis 2004, p. 192, no. 103 (in a white fabric), no. 104 (in a red fabric); Yangaki 2004-2005, p. 508, fig. 3, and 2005, pp. 185-188, figs. 47-49, dated to the 4th century with continuation into the 5th. The MRC2a is popular in Eleutherna in the first half of the 4th century and continuing into the 5th; cf. Yangaki 2005, pp. 185-188, who also identified examples of her variant 'a' in the Athenian Agora and the Kerameikos; see *Agora* V, p. 68, no. K 112, pl. 15, and Böttger 1992, p. 344, no. 71. Variant 'b' is contemporary but was possibly manufactured at several different centers; see Gallimore 2011, pp. 326, 331, 335-336, nos. 420-425, figs. 5.35-5.37, pl. 5.5, where the form appears in three different fabrics at Ierapetra, Crete, between the mid-3rd to mid-5th century.

[554] For the Benghazi LR Amphora 14, see Riley 1979, p. 232, pl. 94.376; for the *Saraçhane* type 22, see *Saraçhane*, p. 104, fig. 49, deposit 30.195-196, Deposit 30 dated ca. 655-670. The first amphora was recovered among the Long Building fills, while the second example is from the 7th-century pit. Although the Long Building fills did occasionally contain later intrusive material, supporting finds from elsewhere in Corinth confirm that the *Saraçhane* type 22 amphora could appear at least by the end of the 6th century; see Slane and Sanders 2005, p. 271, no. 3-28, fig. 10. For its appearance in the Athenian Agora, cf. *Agora* V, pp. 118-119, no. M 372, pls. 34, 58, layer XIII re-dated to the early 6th century (*Agora* XXXII, p. 300). For its appearance at various sites in Scythia in the early 7th century, see Opaiţ 2004b, p. 24.

[555] This was originally identified as a "forerunner" of an "Early Byzantine Corinthian Amphora;" see Slane and Sanders 2005, p. 278, no. 4-26, fig. 11. For the Late Roman Cretan TRC2 amphora, cf. *Gortina* V.3, pp. 303-306, pls. XLIV, LII, see especially pl. LII:j; Yangaki 2004-2005, pp. 510-511, 521, fig. 6; Yangaki 2005, pp. 190-191, figs. 48:m, 48:n; Gallimore 2011, pp. 331, 336-337, nos. 430-432, figs. 5.37-5.38. Originally identified at Gortyn, the TRC2 amphora is generally dated from the second half of the 5th to 7th century with numerous variants noted. Yangaki 2005, p. 190, n. 937, identifies further examples of the Late Roman Cretan TRC2 amphora, similar to **233**, at Knossos (Hayes 2001, p. 440, no. A 39, fig. 4, in a deposit of ca. 525-550), Carthage (*Carthage BM* I.2, p. 128, nos. 35, 38, figs. 38:44, 38:47, dated ca. 500-520 and ca. 500, respectively), Argos (Aupert 1980b, p. 440, no. 326a, fig 46, dated there to the late 6th century), Corinth (Williams and Zervos 1988, p. 98, no. 4, pl. 33, from the debris above a 6th-century floor), and Thessaloniki. My thanks to S. Gallimore (pers. comm.) for his thoughts on this piece and suggestion of references.

and/or parallels that strongly suggest Cretan sources.[556] The fabric of a painted plate (**150**) of the 6th century, not to be confused with Central Greek Painted Ware,[557] shows some similarity in fabric with these amphoras, and may have parallels with similar wares produced at the Cretan capital of Gortyn.[558] If these attributions are correct it would suggest the occasional presence of products from this island,[559] probably from ships diverted from the main east-west route crossing the Mediterranean.

The late 6th-century amphoras and 7th-century plain wares in Samos cistern amphora fabric might have been distributed through a variety of mechanisms. They could have been collected by ships leaving western Asia Minor and stopping on Samos, or they may have already been present at Asia Minor emporia through regional levels of exchange in the immediate area. Their notable distribution to military sites in Byzantine Italy (see above), however, may suggest that they were part of official state-sponsored distribution systems that would have passed Corinth either during their journey south down the eastern coast of Greece, or via the isthmus into the Gulf of Corinth. Alternatively, many of the largest finds of the Samos cistern amphora on Samos have been in association with ecclesiastical complexes,[560] and it might be worth considering that some aspect of this form's distribution might have been conducted through the

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[556] For the possible Cretan source of the *Saraçhane* type 22, see Opaiţ 2004b, p. 24; cf. also *Gortina* V.3, pp. 307-308, pls. XLV, LIII, especially XLV:g, for a generally similar from identified as the Cretan TRC5 amphora; my thanks to S. Gallimore (pers. comm.) whose examination of **231** confirmed the possibility of a Cretan source for the fabric.

[557] See Chapter 4 for a brief consideration of this ware in relation to regional and long-distance distribution routes as viewed from Corinth and Argos. My thanks to P. Pétridis for allowing me access to examine fragments of Central Greek Painted Wares recovered in Delphi.

[558] A source for the piece in Egypt may be possible, but painted fine wares are also known from other areas including Africa and Gerasa; for Africa, see Hayes 1976, p. 58, 89, n. 15, no. 56, pl. 26, who assumed that this piece may have been manufactured in the region of Thuburbo Maius, based on unpublished fragments that "match closely the Carthage fragments;" for Gerasa, see Uscatescu 2003, p. 551, fig. 3. For Gortyn on Crete, see, for example, Di Vita 1985, p. 63, figs. 61-62, and 1996; *Gortina* I, pp. 142-148, figs. 163-164.

[559] The potential uncertainty of these attributions is recognized, as Cretan products have not been noted before in Corinth; see Slane 2000, p. 306.

[560] Steckner 1989; Gerousi 1997, p. 266

church. Few other plain wares recovered in the Panayia Field derived from long-distance Aegean sources; one final, possible example is pithos lid found in the Long Building fills (**527**) which has parallels on other Aegean sites.[561]

*Imports from Western Asia Minor*

Amphoras imported from western Asia Minor may represent occasional cargoes incidentally collected along major routes. The micaceous water jar (LR Amphora 3), a probable wine amphora from the area around Ephesos,[562] is present in modest numbers in late 4th and early 5th-century deposits in the form of one-handled vessels in gray and red fabrics; in the later 6th century a two-handled version appears in the Panayia Field but only in the red fabric and mostly in fragmentary body sherds with few diagnostic examples. The break in import between the one- and two-handled versions, as well as the comparatively low number of diagnostic fragments in the Panayia Field may suggest the infrequency of this ware's import beyond occasional acquisitions.[563] Related to this ware

[561] A similar piece is on display at the Historical Museum, in Heraklion, Crete, labelled under "The 2nd Byzantine Period, Pottery" and "Lids of Cooking Vessels." For Chios, cf. Boardman 1989, p. 110, no. 265, fig. 42, for a smaller example but with the same decorative scheme (but lacking fabric description) found at Emporio, on the fortress floor, NW Tower; the fortress must have been destroyed prior to 673/4. For similar, undecorated, shapes identified as pithos lids on Kos, cf. Didioumi 2010, pp. 808, 814, nos. 24-26, pl. 10. Other, undated examples were found at Kenchreai, and are described as being thick and flat, with one having fire-blackened edges; cf. *Kenchreai* IV, pp. 145-146, nos. RC 102a, b, pl. 38, which also cites a comparable, unpublished piece from a "Byzantine stratum" at Corinth, but without any details. For a possibly similar lid from Megara, dated generally to the Late Roman period, see Korosis 2014, p. 306, fig. 21.

[562] For the contents, see Reynolds 1995, p. 71; see also Papaioannou 2011, pp. 201-202, for the discussion of *dipinti* that may denote the contents of some examples as being wine from Lesbos and from Aphrodisias in western Asia Minor. M. Lang originally raised the possibility that certain one-handled examples from the Athenian Agora bore *dipinti* that indicated that their contents were wine from Mytilene (Lesbos) (see *Agora* V, pp. 106-107, with discussion under no. M 241), but later seems to have abandoned association with a specific source (see *Agora* XXI, p. 93, with discussion under no. L 43).

[563] But see also Papaioannou (2011) who discusses the possibility of the wine contents being a luxury commodity.

are the limited number of plain wares from Asia Minor, amounting to only two finds of unguentaria in the same red fabric as the micaceous water jars.

Other, isolated, products from western Asia Minor found in the Panayia Field include one lamp (**33**) identified with the "Asia Minor" type 1 lamps excavated from Saraçhane in Istanbul.[564] Various isolated fine wares include a late 5th- or early 6th-century dish (**147**) that can be reasonably attributed to a general source in Asia Minor based on parallels from Sardis.[565] Other fine wares include a deep bowl (**148**); although a Boiotian source cannot be completely ruled out, the multiple rows of roulette decoration call to mind Hayes' description of his first class of "Asia Minor Fabrics," later re-named "Late Roman Light-Colored Ware."[566] The profile of **149**, bearing the same stamps as **153**, suggests a similar identification based on comparable profiles from Istanbul,[567] although its fabric is different.[568] No cooking wares have been definitely sourced to Asia Minor (except possibly Late Roman micaceous Aegean ware, if it is sourced to the mainland). The isolated appearance of these products emphasizes the fact that they were not part of any purposeful import of goods, whether by state-sponsored or free market

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[564] *Saraçhane*, pp. 80-84, nos. 1-7, pl. 18, dated 5th to 6th century. Similar examples have been found on numerous sites in addition to Constantinople; for Athens, cf. *Agora* VII, p. 192, nos. 2807-2817, pls. 44, 50; for Kos, cf. Didioumi 2010, pp. 799, 812, no. 2, pl. 3; for Ephesos, cf. *Ephesos* IV.2, p. 130, no. 575, pl. IV, for a similar example belonging to the "Kleinasiatische Lampen" group, type III, form 4; for a similar lamp from Pergamon, cf. *Pergamon* I.2, no. 2, pl. 59; for further references to other finds in the eastern Mediterranean and Black Sea, see *Saraçhane*, pp. 80-84.

[565] For a similar example, cf. *SardisMon* 9, p. 59, no. Uninv. 67, fig. 252; for somewhat similar, cf. also Rautman 1995, pp. 43, 45, nos. 1.7 and 1.8, fig. 4, dated late 5th century.

[566] The fabric description generally agrees, although no comparable profile is provided. See *LRP*, pp. 408-410. This ware was later identified as "light colored ware" (*Supplement*, p. 534; *Saraçhane*, pp. 7-8; *Agora* XXXII, pp. 91-92). One example of this ware has been published from Corinth, recovered from the great bath on the Lechaion Road; *Corinth* XVII, pp. 79-80, 105, no. 124, pl. 32:e, in a late 6th- to early 7th-century context. For a possibly similar vessel, cf. *Kenchreai* IV, p. 75, no. ER 69, pl. 19; if it is the same bowl, the Panayia Field piece must be residual.

[567] Cf. *Saraçhane* p. 7, fig. 1.7, in "Late Roman Light-Colored Ware," dated after its first appearance in ca. 420-450.

[568] Personal examination of "Late Roman Light-Colored Ware" from Athens suggests that **148** is the only possible example of this ware in the Panayia Field.

distribution, but rather represent chance acquisitions that moved as opportunity allowed. LRC fine ware, however, represents what appears to have been a more purposeful import due to its high quantities. By the second half of the 5th century it was the preferred imported fine ware, and after the early 6th century it easily shared that status with AfRS. Its absence in the 7th-century might be telling of changes in the distribution networks with Asia Minor.

Recent scholarship by T. Lewit has questioned the extent that major fine wares like LRC travelled as commodities themselves, exploring the additional factors necessary to make a regional product an international import. A major factor was dependency on pre-existing official routes, such as that of the *annona* or other valuable resources, which allowed these wares to travel as secondary cargo. In the case of the distribution of LRC, Lewit has explored the impact that alum may have had, underscoring the opportunism that must have acted as a substantial determining factor for the distribution of any product not specifically earmarked for transportation via official, state-sponsored systems.[569] The value of alum was in its many uses, including leather tanning, dyeing fabrics, its use in gold, silver and iron working, as well as being useful for its fire-retardant, medicinal, and cosmetic properties. This source, in the mountainous area near Phocea, was the largest in the Mediterranean and its location near a port undoubtedly contributed in making its exploitation obvious.[570]

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[569] Lewit 2011, pp. 330-331, who argues that the presence of major alum mines in the immediate area of production may have pre-figured in the development of the successful fine ware industry.

[570] Lewit 2011, pp. 330-331; see also Horden and Purcell 2000, p. 361. The source was already known to the Romans by at least the 3rd century A. D., before production of LRC began, and its exploitation together with the region's agricultural profile and significant clay resources could explain the unusual development of this fine ware; see also Nenci 1982; Çolak et al. 2005; Giumlia-Mair 2005. For reports on other alum sources in the eastern Mediterranean, namely Egypt, Macedonia, Melos, and Lesbos, see papers in Borgard, Brun and Picon 2005; Pliny (*HN*, 35.184) and Discorides (*De Materia Medica*, 5.106) provide accounts of known alum sources.

LRC, as well as the other isolated examples of lamps and fine wares from Asia Minor, were dependent on the distribution of such agricultural and mineral goods for their ability to break out of their own orbits of local or regional distribution. But whereas the various other goods listed are reflective of the occasional acquisition by merchants or single travelers, LRC could likely have been viewed as a preferred secondary cargo, knowingly and actively acquired for its ability to sell at the ports of destination through the private enterprises of the captains and other sailors who often engaged in their own business while transporting official goods (see Chapter 1). Wares like LRC may thereafter have slowly acquired more of a luxury or commodity value in their own right after their arrival at the major port of call, as locally- or regionally-based merchants operating on smaller scales redistributed such goods to smaller ports or further inland to rural sites.[571]

*Imports from the Eastern Mediterranean (Eastern Asia Minor, the Levant and Egypt)*

In past scholarship, the production of the LR Amphora 1 has been linked with increased agricultural activity in northern Syria during the Late Roman period, transporting the products of state-sponsored olive oil production from the villages of the limestone massif.[572] More recently, in addition to the growing number of LR Amphora 1 kiln sites that have been identified on coastal sites from the Bay of Iskenderun to the Cyclades and on Cyprus (see above), a growing number of Late Roman olive and wine

[571] See Chapter 4 for further discussion of the distribution of long-distance imports through local and regional exchange networks.
[572] Liebeschuetz 1972, pp. 79-81; see also Riley 1979, p. 215, 1981, p. 120, and Peacock and Williams 1986, p. 187, who also linked the LR Amphora 1 with agricultural prosperity in the Antioch region. For a general review, see Decker 2001. More recently, see Giorgi 2010 and Pamir 2010 who both emphasize the olive oil industry in the Antioch region, tracing it from its beginnings in the 1st century. For the villages of Syria's limestone massif, see Tchalenko 1953-1958; Tate 1992.

presses, including those at sites in Rough Cilicia (Cilicia Tracheia)[573] and Cilicia Pedias to the east,[574] have been recorded in the LR Amphora 1 production regions with both agricultural products now being associated with this amphora.[575] It is tentatively believed that the LR Amphora 1 finds recovered from the Panayia Field were produced somewhere between the territory of Antioch and Cilicia, carrying either oil or wine.

A curious feature of agricultural sites associated with the production of the supposed contents of the LR Amphora 1 is the fact that no amphora sherds of this type normally appear at these locations. This observation was made both for agricultural sites in the limestone massif of Syria near Antioch,[576] as well as for a large farm in the Cilician lowlands at the site of Domuztepe.[577] In both cases the interpretation is that the amphoras were manufactured at coastal sites to which the agricultural produce was brought in skins or other degradable containers.[578] Manufacture, therefore, of amphoras in this fabric was clearly oriented towards the export market and not for local consumption. Commenting specifically on the agricultural production sites in Northern Syria, Decker interprets their

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[573] Aydinoğlu 2010; for the site of Korykos, see Iacomi 2010; Aşkin 2010.
[574] For the site of Tarsus, see Tekocak and Adibelli 2010.
[575] For general discussions, see Reynolds 1995, p. 71, 2005, pp. 577-578; Decker 2001; Opaiţ 2004b, p. 14; Elton 2005; Williams 2005, pp. 616-618; Iacomi 2010. Reynolds (2005, p. 578), in a response to Decker, notes the unlikelihood that the LR Amphora 1 was "a product directly associated with Antioch and her vast territory," and urges investigating the villages of eastern Cilicia for the production sites of the oil and wine that were carried in this amphora form. Kirwan 1938a, pp. 388-389, noted pitch-lining on only some examples of this "typical wine-amphora" found at the tombs at Ballana, but also noted the presence of animal bones and traces of corn in many, while the evidence of the inscriptions (Kirwan 1938b, pp. 401-403) indicate the use for oil on one example (also noting the absence of pitch on most of the amphoras), and the writing of a unit of dry measure on five examples possibly suggesting the containment of corn or barley; Thomas 1959, pp. 92-93, postulated the use of the "British Bii" for olive oil; Keay 1984, p. 271, commented on the resin-lined interior of at least one example; Empereur and Picon 1989, p. 242, report on the resin-lined interior of an example from Amathous, Cyprus; van Alfen 1996, p. 203, reports resin-lined interiors in thirteen examples from the Yassi Ada wreck, as well as the find of a single grape seed; Arthur 1998, p. 164, suggests the additional use for non-liquid goods; Williams 2005, p. 617, reports the findings of olive-oil residues on an example from Sabratha.
[576] Reynolds 2005, p. 566.
[577] Rossiter and Freed 1991, p. 158; see also Elton 2005, p. 692. The presence of imported fine wares, such as LRC, however, clearly shows that the site was in contact with long-distance distribution networks.
[578] A similar suggestion was made for oil production in North Africa, as all amphora kiln sites were located along the coast; see Mattingly 1988, p. 48; Bonifay 2004; see also the discussion of AfRS above.

typically small size as indicative of small local farmers, and not large estates, that were collectively producing for a wider economy.[579]

With the arrival of more canonical versions of the LR Amphora 1 in the late 4th century, modes of distribution that involved both the free-market and official state sponsorship are evident. Distribution based on the free market is envisaged for the western Mediterranean; until the early 5th century, the LR Amphora 1 was unable to penetrate the western markets of Italy and Carthage, with African goods dominating. With the dissolution of the *annona* system in Africa after the Vandal conquest, eastern merchants could now compete freely in the markets of Italy and Africa, thus offering an explanation for the sudden increase in LR Amphora 1 finds in Rome and Carthage and other western sites.[580] The presence of the LR Amphora 1 in the Levant and Egypt presents a similar picture. It is found only in low numbers in Palestine, being very rare in Caesarea's hippodrome in the 5th and 6th century.[581] It does, however, appear in great number in Egypt where timber, oil, wine and pottery were imported, while wine, fish and pottery were exported; the Egyptian LR Amphora 7 is found in Cyprus and Cilicia, Egyptian fish at Sagalassos, and Egyptian RS at Anemurium in Cilicia and in Nea Paphos on Cyprus.[582] Thus, a potential free market may be envisaged between Cilicia, Cyprus,

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[579] Decker 2001, p. 82.
[580] Elton 2005, p. 693; in return, eastern merchants could bring back AfRS and African amphoras which are found in the east, but grain, North African marble, and fish sauce were also possibilities. In regards to Italy, Arthur (1985, pp. 255-256) postulated a slightly more official scenario, with "the economic dependence of Italy gradually swinging towards more politically 'secure' eastern sources."
[581] For Caesarea, see Riley 1975, p. 33; for Palestine in general, see Elton 2005, p. 694.
[582] Elton 2005, p. 694; for Egypt, see Arthur and Orem 1998, pp. 201-203, fig. 6.5 and Majcherek 2004; for Anemurium, see Williams 1989, p. 57; for Cyprus, see Hayes 2003a, p. 494, nos. 267-268, 272, fig. 25 for amphoras, and pp. 495, 502, 509, nos. 281-282, 326, 365, figs. 26, 30, 33, for Egyptian RS, and with numerous other citations to Egyptian, or possibly Egyptian, coarse wares.

and Egypt, which is likely a continuation of a similar interregional network that existed during Hellenistic and Early Roman periods.[583]

Distribution to the Northern Balkans was different, and points more to state-controlled systems of distribution, especially in the supply of the Danubian forts. That the LR Amphora 1 is ubiquitous at military sites in this area is strongly indicative of official forms of distribution.[584] Although it appears in a well-dated context of the destroyed storerooms of the fort of Dichin, Bulgaria, established in ca. 400 and burned in 476-480, it is unclear exactly when the LR Amphora 1 began to be used for military supply, but the numbers certainly increase through the 5th century.[585] In 536, Justinian's creation of the *quaestura exercitus* directly assigned the Aegean Islands, Caria and Cyprus, all with attested LR Amphora 1 production sites, to provide supplies directly to the Danubian frontier provinces of Moesia II and Scythia, suggesting that goods from these areas were already being sent to these locations in great quantities.[586]

Of the various sources of the LR Amphora 1, products from Cilicia may have been specifically earmarked for Constantinople itself; indeed, the amphora type is found there in significant quantity.[587] The official connection between Cilicia and Constantinople is attested by the Abydos Tariff inscription, an official decree dated to the end of the 5th century relating the customs and dues for transit through the Dardanelles,

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[583] Lund 1999, 2013. See also Autret 2012.
[584] Karagiorgou 2001b, especially pp. 149-156; Opaiţ 2004a, pp. 294-295, 2004b, pp. 8-10; Swan 2004, p. 372. See references in each for further sources.
[585] It appears there with the LR Amphora 2 and a variety of others. See Swan 2004; Reynolds 2005, p. 577; Poulter 2007, pp. 701-703; Grinter 2007.
[586] Elton 2005, p. 693, who feels that return trade might have been limited, and postulates that voyages may not have been direct to the Danube, being possibly unloaded and reshipped from Constantinople. For the *quaestura exercitus*, see Jones [1964] 1986, pp. 280, 482-483, 661, 844; see also Karagiorgou 2001b, p. 154.
[587] Lewit 2011, p. 325. The LR Amphora 1 had a strong presence in Constantinople during the 5th century, and became the commonest type of amphora in 6th- and 7th-century deposits; see *Saraçhane*, p. 64.

including reference to *annona* cargoes.[588] In relating the dues owed from various merchants, identified by the *commodity* that they transported, the amount due from Cilician *naukleroi* (e.g. the *navicularii*), specifically identified by their *origin*, was only about half of what others were charged, implying some sort of special relationship.[589] One can only speculate as to how this arrangement developed, but it should be noted that the Isaurians (from *Cilicia Tracheia*, or Isauria) evidently already possessed considerable power in the capital when Anastasius became emperor in 491; the previous emperor, Zeno, had been an Isaurian, and many others with similar origins had risen to high positions.[590]

There is some debate as to whether or not the *naukleroi* were independent merchants or were officially tied to the *annona* system; evidence in the form of the title's presence in the epitaphs inscribed on four tombstones marking modest graves in a cemetery in the Cilician town of Korykos is revealing in this regard.[591] In the opinion of this analysis, such mortuary evidence, as humble and concentrated as it is, would argue against the presence of the traditionally-understood *annona* system of the earlier Roman period in which the *navicularii*/*naukleroi* were tied to allotments of land (see Chapter 1), and venture to suggest that participation in this system had become less formalized in the

[588] For the text, see Grégoire 1968, pp. 4-5, no. 4, with further bibliography, dating the inscription generally to the reign of Anastasius (491-518). For more recent studies, which now provide the date of either 492 or 498, see Karagiorgou 2001b, pp. 154-155, and especially Iacomi 2010, pp. 27-28, with further references.
[589] In addition to the Cilicians, the three other groups mentioned are identified by product, namely those who transport wine, those who transport olive oil, lard, and dried vegetables, and those who transport wheat; see Iacomi 2010, p. 27, n. 44.
[590] An Isaurian revolt aimed at deposing Anastasius was put down in 491, with hold-outs until 498. After their defeat, thousands of Isaurians were settled on barren lands in Thrace and thereafter they played little part in politics although they maintained a strong presence in the armies; Jones [1964] 1986, pp. 224, 230-231. See also Iacomi 2010, p. 28.
[591] See Iacomi 2010, p. 27, n. 44. For discussion of the Korykos inscriptions, see Trombley 1987.

Late Roman period with private maritime merchants now able to assume some level of official role in the system.

It is of some interest that no examples of Cypriot RS/LRD are noted in the Panayia Field, rarely being found even in other areas of the site.[592] Evidence for the manufacture of this ware has now been found in Pamphylia,[593] situated along the west-bound route of ships transporting the LR Amphora 1, so the fine ware's rarity/absence at Corinth and other sites where the LR Amphora 1 was distributed is curious. The implication is that any of the fine wares that traveled this route must have been quickly off-loaded at other ports in southwestern Asia Minor and replaced with LRC before ships made their way to Corinth. The situation is puzzling, but may imply that merchants knew that LRC was actively preferred in Corinth, thereby displaying a level of consumer choice.

Products of a confirmed Egyptian source are few. Only one confirmed LR Amphora 7 is in evidence here (**226**)[594] (Pl. 4.12), an amphora type that does not seem to have enjoyed a prominent role in long-distance distribution during this period.[595] It is

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[592] For one published example, see Slane and Sanders 2005, p. 251, no. 1-13, fig. 3.
[593] See Jackson et al. 2012.
[594] This amphora has appeared in numerous typologies under various designations. For the Caesarea Amphora type 7, see Riley 1975, pp. 32-33, no. 20; for the Rădulescu type 9, see Rădulescu 1976, pp. 107-108, 114, pl. X; for the Egloff 172-180, see *Kellia* III, pp. 144-116, pls. 4:17, 7:4, 19:7:a-b, 21:3-10, 22:1-2, 22:9, 58:5-8, 59:1-2, 59:3-7, 60:1, 62:2; for the Benghazi LR Amphora 6, see Riley 1979, pp. 224-225, no. D359, fig. 92; for the Carthage LR Amphora 7, see Riley 1981, p. 121 (see also Hayes 1976, p. 117); for the Fulford and Peacock type 6, see *Carthage BM* I.2, pp. 121, 123, fig. 35:14-15; for the *Saraçhane* type 12, see *Saraçhane*, pp. 66-67, nos. 30.189-192, fig. 49.
[595] The LR Amphora 7 appears in 5th-century levels at Carthage and only rarely in Caesarea, being more generally popular in the late 6th century on sites outside of Egypt; see Riley 1981, p. 121. Arthur 1998, pp. 163-164, reports that Egyptian amphoras rarely travelled beyond their region of manufacture, but compare Majcherek 2004, pp. 231-232, 234, who reports that Egyptian amphoras account for little of the assemblages at Alexandria, while showing some small-scale export to Palestine, Naples, Carthage, Marseilles, and the British Isles. Egyptian amphoras actually seem to have enjoyed some level of popularity in the Balkans and the west, even reaching Britain, but seem to have been distributed more regularly to Cyprus and Cilicia; for Rome, see Arthur 1998, p. 163, for a virtually intact example found in the Crypta Balbi deposits; for Britain, see Tomber and Williams 2000, pp. 46-50, fig. 3; for Carthage, see Riley 1981, p. 121, where it appears in the 5th century but is rare before the late 6th when it becomes frequent; for

unlikely that it was part of any program of state-sponsored distribution, and was likely meant for interregional, or commercially-motivated exchanges, of small quantity. The LR Amphora 7 was considered to have carried wine, with evidence of its manufacture noted around Lake Mareotis near Alexandria and on sites in Middle Egypt along the Nile.[596] Elsewhere in Corinth, sherds of a LR Amphora 7 are noted in the late 5th century or slightly later, but overall finds from Egypt have never been numerous.[597] This find from the Panayia Field, along with other rare fragments of possible Egyptian products, is likely representative of chance imports and not Corinth's normal networks.

On the other hand, amphoras from the southern Levant, namely the Gaza and baggy Palestinian amphoras (LR Amphoras 4 and 5, respectively), constitute a major component of the ceramic finds in the Panayia Field. Although production of the baggy Palestinian amphora began after that of the Gaza amphora, both accelerated production and distribution in the early 5th century in the face of new market opportunities,[598] again, possibly when the political divisions of the empire placed more focus on regionally-based supply. However, unlike the LR Amphora 1, the distribution of these two amphoras and their contents may have been less reliant on state-sponsored distribution.

The popularity of the Gaza amphora was in most part due to the fine white wine that was produced in this area and was commented on in numerous sources for its quality and even medicinal benefits.[599] The association of Palestinian wine with the Holy Land

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Cyprus and Cilicia, see Elton 2005, p. 694; for Saranda Kolones in Paphos on Cyprus, see Hayes 2003a, p. 494, nos. 267-268, 272, fig. 25, dated to the mid-7th century; for Kalavasos-*Kopetra* on Cyprus, see Rautman 2003, p. 173, where only "a few sherds" were found. An example of a rare Nubian amphora also appears at Kenchreai; cf. *Kenchreai* IV, p. 117, no. RC 21, pl. 27; see also Arthur 1998, pp. 163-164.

[596] Empereur and Picon 1989, p. 244; Tomber and Williams 2000, pp. 41-42, fig. 1.

[597] See Slane 2000, p. 306; Slane and Sanders 2005, p. 264.

[598] Kingsley 2001, pp. 53-54.

[599] Kirwan (1938a, pp. 390, pl. 111, "Ballana 10") had noted pitch-lining on an example of a Majcherek form 3, suggesting a wine container; Riley 1975, p. 30, n. 20; Mayerson 1985, 1992, 1993, 1995. Gazan

has been used to argue for its marketability,[600] and might even contribute to the understanding of why these vessels were preferred for the burial of neonates as seen in the Panayia Field.[601] While some examples bear pitch-coated interiors suitable for wine storage, its use as a container for various dry goods, or as a general-purpose storage jar, has also occasionally been attested,[602] and evidence also exists for the transportation of fish products.[603] In the Panayia Field, these amphoras began to appear sporadically by the second-quarter to mid-5th century, gaining popularity during the 6th century and lasting perhaps into the early 7th. Its appearance in the 7th-century pit is certainly residual.

A number of Palestinian amphoras, beside the Gaza amphora, have been recorded in the Panayia Field. Rare instances of the *Agora* V, M 334 carrot amphora, as well as white-painted baggy Palestinian amphoras in "Gritty Red Fabric" are among the earliest examples during the 5th century. By the mid-6th century these shapes were no longer imported here, and were instead replaced by small Palestinian amphoras with vertical walls, also in "Gritty Red Fabric," as well as baggy Palestinian amphoras in three different fabrics: "Buff," "White-Flecked," and "Gritty Brown." These continued to appear at the end of the 6th century and through the 7th century when they were joined with small numbers of a new carrot-shaped amphora in a different red fabric. Recent studies have associated the area of Palestine in which baggy amphoras were made with

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wine likely earned its name from the port from which it was shipped, rather than reflecting the specific area where the grapes grew; Mayerson 1992, p. 76. Various scientific analyses have additionally concluded that the contents were wine; see Whitehouse et al. 1982, p. 80; Fabian and Goren 2001, p. 213.

[600] Arthur 1998, p. 162; Kingsley 2001, p. 59; Reynolds 2010, p. 84.

[601] In regard to infant amphora burials in Carthage, some (Garrison and Stevens 1992, p. 134) have offered that the kind and size of amphora used was merely a practical concern of matching the size of the deceased, while Norman (2003, p. 40) alternatively suggests that it was a subtle means of marking the burials of neonates and infants as different from that of adults. For more on the use of Gaza amphoras in burials, see Chapter 6.

[602] Mayerson 1992, p. 78, 1996, p. 258; Majcherek 1995, p. 163, n. 6.

[603] Opaiţ 2004b, p. 22.

heavy wine production, with local usage possibly having employed these vessels as domestic storage containers for various foodstuffs or water;[604] olive oil has also been occasionally proposed.[605]

Both of these types of Palestinian amphoras enjoyed a high level of distribution in their immediate regions, playing an important role in the domestic economy.[606] They are found throughout the Levant and Cyprus, although distribution to Egypt seems limited to the Gaza amphoras.[607] Evidence for their distribution via commercial networks is revealed by their presence on western sites. Although the baggy Palestinian is somewhat rare in the west outside of Marseilles and Carthage, it does appear in significant numbers at those sites.[608] Gaza amphoras were already appearing in the west in the late 4th century, maintaining its peak from the early 5th to the end of the 6th, but dropping in the early 7th century.[609] It maintained modest numbers at Carthage from the late 4th to late 6th century, but was the commonest type of amphora in one large 5th-century deposit.[610] It also reached sites in Britain.[611] Kingsley has argued that based on shipwreck evidence off the coast of France, amphoras from Palestine may have arrived in the west as minor cargo components of ships arriving from intermediate ports, such as Africa, and that any

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[604] Kingsley 2001, pp. 50-51, with references. Johnson 1988, p. 214, associated the baggy amphoras found at Jalame in Israel with water containers for local and commercial use.
[605] Arthur and Orem 1998, p. 201, in regards to the baggy amphoras from Caesarea (in "Gritty Red Fabric"); see also Adan-Bayewitz 1986, pp. 99-101. Opaiţ 2004b, p. 23, seems to favor both wine and olive oil as the primary contents.
[606] For discussion of the possibility that Alexandria and Antioch each had their own *annonae* with which to draw resources, see Wickham 2005, pp. 714, 716.
[607] See above for discussion of Egypt's production of similar baggy amphoras.
[608] See Reynolds 1995, p. 182; Arthur 1998, p. 174. At Carthage, it was the dominant amphora in a deposit of the mid-5th century and is generally well-attested until the late 6th century; Riley 1981, p. 121. Reynolds 2005, p. 576, maintains that the export of baggy Palestinian amphoras into the west lagged behind other eastern amphoras, appearing only in the late 5th and 6th century and only in small numbers.
[609] Reynolds 1995, p. 71. Majcherek 2004, pp. 233-234, comments that Gaza amphoras maintain their popularity in Naples and Marseilles in the late 6th century, but show significant drops throughout North Africa.
[610] Riley 1981, p. 120.
[611] Arthur 1998, p. 162.

appearance of eastern products in the west during the Vandal period must be taken as commercial enterprises.[612]

The church may in fact have been responsible for a good deal of this distribution. Mayerson has argued strongly that the rise of monasticism in Palestine, and the Gaza area specifically, is linked to the rise of urban and rural populations and the number of wine presses, as winemaking is connected to the works of both rural populations and religious orders. Gaza was also well situated as a port of call for both merchants and large numbers of pilgrims, with ships capable of providing transport for both commodities and travelers.[613]

The distribution of baggy Palestinian and Gaza amphoras through state-sponsored distribution networks is more difficult to gauge based on the present evidence. Aspects of official distribution might include the appearance of the Gaza amphora on some large urban and defensive sites in Italy in the 6th and 7th century, showing steady increase in Naples from the late 4th to early 6th century, but declining again in the late 6th or early 7th century.[614] It has been commented that the typical absence of *tituli picti* on Palestinian amphoras, as opposed to the usual appearance of such on the LR Amphora 1 and 2 to avoid fraudulent practice, may imply lack of centralized control.[615] Both of these Levantine amphora forms are rather rare on the military sites of the Danube, thus indicating that the *annona militaris* had never been the primary stimulus for the production and distribution of these amphoras.[616] Gaza amphoras, however, appear in

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[612] Kingsley 2001, pp. 53, 57, table 3.2.
[613] Mayerson 1985, pp. 75-76, 79. For Palestine in general, see also Kingsley 2001, p. 44.
[614] Arthur 1985, 1998, p. 162.
[615] Kingsley 2001, p. 57.
[616] Reynolds 2005, pp. 577-578. The baggy Palestinian amphora only appears in Scythia in small quantities as, for example, in the latest destruction context of 588 at the fort of Dichin in Bulgaria; for Scythia, see Opaiţ 2004b, p. 23; for Dichin, see Swan 2004, p. 380.

some number on Black Sea and Danubian urban sites from the 4th to 6th century, even displaying a range of subtypes.[617] The presence of Gaza amphora forms at Constantinople is in accordance with this unbalanced picture of northern distribution; the baggy Palestinian type is reported as uncommon,[618] while Gaza amphoras appeared mainly from the second quarter of the 5th to late 6th century, being particularly common in the 5th century and the construction deposits of ca. 525.[619]

Based on these distribution patterns, some support exists that Gaza amphoras may have more regularly been connected to official systems of distribution. In regards to the lack of *tituli picti*, excavations of a small coastal warehouse south of Ashkelon have revealed the presence of such markings on several Gaza amphoras.[620] More important is the appearance of the Gaza amphora in Egypt. Earlier versions of Gaza amphoras had been especially popular in Alexandria since the Early Roman period, accounting for 30-31% of the total assemblages excavated in Kom el-Dikka within Alexandria, and continuing into later periods to account for 50-70% of Late Roman amphoras.[621] On the other hand, baggy Palestinian amphoras were rare in Egypt,[622] despite the presence of local production of similar forms. One possibility that has yet to be explored is that distributors of Gaza amphoras, due to the proximity of their area of production to the ports of the *annona* grain ships in Alexandria, may have found it profitable to deliver

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[617] Opaiţ 2004b, pp. 20-22.
[618] *Saraçhane*, pp. 65-66, including the LR Amphora 5 ("type 8") and LR Amphora 6 ("type 7") from Scythopolis.
[619] *Saraçhane*, pp. 64-65, "type 6."
[620] Fabian and Goren 2001, p. 213. The same excavators also remarked (p. 218) on the typological uniformity of the Gaza amphora despite its manufacture at several different locations, implying "the existence of agencies involved in the inspection of the wine's quality and the standardization of the storage vessels – an important commercial guarantee of their contents." However, the same could also be said for the LR Amphora 5, or, indeed, any of the other LR Amphora series.
[621] Majcherek 1995, p. 165, 2004, p. 231; see also Mayerson 1985, p. 78, 1993, p. 169.
[622] Riley 1981, p. 121.

these amphoras to Egypt in order to take advantage of distribution via the official *annona* routes as secondary cargoes.[623] A 5th-century mosaic floor in the Jewish House of Kyrios Leontis in Beth She'an/Scythopolis depicts a ship arriving in Alexandria carrying a load of Majcherek's form 3 or 4 Gaza amphoras.[624] Another mosaic on the floor of a chapel in Haditha, dated to the second half of the 6th century, depicts a ship near Egypt also loaded with Gaza amphoras, but here set upside-right with caps on top that might be interpreted as lids.[625]

The distribution of the Gaza amphora through Alexandrian ports could be reflected in the higher amounts of Gaza amphoras, rather than baggy Palestinian amphoras, discovered in Constantinople, the Black Sea and the Danube. This could also explain why the distribution of Gaza amphoras seems to considerably drop after the beginning of the 7th century, as the onset of the Persian wars and the subsequent invasion of Egypt in 616 likely upset the official shipments of the Egyptian grain *annona*. If the baggy Palestinian amphoras were less dependent on official means of distribution and moved more regularly via the free market, they may have been more adaptable to the changing conditions of the 7th century, possibly accounting for their significant presence in the 7th-century pit in the Panayia Field and generally in Corinth in the 7th century (see above).

Other amphora forms from the Levant were also noted in the Panayia Field. The small vertical-walled amphoras in "Gritty Red Fabric" that replaced their painted, baggy

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[623] Such an arrangement would imply that Alexandrian grain ships were not stopping along the Gazan coast.
[624] Zori 1966, pl. 12; Kingsley 2001, p. 52, n. 48. Interestingly, the amphoras are clearly set on deck upside-down. Complete Gaza amphoras noted in situ in an eroded section at the production site of Naḥal Bohu, commented on as being part of the "kiln waste," were also set upside-down; Israel 1995b, p. 106, fig. 113.
[625] Avi-Yonah 1972, pl. 23:A; Kingsley 2001, p. 52, n. 48. These lids might possibly be similar to those sealing the group of 70 amphoras awaiting transport from 'Ard el-Mihjar; see Fabian and Goren 2001.

predecessors likely continued to share the same modes of distribution as the general group of baggy Palestinian amphoras discussed above. The reasons for the change in shape are uncertain, but consideration of the contents may account for one possibility. Olive oil has been proposed as the contents of the baggy amphoras from Caesarea,[626] which disappear from the Panayia Field at roughly the time when the LR Amphora 2, primarily a carrier of olive oil, attains its most significant presence. Thus, increased reliance on a regional source of olive oil may have eliminated demand for a long-distance source but, admittedly, this does not satisfactorily explain why baggy amphoras in three other fabrics then appear. The various carrot-shaped amphoras from Palestine or farther north up the Levantine coast, from the perspective of the Panayia Field, probably represent less-frequent cargo acquisitions by ships on route from southern Palestine.

*Reconstructing Official Routes in Relation to Corinth*

In summary, based on the study of the finds from the Panayia Field and the understood mechanics of long-distance distribution in the Late Roman period, various major official routes can be reconstructed that may have had contact with Corinth. Port facilities along these routes would have made them additionally attractive to private merchants who may have followed them for substantial lengths or only regional segments as need saw fit.

A major western route was established following the African re-conquest in 533 that brought grain supplies to Constantinople. The route likely left from ports at or near Carthage, and headed towards Sicily and southern Italy, the former certainly possessing emporia and a convenient stop. Upon entering the Aegean the route continued north

[626] Arthur and Orem 1998, p. 201; see also Adan-Bayewitz 1986, pp. 99-101.

along the eastern coast of the Peloponnese before reaching Corinth and continuing north along the Thessalian coast. The two Thessalian ports of Demetrias and Thebes (Nea Anchialos) would surely have been important nodes in such a route,[627] and the fact that grain from Thessaly was noted to have supplied Thessaloniki in the 670s may also give this route more importance than previously recognized.[628] The route then continued northwards to the Chalkidiki (or all the way to Thessaloniki) before following the Thracian coast eastward toward Thasos,[629] then to the Bosphorus and Constantinople.[630] Other routes connecting Corinth with the west would have travelled through the Gulf of Corinth;[631] although the ceramic evidence in the Panayia Field after the end of the 5th century reveals the presence of few western goods, the gulf nevertheless served as a conduit for west-bound goods as attested by the numerous correspondences between the imported fine wares, amphoras and cooking wares seen here and at Butrint.[632]

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[627] Although some evidence for decline has been noted for both cities during the 6th century; see Karagiorgou 2001a, pp. 212-213, 2001c, p. 196. For the publication of a body of ceramic material, including various imports, see *Demetrias* IV.
[628] Wickham 2005, p. 788.
[629] AfRS reached the site of Torone in the Chalkidiki, where it is found mainly for the 4th to early 7th century, with Hayes form 105 being the latest; see Papadopoulos 2001, p. 534; for AfRS on Thasos, see *Thasos* XIII, pp. 30-32, where the latest forms are 104C and 105, with one possible example of 109.
[630] Scholars have recently emphasized the importance that this route held in the 7th century, viewing places like the fortified island fortress of Dokos (see Chapter 4), immediately off the coast of the southern Argolid, as symptomatic of the concern the empire had in maintaining this route; see Gregory 2005, fig. 7.1; Armstrong 2009, p. 177.
[631] When Constans II travelled west in his short-lived attempt to move the imperial capital to Syracuse in 662/663, his own route took him through the Gulf of Corinth; see Setton 1950, p. 523
[632] Compare similar finds published in Reynolds 2004a (with catalogue in Reynolds 2004b), such as examples of the LR Amphora 1 (pp. 230-231, nos. 292-305, fig. 13:174-184); Gaza amphoras (p. 229, nos. 280-286, fig. 13:165-171), Palestinian amphoras in various fabrics (pp. 229-230, nos. 288-291, figs. 13:172-173), examples of the Samos Cistern Amphora (pp. 232-234), *spatheion* amphoras (p. 229, fig. 13:161), possibly Unidentified Cooking Ware 1 (pp. 227, nos. 131, 135, 181, 531, figs. 13:78, 13:110, 13:316), possibly Unidentified Cooking Ware 2 (p. 227, nos. 122, 126, 127, figs. 13:73-75), possibly Unidentified Cooking Ware 3 (p. 227, no. 116, fig. 13:68), Attic RS (p. 225, no 39, fig. 13:17), the LR Amphora 2 (pp. 231-232, nos. 320-322, 324, 326-328, figs. 13:186-191), and triangular-rimmed stewpots of similar form to those found here in Northeast Peloponnesian cooking fabric (p. 235, nos. 371-373, figs. 13:210-212). In the aggregate, these correspondences may suggest that these two sites were closely connected in terms of their network connections. See also Slane 2008a for discussion of Corinth's connections with the Adriatic and the ceramic *koine* that they shared, particularly for earlier Roman centuries.

It is clear that with the exception of AfRS, the sources of the ceramics recovered in the Late Roman Panayia Field strongly indicate that Corinth was oriented towards eastern markets, namely Asia Minor and the Levant. A general peak in prosperity at rural sites in the eastern Mediterranean during the Late Roman period is well-attested and points to the creation of agricultural surpluses in this broad area.[633] The possible role that the church, particularly the foundations in the Holy Land, had in spurring agricultural surplus production for export has often been remarked upon,[634] but the phenomenon is too widespread in the east to conform to so simple an explanation. Nor is demand from the west the catalyst for this agricultural expansion, as the products of these expanding eastern industries were already present in their home and regional ports by the mid-4th century, being carried in early versions of the LR Amphora 1, Gaza amphoras, and baggy Palestinian amphoras.[635] By the 5th century the major agricultural producers of the east were well-situated to expand their pre-existing interregional distribution networks and assume a leading role in the Mediterranean and beyond.

The major eastern route, established by ca. 400, would have begun in Alexandria with the grain ships bound for Constantinople. One route would have continued north up the Levantine coast before following the southern coast of Asia Minor where the route

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[633] Kingsley and Decker 2001; Ward-Perkins 2001, pp. 167-168, 2005, pp. 41-42, 58-62, 107-108, 124; Decker 2009; Lewit 2011, p. 329. Kingsley 2001, pp. 57-59, commented that the wine trade in Palestine served as a positive economic stimulus among rural communities resulting in levels of wealth as evidenced by fine ware imports found in the villages as well as large coin deposits that argue for participation in wide-ranging monetized markets.

[634] Arthur 1998, p. 174; Kingsley and Decker 2001, pp. 9-11. For an ecclesiastical impetus behind the production of wine from the Gaza region, see Mayerson 1985, pp. 75-76.

[635] Reynolds 2005, pp. 576-577, who believes that this should be seen in the context of the empire's division into eastern and western halves that had begun under Diocletian, with further subdivision of the eastern provinces "based on an existing cellular structure of regional centers;" the degree to which the foundation of Constantinople provided an additional catalyst could not be assessed without more 4th-century archaeological material from the capital. See also Decker 2001, p. 83, who attributes the increased production in North Syria to the new demands created following the establishment of Constantinople and to the later loss of surpluses from Africa to the Vandals for which the East had to replace.

would have joined with another *annona* route that began in the area of the Bay of Iskenderun.[636] The route then followed the remainder of the southern coast before turning north to follow the western coast of Asia Minor, with ships bound for Corinth unlikely to have gone farther north than Ephesus or Pergamon before turning west into the Aegean Sea and island-hopping towards the Greek mainland. A route to Corinth from Ephesos or Pergamon has been recognized by others.[637]

Another route has also been identified for earlier Hellenistic and Early Roman periods, in which ships from Alexandria or southern Palestine travelled to Cilicia via Nea Paphos in western Cyprus.[638] Evidence from the Iskandil Burnu shipwreck in Turkey, however, revealed a cargo that contained LR Amphora 1, baggy Palestinian amphoras (both LR Amphoras 5 and 6), Gaza amphoras, versions of the carrot-shaped *Agora* V, M 324, as well as carrot-shaped amphoras as those in the 7th-century pit in the Panayia Field, suggesting that this particular ship may have been engaged in tramping along the Levantine coastline.[639] Alternatively, and perhaps more likely, these amphoras may have been loaded at a single emporium, perhaps on Cyprus, where these various interregional products could have been collected. Regardless of the probable role of Cyprus as a node

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[636] That goods along the Levantine coast moved northwardly has been commented on by others, in that the baggy amphoras of Palestine appear north in Phoenice, but the carrot-shaped amphoras of the latter were not noted as being distributed south to Palestine; see Reynolds 2005, p. 575.
[637] Slane 2000, p. 306, further noting a modern route from the Black Sea that sailed westward across the Aegean reaching the southern tip of Attica before continuing south to round the Peloponnese; it may be possible that Roman routes did the same, stopping at ports in northwest Asia Minor before crossing the Aegean.
[638] Lund 1999, p. 13; see also Fulford 1987, p. 70; Lund 1996, 2013; Poblome and Firat 2011, p. 54. But compare Leonard and Demesticha 2004, p. 202, who comment that Dreamer's Bay in south-central Cyprus had commercial ties with at least Crete and Cilicia during the Roman period, as well as all of the eastern Mediterranean during the Late Roman period, but with no ties to the Aegean or sites further west. Although the LR Amphora 1 appears to be the dominant amphora type on all sites in southern Cyprus and larger sites in the north, exchange networks in the Late Roman period incorporating the island are obscured by the current inability to distinguish between imported and locally-produced versions of the amphora. Otherwise, amphoras from the southern Levant and Egypt account for modest numbers on numerous southern sites, with Aegean and other western products appearing in even smaller numbers; see Jacobsen 2004.
[639] Lloyd 1984.

in eastern networks, goods from that island have rarely been recognized in Late Roman Corinth. The generally low number of island products in Corinth should not come as a surprise given the fact that the insular goods of Cyprus and the Aegean were earmarked for military consumption on the Danube from the time of Justinian's creation of the *quaestor exercitus* in 536, possibly lessening the potential commercial attraction for shippers to stop at those ports.

Other than the two major eastern and western routes that ended in Constantinople, there is also a route that likely connected the two via the southern Aegean or Crete, linking southwest Asia Minor with the west, probably at Carthage. Once in Carthage eastern goods were able to disseminate to Marseilles, or to other sites further west. Sicily was likely a node for distribution of eastern goods to Italy or the west, as various eastern products have been noted there.[640] Such a route that moved along the northern coast of Crete has been considered elsewhere, including a branch that must have reached Corinth, despite the paucity of goods from that island at the site.[641]

The baggy Palestinian amphora is well-attested at Carthage from the mid-5th to late 6th century, but its rarity in Egypt and its absence from the quantified early 6th-century levels at Benghazi led Riley to postulate that the amphora followed either a direct

[640] See Malfitana 2004, p. 246, figs. 3, 4, for the presence of eastern amphoras and fine wares on Sicily. Gaza amphoras and Palestinian and Egyptian baggy amphoras are practically non-existent, but LR Amphora 1, 2, and micaceous water jars appear on numerous sites. LRC fine wares are only found on sites along the eastern coast, with only one site yielding finds of Cypriot Red Slip.

[641] Slane 2000, p. 306; this hypothesized branch receives some confirmation by the possible Cretan finds in the Panayia Field (see above), but also underscores the rarity of any direct distribution. Fulford 1987, p. 70, reconstructed the route of Early Roman grain ships leaving Alexandria for Rome as having reached Cyprus before following the southern coast of Asia Minor and heading west via Crete and Sicily; for more on the role of Crete in the context of the routes of Early Roman grain ships, see Gallimore 2011. Morrisson and Sodini 2002, p. 210, also consider much east-west traffic to have crossed by way of Crete, delivering eastern amphoras to Carthage and AfRS to Asia Minor, Antioch and Caesarea.

route to Carthage, or one through the Aegean.[642] The latter is more likely; as the provinces of the Eastern prefecture had been delivering the *annona* to the Illyrian prefecture already from the late 4th century,[643] pre-established routes and port facilities would have made such a course more attractive. However, accounts of direct voyages between Carthage and Alexandria do exist.[644] Winds and currents in the Mediterranean are often opposing, with the general inflow of Atlantic water through Gibraltar following a counter-clockwise direction. Thus the preferred route, with all factors being equal would see a west-bound ship leaving northbound from Alexandria. However, an east-bound ship would find the route along the African coast possessing faster currents and more favorable winds.[645] Indeed, a surprising number of African amphoras have been found at Ostrakine in the Sinai from the later 3rd- or 4th-century well into the 7th, illustrating the frequency of this route.[646]

But all factors were not always equal, with political, economic, or natural circumstances prompting deviations from these routes and the *navicularii*, even those operating under official direction such as in the transportation of the grain *annona*, were free to make commercial stops.[647] Constantinople in the 6th century was also a less-domineering nexus of exchange than Rome had been in relation with her western distribution routes at the start of the 5th century; thus, multiple routes existed in the east, with Antioch and Alexandria possibly even drawing their own respective *annona*

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[642] Riley 1981, p. 121.
[643] Jones [1964] 1986, p. 459.
[644] Sulpicius Severus (*Dial*. 1.1, 3, 6) provides the details of the voyage of a certain Postumianus, who sailed from Narbo in Gaul to Carthage, and then Carthage to Alexandria; see also Jones [1964] 1986, p. 842.
[645] Horden and Purcell 2000, pp. 138-139.
[646] Arthur and Orem 1998, pp. 209-210; Horden and Purcell 2000, p. 171.
[647] Horden and Purcell 2000, pp. 138-139, 172.

supplies and creating more foci for exchange.[648] While the major routes can be tentatively mapped, exceptions should never be unexpected.

These routes began a process of redefinition already in the early 7th century. While the dramatic end to the traditional ways of life in the classical Mediterranean world brought about by the Arab invasions is less clear today than it was to H. Pirenne,[649] the possibility of serious changes in the 7th century is detected from the study of the Panayia Field material, although it is only partially corroborated by finds from elsewhere in Corinth. Most notably, the connections with Asia Minor and the eastern Aegean seem to have become disrupted to some extent, as possibly illustrated by the rarity of the LR Amphora 1 (outside of a single, albeit near-complete, example in the 7th-century pit),[650] wares in micaceous water jar and Samos Cistern Amphora fabrics,[651] and the complete absence, at least in the Panayia Field, of contemporary LRC fine wares.[652] This is not to say that production of these wares stopped, but that networks were altered to the extent that Corinth was receiving far fewer quantities. Such a case is possibly illustrated by LRC, Hayes form 10C, which was completely absent in the Panayia Field and generally rare at Corinth, but its presence on other sites indicates the continued maintenance of maritime routes that traversed the Aegean. [653] The continued presence of massive

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[648] Wickham 2005, p. 714, 716.
[649] Pirenne [1954] 2001; for re-evaluations of the Pirenne thesis, see, for example, Hodges and Whitehouse [1983] 1989.
[650] Quantified studies from other areas of Corinth, however, do not note any break after ca. 600; see Slane 2000, pp. 305, 310, fig. 13.
[651] Slane 2000, p. 310, fig. 13, also notes a decrease in the quantities of micaceous water jars in the 7th century in other areas of Corinth.
[652] Again, quantified study of material from other areas of Corinth show the continued presence of LRC in 7th-century contexts, albeit in vastly diminished numbers; see Slane 2000, p. 305, fig. 10.
[653] Several rims were recovered from Constantinople; cf. *Saraçhane*, pp. 100-101, 106, figs. 37:1, 41:62-64, 50:14, deposits 29 to 31. Multiple examples of forms 10B and C are recorded at Emporio, on Chios; see *LRP*, pp. 343, 345, fig. 71, nos. 10.11, 10.14-15, and Boardman 1989, pp. 92-96, figs. 28-29. Finds from Kalavasos-*Kopetra* on Cyprus include forms 10A-C; see Rautman 2003, pp. 165-166. One example of LRC form 10C was published from Porto Rafti on the east coast of Attica; see *LRP*, p. 343, fig. 71, no. 10.12.

quantities of Palestinian baggy amphoras in the 7th-century pit indicate continued contact with the east;[654] their presence may have been due more so to acts of individual enterprise as the distribution of Gaza amphoras, from the same general geographical area, seems to cease throughout the Mediterranean and may have been more reliant on the official routes of distribution (see above).[655] The eastern routes that carried the baggy Palestinian amphoras may now have bypassed Asia Minor ports completely, using the route that connected the southern Levantine coast to Cyprus, then making for Crete as directly as possible before joining the major north-south African grain route along the eastern coast of Greece.

*The Role of Corinth in Long-Distance Distribution: Ports and Emporia*

Having examined the major ceramic wares carried on Corinth's long-distance networks, and having determined the mechanisms and routes by which they travelled, Corinth's role in this long-distance web of distribution needs to be considered. By all accounts, the city had continued the function that Strabo (8.6.20) ascribed to it already in

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For Corinth, see Slane and Sanders 2005, p. 273, n. 34, who report that form 10C was later documented in the latest destruction levels east of the Theater, originally published in Williams and Zervos 1983, pp. 29-32. Finds from the Eastern Korinthia Archaeological Survey (EKAS) report finds of form 10, but do not specify which variants; see Pettegrew 2007, p. 777, table 13, and 2010, p. 220, table 2. Multiple examples of LRC form 10C were published from Aegina; see Felten 1975, p. 69, no. 99, fig. 9 (bottom two on left side, and bottom three on right). One example of form 10B and two examples of form 10B/C were found during survey of the Methana peninsula; see Bowden and Gill 1997, pp. 86-87, table 8.3. One example of LRC form 10C was published from Halieis in the southern Argolid; see Rudolph 1979, p. 310, no. 24, fig. 8. For multiple rims of form 10C at Kastri on Kythera, see Coldstream and Huxley 1972, p. 167, no. 6, p. 169, nos. 23, 26, p. 174, nos. 7-8, figs. 50-51, 53, pls. 47-49; Johnston, Slane and Vroom 2014, pp. 21, 25, 34-35, 39-40, 42, fig. 17:h. In the west, form 10C is generally noted in 7th-century contexts; Reynolds 1995, p. 35.

[654] For the notable quantities of Palestinian amphoras recorded in other areas of Corinth, see Slane 2000, p. 310, fig. 13. For the continuity of settlement patterns in Palestine in the immediate aftermath of the Islamic invasions, see Magness 2003.

[655] Slane 2000, p. 310, fig. 13, also notes a decrease in the quantities of Gaza amphoras in the 7th century in other areas of Corinth.

the 1st century, that is, as an emporium meant to facilitate the distribution of goods throughout the Roman Empire.[656]

The existence of numerous ports, emporia or other forms of way-stations along the major routes is an obvious necessity for networks of sea-borne distribution. Due to the increased danger inherent in prolonged sea voyages, mariners would have preferred shorter journeys whenever possible.[657] Lewit feels that the *annona* routes created numerous emporia as a by-product of their existence, becoming more than just direct channels from the point of origin to that of consumption, with shipwrecks consistently providing evidence that they carried mixed cargoes of goods from a variety of origins that most likely had been gathered at a central site. It is important to remember that the *navicularii* who carried *annona* goods were not only allowed to carry their own goods, but were granted tax exemptions on all the cargo that they carried, thus all but encouraging their efforts to seek profits through numerous exchanges and transactions at various harbors. Apparently these stops were so common that laws had to be repeatedly passed preventing them from making unauthorized detours for extra profit.[658]

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[656] Horden and Purcell (2000) differentiate "ports" and "emporia;" a "port" (pp. 392-393) consists of more than simple access to the sea, as it must be a nodal point in the geography of connectivity, and are collectively seen as "gateway settlements" that control contact between different economic and social systems, obeying a regional logic that defies their being solitary or fixed points; "emporia" (p. 397) are characterized by two features: the close management of any economic opportunities in order to control the movement of products and unite state and private economies, and the housing of a mix of communities and origins. Arnaud (2011, p. 65) admits that the meaning of the word "emporion" varied through time and space; it was not only a port of trade, but was a bounded, cosmopolitan space devoted to trade, was minutely regulated by the state and worked towards the interests of that state, and was able to provide services and jurisdictional protection to all traders. Arnaud sees the "emporion" as the place where the state decided that the practice of trade was legal; trade outside the proscribed area was not impossible but was illegal and considered smuggling.

[657] Finley 1985, p. 130.

[658] Lewit 2011, pp. 325-326; see also Kingsley 2001, p. 53, regarding cargoes reaching emporia, then travelling piecemeal on various different ships. For the mixed cargoes on ships, see, for example, Bass 1982, for the cargo of the Yassi Ada wreck, or Lloyd 1984, for the cargo of the Iskandil Burnu shipwreck.

A major emporium, or at least a major concentration of emporia, through which nearly all of the eastern long-distance goods found in the Panayia Field must have travelled existed on the islands neighboring the coast of southwestern Asia Minor. Some evidence is found in the letters of Pope Leo the Great (*Ep*. 149, 150, 152, 153), dated to 457, that feature Kos as an important node of transit between those travelling between Italy, Constantinople, and the Levant.[659] Gregory of Nazianus (*vit. sua* 124) embarked on a ship that originated from Aegina to journey from Alexandria to Greece, but was forced to take shelter in Rhodes due to a storm; a certain Mark the Deacon undertook voyages for Porphyry, the bishop of Gaza, sailing between Ashkelon to Thessaloniki, Ashkelon and Constantinople, and Caesarea and Constantinople, stopping at Rhodes on each leg of each journey (*V. Porph*. 6, 26-7, 34, 37, 55, 57).[660] The high concentration of documented shipwrecks in the general area between Rhodes and Kalymnos also offers very compelling evidence.[661] Other emporia certainly existed, and must have included Marseille, Carthage, Naples, Syracuse, Ephesos, and Antioch, to name only a few.

Corinth's role as an emporium fits the evidence in every respect, both in the range of imported goods and its well-suited geographic position along the numerous distribution routes reconstructed above.[662] Based on the ceramic record of the Panayia Field and other excavated areas of the site, Corinth played host to the ships arriving from the major eastern routes as well as the north-bound ships from Africa and Sicily.

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[659] These detail the account of a series of letters addressed to the vicar of Thessaloniki, as well as the metropolitan bishops in Dyrrachium, Corinth, Antioch and Jerusalem, carried by Leo's representative Gerontius, who was already on his way from Rome to Constantinople. Gerontius' instructions, after evidently delivering the letters to the "Illyrian bishops," were to deliver the remaining letters to a certain bishop and priest on the island of Kos, one of whom were then to assume responsibility for forwarding the letter to the eastern metropolitans.
[660] See also Jones [1964] 1986, p. 842.
[661] See Parker 1992, map 13.
[662] See also Pettegrew 2014, pp. 133-139, for Corinth's role as an emporium.

Concentrated at this intersection was also the agricultural produce of the southern Argolid, shipped in LR Amphora 2 containers and demanded by the state for official distribution (see Chapter 4). Naturally, the Corinthians themselves also consumed a deal of what arrived into their city, as the assemblages filled with broken, imported pottery from the Panayia Field testify, but more importantly, Corinth served as a significant link on the various chains of distribution routes that facilitated the movement of goods for state, ecclesiastical and commercial enterprises.[663]

Due to Corinth's harbors at Kenchreai and Lechaion that gave it access to goods arriving from east and west, respectively, the primarily eastern orientation of the city's network connections after the 5th century is indeed a curious phenomenon. Even after the re-establishment of official western networks under Justinian, the reappearance of AfRS constitutes the only regular import of western ceramics in the Panayia Field. One possibility sees this ware (and the African amphoras which have been documented on other parts of the site) arriving on the grain ships, or on the merchant ships which likely followed the same secure route, that were directed toward Constantinople through the western Aegean. But the large amounts of 6th-century AfRS found at Butrint and Delphi, among other sites, attest that long-distance distribution from western sources was still

[663] Corinth's position on an isthmus that was capable of facilitating the exchange of goods between western and eastern halves of the empire has often been attributed to account for much of the city's prosperity throughout antiquity. This role has been recently modified through a re-evaluation of the *diolkos*, the roadway that was understood to have crossed the isthmus allowing for ships and cargoes to be transported from one port to another. The unlikelihood of such activity on a regular basis has been discussed in full, concluding that the *diolkos* should rather be seen as a roadway that merely facilitated communication in the area. This re-analysis in no way challenges the established views of Corinth's prosperity, however, but merely sees the *diolkos* as another feature of the numerous facilities that Corinth had to offer to facilitate exchange in its harbors and territory; see Pettegrew 2011, 2014, pp. 127-133.

practiced through the Adriatic and the Gulf of Corinth in the 6th century.[664] Recent scientific investigations that report that the harbor facilities at Lechaion were damaged and rendered inoperable due to seismic activity in the 6th century should be considered with caution,[665] as other lines of evidence seem to offer contradictions.[666] Harbor facilities were certainly in operation in the 7th century in order to accommodate the various travels of the bishop of Corinth, or that of Constans II, to the west, and in the 9th century to accommodate the travels of Loukas (see Chapter 1). Furthermore, regional distribution between Corinth and Boiotia, most likely through the Gulf of Corinth, is certainly attested during the 6th and 7th centuries (see Chapter 4). The decrease in the variety of western goods in the Panayia Field continues to pose a mystery, but one possibility may be to consider non-ceramic goods. While Corinth may have provided a useful point of embarkation for the westward movement of troops and supplies during Justinian's wars in Italy, it may also have served the ships returning east with various spoils of war, such as slaves.

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[664] But note that, AfRS, as well as LRC, is currently underrepresented at nearby Sikyon (see discussion for the regional distribution of each ware, above). Whether this has anything to do with distribution routes in general, or the state of the site of Sikyon specifically, is currently unclear.

[665] See Hadler et al. 2011, who report on the cores taken in the harbor which revealed that the area suffered from tsunamis in ca. 760 B. C., ca. 50 B. C., and sometime in the 6th century A. D.; their reasoning that a tsunami caused damage to the basilica, however, seems less convincing. See also Minos-Minopoulos et al. 2013, who report various ground deformation structures associated with liquefaction caused by seismic activity that have been mapped within the area of the Lechaion Basilica, but date the damage to 551/552 based solely on the conclusions of the original excavations. Investigators cited as support Rothaus 1995, pp. 294-295, who reported that archaeological surface material from Lechaion generally dates from the Late Roman period with little in terms of earlier material, indicating that any earlier evidence of occupation in the area had been greatly obscured by this period; but compare Wiseman 1978, p. 88, who reported mainly "Roman" surface pottery with a high percentage from the first two centuries A. D.

[666] Compare Slane and Sanders 2005, pp. 291-292, n. 95, where they argue against the destruction of the basilica at this date as ceramic material from the basilica accords better with the late 6th and 7th century activity. Procopius (*Aed*. 4.2.23; *Anec*. 18.41-44) specifically mentions the damage brought to Corinth through the earthquake of ca. 525, but the revised dating of the basilica post-dates this event. One must therefore consider if the liquefaction damage recorded on the floor of the basilica was due to an even later (medieval or modern?) event.

# CONCLUSION

Corinth's role as an emporium within the official distribution networks of the empire witnessed the import of a considerable variety of long-distance wares, primarily with an eastern focus, distributed through a combination of official state- (or church-) sponsored distribution or through private enterprise. Despite the variety of amphoras from western sources, they were not a significant component of the Late Roman deposits in the Panayia Field and, in any case, did not generally appear here after the 5th century. Fine wares from North Africa represented a major import for the entire period under study (with a significant decline between the late 5th- to early 6th-century), but western lamps and plain wares were completely absent, and cooking wares from western sources comprised a rather insignificant amount of the material that also ceased to appear after the 5th century.

Various Aegean sources in the late 4th and earlier 5th century seemed to have supplied the Panayia Field with moderate quantities of ceramics, namely cooking wares in Late Roman micaceous Aegean ware along with various other isolated wares. After the late 5th century, all imported cooking wares seem to disappear, with imported Aegean amphoras represented only by modest numbers of Samos cistern amphoras and the possible, occasional import from Crete. Lamps, fine wares, and plain wares from the Aegean are extremely rare and at no time was the Black Sea ever a major supplier of ceramics to this part of the site.

In the east, the early 5th to early 7th century witnessed the increasing reliance on the coastal producers of Asia Minor for LRC fine ware and the LR Amphora 1 (from

Cilicia or northern Syria), with smaller amounts of the micaceous water jar, and rare occurrences of other, isolated lamps, fine wares and plain wares. Imports from Egypt are almost non-existent, while those from Levantine sources were limited to a large quantity of amphoras, namely from Gaza and a wide array of Palestinian sources, with lamps, fine wares, cooking wares, and plain wares not attested in the Panayia Field at all.

In summary, imported fine wares in the Late Roman Panayia Field were thus supplied by North Africa and western Asia Minor. Imported amphoras were mainly supplied from the Bay of Iskenderun (Cilicia or northern Syria) and the Levantine coast, with Aegean sources supplying modest amounts during the 6$^{th}$ century. Imported cooking wares were only arriving from Aegean sources before the 6$^{th}$ century, otherwise they, along with lamps and plain wares, were not regularly imported at all. Any remaining ceramic forms and classes were supplied through regional and local sources and their associated distribution networks, which will be the focus of the next chapter.

# CHAPTER IV:
# REGIONAL AND LOCAL WARES AND TYPES FROM THE PANAYIA FIELD

## INTRODUCTION

This chapter presents the major ceramic wares and fabrics, with their associated forms, from regional and local sources encountered in the Late Roman contexts from the Panayia Field, following the same organizational principles used for long-distance imports in the previous chapter. These include products manufactured in Attic, Boiotian, southern Argolid, Northeast Peloponnesian cooking, and LR Corinthian lamp fabrics. The first three are considered to represent *regional* sources, as defined by the distance of their known kiln sites from Corinth and the natural features (Saronic and Corinthian Gulfs, or location on the extremity of the Akte peninsula, respectively) that separated them. The kiln sites of the remaining two wares, provisionally considered here to be *local*, are not known with certainty but the quantity of vessels in Northeast Peloponnesian cooking fabric at Corinth effectively makes it the locally-available ware, and the petrographic similarity with LR Corinthian lamp fabric suggests that the latter was produced nearby.

Many of the following fabrics have been previously recognized and published in individual shapes, and some of the wares as a whole have already appeared in preliminary presentations or focused studies.[667] The material from the Panayia Field has offered the opportunity to synthetically combine the findings of these earlier studies and expand the overall knowledge of these previously-identified wares. Among the contributions presented here is the recognition of new variations in some fabrics, an

[667] See *Corinth* XVIII.2; Hjohlman 2005; Sanders 1999; Slane 1994, 2008b, 2014; Slane and Sanders 2005.

expansion of the known range of vessel shapes produced in each ware, and the presentation of new data contributing to further understanding of their production and regional distribution. Together with the previous chapter, this chapter completes the presentation of the major wares from the Panayia Field.

## ATTIC WARE

*Ware*

Fabric Description

Attic 1 Fabric (Pls. 5.1, 5.2): Red (approx. 2.5YR 5/8) fabric; red (2.5YR 5/8) slip. Characterized by few to frequent very fine white flecks; rare fine to small sub-rounded calcareous white lumps; rare fine sub-rounded gray clumps; rare fine (sub-)rounded black grains; rare fine rounded red pellets; frequent very fine sub-rounded voids. Granular, slightly conchoidal, break; medium hard fabric.[668]

Attic 1 Fabric, refined (Pls. 5.3, 5.4): Red (10R 5/8 to 2.5YR 5/8) fabric; red (10R 5/6 to 2.5YR 5/6) slip on exterior. Characterized by frequent elusive fine sparkling bits (in direct sunlight); frequent very fine white flecks; rare fine sub-rounded gray clumps; rare fine rounded black grains; rare very fine rounded red pellets; rare very fine to fine sub-rounded voids. Granular to conchoidal break; medium hard to hard fabric.[669]

Attic 2 Fabric (Pls. 5.5-5.7): Red (10R 5/8 to 2.5YR 5/8) to light red (2.5YR 6/8) fabric. Characterized by frequent to common very fine to fine sparkling bits; (rare to) few to frequent (very fine to) fine (to small) sub-rounded white lumps; few (to frequent) fine (to small) sub-rounded dark/black grains; rare fine rounded red pellets; frequent fine to small sub-rounded voids. Occasionally noted are rare fine (to small) rounded and sub-rounded tan pellets (grog?). Rarely noted are few very fine to fine stringy white flecks; rare fine sub-rounded bluish-gray clumps (chert?). (Granular to) conchoidal break; medium hard fabric.[670]

Attic 2 Fabric, refined (Pls. 5.8, 5.9): Reddish yellow (5YR 6/6) fabric; weak red (10R 5/4) to red (10R 5/6) slip. Characterized by few to frequent very fine to fine round black grains; rare to few (to frequent) very fine to fine rounded and sub-rounded white and off-white lumps; rare fine (elusive) sparkling bits; rare fine sub-round gray/white clumps;

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[668] Based on macroscopic examination of **112 (P-75)**. The lack of Attic 1 fabric samples with which to provide a macroscopic fabric description is a testament to the fabric's rarity in the Panayia Field's deposits by the beginning of the period discussed here.
[669] Based on macroscopic examination of P-76.
[670] Based on macroscopic examination of **113 (P-77)**, **117**, and **118 (P-78)**.

few to frequent very fine to fine sub-rounded voids. Occasionally noted are few very fine to small sub-rounded tan pellets (grog?). Granular to conchoidal break; medium hard fabric.[671]

Attic 3 Fabric (Pls. 5.10-5.12): Mainly reddish yellow (5YR 6/6 to 7.5YR 6/6) fabric, rarely appearing brown (7.5YR 5/4 and approx. 7.5YR 4/3) to strong brown (7.5YR 5/6); red (2.5YR 5/6) and reddish brown (2.5YR 5/3) slip noted. Rare to few (occasionally elusive) fine sparkling bits; rare to few fine rounded (and sub-rounded) black grains; rare (to few) fine to small sub-rounded white lumps; rare (to few) rounded (and sub-rounded) (dark) red pellets; few to frequent fine (to small) sub-rounded voids. Occasionally noted are common to abundant very fine stringy white and off-white flecks (creating a "fuzzy" appearance under the lens); rare (to few) fine (to small) rounded off-white/tan pellets (grog?); rare (very fine to) fine angular bluish-gray chips. Granular (slightly conchoidal) break; medium hard fabric.[672]

Attic 3 Fabric, refined (Pls. 6.1, 6.2): Reddish brown (5YR 5/4), reddish yellow (5YR 6/6 to 7.5YR 6/6) to pale brown (7.5YR 6/3, tending towards light gray), and light brown (7.5YR 6/4) to brown (7.5YR 5/4) fabrics are all noted; brown (ranging from 7.5YR 5/3 to 4/2) slip, appearing a dark, metallic, reddish brown. Characterized by frequent very fine to fine sparkling bits; (rare to) few to frequent very fine to fine (to small) sub-rounded white (and off-white) lumps; rare to few fine rounded black grains; rare very fine to fine rounded red pellets; rare very fine to fine sub-rounded gray clumps; (few to) frequent very fine to fine (to small) sub-rounded voids. Rarely noted are common to abundant very fine sub-rounded and stringy off-white flecks (creating a "fuzzy" appearance under the lens). Granular, slightly conchoidal, break; medium hard fabric.[673]

The standard fabric descriptions are applicable to all recognized fine wares, amphoras, and plain wares, while the refined versions are limited to lamps. The sub-fabrics 1, 2 and 3 were initially characterized through the examination of lamps that are universally identified as being Attic products (especially Attic glazed lamps); following the recording of each sub-type's characteristics, the same fabrics (usually in a less refined state) were recognized in other ceramic classes. The three distinct sub-fabrics that are characterized above are differentiated primarily by the level of coarseness and amount of visible inclusions. These distinctions are standardized and consistent among the material

[671] Based on macroscopic examination of P-79 and an unnumbered base in Lot 2000-007 (glazed lamp).
[672] Based on macroscopic examination of **114**, an unnumbered rim in Lot 2000-007 (keel rim bowl), unnumbered base in Lot 2000-007 (unidentified Attic RS), **119 (P-80)**, and P-81.
[673] Based on macroscopic examination of an unnumbered lamp fragment (glazed lamp) in Lot 2000-007, P-82, and **9 (P-83)**. The unnumbered fragment is noted as not containing any sparkling flakes at all.

recovered from the Panayia Field; previous descriptions of the fabrics of Attic products recovered from other areas of Corinth as well as Kenchreai have also recorded notable fabric variations.[674] Of interest is the variability of the sparkling inclusions, both among the three sub-fabrics and between standard and refined versions of the same sub-fabric. This variability is possibly due to their elusive nature and the need for direct sunlight in order to conduct a proper reading.[675] Two main types of slip can also be recognized on these products: a bright red slip, and a dark red slip that almost appears metallic purple.[676]

Scientific analyses focused on earlier periods have also observed variations in the fabrics of Attic products. Fine wares produced in Athens have been shown through neutron activation analysis to have employed very different fabrics during different chronological periods.[677] Various scientific analyses of Attic fine, cooking and plain wares from Hellenistic contexts in the Athenian Agora, undertaken by S. Rotroff, have determined that while a variety of fabrics were employed by Attic potters for the manufacture of cooking and plain wares, there exists a great deal of homogeneity in the

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[674] See *Corinth* XVIII.2, pp. 3, 17, 19, 21, and 57, for K. Slane's observed variations in fabric descriptions as noted within Attic unglazed, glazed and post-glazing lamps from the sanctuary of Demeter in Corinth, with the Attic RS displaying "the same range of fabrics as the Attic glazed lamps of the 4th century;" some of the variations were attributed by Slane to differences in firing conditions. Similar, but less specific, sentiments regarding variations among Attic products in terms of fabric and slip were also made regarding finds from Kenchreai; see *Kenchreai* IV, p. 92.

[675] Of some possible relevance, see *Agora* XXXIII, p. 16, for Rotroff's "Attic fine fabric," evidently employed in various Hellenistic plain wares, amphoras and fine wares generally, in which the presence of sparkling inclusions are noted to vary.

[676] Although the slip generally tends toward a darker red with a metallic sheen in Attic 3 fabric, this is not a defining characteristic; metallic and bright red slips are both noted in Attic 2 and 3 fabric vessels, but the metallic red slip was not noted at all on Attic 1 vessels among the available material.

[677] See Fillieres, Harbottle and Sayre 1983, p. 62; trial firing pieces, (black-glazed) pottery and figurine wasters produced in the Athenian Agora all employed the same fabrics, but these fabrics were compositionally different for the Protogeometric, Subgeometric and Classical-Hellenistic Periods. The authors were unable to conclude whether separate clay sources were used during each period, or if significant changes in traditional ceramic-production practices occurred. But see also Farnsworth 1964, p. 223, who remarks that, in thin section, the Athenian fabric, regardless of date or its use in coarse or fine wares, is mineralogically similar from the 7th century B. C. to Roman times.

fabric of the fine wares for this period.[678] However, while the neutron activation analysis of a group of Rotroff's fine wares from contexts of the 3rd to 1st century B.C., including black-gloss, west slope and moldmade wares as well as various wasters, indeed formed a single compositional group, these were also noted to have displayed significant variability in regards to each sample's calcium and arsenic content.[679]

Samples of all three Attic sub-fabrics have been submitted for petrographic analysis. While an official report is still pending, preliminary results show that all three sub-groups belong to a single fabric with the small levels of variation among them being related to degrees of coarseness and firing temperature.[680]

Range of Vessel Shapes

By the late 4th century Attic fabrics were employed in the manufacture of lamps, including glazed versions (**1**; **2**; **3**; **4**; **5**; **6**) followed by post-glazing lamps (**7**; **8**; **9 (P-83)**; **10**), a number of red-slipped fine wares including painted keel-rim bowls (**112 (P-75)**; **113 (P-77)**; **114**; **115**) and various other forms with painted or stamped decoration (**116**; **117**; **118 (P-78)**; **119 (P-80)**; **120**; **121**; **122**; **123**; **124**; **125**; **126**; **127**; **128**; **129**), a small number of amphoras (**234**; **235**), and various plain wares including pitchers/jugs (**394**;

[678] See *Agora* XXXIII, pp. 13-16, table 2, for general comments and summary of scientific analyses; see also pp. 16-23 for Rotroff's "Attic fine fabric," used for various plain wares and amphoras but "appears to be identical with that used for fine Attic table ware," and her "pinkish buff fabric," a plain ware fabric with close resemblance to that of fine ware. See also *Agora* XXII, p. 14, and *Agora* XXIX, p. 10, in which Rotroff briefly describes the "normal fabric" of Hellenistic wheelmade fine wares and moldmade bowls with very little reported variations.
[679] Neff and Glascock 2006; the samples submitted by Rotroff matched the "Attic A" group of the Classical-Hellenistic period published in Fillieres, Harbottle and Sayre 1983.
[680] H. Graybehl (pers. comm.), who additionally notes the high degree of correspondence between the Late Roman Attic fabrics submitted here and samples of Attic products from the Bronze Age (LH III). Graybehl has also provisionally determined that one lamp (**9 (P-83)**), submitted as an Attic post-glazing lamp, is in fact in LR Corinthian lamp fabric; if correct, the misidentification would not be very much of a surprise, as the lamp was already identified as having been overfired and malformed.

**395**; **396**), closed vessels with gouged decoration (**397**; **398**), and other closed shapes (**399**).

*Dating and Identification*

Attic 1 fabric seems to have disappeared from the Panayia Field early in, if not already by, the period studied here, while Attic 2 and 3 both seem to have held a contemporary place in these deposits until at least the mid-5th century and perhaps continued to the end of the century or the early years of the 6th. The two kinds of slip, bright red and metallic purple, might be the result of changes in firing conditions over time; chronological precision is difficult, but the material from the Panayia Field suggests that the latest pieces more often appeared in the metallic slip. Elsewhere in Corinth, quantified data shows that Attic RS was present throughout the 4th century, and accounts for a large proportion of fine wares during the first half of the 5th century, outnumbering AfRS but being outnumbered by LRC.[681]

Turning to specific ceramic classes and forms, Attic glazed lamps were the dominant lamp group at the beginning of the period analysed here, persisting into the 5th century.[682] Although the pieces catalogued here are all from 5th-century lots, many of the glazed lamps can be identified as late 4th-century products based on recently published criteria.[683] Three possible fragments of Attic post-glazing lamps are first identified in Lot 1996-045, and agree with that type's first appearance elsewhere in Corinth where they are dated no earlier than ca. 425-450.[684] Otherwise, the few remaining appearances of these

[681] Slane 2000, p. 303, fig. 13.
[682] See also Karivieri 1996, p. 49; Slane and Sanders 2005, p. 282; Slane 2008b, p. 487.
[683] See Slane 2008b, table 3.
[684] Slane 2008b, pp. 487-489.

lamps in the Panayia Field occur in deposits of the later 5th and early 6th century; while a residual or contemporary nature is not always clear, post-glazing lamps do not seem to have survived far into the 6th century. In other parts of Corinth, post-glazing lamps were found in a deposit of the second half of the 5th century to 500 or later.[685]

Fine wares from Athens appeared in significant numbers just before LRC came to dominate the market in Corinth sometime in the mid-5th century. Although much Attic RS was recovered from the excavations of the Panayia Field, due to the lack of a complete, published chronology, it was not always clear which pieces were contemporary with the deposit and which were residual.[686] Presented here are only the examples for which a late 4th century, or later, date seems secure.[687] By the late 4th century, these could include Attic RS bearing a number of decorative features, including white-painted decoration or stamps.[688] While the available deposits from the Panayia Field do not provide a clear end-date for Attic RS, it seems that it may have continued here through the 5th century although experiencing a dramatic decline after the mid-5th century when LRC became increasingly dominant.[689] By the 6th century, its presence is certainly

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[685] Slane and Sanders 2005, p. 258, nos. 2-1, 2-2, fig. 7. See also Walbank and Walbank 2006, pp. 270-274, nos. 1, 4, figs. 2, 3, for post-glazing lamps dated, respectively, by K. Slane to the second half of the 5th century to first half of the 6th century, and second half of the 5th century; no. 1 offers a more worn (or less re-touched?) parallel to **8**.

[686] For a similar comment, see Slane 2000, p. 307, n. 44.

[687] An example of this problem is in the case of vessels resembling *Agora* V, p. 103, no. M 209, pls. 26, 37, 71 (layer VII dated early 4th century), which appear repeatedly in the lots under analysis here. Published comparanda, including Slane 1994, p. 132, no. 11, fig. 4, and Abadie-Reynal 2007, p. 194, no. 310.1, pl. 46, place this form prior to the period under study, and thus these were omitted from the catalogue.

[688] Although existing publications of white-painted Attic RS seem to favor a 3rd to 4th century date, Hayes' recent work (2008, p. 442, 2010, p. 25) on Attic RS places vessels "with added white paint patterns – most frequently spiral scrolls" as being current from the earlier 3rd century until ca. 500, along which closed vessels with gouged decoration run parallel; in the later publication, Hayes (2010, p. 25) modifies the date of such painted decoration as being "current from late 3rd to the end of the 5th AD." Additionally, Hayes (2008, p. 442, 2010, p. 25) states that stamped vessels originally modelled on 4th-century AfRS continue almost to the end of the 5th century while retaining their 4th-century decorative treatment. Painted, gouged, and stamped decoration all appear in the Panayia Field, although the latter two are notably rare.

[689] J. Hayes (pers. com.) stated that production of Attic fine wares continued to at least 500. Compare also the various finds of locally produced red slipped bowls and gouged jugs from graves in Athens stored in the

residual. The sparse finds of amphoras in this fabric do not lend themselves to any increased understanding of their chronology but, like the plain wares, they certainly did not survive any longer than the fine wares.[690]

Although the Roman and Late Roman pottery and lamp industries of Athens are generally well-recognized, no complete synthetic studies have appeared on the ceramic industry as a whole. Concerning the fine wares and other classes of red-slipped pottery, an early publication of Late Roman stamped wares from the Kerameikos was the first to appear.[691] This was soon followed by a preliminary, diachronic treatment of fine wares from the Roman to Early Modern periods from the Athenian Agora in which the locally-made Roman fine wares appeared among Waagé's "Late D ware,"[692] but this designation was abandoned when H. Robinson presented several deposits of Agora material that included these wares.[693] Later, in J. Hayes' typological study of Late Roman fine wares, these fine wares, referred to as "Athenian ware," were only briefly discussed, and were not accompanied by a study of their own.[694] Attic vessels published among Corinthian material have appeared under names such as "Attic imitations of African red-slip ware,"

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Byzantine Museum which are dated to the 6th century; see Borboudaki 2004, pp. 310-311, figs. 298:a-d, 299:a-b. J.

[690] A fragment of an Attic gouged jug from elsewhere in Corinth, from a deposit dated to the second half of the 5th century to 500 or later, might attest to the longevity of Attic plain wares through the later 5th century; see Slane and Sanders 2005, p. 262, no. 2-16, fig. 7

[691] Kübler 1931.

[692] Waagé 1933, pp. 304-308.

[693] See *Agora* V.

[694] *LRP*, pp. 407-408.

"Attic," and "LR Attic."[695] A dedicated study of locally-produced Athenian table wares is expected in the future.[696]

Greater scholarly attention has focused on the lamps.[697] Athenian lamps belonging to the period under study were originally classified based on finds from Corinth under Broneer's type XXVIII, retaining this designation in a later publication of lamps from Isthmia.[698] A thorough study of lamps found at the Athenian Agora was presented by J. Perlzweig in which the fabrics of Athenian and Corinthian lamps were characterized and a new chronology devised, but without a new typology; her work formed the basis of Karivieri's later work on the Athenian lamp industry.[699] Since the 1990s, these lamps have been re-classified by K. Slane who has divided Athenian lamps into Attic unglazed, glazed and post-glazing lamps,[700] which continue to be used in this study.

*Discussion*

As the focus of the present study only begins in the late 4th century, thereby dealing only with the final decades of the import of any significant quantity of Attic products into Corinth, any remarks made here regarding the ceramics industries in Athens

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[695] See, respectively, *Corinth* XVIII.2, p. 57, nos. 118-119, fig. 10; Slane 1994, p. 132, nos. 8-12, figs. 3-4, pl. 33; Slane and Sanders 2005, pp. 251, 262, nos. 1-12, 2-15, 2-16, figs. 3, 5, 7, with additional notes on pp. 283-284.
[696] J. Hayes (in *Agora* XXXII, p. vii) noted that a separate volume dedicated to the locally produced fine wares in *The Athenian Agora* series is yet forthcoming, a sentiment repeated in Hayes 2008, pp. 439-440; see also Hayes 2010.
[697] For a full review of the bibliography pertaining to the study of the Athenian lamp industry up to the mid-1990s, see Karivieri 1996, pp. 6-19; for a later review, see Slane 2008b, pp. 483-490.
[698] *Corinth* IV.2, pp. 102-114, 212-280; *Isthmia* III, pp. 72-80, where the type was sub-divided into sub-types A to E.
[699] *Agora* VII; Karivieri 1996, in which Athenian lamps are arranged into early unglazed, glazed and late unglazed lamps. For additional contributions, see Garnett 1975; Wohl 1981, 1993; *Kerameikos* XVI, for a dedicated treatment of lamps from the Kerameikos.
[700] Refinements on their dating and classification appeared in *Corinth* XVIII.2, pp. 7-36; Slane 1994, pp. 150-162, 2008b, pp. 483-490; Slane and Sanders 2005, pp. 280-281.

should remain subject to change. A full understanding of the Attic ceramic industry may, however, be difficult to attain as the clay beds and sources of temper that the ancient potters used have likely been completely obscured by the development of the modern city.[701]

The manufacture of Attic red-slipped wares within the city of Athens, especially at the Kerameikos, is well-attested archaeologically, even if no full presentation of kiln material has yet appeared.[702] Painted keel-rim bowls and the so-called "gouged jugs" have been published in great number from the Athenian Agora.[703] Hayes recently commented that certain Attic RS dishes were mechanically copied by the use of whole-vessel moulds;[704] while such practice might account for the morphological features of these dishes (wide, shallow, open profiles with thick walls and no evidence of articulated bases) no moulds have yet been published.[705] The production of Attic lamps is better understood; detailed studies have appeared, firmly placing their workshops within the Kerameikos until the early 5th century, then within the Themistoklean wall circuit thereafter.[706] The harder, coarser nature of Attic 2 and 3 fabrics, together with the general tendency for the red slip to appear darker with a metallic sheen in the latest products here,

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[701] *Agora* XXXIII, p. 13, n.1; see also Fillieres, Harbottle and Sayre 1983, p. 57.
[702] See for example Kübler 1931; *LRP*, p. 407; Knigge and Rügler 1989, p. 85, fig. 6; Zachariadou and Kyriakou 1993, pp. 27-28, for the excavation of a kiln, with other excavated kilns noted in n. 16; Hayes 1996, p. 11, 2008, 2010. Wasters of painted keel-rim bowls have additionally been found in the excavations at the Athenian Agora; see *Agora* V, p. 61.
[703] For keel-rim bowls, see Waagé 1933, pp. 304-307, nos. 243-244, 280-282, fig. 5, pl. IX; *Agora* V, pp. 61-63, nos. K 19-33, K 42-46; see also Hayes 2008, p. 442, fig. 7, where painted vessels are commented on as being "current" from the earlier 3rd century until ca. 500. For gouged jugs, see *Agora* V, pp. 111-112, 114, 117, nos. M 291-M 293, M 297-M 299, M 320, M 357, M 359-M 361, pls. 30, 31, 33, 42.
[704] Hayes 2008, p. 443, with illustration of such a dish in fig. 9 (bottom); see also Hayes 2010, pp. 22-23, figs. 1, 3. These correspond roughly to dishes like **121**, **122**, **126**, and **127**. Generally, these hypothesized mold-made vessels seem to have in common thicker floors and rounded bottoms lacking a sharp transition between the wall and base.
[705] The completion of the petrographic analysis of the Attic RS samples submitted from the Panayia Field will provide information regarding the alignment of inclusions and voids in the fabric, thus suggesting whether or not a vessel was wheel-made.
[706] *Agora* VII; Karivieri 1996; *Kerameikos* XVI.

might suggest that the Attic ceramics industry as a whole was undergoing changes in manufacturing and firing techniques during the late 4th and early 5th century.

Attic products evidently enjoyed a wide market. Perlzweig, in her study of lamps recovered from the Athenian Agora, identified Attic lamps of the 4th century or later in Delphi, Argos, Corinth, Delos, possibly Pannonia, southern Russia, Ephesos and the coast of Asia Minor, and Egypt.[707] Several Attic lamps have also since been identified in the Chalkidiki in northern Greece at the site of Torone.[708] In regards to the known distribution of Attic RS, J. Hayes attributes its movement to travelling with Attic lamps. He further notes that the distribution of Attic RS was primarily local in nature; Corinth is the only site where it is found in any great quantity, but some pieces did manage to reach the north at Thessaloniki, south to sites on Crete, Cyrenaica and Alexandria, and west in the Adriatic at Corfu and Butrint.[709] More work is needed in order to test the distribution limits of Attic products. Fabrics are not always described in publications and regional sources for lamps other than Athens or Corinth are not always considered. Further site visitation and first-hand inspection of fabrics is called for in order to properly differentiate between Attic products and similar products manufactured at other centers.

Personal comparative analysis of several archaeological collections and published finds from the region surrounding Corinth have placed Attic ware at various sites. Attic

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[707] *Agora* VII, pp. 65-69, in which Perlzweig (p. 66) also cautions on the danger of assigning provenance to a lamp without physical inspection.
[708] See Tidmarsh 2001, pp. 653-654, 665-666, nos. 15.82, possibly 15.83, 15.84-85, 15.87, and possibly 15.88-89, fig. 162.
[709] See *LRP*, p. 408, where Hayes mentions sporadic finds in Thessaloniki and Corfu, and at Tolmeita and Tocra in Cyrenaica; Hayes 2010, p. 25, figs. 8-9, where he publishes profiles of a painted keel-rim bowl from Alexandria, and various Attic RS from Corfu; for Butrint, see Reynolds 2004a (with catalogue in Reynolds 2004b), p. 225, no 39, fig. 13:17, publishing a red-slipped keel-rim bowl with white-painted spirals on the rim which J. Hayes, in a personal communication to Reynolds, dated to ca. 380-430, placing it in a late phase of Athenian exports. Recently, J. Hayes (pers. comm.) stated that Attic fine wares are found in small numbers in Crete, Alexandria, Thessaloniki, and Cyrenaica.

lamps were personally noted at Delphi, appearing alongside Attic RS keel-rim bowls and other painted red-slipped wares.[710] In Boiotia, one piece of Attic RS was noted among survey finds collected from Thespiae as well as at least one rim of a gouged jug in Attic fabric from the same site,[711] with Attic glazed lamps observed among the finds from Koroneia. In the Saronic Gulf, Attic lamps might be present on Aegina.[712]

Attic lamps are well-published from Isthmia,[713] and Attic RS is personally attested at the site.[714] Attic lamps have also been published from Kenchreai,[715] along with a few painted Attic bowls,[716] but otherwise "surprisingly little" non-painted Attic RS has been recovered there, with only six pieces reportedly found in addition to a few examples of gouged jugs.[717] The ware is found quite often at Corinth with numerous published examples testifying to the long duration of the import of lamps,[718] fine wares and gouged jugs.[719] Several Attic glazed and post-glazing lamps were personally noted at Nemea.[720]

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[710] For publication of the lamps, see Pétridis 2010, p. 131, figs. 234-235, pl. 43; for the Attic RS of the early 3rd to 5th century, see p. 129, figs. 228-229, pl. 42.
[711] The Attic RS bowl is similar to **127**.
[712] See Felten 1975, pp. 60-63, nos. 20-35, pls. 16-17, but the fabric has not been personally confirmed.
[713] See *Isthmia* III, where they appear under a number of Broneer's types; Wohl 1981, 1993; *Isthmia* V, p. 43 (n. 31), 77 (n. 45), 78 (n. 49), 84 (n. 64), pl. 19:a. Their presence was also confirmed through personal examination of several examples of Attic glazed and post-glazing lamps.
[714] Attic RS personally observed at Isthmia includes an example similar to *Agora* V, M 209, a painted keel-rim bowl, and an example of a possible interpretation of LRC, Hayes form 1.
[715] See *Kenchreai* V, pp. 49-68, nos. 230-371b, pls. 10-16.
[716] See *Kenchreai* IV, pp. 90-91, nos. LRB 13-LRB 15, pl. 22; see also Wright 1980b, p. 548, who excluded nos. LRB 11 and LRB 12 from the same group.
[717] See *Kenchreai* IV, p. 92, 94-95, nos. LRB 21, LRB 22, LRB 23 (interpreting AfRS, Hayes form 61A), pls. 22-23, spanning the 3rd to early 5th centuries. For the gouged jugs, see p. 135, no. RC 71, pl. 27, identified as "Attic," but see also p. 130, no. RC 55, pl. 35, for a similar shape.
[718] See *Corinth* IV.2, where they appear under a number of Broneer's types; Garnett 1975, pp. 175-176, 188-190, nos. 1-6, figs. 1, 3, pl. 43; *Corinth* XVIII.2, pp. 17-21, 32-35, nos. 40-59, fig. 2, pls. 4, 5; Slane 1994, pp. 152-153, 158-162, nos. 72-79, fig. 13, pls. 35, 36; Slane and Sanders 2005, pp. 250, 258, 280-282, nos. 1-1, 1-2, 2-1, 2-2, figs. 4, 7; Walbank and Walbank 2006, pp. 270-274, nos. 1, 4, figs. 2, 3; Slane 2008b, pp. 483-490.
[719] For Attic keel-rim bowls in a 3rd century context in Corinth, see *Corinth* XVII, pp. 81-82, nos. 131, 132, fig. 7, groups 3 and 4, but acknowledging their continuity from the 3rd to 5th century. An Attic painted keel-rim bowl and various other Attic RS were present in a deposit of ca. 300 in Corinth, see Slane 1994, p. 132, no. 12, fig. 4 (keel-rim bowl), and pp. 132-134, nos. 8-11, figs. 3-4, pl. 33 (various). Further fragments of painted keel-rim bowls similar to *Agora* V, K 19-28, were noted in the sanctuary of Demeter and roughly dated to the third quarter of the 4th century, as well as various other Attic RS in 4th-century contexts; see

Attic ware also seems to have penetrated the Argolid, with fine wares present at Argos,[721] and identified Attic ware with comparable profiles published from among the survey finds recovered from the Methana peninsula.[722]

## BOIOTIAN WARE(S)

*Ware*

Fabric Description

Boiotian fabric (standard) (Pls. 6.3-6.12): Reddish yellow (between 5YR 6/6 and 6/8, to 7.5YR 6/6 and 6/8) fabric, occasionally appearing brown (7.5YR 5/4) to light brown (7.5YR 6/4).[723] Bowls with vertical rims have red (2.5YR 5/6) to reddish brown (2.5YR 5/4) slip, with a dark discoloration at the rim not uncommon, while slip is not always present on plain wares and is variable, with reddish brown (2.5YR 5/4) and reddish yellow (5YR 6/6) noted; amphoras are usually unslipped. Characterized by (rare to) few (to frequent) fine sparkling bits; (rare to) few (to frequent) very fine to fine sub-rounded white lumps;[724] rare to few (very fine to) fine rounded black grains; few to frequent very fine to fine sub-rounded voids. Occasionally noted are rare very fine to fine sub-rounded gray clumps; rare very fine to fine rounded and sub-rounded red pellets. Rarely noted are few to frequent fine white flecks;[725] few (to frequent) (very fine to) fine rounded voids, and (rare to) few fine (to small) elongated voids.[726] Granular to conchoidal (bordering on smooth) break; medium hard fabric.[727]

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*Corinth* XVIII.2, p. 57 (keel-rim bowls), and p. 57, nos. 118-119, fig. 10 (various). For Attic RS interpreting AfRS found in 5th-century deposits at Corinth, see Slane and Sanders 2005, pp. 251, 262, nos. 1-12, 2-15, figs. 3, 5, and for an Attic gouged jug, see Slane and Sanders 2005, p. 262, no. 2-16, fig. 7.

[720] Among the lamps personally confirmed to be Attic are those published in Miller 1979, p. 74, nos. L 42 (glazed), L43 (glazed, but poorly preserved), pl. 20:a; *Nemea* II, p. 122, no. L 37 (post-glazing). Several other probable examples are on display in the museum and could not be closely examined, while the adverse soil conditions on the site occasionally made firm identifications difficult.

[721] See Abadie-Reynal 2007, p. 194, no. 310.1, pl. 46 (as *Agora* V, no. M 209), and p. 199, no. 326.1, pl. 48 (keel-rim bowl), from 4th- and 5th-century contexts.

[722] See Bowden and Gill 1997, pp. 86-87, figs. 11.46:17 ("impressed rim"), 11.45:18 (painted keel-rim bowl), and 11.61:10 (possible interpretation of LRC Hayes form 1), as well as mention of "grooved" sherds.

[723] Only bowls with vertical rims appear in the 5YR color range, and only occasionally appear brown or light brown; plain wares appear light brown only rarely.

[724] In plain wares the white lumps are occasionally "small."

[725] The white flecks were only observed in the bowls with vertical rims and the plain wares; in the former, they ranged from very fine to fine, while in the latter they ranged fine to small.

[726] Rounded and elongated voids were only noted in the bowls with vertical rims and the amphoras, with rounded voids appearing slightly more regularly in the bowls.

[727] Some amphoras tended towards softer fabric, while some plain wares tended towards harder fabric. Based on macroscopic examination of **130 (P-85)**, **131 (P-86)**, P-87, **132** (fine wares); **241 (P-93)**, P-94, **236** (amphoras); P-89, P-90, **400**, and 95-61:94 (mug) (plain wares).

Boiotian fabric (flanged bowls) (Pls. 7.1, 7.2): Reddish yellow (5YR 6/6 to 7.5YR 6/6) fabric, with yellowish red (5YR 5/6) and light brown (7.5YR 6/4) also noted; light brown (approx. 7.5YR 6/4) to strong brown (approx. 7.5YR 5/6) slip on interior while exterior fired to reddish yellow (approx. 5YR 6/6). Characterized by rare to few fine sparkling bits; rare (to few) (very fine to) fine (to small) sub-rounded white lumps; few to frequent (very fine to) fine (to small) sub-rounded voids. Occasionally noted are rare fine black grains. Rarely noted are few fine sub-rounded yellow grits; rare to few fine sub-rounded gray clumps; possible rare fine rounded red pellets. Granular to conchoidal (also smooth) break; medium hard fabric.[728]

During the course of this analysis some hesitation was felt regarding whether or not the flanged bowls employed the same fabric as the bowls with vertical rims. Much of the uncertainty stemmed from earlier characterizations of these fabrics in which two different, but similar, fabrics had been identified;[729] during the course of this analysis, attempts to retain these fabric distinctions revealed that they also *regularly* divided by shape. Although later considered to be the same fabric,[730] the fabric of Boiotian flanged bowls is nevertheless presented separately above, as the two fabrics do exhibit some differentiation in regards to the slightly coarser nature typically noted in the flanged bowls, and the slightly darker/deeper color of the fabric and slip of other Boiotian wares. These differences might simply amount to differences in firing conditions or clay preparation by the same potter or workshop, a suggestion possibly supported by the fact some overlap between fabric and shape is occasionally observed.[731]

Based on the previous recognition of Boiotian fine wares in Corinth (see discussion, below), the fabric was immediately characterized during the course of this

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[728] Based on macroscopic examination of P-88, **137**, and **139**.
[729] See Sanders 1999, p. 463, n. 32 and 33, who originally divided his "Fabric D" and "Fabric E" into separate groups.
[730] See Slane and Sanders 2005, p. 262, n. 25.
[731] In at least one instance, a bowl with a vertical rim and a flanged bowl were confidently felt to share identical fabrics; cf. **134** (vertical rim) and **140** (flanged bowl), identified with Sanders 1999, "Fabric D." See also Sanders 1999, p. 467, no. 10, fig. 9, for a flanged bowl from an unlotted context (Corinth Notebook 881, basket 51) from the Panayia Bath; this piece was identified to be in Sanders' "Fabric D" which was otherwise only identified for use in the manufacture of bowls with vertical rims.

analysis and was quickly recognized as having been employed in various other ceramic classes and forms. Several samples from this macroscopically-identified ware were submitted for petrographic analysis. While an official report is still pending, preliminary results show that they all form a consistent group, including the bowls with vertical rims, flanged bowls, lekythoi, mugs, table amphoras, and even some vessels whose attribution was uncertain, including the cylindrical amphoras (**197 (P-92)**; **201 (P-91)**) and the pitcher (**511 (P-84)**), which were presented above under Unidentified Amphora 1 fabric and Unidentified Plain Ware 2. At present, the only difference among the group lies in the slightly more calcareous nature of the Boiotian samples from earlier contexts (**511 (P-84)**; **130 (P-85)**).[732] Due to the extremely fine nature of Boiotian fabric, its characterization may benefit greatly from future chemical analyses, such as neutron activation analysis (NAA).

Range of Vessel Shapes

The fineness of the Boiotian fabric (it has very few readily visible inclusions) occasionally makes it difficult to identify with confidence, thus the vessels catalogued here as belonging to this ware are only those for which the most certainty existed.[733] Fine ware shapes are limited to two main series of bowls, the first characterized by flat bases and near-vertical rims with a concave exterior face (wherein the diameter of the lower 'flange' is always smaller than that of the lip) (**130 (P-85)**; **131 (P-86)**; **132**; **133**; **134**; **135**; **136**), the second with prominent flanges which were often decorated with stamped

[732] H. Graybehl (pers. comm.).
[733] Several fine and plain ware pieces are listed among the unknowns in the catalogue even though they appeared somewhat similar to this fabric on macroscopic inspection; in such cases their possibly Boiotian origins are noted in their catalogue entry.

or incised designs (wherein the diameter of the flange is always greater than that of the lip) (**137**; **138**; **139**; **140**; **141**; **142**). Other bowls, appearing as isolated finds, include possible interpretations of imports (**143**; **144**). Small, two-handled table amphoras (**236**; **237**; **238**; **239**; **240**; **241 (P-93)**; **242**), few other amphoras (**243**), and inscribed amphora fragments (**244**; **245**; **246**) also appear. A variety of (partially) thinly, red-slipped closed vessels were also found in this fabric, but these are discussed along with the plain wares due to their correspondence in shape with vessels in other fabrics. These plain wares include mugs (**400**; **401**), jars (**402**), small lekythoi (**403**), and miscellaneous closed vessels with built-in strainers (**404**).

*Dating and Identification*

Preliminary petrographic results suggest that vessels in this fabric were appearing sporadically in the Panayia Field as early as the first quarter to mid-5$^{th}$ century, but are currently only positively confirmed at the end of the 5$^{th}$ century before occurring in significant quantity from the mid-6$^{th}$ to early 7$^{th}$ century and appearing in the 7$^{th}$-century pit. In regards to specific forms, Boiotian RS bowls characterized by flat bases and vertical rims first appear in the Panayia Field in deposits of the later 5$^{th}$ and early 6$^{th}$ century in isolated examples, agreeing with their start-date elsewhere in Corinth,[734] before appearing regularly in deposits of the late 6$^{th}$ century, and possibly extending into the early 7$^{th}$ century. Flanged bowls were only recovered from late 6$^{th}$ and early 7$^{th}$-century contexts in the Panayia Field. Amphoras in Boiotian fabric are concentrated in the late 6$^{th}$ and early 7$^{th}$ century, but continue to appear in the 7$^{th}$-century pit; their start

[734] See Slane and Sanders 2005, p. 262, no. 2-13, fig. 5, dated to the second half of the 5$^{th}$ century to 500 or later.

date is harder to ascertain, but the recovery of numerous undiagnostic body sherds in similar fabric from earlier deposits might place this form, or earlier variations of it, as early as the 5th century. Plain wares in confirmed Boiotian fabric do not appear until the last stages of construction activity in the first half of the 6th century, but considerably increase in number through the late 6th and early 7th century.[735]

When this fabric was first described in Corinth based on the finds of red slipped fine wares published during the preliminary report of finds from the Panayia Bath, it was identified as "probably Attic" and sub-divided based on levels of fineness.[736] This identification was later amended in later Corinth publications to "Boiotian RS" based on the recovery of wasters with profiles agreeing to that of the bowls with vertical rims from Askra in Boiotia, and is thus also known in scholarship as "Askra Ware."[737]

*Discussion*

Unfortunately, published reports of the wasters from Askra only make mention of the one bowl type, and currently leaves open the question of whether or not that workshop engaged in specialized production of only fine wares, or if other ceramic classes were manufactured there as well. The standardization of fabric observed macroscopically, however, seems to suggest the latter. It must also be stated that the ware discussed here, understood as the product of Askra, is only one of what must have been numerous wares manufactured throughout Boiotia; personal examination of the fabric of

[735] Even if various unknowns listed in the catalogue as possibly being in Boiotian fabric were confirmed as such, Boiotian plain wares would still not account for any significant presence in the 5th-century pottery lots from the Panayia Field.
[736] Sanders 1999, p. 463, n. 32 and 33, "Fabric D" and "Fabric E."
[737] For the amendment, see Slane and Sanders 2005, p. 262, n. 25, with fabric description; for publication of the wasters, see Vroom 2003, pp. 137-139; see also *Agora* XXXII, p. 94, there termed "Askra/Thespiae Stamped Ware," in which Hayes notes the presence of "probable wasters and stamps (?)" at Askra, and notes additionally that "similarities exist with fabrics from further north (e.g., in Thessaly)."

survey finds collected from Tanagra, with a rather 'soapy' feel, and those at Koroneia, where kiln evidence was collected, were markedly different.[738] Additional production sites in Boiotia have also recently been presented from the site of Delion (modern Dilesi), the ancient harbor of Tanagra, where evidence for three Late Roman kilns which manufactured various amphoras, including LR Amphora 2 and carrot amphora types, has been discovered.[739] The fabrics of other pottery centers in Boiotia, however, have not yet been recognized among the finds from the Panayia Field.

The understanding of the distribution of this ware is only in its preliminary stages, and only a few remarks can be made.[740] The fabric was not personally observed among the finds from Late Roman Delphi, despite the geographic proximity and the similarity of some plain ware shapes (especially that of the lekythoi), thus drawing a possible western boundary to its distribution. Further comparative study needs to be made towards the north, especially from the region's main urban center of Thebes, where these ceramics stand a good chance of appearing. Various finds published from a number of Late Roman graves excavated in Thebes bear similarity to finds from the Panayia Field, including lekythoi, a mug, and fragments of closed vessels with built-in strainers, as well as gouged jugs that bear resemblance to those published from Athens, and are reported to be in this fabric (see below).[741] In addition to the survey finds that recovered the wasters at Askra, the finished bowls of the same type have also been recorded on sites in Boiotia from

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[738] Personal observation of finds collected during the Leiden-Ljubljana Ancient Cities of Boeotia Project.
[739] Gerousi 2014.
[740] It is of note that closely comparable finds of flanged bowls or the table amphoras in this fabric as found in the Panayia Field have yet to be identified and published from archaeological investigations in Boiotia or elsewhere.
[741] For the numerous lekythoi, cf. Keramopoullos 1929, p. 127, fig. 3, of which two are similar in appearance to C-1933-1505 and C-1933-1510 from the Hill of Zeus cemetery in Corinth; for the mugs, cf. p. 127, fig. 3, being similar to **400** and **401**; for similar necks with strainers, identified as "hydriai or lagynoi," cf. p. 127, fig. 2, being similar to **404**; for two gouged jugs, cf. p. 127, fig. 3. These vessels have not yet been personally examined.

Askra and Thespiae in the south, Hyettos in the north, and Thebes in the east.[742] Survey finds from the cemetery at Klimataria in Boiotia recovered a near-complete lekythos, also reportedly in this fabric,[743] while gouged jugs, possibly produced in the same fabric as the bowls, have been personally noted among survey finds from Koroneia.[744] Possible finds of Boiotian fine wares were also recovered from the site of Diporto, on the island of Makronisos off of the southern Boiotian coast, and include one example of a bowl with vertical rim and a possible flanged bowl.[745]

A few examples of bowls with vertical rims were discovered at the Athenian Agora, where at least one example bears an otherwise unattested ring-base.[746] Personal examination of the fabric of a lekythos from the Agora, similar in profile to other Boiotian examples, was unfortunately inconclusive,[747] while some gouged jugs, reportedly in the same fabric as the bowls with vertical rims, have also been published from the site.[748] At present, Corinth seems to represent the southern boundary of this ware's distribution. Boiotian RS bowls with vertical rims have been recovered from

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[742] See Vroom 2003, pp. 137-139. The finds collected from Thespiae collected during the Leiden-Ljubljana Ancient Cities of Boeotia Project were personally examined, and confirmed that examples of bowls with vertical rims found there share the same fabric as the Panayia Field examples.
[743] Vroom 2003, p. 139, who identified the fabric as being related to that of the bowls with vertical rims; the profile is similar to C-1933-1505 from the Hill of Zeus cemetery in Corinth.
[744] Gouged jugs were also published among other survey finds in Vroom 2003, p. 145, fig. 6.3, but are treated under the Byzantine finds.
[745] For the bowl with vertical rim, cf. Gregory 1986, p. 295, no. 3, fig. 12, identified there as a "local ware;" for the flanged bowl, which is of different form than those recovered in the Panayia Field, cf. Gregory 1986, p. 295, no. 2, fig. 12, which is compared to LRC, Hayes form 3 and remarked that "the fabric is that encountered commonly around Askra in western Boiotia."
[746] See Vroom 2003, pp. 137-139; Hayes 2003b, p. 533, fig. 4; *Agora* XXXII, p. 255, nos. 1474-1476, fig. 44, pl. 72. The fabric of the Agora examples was confirmed by personal examination; the trace of a stamp on no. 1476, the example with a ring-base, is likely that of an encircled cross as noted on similar bowls, but with flat bases, found in Corinth; cf. C-1933-1526 recovered from Grave 33 (G273) in the Hill of Zeus cemetery, or *Corinth* XVII, p. 79, no. 122, pl. 32.
[747] See *Agora* V, p. 118, no. M 367, pl. 34, layer XIII re-dated to the early 6th century (*Agora* XXXII, p. 300). The lekythos is (mostly) red-slipped, and very similar in profile to C-1933-1529, also from the Hill of Zeus Cemetery at Corinth. The vessel is currently on museum display, and could not be personally handled.
[748] *Agora* XXXII, pp. 93, 254-255, nos. 1472-1473, fig. 44, pl. 72, with the fabric of no. 1472 specifically noted as being related to "Askra/Thespiae Stamped Ware;" the fabric was not personally examined.

various parts of the site,[749] while the Hill of Zeus cemetery, located to the west of the Asklepieion,[750] has produced several examples of mugs and lekythoi (personally confirmed to be in this fabric),[751] with others appearing in burials in the area of the gymnasium.[752] No instances of this ware's appearance can, at present, be confidently attributed on any other site in the Peloponnese.[753]

## SOUTHERN ARGOLID FABRIC

### *Ware*

#### Fabric Description

Southern Argolid fabric, refined (Pls. 7.3-7.7): The color of the fabric is highly variable and seems to be dependent on the ceramic class: lamps have reddish yellow (5YR 6/8 to 7.5YR 6/6) fabric with buff or pink (7.5YR 7/4) to reddish yellow (7.5YR 7/6) exterior fabric and surface; fine wares have red (2.5YR 5/8) fabric, with reddish yellow (5YR 7/6-6/6) exterior surfaces; bowls like P-28 have light brown (7.5YR6/4) fabric with red

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[749] Boiotian RS vertical rim bowls have been found in other areas of Corinth, although never in the quantity exhibited in the Panayia Field; isolated finds include an unpublished bowl with an encircled cross stamp, C-1933-1526, recovered from Grave 33 (G273) in the Hill of Zeus cemetery; for a bowl with a cross stamp from a building south of the southern stoa of the temenos of Temple E, see Williams and Zervos 1990, p. 339, no. 5, pl. 61, dated 5th to 6th century; for a bowl with an encircled cross stamp from the Great Bath on the Lechaion Road, see *Corinth* XVII, p. 79, no. 122, pl. 32, group 26 dated late 6th to early 7th century; see Slane and Sanders 2005, p. 262, no. 2-13, fig. 5 and p. 270, no. 3-16, fig. 8, for east of the Theater (second half of the 5th century to 500 or later) and the Baths of Aphrodite (end of the 6th century), respectively.

[750] The site, located to the west of the Asklepieion on the northern edge of the city, has only been published in a preliminary report; see de Waele 1935, with brief description and notes in *Corinth* XIV, pp. 4-5, Sanders 2004, p. 183, and Slane and Sanders 2005, p. 291, n. 90. J. Ott includes these graves in his forthcoming dissertation regarding late antique burials (IFA, NYU), examination of the human remains will appear in another dissertation by L. Kennedy (Texas A&M), while the present author has been given permission to study and publish the ceramic finds in a future work. Preliminary examination of the ceramic material places most of the graves within the 6th and early 7th century.

[751] Intact examples of these mugs were recovered from the Hill of Zeus cemetery in Graves 33 (G273) and 8 (G248); cf. C-1933-1527 and C-1933-1535, respectively. Intact lekythoi include C-1933-1501, C-1933-1505, C-1933-1510, and C-1933-1529, from Graves 3 (G279), 25 (G265), 3 (G279), and 33 (G273), respectively.

[752] For a similar mug, see Wiseman 1967a, p. 38, pl. 15:b:6, identified there as a "globular jar" of the 6th century; the fabric was not personally confirmed. Lekythoi in Boiotian fabric include those published in Wiseman 1967a, p. 37, pls. 15:b:1 and 15:b:2, dated there to the 6th century; the fabric was identified by personal examination.

[753] A published rim fragment from a Roman bath at Asine, near Argos, is similar in general profile to bowls with vertical rims but the addition of what appears to be incised lines on the interior surface is unattested in this ware; see Höghammar 1984, p. 106, no. 1305:1, figs. 9, 10, there identified as LRC form 3 and without any fabric description.

(2.5YR5/6) core.[754] Characterized by few to frequent (to common) very fine to fine elusive sparkling bits (in direct sunlight); rare to few (to frequent) (very fine to) fine (to small) sub-rounded calcareous white and off-white lumps (occasionally with rare spalling on the surface);[755] rare to few (very fine to) fine (to small) rounded and sub-rounded black grains; few to frequent very fine to fine (to small) sub-rounded voids.[756] Occasionally noted are rare (very fine to) fine (to small) sub-rounded red pellets.[757] Rarely noted are rare very fine to fine sub-rounded gray clumps.[758] Granular to conchoidal break;[759] medium hard fabric.[760]

Southern Argolid fabric, coarse (Pls. 7.8-7.12, 8.1-8.3): In the LR Amphora 2, the fabric is typically reddish yellow (7.5YR 6/6) with a central core or interior fabric that is red (2.5YR 5/6) to light red (2.5YR 6/6); fabrics fired completely reddish brown (5YR 4/4) or yellowish red (5YR 5/6) without color horizons are also attested. More variation has been noted in the plain wares, with colors including red (5YR 5/8), yellowish red (5YR 5/6), reddish yellow (7.5YR 6/6), pink (approx. 7.5YR 7/4), light brown (approx. 7.5YR 6/4), and very pale brown (10YR 8/3); color horizons in the fabric are less common, but not unattested. Characterized by (rare to) few to frequent (to common) very fine to medium (to large) sub-rounded calcareous white and off-white lumps (with few spalling on surfaces); rare to frequent (to common) fine sparkling bits;[761] rare to few fine (to small) rounded (and sub-rounded) black grains; rare (to few) fine (to small) rounded and sub-rounded red pellets; few to frequent (very fine to) fine to small sub-rounded voids. Occasionally noted are rare to few (to frequent) fine to small sub-rounded gray clumps; few to frequent fine to small elongated voids. Rarely noted are frequent to common fine gold sparkling flecks; rare small rounded translucent white.[762] Smooth to conchoidal, occasionally granular or hackly, breaks exhibited in the LR Amphora 2, but granular, occasionally slightly conchoidal, breaks exhibited in coarse plain wares; medium hard fabric.[763]

Southern Argolid fabric, mudstone sub-group (Pls. 8.4, 8.5): Light reddish brown (approx. 5YR 6/4) fabric with a red (2.5YR 5/6) core. Characterized by frequent fine to medium sub-rounded (calcareous) white lumps; rare fine rounded and sub-rounded black

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[754] The two identified amphora fragments in this group, P-61 and P-62, were nearly vitrified, exhibiting almost completely gray fabrics; 00-07:18, a fragmentary rim of an amphora/jar from an early lot, exhibited a light red (2.5YR 6/8) core and interior fabric with a pink (lighter than 7.5YR 7/4) exterior fabric.
[755] In P-28, and generally in other similar bowls, the frequency of the calcareous white lumps is noted as being frequent to common, and attaining a maximum size of only "medium."
[756] In the lamps, the frequency of voids are only rare to few.
[757] Noted in the fine wares, in P-28, as well as in other similar bowls, and in P-61 and P-62.
[758] Noted in **146** and P-67.
[759] P-28 and similar bowls often exhibit smooth breaks; P-61 and P-62 exhibited granular to hackly breaks.
[760] Based on macroscopic examination of **12** and P-67 (lamps), **145** and **146** (fine wares), P-28 (bowl), 00-07:18 (uncatalogued fragmentary amphora/jar rim), and P-61 and P-62 (from a near-vitrified LR Amphora 2, but petrographically determined to have been manufactured in the refined version of this fabric).
[761] Sparkling bits are slightly more elusive in the plain wares.
[762] Gold sparkling flecks and translucent white clumps were only rarely noted in the LR Amphora 2.
[763] Based on macroscopic examination of **253 (P-18)**, P-22, P-23, P-27, P-29, P-33, P-39, P-40, **256 (P-45)**, P-46, and P-58 to P-60 (all LR Amphora 2), and P-63, P-64, P-68, **414 (P-65)**, and **435 (P-66)** (plain wares).

grains; rare fine rounded red pellets; rare small and medium sub-angular purple chips; few small sub-rounded voids; few fine elongated voids. Granular to smooth break; medium hard fabric.[764]

This fabric appears in both a refined and coarse version, while a "mudstone sub-group" was only recognized petrographically in a single sample (see below). The refined fabric was likely better sieved and/or levigated, leaving behind only much smaller, and better-sorted, inclusions. Such practice would have been vitally important for the fabric's employment in finer table wares and lamps which typically possess thinner walls, as the primary tempering agent consisted of crushed limestone that has a tendency to expand in high temperatures, and breaking the surface of the vessel. Typically, the fabric as a whole is characterized by distinct color horizons that are easily noted in section, but a single fabric color throughout (either light brown or red) is also not uncommon. The variations in color among the different ceramic classes can possibly be attributed to differences in firing practices or the thickness of the vessel wall.

Petrographic analysis of 17 samples from the first analysis found membership in H. Graybehl's Micrite and Fine Mica Group. Micrite (fine grained limestone) was dominant in the coarse fraction (20%), with frequent polycrystalline quartz/metamorphosed igneous rock fragments (with biotite), textural clay features (red clay pellets; many with quartz and biotite inclusions related to polycrystalline quartz/metamorphic/igneous rock inclusions), common mudstone (various types), and rare chert. The fine fraction (15-35%) was dominated by biotite, micrite, and quartz, with common clay pellets and mudstone. The matrix (64-84%) is a moderately calcareous clay with high amount of mica, is homogeneous to moderately homogeneous (depending on the amount of temper), and is moderately to highly active. Voids (1-2%) consists mainly

[764] Based on macroscopic examination of **248 (P-5)**.

of mesovughs, but with few instances of extremely large, elongated megavughs, and are strongly aligned to the margins. Every sample was characterized by micrite, fine mica and quartz in a fairly calcareous matrix high in mica; the most significant differences were limited to the specific quantities of mudstone (and related inclusions), polycrystalline quartz and/or possibly metamorphosed igneous rocks.[765]

The petrographic analysis revealed the level of variation that is possible within one fabric, given the fact that several samples of LR Amphora 2 (P-27, P-29, P-46, P-59, P-60) were selected specifically for certain macroscopic traits (such as color and/or a high micaceous quality) that seemed to distinguish them. Thus, it is illustrated that variations in color or inclusion count recognized macroscopically do not always constitute a new fabric group, and that it is important to maintain a looser definition of a fabric in order to account for such inconsistencies.

On the petrographic level, and with only a few exceptions, the Micrite and Fine Mica Group displayed a general homogeneity spanning the sampled time-span, maintaining the same general clay recipe and implying continued production in the same workshop or center.[766] Four samples originally macroscopically identified as Northeast Peloponnesian cooking fabric were found to belong to this group. P-5 (**248**) preserved the shoulders, handles and lower neck of an amphora in a red, coarse fabric; its general form seemed to correspond with amphoras such as *Agora* V, M 325 (as **271**), and the red color of the fabric was not that dissimilar to that occasionally noted in Northeast Peloponnesian cooking fabric. P-5 was discovered to be representative of a "mudstone sub-group" within this group; the relatively early date of the lot from which it derived may indicate

[765] Graybehl 2010, pp. 81-82.
[766] Graybehl 2010, pp. 31-32, 82.

that this piece is an example of an earlier practice of clay mixing and preparation.[767] P-28, the second mistaken sample, was originally identified as being in Northeast Peloponnesian cooking fabric based on the earlier publication from the Panayia Field of bowls of the same form in a corresponding fabric (bowls as **427**).[768] The sample was found to represent a "fine matrix sub-group" of the Micrite and Fine Mica group, with its coarse fraction amounting to only 1% (versus 20% in amphora samples).[769] Since the petrographic characterization of this sub-group, it was since macroscopically recognized in other bowls of similar form, lamps, and fine wares (see macroscopic description, above). Finally, P-61 and P-62 were taken from an overfired LR Amphora 2 that had assumed a dull gray color that casual observation had attributed to Northeast Peloponnesian cooking fabric, again serving as a reminder that color alone should never be used to characterize ceramic fabric.[770]

Preliminary results from the second petrographic study that included of a number of plain wares and lamps in southern Argolid fabric agree with the results of the first study, providing support for the employment of this fabric (in either refined or coarser versions) in a range of ceramic classes. Further preliminary results from the petrographic analysis of material from the kiln site at Kounoupi also promises agreement with these results, and supports the southern Argolid as the source of this ware.[771]

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[767] Graybehl 2010, pp. 32, 82.
[768] See Sanders 1999, p. 469, nos. 13-14, fig. 10, in "Fabric F2." Fabrics "F1," "F2" and "G" (p. 464) were equated with "Corinthian cooking fabric" in Slane and Sanders 2005, pp. 248-249, n. 15, which is here presented as Northeast Peloponnesian cooking fabric. Later, K. Slane (2008a, p. 240) considered the fabric of such bowls to be imported and to be the same as that used in various circular lamps and lamps based on North African prototypes; these can all now be considered to have been manufactured in the refined version of southern Argolid fabric (see below for further discussion of the range of shapes).
[769] Graybehl 2010, pp. 31, 82.
[770] Graybehl 2010, pp. 31-32, 82, who also placed these samples within the "fine matrix sub-group."
[771] H. Graybehl (pers. comm.).

Range of Vessel Shapes

The finds from the Panayia Field attest to the fabric's use in a wide range of ceramic classes, including circular lamps, a very small number of red-slipped fine wares, amphoras (mainly the LR Amphora 2, but with rare occurrences of other forms), and plain wares (including a large range of basins, bowls, pitchers/jugs, lids, and miscellaneous open and closed shapes). Only a few lamps manufactured in the refined version of southern Argolid fabric were recovered from the Panayia Field. Lamps based on Attic or early types of LR Corinthian lamps are currently unknown in this fabric, with circular shapes evidently being preferred at this site (**11**; **12**).[772] Even rarer are fine wares, of which there are only two examples here (**145**; **146**).

Amphoras, other than those of the LR Amphora 2 form, were few and of varied form (**247**; **248 (P-5)**; **249**; **250**; **251**; **252**), while the LR Amphora 2 appeared in great number; these can roughly be divided into short- (**253 (P-18)**; **254**; **255**; **256 (P-45)**; and probably **257**) and long-necked (**258**; **259**; **260**; and possibly **261**; **262**) variants based on the standard morphology that consistently appears.[773] Few other amphoras, generally related to the LR Amphora 2 form, did not easily conform to one of these two sub-divisions (**263**; **264**; **265**; **266**; **267**) (usually due to lack of preservation). Finally, a few examples of so-called fruit amphoras (**268**; **269**) also appeared here.

[772] These correspond with *Corinth* IV.2, pp. 290-291, nos. 1501-1510, pl. XXIII, identified there as type XXXII, which Broneer linked to finds from Syracuse.

[773] The short-necked forms may also be described as biconical, while the long-necked amphoras have a tall, slender neck, with a short outwardly-flaring lip. This form of division is loosely based on that employed by J. Hayes for amphoras of the same basic form recovered from Istanbul; see *Saraçhane,* p. 66, figs. 22.8, 10-11, for his types 9A and 9B. The decision to not adopt the *Saraçhane* nomenclature here was made because the published forms do not seem to closely match the morphology of the southern Argolid products identified here; furthermore, Hayes' observations that type 9A is characterized by straight grooving while 9B is characterized by wavy grooving cannot be consistently applied to the corresponding vessels here.

Plain wares in this fabric include shallow (**405**; **406**; **407**; **408**; **409**; **410**; **411**), and deep (**412**; **413**; **414 (P-65)**; **415**; **416**; **417**; **418**) basins, miscellaneous bowls (**419**; **420**; **421**; **422**; **423**), a distinct series of bowls with wide lower bodies and narrowing mouths (manufactured in the refined version of the fabric) (**424**; **425**; **426**; **427**; **428**; **429**; **430**), miscellaneous open shapes (**431**), jars (**432**), a closed shape with vegetally-inspired gouged decoration (**433**), pitchers (**434**; **435 (P-66)**; **436**; **437**; **438**), a small flask (**439**), miscellaneous closed vessels (**440**; **441**; **442**), and lids (**443**; **444**).

Finds from outside of the Panayia Field attest that southern Argolid fabric was also used in the production of lamps based on North African prototypes, as noted on various examples recovered from other areas of Corinth.[774] Another type of red-slipped bowl in this fabric has also been found in the Athenian Agora.[775] Beehives in southern Argolid fabric, also absent from the Panayia Field, appear at Isthmia,[776] while a "dipper" in this fabric was discovered to the east of the theater in Corinth.[777] At least one small lekythos, recovered from a burial in the area of Corinth's gymnasium complex, was

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[774] Slane and Sanders 2005, p. 281, n. 42, had already noted certain unslipped "imported imitations of AfRS and circular lamps" that appeared in a single fabric, citing *Corinth* IV.2, pp. 285, 290, nos. 1454, perhaps 1455, 1501-1505, pls. XXII, XXIII, and *Corinth* XVII, pp. 83-84, nos. 141, 143, pl. 35 (there identified as Attic). At least two lamps based on North African models found during the 2012 excavation season at Corinth were also personally noted to be in southern Argolid fabric. See also Slane 2008a, p. 240, where the fabric of such lamps is grouped together with bowls like P-28 and circular lamps; these can now all be considered to have been manufactured in the refined version of southern Argolid fabric.

[775] *Agora* V, p. 117, no. M 354, pl. 71; the fabric was confirmed by personal observation. The general form is similar to that of the small plain ware dishes manufactured in LR Corinthian lamp fabric but the base of the Agora piece exhibits an articulated foot; cf. **498** for the closest parallel.

[776] Personal observation of *Isthmia* V, p. 114, n. 5, pl. 40:d, recovered from tower 2 of the Byzantine fortress and dated from the mid- to later 6th century. This piece is further discussed in Anderson-Stojanović and Jones 2002, p. 348, n. 8, who identify this piece as belonging to their long, cylindrical, "type 1," with the fabric described on p. 348; the fabric of their "type 2" beehive is very different, and is described (p. 349) as corresponding with the fabric used in coarse, plain, and cooking wares of the "Greek and Early Roman period."

[777] Williams and Zervos 1983, p. 29 (= C-1982-5, not illustrated), identified as a "LR dipper" and in a context dated ca. 600. The form is as **521**.

manufactured in the refined version of this fabric,[778] as was one example from the Athenian Agora.[779]

*Dating and Identification*

Although some rare fragments were possibly noted in the pre-construction eastern dumps, diagnostic examples of circular lamps were limited to mid- to late 6th-century deposits. Fine wares were too few to obtain a reliable chronology, while amphoras, other than those of the LR Amphora 2 form, were found in deposits either of the early 5th or late 6th to 7th centuries. The short-necked version of the LR Amphora 2 is recognized in the Panayia Field in deposits of the second quarter to mid-5th century, and the amphora continues to appear here in modest yet regular quantities throughout the century. Strict chronological definition is difficult, but long-necked versions of the LR Amphora 2 seem to become popular here towards the end of the 6th century and appear in great number in the 7th-century pit, while the short-necked versions continue to appear in later lots making it difficult to determine when production stops, if at all. The combed decoration of the body, whether wavy or horizontal, is often cited as a possible tool for dating this amphora type, but caution should be made as both types of combing may occur on the same vessel.[780] Quantified data and finds from elsewhere in Corinth, show that the LR

[778] Wiseman 1967a, p. 38, pl. 15:b:4, there dated 6th century; the fabric was identified by personal examination.
[779] *Agora* V, p. 118, no. M 368, pl. 34, identified as a "jug;" the fabric was identified by personal examination.
[780] An example of a fruit amphora in this fabric is on display at the museum at Isthmia, originally published in Broneer 1959, p. 336, no. 15, pl. 72:a; its body is combed in exactly the same technique as the LR Amphora 2, but both wavy and horizontal combing are clearly present. The waviest section seems to be at the point of widest diameter, whereas the top register of combed decoration just below the neck is horizontal.

Amphora 2 began to significantly peak by the mid-5th century and reached its apex ca. 500, maintaining a strong presence among other amphora types in the 7th century.[781]

Shallow and deep basins seem to have been imported into Corinth from the southern Argolid since at least ca. 300,[782] but the consistently strong presence of deep basins in lots through the 5th century and into the pre-construction dumps, together with the corresponding numerical inferiority of basins in Northeast Peloponnesian cooking fabric, indicates that their longevity may have at least spanned the better part of two centuries.[783] At present, the evidence may indicate that the import of shallow basins might have ceased (or at least significantly diminished) before deep basins, possibly around the late 4th or early 5th century.[784] Isolated examples of later forms of shallow basins are found in deposits as late as the late 6th century, while different variations of deep basins might appear as late as the early 7th century. Bowls of varied shape appear intermittently throughout the 6th century, but the distinct series with wide lower body and

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[781] Slane 2000, pp. 304, 310, fig. 13. A large specimen with a short neck was already documented in a Corinthian context of the first half of the 5th century, with another example with a long neck in a context of the end of the 6th century; see Slane and Sanders 2005, p. 255, no. 1-23, fig. 3, and p. 271, no. 3-22, fig. 8. For the Great Bath on the Lechaion Road at Corinth, see *Corinth* XVII, p. 80, nos. 125, 128-129, fig. 6, pls. 33, 34, groups 26 and 29 dated to the late 6th to early 7th century, representing both short- and long-necked types.

[782] See Slane 1994, p. 146, nos. 58-59, fig. 12, pl. 34, dated to ca. 300, with the fabrics of each personally confirmed.

[783] Evidence from Isthmia agrees with the picture from the Panayia Field; a nearly complete, deep basin was found in the early 5th-century foundations of the north wall of the northeast gate of the fortress; see *Isthmia* V, pp. 70, 74, n. 35, pl. 18:c, d, personally examined, where the basin type is identified as being found there from the mid-3rd to early 5th century. The same reference also states that it was accompanied by four lamps including one Athenian post-glazing lamp (IP 3690), and three Attic glazed lamps (IP 3691, IPL 67-17, and IPL 67-18). B. Wohl (pers. comm.) stated that while IPL 67-17 and 67-18 could both fit late 4th-century dates, the signature of the latter could possibly place it in the early 5th century. Slane 2008b, pp. 487-489, dates the introduction of Attic post-glazing lamps to no earlier than ca. 425-450.

[784] It is of interest that when basins manufactured in Northeast Peloponnesian cooking fabric do begin to appear in steadily increasing quantities in the Panayia Field, they are almost always of a shallow shape; see **448**; **449**; **450**; for elsewhere in Corinth, see also Slane and Sanders 2005, p. 256, no. 1-39, fig. 3. Interestingly, other examples (unnumbered) of the same form appear in Lot 2000-011, and were also noted during brief examination of Lot 1998-014, but the fabric was definitely that of the southern Argolid. Deep basins, or kraters, in Northeast Peloponnesian cooking fabric are also attested at this time, but their presence in the Panayia Field is rare; see Slane and Sanders 2005, p. 257, nos. 1-41, 1-42, figs. 3, 4, for examples from elsewhere in Corinth.

narrow mouth is limited to the mid- to late 6th-century lots here.[785] The appearance of other open and closed shapes, as well as lids, is too intermittent to allow for any definite remarks regarding chronology, but pitchers in this fabric seem to appear in the Panayia Field deposits throughout the 6th century, as well as in the 7th-century pit.

The name and characteristics of "southern Argolid fabric" were recently established during publication of a variety of deposits from Corinth. The fabric was fully described and discussed in relation to its appearance in the LR Amphora 2, but also with brief mention to the fabric's use in a small number of plain wares. Macroscopic differences in fabric were provisionally attributed to the simultaneous operation of various production centers within the Argolid.[786]

No presentation of this ware as a whole has appeared, although specific forms that can now be associated with the fabric employed in this ware have appeared in major typologies. During his major study of lamps from Corinth, the circular lamps were considered by Broneer to belong to his type XXXII, which he postulated were from Sicily, a designation that was retained in his later publication of lamps from Isthmia.[787] Similar lamps later appeared in Perlzweig's study of lamps from the Athenian Agora, but without any new typology proposed.[788] The LR Amphora 2, by far the most-published product of this ware, has appeared in numerous typological studies and has thereby

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[785] **430**, however, found among the redeposited material in the Long Building basement fills, might be of earlier date.
[786] Slane and Sanders 2005, pp. 286-287, n. 65. The description follows on earlier treatments of the fabric, such as that found in the catalogue entries of Rudolph 1979 and chemical analyses carried out in Megaw and Jones 1983, pp. 246-247, 258. See also Sanders 1999, p. 464, for his "Fabric F2" which was originally thought to be local Corinthian, but was petrographically shown to belong to a refined version of southern Argolid fabric (see P-28).
[787] *Corinth* IV.2, pp. 120-121, 290-291; *Isthmia* III, p. 82.
[788] See *Agora* VII, p. 193, nos. 2828-2837, pls. 44, 50, included among "lamps of the 5th and 6th centuries, plain or patterned disk."

acquired a large number of designations;[789] the nomenclature based on Riley's publications of material from Carthage is followed here, in accordance with recent Corinth publications.[790] The fabric of these amphoras has not always been described, and concordance is often made based on form alone.

*Discussion*

Circular lamps of the general type found in the Panayia Field in southern Argolid fabric were also manufactured at other Greek centers, with molds found at Delphi and Olympia.[791] Recent scholarship has proposed the manufacture of the LR Amphora 2 type

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[789] For the *British Bi*, see Thomas 1959, pp. 91-92 (horizontally combed); for the Beltrán 71, see Beltrán Lloris 1970, p. 573, fig. 236:4 (biconical neck, concave interior mouth); for the Beltrán 77, see Beltrán Lloris 1970, p. 577, fig. 237:5 (biconical neck, straight flaring rim); for the Kuzmanov XIX, see Kuzmanov 1973, fig. 1; for the Rădulescu type 8, see Rădulescu 1976, p. 107, 114, pl. VIII.1-1a (very squat, globular version with biconical neck and horizontal combing; the other amphoras illustrated under this type should not be associated with the LR Amphora 2); for the Scorpan VII-A, see Scorpan 1976, pp. 159-163, 177-178, pls. VII, XXXII (Scorpan charts a long period of evolution for these amphoras with further subdivisions; of relevance for the Late Roman period are: type A1 (p. 160, pl. VII:3, 7), a very squat, globular version with biconical neck and horizontally-combed; type A2 (p. 160, pl. VII:4), ovoid body with tall, tapering neck and wavy combing; type A3 (p. 160, pl. VII:8), ovoid body, tall, narrow, cylindrical neck and concentric or spiral grooves); for the Benghazi LR Amphora 2, see Riley 1979, pp. 217-219, nos. D348-D350, figs. 44, 91-92; for the Carthage LR Amphora 2, see Riley 1981, p. 122, fig. 15 (see also Hayes 1976, p. 116); for the Fulford and Peacock form 1, see *Carthage BM* I.2, p. 119, fig. 34:3 (short-necked); for the Keay LXV, see Keay 1984, pp. 352-357, figs. 165-166; for the Peacock and Williams class 43, see Peacock and Williams 1986, pp. 182-183, fig. 101; for the *Saraçhane* type 9A and 9B, see *Saraçhane*, p. 66, figs. 22.8, 10-11 (type 9A, with shallow, straight grooving and short neck; type 9B, with deep, wavy grooving and a longer neck). Excavations in Istanbul have revealed numerous amphora types that are related to the type 9A and 9B. For the *Saraçhane* type 10, see *Saraçhane*, pp. 66, 103, no. 30.171, fig. 47 (identified as an "imitation" of type 9B) (see also Hayes 1976, pp. 117, no. F 15, fig. 21, type 8); for the *Saraçhane* type 28, see *Saraçhane*, pp. 69, 71, 104, no. 30.197, fig. 47 (identified as possibly related to type 10); for the *Saraçhane* type 29, see *Saraçhane*, p. 71, figs. 23.3 (basic form similar to type 10; also as amphora type 2, see Bass 1982, pp. 157-160, nos. CA 13-CA 21, figs. 8-4 to 8-6); for the *Saraçhane* type 33, see *Saraçhane*, pp. 71, 112, nos. 35.28-29, fig. 57 (derivative of type 9); for the *Saraçhane* type 36, see *Saraçhane*, pp. 71, 107, nos. 32.9, fig. 23.4 (same ware as type 29); for the *Saraçhane* type 37, see *Saraçhane*, pp. 71, 112, nos. 35.26, fig. 57 (similar to type 36); for the *Saraçhane* type 38, see *Saraçhane*, pp. 71, 112-113, nos. 35.36, 43, fig. 57 (undecorated version of types 36-37); for the *Saraçhane* type 39, see *Saraçhane*, p. 71, fig. 23.6 (variant of type 38); for the *Saraçhane* type 40, see *Saraçhane*, pp. 71, 111, no. 34.73, fig. 54 (variant of type 38).

[790] See, for example, Slane 2000; Slane and Sanders 2005.

[791] For Delphi, see Pétridis 2010, p. 99, nos. CA 17 to CA 19, figs. 167-169, pl. 34; for Olympia, see Schauer 2010, pp. 32-34, fig. 6:1-5. Lamps at Olympia have not been personally examined, but examination of those from Delphi did not reveal any in this fabric. See also Slane 2008a, p. 240, where she comments that bowls like *Agora* V, M 355 (as P-28), lamps based on North African prototypes, and

at several different locations in the Aegean,[792] but the amphora fabric in the Late Roman Panayia Field is completely homogenous and is identified as being in southern Argolid fabric through comparison with the fabric recovered from the kiln site at Kounoupi (see below).[793] These other centers of production thereby do not necessitate further consideration here as their products were evidently not distributed to the Panayia Field or other areas of Corinth. With the manufacture of the best-known product of this industry, the LR Amphora 2, securely placed in the southern Argolid, provenance can thus be provided to the ware as a whole.[794]

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circular lamps, now all considered to be in the refined version of southern Argolid fabric, were also manufactured at other centers in the Gulf of Corinth and Adriatic Sea. Note that circular lamps were also manufactured in LR Corinthian lamp fabric; see, for example, **21**.

[792] Vroom 2003, p. 143; Slane and Sanders 2005, p. 286, n. 64. These authors make note of Chios, Crete, and Kardamaina (ancient Halasarna) on Kos as other centers of production, in addition to the industry in the southern Argolid. See Arthur 1998, pp. 168-169, for the evidence of manufacture of LR Amphora 2 on Chios and a short description of the fabric; he identifies products from this manufacturer at Emporio on Chios (Boardman 1989, pp. 106-109), Torone in the Chalkidiki (Papadopoulos 1989, pp. 83-87, 2001 pp. 551-555), and possibly the Methana peninsula (see Bowden and Gill 1997, pp. 87-88). Armstrong 2011 offers additional production sites on the islands of Euboea and Kea, and suggests that a later variant was being manufactured at the site of Ganos near Constantinople up to the 13th century; Armstrong also specifically states that the LR Amphora 2 finds on the island site of Tintagel, England, were not produced at Kounoupi, but rather Ganos. Gerousi 2014 further reports a kiln site at Dilesi (ancient Dēlion), the harbor of ancient Tanagra in Boiotia, where the LR Amphora 2 was evidently manufactured. But see now Diamanti 2010a, 2010b, and 2012, who has revised the understanding of amphora production at Kardamaina and discusses instead the making of LR Amphora 1 and LR Amphora 13 types, *not* the LR Amphora 2. Furthermore, as Slane and Sanders 2005, p. 286, n. 64, point out, the fabric that Arthur (1998, pp. 168-169) describes as being from Chios is in fact southern Argolid fabric.

[793] Another problem related to the study of this amphora type is the confusion or conflation of the LR Amphora 2 with the similar LR Amphora 13. For warnings regarding such situations, see Arthur 1998, p. 169; Slane and Sanders 2005, p. 286, n. 64. See Riley 1979, pp. 231-232, nos. 373-374, for description of the LR Amphora 13. The amphora type on board the Yassi Ada wreck of ca. 625 was not the standard LR Amphora 2 and its origins remain unknown; see Bass 1982, pp. 157-165; see also Arthur 1998, p. 169.

[794] It is briefly worth noting that, like the LR Amphora 2, it is possible that similar plain ware forms as attested in the Panayia Field in this fabric were also manufactured in different fabrics at other centers. Rare examples of basins with the same profile as **448**, **449**, and **450** (in Northeast Peloponnesian cooking fabric) have been confirmed to be in southern Argolid fabric in the Panayia Field in Lots 1998-014 and 2000-011. Another basin published from Pyrgouthi is of the same form, but the fabric description reads similarly to southern Argolid fabric; see Hjohlman 2005, p. 190, no. 172, fig. 58. Bowls, very similar to basin forms in southern Argolid fabric, also appear at other sites. For the profile of a published "bowl" from Sparta that is similar in form to **415** (a deep basin), but smaller in diameter (only 0.237 m), see Pickersgill and Roberts 2003, p. 570, no. 51, fig. 9, dated to the late 4th century; the fabric ("C2") is described (p. 553) as appearing in local Spartan products. Profiles illustrated on p. 585, nos. 110a-b, fig. 15 (in the commonly found fabrics "C6" and "C2"), dated to the early 5th century, are also similar and are more in keeping with diameters from the Panayia Field of ca. 0.300 m and more.

In the southern Argolid, in the peninsular area also known as the Akte, manufacturing sites have been located along the coast, normally in small protected coves; these sites were noted to produce ceramic vessels, bricks and tiles, with their coastal location being a clear indication of their orientation towards the export market where small, coastal craft could transship the products to more central locations.[795] This area has been strongly connected to olive cultivation,[796] and one can see a potential symbiotic relationship between olive oil production and pottery making in the southern Argolid. Olive growing only requires seasonal investment of labor for cultivation and processing, thus leaving much labor free for ceramic production,[797] but more importantly, as T. Lewit has illustrated for fine wares, the trimmings from olive cultivation also make excellent fuel for firing kilns.[798] Olive oil also requires sturdy containers in which to ship it in, thus encouraging the manufacture of such in its vicinity.

A site manufacturing the LR Amphora 2 was discovered during the Argolid Exploration Project at site B-19, at the site of Kounoupi on the mainland opposite the island of the same name, along the eastern coast of the southern tip of the Akte, where two kilns and wasters were found (Map 2:47). Material collected from the site indicated the manufacture of this amphora type and other domestic coarse wares.[799] The remains of a rectangular structure on a hilltop beside the second kiln were also noted, with additional

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[795] van Andel and Runnels 1987, pp. 114-115, map 23. Mention is also made of in situ finds of stacked pottery and tiles that were awaiting transport. See also Jameson, Runnels and van Andel 1994, pp. 256, 307. Horden and Purcell 2000, p. 346, note that the production of commodities generally tends to take place neither where raw materials are produced nor where they are consumed, but rather within the medium of communication links; thus the use of islands as production sites and the employment of itinerant craftsmen become attractive possibilities. For review of the chain of coastal and island sites that may have served to transship southern Argolid products to Corinth, see the discussion of mechanics and routes, below.
[796] For the discussion of olive cultivation in the Akte, see Sheehan 1979; Munn 1985, pp. 342-343; van Andel and Runnels 1987, p. 115; Jameson, Runnels and van Andel 1994, pp. 275, 320, 402, table 6.9.
[797] van Andel and Runnels 1987, p. 116.
[798] Lewit 2011, pp. 319-322.
[799] Rudolph 1979, p. 304, n. 23; Megaw and Jones 1983, pp. 246-247; Munn 1985; Jones 1986, p. 206; Jameson, Runnels and van Andel 1994, pp. 256, 307, 402, 443-444, map (foldout) 8, fig. A.9.

finds including a coin of Phokas (602-610), much vitrified clay, mounds of ceramic sherds, submerged offshore structures, and a possible Roman tomb in the area.[800] A possible pottery production site with a possible coin of Marcian (450-457) was found on the island of Khinitsa (Chinitsa) (46), off the western coast of the southern tip of the Akte just south of Halieis (45),[801] with another possible production site on the island of Korakia along the western-most shoreline (44),[802] and at Panayitsa to the north of Korakia and just south of modern Doroufi (43).[803] Ceramic production is also attested at Halieis itself during the late 6th to early 7th century, based on the massive amount of amphoras on the site, pottery burned to the point "that the sherds had actually begun to melt and taken on a slightly vitreous appearance," and the presence of a large concentration of what had appeared to have been "refined clay near a firing area."[804] Remaining kiln evidence in the southern Argolid belongs to more recent periods.[805]

Aspects related to the production process of vessels in southern Argolid fabric were revealed through the results of the petrographic analysis. The red clay pellets make it apparent that clay mixing took place, involving the mixture of a red (*terra rossa*) clay, possibly from a residual clay bed, rich in igneous and possibly metamorphic inclusions,

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[800] Jameson, Runnels and van Andel 1994, pp. 443-444.
[801] Jameson, Runnels and van Andel 1994, pp. 256, 307, 402, 425, map (foldout) 8, site A17; the possibility of pottery production was based on the presence of "vitrified pieces of clay with straw impressions (probably burnt mudbrick) and 1 waster" (p. 425). Earlier reports of the finds from Khinitsa (Chinitsa) include mention of early 7th-century coins; see Megaw and Jones 1983, p. 246, with summary in Jones 1986, p. 206, neither of whom mention production evidence on that island.
[802] Jameson, Runnels and van Andel 1994, pp. 256, 307, 402, 463-464, map (foldout) 1, site B105, where "some vitrified lumps of clay suggest the presence of a pottery kiln" (p. 464).
[803] Jameson, Runnels and van Andel 1994, pp. 256, 438, map (foldout) 1, site B4, where surveyors found "a stack of roof tiles, warped and apparently vitrified from an intense fire, and observed cemented into submerged beach rock" (p. 438), along with a majority of Late Roman sherds from the same site.
[804] Rudolph 1979, pp. 297, 304.
[805] A 19th-century tile kiln was found in the small Bay of Lorenzo in the straits of Spetses; see Jameson 1969, pp. 341-342; Jameson, Runnels and van Andel 1994, pp. 256, 307, 402, site A18. An early modern kiln for roof tiles and bricks was also found in Koiladha Bay; see Jameson, Runnels and van Andel 1994, pp. 307, 473-474, site C40.

with a calcareous clay most likely containing mudstones and micrite. The small size of the igneous and quartz inclusions indicates that they occurred naturally in their clay, which was probably not finely levigated or sieved. The addition of a tempering agent is suggested by the sub-angular shape of the micrite which was made from crushed, fine-grained limestone, and the strong alignment of the voids attests to the fact that the sampled LR Amphora 2 vessels were wheelmade. The fabric was fairly high-fired (750 degrees Centigrade or higher) in an oxidizing atmosphere, but with two samples (P-61, P-62) showing signs of vitrification, possibly from post-production activity.[806]

Understanding the distribution of this ware poses various challenges, given the multiplicity of production centers within Greece alone that manufactured similar products (see above). Previous scholars have identified the LR Amphora 2 form distributed over long distances throughout the Mediterranean, Black Sea, and even Britain,[807] with concentrated finds in the immediate and neighboring regions,[808] but the fabric cannot

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[806] Graybehl 2010, pp. 81-82.

[807] It appears on sites in the northern Aegean, the Black Sea, the eastern and western Mediterranean, and even Britain; for Torone, see Papadopoulos 1989, pp. 83-87, nos. 1-2, fig. 11, and 2001, pp. 551-555, nos. 14.378-14.412, figs. 147-150, "type I;" for Thasos, see *Thasos* XIII, pp. 56-57, nos. CC284-CC319, fig. 24; for Constantinople, see *Saraçhane*, p. 66, fig. 22:8, 10, 11; for the Black Sea and Danube, see Karagiorgou 2001b, Opaiţ 2004a, pp. 294-298, and 2004b, pp. 10-12; for Kalavasos-*Kopetra* on Cyprus, see Rautman 2003, p. 195, nos. 145-147, fig. 5.11; for Alexandria, see Majcherek 2004, p. 234; for Carthage, see Riley 1981, p. 121, and *Carthage BM* I.2, p. 119, fig. 34:3; for Sicily, see Malfitana 2004, p. 246, fig. 3; for Italy, see Arthur 1998, p. 168; for Butrint, see Reynolds 2004a (with catalogue in Reynolds 2004b), pp. 231-232, nos. 320-322, 324, 326-328, figs. 13:186-191, it is the second most common amphora type with both short- and long-necked versions, and identified in five fabrics; for Durrës (ancient Dyrrachium) on the eastern Adriatic coast, see Shkodra 2006, pp. 439, 454, nos. 32-36, fig. 6, where both the short- and long-necked versions are "ubiquitous" and two fabrics were reported; for the western provinces, see Reynolds 1995, pp. 70-71; for Britain, see Tyers 1996, pp. 80-82. Overall, distribution of LR Amphora 2 seems most concentrated in the Aegean, Black Sea and on the Danube, with only a few centers in the west, like Carthage, importing them in any significant quantity; see Peacock and Williams 1986, pp. 184-186; Riley 1981, p. 121.

[808] In addition to Corinth, distribution in the Corinthia, Argolid and central Greece is particularly rich. For Kenchreai, see *Kenchreai* IV, pp. 114-115, no. RC 14, pl. 26, and pp. 115-116, no. RC 16, pl. 27; Rife et al. 2007, p. 173. For Isthmia, see *Isthmia* V, pl. 19:d; Marty 1993, p. 128, fig. 11. For Nemea and the NVAP survey material, see Graybehl et al. 2013. For Pyrgouthi, see Hjohlman 2005, pp. 147, 161-162, nos. 38-39, figs. 19-20, 35, for both a short- and long-necked type in a late 6th to early 7th-century context. For Argos, see Aupert 1980b, p. 440, no. 325a, fig. 46; see also Abadie 1989, pp. 51-52, fig. 7; Abadie-Reynal 1989, p.

always be confirmed as being southern Argolid in the light of other recognized production centers. Until comparative scientific data become available, or further first-hand observations of archaeological materials are made, one is hard-pressed to comment on the extent that the LR Amphora 2 in southern Argolid fabric travelled based on published profiles and photographs alone (but see below, this chapter, for some attempt).[809] To date, LR Amphora 2 specimens in southern Argolid fabric, in addition to those found at Corinth, have been confirmed through personal observation at the cave at Andritsa,[810] Kounoupi, Pyrgouthi,[811] Nemea,[812] Isthmia, Kenchreai,[813] Athens, Thespiae, Delphi,[814] and further north at Dion. Comparison with the petrographic thin-sections made from the Panayia Field samples has additionally confirmed the fabric's presence in

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151, fig. 12; Ivantchik 2002, p. 379, no. 120, figs. 17, 21, might be an early variation from a 5th-century well. For the cave at Andritsa, see Kormazopoulou and Hatzilazarou 2010, pp. 171-172, fig. 3. For Asine, see Höghammar 1984, p. 89, fig. 11. For Kounoupi, see Munn 1985; see also Jameson, Runnels and van Andel 1994, p. 402, fig. 6.23. For Halieis, see Rudolph 1979, pp. 305-309, nos. 1-9, fig. 3. For Phourkari in the eastern Argolid, see Frost 1977, p. 238, fig. 7. The LR Amphora 2 also crossed the Corinthian and Saronic Gulfs. For Megara, see Korosis 2014, p. 305, figs. 5-7. It was personally observed among the finds from the Athenian Agora. For Diporto, in the Corinthian Gulf, see Gregory 1986, pp. 295-297, no. 4, figs. 12-13. For various surveyed sites in Boiotia, see Vroom 2003, p. 143, no. W3.1, fig. 6.3. For Delphi, see Pétridis 2010, p. 126, fig. 215, pl. 40, who also noted (pers. comm.) that LR Amphora 2 are not particularly common at Delphi. For Thermopylae, see Rosser 2001, pp. 38-39, nos. 19, 22-24, fig. 4.3, pl. 4.3a.

[809] A notable example exists in the case of Durrës (ancient Dyrrachium) on the eastern Adriatic coast, where LR Amphora 2 finds have been published and identified in both "Chian" fabric (citing Arthur 1998, p. 168) and that of the southern Argolid, both fabrics being lime-rich and containing mica; see Shkodra 2006, p. 439. One is tempted to speculate whether or not these two identified fabrics are in fact the same, as was the case with the varying LR Amphora 2 samples that were petrographically demonstrated to actually belong to the same fabric (see above). See also the situation at Butrint where five different fabrics were noted for the LR Amphora 2, again citing Arthur's fabric description and hypothesizing production from both Chios and Kounoupi; Reynolds 2004a, pp. 231-232.

[810] See Kormazopoulou and Hatzilazarou 2010, pp. 171-173, fig. 3:a-d, for publication of the LR Amphora 2 examples examined from the cave.

[811] As published in Hjohlman 2005, pp. 147, 161-162, no. 39, figs. 20, 35, on display in Nauplio.

[812] See the petrographic results in Graybehl et al. 2013.

[813] As published in *Kenchreai* IV, pp. 114-115, no. RC 14, pl. 26, on display at Isthmia.

[814] As published in Pétridis 2010, p. 126, fig. 215, pl. 40. The LR Amphora 2 is otherwise not very common at Delphi; P. Pétridis (pers. comm.).

at least one fragment from Crete.[815] A fruit amphora in this fabric with vertical handles was also recovered from the fortress at Isthmia.[816]

The other ceramic classes manufactured in this ware are only slightly easier to trace. Shallow and deep basins, with both long and short rims, have been personally observed among survey material collected from Thespiae, while published profiles of similar vessels from the site of Diporto on the island of Makronisos, to the south of Thespiae, might shed light on the distribution route that carried some of these vessels across the gulf.[817] Similar circular lamps as those presented here have been published from the Athenian Agora,[818] which also yielded at least one example of a red-slipped bowl, personally verified to be in this fabric.[819] The distribution of jugs in southern Argolid fabric to the Athenian Agora has been previously recognized by others,[820] with more examples now recognized.[821] A bowl similar to the mid- to late 6th-century series

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[815] E. Nodarou (pers. comm. to H. Graybehl).
[816] Cf. Broneer 1959, p. 336, no. 15, pl. 72:a; the vessel is on display at the museum at Isthmia. The neck has lightly incised wavy decoration, while the body has both wavy and horizontal combing; the rim and the decoration on the neck is paralleled with **268**. See also Slane and Sanders 2005, p. 271, no. 3-27, fig. 8.
[817] Cf. Gregory 1986, p. 297, nos. 5, 8, fig. 12; no. 8 exhibits some parallels with **412**, while no. 5 is similar in profile to **414 (P-65)**. The fabrics have not been personally confirmed.
[818] Cf. *Agora* V, pp. 119-120, nos. M 381-M 383, pl. 46, layer XIII re-dated to the early 6th century (*Agora* XXXII, p. 300), and *Agora* VII, p. 193, nos. 2828-2837 (includes M 381-M 383), pls. 44, 50, part of "lamps of the 5th and 6th centuries, plain or patterned disk," all dated there to the second half of the 6th century. Personal observation of no. 2835 (= M 381), covered in a very thin, red slip, confirmed the fabric as being southern Argolid.
[819] *Agora* V, p. 117, no. M 354, pl. 71, layer XIII re-dated to the early 6th century (*Agora* XXXII, p. 300).
[820] Peacock and Williams 1986, p. 182, noted that two jugs published in *Agora* V, pp. 114, 118, nos. M 321, M 371, pls. 31, 34 shared their fabrics with the LR Amphora 2.
[821] Personal observation of several jugs published in *Agora* V, pp. 105, 114, 118, nos. M 226, M 321, M 322, M 371, pls. 27, 31, 34. M 226 was found in layer VII (dated early 4th century; date retained in *Agora* XXXII, p. 300), M 321 and M 322 were from layer XII (re-dated to the late 4th to mid-5th century; *Agora* XXXII, p. 300), and M 371 from layer XIII (re-dated to the early 6th century; *Agora* XXXII, p. 300). Personal examination of another jug published in *Agora* V, p. 118, no. M 370, pl. 34, also from layer XII, was inconclusive, but the published form seems to agree with fragments from the Panayia Field in southern Argolid fabric such as **434**, **435 (P-66)**, or **436**. The profile of a similar pitcher published from other Agora deposits appeared in Hayes 2003b, p. 534, fig. 3, where he related it and various deep, ribbed basins and other pitchers to a fabric shared with the LR Amphora 2; see also Hayes 2008, p. 441, fig. 5 (right), where he provisionally assigns the same pitcher "to the southern Saronic Gulf/Eastern Argolid region;" see also Hayes 2010, p. 23, fig. 2 (right), where the source of the pitcher is stated as "perhaps from a source in the eastern Argolid."

found in the Panayia Field in the refined version of the fabric and a small lekythos from the site are also in this fabric.[822] Similar shapes published from Megara include the LR Amphora 2, deep basins with wavy-incised decoration, shallow basins as **409**, jugs, and small bowls such as P-28.[823] Similar circular lamps have been published from Aegina,[824] Kenchreai,[825] and Isthmia.[826] Additional examples of this ware present at Isthmia also include a number of beehives,[827] as well as the series of shallow and deep basins found in the Panayia Field.[828] Finds from Nemea include circular lamps that might be in this fabric,[829] as well as one lamp based on a North African prototype which is certainly in this fabric.[830]

In the Argolid, finds from Pyrgouthi did not include any lamps in southern Argolid fabric, and plain ware finds might be limited to a single basin rim.[831] Circular

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[822] See *Agora* V, p. 117, no. M 355, pls. 33, 71 (bowl), and p. 118, no. M 368, pl. 34 (lekythos, identified there as a "jug"), layer XIII re-dated to the early 6th century (*Agora* XXXII, p. 300).
[823] Korosis 2014, see especially figs. 5-7 (LR Amphora 2), 12-13 (basins with wavy incised decoration), 17 (shallow basin), 18 (jug), and 19 (bottom, small bowl). The fabric of figs. 12-17 are specifically remarked (p. 306) as being "local," but with no description provided.
[824] Cf. Felten 1975, p. 66, nos. 62-63, pl. 18.
[825] Cf. *Kenchreai* V, pp. 85-86, nos. 456-461, pl. 20, especially no. 461 which appears similar to **12**, variously dated there throughout the Late Roman period.
[826] Cf. *Isthmia* III, p. 82, nos. 3170-3176, pl. 37, identified as Broneer's type XXXII, and p. 82, no. 3177, pl. 37, grouped with his loosely-defined type XXXIII. The fabrics have been personally confirmed.
[827] For beehives in southern Argolid fabric at Isthmia, see Anderson-Stojanović and Jones 2002, their "type 1." See also Broneer 1959, p. 337, no. 17, fig. 11, pl. 72:c; *Isthmia* V, p. 114, n. 5, pl. 40:d; Gregory and Kardulias 1990, p. 509, no. 3, pl. 77. Body sherds of beehives found at the site of Diporto on the island of Makronisos were not described but may be similar; see Gregory 1986, p. 300, nos. 13-18, fig. 13:h.
[828] Personal observation of IPR 70-94, unpublished, and *Isthmia* V, pp. 70, 74, n. 35, pl. 18:c, d; these are similar to **405** and **412**, respectively.
[829] Cf. Miller 1983, p. 84, no. L 145, and 1988, p. 5, no. L 224, pl. 8:c, both dated roughly to the third quarter of the 6th century. The fabric could not be confirmed macroscopically due to the adverse soil conditions of the site, but the possibility of southern Argolid fabric could not be discounted.
[830] Personal observation of L 130, unpublished, which appears in shape, if not in fabric, as **32** from the 7th-century pit.
[831] Cf. Hjohlman 2005, p. 190, no. 172, fig. 58, with a fabric description that reads similarly to southern Argolid fabric, although the form is most often found in Northeast Peloponnesian cooking fabric, as **448**, **449**, and **450**.

lamps that are similar in appearance to those here have been recovered from Argos,[832] but, surprisingly, published finds of plain wares in this fabric from that site are few.[833] At least three lamps in this fabric based on North African prototypes were recovered from the cave at Andritsa, to the south of Lerna,[834] as well as a range of small jugs and other vessels that were possibly manufactured in southern Argolid fabric, but the forms are unattested in the Panayia Field.[835] A low, raised, wide oval foot of a lamp with traces of a 'spine' connecting it to the handle in this fabric was personally noted among the finds collected from Kounoupi at site B-19 of the Argolid Exploration Project, although the type of lamp could not be confidently identified on the base alone.[836] Plain wares in this fabric additionally noted among the Kounoupi material include the rim of a shallow basin as **407**, deep basins similar to **417** and **418**, a bowl as **420**, a base of a closed vessel similar to **442**,[837] and fragments of pitchers similar to **434**, **435 (P-66)**, and **436**. Finally, among the large quantity of LR Amphora 2 vessels at Halieis was a shallow, footed bowl similar to **422**, noted by the excavator to be in possibly "local" fabric."[838]

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[832] Cf. Bovon 1966, pp. 92-93, nos. 659-666, pls. 17-18; Aupert 1980b, pp. 412-413, nos. 58, 62-63, 68, 70-71, figs. 26, 28-32, originally dated to ca. 585 but now considered later in Slane and Sanders 2005, p. 294, n. 108.
[833] Only a few profiles or photographs of plain wares shapes with recognized correspondences with products in southern Argolid fabric have been published from Argos; see Aupert 1980b, p. 426, nos. 213-215, fig. 40 (bowls), p. 428, no. 226, fig. 40 (pitcher).
[834] Personal observation. The shape of one of these lamps is paralleled with a find from Corinth in another fabric decorated with a jeweled TATA pattern on the rim; see Slane and Sanders 2005, p. 266, no. 3-3, fig. 10.
[835] Personal observation. Several of these vessels were published in Kormazopoulou and Hatzilazarou 2010, pp. 174-175, figs. 6-7. Clean breaks by which to examine the fabric were not available among the intact vessels.
[836] The base fragment from Kounoupi is undergoing petrographic analysis. The remains of a signature were noted within the foot resembling the Greek letter Φ.
[837] In addition, published bases of closed vessels from the kiln at Kounoupi appear similar to **440** and **442**; see Megaw and Jones 1983, p. 247, nos. H(2)28, H(2)29, fig. 4, pl. 24:3.
[838] Given the quantity of specimens of LR Amphora 2, southern Argolid fabric is understood; see Rudolph 1979, p. 313, no. 36, fig. 10.

## NORTHEAST PELOPONNESIAN COOKING FABRIC

*Ware*

Fabric Description

Northeast Peloponnesian cooking fabric (Pls. 8.6-8.12, 9.1-9.5): Munsell readings for this fabric are highly variable, and are thus provided for each catalogued entry. Characterized by few to frequent (fine to) small (sub-) angular (and sub-rounded) bluish-gray (or white/gray) chips (chert); few to frequent (to common) fine to small (rounded and) sub-rounded white lumps;[839] few to frequent fine to small rounded sub-rounded voids. Occasionally noted are rare to few fine to small sub-rounded (and rounded) yellowish/red grits; rare fine to small (sub-)rounded black grains; few to frequent (to common) fine to small elongated voids; few to frequent (fine to) small rounded voids.[840] Rarely noted are few to frequent fine to small rounded (dark) red pellets;[841] (rare to) few small (sub-) angular red/yellow chips;[842] rare (very fine) to fine sparkling bits;[843] rare small to medium sub-rounded voids.[844] Hackly break; hard fabric.[845]

Schist Petrographic Group (Pls. 9.6, 9.7): Red (2.5YR 5/8) fabric. Characterized by frequent fine to small angular bluish-gray (and white) chips (chert); few (fine to) small sub-rounded white lumps; (rare to) few (sub-) rounded black grains; frequent fine to small (to medium) (sub-) rounded and elongated voids. Sample P-31 additionally exhibited few fine to medium yellowish-red inclusions. Hackly break; hard fabric.[846]

Chert and Igneous Rock Petrographic Group (Pl. 9.8): Red (2.5YR 4/8) fabric. Characterized by few to frequent fine to small angular bluish-gray and white chips (chert); few to frequent fine to small sub-rounded white lumps; rare fine rounded black grains; few to frequent fine to small sub-rounded and elongated voids. Hackly break; hard fabric.[847]

The petrographic analysis determined that 36 samples belonged to H. Graybehl's Chert Fabric Group. Chert was dominant in the coarse fraction (10-30%), with frequent

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[839] **462 (P-48)** (plain ware) was noted to have abundant fine to medium sub-rounded white lumps, but was still proven to petrographically belong to this fabric group.
[840] Only noted in amphoras.
[841] In amphoras, red pellets occur occasionally, but are rare to few in frequency; in cooking wares, they occur only rarely, but are frequent to common in frequency. They were not noted in plain wares at all.
[842] Only noted in cooking and plain wares.
[843] Only noted in amphoras and plain wares.
[844] Only noted in plain wares.
[845] A few plain wares were noted to have a medium hard fabric. Based on macroscopic examination of **272 (P-1)**, P-2, P-12, **273 (P-21)**, **287 (P-26)**, **286 (P-35)**, P-44 and **293 (P-51)** (all amphoras); P-4, P-8, **335 (P-9)**, **381 (P-11)**, P-14, **331 (P-15)**, P-19, P-20, P-24, P-30, P-32, P-34, P-41, P-42, P-52 to P-54, and **364 (P-56)** (all cooking wares); **469 (P-3)**, **468 (P-10)**, P-25, P-37, P-38, P-43, and P-47 to P-50 (all plain wares).
[846] Based on macroscopic examination of P-31 and P-55 (cooking wares).
[847] Based on macroscopic examination of P-57 (cooking ware).

micrite (fine-grained limestone) and monocrystalline quartz, common radiolarian chert (chert with siliceous microfossils) and textural features (clay pellets, a red and a calcareous type), and rare instances of chalcedonic quartz (quartz with a fine radial-fibrous structure), mudstone (red, some iron-rich; possibly hornfels), siltstone (with quartz and calcareous inclusions), opaque iron inclusions (possibly just iron-rich clay pellets), polycrystalline quartz, plagioclase feldspar (possibly related to igneous rocks; in P-1 only), schist (foliated mica schist with quartz, feldspar and mica; possibly muscovite; in P-30 only), and an unknown orange inclusion (similar to orange serpentinite; possibly a grouping of metamorphic minerals; in P-25 only). The fine fraction (30-40%) is dominated by micrite and quartz, with frequent mica and common textural features (clay pellets). The matrix (30-60%) is highly calcareous, is homogeneous to moderately homogeneous, and ranges to not optically-active (P-11, P-32) to very optically-active (P-37, P-53). Voids (1%) consist mainly of some megavughs, many mesovughs, and a fair amount of macrovughs, with some mesovesicles also present. Some vughs contain secondary calcite. The voids are strongly aligned to the margins, and almost every sample has fine, hairline cracks throughout which are also strongly aligned with the margins and contain secondary calcite. Generally speaking, the fabric exhibits a homogeneity throughout the nearly three centuries of the Late Roman Panayia Field deposits discussed here implying that standardized manufacturing techniques continually remained in place. In Graybehl's estimation, the fabric group is consistent with the local geology of Corinth, with the *terra rossa* and calcareous clays, as well as chert and quartz outcrops all locally found on or in the vicinity of Acrocorinth; a proper source of schist, however, has yet to be identified in the area.[848]

[848] Graybehl 2010, pp. 29-30, 77-78. See Slane 2014, p. 127, who does not agree that Acrocorinth could be

For the most part, samples macroscopically identified as Northeast Peloponnesian cooking fabric were petrographically verified as belonging to the Chert Fabric Group. There were, naturally, some unexpected results. Some samples were erroneously macroscopically identified as Northeast Peloponnesian cooking fabric based primarily on superficial physical properties (such as general coarseness and similarities in color) and found memberships in other fabric groups.[849] Three sub-groups within the Chert Group, however, were defined through some unique characteristics. The first is the "iron-rich" sub-group (**P-11** (**381**) and **P-15** (**331**)), which contains an abundance of opaque iron inclusions and nearly opaque iron-rich clay pellets. The "metamorphic fine fraction" sub-group (P-25 and P-30), contains small amounts of schist and metamorphic related rocks, and is also slightly finer and less bimodal than the rest of the samples in this group. The third sub-group is the "chert and quartz" sub-group (**P-26** (**287**) and P-43), characterised by more monocrystalline quartz than the other samples. These sub-groups are only indicative of natural inconsistencies in the clays employed, not different practices in clay preparation, and are considered unsurprising for a fabric that spans several centuries.[850]

A few samples, with forms agreeing with the repertoire of cooking wares noted in Northeast Peloponnesian cooking fabric, were found to belong to distinctive, but probably related, petrographic groups. These included samples P-31 and P-55, which were found to belong to Graybehl's Schist Group, which is distinguished by the presence of fine-grained metamorphic rocks (schist). This group might relate to the "metamorphic fine fraction sub-group" of the main Chert Group, and might possibly represent a

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the source of the raw material during the Roman (and Frankish) period.

[849] These have already been previously discussed. See P-13, in Unidentified Plain Ware 1 (Graybehl's Quartz and Plagioclase Group), and **P-5** (**248**), P-28, P-61, and P-62 in southern Argolid fabric (Graybehl's Micrite and Fine Mica Group).

[850] Graybehl 2010, pp. 29, 79.

variation, but enough difference remained to justify creation of a separate petrographic group as the fine grained metamorphic rocks are unusual for the area of Corinth.[851] Sample P-57 alone constituted the Chert and Igneous Rock Group, which is potentially related to the Schist Fabric Group, but possibly also with the "metamorphic fine fraction sub-group" of the Chert Fabric Group with which it significantly shares many common inclusions (except metamorphic rock) and matrix features. It is distinguished by the presence of clastic igneous rock, sandstone and a calcareous inclusion that may be sedimentary in origin.[852] Of note is the fact that these three samples, plus the two from the possibly-related "metamorphic fine fraction sub-group" were all sampled from late 6th- and 7th-century lots and may be indicative of later changes in ceramic practices or raw material sources. The formation of these two separate groups was surprising, as these three samples did not exhibit any macroscopic variations to indicate any divergence from the standard description of Northeast Peloponnesian cooking fabric when examined under a hand lens (see descriptions, above).

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[851] Graybehl 2010, pp. 35-37, 84-85. Chert was dominant to common in the coarse fraction (10-15%) of the Schist Fabric Group, with common polycrystalline quartz (few fine-grained fragments contain mica and may be metamorphosed or are related to fine-grained metamorphic rocks) and fine-grained metamorphic rock fragments (fine-grained quartz rocks with mica; may be schist or schist-related), with rare instances of micrite, argillaceous rock fragments (red to brown mudstones), and textural clay features (red clay pellets, many with fine fraction mica and quartz). Quartz and mica-biotite dominated the fine fraction (15-20%), with frequent textural clay features (clay pellets), common argillaceous rock fragments (mudstone), and rare opaque iron inclusions. The matrix (69-79%) is slightly calcareous, homogeneous and highly optically-active, with evidence of secondary calcite, many fine cracks (with secondary calcite) aligned to the margins (in P-31), and with clay mixing striations faintly visible. Voids (1%) consist of mesovughs, slightly aligned to margins, a few with secondary calcite deposition within; one megavugh (in P-55) is strongly aligned to the margin.

[852] Graybehl 2010, pp. 38-39, 87-88. Polycrystalline quartz (one piece with small hornblende attached) and chert were common in the coarse fraction (3-5%), with rare instances of a clastic igneous rock fragment (containing mono- and crystalline quartz, with possible feldspar and biotite), sandstone (containing quartz, biotite and hornblende), a calcareous inclusion (either mudstone or secondary calcite), and reddish mudstone. The fine fraction (10-12%) was dominated by quartz, with frequent biotite and hornblende, and common textural clay features (clay pellets) and mudstone. The matrix (84%) is highly optically-active with fine cracks throughout that are filled with secondary calcite. Voids (1%) consist of several macrovughs, some filled with secondary calcite along the edges and no alignment to the margins.

Range of Vessel Shapes

This fabric was employed in the manufacture of a wide range of forms throughout numerous ceramic classes, excepting only lamps and fine wares.[853] Amphoras include those identified as the *Agora* V, M 325 amphora (**270**; **271**; **272 (P-1)**; **273 (P-21)**), others of various forms (**274**; **275**; **276**; **277**; **278**; **279**; **280**; **281**), those interpreting imported amphoras such as the Keay XIX from Portugal (**282**) or the regionally-produced LR Amphora 2 (**283**; **284**; **285**; **286 (P-35)**; **287 (P-26)**; **288**; **289**; **290**; **291**; **292**; **293 (P-51)**), as well as fruit amphoras (**294**; **295**; **296**).

The production of cooking ware in this fabric seems to have been one of the most important aspects of this industry. During the period under study, the production of casseroles had become infrequent, with only a few examples from early in the period noted here (**328**; **329**; **330**). Stewpots account for the vast majority of cooking ware in this fabric with the associated material presenting a detailed history of typological development (see Chapter 6 for more details). This period witnessed the transition from the general form of the deep, ovoid stewpot of earlier periods (**331 (P-15)**; **332**), to the globular stewpot that characterizes the Late Roman period of Corinth, and for which early examples are recorded (**333**; **334**; **335 (P-9)**). Thereafter, the globular stewpot evolves into a generally recognized form exhibiting an everted rim (**336**; **337**; **338**; **339**; **340**; **341**; **342**), before early examples with triangular rims and incurving upper bodies ("type 1") appear (**343**; **344**; **345**; **346**; **347**; **348**). As the triangular rim became more developed, distinct sub-types were noted, including those that place the rim above a sharp interior overhang ("type 2") (**349**; **350**; **351**; **352**; **353**; **354**), those with a more vertical

[853] The fabric did not appear in any fine wares recovered from the Panayia Field, but for slipped wares from Pyrgouthi in "fabrics 2 and 3," equated to a "medium coarse" version of Northeast Peloponnesian cooking fabric, see Hjohlman 2005, pp. 188, 191, 208, 232, nos. 159, 181, 212-213, 288, figs. 55, 58, 74, 95.

(or even half-round) rim, also placed upon sharp overhang ("type 3") (**355**; **356**), and, finally, those exhibiting squat, thick rims on bodies that have become even more squat and round ("type 4") (**357**; **358**; **359**; **360**; **361**; **362**). Globular stewpots from the latest deposits do not easily fit with the progression noted above (**363**; **364 (P-56)**; **365**; **366**).

Cooking ware in this fabric also includes a number of lids. Bell-lids appear with large knob handles and some variation in rim form (**367**; **368**; **369**; **370**; **371**; **372**; **373**), with few examples incised with Christian monograms (**374**; **375**; **376**; **377**). Flat lids seem to display less variation in their rims, with short handles that may appear 'lumpy' or may have been string-cut (**378**; **379**; **380**; **381 (P-11)**; **382**; **383**; **384**; **385**; **386**; **387**; **388**; **389**). Other, miscellaneous shapes plausibly used for cooking purposes were rare (**390**; **391**).

Plain wares in this fabric include a variety of shapes and often illustrate detailed development in form. Early basins include interpretations of 4th-century basins manufactured in southern Argolid fabric (**445**; **446**) and rare fragments of pedestal kraters.[854] Thereafter begins a continuous development that includes shallow basins with folded rims ("type 1") (**447**, for a possible prototype; **448**; **449**; **450**), shallow basins with hammerhead rims ("type 2") (**451**; **452 (P-49)**), deepening basins with inwardly-rolled rims ("type 3") (**453**; **454**; **455**; **456**; **457**), round-bodied(?) basins with incurving rims ("type 4") (**458**; **459**; **460**), and basins with outwardly-rolled rims ("type 5") (**461**; **462 (P-48)**; **463**; **464**). A unique basin (or storage jar?) was recovered from the 7th-century pit (**465**), while other Late Roman basin forms in Northeast Peloponnesian cooking fabric,

[854] Similar to Slane and Sanders 2005, p. 257, nos. 1-41, 1-42, figs. 3, 4.

attested elsewhere in Corinth, were unattested in the Panayia Field.[855] Other plain wares include folded rim bowls (**466**; **467**; **468 (P-10)**; **469 (P-3)**; **470**; **471**; **472**; **473**), other miscellaneous bowls (**474**; **475**; **476**), jars (**477**; **478**), mugs (**479**), pitchers and jugs (**480**; **481**; **482**; **483**; **484**; **485**; **486**; **487**; **488**), lekythoi (**489**),[856] and miscellaneous closed forms (**490**; **491**).

*Dating and Identification*

Northeast Peloponnesian cooking fabric maintains a continuous place among the finds from the Late Roman Panayia Field, from the late 4th to 7th century. Quantified data from elsewhere in Corinth has revealed that locally-produced cooking wares and plain wares had always accounted for the vast majority of finds since Early Roman times, while locally-produced amphoras only accounted for a significant minority through to the 5th century, but were nevertheless consistently present.[857]

Although the *Agora* V, M 325 amphora form seems not to have much outlived the 5th century, amphoras of various forms were produced throughout the late 4th to 7th centuries, with many 6th- and 7th-century examples interpreting to various degrees the LR Amphora 2. Amphora production generally appears to have witnessed a dramatic increase beginning at the end of the 5th and start of the 6th century. Of the cooking ware, the casserole shapes as well as the deep, ovoid stewpots that were common in the 3rd and 4th century go out of use by the late 4th or early 5th century, giving way for the globular

[855] Slane and Sanders 2005, p. 265, no. 2-46, fig. 6 (cylindrical basin), and p. 273, no. 3-46, fig. 9 (globular bin).
[856] Another lekythos from a burial excavated in Corinth's gymnasium complex, published in Wiseman 1969, p. 80, n. 30, pl. 25:d (left), was personally identified to be in this fabric.
[857] See Slane 2003, pp. 328-332, figs. 19.3, 19.9, 19.10.

stewpots that appear throughout all deposits examined here.[858] By the second quarter to mid-5th century, globular stewpots with everted rims appear, while those with triangular rims show signs of initial development during the time of the construction phase of the bath and Long Building, and continue into the early 7th century. Stewpots with thinner, more vertical rims were present in the 7th-centiry pit. Bell-lids appear for most of the period under analysis but seem to go out of use after the early 7th century, while flat lids span the entire period.

As the cooking wares, the majority of plain wares that appear in the Panayia Field, especially by the early 6th century, are manufactured in Northeast Peloponnesian cooking fabric. Basins were continually manufactured in this fabric for the period under study; interpretations of basins manufactured in southern Argolid fabric were likely limited to the 4th century, basins with folded rims ("type 1") appear within the first decades of the 5th century and continue into the 6th, hammerhead rims ("type 2") probably appear in the second half of the 5th century, basins with inwardly-rolled rims ("type 3") develop in the early 6th century and become popular probably in the mid-6th, basins with incurving rims ("type 4") seem to also develop in the early 6th century and last until the end of that century, and basins with outwardly-rolled rims ("type 5") begin sometime in the second half of the 6th century and continue to be found in the 7th-century pit. Folded rim bowls appear in late 4th- and early 5th-century lots, with rarer occurrences in later 5th- and 6th-century contexts, but it is not always clear if they are contemporary or simply residual 4th-century finds. Pitchers and jugs in Northeast Peloponnesian cooking fabric are limited to examples of the mid-6th through 7th century, as there seems to have been a discontinuity in their manufacture during the 5th century following the production of a

[858] For the transition from ovoid to globular stewpots in Corinth, see *Corinth* XVIII.2, p. 77.

series that can be traced from the 1st to 4th centuries.[859] The single example here of a small lekythos in this fabric does not allow for any conclusive chronological remarks, but its context in the *tepidarium* dump as well as comparative examples in other fabrics would favor its placement in the late 6th and early 7th centuries.

Northeast Peloponnesian cooking fabric had a long history throughout the Roman period at Corinth and the surrounding region, although it should be stressed from the outset that comparative chemical or petrographic analysis of Early Roman samples has not yet been conducted and that an unbroken ceramic tradition is only conjectural, although highly probable, at this point.[860] Since the beginnings of the Roman colony at Corinth, (presumably) the same cooking fabric was recognized in a range of plain ware vessels and even Broneer type XVI lamps.[861] Later, vessels employing the same fabric were distinguished by the term "local n.f.c." (not for cooking) when employed in vessels with non-cooking uses.[862] The fabric was later published as "Fabric F" and "Fabric G" in a preliminary report on the finds from the Panayia Bath,[863] before the term "C.c.f." (Corinthian cooking fabric) was suggested.[864] In light of the fabric's now widely recognized regional distribution, its use in a range of coarse utilitarian vessels, and the

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[859] For this 1st- to 4th-century series of pitchers, see *Corinth* XVIII.2, pp. 104-107, nos. 219-227, figs. 26-27, pl. 13.
[860] See Slane 2014, pp. 127-129, who offers that the fabric was continuous for the Roman period (at least to the 5th century and probably the 6th), but differed from that employed by Hellenistic and Byzantine potters; the source of cooking pots in the Frankish period, however, may have been the same as that employed in the Roman period.
[861] Wright 1980a, pp. 169-170; Slane 1986, pp. 305, 308, 313; *Corinth* XVIII.2, pp. 3-4, 74; Slane 2014, p. 126.
[862] Slane 1994, pp. 140-144, nos. 39-53, where the fabric was distinguished among cooking vessels and "not for cooking;" Slane 2003, p. 331, with a discussion of "local (cooking) n.f.c. (= not for cooking)." See also Slane 2014 where the same terminology is employed but with the emphasis of discussion on the 1st to 5th century.
[863] Sanders 1999, p. 464, where "Fabric F" and "Fabric G" are both considered local.
[864] Slane and Sanders 2005, p. 248, n. 15.

lack of a recognized production site, "Northeast Peloponnesian cooking fabric" is used in this analysis.

*Discussion*

The petrographic analysis revealed that two clays were mixed to form this fabric, as attested by the high amount of clay pellets. One clay was a red (*terra rossa*) clay with quartz and mica inclusions, and was most likely derived from sedimentary rocks that included igneous and metamorphic inclusions; as these inclusions are rare in the samples, and only present in individual examples, they were most likely natural inclusions in the red clay. The second was a calcareous clay with no visible inclusions, although it is apparent that micrite must have been a part of it. The clay was then tempered by the inclusion of crushed chert; this is attested by its angular shape, the lack of chert in the fine fraction inclusions, and the bimodal nature of the fabric with a high percentage of coarse fractions. The samples were fired at a temperatures of over 750˚ Centigrade, possibly in an oxidising atmosphere judging from the general homogeneity in fabric color. Several samples may not have been completely oxidised, such as P-4, P-19, P-21, P-26, P-34, P-35, and P-43, due to their gray core with reddish margins.[865] The alignment of the voids with the margins is suggestive that this ware was wheel-made but, as only identifiable rims were submitted for analysis, this leaves open the possibility that the bodies of certain classes, especially cooking wares, were manufactured by other means.[866]

[865] Graybehl 2010, pp. 29-30, 77, 78-79.
[866] See again Chapter 3, regarding the manufacture techniques of cooking wares discussed under Late Roman micaceous Aegean ware.

The exact area of production remains uncertain, and the results of this analysis are unable to suggest an exact source. Any evidence for production sites is completely lacking;[867] while various Late Roman kilns have been found in Corinth, these have all been identified as tile kilns.[868] Methana has been suggested as a possible source but the results of the petrographic analysis do not offer support to this theory;[869] the absence of forms related to this fabric among the survey finds from Methana are also another factor to consider.[870] I. Whitbread found that three clay samples taken from the Berbati Valley were petrographically identical to this fabric, but the lack of any production evidence related to this fabric and the similarity with Corinthian material prevented him from ruling out the possibility that the fabric was imported into the valley.[871] Another possibility that was not addressed is the mining of a preferred clay some distance from the actual center of production; thus, even if the raw material did originate from the

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[867] An intriguing stray find of a misfired stewpot was noted at Isthmia during excavation of the Roman bath, but little can be said at present regarding its fabric or the possibility of a manufacturing center nearby. The stewpot, IPR 93-22, has been selected for petrographic analysis by the author and H. Graybehl, and will appear in a future study along with nine other samples from Isthmia. The stewpot is badly distorted, having collapsed in on itself, and is nearly vitrified. The overall appearance accords well with that of wasters from kiln sites but the association of its findspot with the bath should be kept in mind as exposure to the high temperatures of the hypocaust may have been responsible for its physical condition. The shape might be similar to the deep, oval stewpots of the Middle Roman period.

[868] Two kilns were excavated by G. Weinberg, one mid-4th-century kiln to the northeast, and another to the west near Kokkinovrysi; see Megaw 1964-1965, p. 8, fig. 8; Daux 1965, pp. 689-693, figs. 1-2; Langridge-Noti 1996, p. 45, fig. 62. See also Slane 2014, p. 123.

[869] Slane and Sanders 2005, pp. 248-249, n. 15, based on the macroscopic identification of potassium feldspar (originating from a volcanic environment), for which Methana was considered the closest possible source; see also Slane 2014, p. 127. H. Graybehl's petrographic analysis of late 4th to 7th-century samples of this fabric from the Panayia Field did not identify any potassium feldspar. Descriptions and dates of the vessels macroscopically examined were not provided; if they derived from Early Roman contexts, the possibility that raw material sources changed in the Late Roman period might be entertained.

[870] See Mee et al. 1997; see the discussion of this ware's distribution below for further details and notation of a few possible exceptions.

[871] Whitbread et al. 2007, p. 186. Graybehl's Chert Group (Northeast Peloponnesian cooking fabric) has been equated with Whitbread's "Felsic (class: chert limestone garnet) fabrics" from the Berbati Valley (Whitbread et al. 2007, see esp. pp. 181, table 2, and 186), which are identical except for the presence of garnet in the Berbati samples; see Graybehl 2010, pp. 10-11, 49-52, 64.

valley, actual production may have taken place elsewhere.[872] Most recently, H. Graybehl has shown that the fabric is consistent with the geology of Corinth, with the raw materials potentially being found on Acrocorinth.[873] The source of this ware therefore remains under some debate.

What is clear is that the petrographic analysis revealed that the fabric was essentially consistent for the entire period under study, and the standardization of the forms implies organized workshop production, as opposed to numerous smaller workshops supplying individual localities.[874] This situation agrees most with D. P. S. Peacock's fourth mode of pottery production, namely nucleated workshops. Production at this level is characterized by individual workshops that are grouped together in order to form a tightly-clustered industrial complex in which pottery production is the primary income-generating activity, and resources and markets are shared. Year-round production is conducted as far as is able, a sense of competition will continually refine technique, and the products will be characterized by their standardization and high-quality. Rural, as opposed to urban, nucleated workshops are noted to typically produce comparatively more specialized products, which seems to be the case with Northeast Peloponnesian cooking fabric. Among the most important aspects of this level of production, Peacock feels that the scale of production "will attract the middleman with his wide distribution network," especially in regards to rurally-based nucleated workshops, with surrounding

[872] For example, see again the discussion of Sagalassos Red Slip Ware outlined in Chapter 1.
[873] Graybehl 2010, p. 30.
[874] See Graybehl 2010; Graybehl et al. 2013. See also Slane 2014, p. 127, who also stresses that the workshop must have been situated in a rural context, and not associated with either Corinth or Argos.

communities benefiting from large sales that are devoid of the expenses and troubles associated with individual distribution.[875]

Regardless of the understanding of its workshops, this ware served as the locally-*available* ware for not only Corinth, but also for Isthmia, Nemea, and Pyrgouthi in the Berbati Valley during the Late Roman Period (see the following discussion of distribution). Although the precise location of the production center continues to remain unknown, given the current knowledge of the distribution of this fabric, it is likely that it was at least produced within the central Corinthia; its prolific appearance at Pyrgouthi (as well as its presence at Argos) and its near-total absence at Sikyon may further suggest that production was situated in proximity to the east-west mountain range that divides the Corinthia from the Argolid. The likelihood of its distribution via land-based means is discussed in a following section further below.

The industry was undoubtedly originally centered upon the production of cooking wares, which likely always remained the primary focus, with the production of amphoras and plain wares seen as additional outgrowths. The logic behind this statement rests in the fact that the cooking wares, required to withstand thermal shock, would have required a more specific clay recipe that would be unnecessary for the other ceramic classes to possess.[876] This is illustrated in the finds from the Late Roman Panayia Field and Corinth generally, where increasingly more amphora and plain ware shapes were slowly added to

[875] Peacock 1982, pp. 9, 38-43. See also Slane 2014, p. 127, who made the same connection for this ceramic industry.
[876] This is contrary to what was postulated for the ceramic industry in Sagalassos, where it was felt that cooking wares and other coarse wares were secondary thoughts to the development of locally-produced amphoras at the same workshops, citing an expansion of agricultural need for their sudden development in the 4th century; see Poblome et al. 2008; see also Poblome 2006.

the repertoire of the potters, while cooking ware forms always retained a continuous presence.

The recognition of the distribution of this fabric in earlier centuries is growing. This fabric was appearing in Argos in the same forms as seen at Corinth for a long period prior to the 5th century, being utilized in bowls, mugs, stewpots, pitchers and amphoras.[877] Additionally, published finds from a well at Nemea in use in the 3rd and 4th century included three one-handled mugs, one small pitcher, and two folded rim bowls, all of which were manufactured in this fabric.[878] In addition to these sites, K. Slane has also recognized the presence of cooking wares in this fabric dating from the Augustan period to the 5th century at Epidauros, Isthmia and Kenchreai.[879]

The understanding of the distribution of Northeast Peloponnesian cooking fabric in the Late Roman period, although still incomplete, has advanced significantly during the course of this analysis. The ware is not noted within Late Roman contexts at Delphi,[880] nor was it noted among the surface survey finds collected from Thespiae, Koroneia, and Tanagra.[881] The published profile of a single rim from the site of Diporto, on the island of Makronisos in the Gulf of Corinth off the southern coast of Boiotia, exhibits a triangular-rimmed stewpot with similarities to one recovered from the Panayia Field,[882] and might be suggestive of this fabric's (very limited) penetration into the gulf.

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[877] See Abadie-Reynal 2007, pp. 199, 201-202, 209-211, 218, 221, 222, 228-230, 243, nos. 327.1-2, 330, 356, 358, 368, 373, 376, 393-396, 399, 438-440, pl. 48, 49, 54, 55, 57, 59, 62, 63, 68; see also Slane 2009, 2014, pp. 126-127, table 1.
[878] Personal observation of vessels published in Miller 1979, p. 74, nos. P 344, P 345, P 346, P 349, 9 372, P 374, pl. 20:a.
[879] Slane 2009, 2014, pp. 126-127.
[880] Personal observation of finds published in Pétridis 1997, 2003, 2007, 2010, 2012.
[881] Personal observation of finds collected during the Leiden-Ljubljana Ancient Cities of Boeotia Project.
[882] Cf. Gregory 1986, p. 297, no. 9, fig.12, which resembles **354** ("type 2"). The fabric is not personally confirmed. Alternatively, the rim could also belong to the production at Sikyon, which manufactured similar shapes in their own local fabric (see below).

At present, the distribution of the ware to the (north) west of Corinth has yet to be demonstrated, as it is not present at nearby Sikyon;[883] a limited number of rims of stewpots with triangular and overhanging rims from the site, dating from the mid-6th century or later, do seem to closely resemble profiles here, but the fabric was petrographically proven to be local to Sikyon.[884]

The ware's distribution within the Saronic Gulf is only slightly better attested. Its presence in Athens is extremely limited, the most notable exception being the presence of the *Agora* V, M 325 amphora, which has been found in significant number in the Athenian Agora and has been personally confirmed to be in this fabric.[885] Additionally, similar profiles to one-handled, globular pitchers were published from the Athenian Agora and identified as originating from "the Corinthia."[886] Several profiles of stewpots with a sharp interior overhang and vertical rim were published from Aegina,[887] while profiles of recognized shapes in this fabric are not generally noted among the published finds from Akra Sophia, a site situated on the Saronic Gulf immediately south of the modern Corinth Canal (between Isthmia and Kenchreai).[888]

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[883] Trainor 2012, p. 107, petrographically attests the fabric's presence only rarely. Slane (2009, 2014, p. 127) also comments that a source different from Corinth's supplied Sikyon and Stymphalos with cooking vessels from the 2nd or 1st century B.C. to at least the 5th century A.D.
[884] Trainor 2012, pp. 98-99, fig. 3.16. Similar rims are published in Lolos 2011, p. 339, fig. 5.50:g-i, similar to **354** ("type 2").
[885] Personal observation of several examples, including that published in *Agora* V, p. 115, no. M 325, pl. 32, which are similar to **270** to **273 (P-21)**. This amphora was manufactured in several different fabrics, as an example in both Attic and southern Argolid fabrics have been recovered from the Panayia Field (cf. **234** and **248 (P-5)**).
[886] Hayes 2000, p. 292, fig. 23 (right); the fabric has not been personally verified, but the profile is very similar to that of **480**.
[887] Cf. Felten 1975, p. 70, no. 104, fig. 13, similar to stewpots like **355** and **356** ("type 3"), but the stewpots there exhibit upper handle attachments that join below the rim, as opposed the examples here where the handles attach at the rim-face. The fabric is unconfirmed.
[888] See Gregory 1985, although one stewpot, p. 427, no. 26, fig. 5, in an unconfirmed fabric, might be loosely related to stewpots like **355** and **356** ("type 3").

Northeast Peloponnesian cooking fabric is found in abundance at Isthmia.[889] Cooking vessels in this fabric were certainly present, including those with everted and triangular rims,[890] as are various plain wares.[891] Nemea is another major source for this ware, with the petrographic analysis of finds from the valley offering scientific confirmation.[892] One example of a fruit amphora in this fabric was found at the site of Nemea, in association with a grave dated to the 6th century.[893] Cooking wares at Nemea include many examples of triangular- and half-round-rimmed stewpots.[894] Stewpots with triangular rims have also been published from the survey of the Nemea Valley,[895] as well as various types of plain ware basins and folded rim bowls.[896] Other plain wares, from a

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[889] Although published finds are not plentiful, personal observation of excavated finds from the area of the Roman bath and the fortress revealed that the site was just as dependant on this fabric as the Panayia Field was for its cooking ware and other utilitarian needs. A variety of stewpots with everted and triangular rims, as well as one rim of a bell-lid, from the fortress will appear in a forthcoming petrographic analysis conducted by the author and H. Graybehl.

[890] Cooking vessels personally observed from the bath include IPR 76-13, a stewpot similar to **339** and **340** (both everted rims), and IPR 72-49, similar to **358** (stewpot with triangular rim, "type 4"). A stewpot with triangular rim (not personally examined), exhibiting a strongly incurving upper body ("type 1" here), was published from the Late Roman graves at Isthmia; cf. *Isthmia* IX, p. 106, no. 12, fig. 2.95, but the date of the "late 6th to very early 7th centuries" might be late for this form.

[891] Cf. *Isthmia* IX, p. 105, no. 10, fig. 2.93, for a folded rim bowl similar to **471** from the Late Roman graves at Isthmia, dated to the late 4th century (not personally examined).

[892] Recent study of the Nemea Valley Archaeological Project survey material by C. Cloke has included petrographic analysis and has identified the presence of Northeast Peloponnesian cooking fabric among the Late Roman period finds; a preliminary report was delivered in Graybehl et al. 2013.

[893] Personal observation of Miller 1983, p. 87, pl. 26:f.

[894] Personal observation of one example from the fill of the stadium tunnel at Nemea published in Miller 1979, p. 99, pl. 38:d, and again in *Nemea* II, p. 132, fig. 241, may be paralleled with that published from Corinth in Slane and Sanders 2005, p. 272, no. 3-30, fig. 8, dated to the end of the 6th century (small stewpot with half-round rim). Another stewpot, published in *Nemea* II, p. 132, fig. 242, as a representative example of stewpots found in the top level of the stadium tunnel fill, was personally observed to be comparable to **362** (triangular rim, "type 4"), with a body that may not be dissimilar to that of **363** (late stewpot with half-round rim). Other, unpublished, finds of cooking vessels that are on display in the site's museum also appear to be in this fabric; these include P 1562, a flat lid with a "sloped" rim, and P 1594, a spouted stewpot with possible parallels with **361** (triangular rim, "type 4"). The latter also contained a coin hoard of 18 fractional bronze coins, and one gold coin of Justinian I (538-574).

[895] Cf. Wright et al. 1990, p. 655, fig. 26:f, similar to **354** ("type 2").

[896] For two folded rim basins ("type 1") similar to **450**, cf. Wright et al. 1990, p. 655, fig. 26:i and j. For a basin with an incurving rim ("type 4") similar to **460**, cf. p. 655, fig 26:g. For a folded rim bowl similar to **472**, cf. p. 655, fig 26:h.

well in the area of the former sanctuary, include examples of one-handled, globular pitchers.[897]

This ware was also dominant in the finds recovered from the site of Pyrgouthi in the Berbati Valley, situated within the mountains that separate the Corinthia and Argolid.[898] Additional comparison of petrographic samples from the site has also confirmed its presence there.[899] Amphoras found at Pyrgouthi include the *Agora* V, M 325 amphora,[900] table amphoras with rims interpreting the LR Amphora 2 with tall necks,[901] and a large proportion of fruit amphoras from late 6th and early 7th-century contexts.[902] Nearly the whole range of stewpot forms in Northeast Peloponnesian cooking fabric identified here is present at Pyrgouthi. Early forms of Late Roman stewpots are rare and only appear twice as residual finds in later strata,[903] as is also the case with stewpots with everted rims,[904] but stewpots with triangular rims and other late forms,[905]

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[897] Cf. Miller 1978, p. 81, pl. 24:c, which are similar to **480**.
[898] Northeast Peloponnesian cooking fabric was treated cautiously at Pyrgouthi and was highly sub-divided into nine fabrics, with numerous other pieces with unassigned fabric groups likely belonging with these as well. For the fabrics, see Hjohlman 2005, pp. 236-240, fabrics 2 through 10. Hjohlman's own personal observation of Corinthian ceramics confirmed that the fabric was the same. Unfortunately, no cooking wares from the Pyrgouthi assemblage were on display at the museum in Nauplio, Greece, when it was visited, but other amphoras and plain ware vessels in Northeast Peloponnesian cooking fabric were on display, thus providing opportunity for personal confirmation of Hjohlman's fabrics. Among the ceramics personally observed in Nauplio were Hjohlman 2005, pp. 139, 142, 145, 147, 185, nos. 14, 15, 16, 26, 27, 28, 30, 33, 39, 146, figs. 13, 15, 17, 20, 52.
[899] H. Graybehl (pers. comm.), who was kindly allowed to compare the thin-sections provided by I. Whitbread from Pyrgouthi against our own. Unfortunately, correspondences between the thin-sections and the vessels published in Hjohlman 2005 could not be made. See also the discussion in Whitbread, Ponting and Wells 2007, p. 186, who had already noted that Corinth and Pyrgouthi shared the same fabrics.
[900] Hjohlman 2005, pp. 215, 225, nos. 241, 277, figs. 81, 89; similar to **270** to **273 (P-21)**.
[901] Hjohlman 2005, p. 142, nos. 25, 29, figs. 15, 16, similar to **290** and **291**.
[902] Hjohlman 2005, pp. 145-147, 152, 168, 208, 223, nos. 33-37, 64-65, 93, 216, 262-263, figs. 17-20, 26, 38, 74, 86, similar to **294** to **296**. Personal confirmation of the fabric was conducted through examination of no. 33, on display in the museum at Nauplio.
[903] Cf. Hjohlman 2005, pp. 177, 232, nos. 110, 296, figs. 44, 96, similar to **334**, **335 (P-9)**.
[904] Cf. Hjohlman 2005, pp. 152, 182, 202, 216, 232, nos. 67, 126, 192, 250, 297, figs. 26, 49, 70, 82, 96.
[905] For parallels to the earliest stewpots with triangular rims ("type 1" here), cf. Hjohlman 2005, pp. 132, 149, 170, 177, 205, 209, 223, nos. 8 (with incurving upper body), 42(?), 96, 111, 206, 223, 265, figs. 5, 21, 39, 44, 72, 75, 87. Only two examples of triangular-rimmed stewpots with a sharp interior overhang ("type 2" here) were recorded, being found (residually?) in the late 6th and early 7th-century activity phases of the site; cf. Hjohlman 2005, pp. 152, 216, nos. 66, 246, figs. 26, 82. Three examples of stewpots with a sharp

as well as flat lids,[906] occur in high frequency while bell-lids are not attested at all. Plain wares in this fabric at Pyrgouthi are equally diverse, and include a few examples of folded rim basins,[907] a single example of a basin with an inwardly-rolled rim,[908] some basins with an incurving rim,[909] folded rim bowls from mid-6th- to early 7th-century contexts (as well as clearly residual finds),[910] and numerous examples of globular pitchers mainly from late 6th to early 7th-century contexts.[911]

Deeper in the Argolid the presence of Northeast Peloponnesian cooking fabric is less well-documented, with the exception of the evidence from Argos.[912] Profiles of amphoras corresponding to those in this fabric include the *Agora* V, M 325 and table amphoras interpreting the LR Amphora 2 with short necks which were recovered from a 5th-century context,[913] as well as the report of an unpublished fruit amphora specifically noted to be in this fabric.[914] Profiles associated with Late Roman stewpots in this fabric also appear at Argos, although the published material has not yet presented as full a range

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interior overhang and a vertical or half-round rim ("type 3" here) were recorded, being found in the late 6th and early 7th-century activity phases of the site; cf. Hjohlman 2005, pp. 216, 224, nos. 248 (half-round), 249, 268 (half-round), figs. 82, 88. Stewpots with squat, round bodies and squat, thick triangular rims ("type 4" here) were found in large number, and only occurred in the late 6th and early 7th-century deposits; cf. Hjohlman 2005, pp. 149, 188, 190, 216, 223, 225, nos. 40-41, 161-162, 177, 247, 266-267, 279, figs. 21, 55-56, 58, 82, 87, 89.

[906] Cf. Hjohlman 2005, pp. 134, 149, 177, 180, 185, 188, 191, 210, nos. 10-11, 45, 112, 115, 144, 163, 178-179, 224-225, 251, 270, figs. 5, 22, 44, 48, 52, 56, 58, 76.

[907] Cf. Hjohlman 2005, pp. 190, 204, 215, nos. 171, 202, 238, figs. 57, 71, 80, similar to **450** ("type 1").

[908] Cf. Hjohlman 2005, p. 141, no. 23, fig. 14, as "type 3" here.

[909] Cf. Hjohlman 2005, pp. 185, 209, 232, nos. 145, 217, 293, figs. 52, 75, 95, similar to **460** ("type 4") (no. 293 is similar to **459**).

[910] Cf. Hjohlman 2005, pp. 132, 141, 151, 168, 177, 180, 188, 201, 205, 215, 232, nos. 3, 21, 58-59, 83-85, 106, 121, 159, 184, 197-199, 233-236, 288-289, figs. 4, 14, 24, 37, 44, 48, 55, 68, 71, 80, 95.

[911] Cf. Hjohlman 2005, pp. 139, 145, 185, 188, 215, 221, nos. 14, 30, 143, 160, 244, 258-259, figs. 13, 17, 52, 55, 81, 85, similar to **480**.

[912] Finds from Argos could not be personally examined, thus the fabrics remain personally unconfirmed. K. Slane (2009, 2014, pp. 126-127), however, has confirmed that the same cooking fabric was employed at Corinth and Argos for (at least) the earlier Roman centuries up the 5th century.

[913] Cf. Ivantchik 2002, pp. 383, 388, nos. 129-131, figs. 18-19 (*Agora* V, M 325), and p. 383, nos. 121-122, fig. 17 (interpretations of LR Amphora 2), the latter described as having been executed in a coarse fabric that seems to agree with Northeast Peloponnesian cooking fabric.

[914] Hjohlman 2005, p. 237, n. 301, noted as being in her fabrics 3a and 3b.

as that present at Pyrgouthi; it should also be noted that published late 6th- or early 7th-century deposits at Argos also contain profiles of cooking vessels that are not recognized in Northeast Peloponnesian cooking fabric here,[915] thus suggesting that Argos was supplied by at least two sources of cooking wares at this time. Profiles of cooking wares in this fabric include early forms of Late Roman stewpots,[916] those with everted rims,[917] those with triangular rims,[918] and cooking lids include both bell and flat lids.[919] Published plain wares, however, are limited and include one-handled, globular pitchers,[920] and folded rim bowls;[921] others have already specifically noted that basins in Northeast Peloponnesian cooking fabric have not been found at Argos.[922]

Otherwise, this fabric is poorly attested in the Argolid. Personal observation of finds form the cave at Andritsa, to the south of Lerna, revealed a number of fractional fruit amphoras that were possibly in this fabric.[923] As the cave represents a unique context with a potentially very narrow range in both use and chronology, it is difficult to say whether these finds represent exceptions to the ware's distribution, or if Andritsa was within the normal network. Nevertheless, the finds from the cave represent the

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[915] See Aupert 1980b, p. 433, nos. 286-287, fig. 43, for profiles of at least two stewpots that have no known correspondence with products in Northeast Peloponnesian cooking fabric. See also p. 437, no. 311a, fig. 44, for a photograph of a bell-lid that is taller and possess a handle, both features being unattested among the examples here.
[916] Cf. Abadie-Reynal 2007, p. 221, no. 373.1, pl. 59, in her fabric 19, similar to **334** and **335 (P-9)**; see also Slane 2009 for confirmation of the fabric.
[917] Cf. Ivantchik 2002, p. 402, no. 177, fig. 31, from a 5th-century well, similar to **341**.
[918] For a stewpot with triangular rim and sharp interior overhang similar to **351** or **354** ("type 2" here), cf. Aupert 1980b, p. 433, no. 269, fig. 43 (possibly residual in the context?). For a stewpot with a squat, round body (presumably with triangular rim; only a photograph is provided), cf. p. 433, no. 285b, fig. 43.
[919] For bell-lids, cf. Aupert 1980b, p. 436, nos. 307, 307a, 309, 310, fig. 44; no. 307a is as **369** and **370**; no. 309 is as and **371** and **373**. For a flat lid, cf. p. 437, no. 316, fig. 44, similar to **382** and **388**.
[920] Cf. Aupert 1980b, p. 428, nos. 221-223, fig. 40, similar to **480**.
[921] Abadie-Reynal 2007, p. 199, nos. 327.1-2, pl. 48, in her fabric 12 (or 11); the fabric was confirmed in Slane 2009.
[922] Slane and Sanders 2005, p. 289.
[923] As the vessels were intact, no fresh breaks were available in order to confirm the fabric. For publication of one of the fruit amphoras from the cave, see Kormazopoulou and Hatzilazarou 2010, p. 173, fig. 4:d.

southernmost (possible) presence of this fabric that is currently known. Review of published finds collected during survey of the Methana peninsula additionally revealed little trace of any profiles associated with Late Roman vessels in this fabric.[924] Finally, personal examination of the survey finds collected at Kounoupi, situated on the southern tip of the Akte peninsula of the southern Argolid, did not reveal any trace of this fabric; the presence of cooking wares in another (imported?) fabric testify that the site was supplied by another source. Based on the currently available evidence, the southern Argolid may have drawn from different sources for its cooking (and other utilitarian) needs.

Of interest is the recovery of various stewpot rims from Butrint that seem to closely resemble the triangular-rimmed examples here.[925] These are identified by Reynolds to have been manufactured in his "CW 4" fabric which he sources to Corinth and describes as being characterized by quartz, "with some ironstone (?)," and lacking any chert or flint as opposed to the local Butrint fabrics.[926] If these pieces truly lack any chert they are certainly not Northeast Peloponnesian cooking fabric; based on the frequency of the quartz, however, it might be possible that these could be the products of potters based in Sikyon who manufactured the same forms (see above), but as the

[924] For exceptions, see Mee et al. 1997, p. 182, fig. 11.46:19 (stewpot similar to **358**), p. 185, fig. 11.49:21 (possible folded rim bowl?), and p. 187, fig. 11.51:11 (stewpot possibly similar (with adjusted orientation) to **364 (P-56)**).
[925] Reynolds 2004a (with catalogue in Reynolds 2004b), p. 235, nos. 371-372, figs. 13:210-211, similar to **354** ("type 2" here), and no. 373, fig. 13:212, similar to **348** ("type 1" here). Reynolds suggest that these were made on a slow wheel and cites Corinth and Argos for parallels.
[926] Reynolds 2004b, p. 334. The Corinth parallel is based on the published forms and fabrics in Sanders 1999.

Sikyonian products also contained chert, such an identification seems doubtful.[927] Butrint might have been supplied by yet a third manufacturer of these forms.

In summary, preliminary macroscopic examination of Late Roman vessels in Northeast Peloponnesian cooking fabric and review of available published materials from various sites in the Corinthia and Argolid have thus far revealed that the presence of this ware was concentrated in the area between Isthmia and Argos, with presently limited penetration outside this north-south zone. It may be that products in this fabric were not generally intended for export outside of the northeast Peloponnese and were intended only for a limited, regional market. Admittedly, further comparative analysis needs to be conducted at Sparta, the central Peloponnese, the Isthmus of Corinth, the Perachora peninsula, and along the eastern coast of the Argolid and Corinthia before the distribution of this ware can be mapped with certainty and its place of manufacture further considered.

## LR CORINTHIAN LAMP FABRIC

*Ware*

Fabric Description

LR Corinthian lamp fabric (Pls. 9.9-9.12, 10.1-10.7): Red (2.5YR 5/6 to 5/8) to yellowish red (5YR 5/6) fabric. Characterized by few to frequent (to common) (very fine to) fine sparkling bits; few to frequent (very fine to) fine (to small) sub-rounded calcareous white and off-white lumps (with rare spalling on the surface); rare to few fine (to small) sub-rounded (and angular) translucent (bluish-) gray chips (chert?); rare to few fine rounded and sub-rounded black grains; few to frequent (very fine to) fine rounded and sub-rounded voids. Occasionally noted (in plain wares) are few fine thin elongated white

[927] See Trainor 2012, pp. 160-161, who describes "Sikyonian Silicate Fabric" as possessing common mono- and polycrystalline quartz and chert.

flecks. Rarely noted (in plain wares) are few small sub-rounded yellowish pellets (clay?); rare fine rounded red pellets. Granular (to hackly) break; medium hard (to hard) fabric.[928]

Very generally speaking, the fabric of the plain wares tends to be only slightly coarser than the other ceramic classes of this ware, with a slightly more hackly break and a slightly harder fabric. Otherwise, no major distinction should be made between the fabrics of the lamps and plain wares. Several samples in this ware have been submitted for petrographic analysis. While an official report is still pending, preliminary results show that it they do in fact form a cohesive group, including both lamps and plain wares, and that the fabric can be identified as a finer version of the Hellenistic version of Northeast Peloponnesian cooking fabric; the raw materials have been identified as being the same as those in Northeast Peloponnesian cooking fabric, but the specific recipe differs.[929]

Range of Vessel Shapes

This fabric is mainly confined to a long series of lamp manufacture, with a smaller production of plain wares; one fragment might attest to the fabric's use in an amphora form. LR Corinthian lamps included imitations (or interpretations) of Corinthian unglazed, Attic glazed, and circular lamps (**13**; **14**; **15**; **16**; **17**; **18**; **19**; **20**; **21**; **22**), followed by lamps inspired by North African prototypes (**23**; **24**; **25**; **26**; **27**).[930] Amphoras manufactured in this fabric are limited to a single example (**297**), while plain wares include numerous types of bowls (**492**; **493**; **494**; **495**), small dishes (**496 (P-71)**;

[928] Based on macroscopic descriptions of **13** (which also exhibited few fine to small sub-rounded tan (grog?) inclusions), P-72, and P-73 (lamps), and **493**, P-69, P-70, **496 (P-71)**, and **501 (P-74)** (plain wares). P-69 additionally exhibits a thin light reddish brown (5YR 6/4) to reddish yellow (5YR 6/6) slip, and **496 (P-71)** exhibits a thick reddish brown (2.5YR 5/4) self-slip.
[929] H. Graybehl (pers. comm.), who reports that it contains all the hallmarks of Northeast Peloponnesian cooking fabric, including chert, micrite, serpentinite, schist, and possible tuffs.
[930] See recently Slane and Sanders 2005, pp. 281-283; see also *Corinth* XVIII.2, pp. 21-22.

**497**; **498**; **499**), small pitchers (**500**; **501 (P-74)**), and piriform lekythoi (**502**; **503**). Flat-bottomed lekythoi in this fabric are also attested from burial contexts in other areas of Corinth (see below).

*Dating and Identification*

The fabric appears in the Panayia Field in about the mid-5th century with the re-introduction of the Corinthian lamp industry. The earliest concentration of lamps in LR Corinthian lamp fabric in the Panayia Field was in Lot 2000-007 which was deposited in the second quarter to mid-5th century, probably in ca. 450.[931] Lamps based on North African prototypes are noted to begin to appear in other areas of Corinth in the 6th century;[932] the earliest appearance in the Panayia Field is likely in the redeposited material (probably originally belonging to the first half of the 6th century) in the Long Building basement fills, before being regularly found from the mid-6th to the early 7th century.[933] The single amphora find in this fabric does not allow for any authoritative statement regarding chronology, but plain ware bowls appear in contexts of the mid-6th to early 7th century, small dishes in contexts from the mid- to late 6th century, and small pitchers and lekythoi from the late 6th to early 7th century. The appearance of isolated examples of bowls with triangular rims, small dishes, and small pitchers in the same Long Building fills, however, might be suggestive of an earlier 6th-century date for these

[931] A single sherd of LRC fine ware, a single sherd of LR Amphora 1, and one rim of a Gaza amphora, Majcherek form 2, were among the latest pieces in the pit. No examples of Late Roman micaceous Aegean ware, however, were noted and the fine wares were dominated by Attic RS.
[932] Slane 2008b, p. 487, n. 83; see also Slane and Sanders 2005, p. 281.
[933] Although lamp production in Africa may have continued as late as the 8th century, the techniques behind the manufacture of Hayes' type II lamps were progressively abandoned over the course of the later 6th and 7th century; see Bonifay 2004, p. 81; Rossiter 2009, p. 101.

forms. Employment of this fabric may have come to an end after the early 7th century, as products in this fabric did not appear in the 7th-century pit.

The distinctive fabric of the majority of Late Roman lamps at Corinth has been recognized for some time now. It has been described in previous publications of lamps as the local reddish brown or yellowish red fabric,[934] which has come to be recognized as "the standard LR Corinthian hard red fabric."[935] Later, G. Sanders published his "Fabric A" and "Fabric B" during preliminary publication of the Panayia Bath, as identified in various coarse dishes, and differentiating the two only by the quantity of their inclusions.[936] Based on careful macroscopic analysis and supported by the preliminary results of petrographic analysis, this study argues that the same fabric was employed in both lamps and these other classes of pottery.[937] Attempts to retain the differentiation that Sanders devised failed in the face of the inconsistences presented by greater numbers of examples; thus, Sanders' two fabrics have been combined into a single fabric here. The name of the fabric group, LR Corinthian lamp fabric, is based on the class of ceramic objects in which the fabric was first identified.

In regards to the forms that appear in this fabric, many of the lamps in LR Corinthian lamp fabric of the 5th and early 6th century belonged within the broad category

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[934] Broneer's description (*Corinth* IV.2, p. 111) of his second variety of clay in Late Roman lamps should be equated to this fabric; see also *Agora* VII, p. 9, who argued that lamps in this fabric were indeed Corinthian; Garnett 1975, pp. 177-178. Garnett's observation that earlier Broneer type XVI lamps were manufactured in this same fabric is not maintained here, believing the fabric of those lamps to instead be that of Northeast Peloponnesian cooking fabric following Wright 1980a, pp. 169-170.
[935] Slane and Sanders 2005, p. 283.
[936] Sanders 1999, p. 463, for fabric descriptions, and pp. 465-466, nos. 6-8, fig. 8, for the associated pottery.
[937] As the pottery forms that Sanders (1999) based his descriptions of "Fabric A and B" on have not, as yet, been recognized outside of the Panayia Field, the correlation between lamp and pottery fabrics had not previously had the opportunity to be made.

contained in Broneer's type XXVIII.[938] This rather broad category was later sub-divided by K. Slane, with the relevant lamps since appearing as her "LR Corinthian imitations of Corinthian unglazed lamps" and "LR Corinthian imitations of Attic glazed and post-glazing lamps."[939] Perhaps contemporary with the latest of these lamps is also Slane's "LR Corinthian imitations of circular lamps,"[940] which formerly would have belonged to Broneer's type XXXII.[941] The type of lamp manufactured in LR Corinthian lamp fabric that most frequently appears in the Panayia Field is that identified with Broneer's type XXXI,[942] which is based on North African prototypes.[943] The Corinthian productions of these African-style lamps were also considered by K. Slane who referred to them as "LR Corinthian imitations of North African lamps."[944]

*Discussion*

The lamps in this fabric have always been considered to be local to Corinth, as may be the case for the fabric as a whole, but no kiln sites have yet been found.[945] Another option to be considered is the possibility that this fabric derives from an Argive

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[938] *Corinth* IV.2, pp. 102-114, 212-280; *Isthmia* III, pp. 72-80, where the type was sub-divided into sub-types A to E.
[939] *Corinth* XVIII.2, pp. 21-23; Slane and Sanders 2005, pp. 281-283; Slane 2008b, pp. 486-487, table 2.
[940] Slane and Sanders 2005, p. 281; but see p. 283, where a circular lamp in this fabric from a deposit dated to the end of the 6th century is considered a "fixed point" for the understanding of the chronology of such lamp forms. The infrequency of these lamps in the Panayia Field beyond one example from the Long Building basement fills (**21**) prohibits any further comment, although other late 6th- to 7th-century material was identified within Lot 1998-023.
[941] *Corinth* IV.2, pp. 120-121, 290-291; *Isthmia* III, p. 82.
[942] *Corinth* IV.2, pp. 118-119, nos. 1451-1500, pls. XXI-XXII; see also *Isthmia* III, pp. 81-82.
[943] The North African products upon which these are based correspond with *LRP*, p. 311, pl. XXI:a, type II, and Bonifay 2004, pp. 371-427, figs. 208-239, types 53-81.
[944] *Corinth* XVIII.2, p. 23, under "Corinthian lamps of the 5th and 6th centuries;" Slane and Sanders 2005, pp. 281-283; Slane 2008b, pp. 486-487, table 2.
[945] For the past tendency to consider this to be a fabric that is local to Corinth, see *Corinth* IV.2, p. 111; *Agora* VII, p. 9; Garnett 1975, pp. 177-178; Slane and Sanders 2005, pp. 280-281. Evidence for the manufacture of lamps in Corinth has been found near the Asklepieion, but the molds relate to earlier Roman series of products; a small "late" kiln was also uncovered in the west colonnade of the Lerna Court, but few details are provided; see *Corinth* XIV, pp. 146, 161, pls. 61, 66:1.

source. A. Bovon had originally attributed North African-style lamps found at Argos, manufactured in a purplish-pink, coarse and crumbly clay, to local manufacture.[946] J. Hjohlman, who examined excavated material from both the Panayia Field as well as Argos, stated that the medium coarse and coarse ware pottery found at Pyrgouthi (that is, vessels manufactured in Northeast Peloponnesian cooking fabric) had closer affinities with the former site than the latter despite geographical proximities. She further stated that the Pyrgouthi material is considerably different from the medium coarse wares at Argos, where the common table ware is "made of a soft, brick-red fabric of a denser character and with fewer and smaller inclusions," citing material from Argos published by P. Aupert that includes some shapes recognized here in LR Corinthian lamp fabric, but also includes some shapes found here in southern Argolid fabric for which her fabric description might also be applicable.[947] Given that the preliminary petrographic analysis of samples of vessels in this fabric found affinities with the earlier, locally-used cooking fabric of the Hellenistic period (see above), a source within Corinth's hinterland seems likely. Furthermore, a program of clay sourcing in the outskirts of Corinth was recently conducted, revealing a potential source for this fabric less than four km to the west of the

[946] See Bovon 1966, pp. 86-87. If this hypothetical attribution to the area of Argos is correct, it may help to explain why lamps in this fabric were able to travel as far south as Andritsa, why similar profiles of similar bowls and small dishes have been published at Argos (see the discussion of distribution below), and why the use of a coarser version of the traditional "Corinthian buff" fabric of the earlier centuries in the revitalized LR Corinthian lamp industry was so short-lived.

[947] Hjohlman 2005, p. 241, n. 332, citing material from Argos published in Aupert 1980b, pp. 422-432; exact catalogue entries are not given, but the referenced page range covers Aupert's nos. 162-268 within which are contained parallels to profiles of bowls, small dishes and small pitchers found in the Panayia Field and identified here as being in LR Corinthian lamp fabric; see the following for specific correspondences. Correspondences with shapes found here in southern Argolid fabric include pp. 426, 428, nos. 213-215 (with other, similar bowls also illustrated in fig. 38), and 226, fig. 40. J. Hjohlman (pers. comm.) was unable to provide further details regarding her observations.

city;[948] future petrographic analysis of the fired clay briquettes will confirm or deny any association.

Plain wares in LR Corinthian lamp fabric do not appear in very great numbers here and thus the level of standardization that the forms received cannot properly be commented upon; however, speaking aesthetically, a great deal of care in finishing these pieces seems not to have been practiced. This is especially apparent in the bases that received either only minimal articulation as in the case of the bowls, or were string cut and often left untrimmed as in the small dishes.

Of the various forms of lamps manufactured in this fabric, lamps based on North African models show the best evidence of having been manufactured at several additional regional sites. Numerous lamp moulds of this type were recovered from Delphi, with the fabric of the finished products bearing no resemblance to those found in the Panayia Field.[949] The sites of Thespiae, Tanagra, and Koroneia in Boiotia seem to have been supplied by North African-style lamps in a different fabric,[950] and the practice of unevenly applying red slip to examples found in Athens,[951] Halai in Lokris,[952] and one

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[948] Clay sampling in the area around Corinth was carried out during the summer of 2012 by G. Sanders, H. Graybehl, and the author. Briquettes were prepared and fired, although the petrographic analysis has yet to be conducted. Macroscopically, clay collected from Ag. Tryphonas exhibited a superficial similarity to LR Corinthian lamp fabric, even after being fired, in terms of the brick-red color of the clay body and the quantity of naturally-occurring lime inclusions in the clay.

[949] Personal observation. The lamp molds have been published in Pétridis 1997, p. 689, fig. 6, 2010, pp. 97-99, nos. CA 02-CA 15, figs. 152-165, pls. 33-34; 2012, p. 21, fig. 14. For lamp production in Greece generally, see Pétridis 2000.

[950] Personal observation.

[951] Casual examination (museum display) of one specimen immediately revealed that the buff fabric, partially coated in a thin red slip, bore no resemblance at all to LR Corinthian lamp fabric; see *Agora* V, p. 119, no. M 380, pl. 46 (= *Agora* VII, p. 193, no. 2827), with at least one other example personally noted among inventoried pieces in the museum storeroom exhibiting a similar fabric and surface treatment. Among the numerous lamps based on North African prototypes published from the Athenian Agora, several, identified specifically as an "imitation of a North African lamp" or simply sharing the same superficial appearance, were noted as possessing a slip or glaze and thereby indicating immediately that they are of a different manufacturing tradition than LR Corinthian lamps; see *Agora* VII, pp. 175, 176, 180, 193, 194, 198, nos. 2399, 2407, 2419, 2425, 2591, 2825, 2827, 2846, 2921, pls. 38, 39, 44, 45, 46. More first-hand examination is necessary, but Broneer already noted long ago that Late Roman lamps "of the

example at Epidauros[953] bear no correspondence to lamps in LR Corinthian lamp fabric which were always unslipped. Finally, a fragment of a lamp mold for a North African-inspired lamp was also found on Aegina,[954] and another during survey in Laconia.[955] Such clear evidence of lamp manufacture might be useful in beginning to determine the area of distribution of lamps in LR Corinthian lamp fabric.[956]

The products in LR Corinthian lamp fabric currently seem to have travelled within the same distribution networks as Northeast Peloponnesian cooking fabric, but further comparative study should be made in order to confirm this hypothesis. Distribution is best attested by the lamps but, like the lamps of Attic manufacture, it is difficult to chart without published fabric descriptions and/or physical examination due to the multitude of regional production centers noted.

In addition to the lamps, other products in LR Corinthian lamp fabric can now be identified in other parts of Corinth, consisting primarily of small pitchers and lekythoi recovered from burial contexts in the Hill of Zeus cemetery,[957] and burials within the gymnasium complex.[958] Published descriptions from Isthmia of North African-modelled

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second class," with a fabric described as that of LR Corinthian lamp fabric, were not found in Athens; see *Corinth* IV.2, pp. 111-112; see also *Agora* VII, p. 9, where Perlzweig notes that both Attic and Corinthian lamp-makers were manufacturing their own versions of North African lamps.

[952] O'Neill et al. 1999, pp. 319-320, nos. 30-31, fig. 32.

[953] Personal observation (museum display).

[954] Felten 1975, p. 66, no. 50, pl. 18.

[955] Overbeek 1996, p. 186, no. 35, pl. 9:e.

[956] The patterns correspond generally to those of Northeast Peloponnesian cooking fabric, strengthening the argument that they likely shared the same networks.

[957] For intact pitchers, see C-1933-1496 and C-1933-1522 from Graves 15 (G255) and 33 (G273), respectively. For intact lekythoi see C-1933-1502 and C-1933-1503 from Grave 1 (G241), C-1933-1508 from Grave 3 (G279), C-1933-1524, C-1933-1525 and C-1933 from Grave 33 (G273), C-1933-1530 and C-1933-1531 from Grave 33/34 (G273/274), and possibly C-1933-1491 from Grave 8 (G248), C-1933-1493 from Grave 21 (G261), and C-1933-1498 and C-1933-1499 from Grave 3 (G279).

[958] A similar pitcher from a burial context in Corinth's gymnasium complex was published in Wiseman 1969, p. 80, n. 30, pl. 25:d (right); the fabric has not been personally confirmed. Lekythoi from the area of the gymnasium include two published in Wiseman 1967a, p. 38, pl. 15:b:5 (the other, C-65-224, is not illustrated), dated there to the 6th century; the fabric was personally confirmed.

lamps suggest that unglazed examples in a "brick-red clay" are in this fabric,[959] while lamps from Kenchreai are very likely in this fabric.[960] Personal examination of a large number of lamps at Nemea identified various early LR Corinthian lamps,[961] circular lamps,[962] lamps based on North African prototypes,[963] and other late lamps[964] in significant quantity in this fabric. In the Argolid at the site of Pyrgouthi, the majority of published lamps were recognized to be North African-inspired lamps in this fabric.[965] A small number of earlier Late Roman lamps were also found at Pyrgouthi, but the fabrics

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[959] These lamps were not personally examined. For descriptions, see *Isthmia* III, p. 81, nos. 3149-3153, pls. 10, 35, 36; note that nos. 3145-3148 are described as being glazed, and are interpreted by Broneer as imports. See also Wohl 1981, p. 116, pl. 33:a, 1993, p. 136, fig. 9, for other North African-modelled lamps from Isthmia.

[960] Rife et al. 2007, p. 173, fig. 25, based on the parallels in n. 75. See also *Kenchreai* V.

[961] My assessment of earlier LR Corinthian lamps in this fabric include Miller 1979, p. 75, no. L 34, pl. 20:a (possibly in this fabric), an unglazed lamp similar to *Corinth* IV.2, pp. 222-223, nos. 883-888, fig. 153, pl. XIII, recovered from a 4th-century well at Nemea (possibly a later intrusion?); Miller 1983, p. 86, no. L 128, pl. 25:g (possibly in this fabric) a possible interpretation of 5th- to 6th-century Asia Minor types (?) from material below the floor of the early Christian house; Miller 1988, p. 5, no. L 215, pl. 8:c (possibly in this fabric), based on Attic glazed lamps, from a deposit slightly pre-dating the 6th-century early Christian house; and *Nemea* II, p. 122, no. L 235, a lamp with a small discus with cross, similar to Slane and Sanders 2005, p. 258, no. 2-1, fig. 7, from the "early Christian" fill of the stadium tunnel.

[962] LR Corinthian circular lamps include Miller 1983, p. 84, no. L 122, pl. 25:g, a circular lamp (?) from destruction debris over the floor of the 6th-century early Christian house.

[963] LR Corinthian lamps based on North African prototypes in this fabric include Miller 1979, p. 85, no. L 31, pl. 28:b, similar to Slane and Sanders 2005, p. 266, no. 3-3, fig. 10, from "Byzantine activity" north of the basilica; Miller 1980, p. 192, nos. L 48, L 49, L 51, pl. 41:e, with L 48 and L 49 similar to **23**, from association with 6th-century graves; Miller 1983, p. 84, no. L 123 (possibly in this fabric), similar to **23**, from destruction debris over the floor of the 6th-century early Christian house; p. 86, nos. L 125, L 126, pl. 25:g. (both possibly in this fabric), somewhat similar to **23**, from material below the floor of the early Christian house; p. 87, no. L 150, similar to **23**, from the layer above a 6th-century grave containing a fruit amphora; Miller 1988, p. 5, nos. L 216, L 220 pl. 8:c (L 216 possibly in this fabric), similar to Slane and Sanders 2005, p. 266, no. 3-3, from material below the floor of the early Christian house; *Nemea* II, p. 122, nos. L 68, L 236 (possibly in this fabric), L 238 (possibly in this fabric), and L 239, figs. 222, 243-246, variously-styled lamps with long channels, from the "early Christian" fill of the stadium tunnel.

[964] These include Miller 1980, p. 192, no. L 50, pl. 41:e, a North African-modelled lamp with a wide, flat, sunken rim; Miller 1988, p. 5, no. L 217, pl. 8:c, a lamp similar to *Corinth* IV.2, p. 280, nos. 1413-1417, pl. XX, type XXIX, as well as another lamp from Corinth (with no inventory number listed) reproduced in *Isthmia* III, p. 80, pl. 40:n.

[965] Hjohlman 2005, pp. 242-243, equates the fabric to the second of the two Corinthian lamp fragments published in Garnett 1975, pp. 177-178. Hjohlman also recognized the same lamps at Isthmia, Nemea, Berbati, and Argos. Examples include pp. 134, 139, 154, 170, 182, 185, nos. 12, 16, 69, 103, 128, 146, figs. 5, 13, 27, 39, 49, 52. Personal observation of no. 146, on display in Nauplio, Greece, confirmed the fabric.

are not certain.[966] At the cave in Andritsa the majority of lamps are North African-based and are in LR Corinthian lamp fabric; two other lamps, possibly in LR Corinthian lamp fabric, were modeled on Attic lamps featuring rays on a sunken discus.[967]

Plain wares in LR Corinthian lamp fabric have not been attested at many other sites. One small pitcher from Pyrgouthi, very similar in form to those here, is probably in this fabric.[968] Publication of the contents of an assemblage from Argos produced various vessels with profiles that seem to correspond with those in this fabric, including bowls with vertical and triangular rims, small dishes, and a small pitcher.[969]

## REGIONAL AND LOCAL PRODUCTS BY GEOGRAPHICAL AREA AND THE MECHANISMS OF THEIR DISTRIBUTION

### *Introduction*

Through the recognition of various Late Roman regional and local wares from the Panayia Field, several aspects of the distribution networks that supplied Corinth in addition to its long-distance connections can now be discussed in some detail. Corinth was heavily supplied with ceramic wares from sources within its immediate and neighboring regions, which must have been procured through a combination of short-range land and water transportation. The distribution of these ceramics (with the exception of the LR Amphora 2 manufactured in southern Argolid fabric) were not part

[966] Hjohlman 2005, pp. 202, 210, nos. 193, 226, figs. 70, 76. The fabric of no. 193 is described as dark gray with white inclusions, while that of no. 226 might be the late Corinthian buff fabric as described in Garnett 1975, p. 177.
[967] Personal observation.
[968] Hjohlman 2005, p. 182, no. 124, fig. 49, from a late 6th/early 7th context and with a fabric description that seems to agree with this fabric.
[969] Aupert 1980b, pp. 422, 425-426, 428, nos. 172 (bowl with vertical rim), 175 (bowl with triangular rim), nos. 190, 195-196, 210 (small dishes similar to **498** and **499**), 229a (small pitcher), figs. 38-40. See Slane and Sanders 2005, p. 294, n. 108, for discussion of a post-585 date for this assemblage. The fabric of these vessels has not yet been personally confirmed.

of any state-sponsored system, but are reflective of Corinth's own utilitarian or market needs. The networks and mechanisms through which these exchanges took place can be, at least partially, explored and are reflective of the daily patterns of life that took place in and around the city during the Late Roman period.

*The Movement of Southern Argolid Products*

The LR Amphora 2 and the Long-Distance Distribution of Olive Oil

Due to the presence that the LR Amphora 2 had on long-distance markets, the complicated mechanics and routes of distribution of vessels manufactured in southern Argolid fabric should be discussed first, as the framework that governed their movement might have influenced the distribution of other regional wares. In order to properly assess the LR Amphora 2's role in long-distance distribution, one must first address the contents that it carried. Olive oil is the most likely product, as the Argolid Exploration Project discovered numerous stone *mortaria* and semi-circular *orbes* (crushing stones used in pairs) belonging to *trapeta* (a type of manually-powered olive mill) at Late Roman sites, indicating that large-scale olive oil production was taking place.[970] Political decisions made under Arcadius and Honorius at the end of the 4th century regarding the separation and independent provisioning of the eastern and western halves of the empire may have resulted in a vast agricultural expansion project in the southern Argolid that witnessed the

[970] Munn 1985, pp. 342-343; van Andel and Runnels 1987, p. 115; Jameson, Runnels and van Andel 1994, pp. 275, 320, 402, table 6.9. This picture is supplemented by pollen analyses which revealed an increase in olive trees for the period dating ca. 400-650; see Sheehan 1979; see also Jameson, Runnels and van Andel 1994, p. 275.

planting of new trees in order to meet the sudden new demand.[971] Given the time it takes for a newly planted olive tree to reach initial maturity, followed by its full fruit-bearing potential, the appearance of the LR Amphora 2 in the early to middle decades of the 5th century in the Panayia Field, and in Corinth generally, might not be coincidental.[972]

The form of the LR Amphora 2 certainly enjoyed long-distance distribution. One recent theory was that this amphora was an important carrier of olive oil for the military *annona*; its presence on numerous sites along the Danubian border strongly supports the idea that it was part of a state-sponsored system that helped ensure the proper supply of the roughly 130 forts that existed by the time of Justinian.[973] Although representing a significant advancement in the understanding of the distribution of this amphora form, Karagiorgou's study should be approached with some caution due to her inability to take into account the fabrics of these vessels, a detriment that she herself acknowledges.[974] The examination of the LR Amphora 2 finds from the Panayia Field allows for some refinement of Karagiorgou's corpus of examples and, although unable to provide firm identifications, one can now highlight the elements of her comparanda that are most likely to be identified as products of the southern Argolid.[975] Published examples of the

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[971] The intensified cultivation of olives in the southern Argolid might have been one component of a greater scheme that also witnessed agricultural intensification in Cilicia and the Levant, and marked Egyptian grain for the *annona* supply of Constantinople, while African grain was sent to Rome.

[972] Furthermore, its appearance in the Panayia Field and other urban areas of Corinth may be indicative of the industry's growth to the point that it was producing surplus beyond what was required for the *annona*, allowing for distribution to local or regional markets.

[973] Karagiorgou 2001b, especially pp.149-156; Opaiţ 2004b, pp. 10-12.

[974] Karagiorgou 2001b, p. 131. Despite Karagiorgou's attempts to account somewhat for different morphological characteristics, all these amphoras are ultimately treated as essentially the same in her study, lacking any nuanced discussion of potentially differing sources of origin. For the calls of various scholars to better define the "LR Amphora 2" type, see Arthur 1998, pp. 168-169; Slane and Sanders 2005, p. 233, n. 64.

[975] Finds of LR Amphora 2 from the Panayia Field in southern Argolid fabric, and others published from Corinth, the Corinthia and Argolid, show a surprising homogeneity in morphology and decoration for the late 5th to early 7th centuries, even while giving allowance for the shorter or taller neck varieties, wavy or horizontal combing, or presence or absence of a knob toe. Even without a fabric description, several of the

LR Amphora 2 from the northern Balkans and Danube area generally show a high degree of morphological and decorative similarity with southern Argolid products.[976] Evaluation of Karagiorgou's Aegean comparanda presents a more mixed picture; the best evidence for similarity originates from the sites that she lists in the northeastern Peloponnese, south-central and northern Greece, but with eastern Aegean finds seemingly indicating different sources.[977] Given the additionally strong presence of the eastern LR Amphora 1

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references that Karagiorgou makes to published examples of LR Amphora 2 can be ruled out as having been manufactured in the southern Argolid, simply by examining published photographs or profiles and noting the differing morphological or decorative characteristics; see the following notes.

[976] These include those published from Stobi (*Stobi* I, p. 96 (inv. no. C-71-359, discussed under no. 700), pl. 184, short neck), Justiniana Prima (Caričin Grad) (Bjelajac 1990, p. 176, pl. XXI:7, tall neck), Svetinja near Viminacium on the Danube (Popović 1988, figs. 13:6, "type II," tall neck), Dichin (Swan 2004, p. 372, fig. 4, short neck), Iatrus (Böttger 1982, pp. 103, 113, 138-139, nos. 101, 220-222, 532-533, pls. 17-18, all short necks, and 1991, p. 166, no. 732, pl. 46, tall neck, *but excluding* Böttger 1982, pp. 95, 103, 113, 138, nos. 1-2, 99-100, 102, 223, 529-531, and 1991, pp. 162-163, 165, nos. 663, 677, 678, 731, pl. 46, which are listed under the same type; see also Wendel 1986, p. 116, pls. 19:2-11, 38:a, for other amphoras with similar features, tall and short necks?), Sucidava on the Danube (Tudor 1965, p. 88, pl. XXV:6, short neck), Golemanovo-Kale, near Sadovec, in northern Bulgaria (Mackensen 1992, pp. 239-242, figs. 1:1-6, 2, short neck), at Pernik in Bulgaria (Ljubenova 1981, p. 142, fig. 61, short neck), Sacidava on the Danube (Scorpan 1973, p. 320, fig. 36:3, short neck, and 1975, pp. 272-274, pls. II:8-10, IX:7-8, X:1-2, short and tall necks, *but excluding* Scorpan 1975, pp. 272-274, pls. III:1-2, IX:5, IX:10, which are listed under the same general type), the site at modern Independenta on the Danube (Opaiţ 1991a, pp. 139-140, nos. 52-58, 60-61 pls. 8-9, short and tall necks, *but excluding* p. 140, nos.59, 62-63, pls. 9-10, which are listed under the same type), the Danubian fort of Tropaichioi (Opaiţ 1991b, p. 254, nos. 11-12, fig. 14:1-2, short neck), Tomis (Rădulescu 1973, pp. 194, 197-201, figs. 3, 6-7, short neck), and the Tropaeum Traiani, near modern Cetatea, Romania, (Cătăniciu and Barnea 1979, p. 190, no. 3.2, figs. 167, 170, tall neck).

[977] In the Aegean, the cargo of the 7th-century Yassi Ada shipwreck as originally published contained *no examples* of globular amphoras resembling the southern Argolid LR Amphora 2 (cf. Bass 1982), with *only two exceptions* later published (cf. van Doorninck 1989, p. 250, fig. 1:1, 1:7, short neck). At Samos, in the Efpalinos tunnel, the combed, globular amphoras *do not resemble* those of the southern Argolid with *only few exceptions* (cf. Hautumm 1981, pp. 21-58, 182-205, nos. 1-71, figs. 17-41, 50-57, 59-68, 70-73, 76-81, 89, 91-114, with the exceptions appearing as nos. 39-44, figs. 76-81, short neck), while others published from the ecclesiastical complex (Steckner 1989, p. 58, fig. 5, short neck), and in a pit near to the complex (Gerousi 1997, pp. 252-254, fig. 2, pl. 47:b, short neck), *show some general similarity*. Finds from Emporio, on Chios (Boardman 1989), *are dissimilar*, while illustrated examples from Thasos show enough difference to suggest the *possibility of a different source* (*Thasos* XIII, pp. nos. CC284-CC285, fig. 24, pl. V). At Torone, in the Chalkidike, amphora forms *seem to be in keeping with* examples in southern Argolid fabric (Papadopoulos 1989, pp. 83-87, figs. 8:c, 9, 11; 2001, pp. 551-555, nos. 14.378-14.384, figs. 147-148, pl. 82, short neck). Survey at Louloudies recovered fragmentary rims that *may belong* to this amphora type (Poulter 1998, p. 511, nos. 23, 25, fig. 25, short neck). The decoration of the LR Amphora 2 recovered from Thessalian Thebes (modern Nea Anchialos) (reproduced in Karagiorgou 2001b, fig. 7.4) *does not resemble* any known examples in southern Argolid fabric. Of the examples cited from the Athenian Agora (*Agora* V, pp. 106, 109, nos. M 235, M 272, pls. 28-29, and P 4129 and P 16074 on pl. 40), *only one agrees* in shape and decoration with examples in southern Argolid fabric (P 4129, short neck; personal observation confirmed that the fabrics of M 235 and M 272 are not southern Argolid), *although other, unpublished, examples* of LR Amphora 2, as defined in this study, were personally noted to be in southern Argolid fabric

at most of these same sites, and the creation of the *quaestor exercitus* in 536 which had the effect of earmarking Aegean island products for Danubian consumption, Karagiorgou is likely accurate in her hypothesis that routes traveling along southern Anatolia met north-bound routes in the Aegean.[978] However, another route, one that would have supplied the cities of Stobi and Caričin Grad, is identified as passing up the Vardar Valley through Thessaloniki, and may have offered the southern Argolid production of the LR Amphora 2 a more direct north-bound route as opposed to the longer one along the northern coast of the Aegean and then up through the Black Sea.[979] The LR Amphora 2 in southern Argolid fabric was likely just one of several globular amphoras that ultimately travelled to these northern borders and it should not be assumed that this area alone was responsible for the supply of all of the Danubian forts.

State Intensification of Pre-Existing Regional Industries: The Southern Argolid

The ceramic industry of the southern Argolid provides a clear example of how the state could intensify pre-existing agricultural (and ceramic) production for empire-wide export. In the 2nd century the general picture of the Akte is one of a preponderance of

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(short and tall necks). The LR Amphora 2 *is present* at Isthmia (Broneer 1959, pp. 336-337, no. 16, pl. 72:b, tall neck; see also *Isthmia* V, p. 74, n. 36, pl. 19:d, short neck, with other examples of similar form and fabric confirmed through personal observation), *and* Kenchreai (*Kenchreai* IV, pp. 114-116, nos. RC 14, RC 16, pls. 26-27, short and tall necks; RC 14, on display at the museum at Isthmia, was personally confirmed). *Similar amphoras* have been published from Argos (Aupert 1980b, p. 440, no. 325a, fig. 46; Abadie-Reynal 1989, p. 151, fig. 12, short neck), *and of course* at Halieis (Rudolph 1979, pp. 305-309, nos. 1-3, 5-6, 8-9, fig. 3, pl. 80:b, short neck) *and* the surrounding vicinity (Jameson, Curtis and van Andel 1994, p. 402, fig. 6.23, short neck). A similar amphora has also been published from Nichoria (cf. Rosser 1983, p. 384, no. P1756, pl. 10-10, short neck, although the inconsistent horizontal combing is suspect).

[978] Karagiorgou 2001b, p. 154; see also Jones [1964] 1986, pp. 280, 482-483, 661, 844. Many of the so-called LR Amphora 2 that do not morphologically correspond with southern Argolid products might be the globular amphoras produced on islands such as Chios (see above).

[979] Karagiorgou 2001b, p. 154. Concentrations of the LR Amphora 2, with published photographs agreeing with southern Argolid products, at Torone in the Chalkidiki contribute in supporting such a route; see Papadopoulos 1989, pp. 83-87, nos. 1-2, fig. 11, and 2001, pp. 551-555, nos. 14.378-14.412, figs. 147-150, "type I." A LR Amphora 2 (with short neck) personally examined at Dion appeared to be in southern Argolid fabric as well.

large estates and absentee landlords, with some areas specializing in purple dye-works and olive oil. Some evidence of population growth is attested in the return to Classical hilltop sanctuaries in the 3rd and 4th centuries. The major city in the area, Hermion (Map 2:48), was small but growing at the end of the 2nd century, showing signs of prosperity thanks in part to the manufacture of purple dye and the farming of the fertile valleys. Several benefactions, including a theater, stadium, fountain houses and an aqueduct are roughly attributed to this period. While Hermion had to rely on Mases (42), on the opposite side of the peninsula, for its harbor needs in the 2nd century as its own facilities had become silted up, a rise in sea levels by the 3rd century re-established its own harbor potentials.[980] Although the evidence from historical sources and archaeological survey is currently limited, there were nevertheless already some signs of growth in the area prior to the Late Roman period.[981]

Supporting systems to the olive industry in the southern Argolid also pre-existed state intensification. The area had already been a ceramics manufacturer, as attested by the presence of basins in this fabric in Corinth and Isthmia already by the early 4th century (similar to **405** and **412**), and various forms of amphoras in southern Argolid fabric, pre-dating the LR Amphora 2 (**247** to **249**), that are recorded in the earliest lots excavated here. Equally important was the long-standing role of Corinth as a maritime and land-based emporium (see Chapter 3), as its pre-existing connections to long-distance and regional markets facilitated the movement of the LR Amphora 2 along the state's

[980] van Andel and Runnels 1987, p. 112; Jameson, Runnels and van Andel 1994, pp. 399-400, n. 17. The picture of the poor harbor conditions at Hermion in the 2nd century is in contrast to its suggested use as the end point of a road whose construction has been linked with the use of Achaia in 114/115 in Trajan's Parthian campaign route. "The road in question lay in the western Peloponnese, in the Elis/Triphylia area where a milestone was recently found (fig. 39); the port of Hermione in the Southern Argolid may have been the specific embarkation point to the east;" Alcock [1993] 1996, p. 121, without further references.
[981] It should also be stressed that purple dye for use in textiles was a luxury in the Roman Empire and alone should attest to some level of high-end, long-distance exchange.

supply routes. The excellent infrastructure of Roman roads in the northeast Peloponnese, dating back to at least the 2nd century (see below), would also have been a boon to the intensified olive industry of the Akte; whether or not products were being shipped out on these roads, they at least would have aided in creating communication routes for people and other supplies in support to the industry as a whole. Finally, other major industries documented in the Akte in addition to olive cultivation may also have contributed to either state-sponsored or regional networks that might have facilitated the distribution of its ceramics. These include cattle herding, which may have been established in antiquity and supplied dried meat to troops,[982] and also sheep and goat herding, a significant observation given that wool from the Argolid was featured in Diocletian's price edict.[983]

The Distribution of the LR Amphora 2: Corinth and Argos

The shipments of LR Amphora 2 most likely traveled along a chain of coastal sites by sea, connecting the production centers to other, more major ports for wider distribution (see below). Based on evidence from Corinth and its eastern port of Kenchreai, the latter was certainly a point for the greater distribution of this amphora. Corinth's role within this distribution system is certainly plausible; its geographic position on an isthmus ideally placed the city in the midst of both east-west maritime routes and north-south land routes, it already had a long-established reputation as an

[982] For the evidence of cattle herds in the Akte, see Jameson, Runnels and van Andel 1994, p. 287; see also the description of the coastal route taken by Pausanias (2.34.8-9) which mentions several toponyms that feature cattle. The importance of the consumption of cattle in the region during the Late Roman period was recently illustrated by the excavation of more than one ton of cattle bones from late 4th- and 5th-century contexts from the West Hall of the Theater in Corinth, although these are likely to have been raised closer to Corinth; see Williams 2013, pp. 521, 532-534.

[983] For sheep and goats, see Jameson, Runnels and van Andel 1994, pp. 290-301; see also pp. 316-318, for mention of the nearby town of Hermion and its reputation for its purple dye in the Early Roman period. For Diocletian's edict, see Jones [1964] 1986, p. 849, for mention of various high quality wools, including a mid-quality wool from the Argolid and a lower quality one from Achaea.

emporium, and its administrative and religious position placed it favourably within the workings of the empire.[984] But another likely candidate for distribution is Argos. Examples of the LR Amphora 2 have been found at both of these sites, and the presence of many of the same international LR Amphora types imply that both cities were involved in similar networks of long-distance distribution.

Although Corinth and Argos obviously overlapped in their networks, published finds from Argos reveal that it had access to some networks that Corinth did not. One notable type of find in this regard is Central Greek Painted Ware, found at Argos as well at as numerous other sites in central Greece along the eastern coast.[985] This fine ware is conspicuously absent in Corinth, and strongly implies that Argos had different interregional exchange patterns.[986] Other fine wares found at Argos and not at Corinth are the various series of "imitations" of AfRS,[987] and a small number of unique, slipped forms found at Pyrgouthi were likely supplied through Argos' networks as they too are

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[984] For Corinth's role as capital and seat of a metropolitan bishop, see Avraméa 1997, pp. 35, 37; Limberis 2005. See also the discussion in Chapter 1.

[985] It was first identified by J. Hayes; cf. *LRP*, p. 413; cf. also *Atlante* I, p. 256; *Agora* XXXII, p. 92. Confirmation of a central Greek origin is likely, due to the great numbers found at Nea Anchialos (Phthiotidic Thebes) (Lazaridis 1967, p. 16, 22, pl. 10:a, 24:a-b, 25:a-b; Ntina 2010, p. 566, figs. 18-20) and Demetrias (*Demetrias* IV, pp. 40-42, nos. II.157-167, pls. 10-12, insert 2) where the center of production is postulated. Additional finds have been published or noted at Constantinople (Harrison, Firatli and Hayes 1968, p. 212, no. 82, fig. F; *Saraçhane*, p. 101, no. 80, pl. 1:f), Thasos (Blondé, Muller and Mulliez 2003, p. 773, fig. 2, 2010, p. 412), Thessaloniki (*LRP*, p. 413; Karayianni 2010), Thermopylae (Rosser 2001, p. 37, nos. 2-3, pl. 4.3:b), Athens (*Agora* XXXII, p. 252, nos. 1456-1457, fig. 44, pl. 70), Delphi (Lerat 1949, p. 327, fig. 39; *LRP*, p. 413, pl. XXIII:b; Pétridis 1997, p. 693, fig. 16; 2010, p. 129-130, figs. 230-231), Phokis (finds from the Loyola University of Chicago Phokis-Doris Survey of 1982 noted in *Agora* XXXII, p. 92, n. 30); Argos (Aupert 1980b, p. 420, 454-455, nos. 159-161, fig. 37), and Abu Mena (*LRP*, p. 413).

[986] The only painted plate found in the Panayia Field is not in this fabric (**150**), perhaps sourced to Crete. It must be admitted, however, that until publication of finds from excavations within the proposed 6th-century perimeter of the city are published, the recognized absence of Central Greek Painted Ware in Corinth remains tentative. For discussion of the Late Roman wall, see Chapter 1.

[987] Aupert 1980b, pp. 417-418, 419-420, nos. 121-124, 157-158, figs. 35-36.

not noted in Corinth.[988] In addition to some correspondences with vessels in Northeast Peloponnesian cooking fabric, the published profiles and photographs of cooking wares from Argos also display some morphological differences that testify to different sources, including certain forms of stewpots,[989] and a tall bell-lid with a handle.[990] On the other hand, the two major publications of material from Late Roman deposits at Argos both contain sections devoted to basins, but in neither are any profiles corresponding to basins in southern Argolid fabric found;[991] a most surprising discrepancy given the proximity of Argos to the Akte.

The primacy of Corinth or Argos as a redistributive port of the LR Amphora 2 cannot currently be ascertained, but what should be stressed is that the two cities were oriented towards different networks, and were thus able to distribute the LR Amphora 2 to diverse markets.

Tracing Regional Movements of Products in Southern Argolid Fabric

Before the LR Amphora 2 could be distributed to long-distance markets, all southern Argolid products first had to move regionally from its center of production in the Akte. The regional distribution of southern Argolid products must have been carried out through numerous facilities that dotted the coastline of the southern Argolid that

[988] Hjohlman 2005, pp. 132, 151, 166, 168, 177, 221, 232, nos. 3-4, 57, 59, 77, 82, 107-108 (closed shapes), 253, 290, figs. 4, 24, 36-37, 44, 84, 95. Their fabrics were not identified with other known fabrics on the site.
[989] Aupert 1980b, p. 433, nos. 286-290c, fig. 13.
[990] Aupert 1980b, p. 437, no. 311a, fig. 44.
[991] Compare the catalogues in Aupert 1980b and Ivantchik 2002. Neither does the catalogue of pottery dating up to the end of the 4th century published in Abadie-Reynal 2007 contain the 4th-century southern Argolid basins that are found in Corinth.

likely had their own port facilities,[992] as indicated on Map 2. At Classical Halieis (45), at the southernmost tip of the peninsula, the lower town and harbor were re-occupied in the Late Roman period as evidenced by a small bath, several graves, and large amounts of LR Amphora 2 fragments.[993] Amphora stands were interpreted as being used in order to aid filling the amphoras before transportation, and no *dipinti* were noted on any of the finds,[994] possibly indicating that they were only added to vessels at the final stage of transportation or when they reached a central collection facility. The excavators placed the site into the context of "farmlords" and their "serfs," and felt that the bath on site was unlikely to date to the latter half of the 6th century, thereby placing it earlier.[995] The port-town of Hermion (48), situated in the northeast of the Akte, must have played a key administrative role in the distribution of local products.[996] It was the only Late Roman town noted during survey of the area, but showed a degree of affluence through the presence of a basilica, a "bishop's palace," other churches and houses with mosaic floors. In addition to the small port at Halieis, another village-sized port at Mases (42) was situated on the western side of the peninsula, with all three likely serving as various nodes within an integrated network.

Island sites likely facilitated movement along this maritime network, such as Dokos (49) which was situated on route between Halieis and Hermion. Survey of the

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[992] Submerged off-shore structures were reported at the kiln site at Kounoupi; see Jameson, Runnels and van Andel 1994, pp. 443-444. The function of such remains, namely whether or not they formed part of any port structure, must remain speculative.
[993] Jameson 1969, pp. 339-340; Rudolph 1979.
[994] Rudolph 1979, pp. 301-302.
[995] Rudolph 1979, p. 304. See also Jameson, Runnels and van Andel 1994, pp. 256, 402, where Late Roman Halieis (site A65) is seen as a stratified settlement in which the small bath was only for the owners, and the poor workers were buried simply among the remains of the Classical city. The mid-6th-century bath in the Panayia Field is remarkably similar in plan to that at Halieis, thus there is no reason for an earlier date; see Sanders 1999.
[996] For excavation reports see Orlandos 1956, 1957, 1977; Stikas 1960, 1961. More recent discussion of the town can be found in Jameson, Runnels and van Andel 1994, pp. 255-256, 316, 320, 400, 402, 488-489, 573-595, their site E19. For additional descriptions, see Paus. 2.34.9-36.3.

island reveled a Late Roman fortified settlement centered on a *kastro* covering an area of 1.65 ha; it was possibly constructed in the late 6th century with extensions made in the mid-7th century. Several structures were identified within and without the wall circuit, as well as cisterns, a fresh-water spring, and two Christian basilicas, one of which was three-aisled and may have been the resting place of three Spanish martyrs. A large settlement surrounded the fortified area and extended down to the harbor area on the north side of the island. Large quantities of pottery, lamps and coins are dated to the 7th century, "from early in the reign of Heraklios to the 4th year of Constantine IV" (early 7th century to 672).[997]

The site of Phourkari (50) is situated on the easternmost tip of the Argolid before northbound travellers rounded Cape Skyllaion and passed Poros before the Methana peninsula. Phourkari is provided with two sheltered anchorages from prevailing winds by the neighboring island of Soupia and a rocky spit of land. The survey of submerged remains revealed what was considered to be a "Late Roman seaside resort" including a small bath to the west and a larger complex interpreted as a large villa inside a courtyard.[998] The presence of examples of LR Amphora 2, sunken storage jars, as well as a building with a built-in basin and floor-lined tiles seems to be indicative of some industry or agricultural use. Around the cape on the Methana peninsula, the harbor at Vathy (38) seems to have, perhaps not coincidently, resumed operation at around the mid-5th century; a number of small and medium-sized sites with pressing equipment appeared in this period while other sites were interpreted as storehouses connected to a nearby farmstead. Survey evidence points to a general intensification of agriculture from

[997] See Blackman 1997, pp. 26-27; Kardulias 2000, pp. 35-36; Gregory 2005, p. 158, fig. 7.1. The pottery is not described.
[998] Frost 1977; see also 1980.

the 4th century onwards with an increase in both the number of sites and their concentration along the east coast of the peninsula; most of the Late Roman sites are characterized by the presence of the LR Amphora 2.[999]

Farther up the coast at Palaia Epidauros (37) a large, submerged building with several rooms was surveyed. The large main room preserved nine sunken pithoi in situ, although more had previously been there. Investigators identified this as a Roman country villa with a concentration of pithoi that seems dedicated to agricultural storage; later investigators also attested the presence of the LR Amphora 2 in the area.[1000] Continuing this north-bound route, one encounters the island of Evraionisos (Ovrios) (26) after following the coastline westward into the Bay of Kenchreai. Survey of the island revealed Late Roman pottery in abundance, in addition to saddle and rotary querns, millstones, cisterns and numerous stone-built features.[1001] A probable harbor, along with the remains of various structures, was identified at site 1 on the eastern tip of the island; ceramic finds from the site were predominantly Late Roman and were composed of fine wares as well as "wheel-ridged," "combed" and "spirally-grooved" sherds that are most likely interpreted as belonging to the LR Amphora 2.[1002] Site 2, on the opposite slope and parallel to site 1, contained numerous caves and evidence for Late Roman habitation, including cooking wares, fine wares, beehives, three well-built cisterns, and a 6th-century bronze coin.[1003] The remains of the fortress in the center of the island at site 3 bore some phases connected to the Late Roman period, including fine wares, "combed and spirally

[999] Bowden and Gill 1997, pp. 87-90.
[1000] Kritzas 1972, pp. 192-194. Although no pottery was collected during this project, D. Gill personally attested the presence of the LR Amphora 2 at Palaia Epidauros; Bowden and Gill 1997, p. 87, n. 25.
[1001] Kardulias, Gregory and Sawmiller 1995, pp. 5-9.
[1002] Kardulias, Gregory and Sawmiller 1995, pp. 10-11, figs. 6:A-C; the fine wares are not identified.
[1003] Kardulias, Gregory and Sawmiller 1995, pp. 11-14; the ceramics and the coin are not further identified.

grooved sherds," cooking ware, beehives, and a Roman rotary quern.[1004] Investigators therefore concluded that for the Late Roman period there was evidence for both defensive, domestic and some agricultural use on the island that was also dependant on continued contact with the mainland; overpopulation of the mainland during this period, as well as a need for a military station oriented against maritime attack, is suggested as a possible reason why such marginal territory was exploited.[1005]

Older views, now re-considered, placed marginal sites such as islands in the context of the so-called "isles of refuge," where retreating populations fled in the face of Slavic invaders.[1006] More recent interpretations of these coastal and insular sites have placed them in the paradigm of aristocratic agricultural "villa" life,[1007] lines of defense against Arab aggression, or in terms of expanding regional economies and settlement patterns. It is the contention of this analysis that such sites are best interpreted collectively, rather than independently,[1008] and should be placed within a greater economic framework that was centered on the export of olive oil in LR Amphora 2

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[1004] Kardulias, Gregory and Sawmiller 1995, pp. 14-16. Cursory examination of site 4 on the western side revealed no Roman remains.
[1005] Kardulias, Gregory and Sawmiller 1995, pp. 16-17.
[1006] See Hood 1970; for counter arguments, see Gregory 1986; Kardulias, Gregory and Sawmiller 1995.
[1007] The interpretation of the various coastal sites as aristocratic rural estates, or "villas," places these sites within past economic models that argued for a dynamic, yet demographically restrictive, "internal consumption" view of the Late Roman economy; see Whittaker 1983, pp. 171-173. In reviewing the available evidence for these rural estates, one finds full excavation of the Late Roman contexts lacking and the evidence articulating site function being vague at best.
[1008] Arthur 1998, pp. 169-170, referred to Halieis as only a minor center, not taking into account its potential position in a wider network of production and distribution. See Schörle 2011 who places the various ports along the Tyrrhenian coast of Italy in earlier Roman periods, including ports associated with villas, into a greater context of overall connectivity and a given region's economic activity, breaking with previous interpretations of the "luxury estate." Stone 2014 identifies the numerous ports built along the North African coast during the 1st to 3rd centuries A. D. as providing maritime links with the interior with numbers increasing as North Africa's level of connectivity with the Mediterranean grew stronger; these ports were not associated with villas, however, but were part of civic projects intended to maximize revenue collected from tolls.

containers.[1009] These sites provided links along a chain of production and distribution that connected the areas of manufacture with larger centers from where long-distance distribution could occur;[1010] a similar system of coastal collection sites, or warehouses, has been suggested for the Gaza amphora (see Chapter 3). The number of agricultural "villa" sites noted above also suggests that olive oil production may have occurred at numerous sites along the Saronic coast, thus the shipments of LR Amphora 2 that left the southern Argolid may have occasionally been empty in order to provide shipping containers for other production centers. On a reduced, regional level these sites would also have acted as nodes servicing inland, regional market networks through which secondary ceramic products such as lamps, fine wares, and plain wares could be distributed to the countryside.

The role of coastal enclaves has been observed elsewhere to facilitate interaction between the sea and the deep hinterland; these "gateway settlements" funnelled both goods and people in both directions.[1011] This relationship is aptly illustrated in the southern Argolid, where the products of the olive oil industry were brought from the interior to any number of coastal LR Amphora 2 manufacturing sites; imported goods were brought in return, such as the long distance fine wares recovered from excavations at Halieis and Kounoupi,[1012] or in the form of artisans such as the accomplished

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[1009] The island of Dokos was recently used as a case to emphasize the empire's desire to maintain lines of communication between the capital at Constantinople and Italy, with only brief consideration of commercial interests; see Kardulias 2000, p. 35; Gregory 2005, p. 158, fig. 7.1; Armstrong 2009, p. 177.
[1010] An unpublished shipwreck near Porto Cheli, carrying "globular" amphoras may be representative of the maritime traffic related to this network; Parker 1992, p. 335, no. 884, map 13.
[1011] Horden and Purcell 2000, p. 133. See also Schörle 2011, p. 93, who defines ports as hubs between the land and sea; it is dependent on its hinterland for either production or consumption, and on the sea for its access to maritime traffic.
[1012] For Halieis, see Rudolph 1979, pp. 310-313, nos. 20-34, figs. 7-8; for Kounoupi, see Jameson, Runnels and van Andel 1994, pp. 443-444, and personal observation.

mosaicists employed at Hermion.[1013] The investigators of Evraionisos and Dokos emphasized that in regards to insular settlements, the maintenance of outside contact with other islands and the mainland is essential to success.[1014] While larger sites like Hermion might have provided a more direct channel to long-distance routes, the other agricultural "villa" sites might have had a more indirect connection and may have served as intermediary links between the products of the hinterland and distribution from larger ports.

It is worth emphasizing the dual nature of such nodes: on the one hand, they facilitated the progress of long-distance distribution, while on the other hand they were essential components to the daily distribution and exchange that neighboring localities or distant regional centers engaged in for everyday needs. This regional chain of coastal sites would have facilitated the distribution of an extensive array of southern Argolid products to local and regional markets for the sole sake of commerce,[1015] constituting the "background noise" of the regular "low-scale" movement of goods that must have pre-existed and provided the framework from which larger-scale, long-distance distribution could develop,[1016] thus overlapping regional networks with the official *annona* routes of the Roman Empire. Finds of products in southern Argolid fabric in Athens should be seen within this context; Athens may have been one of the first ports of call for the north-bound, long-distance distribution of the LR Amphora 2, and it is reasonable to suggest

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[1013] See Orlandos 1956, 1957, 1977; Stikas 1960, 1961; Jameson, Runnels and van Andel 1994, p. 591, fig. E.9.
[1014] Kardulias 2000, p. 43; Kardulias, Gregory and Sawmiller 1995, p. 17
[1015] Wickham 2005, p. 781, also felt that finds of the LR Amphora 2, when appearing in the Aegean, are probably commercial in nature.
[1016] See Horden and Purcell 2000, especially their chapter 5. The impact of the LR Amphora 2 on long-distance exchange was the result of this "shipping lane" that was created by an ensemble of facilities along a well-defined route that transcended the capabilities of a single "microregion;" Horden and Purcell 2000, p. 137.

that the limited number of lamps, fine wares and plain wares found there may have moved as a form of secondary cargo for smaller-scale commercial distributions. Thus far, Athens is the farthest north that non-amphora products in southern Argolid fabric have been noted,[1017] and it is possible that ships crossing the Saronic Gulf had emptied such minor cargo at Athens (if not sooner) before taking on new cargoes by means of tramping or a similar process.[1018]

Narrowing the focus on these distribution networks, one can begin to see in increasing detail how all classes of southern Argolid ceramics were distributed on the regional scale. Lamps, fine wares, amphoras and plain wares, when appearing regionally, seem more often to have been a part of coastal distribution patterns (Map 2). Disseminated from the production sites in the southern Argolid, finds at Argos (35), Asine (41), Phourkari (50), Methana (38), Palaia Epidauros (37), Kenchreai (25), and Isthmia (24) testify to a primarily coastal pattern. Having reached Corinth (23) via Kenchreai, vessels in this fabric would have begun a second leg of their regional distribution in order to reach sites on the northern shore of the Perachora peninsula,[1019] the island of Makronisos (7), Thespiae (3), and (rarely) Delphi (1).

Some limited evidence attests the ware's regional distribution by land. The LR Amphora 2 and coarse ware finds found at the cave at Andritsa (39) would have had to have moved at least roughly 13 km from the coast up the Xavrias River Valley before being brought to higher ground. A more substantial inland journey would have faced the

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[1017] A published profile similar to that of a shallow basin in southern Argolid fabric found on the island of Keos, off the coast of Attica, might extend this distribution a little farther; cf. Sutton et al. 1991, p. 123, no. 64-7, fig. 5.13.
[1018] For the definition of tramping and its likelihood in antiquity, see the discussion of local and regional distribution networks as practiced over water in Chapter 1.
[1019] See Wiseman 1978, pp. 24, 34, for reports of "spirally-grooved" sherds at Dourachos and Asprokambos, which are most likely body sherds of combed LR Amphora 2 specimens.

LR Amphora 2 finds at Pyrgouthi (34), situated in the Berbati Valley within the Psili Rachi mountain range; among the finds were two completely reconstructed examples that were found inside the re-used tower among the various features dedicated to wine production.[1020] Their transportation inland to the site within the mountain valley (roughly 15 km inland from the modern port at Nauplio) might have required some effort. Finally, the presence of various lamps, plain wares and amphoras in southern Argolid fabric at Nemea would have represented the longest inland journey, having to have moved roughly 18 km from Corinth, but only after an initial maritime journey.

*The Movement of Other Regional and Local Wares*

This analysis of the mechanisms and routes that drove the distribution of products in southern Argolid fabric essentially presents the framework in which to discuss the distribution of the other local and regional ceramics that are found in the Panayia Field. These remaining wares essentially used the same routes and modes of transportation, but many of the details and the circumstances behind the movement of each differs from ware to ware.

<u>The Movement of Regional and Local Wares by Land</u>

Ceramics manufactured in Northeast Peloponnesian cooking fabric and LR Corinthian lamp fabric have been shown to have been well-distributed in the area from Isthmia to Argos (see above). Some water-borne transport may have occurred, especially

[1020] See Hjohlman 2005, p. 147, nos. 38-39, figs. 19-20, for the amphoras, and pp. 244-250 for the discussion of wine production. As these amphoras are generally assumed to have contained oil, it is unclear if oil was also being stored in the tower, if the amphoras were being re-used for wine production, or if they were acquired empty for the purpose of being used as a general-purpose storage container.

in regards to the (possible) presence of both wares at Argos, where they might have arrived by boat.[1021] However, the currently-observed absence of Northeast Peloponnesian cooking fabric within the Methana peninsula or on sites along the coastline of the southern Argolid speaks against heavy reliance on maritime routes for at least this ware. On the other hand, the presence of the fabric at such inland sites as Nemea and Pyrgouthi, additionally confirmed through petrographic analysis, strongly suggests movement by land. This implies the existence of land-based distribution networks that supplied local or regional markets with ceramic products that were distributed in their own right, and were not dependant on opportunistically taking advantage of the transportation of large bulk shipments. As the petrographic data revealed that the ceramic recipe of Northeast Peloponnesian cooking fabric was unchanged for the entirety of the period studied here, one can assume that the vessels manufactured in this fabric were of a trusted quality and were in such a demand that the cost of their distribution over land was completely off-set.

The movement of goods by land through the Corinthia and northern Argolid was facilitated by a dense network of roads that could make such distribution possible. The following discussion makes reference to the sites that appear on Map 2 as points of reference along theoretical routes. Connections between Corinth (23), Isthmia (24), Lechaion (22) and Kenchreai (25) have already been addressed above (Chapter 1), with the *diolkos* likely featuring prominently in such a network, as recently reassessed by D. Pettegrew.[1022] To access Tenea (32) and the northern face of the Psili Rachi mountain range that separates the Corinthia from the Argolid, one would take the route roughly due

[1021] See Slane 2014, pp. 127, 129, who postulates the movement of Northeast Peloponnesian cooking fabric by small sailing vessels such as caïques from their proposed origin within the Methana peninsula. See the discussion above regarding the origins of this ware.
[1022] Pettegrew 2011, 2014.

south from Corinth along the Xerias/Levkon Valley.[1023] While the mountain range may at first appear to be a detriment to the flow of goods over land, mountains were not necessarily impenetrable barriers, and regional interaction could still flow through them.[1024] In the case of the Psili Rachi, at least three, if not four, passes existed that would have allowed the determined merchant to distribute goods to either side.[1025] The major land route to Argos left Corinth in a southwesterly direction, roughly following the Longopotamos River towards Kleonai (29). Branches from this road served Nemea (28) and Phlious (27) before the main route entered the Tretos Pass, passing Mycenae (33), and entering the Argive Plain at its most northerly point. A shortcut through the pass was accessed via Agios Sostis (30), near the peak of Mt. Tretos, but was reserved for the more active and fit, and did not accommodate wheeled traffic.[1026] At least two other passes through these mountains are known, each having been associated with that known as the *kontoporeía* described in literary sources.[1027] One of these also begins at the modern village of Agios Vasilios (31) on the north side of the mountain range, but then ascended to the Kephalari Spring. The other pass, the easternmost, began south of Tenea (32) in the Ayionorion Pass, moving southwest through the Berbati Valley and past the site of Pyrgouthi (34), entering the Argolid Plain at a point further southeast than the exit from the Tretos Pass.[1028] The latter route through the Berbati Valley has been remarked as

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[1023] Wiseman 1978, pp. 88-93.
[1024] Horden and Purcell 2000, pp. 130-131.
[1025] This is not the place for an assessment of the identification of the routes as described in the literary sources, as numerous scholars have already treated the subject in full. Most notably, see Wiseman 1978. For a more recent analysis of the main route that connected Corinth to Kleonai and then to the Tretos Pass towards Argos, see Marchand 2009, with bibliography.
[1026] Wiseman 1978, p. 113-115; for the shortcut, see also Marchand 2009, p. 156.
[1027] See Wiseman 1978, p. 121-125; Wells 2002.
[1028] Wiseman 1978, p. 121-124; Wells 2002.

being unsuited for wheeled traffic,[1029] whereas wheel ruts were reported in the vicinity of the Kephalari Spring.[1030]

Either a land or sea route for the distribution of Attic products to Corinth seems reasonable, with a good deal of information known regarding the land routes crossing the Isthmus.[1031] The Skironian Road linked Corinth (23) to Athens (20) following the cliffs of the Saronic Gulf and was further widened under the emperor Hadrian (Strabo 9.1.4; Paus. 1.44.6-10).[1032] Another 'Saronic Road' linked Corinth with the site of Crommyon (18), before linking with the Skironian Road (Strabo 9.1.4; Plin. *HN* 4.7; Paus. 1.44.6-10, 2.1.3).[1033] Before the Hadrianic repairs to the Skironian Road, and then again after it evidently fell into disuse, the principle route through the Isthmus seems to have been the pass between the peaks of Gerania, the mountain range that separated Corinthian and Megarian territories in earlier periods.[1034] The bed of the old road was remarked at being on average 12 feet wide, and able to accommodate carts travelling from Megara (19) to the Isthmus.[1035]

Distribution between Corinth and Boiotia is better attested through maritime movements through the Gulf of Corinth (see below), but land routes connecting the two

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[1029] Wells 2002, p. 75.
[1030] Wiseman 1978, p. 118.
[1031] It is worth noting Adamsheck's observation that "surprisingly little Attic red slipped and stamped ware" was recovered during excavations at Corinth's eastern port at Kenchreai; see *Kenchreai* IV, p. 92. See also *Corinth* XVIII.2, p. 3, where K. Slane implies that the distribution of Attic ware in the Early and Middle Roman periods was primarily by land routes, noting that the other imported pottery dated to these centuries must have arrived by sea based on the lack of Attic and Argive pottery in the Sanctuary of Demeter at Corinth in the 1st and 2nd centuries, and the rarity of Attic pottery (except lamps) of the 3rd and 4th centuries.
[1032] See Wiseman 1978, p. 17, who believes that it was probably in disuse by the Late Roman period based on the fact that the principle route during the Ottoman period seems to have been through the Gerania pass. For more on the road, see also Hammond 1954, p. 105; Alcock [1993] 1996, p. 121.
[1033] See also Wiseman 1978, pp. 17-19.
[1034] Wiseman 1978, pp. 20-22.
[1035] Hammond 1954, pp. 105-107.

are also well-known.[1036] Documentary evidence during the Peloponnesian War indicates that the pass through the Gerania Mountains was also used in the major land route between the Peloponnese and Boiotia (Thuc. 1.105.3, 1.107.3, 1.108.2; see also Diod. Sic. 19.53-54).[1037] This was by way of connection with a roughly north-south route that joined the Gerania Mountains on its eastern side at modern Hani Derveni (16). This route went north through Megarian territory passing to the east of ancient Egosthena (9) (at modern Agios Vasilios), then north through Mount Cithaeron towards ancient Erythres (11), located just east of Plataea (10), and continuing onwards towards Thebes (4). The road was wide, well-graded, and even suitable for wheeled traffic.[1038] Other, more difficult, land routes include one that crossed Mount Cithaeron directly from Plataea (10), and another connecting Creusis (8) to Egosthena (9) along the coast of the Halcyonic Gulf, and then onwards to the coastal site of Pagae (15). This coastal route was unsuitable for wheeled traffic, often becoming little more than a one-man track.[1039] However, at least three tracks, wide enough for carts, did exist in the coastal plain between Egosthena and Pagae, bordered by the foothills of Mount Pateras to the east.[1040]

The road from Pagae (15) continued west along the north coast of the Perachora peninsula before turning south at Schinos (13) for Perachora (12), and then heading back east to modern Loutraki (17).[1041] Several instances of Late Roman remains have been noted along this route. Pottery dated as late as the 5th century as well as a built stone cist grave were found in the vicinity of the coastal site of Dourachos (14), just west of

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[1036] Alcock [1993] 1996, p. 121, fig. 40.
[1037] Cassander used the pass in his Peloponnesian campaign of 316 B. C. See also Wiseman 1978, p. 20.
[1038] Hammond 1954, pp. 103-108.
[1039] Hammond 1954, pp. 103-104.
[1040] Hammond 1954, p. 108.
[1041] Hammond 1954, p. 105; Wiseman 1978, pp. 22-37.

Pagae,[1042] and architectural remains were used to hypothesize the existence of a "settlement of considerable size" of the 4th to 6th century at the harbor of Schinos.[1043]

The presence of Boiotian RS bowls at the Athenian Agora and the presence of Attic ware in Boiotia (see above) indicate the movement of ceramic goods between these two regions. This distribution may have occurred in several ways. Distribution via Thebes (4) to Athens (20) may have occurred, possibly by sea and rounding the cape at Sounion. Alternatively, the roads that linked Boiotia to Corinth, namely the Skironian Road or the road through the Geranian Pass, may have been used to go in the other direction once in Megarian territory. A combination of maritime (see below) and land routes may also have been employed;[1044] some of this traffic may have been diverted to coastal sites within the smaller Halcyonic Gulf,[1045] where substantial Late Roman remains have been reported at sites at modern Dourachos (14) and Schinos (13),[1046] and the sites of Pagae (15) and Egosthena (9) have been shown to have been modest hubs connecting a road network in the northern Megarid.[1047] Port facilities at any of these sites could have provided a link between the commerce conducted in the Gulf of Corinth and the numerous land routes that led to Attica.

## The Movement of Regional and Local Wares by Water

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[1042] Wiseman 1978, p. 24. Wiseman notes that the finds were richer in the next valley west of Dourachos where he noted "pottery sherds of the 4th to 5th centuries after Christ: Late Roman Red Ware and spirally-grooved sherds were especially frequent." "Spirally-grooved" decoration can often be taken to mean the wavy combing seen on LR Amphora 2, or some pitchers manufactured in southern Argolid fabric.
[1043] Wiseman 1978, p. 30.
[1044] Note again the importance of the anchorage of Oropos in northern Attica from where a vital land-based supply route connected to Athens in the Classical Period; see Chapter 1.
[1045] In the early 10th century, Roman pilgrims heading for Jerusalem evidently sailed to the north shore of the Gulf of Corinth, then crossed Phokis and Boiotia by land in order take another ship sailing out of Athens; see Oikonomides 1992, p. 253.
[1046] Wiseman 1978, pp. 24, 30.
[1047] Hammond 1954, pp. 103-108.

The regional movement of southern Argolid fabric along coastal routes has already been demonstrated (see above), and it is possible that some of the Attic ware found in Corinth moved along similar routes. It is not unlikely that in the late 4th and early 5th century, ships heading towards Corinth may have first docked at Athens' port, Piraeus; being among the university towns of the Roman Empire, Late Roman Athens would undoubtedly have had much to attract merchants. The harbor facilities at Piraeus could also have proven useful when shipments of LR Amphora 2 began travelling to northern sites; water-borne regional connections with the southern Argolid are testified by the presence of that amphora as well as other 5th- to 6th-century wares in southern Argolid fabric in the Athenian Agora (see above).

Although land routes did link Corinth and Boiotia, archaeological evidence may better favor maritime routes that crossed the Gulf of Corinth for the distribution of Boiotian ceramics.[1048] Investigation of islands in the smaller Gulf of Domvrena, south of ancient Thisbe (5), by T. Gregory reveals that they may have served as "trade ports" along distribution routes. The island of Kouveli (6), closest to the shore, revealed finds of the 3rd to 7th century although the nature of the settlement was uncertain.[1049] Investigations at the site of Diporto (7) on the larger island of Makronisos, south of Kouveli, provided clearer results. Architectural remains led to the identification of 56 buildings, including substantial harbor facilities, an ecclesiastical complex, another small church, and residences.[1050] Pottery published from survey of the site includes AfRS, Hayes form 104, a flanged bowl in a fabric that is "encountered commonly around Askra" in Boiotia, a Boiotian RS bowl similar to **133**, ceramics from the southern Argolid

[1048] Such maritime connections are attested since the Classical period; see Rothaus 1995, p. 294.
[1049] Architectural features included the presence of a small church; see Gregory 1986, p. 289.
[1050] Gregory 1986, pp. 291-295.

that include a LR Amphora 2 and two deep basins, a triangular-rimmed stewpot with a profile as 6th-century forms in Northeast Peloponnesian cooking fabric, and another with parallels in Late Roman micaceous Aegean ware.[1051] Gregory interpreted this site as having a commercial function as a "port of trade," or emporium, where cargoes were normally brought and exchanged on their way to or from the interior of Boiotia.[1052] As most of the published pieces from the site have correspondences with material from the Panayia Field, a distribution network connecting Corinth and Boiotia seems likely. Furthermore, finds collected from the survey of the area of Thespiae in Boiotia also share several parallels with material from Diporto and the Panayia Field, including Boiotian fine wares, LR Amphora 2 and basins in southern Argolid fabric, and Attic RS gouged ware.[1053] Thus the distribution of Boiotian ceramics to Corinth, or the distribution of ceramics from the northeastern Peloponnese to Boiotia via Corinth, can be charted by maritime routes that used the available islands to facilitate commercial enterprises.[1054]

The Availability of Long-Distance Products within Regional and Local Networks

As the above routes and mechanisms distributed local and regional wares to Corinth, so too may these same routes have carried long-distance imports to rural consumers. Tramping, the maritime port-to-port commerce that moved local or regional goods, could also have provided an opportunity for the small-scale movements of long-

[1051] Gregory 1986, pp. 297-300, nos. 1-5, 7, 9-10, figs. 12-13, respectively.
[1052] Gregory 1986, pp. 302-303.
[1053] Personal observation of finds collected during the Leiden-Ljubljana Ancient Cities of Boeotia Project.
[1054] Wiseman 1978, pp. 31-32, additionally notes the finds from the island of Panayia, the largest island of the Kala Nisia ("Fair Islands") between the Gulf of Domvrena and the north coast of the Perachora peninsula, where pottery sherds "dated to the Hellenistic and Roman period," a coenobium of the 2nd century A.D., and the possible remains of an early Christian basilica were found.

distance goods disseminating from the major ports of call.[1055] Small-scale, local systems of exchange could carry these products beyond the main arteries of long-distance distribution, including territory not under Roman rule, or rural sites far from the official maritime routes.[1056] The occasional imported fine ware found on a rural site should be seen in this regard, especially those found on coastal sites.[1057]

A deficiency of long-distance imports seems to characterize inland sites in the immediate region. At the site of Nemea, no other imported fine wares are noted in the preliminary excavation reports besides the publication of a reportedly "rare example" of AfRS, Hayes form 104B from the early Christian house.[1058] A similar picture was seen in the survey of the Nemea Valley, where "Roman fine wares are notably rare" with the latest cited being AfRS, Hayes form 67 or 68.[1059] The investigators of the Nemea Valley Archaeological Project (NVAP) remarked that Nemea, during the historic period, was reliant on nearby urban sites for most of its ceramic materials with imports of all classes being rare; the difficulty of overland transport may have been a factor, but "no doubt other factors played a role in the apparent isolation of the Nemea region."[1060] The investigators were correct in postulating other factors, as the actual ease of land transport has already been demonstrated by Nemea's active consumption of wares manufactured in

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[1055] Horden and Purcell 2000, pp. 369-370; see also Braudel 1972, p. 104.
[1056] Horden and Purcell 2000, pp. 369-370; see also Lewit 2011.
[1057] See the regional distribution of AfRS and LRC discussed in the previous chapter. In addition to these fine wares, Cypriot RS (LRD) and imported amphoras were also recovered from some regional sites. For surveyed sites within the Methana peninsula, see Bowden and Gill 1997, p. 86, table 8.4, for CRS, Hayes forms 9A, 9B, 9B/C; and see pp. 87-88 for LR Amphoras 1 and 2. For the Eastern Korinthia Archaeological Survey, see Pettegrew 2007, tables 4, 13, and 2010, table 2, for instances of LR Amphora 1, and Palestinian amphoras. For Asine, see Höghammar 1984, no. 4292:1, fig. 8, for possibly CRS, Hayes form 7. Cypriot RS (LRD) also appears occasionally in Corinth; see Slane and Sanders 2005, p. 251, no. 1-13, fig. 3. For the penetration of Sagalassos RS in Athens and "sporadically at other places in the eastern Mediterranean," see Hayes 2005, p. 22.
[1058] Miller 1983, p. 86, n. 80, pl. 26:a.
[1059] Wright et al. 1990, p. 655, n. 189.
[1060] Wright et al. 1990, p. 658.

Northeast Peloponnesian cooking fabric (see above). A general lack of imports was also a feature of the finds at Pyrgouthi for the Late Roman (late 6th to early 7th century) period. Any imported fine wares found there were residual from the 4th and 5th century, although many "imitations of Late Antique red slip wares" made in Northeast Peloponnesian cooking fabric were present;[1061] Pyrgouthi did, however, manage to receive a small number of imported amphoras.[1062] No imported fine wares were noted in the context of the cave at Andritsa.[1063]

When AfRS returned to the northeastern Peloponnese after 533 several rural sites that had previously received the ware in the 4th- and 5th-century now lacked them completely in the late 6th and 7th century.[1064] In a previous study of Late Roman pottery from Argos, C. Abadie-Reynal had postulated that in the 6th century AfRS had become limited to coastal distribution, while LRC may have been more regionally distributed through small-scale, land-based distribution, such as through peddlers.[1065] The present evidence from the surrounding region does not seem to support this, as the distribution of these imported fine wares in the later 6th century seem to have primarily been meant for urban markets with only some diversions including the coastal sites which received them through their trickling movements from the major ports of call. The penetration of long-distance goods into rural, inland markets was therefore reliant on numerous factors; its

[1061] Hjohlman 2005, p. 236. The fabric was identified there as the medium coarse fabrics 2 and 3, but equated here with Northeast Peloponnesian cooking fabric.
[1062] Hjohlman 2005, pp. 142, 184, 223, nos. 28, 141, 264, figs. 16, 32, 51, 86.
[1063] Personal observation; see also Kormazopoulou and Hatzilazarou 2010.
[1064] For the attestation of similar trends in Rome and its rural hinterland, see Ward-Perkins 2005, pp. 107-108. In the Levant AfRS is found at coastal sites from whence it penetrated inland; Pentz 1992, p. 32, but noting that only a few different forms are found. Some attribute this inland presence to the affluence of the agricultural producers whose products shipped throughout the Mediterranean, while others interpret it as diversions from supply lines aimed at the armies of the eastern frontier; for agricultural production, see Kingsley 2001, pp. 57-58; for military supply, see Wickham 2005, pp. 716, 771. AfRS apparently had little trouble penetrating the rural hinterland of Cyprus in order to reach Kalavasos-*Kopetra*; see Rautman 2003, pp. 207-215
[1065] Abadie-Reynal 1989, p. 157.

presence or absence serves only as an indicator of the level of opportunistic connectivity to major distribution centers, and informs little on a site's integration in local and/or regional systems of distribution.

## CONCLUSION

In summary, the ceramic deposits from the Late Roman Panayia Field reveal that local and regional sources were increasingly supplying much of the ceramic wares found in the city of Corinth. Despite the diversity of geographic origins and each ware's different range of shapes that were imported into Corinth, a certain quality of manufacture and standardization seems to characterize each ware thus suggesting that they all belonged to the level of production achieved by nucleated workshops.[1066]

Ceramics from Attica were already arriving at the beginning of the period under analysis, either by maritime or, more likely, land routes. Glazed lamps and various red-slipped fine wares, with very few amphoras and plain wares, were imported in these early deposits; by the mid-5th century the glazed lamps gave way to post-glazing lamps, and the overall number of imports significantly diminished, but possibly continued to trickle in throughout the late 5th and into the 6th century.

Regional distribution with Boiotia was late to most fully develop, with Boiotian products only sporadically appearing here up to the early 6th century with a few occurrences of various closed vessels, fine ware bowls with vertical rims, and mugs. By the late 6th century, these products, including various fine ware bowls, amphoras, mugs,

[1066] Peacock 1982, pp. 9, 38-43; see again the discussion above regarding the manufacture of vessels in Northeast Peloponnesian cooking fabric at this level of production.

and lekythoi are regularly present, but never in such quantity as to pose any threat to other imported wares. By the end of the 7th century small numbers of Boiotian amphoras are still appearing in the Panayia Field, conveyed through the small-scale maritime networks that crossed the Corinthian Gulf.

Ceramics manufactured in southern Argolid fabric were also present at the beginning of the period under analysis, when they seem to be the source for plain ware basins and a few various amphora shapes. Through the course of the early 5th century the state-intensification of the olive oil industry prompted the manufacture of the LR Amphora 2 in which to ship it, which by the 6th century gained a strong presence in the Panayia Field. Through the course of the late 5th century, the reliance on plain wares from the southern Argolid diminishes but never fully vanishes, with a slight resurgence noted in the presence of plain bowls manufactured in a refined version of the fabric, along with small numbers of circular lamps and fine wares in the (mid- to late) 6th century. The LR Amphora 2 continues to appear in large numbers throughout the 7th century, along with small numbers of other classes of pottery. Distribution of this ware is complex due to its long-distance as well as regional character; maritime transport along a course of coastal facilities seems to have provided for much of its initial movement, as well as long-distance distribution from large centers such as Argos and Corinth. Land-based distribution to regional markets, likely emanating from these smaller ports, is also possible.

Ceramics manufactured in Northeast Peloponnesian cooking fabric represent a long ceramic tradition of potters who specialized in the manufacture of quality cooking wares, and some plain wares, throughout the Roman period. By the Late Roman period,

as the import of cooking wares decreased over the course of the 5th century, this ware became the sole source for this class of pottery, slowly taking over increasingly more shapes of amphoras and plain wares. By the 7th century, nearly all cooking and plain wares, and a large number of amphoras, are manufactured in this fabric. Although the exact source of this ware is unknown, it functionally served as the local ware at least for the sites of Corinth, Isthmia, Nemea and Pyrgouthi, and probably others, thus indicating that much of the ware's distribution must have occurred over land.

LR Corinthian lamp fabric began to be employed in ceramics by the mid-5th century when it appeared in lamps modelled on Corinthian and Attic prototypes. Circular lamps followed, as well as lamps based North African products that dominate the deposits from at least the mid-6th century to the early 7th. The variety of classes represented by this ware is limited; little evidence exists for amphoras, with a small number of coarse bowls appearing with the North African-modelled lamps, as well as a few small pitchers and lekythoi. Although typically considered a Corinthian fabric, the source is currently unknown and the mechanics of its movement are difficult to trace, but land-based distribution seems to have most often been the case.

Local and regional wares account for a sizeable amount of the ceramic material from the Late Roman Panayia Field, existing alongside those from long-distance sources discussed in the previous chapter. Their recognition is of vital importance if one is to take full account of the locally-important wares that regularly appeared in the Panayia Field, and in Corinth generally, but their recognition also has broader implications in the full illustration of how this Late Roman city interacted with its immediate and surrounding regions.

# CHAPTER V: FINDS CATALOGUE

## INTRODUCTION TO THE CATALOGUE

### *Selection Strategy*

The catalogue provides a thorough account of the ceramic classes and the distinct forms produced by each major ware identified in Chapters 3 and 4, as well as the illustration of various unidentified or less-attested fabrics whose presence seemed significant to their context or greater interpretation of the site. Repetition of the same form within the catalogue was generally avoided, with the best-preserved example often selected; exceptions were made when an example illustrated a significant variation in form or fabric as compared to another piece. More practical concerns resulted in the exclusion of some minor pieces.[1067]

The ceramic lots are not equally represented in the selection of pieces for illustration in the following catalogue, as priority was given mainly to those whose chronological integrity was most secure.[1068] The inclusion of some pieces from less secure lots, however, was occasionally made when examples displaying some unique quality were identified as being essential to providing a full account of the range of products present in the Panayia Field. As outlined in Chapter 2, certain periods in the

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[1067] The ultimate decision to exclude a piece may have occurred for various reasons, including a fragmentary condition that did not lend itself to illustration, or the lack of security felt regarding its identification and/or chronology. Some of the identifiable ceramics that were not catalogued receive some brief note in the text in order to at least attest their presence on the site (see Chapter 6).

[1068] Material that the excavators had been able to immediately associate with construction debris, that is, the clearly evident redeposition of broadly 5th-century material that was moved during the act of digging the foundation trenches of the bath and Long Building (see Chapter 2), received the least priority in this regard. Although a similar nature of later redeposition was ultimately realized in regard to the fills in the basement rooms of the Long Building, the character of the ceramic material is generally distinct from both the broadly 5th-century construction debris, and the late 6th- to early 7th-century material associated with the later abandonment of the site (see again, Chapter 2); furthermore, the better-definition of late 6th- to early 7th-century material allows for the identification of many of the intrusive elements in the Long Building fills. Thus, much of the Long Building material can be dated to the first half of the 6th century, a period otherwise poorly represented in the Panayia Field.

Panayia Field are better represented materially than others, due to an imbalance in the use of the site over the centuries; as a result, much of the illustrated material here dates to the 6th and 7th centuries.

*Explanatory Notes to the Catalogue*

Although several different numbering systems have been in use in the Corinth Museum since 1896, the finds from the excavations in the Panayia Field, beginning in 1995, represent use of only the latest version. Inventoried objects are labelled so as to identify the type of object (C Ceramic, L Lamp), the year of excavation (in four digits), and the next available number in a continuous sequence for that year (in three digits). Hence, C-1998-030, or L-1999-001. The number of lots is likewise numbered, with a four-digit year followed by a three-digit sequential number. Many pieces were not inventoried into the museum's collection and were left with their respective lots. These pieces were numbered in lot, and are so designated by an abbreviated version of the lot number, followed by the next number in sequence for that lot. Hence, the first piece numbered in Lot 1995-061 is 95-61:1. Some variation may be noted when referring to comparanda deriving from earlier excavations.[1069]

Measurements are given according to the conventions employed in previous Corinth publications of Roman lamps and pottery.[1070] Moldmade lamps have height (H.), length (L.) and width (W.), whereas pottery has height (H.), diameter of the resting surface (diam. base or diam. foot), and diameter of the highest point of the profile (diam. rim). The widest diameter (max. diam.) is often noted for closed vessels whose bodies are

[1069] For an outline of the development of the system, see *Corinth* XVIII.2, p. xv.
[1070] Cf. *Corinth* XVIII.2, p. xv.

significantly wider than their rims. For many fragmentary objects, the letter "p." preceding any dimension indicates "preserved," while "est." indicates the best estimate of a measurement based on the surviving condition, and ranges of measurements are employed in cases where enough is preserved to determine the greatest or lowest possible measurement. Profiles were originally drawn 1:1, and are illustrated here at 1:2 unless otherwise specified. Profiles accord to the degree of preservation of the individual object, with profiles reflected (both sides drawn) only in cases where over 50% of the diameter is preserved.

The major fabric groups were already described in Chapters 3 and 4, allowing the catalogue to make direct reference to those groups. Fabric identifications serve as sub-divisions within each ceramic class and are not repeated again within the individual catalogue entries if they conform to the general description. If a fabric has known variations (e.g. AfRS fabrics C, D, or E; Attic 1, 2, or 3), these are indicated within the catalogue entry. Only unidentified fabrics, or those of questionable identification, are described in detail within the catalogue entries, following the same manner of description employed in Chapters 3 and 4. Colors are described in individual entries of known wares when variations commonly occurred, as in the case of vessels manufactured in Northeast Peloponnesian cooking fabric, using the *Munsell Soil Color Charts*. Slips and other decorative features are described as applicable.

Comparanda and references listed under individual pieces are limited to publications of the same object elsewhere or to identify parallels with a published typological series or well-known catalogue (e.g. *LRP*, or *Agora* V; see listed abbreviations below). In instances where a specific piece used in a typological series has

been republished elsewhere, that reference is also given.[1071] Finally, references to pieces that contribute a new form, refinement, or variation of an already accepted typology are also included. References to comparanda found at other sites, or additional un-catalogued finds from the Panayia Field as well as discussion of a form's relative frequency on the site, are discussed in Chapter 6.

Due to the number of pieces, catalogue entries follow an abbreviated format. Dates are provided for both the lot (or context) from which each piece was recovered, as well as the likely date of the catalogued piece itself, based on contextual evidence as well as consideration of published typologies and other scholarship (discussed more thoroughly in Chapter 6).[1072]

The following abbreviations are employed for citing the relevant works in the catalogue entries:

*Agora* V = H. S. Robinson, *Pottery of the Roman Period: Chronology* (*Agora* V), Princeton 1959.

*Agora VII* = J. Perlzweig, *Lamps of the Roman Period, First to Seventh Century after Christ*, Princeton 1961.

*Agora* XXXII = J. W. Hayes, *Roman Pottery: Fine-Ware Imports* (*Agora* XXXII), Princeton 2008.

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[1071] This most often applies to fine wares published by J. Hayes in *LRP* that were later republished in Slane and Sanders 2005, or *Agora* XXXII.

[1072] The dating of Late Roman fine wares (most importantly here, AfRS and LRC) has progressed a great deal since J. Hayes published *LRP* in 1972, followed by *Supplement* in 1980; Hayes (1998, pp. 9-10) himself admits that his original work now falls short of reflecting what decades of new research has brought to light. Hayes' work in *Agora* XXXII, although an advancement from *LRP*, was unfortunately not able to include some of the most recent reassessments, especially in regards to the start-date of LRC (see discussion of the ware in Chapter 3). Reynolds 1995 provided fresh insight on the dating of many forms of AfRS and LRC as they appeared in the west, and Bonifay 2004 now stands as a reliable reference for Late Roman AfRS forms; a similar, dedicated re-assessment of LRC is badly needed. New research continues to refine the chronology of Late Roman fine wares; one should consult Cau, Reynolds and Bonifay 2011 for some preliminary remarks. However the chronology may have since been modified, *LRP* continues to serve as the standard typological reference by which to refer to Late Roman fine wares; the catalogue provided in the present chapter will often refer to *LRP* for illustrative comparanda for the purpose of identification, but the dating of specific pieces (discussed more fully in Chapter 6) is more often reliant on the newer sources listed above.

Bonifay, M. 2004. *Etudes sur la céramique romaine tardive d'Afrique* (*BAR-IS* 1301), Oxford.

*Corinth* IV.2 = O. Broneer, *Terracotta Lamps* (*Corinth* IV.2), Cambridge, Mass., 1930.

*Corinth* XVIII.2 = K. W. Slane, *The Sanctuary of Demeter and Kore: The Roman Pottery and Lamps* (*Corinth* XVIII.2), Princeton 1990.

Keay, S. J. 1984. *Late Roman Amphorae in the Western Mediterranean: A Typology and Economic Study, the Catalan Evidence* (*BAR-IS* 196), Oxford.

*LRP* = Hayes, J. W. 1972. *Late Roman Pottery*, London.

Majcherek, G. 1995. "Gazan Amphorae: Typology Reconsidered," in *Hellenistic and Roman Pottery in the Eastern Mediterranean: Advances in Scientific Studies. Acts of the II Nieborów Pottery Workshop, Nieborów, 18-20 December 1993*, ed. H. Meyza and J. Młynarczyk, Warsaw, pp. 163-178.

Sanders, G. D. R. 1999. "A Late Roman Bath at Corinth: Excavations in the Panayia Field, 1995-1996." *Hesperia* 68, pp. 441-480.

*Saraçhane* = J. W. Hayes, *Excavations at Saraçhane in Istanbul II: The Pottery*, Princeton 1992.

Slane, K. W. and G. D. R. Sanders. 2005. "Corinth: Late Roman Horizons." *Hesperia* 74, pp. 243-97.

*Supplement* = Hayes, J. W. 1980. *Supplement to Late Roman Pottery*, London.

*Arrangement of the Conspectus and the Catalogue*

The arrangement of the conspectus and the catalogue follows three degrees of division: 1.) class; 2.) fabric; and 3.) form/shape.

The presentation of the catalogued pieces is first arranged by class: lamps, fine ware, amphoras, cooking ware, and plain ware. Arrangement by class is in keeping with the majority of published ceramic reports and is intended to facilitate navigation through

the catalogue. Following previous Corinth publications,[1073] the catalogue begins with lamps before proceeding to cover the wider range of pottery. Understanding of the types and series of lamps discovered at Corinth has progressed rapidly since the 1990s and a reliable chronology has been developed for this type of artifact. The lamps are then followed by the much better understood classes of fine ware and amphoras, thereby beginning the catalogue with the three classes that best illustrate the chronological limits of this study.

Of critical importance to the aims of this analysis is the presentation of sub-groups of each class by fabric. Thanks to the advancements in ceramic studies at Corinth and fabric analysis in general, the potential to identify the products of a given industry, spanning various classes, is now possible. Fabric sub-divisions are organized geographically, with long-distance imports presented first before moving to regional, then local, fabrics. The major sources of the ceramic products available to the Late Roman Panayia Field for a particular class are thus presented at a glance.

Individual pieces within each fabric sub-group are then arranged as follows. Vessels are arranged by form where reliable, published typologies are available; if not, they are arranged by shape (open to closed forms), presented within each category of shape chronologically, to the best degree possible, with the aim of illustrating any instances of typological development. In this way, the variety of products manufactured by the various centers that supplied the Panayia Field are thus efficiently presented.

[1073] See *Corinth* XVIII.2; Slane and Sanders 2005.

## CONSPECTUS OF THE POTTERY

The following summarizes the catalogue entries by ware and fabric sub-group, in the order in which they appear.[1074]



[1074] The following is based loosely on the conspectus in *Corinth* VII.3, pp. 12-17.

# THE CATALOGUE

## *Lamps*

## Attic Fabrics

### *Glazed lamps*

**1.** Lot 04-52:1 Fig. 1, Pl. 11

Date of lot: early 5th century.

Attic glazed lamp, handle, partial rim, and fragmentary lower body and base. Flat, plain rim marked with double grooves; traces of diagonal grooves flanking nozzle; partially-preserved sunken discus with traces of decoration. p. H. (to rim) 0.033, (to handle) 0.051, p. L. 0.104 m. Attic 2. Thick red glaze covers exterior and drips down through the nozzle. For similar rims, cf. *Agora* VII, p. 123, no. 830, pl. 18; p. 127, nos. 889-895, pl. 20. Date: probably second half of the 4th century.

**2.** Lot 00-18:24 Pl. 11

Date of lot: second quarter to mid-5th century.

Attic glazed lamp, handle and partial rim. Plain flat rim with traces of double grooves framing discus. p. H. (suture to handle) 0.020 m. Attic 1. Fine, red slip covers exterior. Date: probably second half of the 4th century.

**3.** L-1996-002 Pl. 11

Lot 1996-070, dated mid-5th century.

Attic glazed lamp, base to rim, discus and handle. Flat rim with herringbone pattern; sunken discus with fragmentary twelve-petal rosette. Flat base with traces of signature (probably: A) within two concentric grooves. p. L. 0.062, p. W. 0.058, p. H. (to rim) 0.034, (to handle) 0.047 m. Attic 3. Thick slip overall, but becoming inconsistently thinner on portions of the body. Cf. *Corinth* XVIII.2, pp. 34-35, no. 55, fig. 2, pl. 5. Date: second half of the 4th century.

**4.** Lot 96-45:39 Pl. 11

Date of lot: second quarter of the 5th century to ca. 450.

Attic glazed lamp, partial discus, wick-hole, and partial nozzle. Sunken discus with fragmentary twelve-petal rosette; transverse bar before the nozzle. Attic 3. Thick, dark red metallic slip covers exterior. Date: early 5th century.

**5.** Lot 96-45:35 Pl. 11

Date of lot: second quarter of the 5th century to ca. 450.

Attic glazed lamp, handle, partial rim and discus. Sloping rim with traces of raised band and possible herringbone pattern; discus with traces of indeterminate pattern. p. H. 0.0435 m. Attic 3. Thick, dark red metallic slip covers exterior. Date: late 4th to early 5th century.

**6.** Lot 04-52:5 Pl. 11

Date of lot: early 5th century.

Attic glazed lamp, lower handle and base fragment. Attic 2. Slip inconsistently applied to exterior, with a mottled look exhibiting 'bare' patches and thick, dark, metallic red 'drips.' Date: early 5th century.

### *Post-glazing lamps*

**7.** Lot 98-15:10 Pl. 11

Date of lot: ca. 500.

Attic post-glazing lamp, upper body with preserved handle, shoulder and plain, sunken discus with central fill-hole. Sloping rim with impressed (re-tooled?) dots bordered within inconsistent lines. p. H. (to rim) 0.018, (to handle) 0.025, p. L. 0.050 m. Attic 3. For similar, but with decorated discus, cf. *Corinth* IV.2, p. 267, no. 1289, pl. XIX. Date: second quarter/mid-5th century to ca. 500.

**8.** L-1998-001 Pl. 11

Notebook 908, basket 83, dated late 7th to 9th century.

Attic post-glazing lamp, complete (but misshapen). Traces on base indicate 'tear-shaped' double-grooves and traces of "XIONES" signature. Flat rim with herringbone pattern, and undecorated sunken discus with five fill-holes arranged in "X" pattern. H. (to rim) 0.026 (on right side), 0.034 (left side), H. (to handle) 0.045, L. 0.099, W. 0.067 m. Attic 3, fired light. Possibly cf. *Agora* VII, p. 187, nos. 2688-2690, pl. 42. Date: second quarter/mid-5th century to ca. 500.

**9.** Lot 01-03:3 (P-83) Fig. 1, Pls. 6.2, 11

Date of lot: mid-6th to early 7th century.

Attic post-glazing lamp, complete rear-half, base to handle, with shoulders and partial plain, sunken discus with central fill-hole. Encircled signature on base reads "XIO[NES]." Flat rim decorated with simple rosettes. The lamp exhibits manufacturing errors, resulting in the right side being lower than left, and the right side appearing overfired with the decorative elements greatly obscured. Max. W. 0.064, H. 0.045 m. Attic 3. Date: second quarter/mid-5th century to ca. 500.

**10.** Lot 97-51:4 Pl. 11

Date of lot: first half of the 6th century.

Attic post-glazing (?) lamp, base. Base bears a signature (?): central impressed dot surrounded by at least four other dots within an impressed, concentric circle. Attic 3 (overfired)? Dark gray fabric and surfaces, with very thin, dark reddish brown interior surface; exterior surface possibly slightly vitrified (?). Frequent very fine elusive sparkling bits (direct sunlight); rare very fine rounded white grits; rare very fine rounded black grains; rare fine sub-rounded translucent gray clumps; frequent very fine to fine sub-rounded voids. Granular break; medium hard fabric. For similar markings on base, cf. Garnett 1975, p. 181, no. 21, fig. 1. Date: second quarter/mid-5th century to ca. 500.

## Southern Argolid Fabric

**11.** Lot 98-24:2 Pl. 11

Date of lot: later redeposition of primarily 6th-century material.

Lamp, handle, rim and partial discus. Plain, rounded rim followed by double band of raised dots separated by raised lines. Slightly concave discus, decorated with ray pattern with four raised dots arranged in a square between the interstices of each point; possible traces of a central fill-hole. Thin, flaking red slip over exterior. p. L. 0.083, p. H. 0.041 m. Date: unknown, possibly mid-6th century.

**12.** Lot 95-61:92 Pls. 7.3, 11

Date of lot: late 6th century.

Lamp, handle, rim and partial discus. Wide rim decorated with (very worn) rosettes. Sunken discus decorated with widely-spaced rays. p. H. 0.023 m. Date: late 6th century (or earlier?).

## LR Corinthian Lamp Fabric

### *LR Corinthian lamps, early types*

**13.** Lot 00-07:15 Pl. 9.9, 12

Date of lot: second quarter of the 5th century to ca. 450.

LR Corinthian lamp, handle to base. Handle terminates in ornate leaf/heart at base. p. H. (base to suture) 0.028 m. Unslipped, but possible thin self-slip on exterior. Date: second quarter of the 5th century to ca. 450.

**14.** L-1996-003 Pl. 12

Lot 1996-070, dated mid-5th century.

LR Corinthian lamp (interpretation Attic post-glazing), complete except nozzle tip. Slightly sloping rim with traces of herring-bone (?) pattern and rectangular, centrally-placed lateral panels. Sunken discus with shallow petal pattern and central fill-hole. H. (to rim) 0.030, (to handle) 0.039, L. 0.081, W. 0.064 m. Date: mid-5th century.

**15.** Lot 98-15:9 Pl. 12

Date of lot: ca. 500.

LR Corinthian lamp (interpretation Attic post-glazing), complete base and partial handle. Christian graffito/monogram on flat, tear-shaped base. L. 0.076 m. Cf. *Corinth* IV.2, p. 219, no. 847, fig. 152; cf. also Garnett 1975, p. 181, nos. 16-17, fig. 1. Date: ca. 500, or earlier.

**16.** Lot 01-35:1 Pl. 12

Date of lot: first half of the 6th century.

LR Corinthian lamp, base and lower body. Flat base decorated with large encircled rosette, encircled again within a simple wreath. Herring-bone pattern noted on lower handle; lower nozzle articulated with incised borders filled with impressed dots. p. L. 0.072, p. H. 0.017, D. base 0.040 m. Date: first half of the 6th century, or earlier.

**17.** L-2002-002 Pl. 12

Lot 2002-011, dated first half of the 6th century (with intrusions?).

LR Corinthian lamp, complete. Flat, round base with three concentric circles and abbreviated Chi-Rho (six-armed asterisk) within; pair of double-incised line emanates diagonally from the base beneath the nozzle; nearly flat rim decorated with row of raised pellets and central square panel; sunken discus with two fill holes and decorated with a simple cross, the arms of which terminate in transverse bars; sunken channel with one wick hole connects discus to nozzle; two small impressed circles flank the channel and three are placed at the front of the handle; unpierced handle with three lines. H. (to rim) 0.034, (to handle) 0.051, L. 0.099, W. 0.075 m. Cf. *Corinth* IV.2, pp. 222-223, nos. 883-888, figs. 153-154, pl. XIII, but all with plain discuses; for signature, cf. also Garnett 1975, p. 181, no. 42. Date: first half of the 6th century, or earlier.

**18.** Lot 02-11:2 Pl. 12

Date of lot: first half of the 6th century (with intrusions?).

LR Corinthian lamp, partial rim and discus preserving two fill holes. Flat rim decorated with vines and central rosette; sunken discus decorated with depiction of gladiator facing left. p. L. 0.057 m. Cf. *Corinth* IV.2, p. 256, nos. 1192, 1193, fig. 179; *Agora* VII, p. 98, no. 320, pl. 9; Garnett 1975, p. 189, no. 1, pl. 43. Date: first half of the 6th century, or earlier.

**19.** Lot 02-04:2 Pl. 12

Date of lot: mid-6th century.

LR Corinthian lamp, handle, rim and discus with two wick holes. Slightly sloping rim decorated with tendril (?) motifs; solid, unpierced handle with webbing; sunken discus decorated with depiction of Eros to right with torch. p. H. 0.015; p. L. 0.065 m. Probably LR Corinthian lamp fabric. Date: mid-6th century, or earlier.

**20.** Lot 99-38:18 Pl. 12

Date of lot: later redeposition of primarily 6th-century material.

LR Corinthian lamp (interpretation Attic post-glazing), upper handle with partial shoulders and discus. Flat rim decorated with wreath pattern, sunken discus with traces of possible ray pattern. p. H. (suture to handle) 0.017 m. Date: probably mid-5th century.

**21.** Lot 98-23:2 Pl. 12

Date of lot: later redeposition of primarily 6th-century material.

LR Corinthian lamp, base to discus. Sloping, patterned rim (very worn) decorated with a band of rosettes (?), interrupted at mid-rim by two lateral raised bars. Sunken discus (partially preserved), possible traces of a cross. H. (base to rim) 0.024, p. L. 0.065 m. Date: possibly mid-6th century (or later?).

**22.** L-1998-002 Pl. 12

Lot 1998-021, later redeposition of primarily 6th-century material.

LR Corinthian lamp, interpretation African (?), complete. Rim decorated with outer row of slanting rays with inner row of concentric circles. Small, sunken undecorated discus with central fill-hole

(partially preserved). Diam. base 0.025, H. (to rim) 0.025, (to handle) 0.043, L. 0.087, max. W. 0.066 m. Date: probably mid-6th century.

### *LR Corinthian lamps, North African interpretations*

**23.** L-1999-001 Pl. 13

Lot 1999-007, later redeposition of primarily 6th-century material.

LR Corinthian lamp, interpretation African, near-complete (partial nozzle). Flat rim with sunken panel filled with rows of 'spades.' Sunken discus decorated with ornate jeweled Chi-Rho with double fill-holes equally placed on the each side. H. (to rim) 0.026, (to handle) 0.035, p. L. 0.083, max. W. 0.053 m. Date: probably second half of the 6th century.

**24.** Lot 01-11:21 Fig. 1, Pl. 13

Lot 2001-011, baskets 18, 20, dated late 6th century.

LR Corinthian lamp, interpretation African, near-complete (missing handle). Flat rim decorated with wreath motif. Sunken discus decorated with jeweled cross and central fill-hole. H. (base to rim) 0.027, L. 0.106, max. W. 0.063 m. For another example, cf. **25**; possibly cf. Slane and Sanders 2005, p. 266, nos. 3-1, 3-2, fig. 10. Date: late 6th century, or earlier.

**25.** Lot 95-65:5 Pl. 12

Date of lot: late 6th to early 7th century.

LR Corinthian lamp, interpretation African, handle with partial rim and discus. Flat rim with wreath motif; sunken discus with central fill-hole decorated with jeweled cross. H. (handle) 0.021, p. W. 0.062 m. Cf. previous. Date: late 6th to early 7th century, or earlier.

**26.** Lot 01-10:20 Pl. 12

Date of lot: late 6th to early 7th century.

LR Corinthian lamp, interpretation African (?), handle and rim. Flat, depressed rim panel containing undulating vine-and-cluster relief decoration. H. (handle) 0.021 m. For similar elongated handle and flat, sunken rim panel, cf. **27**; for another lamp with depressed, flat rim, cf. **32**. Date: late 6th to early 7th century, or earlier.

**27.** Lot 01-09:5 Pl. 12

Date of lot: late 6th to early 7th century.

LR Corinthian lamp, interpretation African, handle and rim. Depressed rim with stamped decoration includes palm tree and bird-of-paradise. H. (handle) 0.027 m. LR Corinthian lamp fabric, overfired (?) with dark gray surface. Cf. previous. Date: late 6th to early 7th century, or earlier.

## Various and Unidentified Fabrics

**28.** Lot 02-11:1 Fig. 1, Pl. 13

Date of lot: first half of the 6th century (with intrusions?).

LR Corinthian lamp, near-complete, but much of the surface of the lower body has completely flaked off. Sloping rim with very worn raised decoration; sunken discus with central fill-hole and decorated with a ray pattern; unpierced, semi-round handle with webbing. p. L. 0.077, H. (to rim) 0.026, (to handle) 0.038, W. 0.065 m. Corinthian buff fabric. Yellow (paler than 10YR 7/6) surfaces with traces of a reddish yellow (5YR 6/6) interior core. Rare, elusive, fine sparkling flakes; few very fine sub-rounded dark grits; rare very fine sub-rounded red pellets; rare fine sub-rounded (calcareous?) white lumps; few very fine to fine sub-rounded and elongated voids. Granular and laminar breaks; soft fabric. Possibly cf. Garnett 1975, p. 190, no. 6, pl. 43, for the original decorative scheme. Date: probably mid-5th century.

**29.** L-1998-003 Pl. 13

Notebook 908, basket 94, dated early 6th century.

Glazed lamp, base with signature (Chi-Rho + upsilon, "Chry"). p. H. 0.022, p. W. 0.074m. Brown (7.5YR 5/2) (nearly gray, overfired?) fabric; near-black interior; thick slip on exterior ranges from weak red (10R 5/3) to dark reddish gray (10R 4/1) to near-black. Few to frequent fine sparkling bits; few fine sub-

rounded calcareous white lumps (rare spalling on interior); rare to few fine rounded black grains; rare to few very fine to fine rounded red inclusions; frequent very fine to fine voids. Granular to conchoidal break; medium hard fabric. Date: unknown.

**30.** Lot 98-22:12 Pl. 13

Date of lot: later redeposition of primarily 6th-century material.

Lamp (interpretation Attic post-glazing?), handle, rim and partial discus. Shallow sunken panel on top of rim filled with row of concentric circles in relief; sunken discus with traces of decoration. p. H. (suture to handle) 0.030 m. Possibly LR Corinthian lamp fabric (?). Red (2.5YR 5/6) fabric. Reddish brown (approx. 2.5YR 5/3) slip on exterior. Overall, the fabric is superficially similar to Late Roman Corinthian red fabric, differentiated only by the presence and amount of sparkling flakes. Frequent to common fine sparkling flakes (on clean surface); few to rare fine to small sub-rounded calcareous white lumps; rare to few fine rounded black grains; frequent fine sub-rounded gray inclusions; few fine sub-rounded voids. Granular break; medium hard fabric. Possibly an interpretation of Attic post-glazing lamps as **7**? Date: mid-5th century or later.

**31.** Lot 95-61:60 Pl. 13

Date of lot: late 6th century.

Lamp, interpretation African, body, rim and handle with partial discus. Wide, flat rim with wreath motif. Slightly sunken discus with traces of jeweled cross. Est. H. 0.050, p. L. 0.078 m. Yellowish red (5YR 5/8), with light red (slightly darker than 2.5YR 6/6) exterior surface. Frequent fine to small rounded grayish-blue inclusions and sparkling bits; few small sub-rounded white grits; rare small rounded black grains; few fine rounded yellowish inclusions; few very fine to fine sub-rounded voids. Hackly break; medium hard fabric. Probably modelled on the same prototypes as **24** and **25**. Date: late 6th century.

**32.** Lot 97-57:18 Fig. 1, Pl. 13

Date of lot: mid- to third quarter of the 7th century.

Lamp, handle and partial discus. Depressed rim with stylistic wreathes; sunken discus with traces of a jeweled cross. p. H. (to rim) 0.027, (to handle) 0.044 m. Boiotian fabric? Reddish yellow (7.5YR 6/6) fabric, becoming slightly redder towards exterior; reddish yellow surfaces (between 5YR 6/6 and 6/8). Few fine sparkling bits; few fine sub-rounded calcareous white lumps; few fine rounded black grains; rare fine rounded red grains; rare fine sub-rounded gray inclusions; few fine sub-rounded voids; few fine to small elongated voids. Conchoidal, slightly granular break; medium hard fabric. For roughly similar lamps with depressed flat rims, cf. **26** and **27**. Date: 6th to early 7th century.

**33.** L-1999-002 Pl. 13

Lot 1999-038, later redeposition of primarily 6th-century material.

Lamp, possibly from Asia Minor, complete but missing central portion of discus. Plain base; sloping rim with double row of continuous globules; flat, raised band frames sunken discus; four flat, raised bars connect discus to nozzle; plain unpierced handle. H. (to rim) 0.025, (to handle) 0.032, L. 0.090, max. W. 0.062 m. Yellowish red (5YR 5/6) fabric and surfaces; blackening (burning) on nozzle, continuing onto the rims. Abundant fine to small silver and gold sparkling flakes; frequent very fine rounded black grains; few fine to small angular translucent gray chips; rare fine to small sub-rounded calcareous white lumps spalling on the surfaces; two large sub-rounded/angular clay pellets spalling on the bottom surface (same color as fabric); few fine sub-rounded voids. Granular break; medium hard fabric. Cf. *Saraçhane*, pp. 80-84, nos. 1-7, pl. 18; *Agora* VII, p. 192, nos. 2807-2817, pls. 12, 44. Date: late 5th to 6th century.

## *Fine Wares*

### African Red Slip (AfRS)

#### *Hayes' forms*

**34.** Lot 98-15:27 Fig. 1

Date of lot: ca. 500.

Large dish, Hayes form 50B, rim. Diam. rim 0.260 m, or greater. AfRS fabric D. Cf. *LRP*, pp. 71-73, nos. 50.56, fig. 12; republished, *Agora* XXXII, p. 221, no. 995, fig. 32. Date: early 5th century.

**35.** Lot 96-45:27a-b Fig. 1
Date of lot: second quarter of the 5th century to ca. 450.
Bowl, Hayes form 53B, rim to near-base, with non-joining rim. p. H. 0.033, diam. rim 0.150-0.170 m. AfRS fabric C. Cf. *LRP*, pp. 80, 82, no. 53.18, fig. 13, republished, *Agora* XXXII, p. 223, no. 1044, fig. 32, pl. 52; cf. also *Saraçhane*, p. 93, no. 11.1, fig. 32. Date: early 5th century.

**36.** Lot 98-15:24a-c Fig. 1, Pl. 13
Date of lot: ca. 500.
Bowl, Hayes form 53B, rim, base and floor fragment. Diam. base ca. 0.060-0.070, diam. rim 0.180-0.240 m. AfRS fabric C. Cf. previous. Date: early 5th century.

**37.** Lot 05-07:1 Fig. 1
Date of lot: early 4th with first half of the 5th century.
Flat-based dish, Hayes form 59B, rim and upper body. Diam. rim 0.340 m. AfRS fabric D. Cf. *LRP*, pp. 97, 100, no. 59.9, fig. 15. Date: early 5th century.

**38.** Lot 98-13:1 Fig. 1
Date of lot: first half of the 6th century.
Flat-based dish, Hayes form 59B, rim to base. Diam. base 0.200, H. 0.033, diam. rim 0.320-0.350 m. AfRS fabric D. Cf. *LRP*, pp. 99-100, no. 59.17, fig. 15, republished, *Agora* XXXII, p. 224, no. 1055, fig. 33. Date: early 5th century.

**39.** Lot 04-02:2 Fig. 1
Date of lot: late 4th century (with Middle Roman material).
Flat-based dish, Hayes form 61A, rim. Est. diam. rim 0.150-0.200 m. AfRS fabric D. Cf. *LRP*, pp. 103, 107, no. 61.21, fig. 16; for similar profile but larger diameter, cf. Bonifay 2004, p. 167, fig. 90:3, type 37 A/B2 (Hayes form 61 A/B). Date: late 4th century.

**40.** Lot 96-39:1 Fig. 1
Date of lot: mid-5th century.
Flat-based dish, Hayes form 61B, rim. Diam. rim 0.310-0.330 m. AfRS fabric D. Cf. *LRP*, pp. 105, 107, no. 61.30, fig. 16; Bonifay 2004, p. 167, 170, fig. 90:23, type 38 B2 (Hayes form 61B). Date: first half of the 5th century.

**41.** Lot 95-61:105 Fig. 2
Date of lot: late 6th century.
Large plate/bowl (or dish), Hayes form 66/68 (or 76), rim. Diam. rim 0.380-0.430 m. AfRS fabric E. Possibly cf. *LRP*, p. 112, no. 66.1, fig. 18, or p. 117, no. 68.4, fig. 20; for a closer parallel, cf. Bonifay 2004, pp. 199, 201, fig. 106:1, type 71 (Hayes form 76, Sidi Jdidi 3 variant). Date: late 4th to second half of the 5th century.

**42.** Lot 96-70:7 Fig. 2
Date of lot: mid-5th century.
Large bowl, Hayes form 67, rim and upper body. Diam. rim 0.360 m. AfRS fabric D. Cf. *LRP*, pp. 113, 116, no. 67.6, fig. 19; Bonifay 2004, pp. 171, 173, fig. 92:1, type 41 A (Hayes form 67). Date: late 4th century.

**43.** Lot 04-07:1 Fig. 2
Date of lot: second quarter to mid-5th century.
Large bowl, Hayes form 68, rim. Diam. rim 0.380-0.400 m. AfRS fabric D. Cf. *LRP*, pp. 117, no. 68.4, fig. 20. Date: late 4th to early 5th century.

**44.** C-1997-069 Fig. 2

Notebook 892, basket 106, dated mid-5th century.

Small bowl, Hayes form 73A, rim to base. Diam. base, 0.060, H. 0.046, diam. rim 0.170-0.180 m. AfRS fabric D (slightly finer version?). Cf. *LRP*, pp. 123-124, no. 73.2; fig. 21. Date: first half of the 5th century.

**45.** C-1998-028 Fig. 2

Lot 1998-022, later redeposition of primarily 6th-century material.

Large dish, Hayes form 88, rim. Diam. rim 0.380 m. AfRS fabric D. Cf. *LRP*, p. 136, no. 88.1, fig. 24, republished, *Agora* XXXII, p. 230, no. 1134, fig. 35; cf. also Bonifay 2004, pp. 175, 177, fig. 93:10, type 46 B (Hayes form 88). Date: second quarter to mid-6th century.

**46.** Lot 98-29:3 Fig. 2

Date of lot: later redeposition of primarily 6th-century material.

Large dish, Hayes form 88, rim and upper body. Diam. rim 0.380-0.400 m. AfRS fabric D. Cf. previous. Date: second quarter to mid-6th century.

**47.** Lot 99-07:1 Fig. 2

Date of lot: later redeposition of primarily 6th-century material.

Flanged bowl, Hayes form 91B (late), rim and upper body. Diam. rim 0.160 m. AfRS fabric D. Cf. Bonifay 2004, p. 179, fig. 95:3, type 51 (Hayes form 91B late). Date: end of the 5th to first half of the 6th century.

**48.** Lot 97-52:2 Fig. 2

Date of lot: first half of the 6th century.

Large bowl, Hayes form 93B (small version?), rim. Diam. rim 0.160-0.180 m. AfRS fabric D. For general profile, cf. *LRP*, pp. 147-148, nos. 93.19, 93.21, fig. 27, but with diameters greater than this piece; both republished in *Agora* XXXII, p. 231, nos. 1143 and 1144, respectively, fig. 36. Date: probably first half of the 6th century.

**49.** C-1999-036 Fig. 3, Pl. 1.2

Lot 1999-044 (Well 1999-001), dated mid-3rd century (with 6th century intrusions).

Bowl, Hayes form 94, near-complete. Diam. base, 0.086, H. 0.058, diam. rim 0.154 m. AfRS fabric D. Cf. *LRP*, p. 148, no. 94.1, fig. 27. Date: late 5th to mid-6th century.

**50.** Lot 98-29:4 Fig. 2

Date of lot: later redeposition of primarily 6th-century material.

Bowl, Hayes form 99A or B, rim. Diam. rim 0.180-0.200 m. AfRS fabric D. Cf. *LRP*, pp. 153, 155, no. 99.13, fig. 28, republished *Agora* XXXII, p. 232, no. 1153, fig. 36, pl. 56 (form 99B); Bonifay 2004, p. 181, fig. 96:2, type 55 (Hayes form 99A). Date: end of the 5th to mid-6th century.

**51.** C-1997-043 Fig. 2

Lot 1997-057, dated mid- to third quarter of the 7th century.

Bowl, Hayes form 99B, rim. Diam. rim 0.175-0.200 m. AfRS fabric D. Cf. Bonifay 2004, p. 181, fig. 96:4, type 55 (Hayes form 99B). Date: second quarter of the 6th to the start of the 7th century.

**52.** Lot 02-06:31 Fig. 2

Date of lot: second half of the 6th to 7th century.

Bowl, Hayes form 99C, rim. Diam. rim 0.170-0.210 m. AfRS fabric D. Possibly cf. *LRP*, pp. 153, 155, no. 99.22, fig. 28, republished *Agora* XXXII, p. 232, no. 1155, fig. 36. Date: second half of the 6th to 7th century.

**53.** Lot 97-57:40 Fig. 2

Date of lot: mid- to third quarter of the 7th century.

Bowl, Hayes form 99C, rim and upper body. Diam. rim 0.15-0.21 m. AfRS fabric D. Cf. Bonifay 2004, p. 181, fig. 96:8, type 55 (Hayes form 99C); cf. also Reynolds 2011a, p. 106, no. 38, fig. 4. Date: end of the 6th to 7th century.

**54.** C-1999-025 Fig. 3

Lot 1999-030, dated late 6th to early 7th century.

Large bowl, Hayes form 103A, rim and upper body. Diam. rim 0.320 m. AfRS fabric D. Possibly cf. *LRP*, pp. 157, 159-160, no. 103.1, fig. 29. Date: possibly late 5th century.

**55.** C-1999-017 Fig. 3

Lot 1999-038, later redeposition of primarily 6th-century material.

Large bowl, Hayes form 103B, rim and upper body. Diam. rim 0.330-0.340 m. AfRS fabric D. Cf. *LRP*, pp. 159-160, no. 103.6, fig. 29. Date: ca. 500 to the third quarter of the 6th century.

**56.** Lot 98-29:6 Fig. 3

Date of lot: later redeposition of primarily 6th-century material.

Large dish/bowl, Hayes form 103B, base. Diam. base 0.180-0.200 m. AfRS fabric D. Cf. *LRP*, pp. 159-160, no. 103.8, fig. 29. Date: ca. 500 to the third quarter of the 6th century.

**57.** Lot 99-38:10 Fig. 3

Date of lot: later redeposition of primarily 6th-century material.

Large dish/bowl, Hayes form 104A, rim. Diam. rim 0.320-0.360 m. AfRS fabric D. Cf. *LRP*, pp. 163, 166, no. 104.13, fig. 30, republished, *Agora* XXXII, p. 233, no. 1158, fig. 36; cf. also Bonifay 2004, pp. 181, 183, fig. 97:7-8, type 56 A2 (Hayes form 104). Date: probably second quarter to mid-6th century.

**58.** Lot 01-10:1 Fig. 3

Date of lot: late 6th to early 7th century.

Large dish/bowl, Hayes form 104A, rim and upper body. Diam. rim 0.370-0.400 m. AfRS fabric D. Cf. *LRP*, pp. 161, 166, no. 104.2, fig. 29; cf. also Bonifay 2004, pp. 181, 183, fig. 97:7-8, type 56 A2 (Hayes form 104). Date: probably second quarter to mid-6th century.

**59.** Lot 99-38:11 Fig. 4

Date of lot: later redeposition of primarily 6th-century material.

Large dish/bowl, Hayes form 104B, rim. Diam. rim 0.300-0.360 m. AfRS fabric D, but slip fired dark red. Cf. *LRP*, pp. 163, 166, no. 104.15, fig. 30, republished, *Agora* XXXII, p. 233, no. 1160, fig. 36, pl. 56; cf. also Bonifay 2004, pp. 181, 183, fig. 97:15, type 56 B (Hayes form 104). Date: mid- to second half of the 6th century.

**60.** Lot 01-10:18 Fig. 4

Date of lot: late 6th to early 7th century.

Large dish/bowl, Hayes form 104B, rim. Diam. rim 0.360-0.400 m. AfRS fabric D. Cf. previous. Date: mid- to second half of the 6th century.

**61.** Lot 01-10:2 Fig. 4

Date of lot: late 6th to early 7th century.

Large dish/bowl, Hayes form 104B (late?), rim. Diam. rim ca. 0.320-0.380 m. AfRS fabric D. Typologically between Bonifay 2004, pp. 181, 183, fig. 97:15, type 55 B, and fig. 97:18, type 55 C (Hayes form 104). Date: mid- to second half of the 6th century.

**62.** Lot 95-61:29 Fig. 4

Date of lot: late 6th century.

Large dish/bowl, Hayes form 104C (early?), rim. Diam. rim 0.280-0.290 m. AfRS fabric D. Typologically between Bonifay 2004, pp. 181, 183, fig. 97:15, type 55 B, and fig. 97:18, type 55 C (Hayes form 104). Date: mid- to second half of the 6th century.

**63.** Lot 01-09:17 Fig. 4

Date of lot: late 6th to early 7th century.

Large dish/bowl, Hayes form 104C (early?), rim and upper body. Diam. rim ca. 0.300-0.350 m. AfRS fabric D. Typologically between Bonifay 2004, pp. 181, 183, fig. 97:15, type 55 B, and fig. 97:18,

type 55 C (Hayes form 104). Cf. also Reynolds 1995, fig. 37.50, identified possibly as form 87B variant/form 104B variant. Date: mid- to second half of the 6th century.

**64.** Lot 95-61:54 Fig. 4
Date of lot: late 6th century.
Large dish/bowl, Hayes form 104C, rim. Diam. rim 0.380-0.400 m. AfRS fabric D. Cf. *LRP*, pp. 163, 166, no. 104.23, fig. 30 (from the Lechaion Basilica); Bonifay 2004, pp. 181, 183, fig. 97:18, type 55 C (Hayes form 104). Date: mid- to late 6th century.

**65.** C-1997-041 Fig. 4
Lot 1997-057, dated mid- to third quarter of the 7th century.
Large dish/bowl, Hayes form 104C, rim. Diam. rim 0.390 m. AfRS fabric D. Published, Slane and Sanders 2005, p. 274, no. 4-2, fig. 11; cf. *Saraçhane*, p. 101, no. 30.46, fig. 40; cf. also comparanda for **64**. Date: mid-6th to mid-7th century.

**66.** Lot 95-64:4 Fig. 4
Date of lot: late 6th to early 7th century.
Large plate, Hayes form 105, early variant, base. Diam. base 0.230-0.240 m, or greater. AfRS fabric D. Cf. *LRP*, pp. 166, 169, no. 105.2, fig. 31; cf. also Bonifay 2004, pp. 183, 185, figs. 98:1, 98:8, type 57 A (Hayes form 105). Date: end of the 6th to first half of the 7th century.

**67.** C-1997-042 Fig. 4
Lot 1997-057, dated mid- to third quarter of the 7th century.
Large plate, Hayes form 105, rim. Diam. rim 0.350-0.370 m. AfRS fabric D. Published, Slane and Sanders 2005, p. 274, no. 4-3, fig. 11; for similar profiles, cf. *LRP*, pp. 167, 169, no. 105.6, fig. 31, and Bonifay 2004, pp. 183, 185, figs. 98:1, type 57 A (Hayes form 105); for a close parallel, cf. Reynolds 2011a, p. 109, no. 168, fig. 8 (form 105 variant). Date: end of the 6th to first half of the 7th century.

**68.** Lot 96-44:14 Fig. 5
Date of lot: mid- to third quarter of the 7th century.
Large plate, Hayes form 105, rim and upper body. Diam. rim 0.420-0.460 m, or greater. AfRS fabric D. For similar profiles but with smaller diameters, cf. *LRP*, pp. 167, 169, no. 105.7, fig. 31, republished, *Agora* XXXII, p. 233, no. 1162, fig. 36; Bonifay 2004, pp. 183, 185, fig. 98:10, type 57 B (Hayes form 105B); Reynolds 2011a, p. 107, nos. 173, 174, 176, fig. 8. Date: mid-7th century.

**69.** C-1997-047a-b Fig. 5
Lots 1996-044, 1997-057, dated mid- to third quarter of the 7th century.
Large plate, Hayes form 105, large variant, rim and body. Diam. rim 0.520-0.530 m. AfRS fabric D. Published, Slane and Sanders 2005, p. 274, no. 4-4, fig. 11; no exact parallels in *LRP* or Bonifay 2004; for similar, cf. previous. Date: mid-7th century.

**70.** Lot 01-09:9 Fig. 5
Date of lot: late 6th to early 7th century.
Dish, Hayes form 109, rim. Bands of horizontal burnishing (?) on interior and exterior. Diam. rim ca. 0.290 m, or greater. AfRS fabric D. Cf. *LRP*, p. 172, no. 109.1, fig. 33; Reynolds 2011a, p. 107, nos. 59-60, figs. 5, 10:a (form 109A/B). Date: early 7th century.

**71.** Lot 97-57:17 Fig. 5
Date of lot: mid- to third quarter of the 7th century.
Dish, Hayes form 109, rim. Est. diam. rim 0.290 m. AfRS fabric D. Published, Slane and Sanders 2005, p. 274, no. 4-6, fig. 11; for similar profile, cf. *Saraçhane*, p. 101, no. 30.41, fig.40. Date: mid- to third quarter of the 7th century.

*Stamps*

**72.** Lot 00-07:8 Pl. 13
Date of lot: second quarter of the 5th century to ca. 450.

Stamped body sherd (partial palm-branch). AfRS fabric D. Cf. *LRP*, p. 218-219, fig. 38, Style A (i-iii). Date: late 4th to mid-5th century.

## Late Roman 'C' Ware (LRC)

### *Hayes' forms*

**73.** Lot 96-45:33 Fig. 5

Date of lot: second quarter of the 5th century to ca. 450.

Dish, Hayes form 1/3 variant (forerunner to form 3), rim. Diam. rim 0.290-0.320 m. LRC1 (?). Reddish yellow (5YR 6/8). Rare, fugitive, fine sparkling bits; few fine to small white flecks; one large glossy dark plate-like inclusion; possible rare fine red inclusions; rare fine rounded dark grains; few to frequent fine to small pin-hole voids. Granular, near smooth, break; soft fabric. Light red (2.5YR 6/8) slip, thick on interior and thin on exterior, with darker, red (2.5YR 5/6) discoloration on rim. Cf. Hayes 2000, p. 285, fig. 2:3; 2005, p. 11, fig. 1:b. Date: early 5th century.

**74.** C-2003-032 Fig. 5

Notebook 959, basket 10 (Manhole 2003-001), dated 5th to 6th century.

Dish, Hayes form 1A, rim to base. Diam. base 0.060, H. 0.055, diam. rim 0.152 m. LRC2. Cf. *LRP*, pp. 325-327, nos. 1.1, 1.3, fig. 65; no. 1.3 republished, *Agora* XXXII, p. 237, no. 1231, fig. 37. Date: early 5th century.

**75.** Lot 98-15:1 Fig. 5

Date of lot: ca. 500.

Dish, Hayes form 1D, rim and body. p. H. 0.050, diam. rim 0.160 m. LRC2. Possibly cf. *LRP*, pp. 326-327, no. 1.7, fig. 65. Date: second quarter to mid-5th century.

**76.** C-2000-010 Fig. 5, Pl. 14

Lot 2000-017, dated second half of the 5th century.

Dish, Hayes form 2A, rim to base with stamped floor (small crosses). Diam. base 0.116, H. 0.056; diam. rim 0.310 m. LRC2. For the form, cf. *LRP*, pp. 327-328, no. 2.1, fig. 66, republished, *Agora* XXXII, p. 237, no. 1237, fig. 37, pl. 60; for the stamp, cf. *Supplement*, p. 502, no. 64.6, fig. 96:a (on AfRS, Hayes form 50B/64). Date: second quarter to mid-5th century.

**77.** Lot 98-15:2 Fig. 5

Date of lot: ca. 500.

Dish, Hayes form 2A/B, rim. Diam. rim 0.210-0.240 m. LRC2. For a similar profile but with a larger diameter, cf. *LRP*, pp. 327, 329, no. 2.2, fig. 66 (Hayes form 2A), republished in *Agora* XXXII, p. 238, no. 1238, fig. 37. Date: second quarter to mid-5th century.

**78.** Lot 00-06:1 Fig. 5

Date of lot: second quarter of the 5th century to ca. 450.

Dish, Hayes form 2B, rim. Diam. rim 0.160-0.180 m. LRC2. For a similar profile but with a larger diameter (Hayes form 2A), cf. *Agora* XXXII, p. 238, no. 1239, fig. 37. Date: second quarter of the 5th century to ca. 450.

**79.** Lot 01-11:1 Fig. 6

Lot 2001-011, basket 16, dated second half of the 5th century.

Dish, Hayes form 2B, rim and body. Diam. rim 0.190-0.210 m. LRC1. Cf. *LRP*, p. 327, no. 2.4, fig. 66. Date: second quarter to second half of the 5th century?

**80.** Lot 01-11:2 Fig. 6

Lot 2001-011, basket 16, dated second half of the 5th century.

Dish, Hayes form 2C, rim. Diam. rim 0.230-0.240 m. LRC1. For a similar profile, cf. *Agora* XXXII, p. 238, no. 1242, fig. 37. Date: second quarter to second half of the 5th century?

**81.** Lot 00-38:1 Fig. 6

Date of lot: second half of the 5th century.

Dish, Hayes form 2C, variant, rim and upper body. Diam. rim 0.298-0.300 m. LRC1. Non-joining rim fragment in same lot, with further non-joining fragments in Lots 2001-038 and 2002-009. For a similar profile, cf. Slane and Sanders 2005, p. 251, no. 1-10, fig. 3. Date: second quarter to second half of the 5th century?

**82.** Lot 98-15:3 Fig. 6

Date of lot: ca. 500.

Dish/bowl, Hayes form 3, small, rim. Diam. rim 0.140-0.160 m. LRC1 (?). Cf. *Agora* XXXII, p. 243, no. 1305, fig. 41; cf. also *Saraçhane*, p. 94, no. 13.1, fig. 32. Date: mid- to late 5th century.

**83.** Lot 99-30:1 Fig. 6

Date of lot: late 6th to early 7th century.

Dish/bowl, Hayes form 3, small, rim. Diam. rim 0.160-0.170 m. LRC1. Possibly cf. *LRP*, pp. 336, 338, no. 3.40, fig. 69. Date: mid- to late 5th century.

**84.** Lot 98-15:4 Fig. 6

Date of lot: ca. 500.

Dish/bowl, Hayes form 3B, rim. Diam. rim ca. 0.300-0.320 m. LRC1 (?). Possibly cf. *LRP*, pp. 331, 337-338, no. 3.5, fig. 67, republished, *Agora* XXXII, p. 239, no. 1260, fig. 38, pl. 60. Date: mid- to late 5th century.

**85.** Lot 98-19:1 Fig. 6

Date of lot: later redeposition of primarily 5th-century material.

Dish/bowl, Hayes form 3B, rim. Diam. rim 0.200-0.240 m. LRC1. Cf. *LRP*, pp. 331, 337, no. 3.4, fig. 67, republished, *Agora* XXXII, pp. 239-40, no. 1262, fig. 38, pl. 60. Date: mid- to late 5th century.

**86.** Lot 03-21:1 Fig. 6

Date of lot: second half of the 5th to first half of the 6th century.

Dish/bowl, Hayes form 3C, rim. Diam. rim 0.240-0.260 m. LRC1. For a similar profile but without roulette decoration, cf. *LRP*, pp. 333, 337-338, no. 3.10, fig. 68, republished, *Agora* XXXII, pp. 240-241, no. 1273, fig. 39, pl. 61. Date: mid- to late 5th century.

**87.** Lot 98-13:2 Fig. 6

Date of lot: first half of the 6th century.

Dish/bowl, Hayes form 3E, rim. Diam. rim 0.240-0.270 m. LRC2. Cf. *LRP*, pp. 333, 337-338, no. 3.16, fig. 68, republished, *Agora* XXXII, p. 241, no. 1279, fig. 39, pl. 62. Date: late 5th to early 6th century.

**88.** Lot 95-61:58 Fig. 6

Date of lot: late 6th century.

Dish/bowl, Hayes form 3E/F, rim. Diam. rim 0.230-0.250 m. LRC2. Compare *Agora* XXXII, p. 241, no. 1278, fig. 39 (Hayes form 3E) and *LRP*, pp. 333, 338, no. 3.17, fig. 69, republished, *Agora* XXXII, p. 242, no. 1284, fig. 40, pl. 62 (Hayes form 3F). Date: possibly mid-6th century?

**89.** Lot 01-03:1 Fig. 7

Date of lot: mid-6th to early 7th century.

Dish/bowl, Hayes form 3E/F, rim. Diam. rim 0.230-0.260 m. LRC1. Cf. previous. Date: possibly mid-6th century?

**90.** Lot 02-04:1 Fig. 7

Date of lot: mid-6th century.

Dish/bowl, Hayes form 3F, rim and upper body. Diam. rim 0.220-0.240 m. LRC2. Cf. *LRP*, pp. 333, 338, no. 3.17, fig. 69, republished, *Agora* XXXII, p. 242, no. 1284, fig. 40, pl. 62. Date: mid-6th century.

**91.** Lot 95-70:1 Fig. 7

Date of lot: mid- to late 6th century.

Dish/bowl, Hayes form 3F, rim. Diam. rim 0.240-0.285 m. LRC1. Published, Sanders 1999, p. 465, no. 2, fig. 7; possibly cf. *LRP*, pp. 335, 338, nos. 3.18, 3.23, and 3.25, fig. 69, each republished, *Agora* XXXII, p. 241, nos. 1283, 1280, and 1282, respectively, figs. 39, 40, pl. 62. Date: probably mid-6th century.

**92.** Lot 98-29:1 Fig. 7

Date of lot: later redeposition of primarily 6th-century material.

Dish/bowl, Hayes form 3F, rim. Diam. rim 0.280-0.290 m. LRC1. Cf. previous. Date: mid-6th century (or later?).

**93.** Lot 98-29:2 Fig. 7

Date of lot: later redeposition of primarily 6th-century material.

Dish/bowl, Hayes form 3F, rim. Diam. rim 0.290-0.300 m. LRC1. Cf. previous. Date: mid-6th century (or later?).

**94.** Lot 01-10:29 Fig. 7

Date of lot: late 6th to early 7th century.

Dish/bowl, Hayes form 3F, rim. Diam. rim 0.280-0.300 m. LRC2. Cf. previous. Date: mid-6th century (or later?).

**95.** Lot 01-08:4 Fig. 7

Date of lot: mid-6th century.

Dish/bowl, Hayes form 3F (transitional?), rim. Diam. rim 0.230-0.250 m. LRC2. Cf. Reynolds 2011b, p. 218, no. 104, fig. 7, with discussion of transition from form 3F to forms 3G and 10A; possibly cf. also *Agora* XXXII, p. 243, no. 1298, fig. 40, pl. 63, identified as form 3, Transitional to form 10. Date: mid-6th century.

**96.** Lot 95-61:1 Fig. 7

Date of lot: late 6th century.

Dish/bowl, Hayes form 3F(/G?), rim. Diam. rim 0.270-0.282 m. LRC1. Published, Sanders 1999, p. 465, no. 1, fig. 7 (form 3F); cf. *Saraçhane*, p. 100, no. 26.2, fig. 37 (form 3F/3G); for a similar profile but smaller diameter, cf. *Agora* XXXII, p. 242, no. 1292, fig. 40 (form 3G). Date: mid- to late 6th century.

**97.** Lot 99-07:2 Fig. 7

Date of lot: later redeposition of primarily 6th-century material.

Dish/bowl, Hayes form 3F/3G, rim. Diam. rim 0.260-0.280 m. LRC1. Cf. *LRP*, p. 335, no. 3.23, fig. 69, republished, *Agora* XXXII, p. 241, no. 1280, fig. 39, pl. 62; for close parallel, cf. *Saraçhane*, p. 100, no. 26.2, fig. 37, identified as form 3F/3G. Date: mid-6th century (or later?).

**98.** Lot 01-10:28 Fig. 7

Date of lot: late 6th to early 7th century.

Dish/bowl, Hayes form 3H, rim and non-joining base. Diam. base 0.140, diam. rim 0.220-0.270 m. LRC2 (?), with abundant fine silver sparkling flakes, and possibly rare fine gold sparkling flakes. Cf. *LRP*, p. 335, 338, no. 3.29, fig. 69, republished, *Agora* XXXII, p. 243, no. 1297, fig. 40. Date: late 6th century?

**99.** Lot 01-09:11 Fig. 8, Pl. 1.5

Date of lot: late 6th to early 7th century.

Dish/bowl, Hayes form 3H, rim to base. Diam. base 0.140, H. 0.061, diam. rim 0.260 m. LRC2 (?), with common to abundant very fine sparkling silver flakes and few fine gold sparkling flakes. Possibly cf. *LRP*, pp. 335, 338, no. 3.29, fig. 69, republished, *Agora* XXXII, p. 243, no. 1297, fig. 40. Date: late 6th century?

**100.** Lot 01-09:12 Fig. 8

Date of lot: late 6th to early 7th century.

Dish/bowl, Hayes form 3H (?), rim. Diam. rim 0.200-0.240 m. LRC2. For possibly similar, cf. previous, or *LRP*, pp. 335, 338, no. 3.28, fig. 69, republished, *Agora* XXXII, p. 242, no. 1294, fig. 40, pl. 63. Date: late 6th century?

**101.** Lot 02-06:30 Fig. 8
Date of lot: second half of the 6th century to 7th century.
Dish, Hayes form 5B, rim. Diam. rim 0.190-0.230 m. LRC1. For similar profiles with larger diameters, cf. *LRP*, p. 339, no. 5.2, fig. 70, republished, *Agora* XXXII, p. 243, no. 1302, fig. 41, pl. 63; *Saraçhane*, p. 96, no. 18.3, fig. 34. Date: late 5th to early 6th century.

**102.** Lot 01-09:18 Fig. 8
Date of lot: late 6th to early 7th century.
Dish/bowl, Hayes form 10A, rim. Diam. rim 0.120-0.140 m. LRC2. Possible a smaller version of *LRP*, pp. 343, 346, no. 10.4, fig. 71, republished, Slane and Sanders 2005, p. 270, no. 3-14, fig. 8. Date: late 6th to early 7th century.

**103.** Lot 95-63:4 Fig. 8
Date of lot: late 6th to early 7th century.
Dish/bowl, Hayes form 10A, rim. Diam. rim ca. 0.220 m. LRC2. Cf. *Saraçhane*, p. 98, no. 22.3, fig. 35. Date: late 6th to early 7th century.

**104.** Lot 95-63:5 Fig. 8
Date of lot: late 6th to early 7th century.
Dish/bowl, Hayes form 10A, rim. Diam. rim ca. 0.300 m. LRC2. Cf. *LRP*, pp. 343, 346, no. 10.4, fig. 71, republished, Slane and Sanders 2005, p. 270, no. 3-14, fig. 8; cf. *Saraçhane*, p. 100, no. 26.3, fig. 37. Date: late 6th to early 7th century.

**105.** Lot 95-64:2a-b Fig. 8
Date of lot: late 6th to early 7th century.
Dish/bowl, Hayes form 10A, two non-joining rims. Diam. rim 0.260-0.300 m. LRC1. Published (only 'a'), Sanders 1999, p. 465, no. 3, fig. 7; cf. *LRP*, pp. 343, 346, no. 10.2, fig. 71, republished, *Agora* XXXII, p. 245, no. 1329, fig. 42. Date: late 6th to early 7th century.

**106.** Lot 95-64:3a-c Fig. 8, Pl. 1.4
Date of lot: late 6th to early 7th century.
Dish/bowl, Hayes form 10A, two non-joining rims and non-joining base. Diam. base 0.130, H. (reconstructed) 0.063, diam. rim 0.265-0.280 m. LRC2. Published (only 'a'), Sanders 1999, p. 465, no. 4, fig. 7; cf. *LRP*, pp. 343, 346, no. 10.4, fig. 71, republished, Slane and Sanders 2005, p. 270, no. 3-14, fig. 8. Date: late 6th to early 7th century.

### *Stamps*

**107.** Lot 00-18:21 Pl. 13
Date of lot: second quarter to mid-5th century.
Dish/bowl, Hayes form 2A (?), stamped base (concentric circles). Diam. base 0.160 m. LRC2. For profile, cf. *LRP*, pp. 327-328, no. 2.1, fig. 66, republished, *Agora* XXXII, p. 237, no. 1237, fig. 37, pl. 60. Date: second quarter to mid-5th century.

**108.** Lot 98-13:3 Pl. 13
Date of lot: first half of the 6th century.
Stamped floor fragment (lotus bud within a band of double rouletting). LRC2. Cf. *LRP*, p. 353, Group II, no. 12, "l" or "m," fig. 73, "l" republished, *Agora* XXXII, p. 239, no. 1258, pl. 60. Date: mid- to third quarter of the 5th century.

**109.** Lot 99-31:1 Pl. 13
Date of lot: mid-6th century.

Stamped floor fragment (cross with double outline). LRC2. Cf. *LRP*, pp. 365-367, Group III, no. 71.d, fig. 79, republished, *Agora* XXXII, p. 248, no. 1404, pl. 68. Date: late 5th to early 6th century.

**110.** Lot 01-11:18 Pl. 14
Lot 2001-011, baskets 18, 20, dated late 6th century.
Stamped floor fragment (dolphin). LRC2. Cf. *LRP*, p. 361, Group III, no. 45 "o" or "p," fig. 76, "o" republished, *Agora* XXXII, p. 248, no. 1392, pl. 68. Date: early 6th century.

**111.** Lot 99-30:2 Pl. 14
Date of lot: late 6th to early 7th century.
Stamped floor fragment (preserves the feet of a "duck"). LRC2. The stamp is unattested in *LRP*. Date: unknown, possibly late 5th century.

## Attic RS

### *Painted keel rim bowls*

**112.** Lot 96-45:28 (P-75) Fig. 8, Pls. 5.1, 5.2
Date of lot: second quarter of the 5th century to ca. 450.
Keel-rim bowl, rim. Diam. rim 0.250-0.260 m. Attic 1. Red slip over all, with white-painted spiral/tendril motif on exterior rim-face. Possibly cf. Waagé 1933, no. 281, pl. IX. Date: 4th century to ca. 450.

**113.** Lot 00-07:11 (P-77) Fig. 8
Date of lot: second quarter of the 5th century to ca. 450.
White-painted keel-rim bowl, rim and partial handle scar. Diam. rim 0.220-0.260 m. Attic 2. Red slip on interior with light red wash on exterior; traces of white-painted spiral decoration on exterior rim-face. For a similar profile, cf. Waagé 1933, no. 281, pl. IX; possibly cf. also *Agora* V, p. 61, no. K 19, pl. 69, for a similar profile, but without the protruding flange. Date: 4th century to ca. 450.

**114.** Lot 00-07:12 Fig. 9
Date of lot: second quarter of the 5th century to ca. 450.
White-painted keel rim bowl, rim. Diam. rim unknown. Attic 3. Thin, dark red slip on interior, with dark, nearly black, slip on exterior; white-painted spiral decoration on exterior rim-face. Date: 4th century to ca. 450.

**115.** Lot 98-21:16 Fig. 9
Date of lot: later redeposition of primarily 6th-century material.
Large keel-rim bowl, upper body and lower rim. Diam. flange ca. 0.340 m. Attic 2 or 3, (overfired?). Reddish brown (2.5YR 5/3) slip over all, appearing metallic on exterior. Date: 4th to late 5th century?

### *Various forms*

**116.** Lot 96-40:2 Pl. 14
Date of lot: first half of the 5th century.
Body sherd with white-painted spiral decoration. Attic 2 or 3. Red-slipped interior with spots of slip on the exterior. Date: 4th century to first half of the 5th century.

**117.** Lot 00-07:9 Fig. 9, Pl. 5.5
Date of lot: second quarter of the 5th century to ca. 450.
Dish, rim to base. Diam. base 0.127, H. 0.030, diam. rim 0.160 m. Attic 2. Possibly cf. *Agora* V, p. 80, no. P 11186 (discussed under no. L 61), pl. 70; for a possibly similar profile, cf. also Waagé 1933, no. 272, pl. IX. Date: late 4th century to ca. 450.

**118.** Lot 00-07:10a-b ('a' = P-78) Fig. 9, Pls. 5.6, 5.7, 14
Date of lot: second quarter of the 5th century to ca. 450.

Dish, partial rim to base, with non-joining fragment of stamped floor (floral pattern within concentric circle). Diam. base 0.132, H. 0.039 m. Attic 2. Dark red slip covers interior, lighter red slip covers exterior terminating inconsistently at base. Cf. Waagé 1933, no. 272, pl. IX. Date: late 4th century to ca. 450.

**119.** Lot 96-70:6 (P-80) Fig. 9, Pl. 5.10
Date of lot: mid-5th century.
Dish, rim to near-base. Diam. rim 0.230-0.240 m. Attic 3. Dark red, metallic slip covers entire body. Possibly cf. Waagé 1933, no. 270, pl. IX. Date: late 4th century to mid-5th century.

**120.** Lot 02-06:1 Fig. 9
Date of lot: second half of the 6th century to 7th century.
Dish, rim to lower wall. Diam. rim 0.190-0.230 m. Attic 3. Thick, dark red metallic slip on interior, thin and flaking on exterior. Possibly cf. Waagé 1933, no. 270, pl. IX. Date: late 4th to mid-5th century.

**121.** Lot 01-11:3 Fig. 9
Lot 2001-011, basket 16, dated second half of the 5th century.
Dish, rim to near-base. H. 0.035, est. diam. rim 0.250 m (or greater). Attic 3. Dark red, metallic slip covers interior, is thin on exterior face of rim, and applied in 'spotty' manner on undersurface. Cf. Waagé 1933, no. 291, pl. IX; possibly cf. also *Agora* V, p. 80, no. L 59, pls. 36, 70, and Hayes 2008, p. 443, no. W 150, fig. 9, but with articulated bases and stamped decoration. Date: late 4th to mid-5th century.

**122.** Lot 02-18:1 Fig. 9
Date of lot: ca. 500.
Dish, rim to base. Est. diam. base 0.169, H. 0.034, diam. rim 0.240 m. Attic 2. Red slip on interior and exterior. Cf. previous. Date: late 4th to mid-5th century.

### *Possible interpretations of imported forms*

**123.** C-2005-003 Fig. 9
Notebook 967, baskets 64 and 66, dated 3rd to 5th century.
Dish, rim to base (interpretation of AfRS, Hayes form 50). Diam. base 0.110, H. 0.045, diam. rim 0.194 m. Attic 3. Possibly cf. *Agora* V, p. 54, no. J 33, pl. 68, and p. 63, nos. K 36-40, pl. 69. Date: unknown, possibly 4th to 5th century?

**124.** Lot 04-02:1 Fig. 9
Date of lot: late 4th century (with Middle Roman material).
Dish, rim to base (possible fractional interpretation of AfRS, Hayes form 50?). Diam. base 0.123, H. 0.019, diam. rim 0.180 m. Attic 2 (?). Cf. **123** for a full-sized example. Date: late 4th century?

**125.** Lot 96-40:1 Fig. 10
Date of lot: first half of the 5th century.
Dish (interpretation AfRS form 61B?), rim. Diam. rim 0.250-0.270 m. Attic 2. Date: first half of the 5th century.

**126.** Lot 02-18:2 Fig. 10
Date of lot: ca. 500.
Dish, rim to lower wall (possible interpretation of LRC, Hayes Form 1?). Diam. rim 0.200-0.240 m. Attic 3 (fired pale buff). Dark red, flaking, slip covers interior and exterior. Date: second quarter to mid-5th century.

**127.** Lot 04-07:2 Fig. 10
Date of lot: second quarter to mid-5th century.
Dish, rim and upper wall (possible interpretation of LRC 1, Hayes form 1?). Diam. rim 0.210-0.240, p. H. 0.042 m. Attic 3. Dark red, metallic slip over all. Date: second quarter to mid-5th century.

**128.** Lot 98-15:6 Fig. 10

Date of lot: ca. 500.

Dish (interpretation LRC Hayes form 1C?), rim. p. H. 0.046, diam. rim 0.170-0.190 m. Attic 2. Red slip on interior and exterior. Cf. Waagé 1933, no. 245, pl. IX; possibly cf. also Hayes 2008, p. 443, no. W 151, fig. 9. Date: possibly mid-5th century.

### *Stamps*

**129.** Lot 99-08:2 Pl. 14

Date of lot: later redeposition of primarily 6th-century material.

Stamped floor fragment (partial rosette stamp within raised circle). Attic 3. Dark red slip on interior. For a similar stamp, cf. *Supplement*, pp. 502-503, fig. 96b, Type 44 stamp (found on AfRS, Hayes form 67.32, probably late in the form's series). Date: probably late 4th to mid-5th century.

## Boiotian RS

### *Bowls*

**130.** Lot 98-15:8 (P-85) Fig. 10, Pls. 6.3, 6.4

Date of lot: ca. 500.

Bowl, rim. Diam. rim ca. 0.150 m. Cf. Slane and Sanders 2005, p. 262, no. 2-13, fig. 5, but the rim of this piece is not as vertical. Date: ca. 500.

**131.** Lot 97-52:1a-b (P-86) Fig. 10

Date of lot: first half of the 6th century.

Bowl, rim and non-joining base. Diam. base 0.100-0.140, diam. rim 0.160-0.180 m. Cf. Slane and Sanders 2005, p. 262, no. 2-13, fig. 5. Date: first half of the 6th century.

**132.** Lot 95-61:30a-b Fig. 10

Date of lot: late 6th century.

Bowl, rim to base, with non-joining rim. Diam. base ca. 0.130, H. 0.054, diam. rim 0.160-0.170 m. Brown (7.5YR 5/3) slip over all. Possibly cf. Slane and Sanders 2005, p. 270, no. 3-16, fig. 8. Date: late 6th century.

**133.** Lot 98-29:8 Fig. 10

Date of lot: later redeposition of primarily 6th-century material.

Bowl, rim. Diam. rim 0.170-0.190 m. Weak red (10R 5/4) to reddish brown (2.5YR 5/4) slip thickly applied on interior, but appearing dark brown (nearly black) on exterior, thickly applied to the rim but 'washy' and inconsistent below. Cf. Sanders 1999, p. 465, no. 5, fig. 8. Date: 6th century.

**134.** Lot 95-61:31 Fig. 10, Pl. 14

Date of lot: late 6th century.

Bowl, partial rim to base with stamped decoration (cross). Diam. base 0.124, p. H. 0.042, est. diam. rim 0.210 m. Red slip over all. Date: late 6th century.

**135.** Lot 01-09:4 Fig. 10

Date of lot: late 6th to early 7th century.

Bowl, rim to lower body. p. H. 0.0530, diam. rim 0.180-0.190 m. Reddish brown, near metallic slip covers interior up to rim, becoming thin and mottled on exterior. Possibly cf. Sanders 1999, p. 465, no. 5, fig. 8. Date: late 6th to early 7th century.

**136.** C-1998-025 Fig. 10, Pl. 14

Notebook 913, basket 1, dated mid-12th century.

Small bowl, base with stamped decoration (encircled cross with heart-shapes at corners, within a box frame). Diam. base 0.058 m. Slip covers all but is badly cracked on undersurface. Date: probably 6th century.

*Flanged bowls*

**137.** Lot 95-61:66 Fig. 10

Date of lot: late 6th century.

Flanged bowl, rim. Undecorated flange. Diam. rim 0.130-0.150 m. Slipped all over. Date: late 6th century.

**138.** Lot 95-61:65 Fig. 10

Date of lot: late 6th century.

Flanged bowl, rim and upper body. Exterior rim face decorated with wavy incised lines. p. H. 0.042, diam. rim 0.150-0.170 m. Originally slipped all over, but poorly preserved on interior. Date: late 6th century.

**139.** Lot 95-61:32 Fig. 11, Pl. 7.1

Date of lot: late 6th century.

Flanged bowl, rim and upper body. Top of flange stamped with small floral (?) patterns. p. H. 0.049, diam. rim 0.180-0.220 m. Light brown (7.5YR 6/4) slip on interior, reddish yellow (5YR 6/6) slip on the exterior. Cf. Sanders 1999, p. 467, no. 10, fig. 9, but with wavy incised lines on top of flange. Date: late 6th century.

**140.** Lot 95-61:33 Fig. 11

Date of lot: late 6th century.

Flanged bowl, rim and upper body. Top of flange decorated with incised wavy lines. p. H. 0.039, diam. rim 0.145 m. Slip all over, but thicker on interior and with some darker discoloration on exterior rim face. Cf. previous. Date: late 6th century.

**141.** Lot 01-09:14 Fig. 11

Date of lot: late 6th to early 7th century.

Flanged bowl decorated with wavy incised lines, rim. Diam. rim 0.170-0.180 m. Reddish brown slip covers all, but appears near-metallic on interior. Date: late 6th to early 7th century.

**142.** Lot 01-09:13 Fig. 11

Date of lot: late 6th to early 7th century.

Flanged bowl with impressed roulette decoration, rim and upper body. Diam. rim 0.190-0.210 m. Near-metallic brown slip covers all, appearing redder on exterior. Date: late 6th to early 7th century.

*Possible interpretations of imported forms*

**143.** Lot 98-29:9 Fig. 11

Date of lot: later redeposition of primarily 6th-century material.

Dish (interpretation AfRS Hayes forms 86/87A?), rim to lower body. p. H. 0.044, diam. rim 0.250-0.260 m. Boiotian fabric (as **134**). Granular break; medium hard fabric. Thin, reddish yellow (5YR 6/6 to 6/8) (self-) slip over all. Date: 6th-century (or earlier?).

**144.** Lot 95-64:1 Fig. 11

Date of lot: late 6th to early 7th century.

Dish/bowl (interpretation LRC Hayes form 3?), rim. Diam. rim 0.140-0.150 m. Probably Boiotian fabric. Reddish yellow (slightly lighter than 7.5YR 6/6) fabric. Frequent to common fine (silver) sparkling bits; rare small sub-rounded white lumps; rare small rounded red pellets; few small sub-rounded voids. Granular and conchoidal break; very soft fabric. Fugitive light red (2.5YR 6/8) wash/slip inside and out. Published, Sanders 1999, pp. 466-467, no. 9, fig. 9. Date: late 6th to early 7th century.

## Southern Argolid RS

*Various forms*

**145.** C-1998-024 Fig. 11

Lot 1998-021, later redeposition of primarily 6th-century material.

Dish, rim. Diam. rim 0.380-0.390 m. Southern Argolid fabric (fine). Red (2.5YR 5/6) to yellowish red (5YR 5/6) slip covers interior and rim, dripping over the lip onto the exterior. Date: unknown, possibly first half of the 6th century.

### *Possible Interpretations of Imported Forms*

**146.** Lot 95-61:62 Fig. 11

Date of lot: late 6th century.

Dish/bowl (interpretation LRC, Hayes form 3?), rim. Diam. rim 0.130-0.160 m. Southern Argolid fabric (fine). Red self-slip all over, but badly flaking on the interior surface. Date: late 6th century or earlier?

## Various and Unidentified Fabrics

### *Various forms*

**147.** C-2002-013 Fig. 11

Lot 2002-011, first half of the 6th century (with intrusions?).

Dish, base to rim. Diam. base 0.160-0.180, H. 0.060, diam. rim 0.300-0.320 m. Reddish yellow (approx. 5YR 6/6) fabric with a light brown core (7.5YR 6/4), and reddish yellow (5YR 6/6 to 7.5YR 6/6) exterior surface. Frequent fine elusive sparkling bits (in direct sunlight); frequent fine to small sub-rounded calcareous white lumps (few are spalling); few fine rounded black grains; and few fine sub-rounded voids. Granular break (near-smooth and laminar in places); medium hard fabric. Red (approx. 10R 5/8) slip covers the interior surface, thinly applied on the lip and rim, and inconsistently below. Burnishing is evident on the exterior for only 0.032 m above the foot. Date: unknown, possibly early 6th century.

**148.** Lot 05-22:1 Fig. 12

Date of lot: mid-6th century.

Small bowl with roulette decoration, rim. Diam. rim 0.150 m. "Asia Minor fabric" (?). Yellowish red (5YR 5/6) outer fabric, with reddish yellow (approx. 5YR 5/3) inner fabric. Interior surface nearly gray. Frequent very fine sparkling bits; rare very fine rounded black grains; few fine to small sub-rounded and angular voids. Smooth break; medium hard fabric. For possible parallel for description of fabric and decoration, cf. *LRP*, pp. 408-409, under the first class of "Asia Minor Fabrics." Date: unknown.

**149.** C-2001-010 Fig. 12, Pl. 14

Notebook 939, basket 24, dated 3rd to 6th century.

Dish with stamped floor (incomplete circular stamp, and square with diagonal cross-bars, both preserved within concentric circle), rim to base. Diam. base 0.144, H. 0.041, diam. rim (inner) 0.195, (outer) 0.240 m. Boiotian fabric? Reddish yellow (5YR 6/6 to 7.5YR 6/6) fabric; reddish yellow (slightly paler than 5YR 6/6) exterior surface. Frequent fine sparkling bits; few very fine to fine sub-rounded calcareous white lumps; few very fine black and gray grains; rare very fine rounded red pellets; frequent very fine sub-rounded voids; rare small elongated voids. Granular break; medium hard fabric. Light red (2.5YR 6/6) slip covers interior and exterior wall, only occasionally dripping onto the undersurface. Possibly cf. *Saraçhane*, p. 7, fig. 1.7 (in Late Roman Light-Colored Ware); for similar square stamp, cf. *LRP,* p. 241, AfRS stamp type 69, Style A (ii)-(iii), fig. 42:b-d. Date: unknown, probably 5th century.

**150.** C-1998-023a-d Fig. 12

Lot 1998-021, later redeposition of primarily 6th-century material.

Large bowl with painted decoration (fish and garlands?), rim to base. Diam. base 0.133, H. 0.078, diam. rim 0.373 m. Egyptian or Cretan fabric? Reddish yellow (7.5YR 6/6) fabric with reddish yellow (5YR 6/6) core; reddish yellow (7.5YR 7/6) surfaces; reddish yellow (5YR 6/6) to yellowish red (5YR 5/6) painted decoration on interior. Rare to few fine sparkling bits; rare to few fine rounded black grains; rare very fine sub-rounded white grits; rare very fine rounded voids. Overall, very fine fabric. Granular, with smooth and conchoidal, break; medium hard fabric. For possibly similar fabric, cf. **231** (*Saraçhane* type 22 amphora), identified as possibly Cretan. Date: unknown, possibly first half of the 6th century.

**151.** Lot 98-21:3 Fig. 12

Date of lot: later redeposition of primarily 6th-century material.

Deep carinated bowl, body sherd (just below rim). Diam. (at carination) 0.173 m. Reddish yellow (7.5YR 6/6) fabric, but lightening towards the core. Few fine silver sparkling bits; frequent to fine sub-rounded (shiny?) black flecks; rare fine sub-rounded grayish-white inclusions; rare fine sub-rounded dark red inclusions ('bleeding' into the fabric?); frequent very fine to small sub-rounded voids; few medium to small elongated voids. Granular break, but with smooth and slightly conchoidal portions; medium hard fabric. Reddish yellow (slightly paler than 5YR 6/6) slip thinly applied on interior, and very thinly applied on exterior above the carination, with self-slipped surface below. Date: unknown.

**152.** Lot 95-61:68 Fig. 12

Date of lot: late 6th century.

Small dish, rim and upper body. Diam. rim 0.130-0.140 m. Boiotian fabric? Light brown (7.5YR 6/4) to reddish yellow (7.5YR 6/6) fabric. Frequent fine sparkling bits; rare fine to small white grits; few fine black grits; frequent fine to small sub-rounded voids. Smooth, slightly granular and conchoidal, break; medium hard fabric. Reddish yellow (5YR 6/8) slip covers interior and upper portions of exterior. Date: unknown, late 6th century?

### *Various Forms, Stamps*

**153.** Lot 04-08:2 Pl. 14

Date of lot: mid-6th century.

Stamped floor fragment (three (?) circles with whirl-fringe, and square with diagonal cross-bars, both preserved within concentric circle). Boiotian fabric? Fabric similar to **149**. Thin red slip covers interior of vessel; traces of dripped slip on exterior fired brown. For stamps, cf. *LRP*, p. 237, AfRS stamp type 36, Style A (ii)-(iii), C, fig. 40 and p. 241, AfRS stamp type 69, Style A (ii)-(iii), fig. 42:b-d. Date: unknown, probably 5th century.

### *Possible interpretations of imported forms*

**154.** Lot 95-61:59 Fig. 12

Date of lot: late 6th century.

Large dish/bowl (interpretation AfRS, Hayes form 104A?), rim. p. H. 0.043, diam. rim 0.330-0.370 m. Boiotian fabric? Fabric ranges from reddish yellow (7.5YR 6/6) to light brown (7.5YR 6/4). Frequent fine sparkling bits; few fine rounded black grains; rare very fine to small sub-rounded white grits; rare very fine rounded red inclusions; few very fine to fine sub-rounded voids. Granular, slightly smooth and conchoidal, break; medium hard fabric. Yellowish red (5YR 5/6) to reddish yellow (approx. 5YR 6/8) slip all over. For another, cf. **155**. Date: late 6th century (or earlier?).

**155.** Lot 95-65:2a-b Fig. 12

Date of lot: late 6th to early 7th century.

Large dish/bowl (interpretation AfRS 104A?), two non-joining rims. Diam. rim 0.300-0.340 m. Boiotian fabric? Light brown (7.5YR 6/4) fabric. Common fine to small (silver?) sparkling flakes; rare fine black grits; frequent to fine sub-rounded voids. Conchoidal, slightly granular, break; medium hard fabric. Mottled light brown (7.5YR 6/6 and 6/8) slip inside and out. For another, cf. **154**. Date: late 6th to early 7th century (or earlier?).

**156.** Lot 95-61:63 Fig. 12

Date of lot: late 6th century.

Dish/bowl (interpretation LRC, Hayes form 3?), rim. Diam. rim 0.160-0.180 m. Boiotian (?) fabric. Yellowish red (5YR 5/6) to strong brown (7.5YR 5/6) fabric. Few to frequent very fine sparkling bits; few fine sub-rounded white grits; frequent fine sub-rounded yellowish inclusions; few fine rounded black; few fine angular translucent gray/whitish chips; rare fine sub-rounded voids. Unslipped, but wet-smoothed and with a whitish wash (?) on exterior. Date: late 6th century?

**157.** Lot 95-61:55a-b Fig. 13

Date of lot: late 6th century.

Dish/bowl (interpretation LRC, Hayes form 3?), rim and non-joining base. Diam. base ca. 0.190-0.200, H. (reconstructed) 0.047, diam. rim 0.290-0.310 m. Possibly related to micaceous water jar fabric? Light brown (slightly darker than 7.5YR 6/4) fabric. Common fine (gold?) sparkling bits; rare fine rounded black grains; rare to few fine rounded voids. Overall 'sandy' appearance under hand lens. Granular break, but laminar close to the surfaces; soft to medium hard fabric. Badly flaking light red (2.5YR 6/6) slip, thickly applied on interior, thin and wash-like on exterior. Date: late 6th century?

## *Amphoras*

### LR Amphora 1

**158.** Lot 96-45:93 Fig. 13
Date of lot: second quarter of the 5th century to ca. 450.
LR Amphora 1, rim. Diam. rim 0.065 m. Date: second quarter of the 5th century to ca. 450.

**159.** Lot 98-21:18 Fig. 13, Pl. 1.7
Date of lot: later redeposition of primarily 6th-century material.
LR Amphora 1, rim to shoulder and handle roots. p. H. 0.114, diam. rim 0.090 m. Fabric with white-flecks. Date: 6th century.

**160.** Lot 99-38:17 Fig. 13
Date of lot: later redeposition of primarily 6th-century material.
LR Amphora 1, rim to shoulders with handle, traces of red dipinto at base of neck and shoulder. p. H. 0.136, diam. rim 0.110 m. Fabric fired nearly white. Date: 6th century.

**161.** C-1997-052 Fig. 13
Lot 1997-057, dated mid- to third quarter of the 7th century.
LR Amphora 1, complete profile, with four lines of dipinti under the handle and on shoulder:
Χ(ρίστου) γ(έννα) Μ(αρία)
[---]C
τού | Ιηcο(υ) Χρ(ίcτου) | έτουc | ΦΠΓ
[---]. ξ(έcται)…
Diam. base N/A, max. diam. 0.309, H. 0.566, diam. rim 0.104 m. Published, Slane and Sanders 2005, p. 274, no. 4-8, fig. 13. Dated: mid- to third quarter of the 7th century.

### Micaceous Water Jar (LR Amphora 3), "Gray Fabric"

**162.** Lot 96-45:82 Fig. 13, Pl. 1.9
Date of lot: second quarter of the 5th century to ca. 450.
Amphora, rim. Diam. rim 0.033 m. Dark gray fabric and surfaces. Abundant very fine to fine silver sparkling bits; frequent very fine to fine sub-rounded voids. Granular to conchoidal break; medium hard fabric. Cf. *Agora* V, p. 110, no. M 282, pls. 29, 41 (gray fabric). Date: second quarter of the 5th century to ca. 450.

**163.** Lot 96-45:83 Fig. 13
Date of lot: second quarter of the 5th century to ca. 450.
Amphora, base. p. diam. base 0.024, p. H. 0.045 m. As previous, but with one fine sub-rounded white grit; one fine sub-rounded gray grit. Possibly cf. *Agora* V, p. 110, no. M 282, pls. 29, 41 (gray fabric). Date: second quarter of the 5th century to ca. 450.

### Micaceous Water Jar (LR Amphora 3), "Red Fabric"

**164.** Lot 96-70:12 Fig. 14
Date of lot: mid-5th century.

Amphora, rim. p. H. 0.062, diam. rim ca. 0.035 m. Red (2.5YR 5/6) fabric and surfaces. Abundant fine sparkling bits; few fine rounded dark grains; rare fine sub-rounded white grits; rare fine sub-rounded gray grits; few very fine sub-rounded voids. Granular break; medium hard fabric. Possibly cf. *Agora* V, p. 110, no. M 282, pls. 29, 41 (gray fabric). Date: mid-5th century.

**165.** Lot 01-11:15 Fig. 14

Lot 2001-011, basket 16, dated second half of the 5th century.

Amphora, rim and handle root. p. H. 0.060, diam. rim 0.260-0.030 m. Red (2.5YR 4/8) fabric; reddish brown (5YR 5/4) exterior surface; reddish gray (5YR 5/2) interior surface. Abundant fine sparkling bits; few very fine rounded black grains; rare very fine white flecks; few to frequent fine sub-rounded voids. Granular break; soft fabric. Cf. *Agora* V, p. 108, no. M 255, pls. 28, 41, 58 (red fabric), or p. 110, no. M 277, pl. 29 (red fabric). Date: second half of the 5th century, or earlier.

**166.** Lot 01-11:16 Fig. 14

Lot 2001-011, basket 16, dated second half of the 5th century.

Amphora, base. Diam. base 0.022-0.250, p. H. 0.034 m. Red (2.5YR 4/6) fabric; reddish brown (2.5YR 5/4) surfaces. Abundant fine sparkling bits; rare very fine rounded bright red pellets; rare fine rounded black grains; few fine sub-rounded voids. Granular break; very soft fabric. Cf. *Agora* V, p. 108, no. M 256, pls. 28 (red fabric), or p. 110, no. M 277, pl. 29 (red fabric). Date: second half of the 5th century, or earlier.

**167.** Lot 97-57:69 Fig. 14, Pl. 1.10

Date of lot: mid- to third quarter of the 7th century.

Micaceous water jar, rim. Diam. rim 0.035 m. Red (2.5YR 4/8) fabric with thick gray core; red (2.5YR 5/6) surfaces. Abundant fine sparkling bits; rare fine white flecks; few very fine sub-rounded voids. Conchoidal break; medium hard fabric. Cf. *Agora* V, p. 119, no. M 373, pls. 34, 41. Date: 6th century.

**168.** Lot 01-11:23 Fig. 14

Lot 2001-011, baskets 18, 20, dated late 6th century.

Micaceous water jar, toe and lower body. Diam. base (at tip) 0.015, p. H. 0.182 m. Red (10R 4/8) fabric and exterior surface, graying towards interior surface; reddish brown (2.5YR 5/4) interior surface. Abundant fine sparkling bits; few very fine rounded black grains; few fine rounded bright red pellets; rare to few very fine sub-rounded gray grits; rare fine sub-rounded beige pellets (clay?); few fine sub-rounded voids. Hackly break; soft fabric. Cf. *Agora* V, p. 119, no. M 373, pls. 34, 41. Date: 6th century.

## Possible Micaceous Water Jars?

**169.** Lot 02-06:15 Fig. 14, Pl. 1.12

Date of lot: second half of the 6th century to 7th century.

Micaceous water jar (?), rim. Diam. rim 0.065 m. Yellowish red (5YR 5/6) fabric; reddish yellow (5YR 6/6) surfaces. Abundant fine sparkling bits; rare to few very fine rounded black grains; rare fine rounded bright red inclusions; rare fine sub-rounded gray inclusions; frequent very fine sub-rounded voids. Granular and conchoidal break; soft fabric. For a similar profile, cf. **199**. Date: second half of the 6th century?

**170.** Lot 02-06:17 Fig. 14, Pl. 2.1

Date of lot: second half of the 6th century to 7th century.

Micaceous water jar (?), rim. Diam. rim 0.060 m. Red (2.5YR 5/6) fabric; thin, very pale brown (10YR 8/3) wash/accretion over surfaces. Abundant fine sparkling bits; rare fine sub-rounded gray inclusions; rare fine sub-rounded bright red inclusions; rare fine to small brown patches (clay pellets?); frequent to common very fine sub-rounded voids. Granular and conchoidal break; soft fabric. Date: second half of the 6th century?

## Gaza Amphora (LR Amphora 4)

*Majcherek's forms*

**171.** Lot 96-45:23 Fig. 14
Date of lot: second quarter of the 5th century to ca. 450.
Gaza amphora, Majcherek form 2, rim. Diam. rim ca. 0.100 m. Date: second quarter of the 5th century to ca. 450.

**172.** Lot 00-07:32 Fig. 14
Date of lot: second quarter of the 5th century to ca. 450.
Gaza amphora, Majcherek form 2, rim. Diam. rim 0.090 m. Date: second quarter of the 5th century to ca. 450.

**173.** Lot 95-70:9 Fig. 14
Date of lot: mid- to late 6th century.
Gaza amphora, Majcherek form 3, rim. Diam. rim 0.110-0.120 m. Date: mid- to late 6th century (or earlier).

**174.** Lot 97-57:7 & 97-57:8 Fig. 14
Date of lot: mid- to third quarter of the 7th century.
Gaza amphora, Majcherek form 3, rim to upper body and handle. p. H. 0.116, diam. rim 0.110 m. Date: 6th to early 7th century.

**175.** Lot 01-08:2 Fig. 15
Date of lot: mid-6th century.
Gaza amphora, Majcherek form 3 or 4, rim. Diam. rim 0.080-0.10 m. Date: mid-6th century?

**176.** C-1999-018 Fig. 15
Gr. 1999-005, dated mid-6th to early 7th century.
Gaza amphora, Majcherek form 4, complete. Max. diam. 0.216, H. 0.788, diam. rim 0.096 m. Date: mid-6th to early 7th century.

**177.** Lot 98-29:27 Fig. 15
Date of lot: later redeposition of primarily 6th-century material.
Gaza amphora, Majcherek form 4, rim to upper body with partial handle root. Diam. rim 0.090-0.110 m. Date: 6th century.

**178.** Lot 98-29:28 Fig. 15
Date of lot: later redeposition of primarily 6th-century material.
Gaza amphora, Majcherek form 4, rim. Diam. rim ca. 0.100-0.140 m. Date: 6th century.

**179.** Lot 98-29:29 Fig. 15
Date of lot: later redeposition of primarily 6th-century material.
Gaza amphora, Majcherek form 4, toe and lower body. Max. p. diam. 0.183, p. H. 0.302 m. Date: 6th century.

## Palestinian Amphoras, Early

*Various forms*

**180.** Lot 96-45:92 Fig. 16
Date of lot: second quarter of the 5th century to ca. 450.
Amphora, rim. Diam. rim 0.070-0.100 m. An unnumbered, non-joining handle is noted in the same lot. Possibly cf. Slane and Sanders 2005, p. 263, no. 2-24, fig. 5. Date: second quarter of the 5th century to ca. 450.

## Palestinian Amphoras, "Gritty Red Fabric"

*Small Palestinian amphora with vertical wall*

**181.** Lot 95-61:50 Fig. 16, Pl. 2.4
Date of lot: late 6th century.
Palestinian amphora, rim to upper body and handle. p. H. 0.120, diam. rim ca. 0.055 m. Possibly overfired. Date: late 6th century.

**182.** Lot 98-29:35 Fig. 16
Date of lot: later redeposition of primarily 6th-century material.
Palestinian amphora, rim to shoulder. p. H. 0.087, diam. rim 0.055-0.060 m. Date: 6th century.

**183.** C-1997-061 Fig. 16
Lot 1997-057, dated mid- to third quarter of the 7th century.
Fractional Palestinian amphora, complete profile. Diam. base N/A, max. diam. ca. 0.160, H. 0.380, diam. rim 0.060-0.064 m. Published, Slane and Sanders 2005, p. 278, no. 4-20, fig. 13. Date: mid- to third quarter of the 7th century (or earlier?).

## Palestinian Amphoras, "Buff Fabric"

*Baggy Palestinian amphora (LR Amphora 5)*

**184.** Lot 98-29:26 Fig. 16
Date of lot: later redeposition of primarily 6th-century material.
Palestinian amphora, rim and upper body, x5 non-joining body sherds. p. H. 0.192, diam. rim 0.095 m. Possibly overfired? Date: 6th century.

**185.** C-1997-045 Fig. 17
Lots 1996-044, 1997-057, dated mid- to third quarter of the 7th century.
Palestinian amphora, complete profile. Diam. base N/A, max. diam. 0.330, H. 0.385, diam. rim 0.090 m. Published, Slane and Sanders 2005, p. 278, no. 4-18 (not illustrated). Date: mid- to third quarter of the 7th century.

**186.** Lot 97-57:12 Fig. 17
Date of lot: mid- to third quarter of the 7th century.
Palestinian amphora, rim to lower body and handles. Est. max. diam. 0.400, p. H. 0.413, diam. rim 0.097 m. Published, Slane and Sanders 2005, p. 278, no. 4-19, fig. 11. Date: dated mid- to third quarter of the 7th century.

**187.** Lot 96-44:19 Fig. 17
Date of lot: mid- to third quarter of the 7th century.
Palestinian amphora, rim. Diam. rim 0.090 m. Date: mid- to third quarter of the 7th century.

## Palestinian Amphoras, "Gritty Brown Fabric"

*Baggy Palestinian amphora (LR Amphora 5)*

**188.** Lot 98-22:7a-b Fig. 18, Pl. 2.6
Date of lot: later redeposition of primarily 6th-century material.
Palestinian amphora, rim to mid-body and handle. Max. diam. 0.390, p. H. 0.277, diam. rim 0.097-0.100 m. For a similar profile, cf. **190**. Date: 6th century.

**189.** Lot 97-57:74 Fig. 18
Date of lot: mid- to third quarter of the 7th century.
Palestinian amphora, rim to shoulder and handle. Diam. rim 0.090 m. Date: mid- to third quarter of the 7th century (or earlier).

## Palestinian Amphoras, "White Flecked Fabric"

*Baggy Palestinian amphora (LR Amphora 5)*

**190.** Lot 98-21:5 Fig. 18, Pl. 2.7

Date of lot: later redeposition of primarily 6th-century material.

Palestinian amphora, rim to upper body and handle. p. H. 0.138, diam. rim ca. 0.098 m. For a similar profile, cf. **188**. Date: 6th century.

## Palestinian Carrot Amphoras

**191.** C-1997-046a-d Fig. 18

Lot 1997-057, dated mid- to third quarter of the 7th century.

Palestinian carrot amphora, complete profile. Diam. base ca. 0.050, max. diam. 0.213, restored H. 0.398, diam. rim 0.070-0.080 m. Published, Slane and Sanders 2005, p. 278, no. 4-21, fig. 11; for another, cf. **192**. Date: mid- to third quarter of the 7th century.

**192.** Lot 97-57:58a-b Fig. 18, Pl. 2.8

Date of lot: mid- to third quarter of the 7th century.

Palestinian carrot amphora, rim to upper body and handle, with non-joining base and lower body. Diam. base 0.045-0.050, est. max. diam. 0.250, p. H. ('a') 0.163, ('b') 0.224, diam. rim (warped) ca. 0.070 m. For another, cf. **191**. Date: mid- to third quarter of the 7th century.

## Samos Cistern Amphoras

**193.** Lot 95-61:51a-b Fig. 19, Pl. 2.10

Date of lot: late 6th century.

Samos cistern amphora, rim to shoulder and handle. p. H. 0.084, est. diam. rim 0.090-0.110 m. Date: late 6th century.

**194.** Lot 02-06:21 Fig. 19, Pl. 2.9

Date of lot: second half of the 6th century to 7th century.

Samos cistern amphora, rim to upper body and handle. p. H. 0.174, diam. rim (uneven) 0.090 m. Date: second half of the 6th century.

**195.** Lot 02-06:22 Fig. 19

Date of lot: second half of the 6th century to 7th century.

Samos cistern amphora, solid toe. p. H. 0.068 m. Possible non-joining toe to previous. Date: second half of the 6th century.

**196.** Lot 02-06:16 Fig. 19

Date of lot: second half of the 6th century to 7th century.

Samos cistern amphora (?), rim and handle. Diam. rim 0.070-0.090 m. Strong brown (7.5YR 5/6) fabric. Few to frequent fine sparkling bits (direct sunlight); few very fine rounded black grains; rare fine sub-rounded gray inclusions; few fine sub-rounded voids. Granular to conchoidal break; very soft fabric. Date: second half of the 6th century.

## Unidentified Amphora 1

**197.** Lot 02-06:18 (P-92) Fig. 19, Pl. 3.2

Date of lot: second half of the 6th century to 7th century.

Amphora, rim. Diam. rim ca. 0.058-0.060 m. Date: second half of the 6th century.

**198.** Lot 02-06:19 Fig. 19

Date of lot: second half of the 6th century to 7th century.

Amphora, rim. Diam. rim 0.050-0.060 m. Thin, dark red slip/wash on exterior surface. Date: second half of the 6th century.

**199.** Lot 02-06:20 Fig. 19
Date of lot: second half of the 6th century to 7th century.
Amphora, rim. Diam. rim 0.060 m (but uneven). Near-black (overfired?) slip on rim. Date: second half of the 6th century.

**200.** Lot 02-06:32 Fig. 19
Date of lot: second half of the 6th century to 7th century.
Amphora, rim. Diam. rim 0.060 m. Pinkish self-slip (?) over all. Date: second half of the 6th century.

**201.** Lot 01-11:26a-b (P-91) Fig. 20, Pls. 2.12, 3.1
Lot 2001-011, baskets 18, 20, dated late 6th century.
Amphora, hollow toe and lower body with non-joining shoulder. Diam. toe (at tip) 0.044, max. diam. (reconstructed) 0.263, p. H. (reconstructed) 0.543 m. Date: dated late 6th century.

## Various Non-Local/Regional Fabrics

**202.** Lot 00-07:31 Fig. 20, Pl. 4.4
Date of lot: second quarter of the 5th century to ca. 450.
Keay XXV/Africaine III B amphora, rim and handles. p. H. 0.278, diam. rim 0.125 m. Red (2.5 YR 5/8) fabric with pale whitish surface. Few elusive fine sparkling bits; abundant very fine white grits; few to frequent fine sub-rounded bluish-gray translucent clumps; rare fine to small spalling calcareous white lumps; rare medium sub-rounded tan lumps (grog?); rare to few (more numerous?) fine sub-rounded red inclusions; one medium sub-rounded dark red inclusion; frequent very fine to small sub-rounded voids. Granular break; medium-hard fabric. Cf. Bonifay 2004, p. 119, fig. 63, "Type 28". Date: second quarter of the 5th century to ca. 450.

**203.** Lot 05-07:12 Fig. 20, Pl. 4.5
Date of lot: early 4th with first half of the 5th-century material.
Keay XXXV B (?) (possibly Portuguese Almagro 50 or 51?), African amphora, rim and handle root. p. H. 0.091, diam. rim 0.070 m. Red (2.5YR 5/8) with white exterior coating. Frequent to common fine sparkling bits; few small translucent white inclusions; few to frequent fine translucent gray/clear inclusions; few fine black grits; few to frequent fine white flecks; frequent fine sub-rounded voids. Granular-hackly break; medium-hard to hard fabric. Cf. Bonifay 2004, pp. 134-135, figs. 72a and b, "Type 41." Date: first half of the 5th century.

**204.** Lot 05-07:11 Fig. 20, Pl. 4.6
Date of lot: early 4th with first half of the 5th century.
Keay LXI A (?), African amphora, neck and handle. p. H. 0.114, diam. neck ca. 0.080 m. Red (2.5YR 5/6) with white exterior coating. Frequent fine sparkling bits; few to frequent small angular white and clear translucent chips; few fine black grits; few small angular red inclusions; few fine white flecks; few fine to small sub-rounded voids. Hackly break; medium-hard fabric. Date: first half of the 5th century.

**205.** Lot 99-38:4 Fig. 20, Pl. 4.7
Date of lot: later redeposition of primarily 6th-century material.
African (?) amphora, rim. p. H. 0.082, diam. rim 0.090 m. Red (2.5YR 5/6 to 5/8) fabric. Common very fine white grits; rare to few small angular dark and red chips; rare small sub-rounded (calcareous?) white lumps; rare fine to small sub-rounded voids. Granular to hackly break; hard fabric. Date: possibly mid-5th to early 6th century.

**206.** Lot 97-57:71 Fig. 20
Date of lot: mid- to third quarter of the 7th century.

"*Spatheion*" type 1, African amphora, toe and lower body. Diam. base (at tip) 0.014, p. H. 0.123 m. Very pale brown (approx. 10YR 8/4 to 7/4) inner fabric, white (2.5Y 8/2) outer fabric, with mottled off-white exterior surface. Rare fine silver sparkling bits; few very fine sub-rounded red inclusions; few very fine sub-rounded gray/dark grits; rare fine bluish-gray inclusions; frequent very fine to fine sub-rounded voids. Granular break; medium hard fabric. Cf. Bonifay 2004, p. 125, fig. 67, "Type 31." Date: 5th to 6th century.

**207.** C-1998-027 Fig. 20

Lot 1998-022, later redeposition of primarily 6th-century material.

"*Spatheion*" type 2, African amphora, rim to neck and handles. p. H. 0.115, diam. rim 0.069 m. Reddish yellow (5YR 6/8) fabric and surfaces. Rare elusive fine sparkling bits; few fine sub-rounded black grits; few fine sub-rounded and angular clear/translucent inclusions; rare fine sub-rounded gray inclusions; rare very fine red inclusions; few very fine to fine sub-rounded white grits; frequent very fine to fine sub-rounded and angular voids. Overall, sand-like texture under lens. Granular, slightly conchoidal break; hard fabric. Cf. Bonifay 2004, pp. 125, 127, fig. 68, "Type 32," Variant A. Date: 5th to 6th century.

**208.** Lot 02-23:1 Fig. 20

Date of lot: first half of the 5th century.

Amphora, rim and handles. p. H. 0.094, diam. rim 0.084 m. One half fired gray, the other strong brown (approx. 7.5YR 5/6) with graying horizons, and reddish yellow (approx. 7.5YR 6/6) interior and exterior surfaces. Frequent very fine to small silver sparkling flakes; few very fine white specks; few to frequent fine sub-rounded gray bits; rare fine rounded black grits (but appears frequent and fine to small rounded and sub-rounded on the reddish yellow surface); rare small sub-rounded red grains; few very fine to fine sub-rounded and elongated voids. Granular, slightly conchoidal break; medium hard fabric. Deliberate scratches noted on interior of rim and neck. For the profile, cf. Slane and Sanders 2005, p. 254, no. 1-19, fig. 3, related to Keay XXIII/Almagro 51C. Date: first half of the 5th century?

**209.** Lot 04-02:19 Fig. 20

Date of lot: late 4th century (with Middle Roman material).

Amphora, rim, neck and handle root. Est. diam. rim 0.090 m. Boiotian fabric? Brown fabric (7.5YR 5/2). Frequent very fine sparkling bits; few fine white, yellowish white, and black grits; few to frequent elongated voids. Granular to conchoidal break; medium hard fabric. For possibly another, cf. **210**; for a similar profile, cf. **208**, and Slane and Sanders 2005, p. 254, no. 1-19, fig. 3. Date: late 4th century?

**210.** Lot 95-61:52 Fig. 20

Date of lot: late 6th century.

Amphora, rim to shoulder and handle root. p. H. 0.085, diam. rim 0.070-0.090 m. Boiotian fabric? Strong brown (7.5YR 5/6) fabric. Frequent fine sparkling bits; frequent fine white grits; few fine black grits; few fine sub-rounded voids. Granular, slightly smooth/conchoidal, break; soft to medium hard fabric. Cf. previous. Date: possibly late 4th to 5th century.

**211.** Lot 96-45:85a-b Fig. 20

Date of lot: second quarter of the 5th century to ca. 450.

Matt-Painted Table Amphora, joining rim fragments. p. H. 0.047, diam. rim 0.080 m. Reddish yellow (approx. 7.5YR 7/6) to yellow (approx. 10YR 7/6) fabric. Few fine sparkling bits; few fine black flecks; few small sub-rounded red inclusions; one medium angular light/dull red inclusions; one small white shell (?) visible on surface; frequent fine to small rounded and elongated voids. Granular, nearly smooth, break; medium-hard fabric. For a similar profile, but in a different fabric, cf. Slane 1994, p. 144, no. 53, fig. 11. Date: 4th century?

**212.** Lot 96-45:18 Fig. 20

Date of lot: second quarter of the 5th century to ca. 450.

(Table?) Amphora, rim. Diam. rim 0.040-0.060 m. Red (2.5YR 5/6) inner fabric, yellowish red (5YR 5/8) outer fabric; reddish yellow (5YR 6/6) surfaces. Rare fine sparkling bits; rare very fine sub-rounded white grits; frequent fine sub-rounded gray inclusions; rare fine sub-rounded black grits; frequent

fine sub-rounded voids. Granular break; medium hard fabric. Possibly cf. *Corinth* XVIII.2, p. 116, no. 250, fig. 29. Date: second half of the 4th century or later.

**213.** Lot 96-45:22 Fig. 21

Date of lot: second quarter of the 5th century to ca. 450.

Amphora, rim. Diam. rim 0.048 m. Reddish yellow (approx. 5YR 6/6) fabric, with wet-smoothed exterior surface. Few fine to small rounded black grains; few fine white grits; rare small red inclusions; few fine stringy white flecks; few fine pin-hole voids. Granular break; medium-hard fabric. Date: second quarter of the 5th century to ca. 450?

**214.** Lot 00-18:16 Fig. 21

Date of lot: second quarter to mid-5th century.

Amphora, rim and handles. Diam. rim 0.062 m. Reddish yellow (5YR 6/6) with near-white exterior coating, continuing faintly on interior. Common fine to small silver sparkling bits; few fine to small sub-rounded gray/white calcareous lumps; few to frequent fine to small sub-rounded black grits; frequent (to common?) fine to small sub-rounded voids. Granular, slightly conchoidal break; medium hard fabric. Possibly African (?), but cf. Bonifay 2004 where such high-swung handles are unattested among African amphorae. Date: second quarter to mid-5th century?

**215.** Lot 98-22:11 Fig. 21, Pl. 4.8

Date of lot: later redeposition of primarily 6th-century material.

East Laconian (?) one-handled jar, rim and handle. Diam. rim 0.060 m. Yellowish red (5YR 5/6 - 5/8); reddish yellow (5YR 6/6) exterior surface; red (2.5YR 5/6) slip; frequent to common fine elusive sparkling bits (in direct sunlight); few fine to very fine rounded black grains; rare fine sub-rounded white grits; rare fine sub-rounded translucent gray clumps; few very fine to fine rounded voids. Granular, slightly conchoidal break; soft to medium hard fabric. For possibly the same fabric, cf. 05-07:8 (intrusive?); cf. *Agora* V, p. 113, no. M 315, pls. 33, 58, and p.116, no. M 336, pl. 33. Date: probably 5th century (or earlier).

**216.** Lot 01-10:8 Fig. 21

Date of lot: late 6th to early 7th century.

East Laconian (?) one-handled jar, rim and handle. Diam. rim 0.060 m. Reddish yellow (5YR 6/8) fabric and interior surface; reddish yellow (approx. 7.5YR 7/6) exterior surface. Red (2.5YR 5/8) slip. Few fine sparkling bits; few to frequent very fine rounded black grains; rare fine sub-rounded red inclusions; rare fine sub-rounded white grits; few fine sub-rounded voids. Granular, slightly conchoidal break; medium hard fabric. Thin red slip on exterior and dripping over the rim. For possibly the same fabric, cf. 05-07:8 (intrusive?); cf. *Agora* V, p. 113, no. M 315, pls. 33, 58, and p.116, no. M 336, pl. 33. Date: probably 5th century (or earlier).

**217.** Lot 98-21:6 Fig. 21, Pl. 4.9

Date of lot: later redeposition of primarily 6th-century material.

East Laconian (?) one-handled jar, base. Diam. base 0.044, p. H. 0.087 m. Yellowish red (5YR 5/8) fabric. Few to frequent fine sparkling bits; few fine white grits; few very fine to small rounded black grains; one small angular red chip; few very fine to fine sub-rounded voids. Granular and conchoidal break; medium hard fabric. Traces of mottled slip, ranging from near-black to red (2.5YR 5/6) to reddish brown (2.5YR 5/3), on exterior. Cf. *Agora* V, p. 113, no. M 315, pls. 33, 58. Date: probably 5th century (or earlier).

**218.** Lot 98-15:22 Fig. 21

Date of lot: ca. 500.

Amphora (Black Sea?), rim and handle. Diam. rim 0.090 m. Light red (2.5YR 6/6) fabric and exterior surface, with small brown (7.5YR 5/3) core at area of join of handle and wall; reddish yellow (5YR 6/6) interior surface. Frequent fine sparkling bits; common very fine sub-rounded translucent gray and dark clumps; rare fine to medium sub-rounded red inclusions; rare fine sub-rounded white grits; rare fine sub-rounded off-white inclusions; rare small pebbles; abundant very fine to fine sub-rounded voids. Granular break; medium hard fabric. Date: ca. 500?

**219.** Lot 98-15:23 Fig. 21

Date of lot: ca. 500.

Amphora, rim to neck, and handle roots. p. H. 0.128, diam. rim 0.065-0.070 m. Reddish yellow (5YR 6/6) fabric. Rare elusive very fine sparkling bits; common fine to small rounded black grains; rare large sub-rounded black inclusions; frequent fine to small rounded white/gray inclusions; few small sub-rounded red inclusions; frequent fine to small sub-rounded voids. Overall gritty fabric, appearing sand-like under hand lens. Granular to hackly break; medium hard fabric. Possible relation to Slane 2000, p. 303, fig. 14:g, possibly from Sinope in Bithynia. Date: ca. 500, or earlier (3rd century?).

**220.** Lot 96-76:5 Fig. 21

Date of lot: second half of the 5th century (with contamination?).

Table Amphora, rim and handle root. Diam. rim ca. 0.075-0.080 m. Red (2.5YR 5/6 to 5/8) fabric with thin reddish yellow (5YR 6/6) core close to exterior surface; exterior surface is pink (7.5YR 7/4) to reddish yellow (7.5YR 7/6). Few fine sparkling bits; few small (calcareous?) white lumps; rare small red inclusions; rare to few small rounded black grains; one small elongated yellow lump (grog?); few small translucent white/gray clumps; few fine pin-hole voids. Granular break; medium-hard fabric. Possibly cf. Slane and Sanders 2005, p. 255, no. 1-26, fig. 4, with another roughly similar profile on p. 264, no. 2-30, fig. 5; for the profile of no. 1-26, see Slane 2000, p. 304, fig. 6:a. Date: 5th century.

**221.** Lot 96-76:13 Fig. 22

Date of lot: second half of the 5th century (with contamination?).

Amphora, neck to shoulder and handles. Max. p. diam. 0.280, diam. neck (on exterior) ca. 0.070 m. Yellowish red (approx. 5YR 5/6) fabric, with interior surface light reddish brown (5YR 6/4) to reddish brown (5YR 5/4), and pink (7.5YR 8/3) exterior fabric. Few to frequent fine sparkling bits; rare small (calcareous?) white lumps, with few fine to small visible on the surface; rare to few small black grains; frequent fine sub-rounded voids. Overall, fabric has a sandy appearance. Granular, clean, break; hard fabric. Exterior surface mottled with streaky, thin, light reddish brown (5YR 6/4) wash. Cf. *Agora* V, p. 115, no. M 325, pl. 32, and Williams and Zervos 1983, p. 25, no. 67, pl. 10, for profile but not fabric; Slane 2000, p. 304, fig. 6:c. Date: second half of the 5th century, or earlier.

**222.** C-2000-009 Fig. 22

Lots 2000-003, dated mid-6th century, and 2000-017, dated second half of the 5th century.

Amphora (possibly Cretan, Eleutherna type MRC2a/b?), rim and handle. p. H. 0.065, diam. rim 0.061 m. Yellow (10YR 8/6) outer fabric, becoming grayer towards inner fabric (white, 10YR 8/1); very pale brown (10YR 8/3 – 8/4) exterior surface; nearly bone-white interior surface. Few to frequent very fine and elusive sparkling bits (direct sunlight); rare fine sub-rounded white grits; rare fine sub-rounded dark grits; rare fine to small rounded red inclusions; one small sub-rounded brown pellet (clay?); frequent fine sub-rounded voids. Granular, slightly laminar break; medium hard fabric. Reddish yellow (approx. 5YR 6/6) to light gray (approx. 7.5YR 7/1) slip (?) on the handle; a drop of red slip on the lip and on the shoulder. Cf. Yangaki 2005, pp. 185-188, figs. 47-49. Date: 4th to 5th century.

**223.** Lot 97-52:4 Fig. 22

Date of lot: first half of the 6th century.

Amphora, as Keay LII (?), rim to neck, handle root. p. H. 0.086, diam. rim 0.065 m. Yellowish red (approx. 5YR 5/6) fabric with thick black core; brown exterior surface (7.5YR 5/2), reddish yellow (5YR 6/6) interior surface. Frequent very fine to fine sparkling bits; few small sub-rounded white grits; rare small sub-rounded yellow inclusions; rare fine rounded black grains; few fine to small sub-rounded voids. Overall near-sandy appearance under hand lens. Granular break; hard fabric. Date: first half of the 6th century, or earlier.

**224.** C-1998-030 Fig. 22

Lot 1998-029, later redeposition of primarily 6th-century material.

Amphora, rim to shoulder and handle. p. H. ca. 0.130, diam. rim 0.070 m. Possibly Black Sea fabric? Reddish yellow (5YR 6/6) fabric and surfaces. Rare fine sparkling bits; frequent to common fine sub-rounded translucent red clumps; rare very fine sub-rounded bright red inclusions; rare medium to large

sub-rounded crumbly dark red lumps; few to frequent fine sub-rounded translucent gray clumps; rare very fine rounded black grains; frequent very fine to fine (with few medium to large) sub-rounded calcareous white lumps (few to frequent spalling); frequent very fine to fine sub-rounded and rounded voids. Hackly break; hard fabric. Date: unknown.

**225.** Lot 02-06:3 Fig. 22

Date of lot: second half of the 6th century to 7th century.

One-handled jar, neck and handle. p. H. 0.123, p. diam. neck 0.051 m. Possibly Attic 3 (?). Yellowish red (5YR 5/6) outer fabric, brown (approx. 7.5YR 5/3) inner fabric; red (10R 5/6 to 2.5YR 5/6) interior surface. Few to frequent fine sparkling bits; few fine rounded black grains; rare fine sub-rounded off-white pellets (clay?); few fine to small sub-rounded calcareous white lumps (rare spalling); few to frequent fine sub-rounded voids. Granular, slightly smooth break; medium hard fabric. Overall scratchy feel (sandpaper-like) to surface. Thin, mottled slip over exterior ranges from red (2.5YR 5/6) to near-black in several areas. Possibly an interpretation of East Laconian one-handled jars as *Agora* V, p. 113, no. M 315, pls. 33, 58, and p. 116, no. M 336, pl. 33. For the handle, possibly cf. **437**. Date: unknown.

**226.** Lot 97-57:72 Fig. 22, Pl. 4.12

Date of lot: mid- to third quarter of the 7th century.

Egyptian LR Amphora 7, neck and handle roots with traces of dipinto. p. H. 0.107, diam. neck (at handle) 0.070 m. Strong brown (7.5YR 4/6). Frequent to common fine gold sparkling bits; rare fine sub-rounded red inclusions; few to frequent fine rounded black grains; frequent fine sub-rounded gray inclusions; rare very fine sub-rounded white grits; rare fine to small white translucent inclusions; rare to few fine to small elongated off-white inclusions; abundant very fine tan/buff grains (sand); frequent to common very fine to small sub-rounded voids; rare small elongated voids. Granular break; medium hard fabric. Date: 5th to 6th century.

**227.** Lot 95-61:53 Fig. 22

Date of lot: late 6th century.

Amphora, rim to shoulder and handles. p. H. 0.272, diam. rim 0.085 m. Light red (2.5YR 7-6 to 6/6) interior surface and inner fabric, with pale yellow (2.5YR 7/4) exterior surface and outer fabric. Frequent very fine to small (crystalline) sparkling bits; frequent fine to small translucent grayish-white clumps; rare fine to small rounded red inclusions; few fine to small rounded black grains; few fine sub-rounded voids. Granular, slightly conchoidal break; hard fabric. Date: late 6th century?

**228.** Lot 95-61:103 Fig. 22

Date of lot: late 6th century.

Amphora, rim and handle. Diam. rim 0.060-0.070 m. Reddish yellow (5YR 7/6) fabric, surface same but mottled with patches of pale buff. Abundant fine sparkling bits; frequent fine to small sub-rounded white grits; few to frequent fine rounded red inclusions; few fine rounded black grains; few fine sub-rounded voids. Granular, slightly conchoidal, break; medium hard fabric. For another, cf. **229**; for earlier (?) examples, cf. Slane 2000, p. 304, fig. 6:b, and Slane and Sanders 2005, p. 262, no. 2-17, fig. 5. Date: mid-5th to late 6th century.

**229.** Lot 97-57:57a-b Fig. 22, Pl. 15

Date of lot: mid- to third quarter of the 7th century.

Amphora, rim and handle, with non-joining body sherd with traces of red dipinto. Diam. rim unknown, ca. 0.060-0.070 m? Reddish yellow (5YR 7/6 to 6/6) fabric with pale white exterior surface. Common to abundant fine sparkling silver and gold flakes; few to frequent sub-rounded off-white inclusions; rare fine sub-rounded black grits; rare fine sub-rounded red inclusions; few to frequent very fine to fine sub-rounded voids. Granular and smooth/conchoidal break; medium hard fabric. Cf. previous. Date: mid-5th to late 6th century (or later?).

**230.** Lot 98-21:8 Fig. 23, Pl. 4.10

Date of lot: later redeposition of primarily 6th-century material.

*Saraçhane* type 22, (Cretan?) amphora, rim and partial handle. p. H. 0.079, diam. rim ca. 0.055-0.058 m. Possibly Cretan fabric? Reddish yellow (approx. 7.5YR 6/6) fabric with pale, creamy buff

exterior surface. Few fine (dull) sparkling bits; rare fine sub-rounded white grits; frequent fine sub-rounded voids. Conchoidal break; medium hard fabric. For the type, cf. *Saraçhane*, p. 104, no. 30.195-196, fig. 49; cf. also Slane and Sanders 2005, p. 271, no. 3-28, fig. 10; cf. also **231**. Date: 6th century.

**231.** Lot 97-57:19a-b Fig. 23, Pl. 4.11

Date of lot: mid- to third quarter of the 7th century.

*Saraçhane* type 22, (Cretan?) amphora, rim and handle root, with non-joining shoulder to toe with handle root. Max. diam. 0.160, H. (reconstructed) 0.620, diam. rim 0.048 m. Possibly Cretan fabric? Reddish yellow (darker than 7.5YR 7/6) outer fabric, reddish yellow (5YR 6/6) inner fabric, with corresponding surfaces. Frequent fine silver sparkling bits; few fine sub-rounded white grits; rare fine sub-rounded red inclusions; rare fine sub-rounded dark grits; few fine to small sub-rounded voids. Granular to conchoidal break; soft fabric. Overall, fabric feels slightly chalky. Published, Slane and Sanders 2005, p. 278, no. 4-22, figs. 11(for 'b') and 13 (for 'a'); cf. also previous. Date: mid- to third quarter of the 7th century (or earlier?).

**232.** C-1997-038a-b Fig. 23

Lot 1997-057, dated mid- to third quarter of the 7th century.

(Table?) Amphora, rim to base and handles. *Post-coctum* graffito between handles reads:

+ *vac.* INωTH[1-2]MZINTOY | CαΠO[1-2]IOY

Diam. base 0.062, max. diam. 0.225, H. 0.327, diam. rim 0.099 m. Reddish yellow (5YR 6/6) fabric with dark and badly flaking interior surface; reddish yellow (near 7.5YR 6/6) exterior surface. Common to abundant fine to small sparkling flakes; few to frequent fine sub-rounded black on surface (rare on the break); few fine sub-rounded gray (rare on the break); rare fine sub-rounded white grits; rare fine sub-rounded red inclusions (on the surface only); frequent very fine to small sub-rounded voids. Wet-smoothed exterior surface. Published, Slane and Sanders 2005, p. 278, no. 4-24, fig. 11. Date: mid- to third quarter of the 7th century.

**233.** C-1997-044a-b Fig. 23

Lots 1997-057, 1997-059, dated mid- to third quarter of the 7th century.

Amphora (possibly Cretan, TRC2 amphora?), rim to lower body and handles. Max. diam. 0.385, p. H. 0.495, diam. rim 0.065-0.068 m. Possibly southern Argolid fabric (?). Light brown (7.5YR 6/4) inner fabric and surfaces; reddish yellow (approx. 7.5YR 6/6) outer fabric; near-white wet wash (?) applied inconsistently on exterior surface. Few to frequent very fine elusive sparkling bits; frequent fine to large calcareous white lumps (few spalling); few fine sub-rounded black grits; rare fine sub-rounded gray inclusions; rare fine sub-rounded red inclusions; frequent fine to small sub-rounded voids; rare small elongated voids. Granular, very slightly conchoidal, break; medium hard fabric. Published, Slane and Sanders 2005, p. 278, no. 4-26, fig. 11; cf. Yangaki 2005, pp. 190-191, figs. 48:m, 48:n. Date: mid- to third quarter of the 7th century.

## Attic Amphoras

**234.** Lot 98-13:12 Fig. 24

Date of lot: first half of the 6th century.

(Table) amphora, rim to handle. Diam. rim 0.060 m. Attic 2. Dull red (self-?) slip covers exterior. For a similar profile, cf. **270-273** (in Northeast Peloponnesian cooking fabric). Date: probably 5th century.

**235.** Lot 06-25:1 Fig. 24

Date of lot: late 5th to 6th century.

(Table?) Amphora, rim and neck. p. H. 0.106, diam. rim 0.095-0.100 m. Attic 3. For a similar profile (in Boiotian fabric), cf. **240**. Date: late 5th to 6th century, or earlier.

## Boiotian Amphoras

### *Table amphoras*

**236.** Lot 95-61:90 Fig. 24

Date of lot: late 6th century.

Table amphora, rim to neck and handle. p. H. 0.182, diam. rim 0.092 m. Smooth, self-slipped exterior surface. Cf. **240**. Date: late 6th century.

**237.** Lot 02-06:4 Fig. 24

Date of lot: second half of the 6th century to 7th century.

Table amphora, rim. Diam. rim 0.070-0.080 m. Smooth self-wash on exterior. Probably related to **240**. Date: second half of the 6th century.

**238.** Lot 98-23:5 Fig. 24

Date of lot: later redeposition of primarily 6th-century material.

Table amphora, base. Diam. base 0.100 m. Traces of dripped, red slip. Date: probably second half of the 6th century.

**239.** Lot 02-06:9 Fig. 24

Date of lot: second half of the 6th century to 7th century.

Table amphora, base and lower body, with one non-joining foot, one non-joining floor, and five non-joining body sherds. Diam. base 0.145-0.150 m. Unslipped. Date: second half of the 6th century.

**240.** C-1997-051 Fig. 24

Lot 1997-057, dated mid- to third quarter of the 7th century.

Table amphora, complete profile. Diam. base 0.147, max. diam. 0.265, H. 0.369, diam. rim 0.110 m. One side fired gray, the other light red (10R 6/6-6/8) as fabric. Exterior unslipped. Published, Slane and Sanders 2005, p. 278, no. 4-23, fig. 11. Date: mid- to third quarter of the 7th century.

**241.** Lot 97-57:53 (P-93) Fig. 24, Pls. 6.9, 6.10

Date of lot: mid- to third quarter of the 7th century.

Table Amphora, rim to shoulder and handle. H. (rim to base of neck) 0.132, diam. rim 0.088-0.100, m. Exterior covered in dark self-slip. Date: mid- to third quarter of the 7th century.

**242.** Lot 97-57:55 Fig. 24

Date of lot: mid- to third quarter of the 7th century.

Table Amphora, base, with 14 possible non-joining body sherds. Diam. base 0.136, p. H. 0.087 m. Exterior covered in self-slip as the clay, but darkens above the base to yellowish red (5YR 5/6) with faint traces of burnishing. Possible non-joining body sherds preserve distinct burnishing and a series of shallow grooves on the shoulder. Date: mid- to third quarter of the 7th century.

**243.** Lot 99-33:2 Fig. 24

Date of lot: late 6th to early 7th century.

Table amphora (?), rim and handle. Diam. rim 0.062 m. Probably Boiotian fabric. Very light, fugitive red slip on exterior rim. Date: late 6th to early 7th century.

### *Table amphoras,* graffito *fragments*

**244.** Lot 97-50:5 Pl. 15

Date of lot: first half of the 6th century (with contamination?).

Table Amphora, body sherd with graffito. Lightly ridged shoulder with incised Greek letters, possibly reading: "XX ΛΖ" (?). Smooth self-slip over exterior. Date: first half of the 6th century?

**245.** Lot 01-11:25 Pl. 15

Lot 2001-011, baskets 18, 20, dated late 6th century.

Table amphora, body sherd with graffito. Two lines of incised Greek letters, possibly reading: "[.]ο[.] | μεΛι[.]" Date: late 6th century.

**246.** Lot 02-06:6 Pl. 15

Date of lot: second half of the 6th century to 7th century.

Table amphora, body sherd with graffito. Lightly incised band with graffito within, possibly reading: "[φ]Λι", with incised horizontal and wavy lines above. Light self-wash/slip over exterior. Date: second half of the 6th century.

## Southern Argolid Fabric

### *Various forms*

**247.** Lot 00-07:30a-b Fig. 25
Date of lot: second quarter of the 5th century to ca. 450.
Amphora, rim-neck, non-join body fragment. Max. diam. (at shoulder) ca. 0.180, p. H. ca. 0.221, diam. rim 0.120-0.130 m. Southern Argolid fabric (?). Light red (2.5YR 6/8) inner fabric, with reddish yellow (7.5YR 7/6 to 6/6) exterior fabric; buff exterior surface. Few to frequent fine elusive sparkling bits; frequent fine rounded bluish-gray clumps; rare fine rounded red inclusions; few rounded and sub-rounded dark grits; rare fine to small sub-rounded tan lumps (grog?); frequent to common fine to small sub-rounded voids. Granular, slightly conchoidal break; medium-hard fabric. Date: second quarter of the 5th century to ca. 450?

**248.** Lot 00-07:1 (P-5) Fig. 25, Pls. 8.4, 8.5
Date of lot: second quarter of the 5th century to ca. 450.
Amphora, neck-shoulder and handles. p. H. 0.088 m. For a similar profile, cf. **270-273** (in Northeast Peloponnesian cooking fabric). Date: second quarter of the 5th century to ca. 450?

**249.** Lot 96-41:5a-b Fig. 25
Date of lot: mid-5th century.
(Early?) LR Amphora 2, neck and handle. p. H. 0.121 m. Overfired? Date: mid-5th century?

**250.** Lot 02-06:10 Fig. 25
Date of lot: second half of the 6th century to 7th century.
Amphora, rim. Diam. rim 0.090-0.100 m. Date: second half of the 6th century?

**251.** Lot 01-11:28 Fig. 25
Lot 2001-011, baskets 18, 20, dated late 6th century.
Amphora (?), rim to neck and handle root. p. H. 0.077, diam. rim 0.070 m. Date: late 6th century?

**252.** Lot 97-57:61a-b Fig. 25
Date of lot: mid- to third quarter of the 7th century.
(Table) amphora, rim and handle, with non-joining body sherd. Diam. rim 0.054 m. Interior surface inconsistently covered in a thin, dark reddish-brown, dripped slip. Date: mid- to third quarter of the 7th century.

### *LR Amphora 2 (short neck)*

**253.** Lot 01-04:1 (P-18) Fig. 25
Date of lot: first half of the 6th century.
LR Amphora 2, rim. Diam. rim 0.110 m. Date: probably first half of the 6th century.

**254.** Lot 99-07:6 Fig. 25
Date of lot: later redeposition of primarily 6th-century material.
LR Amphora 2, rim to shoulder and handle root. p. H. 0.109, diam. rim 0.075 m. Date: probably 6th century.

**255.** Lot 01-10:26 Fig. 25
Date of lot: late 6th to early 7th century.
LR Amphora 2, rim to shoulder and handle root. p. H. 0.099, diam. rim 0.070-0.073 m. Date: probably 6th century.

**256.** Lot 95-61:22 (P-45) Fig. 25, Pl. 7.10
Date of lot: late 6th century.
LR Amphora 2, rim. Diam. rim 0.150 m. Date: probably 6th century.

**257.** Lot 97-57:51 Fig. 25
Date of lot: mid- to third quarter of the 7th century.
LR Amphora 2, rim to shoulder and handle, with non-joining lower body and base. H. (base of handle to rim) 0.178, diam. rim (slightly warped) 0.084 m. Likely overfired; possibly local white marl clay (?). Pale greenish-white fabric and exterior surface, with pink inner fabric and interior surface. Frequent fine to small rounded dark grains; few fine (sub-) rounded red inclusions; frequent to common fine sub-rounded voids. Granular, near-smooth break; soft fabric. For profile, cf. *Saraçhane*, p. 66, no. 8, fig. 22, "Type 9 A." Date: mid- to third quarter of the 7th century.

### *LR Amphora 2 (long neck)*

**258.** Lot 97-57:21 Fig. 26
Date of lot: mid- to third quarter of the 7th century.
LR Amphora 2, rim to shoulder and handle. p. H. 0.241, diam. rim 0.080 m. Published, Slane and Sanders 2005, p. 275, no. 4-10, fig. 13. Date: mid- to third quarter of the 7th century.

**259.** Lot 97-57:20
Date of lot: mid- to third quarter of the 7th century.
LR Amphora 2, neck to base and handle (not illustrated). Diam. base N/A, max. diam. ca. 0.350, p. H. 0.519 m. Published, Slane and Sanders 2005, pp. 274-275, no. 4-9, fig. 13. Date: mid- to third quarter of the 7th century.

**260.** C-1997-057 Fig. 26, Pl. 15
Lots 1997-057, 1997-059, dated mid- to third quarter of the 7th century.
LR Amphora 2, neck to shoulder and handle. Dipinto on shoulder between handles:
[---Α]ΠΟΔΡ.. | ΠΡΟΠΑΛ.CKO
p. H. 0.154 m. Published, Slane and Sanders 2005, p. 275, no. 4-11 (not illustrated); for profile, cf. *Saraçhane*, p. 66, nos. 10-11, fig. 22, "Type 9 B." Date: mid- to third quarter of the 7th century.

### *LR Amphora 2, unidentified type*

**261.** Lot 01-11:24 Fig. 26
Lot 2001-011, baskets 18, 20, dated late 6th century.
LR Amphora 2 (?), rim to neck and handle root. p. H. 0.080, diam. rim 0.080 m. Date: probably 6th century.

**262.** Lot 97-57:76 Fig. 26
Date of lot: mid- to third quarter of the 7th century.
LR Amphora 2 (late?), rim to shoulder and handle, with x3 non-joining body sherds. p. H. 0.170, diam. rim 0.088 m. Possibly related to *Saraçhane*, p. 71, fig. 23:3, "Type 29," or pp. 73, 112, nos. 35.31-32, fig. 57, "Type 43." Date: mid- to third quarter of the 7th century.

**263.** C-1997-070 Fig. 26
Lots 1996-044, 1997-057, dated mid- to third quarter of the 7th century.
Fractional LR Amphora 2, rim to lower body and handles. Max. diam. ca. 0.220, p. H. 0.390, diam. rim (restored) 0.105-0.110 m. Published, Slane and Sanders 2005, p. 278, no. 4-17, fig. 11 (erroneously labelled as C-1997-066). Date: mid- to third quarter of the 7th century.

**264.** Lot 99-07:7 Fig. 27
Date of lot: later redeposition of primarily 6th-century material.
Amphora (possible later development of LR Amphora 2?), rim to shoulder and handle. p. H. 0.115, diam. rim 0.070 m. Date: probably 6th century.

**265.** Lot 99-30:5 Fig. 26
Date of lot: late 6th to early 7th century.
LR Amphora 2, toe. Max diam. toe 0.025 m. Date: late 6th to early 7th century, or earlier.

**266.** C-1997-067b Pl. 15
Lot 1997-057, dated mid- to third quarter of the 7th century.
LR Amphora 2, neck to base (not illustrated), with partial dipinto on non-joining shoulder fragment ('b'): [---] ΠΡΟΠ [---]. Diam. base N/A, max. diam. 0.380-0.400, p. H. 0.460 m. Published, Slane and Sanders 2005, p. 275, no. 4-12, fig. 13. Date: mid- to third quarter of the 7th century.

**267.** Lot 97-57:73 Pl. 15
Date of lot: mid- to third quarter of the 7th century.
LR Amphora 2(?), neck to base and handle. Body without combed decoration. Diam. base N/A, (button) 0.032, max. diam. ca. 0.380, p. H. ca. 0.500 m. Southern Argolid fabric (?). Reddish yellow (7.5YR 6/6) fabric. Few very fine elusive silver sparkling bits (direct sunlight); few to frequent very fine small sub-rounded calcareous white lumps (rare to few spalling on the surface); rare to few sub-rounded fine red inclusions; few to frequent very fine sub-rounded black grits; frequent very fine sub-rounded voids. Smooth, slightly granular, break, and slightly conchoidal in places; medium hard fabric. Overall, the fabric is much better sorted (levigated?) than other examples of LR Amphora 2 in southern Argolid fabric, and shows only the faintest hint of color horizons that is typical in the fabric; however, in this example the color horizons are reversed, becoming redder closer to the exterior, as opposed to the interior. Creamy-colored, wet-slipped surface. Date: mid- to third quarter of the 7th century.

### *Fruit amphoras*

**268.** Lot 99-38:2 Fig. 27
Date of lot: later redeposition of primarily 6th-century material.
Fruit amphora/storage jar (?), rim. Decorated with two bands of wavy incised lines framed between shallow, incised grooves. Diam. rim 0.200 m. Date: probably second half of the 6th century (or a later intrusion).

**269.** Lot 97-57:50 Fig. 28
Date of lot: mid- to third quarter of the 7th century.
Fruit amphora, complete profile. Diam. base N/A, max. diam. ca. 0.380, H. (reconstructed) 0.796, diam. rim 0.240-0.250 m. Date: mid- to third quarter of the 7th century.

## Northeast Peloponnesian Cooking Fabric

### *Amphora as* Agora *V, M 325*

**270.** Lot 96-45:15 Fig. 27
Date of lot: second quarter of the 5th century to ca. 450.
Amphora, upper body, neck and handles. Max. p. diam. 0.200, diam. neck ca. 0.050 m. Red (2.5YR 5/8) fabric and surfaces. Cf. Slane and Sanders 2005, p. 255, no. 1-27, fig. 3 (in Northeast Peloponnesian cooking fabric); cf. also *Agora* V, p. 115, no. M 325, pl. 32. Date: second quarter of the 5th century to ca. 450.

**271.** Lot 04-06:1a, b Fig. 27
Date of lot: mid-5th century.
Amphora, upper body to rim, handle, and non-joining base fragment. Diam. base 0.060, max. diam. 0.368, p. H. 0.348, diam. rim 0.054 m. Dark gray outer fabric and corresponding surface; red (2.5YR 4/6) inner fabric and corresponding surface. Cf. previous. Date: mid-5th century.

**272.** Lot 96-70:1 (P-1) Fig. 27
Date of lot: mid-5th century.
Amphora, rim. Diam. rim 0.053-0.057 m. Red (2.5YR 4/8) core with reddish brown (5YR 4/2) outer fabric, and light gray surfaces. Cf. previous. Date: mid-5th century.

**273.** Lot 01-04:4 (P-21) Fig. 27, Pl. 8.6

Date of lot: first half of the 6th century.

Amphora, rim. Diam. rim ca. 0.050 m. Red (2.5YR 5/8) inner fabric, dark gray outer fabric. Cf. previous. Date: probably 5th century.

*Various forms*

**274.** Lot 04-02:21 Fig. 27

Date of lot: late 4th century (with Middle Roman material).

Amphora, rim. Diam. rim 0.070-0.090 m. Northeast Peloponnesian cooking fabric (?). Dark gray surfaces and fabric, with thick red (2.5YR 5/8) core. Cf. **275** for possibly a later version. Date: late 4th century.

**275.** Lot 99-33:3 Fig. 27

Date of lot: late 6th to early 7th century.

Amphora, rim to neck and handle root. Diam. rim 0.080 m. Gray fabric and surfaces. For a possible early version, cf. **274**. Date: probably late 4th to 5th century.

**276.** Lot 99-23:13 Fig. 29

Date of lot: mid-6th century.

(Table) amphora, rim and handle root. p. H. 0.075, diam. rim ca. 0.080 m. Red (2.5YR 5/6) fabric and interior surface; exterior partially fired gray. Date: mid-6th century, or earlier.

**277.** Lot 98-23:11 Fig. 29

Date of lot: later redeposition of primarily 6th-century material.

Table amphora, rim. Diam. rim 0.060-0.070 m. Light gray fabric and surfaces with red (approx. 2.5YR 5/6) core at rim. Possibly cf. Slane and Sanders 2005, p. 271, no. 3-26, fig. 8. Date: probably 6th century.

**278.** Lot 98-29:25 Fig. 29

Date of lot: later redeposition of primarily 6th-century material.

Table amphora, rim. Diam. rim 0.070 m. Gray fabric and surfaces, with light red (approx. 2.5YR 6/6) core. Cf. Slane and Sanders 2005, p. 271, no. 3-26, fig. 8. Date: probably 6th century.

**279.** Lot 99-38:14 Fig. 29

Date of lot: later redeposition of primarily 6th-century material.

(Table) amphora, neck to upper body and handle. Max. diam. 0.140, p. H. 0.132, p. diam. (at concavity below rim) 0.053 m. Gray fabric and surfaces with a thin red core. Date: probably 6th century.

**280.** Lot 01-09:16 Fig. 29

Date of lot: late 6th to early 7th century.

Table amphora, rim to shoulder, handle. p. H. 0.111, diam. rim ca. 0.065-0.070 m. Gray inner fabric; reddish yellow (7.5YR 6/6) outer fabric; light brown (7.5YR 6/4) interior surface; reddish yellow (5YR 7/6 – 6/6) exterior surface. Cf. Slane and Sanders 2005, p. 271, no. 3-26, fig. 8. Date: probably late 6th to early 7th century.

**281.** C-1997-050 Fig. 29

Lot 1997-057, dated mid- to third quarter of the 7th century.

Table amphora, rim to base with handles. Body is covering in vertical and horizontal paring lines. Diam. base 0.080-0.090, max. diam. 0.201, H. 0.362, diam. rim 0.055-0.060 m. Red (2.5YR 5/8) fabric and surfaces. Published, Slane and Sanders 2005, p. 276, no. 4-15, fig. 11. Date: mid- to third quarter of the 7th century.

*Possible interpretations of imported forms*

**282.** Lot 96-45:84 Fig. 30

Date of lot: second quarter of the 5th century to ca. 450.

Amphora (interpretation Keay XIX?), rim. Diam. rim 0.065-0.075 m. Red (2.5YR 5/6) to yellowish red (5YR 5/6) fabric and surfaces. For a similar profile, cf. Slane and Sanders 2005, p. 254, no. 1-20, fig. 4. Date: second quarter of the 5th century to ca. 450.

**283.** Lot 98-13:7 Fig. 30

Date of lot: first half of the 6th century.

Amphora (interpretation of LR Amphora 2), rim. Diam. rim 0.100-0.110 m. Red (2.5YR 4/8) fabric; reddish yellow (5YR 6/6) surfaces. Cf. Slane and Sanders 2005, p. 264, no. 2-33, fig. 5. Date: first half of the 6th century?

**284.** Lot 02-06:26 Fig. 30

Date of lot: second half of the 6th century to 7th century.

(Table) amphora (interpretation LR Amphora 2?), rim to neck and handle roots. p. H. 0.098, diam. rim 0.067 m. Gray fabric with fugitive thin red core; exterior surface alternates gray and reddish yellow (slightly lighter than 7.5YR 6/6) on opposing sides, with the interior surface displaying the opposite arrangement. Cf. Slane and Sanders 2005, p. 271, no. 3-24, fig. 8, identified as "imitation of LR Amphora 2." Date: late 6th century.

**285.** Lot 02-06:27 Fig. 30

Date of lot: second half of the 6th century to 7th century.

(Table) amphora (interpretation LR Amphora 2?), rim to neck and handle roots. p. H. 0.088, diam. rim 0.064 m. Red (approx. 2.5YR 5/8) fabric, with thin brown (approx. 7.5YR 4/2) outer fabric; mottled gray and brown surfaces. Cf. previous. Date: late 6th century.

**286.** Lot 95-61:12 (P-35) Fig. 30

Date of lot: late 6th century.

(Table) amphora, interpretation LR Amphora 2, rim. Diam. rim ca. 0.060 m. Dark gray fabric and surfaces with thin reddish brown (2.5YR 5/8 to 4/6) core. Cf. Slane and Sanders 2005, p. 271, no. 3-23, fig. 8. Date: late 6th century.

**287.** Lot 95-61:26 (P-26) Fig. 30

Date of lot: late 6th century.

Amphora, interpretation LR Amphora 2, rim. Diam. rim 0.110 m. Dark gray fabric and surfaces with thin reddish brown (2.5YR 4/4) core. Date: 6th century.

**288.** Lot 95-61:112 Fig. 30

Date of lot: late 6th century.

(Table) amphora (interpretation LR Amphora 2?), rim. Diam. rim ca. 0.080 m. Gray fabric with red (2.5YR 5/8) core; pink (paler than 7.5YR 8/3) surfaces. Smooth, slightly granular, break. Possibly cf. Slane and Sanders 2005, p. 271, no. 3-23, fig. 8. Date: late 6th century.

**289.** Lot 98-23:10 Fig. 30

Date of lot: later redeposition of primarily 6th-century material.

(Table) amphora, interpretation LR Amphora 2 (?), rim. Diam. rim 0.120 m. Red (2.5YR 5/8) fabric with gray, slightly brown, core; reddish yellow (7.5YR 6/6) exterior surface; light red (approx. 2.5YR 6/6) interior surface. For a similar profile, cf. **256 (P-45)**. Date: 6th century.

**290.** C-1997-048a Fig. 31

Lot 1997-057, dated mid- to third quarter of the 7th century.

(Table) amphora, interpretation LR Amphora 2, rim to upper body and handles, and non-joining lower body. p. H. (a) 0.239, diam. rim 0.058 m. Gray outer fabric; red (2.5YR 5/8) inner fabric; weak red (approx. 2.5YR 5/2) interior surface; exterior as interior, but mottled with gray. Published, Slane and Sanders 2005, p. 276, no. 4-13, fig. 11. Date: mid- to third quarter of the 7th century.

**291.** C-1997-049a-b Fig. 31

Lot 1997-057, dated mid- to third quarter of the 7th century.

(Table) amphora, interpretation LR Amphora 2, rim to upper body and handles, and non-joining lower body to base. Diam. base 0.074, max. diam. 0.150, p. H. (a) 0.170, (b) 0.284, diam. rim 0.068 m. Gray fabric with occasional red (2.5YR 5/8) central core; gray (slightly red) interior surface; reddish yellow (7.5YR 6/6) exterior surface. Three drips of grayish-red slip (?) on rim. Published, Slane and Sanders 2005, p. 276, no. 4-14, fig. 11. Date: mid- to third quarter of the 7th century.

**292.** Lot 96-44:16 Fig. 30

Date of lot: mid- to third quarter of the 7th century.

(Table) amphora, interpretation LR Amphora 2, rim and handle root. Diam. rim 0.070 m. Gray fabric and surfaces. Cf. **291**. Date: mid- to third quarter of the 7th century.

**293.** Lot 97-57:28 (P-51) Fig. 30, Pl. 8.7

Date of lot: mid- to third quarter of the 7th century.

(Table?) Amphora, interpretation LR Amphora 2, rim. Diam. rim 0.140 m. Yellowish red (approx. 5YR 5/6) fabric and surfaces. Date: mid- to third quarter of the 7th century?

### *Fruit amphoras*

**294.** C-1997-056 Fig. 32

Lots 1996-044, 1997-057, dated mid- to third quarter of the 7th century.

Fruit amphora, near complete. Diam. base N/A, max. diam. 0.520, H. 0.820, diam. rim ca. 0.270 m. Brown (approx. 7.5YR 5/4) fabric with a thick red (2.5YR 5/6) core; light reddish brown (5YR 6/4) exterior surface (interior surface approx. same); reddish gray (5YR 5/2) exterior surface with light reddish brown (5YR 6/4) streaks (on neck and rim). Published, Slane and Sanders 2005, p. 276, no. 4-16, fig. 13. Date: mid- to third quarter of the 7th century.

**295.** Lot 97-57:49 Fig. 33, Pl. 15

Date of lot: mid- to third quarter of the 7th century.

Fruit amphora, full profile. Diam. base N/A, max. diam. (reconstructed) 0.488, H. (reconstructed) 0.788, diam. rim 0.240-0.255 m. Light gray fabric with light red (2.5YR 6/8) central core; light red (2.5YR 6/6) surfaces. Cf. **294**. Date: mid- to third quarter of the 7th century.

**296.** Lot 98-23:8a-b Fig. 31

Date of lot: later redeposition of primarily 6th-century material.

Fruit amphora, rim. p. H. 0.098, diam. rim 0.230-0.280 m. Dark gray fabric and surfaces, with thick red (2.5YR 4/8) core. Cf. **294**. Date: second half of the 6th century, or late (intrusive in context?).

## LR Corinthian Lamp Fabric

### *Various forms*

**297.** Lot 97-50:1 Fig. 31

Date of lot: first half of the 6th century (with contamination?).

(Table) amphora, rim and handle. Diam. rim 0.060-0.070 m. Date: first half of the 6th century?

## *Cooking Wares*

## Late Roman Micaceous Aegean Ware

### *Casseroles*

**298.** C-1997-068 Fig. 34

Lots 1996-045, 1997-062, dated second quarter of the 5th century to ca. 450.

Casserole ("tall"), rim to lower body, and handles. Max. diam. 0.224, p. H. 0.154, diam. rim (uneven) ca. 0.180 m. Date of lot: second quarter of the 5th century to ca. 450.

**299.** Lot 96-45:43 Fig. 34
Date of lot: second quarter of the 5th century to ca. 450.
Casserole ("tall"), rim to handle and upper body. p. H. 0.076, diam. rim 0.215-0.220 m. Date: second quarter of the 5th century to ca. 450.

**300.** Lot 02-10:5 Fig. 34
Date of lot: first half of the 6th century.
Casserole ("tall"), rim. p. H. 0.058, diam. rim 0.180-0.190 m. Date: first half of the 6th century, or earlier.

**301.** Lot 96-45:41 Fig. 34
Date of lot: second quarter of the 5th century to ca. 450.
Casserole ("short"), rim to handle and upper body. p. H. 0.061, diam. rim 0.140-0.180 m. Date: second quarter of the 5th century to ca. 450.

**302.** Lot 96-72:1 Fig. 34
Date of lot: mid-5th century.
Casserole ("short"), rim, handle and upper body. p. H. 0.058, diam. rim 0.170-0.180 m. Published, Sanders 1999, pp. 458, 469, no. 17, fig. 12. Date: mid-5th century.

**303.** Lot 96-40:17 Fig. 34, Pl. 3.3
Date of lot: first half of the 5th century.
Casserole, rim. Diam. rim ca. 0.170 m. The profile is roughly similar to Slane and Sanders 2005, p. 255, no. 1-29, fig. 3. Date: first half of the 5th century.

**304.** Lot 96-45:50 Fig. 34
Date of lot: second quarter of the 5th century to ca. 450.
Casserole, rim. Diam. rim 0.160-0.200 m. Cf. Slane and Sanders 2005, p. 264, no. 2-34, fig. 6. Date: second quarter of the 5th century to ca. 450.

**305.** Lot 96-45:53 a-b Fig. 34
Date of lot: second quarter of the 5th century to ca. 450.
Casserole, non-joining rims. Diam. rim 0.210-0.250 m. Late Roman micaceous Aegean ware, possibly overfired? Light gray fabric and surfaces. Frequent to common fine sparkling bits; rare fine sub-rounded calcareous white lumps; rare fine round dark grains; rare fine round red inclusions; frequent very fine to fine sub-rounded voids. Hackly break; medium hard fabric. Date: second quarter of the 5th century to ca. 450.

**306.** Lot 96-45:54 Fig. 34
Date of lot: second quarter of the 5th century to ca. 450.
Casserole, base. Diam. base ca. 0.180 m. Date: second quarter of the 5th century to ca. 450.

**307.** Lot 04-08:6 Fig. 34
Date of lot: mid-6th century.
Casserole (?), rim. Diam. rim ca. 0.300 m. Date: mid-6th century, or earlier.

## Unidentified Cooking Ware 1

### *Stewpots*

**308.** Lot 00-18:13 Fig. 35, Pl. 3.7
Date of lot: second quarter to mid-5th century.
Stewpot, rim, upper body and handle. p. H. 0.095, diam. rim 0.190 m. For a similar profile, cf. Reynolds 1995, fig. 117. Date: second quarter to mid-5th century, or earlier.

**309.** Lot 02-06:14 Fig. 35
Date of lot: second half of the 6th century to 7th century.
Stewpot, rim. p. H. 0.0520, diam. rim 0.150-0.180 m. Date: late 4th to early 5th century.

*Lids*

**310.** Lot 96-43:2 Fig. 35
Date of lot: late 4th to early 5th century.
Flat lid, rim. Diam. rim 0.170-0.200 m. Date: late 4th to early 5th century.

**311.** Lot 96-45:67 Fig. 35, Pl. 3.8
Date of lot: second quarter of the 5th century to ca. 450.
Flat lid, rim. Diam. rim 0.140-0.150 m. Date: second quarter of the 5th century to ca. 450, or earlier.

## Unidentified Cooking Ware 2

*Casseroles*

**312.** Lot 97-52:6 Fig. 35
Date of lot: first half of the 6th century.
Casserole, rim. Diam. rim 0.220 m. Date: probably 5th century.

*Stewpots*

**313.** Lot 04-02:17 Fig. 35
Date of lot: late 4th century (with Middle Roman material).
Stewpot, rim and upper body. p. H. 0.096, diam. rim 0.190-0.192 m. Inner fabric dark reddish brown (approx. 2.5YR 3/3), outer fabric and surfaces nearly black. Common very fine, powdery, white and sparkling bits; frequent fine to small white grits; few small translucent gray/clear clumps; rare small angular pink chips; frequent to common fine sub-rounded voids. Hackly break; medium-hard to hard fabric. For profile, cf. Slane and Sanders 2005, p. 256, no. 1-35, fig. 3 (but in Unidentified Cooking Ware 1 fabric, personal observation). Date: late 4th century?

**314.** Lot 96-73:6 Fig. 35
Date of lot: mid-5th century.
Stewpot, rim. Diam. rim 0.160-0.175 m. Possibly Northeast Peloponnesian cooking fabric? Date: mid-5th century?

**315.** Lot 98-15:21 Fig. 35, Pl. 3.9
Date of lot: ca. 500.
Stewpot, rim. p. H. 0.086, diam. rim 0.155-0.170 m. Date: probably 5th century.

## Various Non-Local/Regional Fabrics

*Pans*

**316.** Lot 00-07:2 (P-6) Fig. 35, Pl. 3.10
Date of lot: second quarter of the 5th century to ca. 450.
Cooking pan, rim to base. Diam. base ca. 0.124, H. 0.038, diam. rim 0.200 m. Unidentified Cooking Ware 3. Cf. *Corinth* XVIII.2, p. 79, no. 167, fig. 16; cf. also *Saraçhane*, p. 91, nos. 2.1, 4.6, fig. 30. Date: 4th to 5th century.

*Casseroles*

**317.** Lot 96-45:52 Fig. 35
Date of lot: second quarter of the 5th century to ca. 450.
Casserole (interpretation of Late Roman micaceous Aegean ware?), rim. Diam. rim 0.180-0.200 m. Reddish brown (approx. 5YR 5/4) fabric; dark gray surfaces. Frequent fine silver sparkling bits; rare

fine gold sparkling flakes; few fine rounded black grains; frequent fine sub-rounded and angular transparent (crystalline) inclusions; rare very fine white grits; rare small sub-rounded off-white pellets (clay?); few to frequent fine sub-rounded voids. Granular break; medium hard fabric. Possibly cf. Slane and Sanders 2005, p. 255, no. 1-28, fig. 3 (in Late Roman micaceous Aegean ware). Date: second quarter of the 5th century to ca. 450.

**318.** Lot 98-15:16 Fig. 36
Date of lot: ca. 500.
Casserole (interpretation of Late Roman micaceous Aegean ware?), rim. Diam. rim ca. 0.210 m. From inner to outer fabric: 1.) light gray, 2.) light red (2.5YR 6/8), 3.) dark gray, 4.) yellowish red (5YR 4/6); dark gray exterior surface; streaky gray and red interior surface. Rare fine sparkling bits; frequent very fine to small sub-rounded and rounded bluish-gray clumps; rare fine sub-rounded pink inclusions; few very fine to fine sub-rounded calcareous white and off-white lumps (rare spalling); few very fine rounded black grains; frequent very fine sub-rounded voids. Granular, slightly conchoidal break; hard to very hard fabric. Possibly cf. Slane and Sanders 2005, p. 264, no. 2-34, fig. 6 (in Late Roman micaceous Aegean ware). Date: ca. 500, or earlier.

**319.** Lot 97-52:5 Fig. 36
Date of lot: first half of the 6th century.
Casserole (interpretation Late Roman micaceous Aegean ware), rim. Diam. rim 0.160-0.190 m. Black fabric and surfaces. Few fine sparkling bits; few fine to small white grits; few fine (angular?) dark inclusions. Overall gritty fabric. Hackly break; hard fabric. Possibly cf. Slane and Sanders 2005, p. 255, no. 1-28, fig. 3, (in Late Roman micaceous Aegean ware). Date: first half of the 6th century, or earlier.

### *Stewpots*

**320.** Lot 04-02:16 Fig. 36
Date of lot: late 4th century (with Middle Roman material).
Stewpot, rim, upper body and handle. p. H. 0.081, diam. rim 0.140-0.158 m. Possibly white-gritted fabric? Red (slightly more orange than 2.5YR 5/8) fabric. Frequent to common fine to small rounded and sub-rounded translucent bluish gray clumps; rare small rounded black grains; few small angular off-white chips; frequent to common small rounded voids. Hackly to granular break; medium hard fabric. For a similar profile, cf. Slane and Sanders 2005, p. 256, no. 1-35, fig. 3. Date: late 4th century.

**321.** Lot 00-07:3 (P-7) Fig. 36, Pl. 3.11
Date of lot: second quarter of the 5th century to ca. 450.
Stewpot, rim. Diam. rim 0.200 m. Unidentified Cooking Ware 4. Cf. Slane and Sanders 2005, p. 256, no. 1-30, fig. 3 (there identified as Late Roman micaceous Aegean ware); cf. **322** for a similar profile (in coarse fabric without any sparkling inclusions). Date: second quarter of the 5th century to ca. 450.

**322.** Lot 97-51:2 Fig. 36
Date of lot: first half of the 6th century.
Stewpot (interpretation of imported cooking ware?), rim. Diam. rim 0.190-0.220 m. Possibly Northeastern Peloponnesian cooking fabric? Surfaces and fabric fired dark gray. For similar profile, cf. **321 (P-7)**. Date: 5th century?

**323.** Lot 96-72:10 Fig. 36
Date of lot: mid-5th century.
Stewpot, rim and upper body. p. H. 0.063, diam. rim 0.220-0.270 m. Possibly white-gritted fabric? Gray fabric and surfaces. Few fine elusive sparkling bits; frequent very fine to fine sub-rounded white grits; few to frequent sub-rounded and angular translucent gray inclusions; rare fine sub-rounded red inclusions; rare fine rounded black grains (obscured by fabric color); frequent very fine to fine sub-rounded voids. Granular break; medium hard fabric. Date: mid-5th century?

**324.** Lot 98-15:15 Fig. 36
Date of lot: ca. 500.

Stewpot, rim to upper body and handle. p. H. 0.089, diam. rim 0.170-0.190 m. Dark gray fabric and surfaces. Frequent fine sparkling bits (on break); frequent very fine to fine angular white and gray chips; rare very fine sub-rounded (and angular?) red inclusions; few fine sub-rounded voids. Granular break; medium hard fabric. Date: ca. 500, or earlier.

**325.** Lot 95-61:107 Fig. 36

Date of lot: late 6th century.

Stewpot, rim. Diam. rim 0.120-0.130 m. Gray fabric and surfaces (lighter gray inner fabric). Frequent fine sparkling bits; frequent very fine to small sub-rounded and angular gray inclusions; rare fine rounded black grains; rare fine to small sub-rounded red inclusions; one small rounded pebble; rare fine sub-rounded white grits; frequent very fine to fine sub-rounded voids; few fine elongated voids. Granular break; medium hard fabric. For another similar, cf. **326** (in unknown micaceous fabric); for similar forms, cf. *Saraçhane*, p. 93, no. 10.7, fig. 31, and p. 94, no. 13.2, fig. 32. Date: unknown, possibly 4th to 6th century.

**326.** Lot 95-61:108 Fig. 36

Date of lot: late 6th century.

Stewpot, rim. Diam. rim 0.160-0.170 m. Possibly late Roman micaceous Aegean ware? Dark gray inner fabric and *exterior* surface; reddish brown (5YR 4/4) outer fabric and *interior* surface. Frequent fine elusive sparkling bits (direct sunlight); few to frequent fine sub-rounded translucent gray clumps; rare fine sub-rounded white grits; rare fine sub-rounded dark, and possible red, inclusions (both obscured by fabric); few fine sub-rounded voids. Granular break; medium hard fabric. Cf. previous. Date: unknown, possibly 4th to 6th century.

**327.** Lot 02-28:2 Fig. 36

Date of lot: late 6th century.

Stewpot, rim. Diam. rim 0.170-0.180 m. Yellowish red (5YR 5/6) fabric, with thin, red (10R 5/6) outer fabric and surface and reddish brown (approx. 5YR 4/3) inner fabric and surfaces. Some blackening on surfaces. Few fine sparkling flakes; frequent very fine to fine sub-rounded dark grits; rare to few fine sub-rounded gray bits; rare fine to small sub-rounded white bits; rare very fine sub-rounded red grits; few very fine to fine sub-rounded voids; rare fine elongated voids. Granular, slightly conchoidal break; hard fabric. Date: late 6th century?

## Northeast Peloponnesian Cooking Fabric

### *Casseroles*

**328.** Lot 96-45:56 Fig. 37

Date of lot: second quarter of the 5th century to ca. 450.

Casserole (interpretation of Late Roman micaceous Aegean ware?), rim, handle, and upper body. Max. diam. 0.220, p. H. 0.078, diam. rim 0.160-0.170 m. Brown (7.5YR 5/4) outer fabric and exterior surface, dark grayish brown inner fabric. For similar profiles in Late Roman micaceous Aegean ware, cf. **298**, and Slane and Sanders 2005, p. 255, no. 1-28, fig. 3, and p. 264, no. 2-35, fig. 6. Date: second quarter of the 5th century to ca. 450.

**329.** Lot 96-45:57a-b Fig. 37

Date of lot: second quarter of the 5th century to ca. 450.

Casserole (?) (interpretation of Late Roman micaceous Aegean ware?), two non-join rims and upper body. p. H. 0.048, diam. rim 0.140-0.150 m. Red (2.5YR 4/8) fabric and surfaces with blackened rims. Cf. previous. Date: second quarter of the 5th century to ca. 450.

**330.** Lot 98-15:20 Fig. 37

Date of lot: ca. 500.

Casserole (?), rim and handle. Diam. rim 0.210-0.220 m (with some warping at handle attachment). Gray fabric and surfaces. Date: ca. 500?

*Stewpots*

## Stewpots, various early types

**331.** Lot 00-18:4 (P-15) Fig. 37

Date of lot: second quarter to mid-5th century.

Stewpot (interpretation of imported cooking ware?), rim and partial handle root. Diam. rim 0.160 m. Reddish yellow (approx. 5YR 6/6) fabric, becoming grayer towards outer surface; exterior surface burned near-black. For a similar profile, cf. **308**. Date: second quarter to mid-5th century.

**332.** Lot 00-18:18 Fig. 37

Date of lot: second quarter to mid-5th century.

Stewpot, rim and handle root. p. H. 0.065, diam. rim 0.130-0.150 m. Strong brown (approx. 7.5YR 5/6) outer fabric; gray interior fabric; reddish brown (5YR 5/4) interior surface; reddish yellow (5YR 6/6) exterior surface. Date: second quarter to mid-5th century.

**333.** Lot 00-07:29 Fig. 37

Date of lot: second quarter of the 5th century to ca. 450.

Stewpot, rim and handle. Diam. rim 0.200-0.220 m. Dark gray fabric and interior surface; reddish yellow (7.5YR 7/6) exterior surface of rim, brown (7.5YR 5/4) exterior surface. Date: second quarter of the 5th century to ca. 450.

**334.** Lot 00-07:28 Fig. 37

Date of lot: second quarter of the 5th century to ca. 450.

Stewpot, rim, handle and upper body. Max. p. diam. 0.240, p. H. 0.110, diam. rim 0.160-0.170 m. Red (2.5YR 4/8) inner fabric and interior surface; gray outer fabric and exterior surface. Cf. *Corinth* XVIII.2, p. 85, no. 186, fig. 21; Slane and Sanders 2005, p. 264, no. 2-38, fig. 6. Date: second quarter of the 5th century to ca. 450, or earlier.

**335.** Lot 00-07:5 (P-9) Fig. 37, Pl. 8.9

Date of lot: second quarter of the 5th century to ca. 450.

Stewpot, rim. Diam. rim 0.125-0.150 m. Dark gray fabric and surfaces, with thin red core. Possibly cf. Slane and Sanders 2005, p. 264, no. 2-38, fig. 6. Date: second quarter of the 5th century to ca. 450.

## Stewpots with everted rims

**336.** Lot 96-45:58a-b Fig. 38

Date of lot: second quarter of the 5th century to ca. 450.

Stewpot, rim and handle root, and non-join rim. Diam. rim 0.160-0.180 m. Red (2.5YR 4/8) fabric and surfaces. For a similar rim, cf. Slane and Sanders 2005, p. 265, no. 2-39b, fig. 6, but **336** also retains features of stewpots such as **334**. Date: second quarter of the 5th century to ca. 450.

**337.** Lot 98-13:8 Fig. 38

Date of lot: first half of the 6th century.

Stewpot, rim to handle and upper body. p. H. 0.083, diam. rim 0.140-0.150 m. Gray fabric; pink (7.5YR 7/4) to light brown (7.5YR 6/4) surfaces. For a similar rim, cf. Slane and Sanders 2005, p. 265, nos. 2-39, 2-40a, fig. 6. Date: 5th to early 6th century.

**338.** Lot 01-11:14a-b Fig. 38

Lot 2001-011, basket 16, dated second half of the 5th century.

Stewpot, rim to upper body and handle, non-joining rim. p. H. 0.080, diam. rim 0.160 m. Gray fabric with red (2.5YR 5/6) core at rim; pinkish gray (7.5YR 6/2) to light brown (7.5YR 6/3) surfaces. Possibly cf. Slane and Sanders 2005, p. 265, nos. 2-39, 2-40, fig. 6. Date: 5th to early 6th century.

**339.** Lot 02-10:1 Fig. 38

Date of lot: first half of the 6th century.

Stewpot, rim and upper body. Diam. rim ca. 0.190 m. Red (2.5YR 5/8) fabric and interior surface; reddish brown (approx. 5YR 5/4) exterior surface. Possibly cf. Slane and Sanders 2005, p. 265, no. 2-39, fig. 6. Date: 5th to early 6th century.

**340.** Lot 02-10:2 Fig. 38
Date of lot: first half of the 6th century.
Stewpot, rim. Diam. rim (outer edge) 0.140-0.150 m. Dark gray fabric and surfaces with red (2.5YR 5/6) core. Possibly cf. Slane and Sanders 2005, p. 265, nos. 2-39, 2-40, fig. 6. Date: 5th to early 6th century.

**341.** Lot 02-18:4 Fig. 38
Date of lot: ca. 500.
Stewpot, rim to lower body and handle. Max. diam. 0.277, p. H. 0.118, diam. rim ca. 0.140-0.190 m. Gray outer fabric and exterior surface; red (10R 5/6) inner fabric and interior surface. Possibly cf. Slane and Sanders 2005, p. 265, nos. 2-39, 2-40a, fig. 6. Date: 5th to early 6th century.

**342.** Lot 04-08:7 Fig. 38
Date of lot: mid-6th century.
Stewpot, rim. Diam. rim 0.140-0.150 m. Red (approx. 2.5YR 5/8) fabric; gray surfaces. Transitional from stewpots like Slane and Sanders 2005, p. 265, no. 2-39, fig. 6, towards later 6th century stewpots with triangular rims. Date: probably early 6th century.

## Stewpots with Triangular Rims, type 1: Incurving Upper Bodies

**343.** Lot 98-13:9 Fig. 38
Date of lot: first half of the 6th century.
Stewpot, rim. Diam. rim 0.150-0.160 m. Dark gray fabric and surfaces, with thin red (2.5YR 4/6) core. Date: first half of the 6th century.

**344.** Lot 98-13:10a-b Fig. 38
Date of lot: first half of the 6th century.
Stewpot, rim and handle, and non-joining rim. Diam. rim 0.120-0.140 m. Red (2.5YR 4/6) fabric and interior surface; blackening on exterior surface. Date: first half of the 6th century.

**345.** Lot 02-10:7 Fig. 39
Date of lot: first half of the 6th century.
Stewpot, rim. Diam. rim 0.130-0.140 m. Gray fabric and exterior surface, with thin red (2.5YR 5/8) core; reddish brown (2.5YR 5/3) interior surface. Incised line below lip on exterior rim face. Date: first half of the 6th century.

**346.** Lot 03-21:2 Fig. 39
Date of lot: first half of the 6th century.
Stewpot, rim, upper body and handles. p. H. 0.061, est. diam. rim 0.150 m. Red (approx. 2.5YR 5/8); light brown (approx. 7.5YR 6/4) exterior surface; reddish brown (5YR 5/4) interior surface. Date: probably first half of the 6th century.

**347.** Lot 98-24:6a-c Fig. 39
Date of lot: later redeposition of primarily 6th-century material.
Stewpot, rim to lower body and partial handle. Max. diam. 0.215, p. H. 0.129, diam. rim 0.120-0.155 m. Red (approx. 2.5YR 4/8) fabric; red (2.5YR 5/6) surfaces; burning on exterior surface of lower body and rim. Date: probably first half of the 6th century.

**348.** Lot 98-29:17 Fig. 39
Date of lot: later redeposition of primarily 6th-century material.
Stewpot, rim to mid-body, handle. p. H. 0.098, diam. rim 0.150-0.180 m. Gray fabric with traces of red in the core; mottled exterior surface of reddish brown (2.5YR 5/3) and red (2.5YR 5/6); reddish yellow (5YR 6/6 – 6/8) interior surface. Date: probably first half of the 6th century.

## Stewpots with Triangular Rims, type 2: Overhanging Rims

**349.** Lot 98-29:16 Fig. 39

Date of lot: later redeposition of primarily 6th-century material.

Stewpot, rim and upper body. p. H. 0.100, diam. rim 0.150-0.160 m. Dark gray fabric and surfaces. Date: probably first half of the 6th century (mid-6th century?).

**350.** Lot 98-29:18 Fig. 39

Date of lot: later redeposition of primarily 6th-century material.

Stewpot, rim to lower body and handle. Max. diam. 0.267, p. H. 0.132, diam. rim 0.160-0.170 m. Red (10R 4/8) fabric; yellowish red (5YR 5/6) surfaces. Date: probably first half of the 6th century (mid-6th century?).

**351.** Lot 02-04:3 Fig. 40

Date of lot: mid-6th century.

Stewpot, rim and upper body. p. H. 0.085, diam. rim 0.150 m. Red (2.5YR 5/6) fabric and interior surface; exterior surface heavily blackened. Three shallow, incised lines below rim. Date: mid-6th century.

**352.** Lot 02-04:4 Fig. 40

Date of lot: mid-6th century.

Stewpot, rim and handle. Diam. rim ca. 0.160 m. Red (2.5YR 5/6) fabric and interior surface, with dark gray core; dark reddish gray (2.5YR 4/1) exterior surface. Date: mid-6th century.

**353.** Lot 95-70:5 Fig. 40

Date of lot: mid- to late 6th century.

Stewpot, rim to upper body and handle. Max. diam. 0.253, p. H. 0.117, diam. rim 0.150-0.155 m. Gray fabric and interior surface; light brown (approx. 7.5YR 6/4) exterior surface. Published, Sanders 1999, p. 470, no. 18, fig. 13 (erroneously labelled Lot 95-65:5). Date: probably mid-6th century.

**354.** Lot 95-61:110 Fig. 40

Date of lot: late 6th century.

Stewpot, rim and handle. Diam. rim 0.120-0.130 m. Dark gray fabric and surfaces. Date: probably mid-6th century.

## Stewpots with Triangular Rims, type 3: Overhanging, Near-Vertical or Half-Round Rims

**355.** Lot 01-10:15 Fig. 40

Date of lot: late 6th to early 7th century.

Stewpot, rim and handle root. Diam. rim 0.130-0.160 m. Red (2.5YR 5/8) fabric; reddish brown (2.5YR 5/4) exterior surface; red (2.5YR 5/6) interior surface. Cf. Slane and Sanders 2005, p. 272, no. 3-30, fig. 8, but with a smaller diameter. Date: late 6th to early 7th century?

**356.** Lot 95-61:109 Fig. 40

Date of lot: late 6th century.

Stewpot, rim and handle. Diam. rim 0.120-0.150 m. Red fabric with grayish red exterior surface. Few white flecks are also noted. Date: late 6th century?

## Stewpots with Triangular Rims, type 4: Squat, Thick Rims

**357.** Lot 01-10:16 Fig. 40

Date of lot: late 6th to early 7th century.

Stewpot, rim to mid-body, handle. p. H. 0.091, diam. rim 0.170-0.180 m. Red (2.5YR 5/8) fabric; red (2.5YR 5/6) interior surface; with gray exterior surface and thin outer fabric. Possibly cf. Slane and Sanders 2005, p. 272, no. 3-32, fig. 8. Date: late 6th to early 7th century.

**358.** Lot 95-65:1 Fig. 41

Date of lot: late 6th to early 7th century.

Stewpot, rim to base and handles. Diam. base N/A, max. diam. 0.248, H. 0.196, diam. rim 0.172-0.175 m. Red (10R 5/8) fabric and interior surface with gray exterior surface. Round red (2.5YR 5/6) area on bottom (diam. ca. 0.170 m), resulting from kiln stacking. Published, Sanders 1999, p. 470, no. 19, fig. 14. Date: late 6th to early 7th century.

**359.** Lot 97-57:1 Fig. 41

Date of lot: mid- to third quarter of the 7th century.

Stewpot, rim to upper body, and handle. p. H. 0.087, diam. rim 0.170 m. At body: yellowish red (5YR 5/6) outer fabric; near-gray inner fabric. At rim: yellowish red (5YR 5/6) outer fabric; gray core; red (2.5YR 5/8) inner fabric. Reddish brown (2.5YR 5/3) interior surface; red (approx. 2.5YR 5/6) exterior surface. Date: mid- to third quarter of the 7th century (or earlier).

**360.** Lot 97-57:45 Fig. 41

Date of lot: mid- to third quarter of the 7th century.

Stewpot, rim and handle. Diam. rim 0.170-0.180 m. Thin reddish yellow (7.5YR 6/6) outer fabric; gray core; red (2.5YR 5/8) inner fabric (at rim); yellowish red (approx. 5YR 5/6) exterior surface; mottled gray and light brown (7.5YR 6/4) interior surface. Date: mid- to third quarter of the 7th century (or earlier).

**361.** C-1997-053 Fig. 41

Lot 1997-057, dated mid- to third quarter of the 7th century.

Spouted stewpot, complete profile. Max. diam. 0.278, p. H. 0.202, diam. rim 0.213 m. Red (10R 5/6) inner fabric and interior surface; gray outer fabric and exterior surface. Red (10R 5/6) circular area on bottom exterior (Diameter ca.0.17m) resulting from kiln stacking. Published Slane and Sanders 2005, p. 279, no. 4-28, fig. 12. Date: mid- to third quarter of the 7th century.

**362.** Lot 97-57:47 Fig. 41

Date of lot: mid- to third quarter of the 7th century.

Stewpot, complete profile with partial handle. Max. diam. 0.293, H. 0.214, diam. rim 0.180-0.205 m. At body: yellowish red (approx. 5YR 5/6) fabric. At rim: near gray fabric with red (2.5YR 5/8) core. Reddish yellow (5YR 6/6) exterior surface; reddish brown (5YR 5/3 – 5/4) interior surface. Possibly transitional to **363**. Date: mid- to third quarter of the 7th century.

## Various Late Stewpots

**363.** Lot 97-57:11 Fig. 41

Date of lot: mid- to third quarter of the 7th century.

Stewpot, complete profile. Max. diam. 0.202, H. 0.164, diam. rim 0.130 m. Gray fabric, exterior surface mottled gray and grayish-brown. Published, Slane and Sanders 2005, p. 279, no. 4-27, fig. 12. Date: mid- to third quarter of the 7th century.

**364.** Lot 97-57:33 (P-56) Fig. 41, Pl. 8.12

Date of lot: mid- to third quarter of the 7th century.

Stewpot, rim. Diam. rim 0.190 m. Red (2.5YR 4/6) fabric, with thin dark gray outer fabric. Date: mid- to third quarter of the 7th century (or earlier).

**365.** Lot 97-57:46 Fig. 41

Date of lot: mid- to third quarter of the 7th century.

Stewpot, rim and handle. Diam. rim 0.170-0.180 m. Reddish yellow (7.5YR 6/6) to strong brown (7.5YR 5/8) fabric; brownish yellow (approx. 10YR 6/8) interior surface; very mottled exterior surface; fabric and interior surface fired dark gray in areas. Possibly cf. Slane and Sanders 2005, p. 272, no. 3-31, fig. 8. Date: mid- to third quarter of the 7th century (or earlier).

**366.** Lot 97-57:66 Fig. 41

Date of lot: mid- to third quarter of the 7th century.

Stewpot, rim and handle. Diam. rim 0.150 m. Dark gray fabric and surfaces, with thick red (2.5YR 4/6) core. Date: mid- to third quarter of the 7th century (or earlier).

*Bell lids*

**367.** Lot 96-40:12 Fig. 42

Date of lot: first half of the 5th century.

Bell lid, semi-round/straight rim and lower body. Diam. rim ca. 0.260 m. Dark gray fabric, light gray surfaces. Date: first half of the 5th century.

**368.** Lot 96-76:10 Fig. 42

Date of lot: second half of the 5th century (with contamination?).

Bell lid, round rim. Diam. rim 0.170-0.180 m. Reddish yellow (7.5YR 6/6) fabric with dark gray core. Date: second half of the 5th century (or earlier).

**369.** Lot 00-21:1 Fig. 42

Date of lot: mid- to late 6th century.

Bell lid, semi-round rim, knob to rim. Hole punched (?) through in center of knob. Diam. knob 0.046, H. 0.165, diam. rim 0.210 m. Red (2.5YR 5/8) fabric with gray surfaces. Date: mid- to late 6th century.

**370.** Lot 95-66:2 Fig. 42

Date of lot: late 6th to early 7th century.

Bell lid, semi-round rim and upper body. p. H. 0.098, diam. rim 0.200 m. Red (2.5YR 5/8) fabric and surfaces. Date: late 6th to early 7th century.

**371.** Lot 99-38:5 Fig. 42

Date of lot: later redeposition of primarily 6th-century material.

Bell lid, splayed rim. Diam. rim 0.210-0.240 m. Gray fabric and surfaces with central red (2.5YR 5/6) core. Date: 6th century.

**372.** Lot 01-10:30 Fig. 42

Date of lot: late 6th to early 7th century.

Bell lid, straight rim. Diam. rim 0.180-0.210 m. Gray inner fabric; reddish yellow (7.5YR 6/6) outer fabric; reddish yellow (7.5YR 7/6) exterior surface; brown (7.5YR 5/3) interior surface. Date: late 6th to early 7th century?

**373.** Lot 95-63:3 Fig. 42

Date of lot: late 6th to early 7th century.

Bell lid, knob and upper body. Diam. knob 0.051, max. diam. 0.205, p. H. 0.106 m. Red (2.5YR 5/8) fabric and interior surface; reddish yellow (approx. 7.5YR 6/6) exterior surface. Published, Sanders 1999, pp. 470, 472, no. 20, fig. 16. Date: late 6th to early 7th century.

*Bell lids, inscribed*

**374.** C-1995-021 Fig. 42, Pl. 16

Lot 1995-061, dated late 6th century.

Bell lid, knob, with inscribed with cross with Alpha and Omega symbols beneath lower arms. Diam. knob 0.043, p. H. 0.046 m. Strong brown (7.5YR 5/6) outer fabric, with light brown (approx. 7.5YR 6/4) exterior surface; gray inner fabric and corresponding surface. Published, Sanders 1999, p. 472, no. 22, fig. 16; the inscribed Christogram is similar to Sanders 1999, p. 473, no. 24, fig. 16. Date: late 6th century.

**375.** Lot 99-38:6 Fig. 42, Pl. 16

Date of lot: later redeposition of primarily 6th-century material.

Bell lid, knob, inscribed with cross with Alpha and Omega symbols beneath lower arms. Diam. knob 0.046, p. H. 0.038 m. Red (2.5YR 5/6) fabric with gray central core; surfaces mottled with the same colors. Date: possibly mid-6th century.

**376.** Lot 01-10:17 Pl. 16

Date of lot: late 6th to early 7th century.

Bell lid, knob, inscribed with cross with Alpha and Omega symbols beneath lower arms. Diam. knob 0.048, p. H. 0.040 m. Red (2.5YR 5/8) fabric and interior surface; gray exterior surface. Cf. **374**. Date: late 6th to early 7th century?

**377.** C-1995-035 Fig. 42, Pl. 16

Lot 1995-061, dated late 6th century.

Bell Lid, knob, with inscribed Chi-Rho cross with Alpha and Omega symbols beneath lower arms. Diam. knob 0.051, p. H. 0.079 m. Gray fabric and surfaces with thick red (2.5YR 5/8) core. Published, Sanders 1999, pp. 472-473, no. 23, fig. 16. Date: late 6th century.

### *Flat lids*

**378.** Lot 96-40:9 Fig. 42

Date of lot: first half of the 5th century.

Flat lid, sloped rim. Diam. rim 0.190 m. Reddish brown (5YR 4/4) fabric with black surfaces. Date: first half of the 5th century.

**379.** Lot 96-45:7 Fig. 42

Date of lot: second quarter of the 5th century to ca. 450.

Flat lid, upturned rim. Diam. rim 0.150-0.170 m. Dark gray fabric and surfaces, with red (2.5YR 4/8) core. Date: second quarter of the 5th century to ca. 450.

**380.** Lot 96-45:64 Fig. 42

Date of lot: second quarter of the 5th century to ca. 450.

Flat lid, knob handle. Max. p. diam. 0.150 m. Dark gray or red (2.5YR 4/6) fabric; red (approx. 2.5YR 5/6) mottled with gray (burning?) surfaces. Date: second quarter of the 5th century to ca. 450.

**381.** Lot 00-07:7 (P-11) Fig. 42

Date of lot: second quarter of the 5th century to ca. 450.

Flat lid, knob handle. Max. p. diam. 0.103 m. Dark gray fabric and surfaces, highly vitrified. Date: second quarter of the 5th century to ca. 450.

**382.** Lot 99-07:5 Fig. 43

Date of lot: later redeposition of primarily 6th-century material.

Flat lid, sloped rim, knob to rim. Max. diam. knob 0.038, H. 0.068, diam. rim 0.155-0.180 m. Gray fabric with mottled gray and buff surfaces. Date: mid-6th century?

**383.** Lot 02-10:3 Fig. 43

Date of lot: first half of the 6th century.

Flat lid, sloped rim, knob to rim. Max. diam. knob 0.033, H. 0.072, diam. rim 0.160 m. Gray fabric and surfaces with red (2.5YR 5/8) core. Small hole pierced in the top of the hollow knob handle. Date: first half of the 6th century.

**384.** Lot 98-29:19a-d Fig. 43

Date of lot: later redeposition of primarily 6th-century material.

Flat lid, sloped rim, three non-joining rims, one non-joining knob. Max. diam. knob 0.038, diam. rim 0.160-0.170 m. Light brown (7.5YR 6/4) fabric with red (2.5YR 5/8) core; light brown (7.5YR 6/4) to brown (7.5YR 6/6) exterior surface; light brown (7.5YR 6/4) interior surface; burning at rim. Date: mid-6th century?

**385.** Lot 97-57:16 Fig. 43

Date of lot: mid- to third quarter of the 7th century.

Flat lid, sloped rim, complete profile. Max. diam. knob 0.026, H. 0.062, diam. rim 0.210 m. Red (2.5YR 4/8) fabric and surfaces; slight burning at lip. Published, Slane and Sanders 2005, p. 279, no. 4-31, fig. 12. Date: mid- to third quarter of the 7th century.

**386.** Lot 97-57:48 Fig. 43

Date of lot: mid- to third quarter of the 7th century.

Flat lid, sloped rim, complete profile. Max. diam. knob 0.034, H. 0.076, diam. rim 0.170-0.180 m. Light brown (7.5YR 6/4) to brown (7.5YR 5/4) fabric; very pale brown (10YR 8/3) interior surface; mottled streaks of pink (7.5YR 7/3) and light brown (7.5YR 6/3) on exterior surface. Date: mid- to third quarter of the 7th century.

**387.** C-1997-054 Fig. 43

Lot 1997-057, dated mid- to third quarter of the 7th century.

Flat lid, sloped rim, complete profile. Max. diam. knob 0.033, H. 0.073, diam. rim ca. 0.160-0.165 m. Red (approx. 2.5YR 5/6) fabric; thin reddish yellow (7.5YR 6/6) inner fabric and surfaces; slightly burning on rim. Published, Slane and Sanders 2005, p. 279, no. 4-30, fig. 12. Date: mid- to third quarter of the 7th century.

**388.** Lot 97-57:67a-b Fig. 43

Date of lot: mid- to third quarter of the 7th century.

Flat lid, sloped rim to knob-handle, with non-joining body sherd. Max. diam. knob 0.032, H. 0.064, diam. rim 0.140-0.150 m. Light red (2.5YR 6/8) fabric, graying towards the edges; reddish yellow (5YR 6/6 to 7.5YR 6/6) surfaces. Date: mid- to third quarter of the 7th century.

**389.** Lot 97-57:68a-b Fig. 43

Date of lot: mid- to third quarter of the 7th century.

Flat lid, sloped rim to knob-handle, with non-joining rim. Max. diam. knob 0.028, H. 0.043, diam. rim 0.220 m. Red (2.5YR 4/8) fabric and surfaces, with some burning on underside of lip. Date: mid- to third quarter of the 7th century.

### *Miscellaneous forms*

**390.** Lot 98-23:14a-b Fig. 43

Date of lot: later redeposition of primarily 6th-century material.

"Frying pan" (?), rim to base (a) with non-joining handle (b). Diam. base N/A, L. (total) 0.287, H.0.092, diam. rim 0.135-0.140 m. Red (2.5YR 5/8) fabric; red (2.5YR 5/6) exterior surface (at rim); yellowish red (5YR 5/6) exterior surface (on handle); exterior body nearly completely burned, with sporadic burning on interior and handle. For a similar form, possibly cf. *Saraçhane*, p. 100, no. 28.1, fig. 37, identified as a "frying pan," in Glazed White Ware. Date: mid-6th century?

**391.** C-1997-055 Fig. 43

Lot 1997-057, dated mid- to third quarter of the 7th century.

"Coal scuttle," rim to lower body and handle. p. L. 0.207, p. H. 0.075, diam. rim 0.150 m. Dark gray (near-black) fabric with thin reddish brown (approx. 2.5YR 4/3 – 4/4) core; heavily burned on interior surface and top of handle. Published, Slane and Sanders 2005, p. 279, no. 4-29, fig. 12. Date: mid- to third quarter of the 7th century.

## *Plain Wares*

## Micaceous Water Jar "Red Fabric"

### *Unguentaria*

**392.** Lot 97-57:10 Fig. 44, Pl. 1.11

Date of lot: mid- to third quarter of the 7th century.

Unguentarium, neck to lower body. Max. diam. 0.070, p. H. 0.164, diam. neck (at tip) 0.023 m. Red (2.5YR 5/6) fabric, with a pale tan (reddish yellow, slightly lighter than 7.5YR 7/6) portion at mid-body. Abundant fine-small silver sparkling plates; few to frequent fine dark grits; frequent to common fine sub-rounded and elongated voids. Granular break; soft to medium hard fabric. Published, Slane and Sanders 2005, p. 279, no. 4-32, figs. 12, 13; cf. also *Agora* V, p. 118, no. M 369, pl. 34, republished, *Agora*

XXXII, p. 288, no. 1814, pl. 91; cf. also *Saraçhane*, p. 99, no. 25.6, fig. 36. Date: mid- to third quarter of the 7th century.

## Samos Cistern Amphora Fabric (?)

### *Pitchers and jugs*

**393.** Lot 97-57:23 Fig. 44, Pl. 2.11

Date of lot: mid- to third quarter of the 7th century.

One-handled jug, rim to shoulder and handle. p. H. 0.138, diam. rim 0.085 m. Published, Slane and Sanders 2005, p. 278, no. 4-25, fig. 11. Date: mid- to third quarter of the 7th century.

## Attic Fabric

### *Pitchers and jugs*

**394.** Lot 96-43:4 Fig. 44

Date of lot: late 4th to early 5th century.

Pitcher, neck and handle. Diam. neck (at base) 0.062 m. Attic 1. Dull, red (self-?) slip covers exterior. For similar profiles, but of smaller proportions and in different fabrics, cf. **513** and **514**; for a similar profile, cf. *Agora* V, p. 111, no. M 295, pl. 30, and p. 112, no. M 299, pl. 30, with gouged decoration. Date: late 4th to early 5th century.

**395.** Lot 98-15:13 Fig. 44

Date of lot: ca. 500.

Pitcher, rim. Diam. rim 0.070 m. Attic 1. Date: ca. 500, or earlier.

**396.** Lot 01-11:4 Fig. 44

Lot 2001-011, basket 16, dated second half of the 5th century.

Pitcher/jar, rim. p. H. 0.079, diam. rim 0.070 m. Attic 2. Date: second half of the 5th century or earlier.

### *Gouged jugs*

**397.** Lot 96-45:94 Pl. 16

Date of lot: second quarter of the 5th century to ca. 450.

Attic gouged jug, body sherd. Attic 1. Thin red slip covers exterior. Date: second quarter of the 5th century to ca. 450.

**398.** Lot 96-76:2 Fig. 44

Date of lot: second half of the 5th century (with contamination?).

Attic Gouged Jug, base. Diam. base 0.090 m. Attic 1 (overfired?). Date: second half of the 5th century, or earlier.

### *Miscellaneous closed shapes*

**399.** Lot 96-70:15 Fig. 44

Date of lot: mid-5th century.

Jar, rim. Diam. rim 0.100-0.110 m. Attic 1. Flaking red (2.5YR 5/6) slip covers exterior. Date: mid-5th century, or earlier.

## Boiotian Fabric

### *Mugs*

**400.** Lot 95-61:57 Fig. 44

Date of lot: late 6th century.

Mug, rim and upper body. p. H. 0.057, diam. rim 0.080 m. Red slip on the interior and exterior of the rim, with a fingerprint impressed on the exterior. Cf. Slane and Sanders 2005, p. 270, no. 3-17, fig. 8 (in

Boiotian fabric, personal observation), but with an outwardly thickened rim. Date: late 6th century (or earlier?).

**401.** Lot 99-30:3 Fig. 44
Date of lot: late 6th to early 7th century.
Mug, base. Diam. base 0.070 m. Cf. previous. Date: late 6th to early 7th century (or earlier?).

### *Miscellaneous open shapes*

**402.** Lot 97-57:56 Fig. 44
Date of lot: mid- to third quarter of the 7th century.
Jar, rim to base and handle root. Diam. base 0.112, max. diam. 0.202, H. 0.138, est. diam. rim 0.174 m. Faintly self-slipped exterior, with splashes and drips of red slip of various tones on exterior (and interior?). Probably Boiotian fabric. Common fine silver sparkling flakes on exterior (less common on interior); few to frequent fine sub-rounded white lumps (rare small spalling on surface); rare fine sub-rounded dark (black and gray) grits; few to frequent fine sub-rounded voids. Granular to conchoidal break; medium hard fabric. The fabric looks slightly "powdery" under the hand lens. Date: mid- to third quarter of the 7th century.

### *Lekythoi*

**403.** C-1998-018 Fig. 44
Gr. 1998-029, dated mid-6th to early 7th century.
Lekythos, complete. Diam. base 0.051, max. diam. 0.089, H. 0.127, diam. rim 0.038 m. Faint red slip covers the top two-thirds of the body and drips into the interior of the rim. Date: probably late 6th to early 7th century.

### *Miscellaneous closed shapes*

**404.** Lot 95-61:95 Pl. 16
Date of lot: late 6th century.
Closed vessel, neck with strainer. Diam. neck 0.060 m. Date: late 6th century.

## Southern Argolid fabric

### *Shallow basins*

**405.** Lot 04-02:7 Fig. 45, Pl. 7.12
Date of lot: late 4th century (with Middle Roman material).
Shallow basin, rim to base. Diam. base 0.190, H. 0.156, diam. rim 0.330 m. For the basic form, cf. Slane 1994, p. 146, no. 59, fig. 12. Date: 4th century.

**406.** Lot 00-07:21 Fig. 45
Date of lot: second quarter of the 5th century to ca. 450.
Shallow basin, rim to base. Diam. base 0.230, H. 0.113, diam. rim 0.280 m. Date: second quarter of the 5th century to ca. 450.

**407.** Lot 01-10:22 Fig. 45
Date of lot: late 6th to early 7th century.
Shallow basin, rim. Diam. rim 0.280-0.300 m. Date: possibly late 4th to early 5th century.

**408.** Lot 01-10:9 Fig. 45
Date of lot: late 6th to early 7th century.
Shallow basin, rim. Diam. rim 0.320-0.350 m. Date: possibly late 4th to early 5th century.

**409.** Lot 99-38:1 Fig. 45
Date of lot: later redeposition of primarily 6th-century material.
Shallow basin, rim and upper body. p. H. 0.080, diam. rim 0.270-0.280 m. Date: probably late 5th to beginning of the 6th century.

**410.** Lot 95-61:73 Fig. 45
Date of lot: late 6th century.
Shallow basin, rim. Diam. rim 0.230-0.240 m. Date: possibly first half of the 6th century.

**411.** Lot 98-21:2 Fig. 45, Pl. 8.1
Date of lot: later redeposition of primarily 6th-century material.
Shallow basin with combed decoration, rim. Diam. rim 0.310-0.340 m. For a similar profile in a tall basin, cf. **414 (P-65)** and **415**. Date: possibly 5th to early 6th century.

*Deep basins*

**412.** Lot 96-39:2 Fig. 46
Date of lot: mid-5th century.
Deep basin, rim and upper body. p. H. 0.138, diam. rim 0.330-0.034 m. For the basic form, cf. Slane 1994, p. 146, no. 58, pl. 34. Date: mid-5th century (or earlier).

**413.** Lot 02-10:6 Fig. 46
Date of lot: first half of the 6th century.
Deep basin, rim. Diam. rim 0.300-0.330 m. Date: first half of the 6th century (or earlier?).

**414.** Lot 01-10:21 (P-65) Fig. 46, Pl. 8.2
Date of lot: late 6th to early 7th century.
Deep basin, rim. Diam. rim 0.300-0.310 m. For a similar profile in a shallow basin, cf. **411**. Date: 6th century?

**415.** Lot 97-57:59 Fig. 46
Date of lot: mid- to third quarter of the 7th century.
Deep basin, rim. Diam. rim 0.410-0.440 m. For a similar profile, cf. previous. Date: probably 6th century.

**416.** Lot 95-61:96 Fig. 46
Date of lot: late 6th century.
Deep basin/jar, rim. Diam. rim 0.260-0.300 m. For a similar profile, possibly cf. Slane and Sanders 2005, p. 273, no. 3-46, fig. 9 (in Northeast Peloponnesian cooking fabric). Date: late 6th century?

**417.** Lot 01-03:4 Fig. 46
Date of lot: mid-6th to early 7th century.
Deep basin/jar, rim. Diam. rim 0.032 m. Date: mid-6th to early 7th century?

**418.** Lot 01-09:6 Fig. 46
Date of lot: late 6th to early 7th century.
Deep basin/jar, rim. Diam. rim 0.350-0.360 m. Date: late 6th to early 7th century?

*Bowls*

**419.** Lot 01-11:5 Fig. 46
Lot 2001-011, basket 16, dated second half of the 5th century.
Incurved rim bowl, rim. Diam. rim 0.160 m. For a similar profile, cf. **420**. Date: second half of the 5th century?

**420.** Lot 98-23:3 Fig. 46
Date of lot: later redeposition of primarily 6th-century material.
Incurved rim bowl, rim. Diam. rim 0.160-0.180 m. For a similar profile, cf. **419**. Date: possibly first half of the 6th century (or earlier?).

**421.** Lot 99-23:5 Fig. 46

Date of lot: mid-6th century.
Bowl, rim. Diam. rim 0.190-0.200 m, or greater. Red, self-slip (?) on interior. Date: mid-6th century?

**422.** Lot 98-29:11 Fig. 46
Date of lot: later redeposition of primarily 6th-century material.
Open bowl, rim. Diam. rim 0.150-0.180 m. Date: 6th century.

**423.** Lot 95-61:42 Fig. 46
Date of lot: late 6th century.
Keel-rim bowl, rim. Diam. rim 0.170-0.180 m. Date: late 6th century?

**424.** Lot 95-61:40a-b Fig. 47, Pl. 7.5
Date of lot: late 6th century.
Bowl, non-joining rim and base. Diam. base 0.090-0.108, H. (reconstructed) 0.112, diam. rim 0.140-0.160 m. Thin, poorly preserved pink self-slip on interior. Possibly cf. *Agora* V, p. 117, no. M 355, pls. 33, 71. Date: late 6th century.

**425.** Lot 95-61:41a-b Fig. 47
Date of lot: late 6th century.
Bowl, two non-joining rims. Diam. rim 0.115-0.120 m. Cf. **427** and **428**. Date: late 6th century.

**426.** Lot 95-61:74a-b Fig. 47
Date of lot: late 6th century.
Bowl, two joining rims. Diam. rim 0.090-0.100 m. Brownish-buff self-slip covers interior and exterior. Cf. *Agora* V, p. 117, no. M 355, pls. 33, 71. Date: late 6th century.

**427.** Lot 95-70:3 Fig. 47
Date of lot: mid- to late 6th century.
Bowl, rim. Diam. rim 0.090 m. Published, Sanders 1999, p. 469, no. 14, fig. 10; cf. **425** and **428**. Date: mid- to late 6th century.

**428.** Lot 95-70:4 Fig. 47
Date of lot: mid- to late 6th century.
Bowl, rim. Diam. rim 0.120-0.130 m. Published, Sanders 1999, p. 469, no. 13, fig. 10; cf. **425** and **427**. Date: mid- to late 6th century.

**429.** Lot 95-61:75a-b Fig. 47
Date of lot: late 6th century.
Bowl, base to upper wall. Diam. base 0.056-0.061, p. H. 0.064 m. Cf. **430**. Date: late 6th century.

**430.** Lot 98-29:12 Fig. 47
Date of lot: later redeposition of primarily 6th-century material.
Bowl, base to upper body. Diam. base ca. 0.058, p. H. 0.056 m. Cf. **429**. Date: mid-6th century?

### *Miscellaneous open shapes*

**431.** Lot 95-61:43 Fig. 47
Date of lot: late 6th century.
Basin (?), rim. Diam. rim 0.420 m. For a similar profile, cf. **509**. Date: late 6th century?

### *Pitchers and jugs*

**432.** Lot 96-45:19 Fig. 47
Date of lot: second quarter of the 5th century to ca. 450.
Large, one-handled pitcher, rim-neck and handle-root. p. H. 0.095, diam. rim 0.090 m. Southern Argolid fabric? Red (2.5YR 5/6). Frequent to common fine to small calcareous white lumps; rare fine dark

grits; rare small orange inclusions; few small to medium whitish/yellowish grits (?); frequent fine to small rounded and sub-rounded voids. Granular break; hard fabric. Date: second quarter of the 5th century to ca. 450.

**433.** Lot 96-45:95 Pl. 16
Date of lot: second quarter of the 5th century to ca. 450.
Gouged jug (?), body sherd, decorated with stylized vegetal (?) motif. Southern Argolid Fabric (?). Reddish yellow (approx. 5YR 6/6) fabric with slightly redder core; light red (approx. 2.5YR 6/8) interior surface; reddish yellow (between 7.5YR 7/6 to 6/6) exterior surface. Frequent very fine sparkling bits; few to frequent very fine to fine calcareous white lumps (rare spalling); rare to few fine sub-rounded dark grits; rare fine rounded red inclusions; few to frequent fine sub-rounded voids. Granular, slightly conchoidal break; medium hard fabric. Date: second quarter of the 5th century to ca. 450.

**434.** Lot 95-61:97 Fig. 47
Date of lot: late 6th century.
Pitcher, rim and handle. Diam. rim ca. 0.065-0.070 m. Date: late 6th century, or earlier.

**435.** Lot 02-06:11 (P-66) Fig. 47, Pl. 8.3
Date of lot: second half of the 6th century to 7th century.
Trefoil-mouth pitcher, rim. Diam. rim N/A. Cf. *Agora* V, p. 114, no. M 322, pl. 31. Date: second half of the 6th century, or earlier.

**436.** Lot 02-06:35a-b Fig. 47
Date of lot: second half of the 6th century to 7th century.
Pitcher, base. Diam. base 0.110, p. H. 0.058 m. Possibly cf. *Agora* V, p. 114, nos. M 321 and M 322, pl. 31. Date: second half of the 6th century, or earlier.

**437.** Lot 97-57:6 Fig. 47
Date of lot: mid- to third quarter of the 7th century.
Pitcher, rim to neck and handle. p. H. 0.103, diam. rim 0.061 m. Traces of matt-painted decoration on the handle, rim exterior, and at the bottom of the neck. Published, Slane and Sanders 2005, p. 279, no. 4-34, fig. 12. Date: mid- to third quarter of the 7th century.

**438.** Lot 97-57:5 Fig. 47
Date of lot: mid- to third quarter of the 7th century.
(Trefoil-mouth?) Pitcher, rim and handle. Diam. rim (if open-mouthed) 0.075 m. Southern Argolid fabric (?). At handle: gray fabric with thin light red (2.5YR 6/6) to red (2.5YR 5/6) core; reddish yellow (7.5YR 6/6) surfaces. At rim: Brown (7.5YR 5/4) fabric with gray core. Rare fine elusive (gold) sparkling bits; few to frequent fine to medium calcareous white lumps (and spalling); few fine rounded black grains; rare fine rounded red inclusions; rare small sub-rounded translucent gray clumps; few to frequent fine sub-rounded voids. Granular, near-smooth break; medium hard fabric. Published, Slane and Sanders 2005, p. 279, no. 4-33, fig. 12. Date: mid- to third quarter of the 7th century.

### *Miscellaneous closed shapes*

**439.** Lot 98-13:4 Fig. 48
Date of lot: first half of the 6th century.
Flask (?), rim to handle. p. H. 0.062, diam. rim 0.040-0.050 m. Date: first half of the 6th century, or earlier.

**440.** Lot 98-24:4 Fig. 48
Date of lot: later redeposition of primarily 6th-century material.
Closed vessel, base. Diam. base 0.054 m. Date: 6th century?

**441.** Lot 95-61:76 Fig. 48
Date of lot: late 6th century.
Closed vessel, base. Diam. base 0.055-0.060 m. Date: late 6th century?

**442.** Lot 95-61:77 Fig. 48
Date of lot: late 6th century.
Closed vessel, base. Diam. base 0.048 m. Date: late 6th century?

*Lids*

**443.** Lot 02-18:3 Fig. 48
Date of lot: ca. 500.
Sombrero lid, rim to handle. H. 0.021, diam. rim 0.055 m. Date: ca. 500?

**444.** Lot 02-06:12 Fig. 48
Date of lot: second half of the 6th century to 7th century.
Lid (for trefoil-mouth pitcher?), handle to rim. Max. diam. 0.050-0.060, H. 0.023 m. Cf. Slane and Sanders 2005, p. 273, no. 3-47. Date: second half of the 6th century, or earlier.

## Northeast Peloponnesian Cooking Fabric

*Basins*

### Basins, various early types

**445.** Lot 01-11:10 Fig. 48
Lot 2001-011, basket 16, dated second half of the 5th century.
Basin (interpretation of southern Argolid basin?), rim. Diam. rim 0.270-0.320 m. Gray fabric and surfaces. Cf. Slane 1994, pp. 142, 144, no. 50, fig. 10, and for a similar profile (in southern Argolid fabric), cf. p. 146, no. 59, fig. 12, but with shallower body. Date: 4th century?

**446.** Lot 01-11:7 Fig. 48
Lot 2001-011, basket 16, dated second half of the 5th century.
Basin (interpretation of southern Argolid basin?), rim. Diam. rim 0.290-0.300 m. Red (2.5YR 4/6) fabric; reddish brown (2.5YR 5/4) to red (2.5YR 5/6) surfaces. For a similar profile, cf. Slane 1994, p. 146, no. 58, fig. 12 (in southern Argolid fabric). Date: 4th century?

### Basins, type 1: Outwardly-Folded Rims

**447.** Lot 98-13:6 Fig. 48
Date of lot: first half of the 6th century.
Basin/large folded rim bowl, rim. Diam. rim 0.270-0.300 m. Yellowish red (5YR 5/6) fabric with a darker (gray) core; reddish yellow (5YR 6/6) surfaces. Date: first half of the 6th century, or earlier.

**448.** Lot 96-45:70 Fig. 48
Date of lot: second quarter of the 5th century to ca. 450.
Basin, rim. Diam. rim 0.280-0.300 m. Red (approx. 2.5YR 5/8) fabric; light red (2.5YR 6/6) surfaces. Cf. Slane and Sanders 2005, p. 256, no. 1-39, fig. 3. Date: second quarter of the 5th century to ca. 450.

**449.** Lot 96-45:71 Fig. 48
Date of lot: second quarter of the 5th century to ca. 450.
Basin, rim. Diam. rim 0.280-0.300 m. Red (2.5YR 5/6) fabric; yellowish red (approx. 5YR 5/6) surfaces. Cf. Slane and Sanders 2005, p. 256, no. 1-39, fig. 3. Date: second quarter of the 5th century to ca. 450.

**450.** Lot 98-21:21a-b Fig. 49
Date of lot: later redeposition of primarily 6th-century material.
Basin, rim and non-joining base. Diam. base 0.110, diam. rim 0.280-0.330 m. Red (approx. 2.5YR 5/8) fabric; light red (2.5YR 6/6) to red (2.5YR 5/6) surfaces. Partial dark gray discoloration on exterior

surface of base resulting from the kiln stacking and firing. Development from Slane and Sanders 2005, p. 256, no. 1-39, fig. 3, possibly transitioning to the form published on p. 265, no. 2-44, fig. 6. Date: probably first half of the 6th century.

## Basins, type 2: Hammerhead Rims

**451.** Lot 99-08:3 Fig. 49

Date of lot: later redeposition of primarily 6th-century material.

Basin, rim. Diam. rim 0.280 m. Reddish yellow (7.5YR 6/6) fabric with thick gray core at rim; reddish yellow (approx. 7.5YR 7/6) surfaces. Cf. Slane and Sanders 2005, p. 265, no. 2-45, fig. 6. Date: probably late 5th to early 6th century.

**452.** Lot 97-57:26 (P-49) Fig. 49

Date of lot: mid- to third quarter of the 7th century.

Basin, rim. Diam. rim 0.336 m. Dark gray fabric and surfaces, with few red streaks near the core. Possibly cf. Slane and Sanders 2005, p. 265, nos. 2-44, 2-45, fig. 6. Date: probably late 5th to early 6th century.

## Basins, type 3: Inwardly-Rolled Rims

**453.** Lot 02-10:8 Fig. 49

Date of lot: first half of the 6th century.

Basin, rim. p. H. 0.064, diam. rim 0.310-0.320 m. Yellowish red (5YR 5/8) fabric with brown (approx. 7.5YR 5/2) core; pink (7.5YR 2/4) exterior surface; reddish yellow (5YR 6/6) interior surface. Date: first half of the 6th century.

**454.** Lot 95-61:82 Fig. 49

Date of lot: late 6th century.

Basin, rim. Diam. rim 0.300-0.310 m. Gray fabric and interior surface; pink (7.5YR 7/4) exterior surface. Transitional piece developing towards **456** and **457**. Date: probably first half of the 6th century.

**455.** Lot 01-10:11 Fig. 50

Date of lot: late 6th to early 7th century.

Basin, rim. Diam. rim 0.300 m. Red (2.5YR 5/6) fabric and interior surface; light brown (7.5YR 6/4) exterior surface. Possibly transitional from Slane and Sanders 2005, p. 265, no. 2-44, fig. 6, towards **456**. Date: first half of the 6th century.

**456.** Lot 98-23:7 Fig. 50

Date of lot: later redeposition of primarily 6th-century material.

Basin, rim to lower body and handle. Max. diam. 0.364, H. 0.236, diam. rim 0.320-0.330 m. Red (2.5YR 5/8) fabric and interior surface; gray exterior surface. Cf. **457**. Date: first half of the 6th century

**457.** Lot 98-22:6a-d Fig. 50

Date of lot: later redeposition of primarily 6th-century material.

Basin, three rims, five body sherds (unnumbered), one base. Diam. base 0.130, H. (reconstructed) 0.194, diam. rim 0.380 m. Red (2.5YR 5/6) fabric and interior surface; thin gray outer fabric; light brown (7.5YR 6/4) to reddish yellow (7.5YR 6/6) exterior surface. Cf. **456**. Date: first half of the 6th century

## Basins, type 4: Incurved Rims

**458.** Lot 02-10:4 Fig. 50

Date of lot: first half of the 6th century.

Basin, rim. Diam. rim 0.290-0.320 m. Gray fabric and surfaces with red (10R 4/3) core. Cf. also **459** for another contemporary variation of this form; for the later development of this form, cf. **460** where the rim is completely folded back. Date: first half of the 6th century, or earlier.

**459.** Lot 97-51:1 Fig. 50

Date of lot: first half of the 6th century.

Basin, rim to upper body, handle. p. H. 0.080, diam. rim 0.280-0.310 m. Strong brown (7.5YR 5/6) outer fabric; brown (7.5YR 5/2) inner fabric; reddish brown (5YR 5/4) surfaces. **458** shows another contemporary variation of this form; for the later development of this form, cf. **460** where the rim is completely folded back. Date: first half of the 6th century, or earlier.

**460.** Lot 95-61:3 Fig. 51, Pl. 9.1

Date of lot: late 6th century.

Basin, rim to upper body, handle. p. H. 0.091, diam. rim 0.260-0.280 m. Pale brown (10YR 6/3) inner fabric; reddish yellow (approx. 7.5YR 6/6) outer fabric; very pale brown (approx. 7.5YR 7/4) interior surface; pink (lighter than 7.5YR 8/4) exterior surface. Published, Sanders 1999, p. 469, no. 15, fig. 11. For an early version, cf. **459**. Date: possibly mid-6th century.

## Basins, type 5: Outwardly-Rolled Rims

**461.** Lot 95-61:4 Fig. 51

Date of lot: late 6th century.

Basin, rim. Diam. rim 0.320-0.340 m. Strong brown (7.5YR 5/6) outer fabric; red (2.5YR 5/8) inner fabric; red (2.5YR 5/6) interior fabric; pink (7.5YR 7/4) exterior fabric. Published, Sanders 1999, p. 469, no. 16, fig. 11; cf. also Slane and Sanders 2005, p. 272, no. 3-45, fig. 9 (in Northeast Peloponnesian cooking fabric); for later examples of the form, cf. **462 (P-48)**, and **463**, both with bases as Slane and Sanders 2005, p. 273, no. 3-46, fig. 9 (in Northeast Peloponnesian cooking fabric). Date: late 6th century.

**462.** Lot 97-57:2, 97-57:3, and 97-57:25 (P-48) Fig. 51

Date of lot: mid- to third quarter of the 7th century.

Basin, five non-joining rims, two non-joining bases, 32 body sherds (only 97-57:25 illustrated). Diam. base 0.100-0.110, diam. rim 0.320-0.350 m. Red (2.5YR 4/6), with thin gray outer fabric and corresponding surface. Abundant fine to medium sub-rounded white grits; few small angular gray and white chips (chert); rare small sub-rounded black grits; frequent fine sub-rounded voids. Hackly break; hard fabric. Despite the high amount of white grits, this sample's membership in the Northeast Peloponnesian cooking fabric group was confirmed petrographically. Possibly cf. Slane and Sanders 2005, p. 273, no. 3-46, fig. 9, especially for the non-joining base fragment; for another similar base, cf. **463**. Date: mid- to third quarter of the 7th century, or earlier.

**463.** Lot 97-57:42 Fig. 51

Date of lot: mid- to third quarter of the 7th century.

Basin, rim to lower body and handle root, with two non-joining rims, three non-joining bases, 44 non-joining body sherds. Diam. base 0.135-0.140, max. diam. 0.196, p. H. (A) 0.198, diam. rim unknown, est. 0.300-0.360 m. Red (10R 5/8) fabric and interior surface; dark gray outer fabric and exterior surface. Date: mid- to third quarter of the 7th century, or earlier.

**464.** Lot 97-57:65 Fig. 51

Date of lot: mid- to third quarter of the 7th century.

Basin, rim. Diam. rim ca. 0.360-0.380 m. Red (2.5YR 5/8) inner fabric and interior surface; thin gray outer fabric; exterior surface mottled pinkish gray (5YR 6/2) and pink (approx. 7.5YR 7/3). Date: mid- to third quarter of the 7th century, or earlier.

## Later basin form

**465.** Lot 97-57:15 Fig. 51

Date of lot: mid- to third quarter of the 7th century.

"Bin" (small pithos?), rim to upper body. p. H. 0.133, diam. rim 0.195 m. Reddish yellow (7.5YR 6/6) outer fabric; gray core; red (2.5YR 5/8) inner fabric; reddish brown (2.5YR 5/3 – 5/4) interior surface; reddish yellow (7.5YR 6/6) exterior surface at rim, becoming paler on body. Published, Slane and Sanders 2005, p. 280, no. 4-40, fig. 12. Date: mid- to third quarter of the 7th century.

### *Folded rim bowls*

**466.** Lot 96-45:68 Fig. 52

Date of lot: second quarter of the 5th century to ca. 450.

Folded rim bowl, rim. Diam. rim 0.150-0.160 m. Brown (approx. 7.5YR 5/4) fabric with dark gray core. For a similar interior profile, cf. Slane 1994, p. 142, no. 44, fig. 10, although the exterior of the Panayia Field example is completely folded over, with additional ridging on the exterior rim-face. Date: second quarter of the 5th century to ca. 450, or earlier.

**467.** Lot 04-52:8 Fig. 52

Date of lot: early 5th century.

Folded rim bowl, rim to base. Diam. base ca. 0.044, H. 0.064, diam. rim 0.146 m. Yellowish red (5YR 5/6) fabric with thick gray core; reddish yellow (5YR 6/6) surfaces. Cf. Slane 1994, p. 142, no. 44, fig. 10; cf. also *Corinth* XVIII.2, p. 126, no. 275, fig. 33, pl. 16. Date: 4th century?

**468.** Lot 00-07:6 (P-10) Fig. 52, Pl. 9.4

Date of lot: second quarter of the 5th century to ca. 450.

Folded rim bowl, rim. Diam. rim 0.150 m. Dark gray fabric with red (10R 5/6) core. Possibly cf. *Corinth* XVIII.2, p. 126, no. 275, fig. 33, pl. 16. Date: second quarter of the 5th century to ca. 450, or earlier.

**469.** Lot 96-70:3 (P-3) Fig. 52

Date of lot: mid-5th century.

Folded rim bowl, rim and upper body. Diam. rim 0.180 m. Dark gray, mottled, fabric with light reddish brown (5YR6/4) interior surface. Cf. *Corinth* XVIII.2, p. 126, no. 275, fig. 33, pl. 16; cf. also Slane and Sanders 2005, p. 265, no. 2-43, fig. 6. Date: mid-5th century, or earlier.

**470.** Lot 96-76:3a-b Fig. 52

Date of lot: second half of the 5th century (with contamination?).

Folded rim bowl, two non-joining rims. Exterior rim face with one pair of fine, roughly incised horizontal lines below lip, and one pair of fine, roughly incised, undulating, lines running perpendicular to rim, from lip to flange. Diam. rim 0.150-0.160 m. Dark gray fabric and surfaces, with a reddish brown (2.5YR 4/4) core. Possibly cf. *Corinth* XVIII.2, p. 126, no. 275, fig. 33, pl. 16. Date: second half of the 5th century, or earlier.

**471.** Lot 96-76:4 Fig. 52

Date of lot: second half of the 5th century (with contamination?).

Folded rim bowl, rim. Diam. rim ca. 0.160 m. Red (2.5YR 5/6) fabric with dark gray exterior rim surface. For a similar shallow body, cf. Slane and Sanders 2005, p. 265, no. 2-43, fig. 6. Date: second half of the 5th century, or earlier.

**472.** Lot 95-61:111 Fig. 52

Date of lot: late 6th century.

Folded rim bowl, rim to lower body. p. H. 0.080, diam. rim 0.140-0.160 m. Gray fabric and exterior surface; light brown (7.5YR 6/3 to 6/4) interior surface and exterior surface of rim. Date: late 6th century, or earlier.

**473.** Lot 98-29:32 Fig. 52

Date of lot: later redeposition of primarily 6th-century material.

Folded rim bowl (?), rim. Diam. rim 0.170 m. Gray fabric; reddish yellow (5YR 6/6) interior surface; light brown (7.5YR 6/4) exterior surface (at rim); light red (2.5YR 6/6) exterior surface (body). Date: first half of the 6th century, or earlier?

### *Miscellaneous bowls*

**474.** Lot 04-02:11 Fig. 52

Date of lot: late 4th century (with Middle Roman material).

Bowl, rim. Diam. rim 0.130 m. Dark gray fabric and surfaces. Date: late 4th century?

**475.** Lot 98-29:24 Fig. 52

Date of lot: later redeposition of primarily 6th-century material.

Keel rim bowl, rim. Diam. rim 0.150-0.190 m. Thin brown (7.5YR 5/2) outer fabric; thin brown (7.5YR 5/4) inner fabric; red (2.5YR 5/8) core; reddish brown (2.5YR 5/3) interior surface; gray exterior surface. Date: possibly first half of the 6th century.

**476.** Lot 97-57:64 Fig. 52

Date of lot: mid- to third quarter of the 7th century.

Bowl, rim. Diam. rim 0.160-0.180 m. Gray fabric and surfaces. Date: mid- to third quarter of the 7th century?

### *Miscellaneous open shapes*

**477.** Lot 95-67:1 Fig. 52

Date of lot: mid-6th century.

Large bowl, rim and upper body. Diam. rim 0.230-0.240 m. Dark gray fabric and surfaces. Date: mid-6th century?

**478.** Lot 98-19:2 Fig. 53

Date of lot: later redeposition of primarily 5th-century material.

Basin/storage jar, rim and upper body. p. H. 0.098, est. diam. rim 0.460-0.480 m. Red (2.5YR 5/8) fabric; red (2.5YR 5/6) surfaces. For thinner-walled examples of the general profile, cf. **460**. Date: first half of the 6th century?

**479.** Lot 99-38:3 Fig. 52

Date of lot: later redeposition of primarily 6th-century material.

Mug, rim. Body decorated with incised horizontal and wavy lines. Diam. rim 0.110-0.130 m. Red (2.5YR 5/6) fabric; dark gray surfaces. Date: probably first half of the 6th century.

### *Pitchers and jugs*

**480.** Lot 98-23:12 Fig. 53

Date of lot: later redeposition of primarily 6th-century material.

One-handled pitcher, rim to lower body and handle. Max. diam. 0.283, p. H. 0.271, diam. rim 0.098 m. Red (2.5YR 5/8) fabric; red (2.5YR 5/6) surfaces. Cf. Slane and Sanders 2005, p. 272, no. 3-43, fig. 9. Date: 6th century.

**481.** Lot 02-06:28 Fig. 53

Date of lot: second half of the 6th century to 7th century.

One-handled pitcher, rim to shoulder and handle. p. H. 0.121, diam. rim 0.093-0.097 m. Reddish yellow (5YR 6/6) fabric and surfaces, with thin gray core. Cf. **482**; related to Slane and Sanders 2005, p. 272, no. 3-43, fig. 9. Date: second half of the 6th century?

**482.** Lot 95-61:101 Fig. 53

Date of lot: late 6th century.

Pitcher, rim to neck. p. H. 0.072, diam. rim 0.080-0.100 m. Northeast Peloponnesian cooking fabric, overfired (?). Gray fabric; surfaces the same, streaked with pale brown. Cf. previous. Date: late 6th century?

**483.** Lot 97-57:13 Fig. 53

Date of lot: mid- to third quarter of the 7th century.

One-handled pitcher, rim to shoulder and handle. p. H. 0.138, diam. rim 0.100 m. Gray fabric, with faintly grayish-brown exterior surface. Published, Slane and Sanders 2005, p. 280, no. 4-38, fig. 12. Date: mid- to third quarter of the 7th century.

**484.** Lot 97-57:63 Fig. 53

Date of lot: mid- to third quarter of the 7th century.

One-handled pitcher, rim to shoulder and handle. p. H. 0.115, diam. rim 0.110 m. Gray fabric; very pale brown (10YR 8/3) exterior surface, with faint red streaks; very pale brown (10YR 8/3) interior surface, with gray streaks and patches of light brown (7.5YR 6/4). Date: mid- to third quarter of the 7th century.

**485.** Lot 97-57:14 Fig. 53
Date of lot: mid- to third quarter of the 7th century.
Pitcher (or amphora?), rim to shoulder and handle. p. H. 0.122, diam. rim 0.110-0.120 m. Reddish yellow (approx. 7.5YR 6/6) fabric, but graying towards the core; exterior surface mottled light brown (7.5YR 6/3) and light reddish brown (5YR 6/4); reddish yellow (5YR 6/6) interior surface. Published, Slane and Sanders 2005, p. 280, no. 4-39, fig. 12. Date: mid- to third quarter of the 7th century.

**486.** Lot 01-10:12 Fig. 53
Date of lot: late 6th to early 7th century.
Pitcher, rim to shoulder and handles. p. H. 0.130, diam. rim 0.095 m. Gray fabric with very thin reddish brown outer fabric; gray exterior surface; reddish brown (5YR 5/4) interior surface. For another, cf. **517** (red slipped, unknown fabric). Date: late 6th to early 7th century?

**487.** Lot 01-11:8 Fig. 53
Lot 2001-011, basket 16, dated second half of the 5th century.
(One-handled?) Pitcher, rim and handle. Diam. rim 0.060 m. Brown (approx. 7.5YR 4/4) fabric with thin gray core; gray surfaces. Date: unknown (possibly intrusive).

**488.** Lot 95-61:98 Fig. 53
Date of lot: late 6th century.
Small pitcher, base. Diam. base 0.050, p. H. 0.053 m. Dark gray fabric and surfaces. For the profile, cf. **500**. Date: late 6th century?

### *Lekythoi*

**489.** Lot 95-61:61 Fig. 53
Date of lot: late 6th century.
Lekythos, rim. Diam. rim 0.060 m. Red (2.5YR 5/8) fabric; gray interior surface; reddish gray (5YR 5/2) exterior surface. For the shape, cf. *Agora* V, p. 118, no. M 367, pl. 34. Date: late 6th century.

### *Miscellaneous closed shapes*

**490.** Lot 96-70:17 Fig. 53
Date of lot: mid-5th century.
Jar, rim. Diam. rim 0.100-0.110 m. Gray inner fabric; yellowish red (5YR 6/6) outer fabric; reddish brown (5YR 5/3) interior surface; exterior surface mottled gray and reddish yellow (approx. 5YR 6/6). Date: mid-5th century?

**491.** Lot 97-57:62a-b Pl. 16
Date of lot: mid- to third quarter of the 7th century.
Closed vessel with burnished and incised decoration, two non-joining body sherds: ('a') preserves nearly complete incised patriarchal cross with possible faint burnished decoration; ('b') preserves at least three burnished lines. Red (2.5YR 4/8) fabric. Date: mid- to third quarter of the 7th century.

## LR Corinthian Lamp Fabric

### *Bowls*

**492.** Lot 95-70:2 Fig. 54, Pl. 10.2
Date of lot: mid- to late 6th century.
Bowl, rim to base. Diam. base 0.066, H. 0.059, diam. rim ca. 0.200 m. Published, Sanders 1999, p. 466, no. 8, fig. 8. Date: mid- to late 6th century.

**493.** Lot 95-61:2 Fig. 54, Pl. 9.12
Date of lot: late 6th century.
Bowl, rim to base. Diam. base 0.057, H. 0.049, diam. rim 0.170-0.180 m. Fugitive light red slip all over. Published, Sanders 1999, p. 465-6, no. 7, fig. 8. Date: late 6th century.

**494.** Lot 95-65:3 Fig. 54
Date of lot: late 6th to early 7th century.
Bowl, rim. Diam. rim 0.170-0.190 m. LR Corinthian lamp fabric (?). Self-slipped interior and lip. Date: late 6th to early 7th century.

**495.** Lot 01-09:3 Fig. 54
Date of lot: late 6th to early 7th century.
Bowl (interpretation LRC, Hayes form 3?), rim. Diam. rim 0.140-0.160 m. Date: late 6th to early 7th century.

### *Small dishes*

**496.** Lot 98-23:4 (P-71) Fig. 54, Pl. 10.5
Date of lot: later redeposition of primarily 6th-century material.
Small dish, rim to base. Diam. base 0.044, H. 0.024, diam. rim 0.100 m. Cf. Sanders 1999, p. 465, no. 6, fig. 8. Date: mid- to late 6th century.

**497.** Lot 95-61:67 Fig. 54, Pl. 10.4
Date of lot: late 6th century.
Small dish, rim to base. Diam. base 0.050, H. 0.024, diam. rim 0.140-0.142 m. LR Corinthian lamp fabric (possibly overfired). Possibly cf. Sanders 1999, p. 465, no. 6, fig. 8. Date: late 6th century.

**498.** Lot 95-61:39 Fig. 54
Date of lot: late 6th century.
Small dish, rim to base. Diam. base 0.041, H. 0.032, diam. rim 0.080 m. Date: late 6th century.

**499.** Lot 95-61:38 Fig. 54
Date of lot: late 6th century.
Small dish, rim to base. Diam. base 0.035, H. 0.030, diam. rim 0.089 m. Date: late 6th century.

### *Pitchers and jugs*

**500.** Lot 95-61:78 Fig. 54
Date of lot: late 6th century.
Pitcher, base. Diam. base 0.066, p. H. 0.048 m. Cf. Slane and Sanders 2005, p. 272, no. 3-40, fig. 9 (possibly in LR Corinthian lamp fabric, personal observation) for the associated top portion of the vessel. Date: late 6th century.

**501.** Lot 95-65:4a-c (P-74) Fig. 54, Pl. 10.7
Date of lot: late 6th to early 7th century.
Pitcher, two non-joining rims, one non-joining base. Diam. base 0.080 m, diam. rim N/A. Cf. previous. Date: late 6th to early 7th century.

### *Lekythoi*

**502.** C-1998-026 Fig. 54
Gr. 1998-034, dated mid-6th to early 7th century.
Piriform lekythos, complete. Diam. base 0.057, max. diam. 0.097, H. 0.159, diam. rim 0.036 m. For another, fragmentary example, cf. **503**. Date: probably late 6th to early 7th century.

**503.** Lot 01-10:4 Fig. 54
Date of lot: late 6th to early 7th century.

Piriform lekythos, base and lower body. Diam. base 0.051, p. H. 0.068 m. For complete example, cf. **502**. Date: late 6th to early 7th century.

## Various and Unidentified Fabrics

### *Miscellaneous open shapes*

**504.** Lot 96-45:12 Fig. 55

Date of lot: second quarter of the 5th century to ca. 450.

(Honey?) Jar, rim. Diam. rim 0.150-0.160 m. Brown (7.5YR 5/4) inner fabric, strong brown (7.5YR 5/6) outer fabric. Common to abundant fine to medium white flecks; few fine black grits; few small translucent grayish white clumps; frequent fine pin-hole and elongated voids. Hackly break; medium-hard fabric. Date: second quarter of the 5th century to ca. 450.

**505.** Lot 96-45:14 Fig. 55

Date of lot: second quarter of the 5th century to ca. 450.

Funnel (?), rim. Diam. rim 0.070-0.080 m. The fabric is generally comparable to various RS Corinthian fine wares and Broneer Type XXVII lamps of the Middle Roman period. Light brown (7.5YR 6/4) fabric; pink (approx. 7.5YR 7/4) interior surface; white (approx. 2.5Y 8/2) exterior surface. Rare fine sparkling bits; few fine sub-rounded white grits; rare fine round black grains; few very fine rounded voids; few fine elongated voids. Granular, near-smooth break; medium hard fabric. For a similar profile, cf. *Agora* V, p. 108, no. M 253, pl. 71, identified as a funnel, with missing spout. Date: second quarter of the 5th century to ca. 450, or earlier.

**506.** Lot 00-07:23 Fig. 55

Date of lot: second quarter of the 5th century to ca. 450.

Mug (?), rim and handle. p. H. 0.051, est. diam. rim 0.080 m. Very similar fabric to Northeast Peloponnesian cooking fabric, but with common very fine to fine sub-rounded white specks. Date: second quarter of the 5th century to ca. 450.

**507.** Lot 02-06:5 Fig. 55

Date of lot: second half of the 6th century to 7th century.

Basin, rim, decorated with incised horizontal and wavy lines. Diam. rim 0.260-0.270 m. Boiotian fabric? Granular break; medium hard fabric. Lightly red slipped interior with lightly self-washed exterior. Date: second half of the 6th century.

**508.** Lot 95-61:114 Pl. 16

Date of lot: late 6th century.

Open vessel, rim and twisted handle with partially preserved appliqué (pine cone, animal head?). Diam. rim 0.220 m. Boiotian fabric? Red slip covers all. Date: late 6th century?

**509.** Lot 95-61:36 Fig. 55

Date of lot: late 6th century.

Basin (?), rim. Diam. rim 0.360-0.380 m. Boiotian fabric? Reddish yellow (approx. 5YR 6/6) fabric. Few fine sparkling bits; few fine white grits; few fine dark grits; few to frequent fine sub-rounded voids. Conchoidal, slightly granular break; hard fabric. Light red slip covers the preserved interior surface, inconsistently covering the top of the rim. For a similar profile, cf. **431**. Date: late 6th century?

**510.** Lot 97-57:4 Fig. 55

Date of lot: mid- to third quarter of the 7th century.

Deep bowl, rim and upper body. p. H. 0.074, diam. rim (warped, or spouted?) ca. 0.150 m. Red (approx. 2.5YR 5/6) fabric with gray surfaces. Frequent very fine elusive sparkling bits (direct sunlight); frequent to common fine to small sub-rounded calcareous white lumps (some spalling); few fine to small sub-rounded yellowish lumps (grog?); common fine to small sub-rounded voids. Granular break; medium hard to hard fabric. Published, Slane and Sanders 2005, p. 279, no. 4-36, fig. 12. Date: mid- to third quarter of the 7th century?

*Pitchers and jugs*

**511.** Lot 96-45:11 (P-84) Fig. 55, Pls. 4.2, 4.3

Date of lot: second quarter of the 5th century to ca. 450.

Funnel-mouth pitcher with pinched spout, rim to handle to upper body. Unidentified Plain Ware 2. p. H. 0.183, diam. rim (excluding spout) ca. 0.093 m. Boiotian fabric? Date: second quarter of the 5th century to ca. 450?

**512.** Lot 96-45:10 Fig. 55

Date of lot: second quarter of the 5th century to ca. 450.

Pitcher, rim to handle. Diam. rim 0.080 m. Red (2.5YR 5/8) fabric, with reddish yellow (approx. 7.5YR 6/6) surface. Few small clear colorless translucent inclusions; frequent to common fine to small black grits; few small rounded red inclusions; few small to medium rounded/plate-like red inclusions; rare fine white flecks; rare small angular greenish white chips; few small rounded and elongated voids. Hackly break; medium-hard fabric. Date: second quarter of the 5th century to ca. 450.

**513.** Lot 96-45:77 Fig. 55

Date of lot: second quarter of the 5th century to ca. 450.

Pitcher (or lekythos), rim to lower body and handle. Max. diam. 0.158, p. H. 0.169, diam. rim 0.064 m. Fabric varies from light red to red (2.5YR 6/8 to 5/8), and reddish yellow (7.5YR 6/6). Few to frequent fine sparkling bits visible on surface; few fine white grits; few fine black grits(?); few fine pin-hole voids. Granular break; soft to medium-hard fabric. Flaking, thin red (2.5YR 5/8) slip originally covered all exterior and interior of funnel-mouth. For similar examples in different fabrics, cf. **394** and **514**; for a similar profile, cf. *Agora* V, p. 111, no. M 295, pl. 30, and p. 112, no. M 299, pl. 30, with gouged decoration. Date: second quarter of the 5th century to ca. 450.

**514.** Lot 98-15:12 Fig. 55

Date of lot: ca. 500.

Pitcher (or lekythos), rim. Diam. rim 0.050 m. Boiotian fabric? For other similar examples in different fabrics, cf. previous. Date: ca. 500, or earlier.

**515.** Lot 04-52:7 Fig. 55, Pl. 3.12

Date of lot: early 5th century.

Trefoil-/pinched-mouth pitcher, rim. p. H. 0.048 m. Unidentified Plain Ware 1. Date: early 5th century.

**516.** Lot 98-21:1 Fig. 56

Date of lot: later redeposition of primarily 6th-century material.

Trefoil-mouth pitcher, rim to shoulder and handle scars. p. H. 0.108, diam. rim N/A (0.051 m at neck). LR Corinthian lamp fabric (?). Light red (2.5YR 6/8) to red (2.5YR 5/8) fabric; red (2.5YR 5/6) interior surface; weak red (2.5YR 5/2) to reddish brown (2.5YR 5/3) exterior surface. Rare fine sparkling bits; few fine to small rounded black grains; few fine sub-rounded translucent gray clumps; few fine to small sub-rounded off-white pellets (clay?); rare fine sub-rounded calcareous white lumps; frequent very fine to fine sub-rounded voids. Granular break; medium hard fabric. Date: 6th century.

**517.** Lot 95-61:106 Fig. 55

Date of lot: late 6th century.

Pitcher, rim. Diam. rim 0.100 m. Red (2.5YR 5/8) inner fabric, yellowish red (5YR 5/8) outer fabric. Frequent very fine sparkling bits; frequent rounded and sub-rounded fine black grains; few fine white flecks; rare fine translucent bluish-gray clumps; rare fine to small sub-rounded yellow; few fine to small sub-rounded voids. Smooth to granular break; medium hard fabric. Possibly covered in a thin red slip/wash? For a similar profile, cf. **486**. Date: late 6th century.

**518.** Lot 95-63:6a-g Fig. 56

Date of lot: late 6th to early 7th century.

One-handled (?) jug, base, non-joining neck-shoulder with handle scar, and five non-joining body sherds. Diam. base 0.085-0.090, p. H. (reconstructed) 0.176 m. Boiotian fabric? Reddish yellow (approx. 5YR 6/6), fabric; red (approx. 2.5YR 5/8) slip on exterior. Frequent very fine sparkling flakes; few fine sub-rounded grayish white grits; few fine rounded black grains; frequent fine rounded voids. Granular break; medium hard fabric. Date: late 6th to early 7th century.

### *Unguentaria*

**519.** Lot 04-08:3 Fig. 56

Date of lot: mid-6th century.

Unguentarium, rim. Diam. rim ca. 0.018 m. Yellowish red (5YR 5/6) fabric, but redder closer to exterior surface. Rare to few fine silver sparkling bits; few fine to small sub-rounded black grits visible on break, but frequent to common on surface; frequent very fine to small white flecks; rare small sub-rounded translucent bluish-gray clumps; frequent very fine rounded voids; frequent fine to small elongated voids. Generally, on surface fabric appears dark pink with common black dots. Granular and conchoidal break; soft fabric. Date: mid-6th century?

**520.** Lot 04-08:4 Fig. 56

Date of lot: mid-6th century.

Unguentarium, base. Diam. base 0.019, p. H. 0.047 m. Reddish yellow (5YR 6/6) fabric with buff, reddish yellow (between 7.5YR 6/6 and 7/6) surfaces. Abundant fine to small silver sparkling bits; frequent to common very fine to fine powdery white bits (same as the sparkling?); rare fine red grits; rare to few fine sub-rounded dark grits; few to frequent fine sub-rounded voids. Conchoidal, slightly granular, break; medium hard fabric. The fabric and details of manufacture show similarities with micaceous water jars. Date: mid-6th century?

### *Miscellaneous closed shapes*

**521.** Lot 98-15:11 Fig. 56

Date of lot: ca. 500.

"Dipper," rim to base and handle. Diam. base ca. 0.050, H. 0.042, diam. rim 0.050 m. Boiotian fabric? Date: ca. 500, or earlier.

**522.** Lot 98-24:3 Fig. 56

Date of lot: later redeposition of primarily 6th-century material.

Pitcher or amphora (possible interpretation of a micaceous water jar?), rim and neck. p. H. 0.090, diam. rim 0.060 m. Possibly Northeast Peloponnesian cooking fabric, but is notably softer to the touch. Hackly break; medium hard fabric. Date: unknown, 6th century?

**523.** Lot 97-57:22 Fig. 56

Date of lot: mid- to third quarter of the 7th century.

"Spouted Jug" or "Baby Feeder", rim to lower body, handle roots and spout, with one non-joining rim and handle root, and five non-joining body sherds. Max. diam. 0.113, p. H. 0.074, diam. rim 0.080-0.095 m. Fabric and surfaces mottled gray and brownish yellow (10YR 6/6), with burned surfaces. Frequent to common fine sparkling bits; rare fine white flecks; rare very fine rounded black grains; rare very fine rounded red inclusions; few very fine to fine sub-rounded and elongated voids. Granular, near-smooth, break; soft to medium hard fabric. Very faint traces of slip on neck. Published, Slane and Sanders 2005, p. 274, no. 4-7, fig. 11. Date: mid- to third quarter of the 7th century?

**524.** Lot 02-28:1 Fig. 56

Date of lot: late 6th century.

Beaker, "Slavic Jar," rim. Diam. rim (uneven) 0.170-0.180 m. Strong brown (approx. 7.5YR 5/6) with a dark gray core; brown (7.5YR 5/4) exterior surface; brown (7.5YR 5/3) interior surface. Overall burned/overfired. Frequent to common very fine to small gold (and silver?) flakes; few to frequent fine sub-rounded (glossy) black grits visible on surface, but frequent to common fine to small on break; common to abundant very fine to fine sub-rounded gray/clear translucent bits (quartz-like); rare to few very fine to fine white specks; rare fine to small sub-rounded yellowish/buff chunks (grog?); abundant very fine to small

rounded and sub-rounded voids. Hackly break; medium hard fabric. Clearly hand-made. Faint diagonal scratches noted on interior of rim, with very faint vertical scratches noted below rim on exterior. For a similar vessel found in Corinth, cf. Weinberg 1974, p. 514, no. 1, pl. 110:c. Date: late 6th century.

*Lids*

**525.** Lot 96-45:81 Fig. 56

Date of lot: second quarter of the 5th century to ca. 450.

Sombrero lid, complete. Max. diam. 0.057 m. Brown (7.5YR 4/3) to dark brown (7.5YR 3/3) fabric; exterior surface yellowish red (5YR 5/6) with thin black layer above. Abundant fine sparkling bits; few fine rounded white grits. Soft fabric. Date: second quarter of the 5th century to ca. 450.

**526.** Lot 97-57:9 Fig. 56

Date of lot: mid- to third quarter of the 7th century.

Lid, handle (missing?) to rim. H. 0.033, diam. rim 0.090 m. Pink (7.5YR 7/4) to light brown (7.5YR 6/4) fabric, with lighter surfaces. Exterior surface appears as a creamy, pale wet-wash. Frequent to common very fine to fine silver sparkling bits (direct sunlight); few to frequent very fine sub-rounded dark grits; rare fine sub-rounded red inclusions; rare small angular opaque white chips; frequent fine to small white flecks on interior surface only; common fine to small sub-rounded voids. Granular to laminar break; medium hard fabric. Overall, fabric appears sandy/granular under hand lens. Published, Slane and Sanders 2005, p. 279, no. 4-35, fig. 12 (identified there as southern Argolid fabric). Date: mid- to third quarter of the 7th century?

**527.** Lot 98-22:8 Pl. 16

Date of lot: later redeposition of primarily 6th-century material.

Lid, rim and partial handle root. Top surface decorated with columns of curved horizontal hatch-marks emanating from the center towards the edge (one column preserved, traces of another).Thickness (near edge) 0.017, (near center) 0.015, diam. rim (irregular) ca. 0.240 m. Reddish yellow (5YR 6/8) fabric and exterior surface; reddish yellow (approx. 7.5YR 6/6) interior surface; burning on underside and side of rim. Common very fine to fine gold sparkling flakes; common very fine to medium sub-rounded calcareous white lumps (few spalling); few fine sub-rounded red inclusions; rare to few very fine rounded black grains; frequent fine to small sub-rounded and elongated voids; frequent fine to medium elongated voids on surfaces. Granular and conchoidal break; soft fabric. Date: unknown, possibly a later intrusion.

# CHAPTER VI. DISCUSSION OF THE CATALOGUE

## INTRODUCTION

This chapter provides additional information regarding the dating and frequency of specific forms in the Panayia Field lots, as well as other general observations. Developmental typologies of various forms are also detailed. The chapter concludes by considering the kinds of activity that took place in the Panayia Field as indicated by the ceramic evidence.

## DISCUSSION OF THE CATALOGUE FINDS BY CLASS

### *Imported Lamps*

Very few of the identified lamps in the Panayia Field are imported from outside of the surrounding region, implying that local or regional sources satisfied demand. One early exception is the base of one lamp (**29**), possibly residual in the soil deposit through which Grave 98-29 was later cut.[1075] Considered at first to be an Attic glazed lamp, it shows marked differences that separate it from this group of lamps: it is larger bodied, the base displays finer articulation, and the deep finger-smoothing on the interior is not typical of other Attic examples. Also, the Christian signature is too early for this type of thick glazing seen on Attic lamps.[1076] Two other lamps, both from 6th-century contexts, appeared superficially similar to other examples in LR Corinthian lamp fabric, but could not be confidently assigned to that fabric group; these include a possible interpretation

[1075] Corinth Notebook 908, basket 94, dated early 6th century.
[1076] My thanks to K. Garnett for her discussion of this piece with me. For more on the dating of Attic Glazed Lamps, see Slane 2008b, p. 486, table 3.

Attic post-glazing lamp (**30**),[1077] and an interpretation North African lamp (**31**). The fabric of another interpretation of a North African lamp, recovered from the 7th-century pit in which context it is certainly residual (**32**), appears similar to Boiotian fabric. A final lamp from the fill of the southeast room of the Long Building (**33**), is identified as a 5th- to 6th-century "Asia Minor" type 1 lamp from the eastern Aegean.

*Regional and Local Lamps*

The dating of lamps produced in Corinth and its neighboring regions in the Late Roman period has been reappraised in recent decades, particularly in the dating of the end of Attic glazed lamps, and the beginning of Attic post-glazing and LR Corinthian lamps.[1078] Although lamp fragments are numerous in the Panayia Field, a paucity of diagnostic pieces, especially for the earlier periods, is reflected in the fragmentary pieces that were ultimately chosen for selection in this catalogue. In effect, the material from the Panayia Field cannot offer further refinements to the dating of Late Roman lamps and this study has adhered to the dates provided in recent Corinth publications.

Attic Lamps

Accumulated fill dating to the early 5th century to the north of the pool produced a mostly reconstructed glazed lamp in a bright red slip, but the plain rim with double

[1077] Possibly cf. *Corinth* IV.2, pp. 246-247, no. 1109, pl. XV, with a discus depicting Athena Promachos, but with stamped concentric circles, shorter handle, and smoothed edges (suture not ledge-like).
[1078] For useful summaries of the scholarship, see Karivieri 1996, pp. 31-59; Slane and Sanders 2005, pp. 280-283; Slane 2008b, pp. 483-490. The dating of Late Roman lamps here generally follows the arguments in Slane and Sanders 2005 and Slane 2008b.

grooves and circular groove on the base properly belong to the 4th century (**1**),[1079] while another handle with a plain rim in the same bright red slip should also be seen as a 4th-century product (**2**).[1080] A second kind of slip is noted on the remaining Attic glazed lamps of this period, appearing dark red and metallic, including one example with two circular grooves on the base with traces of an A signature, and preserving a central filling hole (**3**).[1081] While these morphological features and signature are characteristic of 4th-century examples, the rosette discus and herringbone-rim pattern also continue into the 5th century, as seen on two examples from a second quarter to mid-5th-century dump (**4**; **5**); the first also exhibits a characteristically 5th-century transverse bar above the nozzle.[1082] Another example from the accumulated fill north of the pool mentioned above preserves two grooves on a base that might be circular or tear-shaped, but the visibly thinning, metallic slip points towards a contemporary, 5th-century date (**6**).[1083]

One example of an Attic post-glazing lamp from the pre-construction dumps preserves a plain sunken discus with central filling hole and retouched decoration on the sloping rim (**7**).[1084] Two examples from the XIONES workshop in Athens were also recovered, including a complete example modeled on 4th-century prototypes but with

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[1079] 00-07-13a-b (b = P-76) is another, more fragmentary example. Attic lamps with similar rims are dated by Perlzweig to the second half of the 4th and mid-4th century; cf. *Agora* VII, p. 123, no. 830, pl. 18; p. 127, nos. 889-895, pl. 20.
[1080] See the dating criteria provided in Slane 2008b, table 3.
[1081] This piece was found in Lot 1996-070, a lens of tile and earth that pre-dates the entrance hall of the bath. It is paralleled with a lamp from the Sanctuary of Demeter and Kore that is among the destruction debris over the west and central temples, and is thereby likely residual in its lot; cf. *Corinth* XVIII.2, pp. 34-35, no. 55, fig. 2, pl. 5; Slane 2008b, p. 487, fig. 5.
[1082] For the transverse bar, see Slane 2008b, table 3. The date of **5** is less secure, but the details of the handle and rim seem far more worn than those of **3**, perhaps suggesting a later date.
[1083] For the thinning of the surface treatment in 5th-century examples, see Slane 2008b, table 3.
[1084] For a similar lamp, but with a decorated discus, cf. *Corinth* IV.2, p. 267, no. 1289, pl. XIX. For another lamp with a similarly decorated rim but also with traces of a decorated discus, cf. *Agora* VII, p. 103, no. 376, pl. 11, but identified there as a possibly imported lamp of the 6th to 7th century. For the possible prototype, cf. *Ephesos* IV.2, pp. 115, 117, pl. II, nos. 188-192, and especially no. 230, of the "Kleinasiatische Lampen", type II, form 1.

multiple filling holes (**8**),[1085] and another half-preserved example, also from the eastern dumps, which was poorly fired but nonetheless travelled to Corinth (**9 (P-83)**).[1086] A final example from the construction fill below the entrance of the bath consists of a base that was either overfired or later burned, and preserves a signature of five dots within a circle (**10**).[1087] By this time the importation of Attic lamps, namely post-glazing lamps, had slowly discontinued as Corinth's own lamp industry was re-established.

Lamps in Southern Argolid Fabric

A circular lamp in a refined version of southern Argolid fabric, preserving a handle with half of the rim and discus, was recovered from the Long Building fills (**11**), and decorated with rays on the discus and rows of minute dots on the rim. Another example from the *tepidarium* dump with a vertical, conical handle and worn rosettes on the rim preserved traces of another discus with ray bands, but with widely spaced arms (**12**). A fragment from a pit dated to the second half of the 6th to 7th century preserved the remains of a low ring foot of another example.[1088] Lamps from the southern Argolid were otherwise not very common.

LR Corinthian Lamps

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[1085] This lamp was found in Corinth Notebook 908, basket 83, a late 7th- to 9th-century context with 5th and 6th-century survivors in the east side of the site (basket thrown). Possibly cf. *Agora* VII, p. 187, nos. 2688-2690, pl. 42, dated by Perlzweig to the first half of the 5th century. For a similar example, but with a figural scene, cf. Karivieri 1996, p. 162, no. 16, pl. 2, dated mid-5th century.
[1086] For the XIONES workshop, see *Agora* VII, pp. 55-57; Karivieri 1996, pp. 56-58; *Kerameikos* XVI, pp. 77-79; Slane 2008b, p. 485. For similar bases and signatures, cf. Karivieri 1996, p. 185, no. 75, pl. 6; p. 224, no. 210, pl. 18; p. 227, no. 217, pl. 19; pp. 231-232, no. 233, pl. 21; no. 233 is dated to the mid-5th century, the remaining lamps are dated to the second half of the 5th century.
[1087] For a base with similar markings, cf. Garnett 1975, p. 181, no. 21, fig. 1. For another, roughly similar, base, cf. Karivieri 1996, p. 169, no. 26, pl. 36, but with six dots.
[1088] 02-06:34 (P-67), not illustrated here.

Recent study now places the beginning of lamps in LR Corinthian lamp fabric after 450, as they replaced the Attic lamps of the 5th century.[1089] Most of the finds of LR Corinthian lamps from the Panayia Field occur in the standard hard red fabric normally encountered in Corinth, here called LR Corinthian lamp fabric. When the Corinthian lamp industry resumed, two fabrics were actually employed: this commoner red fabric, and a coarser version of the pale, buff fabric employed in earlier unglazed Corinthian lamps (Broneer's type XXVII).[1090] In the Panayia Field the Corinthian buff fabric is rarely seen, with the earliest appearance possibly represented by a single sherd in Lot 1996-045, otherwise occurring in a fragmentary form in a few lots of the later 5th and early 6th century.[1091] One reconstructed example (**28**) was recovered from among the eastern pre-construction dumps, in the area later covered by wall 133.[1092]

The earliest concentration of lamps in the commoner LR Corinthian lamp fabric, mostly appearing in tear-drop shapes, in was in Lot 2000-007, deposited in the second quarter to mid-5th century.[1093] The best preserved fragment exhibited a circular base and a handle that terminated in a leaf in imitation of 4th century, Attic prototypes (**13**).[1094]

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[1089] Slane 2008b, p. 490; see also Garnett 1975, p. 185.
[1090] See Garnett 1975, pp. 177-178, for the original descriptions.
[1091] A note should also be made on the presence of a fragment of a neck and handle-root of a small flask, not illustrated here, but also found (residually?) in Lot 1996-045 with parallels from elsewhere in Corinth; see Williams and Zervos 1983, p. 25, no. 65, pl. 10, which has a clear parallel in glass presented in pp. 24-25, no. 64, pl. 10; for the re-dating of the context to a post-395 date, see Slane and Sanders 2005, p. 249, n. 16. Another fragment of a similar flask was also noted (residually) in Lot 2002-009. The fabric of these vessels is not certain but it appears to be related to the Corinthian buff fabric employed in earlier Broneer type XXVII lamps.
[1092] Possibly cf. Garnett 1975, p. 190, no. 6, pl. 43, for the original decorative scheme.
[1093] The latest pieces in the pit included a single sherd of LRC fine ware, a single sherd of LR Amphora 1, a single partial rim of LR Amphora 2, and one rim of a Gaza amphora, Majcherek form 2 (**172**), with no examples of Late Roman micaceous Aegean ware and the fine wares dominated by Attic RS. Plain wares were still dominated by basins in southern Argolid fabric, but a single rim of a basin with a folded rim ("type 1") in Northeast Peloponnesian cooking fabric did appear. This pit was sealed by a layer of tile destruction that also did not include any Late Roman micaceous Aegean ware, but did include a single rim of LRC, Hayes form 2B (**78**) among more Attic RS, as well as two sherds of a LR Amphora 1.
[1094] 00-07:16 is another comparable, but fragmentary, example.

Another early example includes a nearly intact lamp from a mid-5th-century lot that seems to harken back to earlier Corinthian prototypes with the use of square lateral panels on the rim (**14**), but also has parallels with Attic glazed lamps of the late 4th century.[1095] Other, later, examples from the pre-construction dumps illustrate complicated base designs, including one elongated tear-shaped lamp with a complicated Christian signature (**15**),[1096] and another with an elaborately decorated circular base with a central rosette encircled by a wreath in place of a signature, and small circles on the lower body (**16**). Other finds from Lot 2002-011 illustrate the range of discus motifs that survived into the early 6th century, including an intact lamp with a cross decorating its discus (**17**),[1097] and another, decorated with a wreath/herring-bone motif on the rim that is interrupted by a raised rosette, exhibiting a sunken discus with a gladiatorial scene and punctured with at least two fill-holes (**18**).[1098] Another lamp from a mid-6th-century repair of the drains beneath the road illustrates that mythological motifs such as Eros had yet to go out of fashion when Corinthian lamp production resumed (**19**).[1099] Other examples of LR Corinthian lamps from the Long Building fills (**20**; **22**) attest to the manufacture of tear-

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[1095] For an Attic glazed lamp found in association with the Late Roman graves at Isthmia, see *Isthmia* IX, p. 104, no. 5, fig. 2.88. See also *Kerameikos* XVI, p. 234, no. 3548, pl. 56.
[1096] For a similar signature, cf. Garnett 1975, p. 181, nos. 16-17.
[1097] 98-24:1 (not catalogued), a partial rim and discus from the Long Building fills, is from a lamp similar to **17**, with similar published parallels in *Corinth* IV.2, pp. 222-223, nos. 883-888, figs. 153-154, pl. XIII, but with plain discuses; for the signature, cf. also Garnett 1975, p. 181, no. 42.
[1098] The discus scene has been identified elsewhere as the "*retarius* and *secutor*;" cf. Garnett 1975, p. 189, pl. 43, no. 1. For other examples, cf. *Corinth* IV.2, p. 256, nos. 1192, 1193, fig. 179; *Agora VII*, p. 98, no. 320, pl. 9. See also Slane and Sanders 2005, p. 258, no. 2-4, fig. 7, for a near-contemporary lamp from Corinth with a gladiatorial scene, with further discussion of the scene on p. 281, n. 41. Although rim patterns vary among these various comparanda, the discus scene and disposition of fill-holes are consistent, and handles, when preserved, are solid and unpierced.
[1099] See Garnett 1975, pp. 188-189, who discusses the issue of Late Roman copies of 3rd-century Broneer type XXVII (or 4th-century Attic glazed) lamps; see also Slane and Sanders 2005, p. 282. Such discus scenes are noted on much earlier lamps: for Corinth, cf. *Corinth* XVIII.2, p. 32, no. 40, fig. 2, pl. 4; for Athens, cf. *Agora* VII, p. 115, no. 726, pl. 16, for a similar rim and discus scene.

shaped lamps in this fabric into the 6th century,[1100] while a third example illustrates the fabric's use in the manufacture of circular lamps (**21**).[1101]

In the Panayia Field lamps based on North African prototypes appear in the Long Building fills, the *tepidarium* dump, the post-abandonment activity in the bath, and in the fills against wall 133. The discus of these lamps is typically decorated here with a jewelled cross or jewelled Chi-Rho, with rims that exhibit outwardly-pointed ivy-leaves (**23**) or simple wreath patterns (**24**; **25**).[1102] Other lamps based on North African prototypes were noted in the fills against wall 133, in which the handles are more pointed, the rims are wider and filled with more intricate stamped or moulded imagery; the two examples here were also fired in a reducing atmosphere so that the surfaces took on a gray appearance (**26**; **27**). No lamps manufactured in LR Corinthian lamp fabric were recovered from the 7th-century pit.[1103]

*Imported Fine Wares*

<u>African Red Slip (AfRS)</u>

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[1100] **22** additionally seems to anticipate the major series of lamps produced in this fabric based on North African prototypes; note especially the handle and the style of the wreath, while the channel that later would connect the discus to the nozzle is even indicated by a single impression.

[1101] Although among redeposited material, this lamp may belong to the other late 6th- or early 7th-century material recovered in Lot 1998-023. For the manufacture of circular lamps in this fabric, see *Corinth* IV.2, p. 111; see also Slane and Sanders 2005, pp. 268, 281, no. 3-6, fig. 10, dated to the end of the 6th century. Miller 1983, p. 84, no. L 122, pl. 25:g, a circular lamp (?) from destruction debris over the floor of the 6th-century early Christian house, might additionally attest to the longevity of this form in this fabric (personally observed).

[1102] Other, similar examples include 95-61:35 (P-72) and 99-33:1; 95-61:69 and 95-61:104 are other fragments that preserve similar rims.

[1103] One fragment of an interpretation North African lamp in an unknown, imported fabric was recovered from this context (**32**), but its presence is interpreted as residual.

Many of the earliest AfRS products in the deposits studied here are identified with the long-lived Hayes form 50, which by the mid-4th century appears in its variant B.[1104] Most of the examples here of form 50B were manufactured in fabric D,[1105] such as **34** which is the best preserved example, and appear in the same lot as Hayes, form 53B with its distinctive feather-rouletting (**36**), which was manufactured in fabric C. Although the contents of Lot 1998-015 were certainly re-deposited (as attested by the presence of later material, especially LRC), form 50B in fabric D and form 53B in fabric C (**35**) also appeared together in an earlier dump of the second quarter to mid-5th-century.[1106] Rare examples of form 67 in fabric C were also noted here, but only as possibly residual finds in the pre-construction dumps.[1107]

Products manufactured in fabric D begin to appear alongside those in fabric C during the late 4th and early 5th century. In addition to the several examples of form 50B noted above, form 59B appeared in an early 5th-century robbing event (**37**), as well as residually in later contexts (**38**).[1108] A single example of form 61A (**39**) was recovered

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[1104] The continuation of Hayes form 50 into the 5th century is witnessed in several lots, and is confirmed by other finds from Corinth; see Slane and Sanders 2005, p. 283. See also Reynolds 1995, p. 145.

[1105] Compare *LRP*, p. 290, where Hayes describes the fabrics employed in form 50 later identified by Carandini (*Atlante* I, pp. 58-59) as being in his fabrics $C^2$ and $C^3$. See more recently Cau, Reynolds and Bonifay 2011b, p. 5, who comment that form 50.60 and 50.61 should not be identified with fabric C, but rather fabric D "or related (Nabeul) products," and discuss the problem of the earlier evolution of this form from the 3rd century onwards.

[1106] For Hayes form 53B, cf. *LRP*, pp. 80, 82, no. 53.18, fig. 13, republished as *Agora* XXXII, p. 223, no. 1044, fig. 32, pl. 52, dated late 4th (to early 5th?) century; cf. also *Saraçhane* p. 93, no. 11.1, fig. 32, Deposit 11 dated to the second quarter of the 5th century.

[1107] Form 67 appears in Lot 2001-010 in fabric C, and in Lot 2000-017 in both fabrics C and D. This form is now regarded as beginning as early as ca. 340 and continuing to ca. 460-490, with its absence in Beirut after 450 attributed to a break in distribution following the Vandal conquest of Africa, and not to a stop in production; Cau, Reynolds and Bonifay 2011b, p. 5, but its appearance in fabric C or D is not specified. See also Bonifay 2004, p. 173, who traces variants of this form (in fabric D) from the second half of the 4th century to the mid-5th, with some examples of variant C found in the second half of the 5th century.

[1108] One example of form 59A appeared as a residual find in Lot 2001-004, while another find in Lot 1996-070 was too fragmentary to distinguish between form 59A or B. Other instances of form 59B include Lots 1998-015 and 1999-038. Cf. *LRP*, pp. 97, 100, no. 59.9, fig. 15, dated ca. 320-420, and *LRP*, pp. 99-100, no. 59.17, fig. 15, republished as *Agora* XXXII, p. 224, no. 1055, fig. 33, in a context of the third quarter of the 4th century.

from a late 4th-century robbing context associated with the pool,[1109] whereas the handful of examples of form 61B (**40**) are contemporary with some of the earliest deposits examined here.[1110] Finds of form 67 in fabric D are few (**42**),[1111] while form 68 is much rarer (**43**).[1112] Only one, nearly complete, example of form 73A (possibly in a refined version of fabric D) was noted (**44**);[1113] the dating of this form suggests that it may have arrived before the Vandal conquest of Africa in 439.[1114] Stamps for this pre-Vandal period were few with one example in fabric D preserving a partial palm branch in Style A (i-iii) (**72**).[1115] The few examples of vessels manufactured in fabric E belong to either the pre-Vandal or Vandal period.[1116] An example of form 66/68 (or 76A) was residual in a

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[1109] See *Supplement*, pp. 515-516, which dates Hayes form 61A as possibly beginning in the 320s and ending in ca. 380; but for a similar profile (but larger diameter) see Bonifay 2004, pp. 167, 171, fig. 90:3, type 37 A/B2 (Hayes form 61 A/B), dated to the start of the 5th century (to the mid-5th?). See also Cau, Reynolds and Bonifay 2011b, p. 5.

[1110] See *Supplement*, p. 516, where Hayes form 61B was dated as first appearing ca. 380 and ending before ca. 450; more recently, see Bonifay 2004, p. 167, 170, fig. 90:23, type 38 B2 (Hayes form 61B), dated to the first half of the 5th century. Reynolds 1995, p. 148, offers a reassessment of form 61B, suggesting a possible start date of ca. 410 and continuing into the early Vandal period of occupation. See also Cau, Reynolds and Bonifay 2011b, p. 5, and Reynolds, Bonifay and Cau 2011, pp. 29-30, for reference to several deposits of the second quarter of the 5th century in which form 61B is prominent, with late variants noted in deposits spanning the mid-5th century to ca. 500+.

[1111] Several other examples of form 67 found in the Panayia Field appearing in late 5th- and 6th-century contexts are interpreted as residual. For a similar profile, cf. Bonifay 2004, pp. 171, 173, fig. 92:1, type 41 A (Hayes form 67), with comparative examples dated to the second half of 4th century and ca. 400.

[1112] No examples of form 68 in fabric D appear as residual finds in the Panayia Field. Cf. *LRP*, p. 117, no. 68.4, fig. 20, dated ca. 370-425; the typical fabric related to this form is described on p. 291, which was later identified by Carandini (*Atlante* I, p. 119) with his fabric E – the form's presence here in fabric D is therefore notable.

[1113] The fabrics typically noted with this form are described by Hayes in *LRP*, pp. 290-291, and were later identified by Carandini (*Atlante* I, p. 59) as his $C^3$ and $C^4$. The identification of this form here in a possibly finer version of fabric D might correspond to these earlier identifications.

[1114] Cf. *LRP*, pp. 123-124, no. 73.2, fig. 21, dated ca. 420-475; Reynolds 1995, pp. 145, 148, however, prefers an earlier date for form 73 of the first half of the 5th century.

[1115] Cf. *LRP*, pp. 218-219, fig. 38, stamps in Style A (i-iii) range in date from ca. 320-470, but its appearance on a vessel manufactured in AfRS fabric D places it in the late 4th century at the earliest.

[1116] For a description of AfRS fabric E, see *Atlante* I, pp. 119-122; Bonifay 2004, p. 51, fig. 22; *Agora* XXXII, p. 69, with references specifically to Hayes forms 62A and 68; Reynolds 1995, p. 7, dates the use of the fabric to between mid-4th to mid-5th century, and associates it with numerous other forms.

later lot (**41**),[1117] and an unnumbered rim as Hayes form 67.17 was identified in Lot 1998-015.[1118]

In the Panayia Field, most of the AfRS found in lots of the late 5th- to early 6th-century are unidentifiable bases and body sherds in fabrics A, C, and D, with many examples of form 50B (in fabrics C and D), and are thus treated as residual or redeposited. Few notable exceptions from the Panayia Field, all in fabric D, are dated within this period. Form 91 appeared only rarely, with an instance of a possibly late form 91B found (residually?) in the use layer of the floor of the Long Building (Lot 2004-008).[1119] Another example of a late form 91B was found in the Long Building fills (**47**) where it is certainly residual.[1120] A possibly small version of form 93B (**48**) was discovered in a robbing trench of the first half of the 6th century that preceded construction of the bath.[1121] A single example of form 94, nearly complete (**49**),[1122] was discovered at the bottom of 6th- to 7th-century debris that had slumped down into a 2nd- to

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[1117] The profile is loosely similar to *LRP*, p. 112, no. 66.1, fig. 18 (dated early 5th century), or p. 117, no. 68.4, fig. 20 (dated ca. 370-425); for a closer parallel, cf. Bonifay 2004, pp. 199, 201, fig. 106:1, type 71 (Hayes form 76, Sidi Jdidi 3 variant), dated to the second half of the 5th century.

[1118] A rim of form 68 (in fabric E) was also noted in Lot 1998-014, with two other rims of the same form (possibly fabric E) in Lot 2000-017 and another in Lot 2002-008.

[1119] The closest parallel for the fragmentary rim (numbered 04-08:1) is Bonifay 2004, p. 179, fig. 95:1, type 51 (Hayes form 91B late), generally dated to the very end of the 5th century or the first half of the 6th. The dates of Hayes forms 91A and B have been substantially revised since their publication in *LRP*, p. 144. The earliest examples now date back to ca. 380 in the west, form 91B belongs essentially to the first half of the 5th century, and the transition to 91C is dated ca. 500; see *Agora* XXXII, pp. 79-80, n. 85, with extensive references. Reynolds 1995, p. 151, notes the difficulty in distinguishing between forms 91 A and B, stating that the form was not common at Carthage until ca. 400, exports achieved significance only after ca. 420, and form 91C had a short life of ca. 525-550. For the rarity of forms 91A and B in Corinth, see Slane and Sanders 2005, p. 283.

[1120] Bonifay 2004, p. 179, fig. 95:3, type 51 (Hayes form 91B late).

[1121] A base fragment possibly identified as form 93A also appears residually in Lot 2001-010. For the general profile, cf. *LRP*, pp. 147-148, nos. 93.19, 93.21, fig. 27, but both with larger diameters; no. 93.19 republished as *Agora* XXXII, p. 231, no. 1143, fig. 36, dated to ca. 500-530, and no. 93.21 republished as no. 1144, dated to the first quarter of the 6th century. Reynolds 1995, p. 146, dates form 93B to ca. 500-575, thus arguing for an equal possibility that it arrived after the Byzantine reconquest. See also Reynolds 2011b, pp. 218-219, no. 118, fig. 8, for a generally similar example of form 93 with a diameter of only 0.213 m from a context of material redeposited after the 551 earthquake at Beirut.

[1122] Cf. *LRP*, p. 148, no. 94.1, fig. 27, dated to the late 5th to early 6th century. See Reynolds 1995, p. 146, who tentatively places form 94A between 475-525 and form 94B between 500-575.

early 3rd-century well (Well 1999-001).[1123] Finally, a single example of form 103A (**54**) was residually found in a fill to the north of the Long Building.[1124] These constitute the rare occurrences of AfRS that had certainly arrived here before the re-conquest of North Africa in 539.[1125]

AfRS returns to the Panayia Field after the early 6th century, now with all products manufactured in fabric D. A single fragmentary rim of form 91C was found (residually) in the *tepidarium* destruction dump (Lot 1995-061).[1126] Two instances of Hayes form 88, comprising substantial fragments, might belong to this period as both examples were found in the Long Building destruction fills (**45**; **46**).[1127] Hayes had originally dated form 88 to the early 6th century, but recent scholarship indicates that the form may have had a longer lifespan, lasting into the second half of the 6th century;[1128] the possible Byzantine redeposition of the Long Building dumps (see Chapter 2), however, should better place these examples in the first half to mid-6th century. Also rare are examples of form 103B, for which only two confirmed examples were identified; a rim (**55**) and a substantial base fragment (**56**), both from the Long Building destruction

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[1123] The well had been filled in the mid-3rd century preceding the construction of the *domus*. The later material that slumped into must have done so during the construction activity pre-dating the mid-6th century, when the wall of the *domus* that covered the well was robbed out.

[1124] For a roughly similar profile, cf. *LRP*, pp. 157, 159-160, no. 103.1, fig. 29, dated possibly to the late 5th century.

[1125] Slane and Sanders 2005, p. 283, suggest that the presence of Hayes form 82 and the rare presence of forms 80/81 and 91A-B on other parts of the site indicate that some AfRS still reached Corinth, but that the overall quantity of the ware "was drastically reduced after the Vandal conquest of Carthage."

[1126] The fragmentary rim most closely resembles Bonifay 2004, p. 179, fig. 95:1, type 52 (Hayes form 91C), dated to the middle decades of the 6th century. For the rarity of 91C in Corinth, see Slane and Sanders 2005, p. 284.

[1127] The fabric typically noted as being related to this form (except for form 88's thicker, more lustrous slip) is described by Hayes in *LRP*, p. 292, and was later identified by Carandini (*Atlante* I, p. 59) as his fabric $C^5$; this is repeated again by Bonifay 2004, p. 175. The examples from the Panayia Field, however, seem to share more in common with the coarser fabric D; Reynolds 1995, p. 31, stated that form 88 was a "Central (and North) Tunisian form."

[1128] For Hayes, see *LRP*, p. 136, and *Agora* XXXII, pp. 230-231, no. 1134. Reynolds 1995, p. 31, placed the introduction of form 88 early in the period after the Byzantine reconquest of Africa, dating it to 533-550. For the revised dating, see Bonifay 2004, p. 175, 177, fig. 93:10, type 46 B (Hayes form 88), dated to the mid- to second half of the 6th century; see also Cau, Reynolds and Bonifay 2011b, p. 5.

fills.[1129] Dated to about this period was one example of form 99A or B, with a large rim and thick wall, which appeared within the Long Building destruction fills (**50**).[1130] Slightly later variants of form 99 include an example of form 99B which appeared as a residual find in the 7th-century pit (**51**),[1131] and form 99C (**52**) which was the latest piece recovered from a destruction dump in a pit to the west of the pool and may date the deposit as late as the end of the 6th to 7th century.[1132]

All variants of form 104 appear here.[1133] Form 104A is noted both in Long Building destruction fills (**57**) and in fills against wall 199 (**58**),[1134] appearing (residually) with form 104B (**59**; **60**) in the same contexts.[1135] Examples of possibly transitional versions between form 104B and C were noted here;[1136] these appear in both the fills

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[1129] For the rim, cf. *LRP*, pp. 159-160, no. 103.6, fig. 29; for the base, cf. *LRP*, pp. 159-160, no. 103.8, fig. 29. Form 103 is generally dated to ca. 500 to the third quarter of the 6th century.

[1130] Cf. *LRP*, pp. 153, 155, no. 99.13, fig. 28, republished, *Agora* XXXII, p. 232, no. 1153, fig. 36, pl. 56, dated mid-6th century (form 99B); Bonifay 2004, p. 181, fig. 96:2, type 55 (Hayes form 99A), dated to the end of the 5th to mid-6th century. For another, similar, profile, cf. *Saraçhane* p. 99, no. 24.2, fig. 36, but with Deposit 24 dated to the late 6th or early 7th century (form 99A or B). See also Reynolds 1995, p. 152, for further discussion on the beginnings of form 99.

[1131] Cf. Bonifay 2004, p. 181, fig. 96:4, type 55 (Hayes form 99B), dated second quarter of the 6th to start of the 7th century. Slane and Sanders 2005, p. 274, identified **51** as residual in its lot.

[1132] Cf. *LRP*, pp. 153, 155, no. 99.22, fig. 28, republished *Agora* XXXII, p. 232, no. 1155, fig. 36, dated late 6th to early 7th century; the diameter of **52** may be towards the larger end of the range provided in *LRP*, p. 152. See also Bonifay 2004, p. 181, for the dating of his type 55 (Hayes form 99B), to the end of the 6th to 7th century; Cau, Reynolds and Bonifay 2011b, p. 5, where form 99C may date as late as the end of the 7th century.

[1133] See Reynolds 1995, p. 153, for discussion regarding the beginnings of this form.

[1134] For **57**, cf. *LRP*, pp. 163, 166, no. 104.13, fig. 30, republished, as *Agora* XXXII, p. 233, no. 1158, fig. 36, dated second quarter to mid-6th century, and for **58**, cf. *LRP*, pp. 161, 166, no. 104.2, fig. 29, dated ca. 530-580; for both, cf. also Bonifay 2004, pp. 181, 183, fig. 97:7-8, type 56 A2 (Hayes form 104), also dated second quarter to mid-6th century.

[1135] For **59** and **60**, cf. *LRP*, pp. 163, 166, no. 104.15, fig. 30, republished, *Agora* XXXII, p. 233, no. 1160, fig. 36, pl. 56, dated ca. 580; cf. also Bonifay 2004, pp. 181, 183, fig. 97:15, type 56 B (Hayes form 104), dated to the middle to second half of the 6th century. Reynolds 1995, p. 153, presented evidence for the argument that form 104A and B were contemporary, both appearing after ca. 500 and established by ca. 525-533; but recently see Cau, Reynolds and Bonifay 2011b, pp. 5-6, who report that form 104A probably started in the late 5th century with Style A(iii) and E(i) stamps, with the transition to form 104B possibly dated to around the middle, or third quarter, of the 6th century.

[1136] Reynolds 1995, p. 153, presents evidence arguing for a start date for form 104C to not before ca. 530, becoming well-established by ca. 575, and ending ca. 600-625, additionally noting (p. 31) that it was not a common export until after ca. 550; Bonifay 2004, p. 183, dates his type 56 C (Hayes form 104) to between the mid-6th to mid-7th century. See most recently Cau, Reynolds and Bonifay 2011b, p. 6, where Hayes

against wall 199 (**61**),[1137] and in the *tepidarium* fill (**62**).[1138] Also appearing in the late 6th-century *tepidarium* fill was a canonical version of form 104C (**64**).[1139]

A distinct horizon was noted among a select few deposits of the end of the 6th and beginning of the 7th century in which appeared the only examples of LRC, Hayes form 10A (see below). Among the various AfRS in these lots, the latest deposit of fill against wall 199 contained another transitional example between Hayes form 104B and C (**63**),[1140] as well as a rim of Hayes form 109 (**70**) that seems generally comparable to an early variant of the form published elsewhere.[1141] The only other AfRS that this deposit contained was a possible base of form 104C. Also belonging to this horizon was the base of an early variant of Hayes AfRS form 105 (**66**), discovered in the destruction debris covering the floor of a small room built against the Panayia Bath following its abandonment.[1142] No other contemporary AfRS was recovered from the post-abandonment contexts of the bath.[1143]

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form 104C is thought to begin in the 560s and last well into the 7th century, based on excavated contexts from Carthage and Saraçhane in Istanbul.

[1137] Preserving the crooked wall below the rim characteristic of Form 104C, but retaining the tall, rounded lip of Form 104B.

[1138] Preserving the crooked wall below the rim and the small, bulbous rim characteristic of Form 104C, but retaining the upwardly-pointed lip of Form 104B; cf. *LRP*, pp. 160-166, figs. 30-31.

[1139] Cf. *LRP*, pp. 163, 166, no. 104.23, fig. 30, (discovered at the Lechaion Basilica) there dated ca. 550-625; cf. also Bonifay 2004, pp. 181, 183, fig. 97:18, type 55 C (Hayes form 104), dated mid-6th to mid-7th century.

[1140] Preserving a crooked undersurface below the small, bulbous rim characteristic of Form 104C, but retaining the smoothly-sloping interior surface and pointed/rounded lip of Form 104B; cf. *LRP*, pp. 160-166, figs. 30-31.

[1141] Cf. Reynolds 2011a, pp. 107, 114, fig. 10:a, identified as form 109 A/B, and dated to ca. 625(+?).

[1142] For the profile, cf. *LRP*, pp. 166, 169, no. 105.2, fig. 31, with early variants there dated to the late 6th century; cf. also Bonifay 2004, pp. 183, 185, figs. 98:1, 98:8, type 57 A (Hayes form 105), dated from the end of the 6th century to the first half of the 7th.

[1143] The floor of the post-bath structure did, however, contain an interpretation of AfRS form 104 (**155**), but this could be residual as another appeared in the earlier *tepidarium* dump (**154**).

Examples of form 105 were also found in the 7th-century pit (**67**;[1144] **68**[1145]), including an unparalleled variant with a very large diameter (**69**). These three examples of form 105 show a range of heterogeneity in regards to their diameters and morphology.[1146] An example of form 99C appeared in the 7th-century pit (**53**) and, while its presence there may be residual, it may also illustrate the long duration that the form is now recognized to have had.[1147] A form 104C appearing in the 7th-century pit might be contemporary (**65**),[1148] while a rim of form 109 (**71**) might also be contemporary.[1149] New scholarship is beginning to characterize the development of this latter form;[1150] although the fragment from the pit is too small to properly apply these new insights, the date of the pit, mid-7th century or later, is appropriate.

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[1144] For similar profiles, cf. *LRP*, pp. 167, 169, no. 105.6, fig. 31 (dated ca. 580/600-660+), and Bonifay 2004, pp. 183, 185, figs. 98:1, type 57 A (Hayes form 105) (dated to the end of the 6th to first half of the 7th century); for a closer parallel, cf. Reynolds 2011a, p. 109, no. 168, fig. 8, in a context of 621/625, identified as a variant of 105 that is characterized by an inner rim molding that is broader than the outer.

[1145] Although similar profiles are known, no diameter is as large as this example; cf. *LRP*, pp. 167, 169, no. 105.7, fig. 31, republished, *Agora* XXXII, p. 233, no. 1162, fig. 36, dated late 6th to first half of the 7th century; Bonifay 2004, pp. 183, 185, fig. 98:10, type 57 B (Hayes form 105B), dated to the middle decades of the 7th century; Reynolds 2011a, p. 107, nos. 173, 174, 176, fig. 8, in a context of 621/625.

[1146] The shapes of **67** and **68** roughly correspond to Hayes' form 105.6 and 105.7, respectively, which he placed "earlier" in the series. But Hayes also postulated that greater diameter size (ca. 0.380-0.400 m) may be indicative of a later date, a diameter range which **68** surpasses; the diameter of **69**, however, is even larger. The validity of this argument is immediately questioned, however, by Hayes' other observation that rims with a more vertical emphasis seem to be predominant in earlier contexts, while those with broad, round ones are generally found in later contexts, hence making **67**, the example with the smallest diameter, the latest. For the discussion, see *LRP*, pp. 166-169. Regardless, based on the more recent comparanda cited for each, only **68** and **69** might be contemporary with the pit. See also Slane and Sanders 2005, p. 273, who suggested that the coarse wares in this pit are later than the fine wares.

[1147] Cf. Bonifay 2004, p. 181, fig. 96:8, type 55 (Hayes form 99C), dated to the end of the 6th to 7th century; cf. also Reynolds 2011a, p. 106, no. 38, fig. 4, in a context of 621/625. Cau, Reynolds and Bonifay 2011b, p. 5, now state that form 99C may date as late as the end of the 7th century.

[1148] Cf. *Saraçhane*, p. 101, no. 30.46, fig. 40, Deposit 30 dated 655-670; cf. also Bonifay 2004, pp. 181, 183, fig. 97:18, type 55 C (Hayes form 104), dated mid-6th to mid-7th century.

[1149] For a similar profile, cf. *Saraçhane* p. 101, no. 30.41, fig. 40, Deposit 30 dated 655-670, with the date of the deposit maintained in Reynolds 2011a, p. 114, fig. 10:e. The form was re-dated in *Supplement*, p. 517, to ca. 610/20-ca. 680-700; see also Bonifay 2004, p. 189, where examples of his type 60 (Hayes form 109B and C), with the same degree of spiral burnishing, are easily dated within the mid- to second half of the 7th century.

[1150] Reynolds 2011a, pp. 107, 114, fig. 10; see also Bonifay 2004, pp. 187, 189.

Late Roman C Ware (LRC)

LRC accounts for the other major group of imported fine wares. Among the earliest instances of LRC in the Panayia Field is a rim that is absent from Hayes' original typology (**73**).[1151] The profile is roughly similar to Hayes form 4,[1152] but recent finds from Beirut have prompted Hayes to identify this as a form 1/3 variant (forerunner to form 3).[1153] The lot in which this piece appeared contained no other examples of LRC, but it did appear with several examples of AfRS form 53B (see **35**), and with the associated cooking ware in the context dominated by numerous examples of Late Roman micaceous Aegean ware.

A full profile of form 1A (**74**) was discovered during excavation of manhole 2003-001 on the Panayia road.[1154] The bowl was discovered in the lowest of a series of fills dated only roughly to the 5th to 6th century,[1155] but illustrates the features inherent in other instances of the form. Examples of form 1B are generally rare,[1156] and no examples of form 1C were definitively identified. Only a few examples of form 1D appear in deposits of the mid-5th century or later; one rim was found within the fill associated with

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[1151] Another similar rim was noted in Lot 2000-017, dated to the middle or second half of the 5th century.
[1152] *LRP*, p. 338, no. 4.1, fig. 69, republished as *Agora* XXXII, pp. 88, 243, no. 1299, fig. 41, pl. 63, dated ca. mid-5th century (pre-450) in a context of 460-475.
[1153] See Hayes 2000, p. 285, fig. 2:3, 2005, p. 11, fig. 1:b, from a context of ca. 400(-410). Similar rims were also discovered at Gortyn, on Crete; cf. *Gortina* V.3, p. 61, pl. XIII:h, identified as Hayes form 4. For Stobi, cf. *Stobi* I, p. 60, no. 408, pl. 47, lot 2213 dated mid- to third quarter of the 5th century, and identified as a "dish related to Hayes Form 3 or Form 4."
[1154] Cf. *LRP*, pp. 325-327, nos. 1.1 and 1.3, fig. 65, there dated late 4th to early 5th century; no. 1.3 was republished as *Agora* XXXII, p. 237, no. 1231, fig. 37, with the context dated to the second half of the 4th century. Hayes now believes that LRC from the Athenian Agora belongs to the 5th century; Hayes 2005, pp. 11-12.
[1155] For published discussion of the context of the manhole, see Palinkas and Herbst 2011, pp. 307-310. Other confirmed examples of form 1A that were not residual appeared in Lots 2000-018 and 2001-011 (basket 16).
[1156] A few examples were, however, noted in Lot 2001-038, redeposited in a context of the early 6th century. Sanders 1999, p. 458, reported a fragment of LRC form 1B among the fragmentary pottery contained within strata running up to the eastern orthostate wall; this may have referred to 96-72:3, a rim sherd identified in the original lot notes as "LRC form 1B/D;" during this study it was identified with form 1D, as it lacks the more vertical rim of form 1B.

the orthostate wall,[1157] more fully illustrated by a nearly complete profile (**75**) found in a later dump to the east.[1158] An example of form 2A (**76**), found in Lot 2000-017, a dump dated to later in the 5th century, preserves a near-complete profile of this shape with the remains of small, stamped crosses on the floor; interestingly, the stamps are best paralleled with those found on AfRS.[1159] The form of the vessel and arrangement of the stamps are similar to another fragment of a base (but with stamped concentric circles) and thus suggests a similar identification for this more fragmentary example (see below, **107**).[1160] Appearing as early as **107** is also a rim of form 2B (**78**) in a deposit of tile destruction above a pit (Lot 2000-007), providing a terminus ante quem for its filling.[1161] Examples of form 2A continued to be found in various dumped deposits to the east of the area, including an example of form 2A or B (**77**) which was found with the example of form 1D noted above.[1162] Single examples of form 2B (**79**)[1163] and 2C (**80**)[1164] both appear in basket 16 of Lot 2001-011. Finally, a variation of form 2C (**81**) was noted in a

[1157] The rim, 96-72:3, is not illustrated in the catalogue, but the profile is as **75**.
[1158] Another example appears residually in Lot 1998-029. An intact example, possibly connected with the dismantling of the propylon in the sanctuary of Demeter in Corinth, was dated to ca. 430 to 460; Slane 2008b, p. 476.
[1159] For the stamp, cf. *Supplement*, p. 502, no. 64.6, fig. 96:a, found on an example of AfRS, Hayes form 50B/64, possibly dated to the mid-4th to early 5th century.
[1160] **107** appears in the fill of a robbing trench of the second quarter to mid-5th century, in which it is among the latest datable pieces. Two other rims of form 2A appear in the Panayia Field including an unnumbered rim from Lot 2002-010, and 99-08:1 which appears residually in the Long Building.
[1161] The pit itself contained no LRC apart from a single body sherd in LRC1 fabric. The rim from the overlying deposit is identified as form 2B based on the description provided in *LRP*, p. 327, in which the variation displays a narrow, slightly convex rim with a diameter that includes a range of ca. 0.160-0.240 m.
[1162] The profile seems similar to form 2A, cf. *LRP*, pp. 327, 329, no. 2.2, fig. 66, republished as *Agora* XXXII, p. 238, no. 1238, fig. 37, but the diameter and description of the rim again conform to Hayes' original description of form 2B; cf. *LRP*, p. 327.
[1163] Cf. *LRP*, p. 327, no. 2.4, fig. 66; the variant is not specifically dated there, but a pre-mid-5th century for the form is suggested (p. 329).
[1164] For a similar profile, cf. *Agora* XXXII, p. 238, no. 1242, fig. 37, dated ca. 400 to the mid-5th century.

second half of the 5th-century (or later?) deposit with parallels noted from elsewhere in Corinth.[1165]

With the exception of a possible base in Lot 2000-018, Hayes form 3 is not noted until the lots of the latter half of the 5th century. The large amount of re-deposition on the site likely accounts for this as forms 1, 2 and early versions of form 3 are noted to appear together elsewhere in Corinth.[1166] A small version of form 3 was noted among the dumped material in the east of the site (**82**) and might be residual,[1167] while another found within a fill of tiles north of the Long Building (**83**) is certainly residual in its deposit.[1168] Form 3B appears only rarely,[1169] with one example appearing in a dump to the east (**84**),[1170] and others, with the distinctive groove on top of the lip, appearing only residually in later contexts (**85**).[1171] Form 3C (**86**)[1172] occasionally appears (residually) in contexts spanning the first half of the 6th century,[1173] form 3D is practically non-existent

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[1165] For a roughly similar profile, cf. Slane and Sanders 2005, p. 251, no. 1-10, fig. 3, from a deposit dated to ca. 450 or 460.

[1166] Hayes forms 1A, 2B-C, the small 3.32, and 4 (or 3/4) "appear in small quantities with coins of the second quarter and middle of the fifth century and with fifth century AfRS;" Slane and Sanders 2005, p. 283. In the area east of the Theater, "LRC forms 1 and 2 occur in approximately equal numbers with form 3B-C, suggesting that importation occurred through most of the 5th century;" Slane 2008b, p. 476.

[1167] Cf. *Agora* XXXII, p. 243, no. 1305, fig. 41, in a context dated there to ca. 400; cf. also *Saraçhane*, p. 94, no. 13.1, fig. 32, Deposit 13 dated second quarter of the 5th century; cf. also Albarella, Ceglia and Roberts 1993, p. 170, no. 22a, fig. 7, there dated to the 420s-430s, but recently re-dated to the mid-5th century in Reynolds, Bonifay and Cau 2011, p. 29, no. 45.

[1168] A rim of a small form 3 was also found in Lot 2000-003, the east-west robbing trench north of the Long Building that pre-dates its construction. Another example was also noted in Lot 2001-039, dated to the second half of the 5th century (or later).

[1169] Hayes form 3B appears ca. 450-480 in the west; Reynolds 1995, p. 35. It is normal in the Athenian Agora ca. 460-475; *Agora* XXXII, p. 88.

[1170] Possibly cf. *LRP*, pp. 331, 337-338, no. 3.5, fig. 67, republished as *Agora* XXXII, p. 239, no. 1260, fig. 38, pl. 60, in a context of the third quarter of the 5th century.

[1171] Cf. *LRP*, pp. 331, 337, no. 3.4, fig. 67, republished as *Agora* XXXII, pp. 239-240, no. 1262, fig. 38, pl. 60, in a context of the third quarter of the 5th century. Another example, similar to *LRP*, p. 331, no. 3.2, fig. 67, republished as *Agora* XXXII, p. 239, no. 1258, fig. 38, pl. 60, dated mid- to third quarter of the 5th century, is almost surely residual in Lot 2002-004 as it appears with an example of form 3F (**90**).

[1172] For a similar profile but without roulette decoration, cf. *LRP*, pp. 333, 337-338, no. 3.10, fig. 68, republished as *Agora* XXXII, p. 240-241, no. 1273, fig. 39, pl. 61, dated to the third quarter of the 5th century.

[1173] The earliest instance is at least one rim from Lot 1998-015 of ca. 500, with slightly later examples found in Lots 1998-013 and 2001-035. A few other examples are found residually in lots of the late 6th

here,[1174] and form 3E appears only a few times (**87**).[1175] Two rims, identified here as form 3E/F appear, perhaps residually, in late 6th-century lots (**88**; **89**).[1176] Instances of form 5 are rare, with form 5A appearing in a dump of the first half of the 6th century,[1177] and one example of form 5B that appeared residually (**101**).[1178]

Form 3F first appears here sometime in the first half of the 6th century,[1179] once in an east-west robbing trench north of the Long Building dug prior to its construction (Lot 2000-003), in a dump in the east of the site,[1180] as well as in a mid-6th-century pit dug to service a drain in the road (**90**).[1181] Other examples are also found in the mid-6th-century use contexts of the Long Building within a small pit dug in the corner of a room,[1182] as

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century. The example from Lot 1998-013 is very fragmentary, but a similar profile was published in *Agora* XXXII, p. 240, no. 1270, fig. 39, pl. 61, and dated to the third quarter of the 5th century; see also p. 88 where form 3C is noted as normal in the Athenian Agora ca. 460-475. Hayes form 3C appears ca. 450-480 in the west; Reynolds 1995, p. 35.

[1174] Only one example was noted in Lot 1998-014.

[1175] Cf. *LRP*, pp. 333, 337-338, no. 3.16, fig. 68, republished as *Agora* XXXII, p. 241, no. 1279, fig. 39, pl. 62, in a context of ca. 500 or a little later. For the same profile, but without rouletting, cf. Reynolds 2011b, p. 215, no. 85, fig. 6, in a context dated to the late 5th century at Beirut; despite the presence of an offset beneath the rim, typically seen in form 3F, Reynolds identified it as form 3E due to the smooth transition from wall to inner rim, as is the case with the example from the Panayia Field. Form 3E appears on western sites in the late 5th and early 6th century; Reynolds 1995, p. 35. A second example from the Panayia Field was noted in Lot 2002-011, dated to the first half of the 6th century, and a third appears residually in Lot 1998-029. A possible rim was also noted in Lot 2000-003 of the mid-6th century.

[1176] The two pieces contain features of both variants; cf. *Agora* XXXII, p. 241, no. 1278, fig. 39 (Hayes form 3E, dated ca. 530-540/550), and *LRP*, pp. 333, 338, no. 3.17, fig. 69, republished as *Agora* XXXII, p. 242, no. 1284, fig. 40, pl. 62 (Hayes form 3F, undated).

[1177] An unnumbered rim in Lot 2001-035 is as *LRP*, p. 339, no. 5.1, fig. 70, republished as *Agora* XXXII, p. 243, no. 1300, fig. 41, in a context of the third quarter of the 5th century. Hayes form 5A appears ca. 450-480 in the west; Reynolds 1995, p. 35. Another example of form 5A was also noted in Lot 2002-011, where it was noted along with an example of LRC form 3E, a Boiotian red slipped mug similar to **400**, and an unidentified fine ware bowl, **147**, possibly imported from Asia Minor.

[1178] For similar profiles with larger diameters, cf. *LRP*, p. 339, no. 5.2, fig. 70, republished as *Agora* XXXII, p. 243, no. 1302, fig. 41, pl. 63, in a context of the second quarter of the 6th century; *Saraçhane*, p. 96, no. 18.3, fig. 34, Deposit 18 dated pre-526-527, probably to end of the 5th century.

[1179] Reynolds 1995, p. 35, notes that form 3F is typical for 6th-century deposits in the west; see p. 147 for its concentration in the first half of the century. It appears in the 551 earthquake horizon in Beirut; see *Agora* XXXII, p. 86.

[1180] A rim in Lot 2001-035 is very similar to **90**.

[1181] Cf. *LRP*, pp. 333, 338, no. 3.17, fig. 69, republished as *Agora* XXXII, p. 242, no. 1284, fig. 40, pl. 62, undated.

[1182] Numbered 99-23:1, the form is comparable to *LRP*, p. 335, no. 3.19, fig. 69, republished as *Agora* XXXII, p. 242, no. 1290, fig. 40, dated earlier than its context of ca. 525-550.

well as in the cleaning of the ash from the *tepidarium* hypocaust (**91**).[1183] Thereafter, the form appears frequently and with some variation in deposits of the late 6th century (**92**; **93**; **94**), being either slightly residual or suggesting a slightly longer life for this variant.[1184] Some examples of form 3F can also be argued to illustrate transitional stages to other forms or variants. One example (**95**) from the fill of a robbing trench south of the pool, likely dug to facilitate access to the *caldarium* service area, may document the transition to form 10.[1185] Other examples, based on various published comparanda, are identified as form 3F/G (**96**;[1186] **97**[1187]).

The chronology of Hayes form 3H is more complicated, as it was only found in the Panayia Field in two consecutive dumped fills against wall 199 dated to the late 6th or early 7th century.[1188] The identification as form 3H is somewhat uncertain as well, but is based on the thick walls and occasional gold flakes present in the fabric.[1189] The example from the stratigraphically earlier dump (**98**) represents the earliest appearance of the form in the Panayia Field. A nearly complete profile of form 3H (**99**) as well as another

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[1183] Possibly cf. *LRP*, pp. 335, 338, nos. 3.18, 3.23, and 3.25, fig. 69, each republished as *Agora* XXXII, p. 241, nos. 1283, 1280, and 1282, figs. 39, 40, pl. 62, in contexts of the early 6th century, the second quarter of the 6th century, and ca. 525-550, respectively.
[1184] See *Agora* XXXII, p. 87, where Hayes maintains that form 3 disappears in the third quarter of the 6th century.
[1185] Cf. Reynolds 2011b, p. 218, no. 104, fig. 7, found in a context of material re-deposited after 551, with discussion of the transition from form 3F to forms 3G and 10A; possibly cf. also *Agora* XXXII, p. 243, no. 1298, fig. 40, pl. 63, identified as form 3, transitioning to form 10, dated with its context to about the mid-6th century.
[1186] Cf. *Saraçhane* p. 100, no. 26.2, fig. 37, identified as form 3F/3G, Deposit 26 dated late 6th century; for a very similar profile but with a smaller diameter, cf. *Agora* XXXII, p. 242, no. 1292, fig. 40 (form 3G), dated ca. 530-540/550.
[1187] Cf. *LRP*, p. 335, no. 3.23, fig. 69, republished as *Agora* XXXII, p. 241, no. 1280, fig. 39, pl. 62, in a context of the second quarter of the 6th century; for a close parallel, cf. *Saraçhane* p. 100, no. 26.2, fig. 37, identified as form 3F/3G, Deposit 26 dated late 6th century.
[1188] Form 3H is typically dated earlier; the canonical examples of form 3H are published in *LRP*, pp. 335, 338, no. 3.28, fig. 69, republished, *Agora* XXXII, p. 242, no. 1294, fig. 40, pl. 63 (dated earlier than the second quarter of the 6th century), and *LRP*, p. 335, 338, no. 3.29, fig. 69, republished, *Agora* XXXII, p. 243, no. 1297, fig. 40 (dated second quarter to mid-6th century. See also Reynolds 1995, p. 147, who places the form in the first half of the 6th century in the west.
[1189] *LRP*, p. 336; see also *Agora* XXXII, p. 88. The rim profiles here differ slightly from those published.

possible rim (**100**) both derive from the latest of these dumped fills,[1190] and were found with a rim of form 10A (**102**).[1191] Hayes form 10A is the latest LRC product seen in the Panayia Field,[1192] with two examples in a destruction fill over the hypocaust ash layer in the *tepidarium* (**103**,[1193] **104**[1194]), as well as in the earth and tile fill over the floor of the post-bath structure (**105**;[1195] **106**[1196]). No examples of LRC were found to be contemporary with any later deposits.[1197]

In addition to the stamped base possibly belonging to form 2A discussed above (**107**), a few other stamped fragments of unassigned forms were also discovered in the Panayia Field. These include a Hayes group II stamped floor fragment with flower buds and roulette bands (**108**),[1198] a Hayes group III cross with double outlines (**109**),[1199] a

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[1190] The same lot also produced an unnumbered rim and upper body of thick proportions and large diameter (0.310-0.320 m) that could be a transitional piece between forms 3F and H.
[1191] Possibly a smaller version of *LRP*, pp. 343, 346, no. 10.4, fig. 71, republished as Slane and Sanders 2005, p. 270, no. 3-14, fig. 8, dated to the end of the 6th century.
[1192] Reynolds 1995, p. 35, dates the appearance of form 10A in the west to the late 6th to early 7th century, maintaining Hayes' original dates in *LRP* (p. 346). A recent reassessment of Late Roman fine wares did not find a revision to the traditional dating of LRC form 10 necessary, noting that only the end date, late 7th or 8th century, was a topic for debate; see Cau, Reynolds and Bonifay 2011b, p. 7.
[1193] Cf. *Saraçhane* p. 98, no. 22.3, fig. 35, Deposit 22 dated late 6th century.
[1194] Cf. *LRP*, pp. 343, 346, no. 10.4, fig. 71, republished as Slane and Sanders 2005, p. 270, no. 3-14, fig. 8, dated to the end of the 6th century; cf. also *Saraçhane* p. 100, no. 26.3, fig. 37, Deposit 26 dated late 6th century.
[1195] Cf. *LRP*, pp. 343, 346, no. 10.2, fig. 71, republished as *Agora* XXXII, p. 245, no. 1329, fig. 42, dated to the first half of the 7th century.
[1196] Cf. *LRP*, pp. 343, 346, no. 10.4, fig. 71, republished as Slane and Sanders 2005, p. 270, no. 3-14, fig. 8, dated to the end of the 6th century.
[1197] Examples of LRC were noted in the 7th-century pit (Lots 1996-044 and 1997-057), but only included a rim of form 3F, a rim of possibly form 3H, an unidentified base, and three body sherds, all of which should be considered residual. Slane and Sanders 2005, p. 274, came to the same conclusion. Neither was LRC found in Lot 1973-087, another major 7th-century deposit uncovered in the west end of the forum; see Slane and Sanders 2005, pp. 273, 274.
[1198] Cf. *LRP*, p. 353, no. 12, "l" or "m," fig. 73, Group II, ca. 440-490; "l" republished as *Agora* XXXII, p. 239, no. 1258, pl. 60, dated to mid- to third quarter of the 5th century.
[1199] Cf. *LRP*, pp. 365-367, no. 71 "d," fig. 79, Group III, republished as *Agora* XXXII, p. 248, no. 1404, pl. 68, dated late 5th to first quarter of the 6th century.

dolphin also of group III (**110**),[1200] and a partial stamp of a "duck" (**111**) that is currently not attested to outside of Corinth.[1201]

Various and Unidentified Fine Wares

No large groups of fine wares of a long-distance origin were noted other than AfRS and LRC, with only a few individual pieces of other wares of unknown origin. One dish of unknown origin (**147**), but likely from Asia Minor, derived from a dump that was re-deposited sometime in the first half of the 6th century.[1202] Another vessel (**148**) is perhaps of a generally similar origin; it was found within the material used to fill the pool preceding the construction of the bath (but was later disturbed) and might be identified as Hayes' "Late Roman Light-Colored Ware." The profile of another dish with unknown origins has found possible parallels with the same eastern ware (**149**);[1203] stamps on this dish and on another very similar fragment (**153**), evidently modelled on stamps on AfRS vessels, support a general date from the late 4th to mid-5th century.[1204]

Three other pieces of an unknown origin were found within the dumped fills of the basement rooms of the Long Building. The first is a large plate that is elaborately painted with a depiction of a fish (**150**), possibly from Gortyn, on Crete, by comparison

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[1200] Cf. *LRP*, p. 361, no. 45 "o" or "p," fig. 76, Group III, dated ca. 470-580; "o" republished as *Agora* XXXII, p. 248, no. 1392, pl. 68, dated early 6th century.
[1201] The complete stamp is noted on an unpublished example of form 3C found elsewhere in Corinth (C-2007-033).
[1202] Lot 2002-011, a fill deposited before the construction of wall 199, is dated by examples of LRC form 3E and 5A, along with a Boiotian red slipped mug similar to **400**.
[1203] Possibly cf. *Saraçhane* p. 7, fig. 1.7, in "Late Roman Light-Colored Ware," dated after its first appearance in ca. 420-450.
[1204] For the stamps on **153**, cf. *LRP*, p. 237, AfRS stamp type 36, Style A (ii)-(iii), C, fig. 40 and p. 241, AfRS stamp type 69, Style A (ii)-(iii), fig. 42:b-d. Type 36 is dated ca. late 4th to third quarter of the 5th century and occurred on AfRS forms 61A, 64, and 67. Type 69 is only generally dated by style (p. 219, A (ii) dated ca. 350-420, A (iii) dated ca. 410-470) and occurred on AfRS forms 61, 64, and 67. Hayes noted that both stamp types occurred with one another. **149** also bears the same square stamp, while its circular stamp is only partially preserved and is very worn.

of this plate's fabric with various amphoras discovered in the Panayia Field which may favor a Cretan source.[1205] The second piece, also from the Long Building deposits, a thinly-slipped carinated bowl (**151**) missing its lip and base but preserving a good portion of the body and lower rim, found no comparanda for either the shape or the fabric. Finally, a small red-slipped dish found in the *tepidarium* dump (**152**) is also of unknown origin, although the fabric might bear some similarities to Boiotian fabric.

A small number of vessels of unknown origin are considered here to be interpretations of popular imported forms. Two examples, one from the *tepidarium* dump and the other from post-abandonment activity at the bath (**154**; **155**), appear to have been interpretations of Hayes, AfRS form 104A. Finally, two other examples, both from the *tepidarium* dump, are thought to be interpretations of Hayes, LRC form 3 (**156**; **157**).[1206]

*Regional and Local Fine Wares*

Attic RS

One of the more distinctive forms of Attic RS is the painted keel-rim bowl, an open bowl with a sharply vertical rim rising above a protruding flange. The body is slipped, and the exterior face of the rim is often decorated with a white-painted running spiral or rinceau. A small horizontal handle was also attached to the exterior rim face. Examples from the late 4th to early 5th century deposits (**112 (P-75)**; **113 (P-77)**; **114**)

[1205] For the amphoras, see **222**, **230**, and **231**. See Chapter 3 for discussion of the possibility of a Cretan source among the distribution networks that supplied Corinth.
[1206] A Boiotian source for the first of these examples was briefly considered but was discounted based on the higher amount of sparkling inclusions. The highly micaceous, soft fabric of **157** does not match any local or regional source, but bears some relation to Ladstätter and Sauer's (2002, pp. 324-325) LRC-Fabric C, a fabric utilized in the production of local (?) interpretations of various LRC forms at Ephesos; the micaceous fabric is compared by the authors to the alluvial clays of the Meander River (see the fabric utilized in micaceous water jars), with which this piece could possibly be associated.

illustrate the variations in rim form,[1207] while another piece (**115**), residual in its lot, might represent a late version of the form with substantially-thickened walls.[1208]

A number of shallow, red-slipped dishes also belong to the same period. A large body sherd depicts the typical white-painted spiral design that decorates some interiors (**116**), although a residual presence cannot be completely discounted.[1209] Two examples possess, or did possess, everted rims with grooved lines on top (**117**[1210]; **118 (P-78)**), with the latter piece also associated with a non-joining stamped floor fragment with palmette decoration.[1211] Other dishes feature a folded, hammerhead rim (**119 (P-80)**; **120**) or an outwardly-thickened triangular rim that may be modelled on AfRS, Hayes form 61 (**121**; **122**).[1212] Other Attic RS vessels may be interpretations of well-known long-distance imports, including AfRS, Hayes form 50 (**123**; **124**), and one that is more clearly related to 61B (**125**). Three other bowls may be interpretations of LRC, Hayes form 1 (**126**; **127**;

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[1207] Many of these keel-rim bowls may possibly be residual, based on various comparanda with Robinson's Group K in *Agora* V; however, they need not be as early as the mid-3rd century as Robinson had originally dated the deposit (p. 58), with a new end-date of ca. 310 now being proposed; J. Hayes (pers. comm.). However, the rims illustrated in *Agora* V, pp. 61-63, nos. K 19, K 32, K 42, pl. 69, appear to be more vertical than those of the keel-rim bowls here; furthermore, these profiles also bear little resemblance to that illustrated in Slane 1994, p. 132, no. 12, fig. 4, dated ca. 300, which exhibits a sharply carinated rim and only a very subtle flange. Therefore, it is not unreasonable to consider that the pieces illustrated here might, at least, be later products of the 4th century.

[1208] Another example with thick walls was identified in Lot 2002-009, with joins in Lot 2002-007, both being fills from construction dumps associated with the building of the bath and Long Building; the exterior face of the rim exhibited the typical white-painted decoration. A third, unnumbered, example is also noted in Lot 1998-015.

[1209] Waagé 1933, p. 305, describes that painted decoration appears on the rims of deep bowls (keel-rim bowls), and on the interior of shallow bowls. More recently, Hayes (2008, p. 442, 2010, p. 25) dates Attic RS vessels with white-painted patterns, normally in the form of spiral scrolls, to a long range roughly spanning the 3rd to 6th centuries.

[1210] See *Agora* V, p. 80, no. P 11186, pl. 70 (discussed under no. L 61), dated there to the early 5th century.

[1211] For similar stamps on Attic fine wares, see Hayes 2008, fig. 8. See also Kübler 1931.

[1212] For Attic interpretations of form 61, see *Agora* V, p. 80, no. L 59, pls. 36, 70, layer IV dated to the early 5th century. Cf. also Hayes 2008, p. 443, no. W 150, fig. 9, and identified as possibly moldmade (date not provided).

**128**).[1213] Finally, a non-joining stamped fragment with rosette design (**129**) also appears to be modelled on AfRS prototypes.[1214] Overall, stamped Attic RS was rare in these deposits, with the two examples presented here representing the only instances.

K. Slane has observed that the import of Attic products into Corinth was unequal in the Middle Roman period, as Attic lamps of the mid-3rd to second half of the 4th century greatly outnumbered contemporary Attic products in other ceramic classes.[1215] By the end of the 4th century (at the earliest) demands had evidently changed and, based on the finds from the Panayia Field, Attic fine wares had become a very important Attic export to Corinth. While it is normally understood that the import of Attic lamps, before the re-establishment of local industries, filled a lacuna in Corinth, the question remains if Attic fine wares were also filling a respective deficiency. Others have reported that AfRS quantities drop in Corinth by the early 5th century,[1216] and it is true that there are only a handful of forms attested in the Panayia Field during this time. It may be possible that the apparent rise in Attic fine wares at Corinth may have been the result of this decrease, but this fine ware source was quickly ousted as supplies of LRC began to arrive as secondary cargoes on the ships that regularly appeared from the western Asia Minor. This theory will be properly tested when a full typology and chronology of Attic fine wares becomes available.

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[1213] For **128**, possibly cf. Hayes 2008, p. 443, no. W 151, fig. 9, but with stamped decoration and identified as possibly moldmade (date not provided); for the possible inspiration of this form, but with roulette decoration, cf. *Agora* XXXII, p. 237, no. 1232, fig. 37, from a 5th-century context.
[1214] For a similar stamp, cf. *Supplement*, pp. 502-503, fig. 96:b, described as a type 44 stamp and found on AfRS Hayes form 67.32, probably late in the form's series. See also Kübler 1931, fig. 4:9. Hayes 2008, p. 442, comments that Attic RS open shapes with impressed stamps were originally modelled on 4th-century prototypes, remaining unchanged until the end of the 5th century; see also Hayes 2010, pp. 23-24.
[1215] *Corinth* XVIII.2, pp. 3, 17-21, 57 (n. 70).
[1216] Slane 2000, p. 307; Slane and Sanders 2005, p. 283.

Boiotian RS

Boiotian RS bowls characterized by flat bases and vertical rims with a concave exterior face first appear in the Panayia Field with material of the later 5th century (**130 (P-85)**), in a context of the early 6th century (**131 (P-86)**), and in the Long Building basement fills (**133**) before appearing regularly in deposits of the late 6th century, and possibly extending into the early 7th century (**132**; **134**; **135**).[1217] Red slip covers the interior surface and continues over the rim on the exterior to varying distances, while a few examples are centrally stamped on the interior; all stamps noted here are limited to crosses, but each example is different. One example preserves the remains of an elaborate cross (**134**),[1218] while another preserves a smaller, encircled cross within a square stamp (**136**).[1219]

The second series of bowls in Boiotian fabric are certain flanged bowls whose form is not entirely dissimilar to AfRS, Hayes form 91. These appear in late 6th and early 7th-century contexts such as the *tepidarium* dump (**137**; **138**; **139**; **140**),[1220] and the fills against wall 133 (**141**; **142**).[1221] Decorative elements were variously added to the upper surface of the flanges, including wavy combing or amorphous shapes impressed in a continuous series. One example preserved wavy combing on both the flange as well as the exterior face of the rim (**138**). Associated base fragments were not identified, so it is unclear if they were flat-based or footed, or received any additional stamps.

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[1217] Two rims and a base of this type appearing in Lot 2000-017, a dumped fill in the east of the site that pre-dates the bath and Long Building, are also counted among its earliest appearances on the site.
[1218] 01-10:3 is another similar fragment.
[1219] Discovered in Corinth Notebook 913, basket 1, a lens of soil above room 1 of the Long Building dated to the mid-12th century.
[1220] 95-61:100 (P-88), also from the *tepidarium* dump, is as **142**.
[1221] Other instances include other bath destruction deposits such as Lot 1995-062 and from the floor of the post-bath building as represented in Lot 1995-065. Other rims have also been previously published from unlotted contexts related to the Panayia Bath; see Sanders 1999, pp. 467-468, nos. 10-11, fig. 9.

Other fine wares in Boiotian fabric include some possible interpretations of imported forms. One rim interpreting AfRS, Hayes form 86/87A was recovered from the Long Building fills (**143**), which may date it to the early 6th century. Another rim, possibly interpreting LRC, Hayes form 3, was recovered from the earth and tile fill over the floor of the post-bath structure (**144**), but its morphological relation to the flanged bowls in this fabric that are contemporary with this late 6th- or early 7th-century deposit is clear.

The reasons behind the initial import of fine ware bowls in Boiotian fabric in the late 5th century is curious, as they do not appear in any quantity that would suggest that these products were actively attempting to fill the demand left by the decline and near-disappearance of both AfRS and Attic RS in Corinth. Even more curious is the fact that when Boiotian fine wares are seen in their greatest quantity in the Panayia Field, it is alongside a renewed import of AfRS and the continued import of large quantities of LRC in the mid- to late 6th century.

Southern Argolid RS

Only two examples of fine wares with fabrics consistent with southern Argolid fabric were recovered. The first is a large dish with thick red slip (**145**) found in the Long Building fills. The other might be an interpretation of LRC, Hayes form 3 (**146**) recovered from the *tepidarium* fill of the bath. While it is clear that southern Argolid potters were also producing fine wares in addition to the large quantity of amphoras and plain wares, their extremely low numbers in the Panayia Field make it clear that these products were not in any great demand on the site.

*Imported Amphoras*

LR Amphora 1

The LR Amphora 1, first noted here in an earlier version in a deposit of the second quarter to mid-5th century (**158**),[1222] appears in the majority of pottery lots recovered from the Late Roman Panayia Field. Unfortunately, it often occurred in isolated, small fragments with few diagnostic features until the mid-6th century.[1223] After this date the LR Amphora 1 is nearly constantly present in all pottery lots (**159**; **160**), appearing in its fully-developed form with little further typological variation even in the 7th-century pit (**161**).[1224] The fabric here is fairly standard, with some noted variations, and likely originates from the area of the Bay of Iskenderun (Cilicia or northern Syria) (see Chapter 3).

Micaceous Water Jars (LR Amphora 3) (various)

[1222] For this piece, possibly cf. Reynolds 2005, p. 566, fig. 32, dated ca. 410; cf. also Slane and Sanders 2005, p. 255, and 263, no. 2-19, fig. 5, for the fragmentary appearances of LR Amphora 1 during the 5th century in other areas of Corinth. For Argos, see Abadie 1989, p. 52, fig. 9, where such early versions of the LR Amphora 1 (the Egloff type 169) appear at the end of the 4th to 5th century; see also Ivantchik 2002, p. 379, nos. 114-119, figs. 15-16, where it appears in a 5th-century well.
[1223] Some larger fragments were noted in some less chronologically-secure lots. One example in Lot 2000-017 displays a tall, narrow, ribbed neck, that terminates in a small mouth with outwardly-thickened rim, with traces of horizontal combing on the shoulder; for the profile cf. Reynolds 2005, fig. 33:a, dated to the early 5th century. A fragmentary example of a similar type was also noted in Lot 2002-008. Another example in Lot 2002-011 seems typologically later, with a wider, but still tall, neck with a sharp offset below the rim; for a similar piece, cf. Reynolds 2005, fig. 33:b (bottom), dated ca. 425-450. For more on the typological evolution of the amphora, see Arthur 1998, pp. 164-165.
[1224] Although the amphora is mostly complete, there was very little additional evidence of the presence of the LR Amphora 1 in the 7th-century pit.

The micaceous water jar appears in the earliest deposits analysed here in two main fabrics.[1225] The first, in a gray fabric, is in the form of a tall one-handled vessel terminating in a narrow, hollow toe (**162**; **163**).[1226] A red fabric is also employed for a similar shape (**164**),[1227] as well as in another one-handled shape with a squatter neck and small ring-base (**165**; **166**), and is found in roughly contemporary deposits.[1228] Substantial remains only appear again in the late 6th century and only in the red fabric; these are of a two-handled type with a much deeper hollow toe (**168**).[1229] A rim of such a vessel appearing in the 7th-century pit is certainly residual (**167**).[1230]

Two fragments of *possible* micaceous water jars were also noted, limited only to Lot 2002-006 (**169**; **170**) of the second half of the 6th to 7th century. Although superficially similar in its micaceous fabric, it was noted to differ upon closer examination. The rim profile is also distinguished from contemporary micaceous water jars (such as **167**) in the wider diameter and more open mouth. Unfortunately, the full form of the neck and body remains unknown.[1231]

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[1225] The general form had a long life throughout the early imperial period; see Lang 1955. Fabrics other than the two discussed here were taken to be residual, and indeed did not appear in any quantity that suggested otherwise.

[1226] A vessel of similar shape was recovered in the Athenian Agora; cf. *Agora* V, p. 110, no. M 282, pls. 29, 41 (in gray fabric), dated there to the late 4th century (date retained in *Agora* XXXII); possibly cf. also Rautman 1995, p. 49, no. 1.32, fig. 8, "Amphora type B," in light reddish brown fabric, dated to the 5th century.

[1227] References and dates as previous.

[1228] For similar, cf. *Agora* V, p. 108, nos. M 255 and M 256, pls. 28, 41, 58 (red fabric) dated to the mid-4th century, or p. 110, no. M 277, pl. 29 (red fabric) dated to the late 4th century (context dates retained in *Agora* XXXII).

[1229] A substantial portion of the lower body of another vessel as M 373, 99-38:7, preserving a small hole evidently drilled in order to drain the liquid contents, appeared in the fill of the southeast room of the Long Building.

[1230] For comparanda, cf. *Agora* V, p. 119, no. M 373, pls. 34, 41, layer XIII re-dated to the early 6th century (*Agora* XXXII, p. 300).

[1231] One rim (**170**) exhibited some similarity with a similar profile recorded on a surveyed site in Laconia; cf. Cavanagh, Mee and James 2005, p. 224, fig. 3.159:3, found on site LP13 with mostly Roman or Late Roman material.

Gaza Amphoras (LR Amphora 4)

Although Gaza amphoras appear early in the Late Roman Panayia Field they remain rare for much of the 5th century. Majcherek's form 2 appears in two of the earliest lots analysed here (**171**; **172**),[1232] while his form 3 (**173**; **174**; and possibly **175**) and form 4 (**176**; **177**; **178**; **179**) begin to appear sporadically by the late 5th or early 6th century,[1233] being found in great quantity by the late 6th and into the early 7th century. Due to the nature of the evidence from the Panayia Field, it is not possible to comment on any chronological difference between forms 3 and 4.[1234] The Gaza amphora is not noted to continue far into the 7th century here, as its appearance in the 7th-century pit is residual.

Palestinian Amphoras (various)

Amphoras of broadly Palestinian origin exhibit significant diversity. Among the earliest appearances in the deposits analysed here is the rim of a carrot amphora (**180**). Body fragments and the partial handle of another Palestinian carrot amphora in a different fabric were also noted in the same deposit, which may be identified as the *Agora* V, M 334.[1235] The fabrics of these two amphoras do not clearly correspond with any of the other four that were employed in the following examples, although the fabric of the latter carrot amphora may be related to that identified here as "Gritty Red Fabric."

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[1232] Majcherek 1995, p. 168, dates his form 2 to between ca. 300 and 450. Two other examples of rims were found residually in the fills of the basement rooms of the Long Building, in Lots 1998-029 and 1999-023.
[1233] Two examples of form 2 or 3 and one form 3 in Lot 2000-017, a form 2 or 3 in Lots 2001-038 and 2001-039, and three examples of form 3 in Lot 2002-009; all are from various re-deposited lots pre-dating the construction of the Long Building and bath.
[1234] Majcherek 1995, pp. 167-169, tentatively dated his forms 2, 3 and 4, respectively, to ca. 300-450, the late 5th century to ca. 600, and roughly the late 6th through early 7th century. He admits (p. 166) that his forms do not represent a continual evolution and that there exist many "transitional" examples that do not fit any one form. Cf. Pieri 2007, fig. 8, for a possible revision of Majcherek's forms.
[1235] Cf. *Agora* V, p. 115, no. M 334, pl. 33. A rim of a similar type and fabric was also noted in Lot 2000-017, a pre-construction dump.

Body sherds in "Gritty Red Fabric," many with white-painted decoration, appear sporadically in early 5th-century (possibly even late 4th-century?) deposits in the Panayia Field;[1236] diagnostic sherds related to these finds only appeared within some of the dumps of re-deposited, pre-construction material that revealed that the form belonged to the baggy amphora type, also known as the LR Amphora 5.[1237] Amphoras in the "Gritty Red Fabric" in the Panayia Field are, however, generally better attested in the smaller amphora type with vertical walls; very fragmentary rims of this form first appear in the early 6th century in Lots 1997-052 and 2002-004, but become common in the second half of the 6th century (**181**; **182**) and continue to be seen in the 7th-century pit (**183**).

All Palestinian amphoras noted in the Panayia Field in the next three fabrics only appear in the baggy type (LR Amphora 5), with only minor variations in form among them. The vast majority of these appear in a "Buff Fabric" that first begins to appear in small fragments in the late 5th or early 6th century.[1238] The fabric continues to be found among the few use deposits of the bath and Long Building,[1239] as well as in the Long Building basement fills, before being seen in great quantity from the second half of the 6th century onward. No significant variation is noted in the profile (**184**; **185**; **186**) except

[1236] The earliest lots in which this fabric appears include Lots 1996-039, 2000-006, 2000-007, 2000-018, and 2004-052. A handle in this fabric (01-06:16) that belonged to the baggy amphora type was noted in a construction fill deposit to the north of the pool (Lot 2001-006) that dated no later than the early 4th century.

[1237] For the LR Amphora 5, see Riley 1981, p. 121. These lots include 2000-017, 2001-038, and 2002-009. Another fragmentary rim of a baggy amphora in this fabric was also noted in Lot 1999-031, the levelling fill against the north wall of the Long Building that marked the end of its construction. Although not illustrated here, the rims, painted decoration and fabric find parallels with complete examples of these baggy amphoras recovered from the Athenian Agora; *Agora* V, p. 115, nos. M 329, M 330, pls. 32, 35 and 58, layers X-XII re-dated to the late 4th to mid-5th century (*Agora* XXXII, p. 300). The fabric of the Athenian examples was confirmed by personal observation. In addition to the finds from the Athenian Agora, the baggy Palestinian amphora with white-painted decoration also appears in a 5th-century well at Argos; see Ivantchik 2002, p. 383, no. 126, figs. 16-17.

[1238] The earliest are in Lots 1997-051, 1998-015, 1999-026, 1999-031, 2001-004, 2001-005, 2001-008, and 2002-018.

[1239] Lots 1995-070 and 1999-023.

in one rim fragment from the 7th-century pit where the interior of the rim is more concave than is typically seen (**187**). The "Gritty Brown Fabric" is a rare but very distinctive fabric variation that is seen in 6th-century deposits (**188**), appearing again in the 7th-century pit including one instance of a variation with a deeply-sliced handle, resulting in a pseudo-bifid appearance (**189**). Baggy amphoras in a "White Flecked Fabric" appear in moderate numbers in the 6th century (**190**), and appear with some concentration in the 7th-century pit.

Later examples of the Palestinian carrot amphora appear in another red fabric. The specific might not appear in the Panayia Field until the second half of the 6th century, with the appearance of small but identifiable fragments in various lots.[1240] Nothing of a truly diagnostic quality appears until the 7th-century pit, where two nearly reconstructable examples were found (**191**; **192**) with numerous other fragments.

Samos Cistern Amphoras

Amphoras from Samos identified as the Samos Cistern type are first recorded here in a use context of the Panayia Bath,[1241] before appearing fairly regularly in several major deposits of the late 6th century (**193**; **194**; **195**).[1242] A handful of body sherds that might belong to this type appear in the 7th-century pit but are most likely residual.[1243] Only one variation, executed in a different fabric, was noted (**196**) in which the basic form remains

[1240] Lots 1999-038 and 2002-006 each contained fragments of two of the distinctive handles, while a fragment of a base was noted in Lot 1995-061. Lot 1999-038, although among the redeposited Long Building basement fills, did contain some late 6th- to early 7th-century material to which this amphora might belong.
[1241] A fragment of an amphora toe, probably of this type, appears in Lot 1995-070.
[1242] Although its appearance is not uncommon, its quantities are modest in comparison to other amphoras, such as the Palestinian, Gaza, LR Amphora 1, and LR Amphora 2.
[1243] However, the same lot did produce a substantial portion of a jug (**393**) that is likely in the same fabric.

but with a rim that tapers slightly inward and with pronounced grooves on the upper and lower surfaces of the rim.

Unidentified Amphora 1

A number of unidentified, tall, cylindrical amphoras were recovered from late 6th-century deposits, namely a pit and within the dumps against wall 199.[1244] Although none of the rims recovered (**197 (P-92)**; **198**; **199**; **200**) join with any bases or bodies (**201 (P-91)**),[1245] their fabrics and the chronology of the deposits seem to suggest that these fragments belong to the same type. Decoration on all examples is limited to the presence of unevenly-applied red slip. Although a Boiotian origin was speculated, the source of this amphora type remains unknown.

Various Imported Amphoras

Various other amphoras of unknown or unconfirmed origin were noted in the Panayia Field.[1246] As a general observation the greatest variety of forms and fabrics seemed to appear before the construction of the bath and Long Building, prior to the mid-6th century.[1247] The presence of the Niederbieber 77 in the Late Roman deposits of the

[1244] Additional fragments were noted in Lots 1999-033, 2001-010, and 2005-022. Single fragments in Lots 1996-074 and 1998-015 might extend this amphora's life-span to the early 6th century.
[1245] Further examples of toes similar to **201 (P-91)**, were also noted in Lot 2001-010 (found with body sherds) and in Lot 2002-006.
[1246] Some of these, those with known origins, have received some brief discussion in Chapter 3.
[1247] This situation has previously been remarked upon in regards to Corinth, in which the 5th century is marked by both the continuation of 4th-century amphoras and the beginning of the standard Late Roman types, as well as other amphoras appearing only briefly, and none being better represented than others; see Slane and Sanders 2005, p. 284, in regards to their Assemblage 1.

Panayia Field should be seen as a continuation from an earlier period.[1248] Although the appearance of at least some fragments of this amphora type are common in the vast majority of Late Roman lots in the Panayia Field, it was never clear if the fragments were contemporary or residual in the context.[1249]

Examples of other amphoras are far less numerous. Several types of amphoras of supposed African origin were noted in the Panayia Field, with a concentration early in the period under analysis. The most concentrated appearance was in the fill of a pit represented in Lots 2000-006 and 2000-007, where the deposit was dominated by a large concentration of fragments of Keay XXV/Africaine IIIB amphoras (**202**). Two other fragments of African amphoras derive from the robbing of the pool wall in the first half of the 5th century; these amphoras include a possible example of a Keay XXXVB (**203**), and an unidentified amphora, possibly a Keay LXIA (**204**), of likely African origin. Numerous other fragments, including some unidentifiable rims, were frequently encountered in roughly contemporary lots, with many other fragments found residually, such as another unidentified amphora (**205**), and the toe of a small *spatheion* which was discovered in the 7th-century pit (**206**).[1250] The rim and handles of another small *spatheion* was recovered from the fill of the basement rooms of the Long Building (**207**), and might belong to the 6th century.[1251] In the Panayia Field, amphoras from Africa are otherwise only noted as late as the first half of the 5th century, or possibly during the

[1248] In the Panayia Field, the Niederbieber 77 (such as C-1999-041, reconstructed with fragments from Lots 1999-044 and 1999-045) comprises a major component of the in-filling of Well 1999-001 in the mid-3rd century in preparation for the construction of the Panayia *domus*.
[1249] The problem is compounded by the relative ease by which even random body sherds can be identified among context pottery, due to the distinctive fabric and color of the amphora, resulting in a potential over-emphasis of its appearance in descriptions of finds.
[1250] Slane and Sanders 2005, p. 278, note this piece as "clearly residual" in this deposit.
[1251] See the comparanda provided in Chapter 3.

period of the Vandal occupation of Africa into the late 5th and early 6th, with none that are identified as being contemporary with the return of AfRS after the re-conquest of 533.[1252]

Another amphora, possibly related to the Keay XXIII/Almagro 51C, rarely appears, with the only significant concentration found in a robbing trench of the first half of the 5th century (**208**). Amphoras of similar profile, but in a very different fabric, also appeared in a late 4th-century robbing context associated with the pool (**209**) as well as in the *tepidarium* dump (**210**) where it is most likely residual.[1253] The contents of an early 5th-century dump contained a matt-painted amphora that may be residual (**211**),[1254] as well as an amphora rim that may belong to a late 4th-century type (**212**),[1255] and the complete neck and rim of an unidentified form (**213**). Another unidentified amphora was recovered from the fill of a robbing trench of the second quarter to mid-5th century (**214**).[1256]

A few east Laconian one-handled jars are noted in the Panayia Field among deposits of the 6th century, notably from the Long Building fills (**215**; **217**),[1257] and dumps against wall 199 (**216**). Based on the dates of other comparanda, and their fragmentary appearance in various redeposited, pre-construction dumps in the Panayia

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[1252] This is not the case for all of Corinth, however, as AfRS re-appears with a small quantity of African amphoras in other areas of the site between ca. 550-600; Slane 2000, p. 304.
[1253] These amphoras bear close similarity in profile (if not in fabric?) to Slane and Sanders 2005, p. 254, no. 1-19, fig. 3, identified as being related to the Keay XXIII/Almagro 51C, but with handles that are circular in section, from an assemblage of the first half of the 5th century. For the Keay XXIII, see Keay 1984, pp. 172-179, figs. 69-72, identified as originating from Portugal or southern Spain, dated there from the 2nd to mid-5th centuries.
[1254] A similar profile was noted in an early 4th-century pit in Corinth, but was manufactured in Northeast Peloponnesian cooking fabric; Slane 1994, p. 144, no. 53, fig. 11.
[1255] Cf. *Corinth* XVIII.2, p. 116, no. 250, fig. 29; see pp. 139-140 for the dating of the latest material in the lot to the second half of the 4th century.
[1256] The fabric might be African but no parallels for high-swung handles such as this have as yet been found among products from Africa; cf. Bonifay 2004.
[1257] A few fragments also appeared in Lot 1998-029.

Field,[1258] the catalogued pieces are all likely residual, probably dating to the 5th century. At least one deposit of the later 5th century contains amphoras that may represent finds from the Black Sea; a rim and handle of one may be sourced to this general area based on fabric (**218**),[1259] while another complete neck and rim (**219**) has parallels with products from Sinope on the southern Black Sea coast.[1260] A robbing trench of the second half of the 5th century contains an amphora in unknown fabric that possesses a grooved surface on the lip as noted in other 5th-century examples from Corinth (**220**),[1261] as well as the complete shoulder, neck and handles of an imported amphora that shares its form with a type (known generally as the *Agora* V, M 325) manufactured regionally in different fabrics (**221**).[1262] Pieces of the neck, rim and handle of an amphora (**222**) found within two separate fills in the east of the site was noted to have been manufactured in a distinctive white fabric and may in fact be sourced to Crete.[1263] The neck, rim and handle roots of an amphora similar to the Keay LII (**223**) appeared in the fill of a robbing trench that preceded construction of the bath;[1264] fragments of more canonical versions Keay LII amphoras were often noted in contexts throughout the 5th century.

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[1258] Lots 2000-017, 2002-009, 2002-011, and possibly 2001-038.
[1259] Alternatively, the profile bears some similarity to the *Agora* V, M 334 (p. 115, pl. 33) amphora type which Reynolds 2005, pp. 571-572, fig. 114, places in the Akko region of Palestine. Cf. also Reynolds 2003, p. 539, fig. 4.7.
[1260] It may possibly be related to Slane 2000, p. 303, fig. 14:g, there dated to 200-225/250. For the similar "Subtype 1, Large Sinopean 'Carrot' Amphora," cf. Opaiţ 2010, pp. 373, 375, fig. 1:3, dated to the first quarter of the 4th to beginning of the 5th century; cf. also Opaiţ 1991, p. 255, pl. 21:4; Opaiţ and Paraschiv 2012, pp. 117-118, fig. 10.
[1261] Cf. Slane and Sanders 2005, p. 255, no. 1-26, fig. 4, and p. 264, no. 2-30, fig. 5, dated, respectively, to the first half of the 5th century and second half of the 5th century to 500 or later. For the profile drawing of no. 1-26, see Slane 2000, p. 304, fig. 6:a.
[1262] A handle fragment from another, similar vessel is unnumbered in the same lot. For the shape, cf. **248 (P-5)** in southern Argolid fabric, and **270** to **273 (P-21)** in Northeast Peloponnesian cooking fabric.
[1263] Joining fragments were discovered in Lots 2000-003 (the early 6th-century fill of a robbing trench) and 2000-017 (a mid- to second half of the 5th-century dump).
[1264] The piece is similar to Keay LII.3, dated to the first quarter to late 5th century, but lacking the concavity on top of the lip and the tall neck; see Keay 1984, pp. 262, 268, fig. 114. However, cf. Pacetti 1998, fig. 8:1-4, for profiles of Keay LII amphoras of the second half of the 5th century that begin to show signs of the

Although various isolated amphora types continue to appear after the mid-6th century, the number is severely reduced in the face of the standard amphoras of the Late Roman period discussed above. A possible Black Sea import appears in the fills of the basement rooms of the Long Building (**224**), and a red-slipped, one-handled amphora (?) appears in a pit of the second half of the 6th century (**225**).[1265] Only one instance of a confirmed Egyptian amphora, the LR Amphora 7, was noted in the Panayia Field; its exact date is uncertain as it appeared residually in the 7th-century pit (**226**). Lot 2002-010, the early 6th-century fill of the cement feature that was likely used to mix cement for construction, also contained a fragmentary rim and a few sherds of a similar fabric. Isolated sherds of unconfirmed Egyptian fabric appear randomly in numerous Late Roman deposits, but never in any quantity.

A substantial portion of a reconstructable amphora was recovered from the *tepidarium* fill (**227**) for which no parallels have yet been found.[1266] The same context also produced an amphora (**228**) which has parallels with another rim and handle with a non-joining *dipinto* fragment from the 7th-century pit (**229**).[1267] The *Saraçhane* type 22, possibly from Crete, is rare in the Panayia Field, appearing only once in the fill of the basement rooms of the Long Building (**230**), and again in a nearly complete example in the 7th-century pit (**231**). Other amphora finds from the 7th-century pit include an

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morphological traits of the 6th century in which the neck notably shrinks and the rim takes on a more flared profile.

[1265] Although similar in form and decoration, the fabric of **225** does not agree with the East Laconian one-handled jars noted above.

[1266] The fabric description, however, bears some similarity to certain Adriatic fabrics as described in Slane 2008a, p. 237; note the light red fabric, red inclusions (although rounded here), mica (sparkling bits), and the surface of the amphora which appears rather greenish.

[1267] For similar, cf. C-1982-120 in the Corinth storerooms, dated late 6th to early 7th century; for earlier (?) examples, cf. Slane 2000, p. 304, fig. 6:b, "an eastern type occasionally published in the western Mediterranean" dated ca. 450, and Slane and Sanders 2005, p. 262, no. 2-17, fig. 5, dated to the second half of the 5th century to 500 or later.

amphora of unknown origin (**232**),[1268] and another (**233**) that may in fact be related to the Late Roman Cretan TRC2 amphora.

*Regional and Local Amphoras*

Attic Amphoras

Attic amphora examples are not as numerous as the lamps and fine wares. Of the two examples presented here, one (**234**), found in the pre-construction dumps, is covered in a dull red (self-?) slip and bears a resemblance to a series of amphoras in Northeast Peloponnesian cooking fabric (the *Agora* V, M 325) that were popular in the 5th century.[1269] The other (**235**), with a thin red slip/wash over the exterior and rim, was found in a fairly mixed context,[1270] but the profile superficially resembles a series of Boiotian table amphoras.[1271]

Boiotian Amphoras

Table amphoras in Boiotian fabric appear in the late 6th and early 7th century and continue to be found in significant number in the 7th-century pit (**236**; **237**; **238**; **239**; **240**; **241 (P-93)**; **242**), although an earlier 6th-century date for the beginning of their import is possible.[1272] Most of the associated bases are flat, but bases with feet have also been

[1268] Although similar examples have been published from Aegina; cf. Felten 1975, p. 70, nos. 105-107, pls. 21-22. Cf. also Popović 1988, fig. 14:5, for his "type VII," from late 6th-centiry layers on the site of Svetinja on the Danube.
[1269] For a similar profile, cf. Slane and Sanders 2005, p. 255, fig. 3, no. 1-27, in Northeast Peloponnesian cooking fabric; cf. also *Agora* V, p. 115, no. M 325, pl. 32. Compare **270** to **273 (P-21)**.
[1270] Lot 2006-025 is the fill of the stone drain of the *castellum* of the pool; it contained much Middle Roman material with some evidence of late 5th- to 6th-century material.
[1271] For a similar profile, cf. **240** (in Boiotian fabric).
[1272] Lot 1998-023 is among the redeposited Long Building basement fills, but it did contain a number of other late 6th- to early 7th-century ceramics that **238** could be a part. A reconstructed base and lower body of

found in isolated examples. Rims are always slightly flaring, with tall necks, bulbous bodies, and grooved, strap-like handles. One example (**237**) preserves gouging beneath the rim, but otherwise decoration is limited to the occasional addition of red slip. Another rim and handle of an amphora probably in this fabric (**243**), found in a late 6th- or early 7th-century pit to the north of the Long Building, does not conform to the usual morphology of the table amphoras, most notably in its oval handle. Three, non-joining body sherds preserve the remains of incomplete *graffiti*. One example (**244**), from a context of the first half of the 6th century, uniquely bears light surface ribbing on the surface of the vessel. The remaining two inscriptions (**245**; **246**) appear on surfaces that correspond with the main series of flat-based table amphoras, although the latter of the two also possesses the unique addition of horizontal and wavy lines that were incised prior to firing.

Amphoras in Southern Argolid Fabric

Various forms of amphoras appear in the Panayia Field in southern Argolid fabric in addition to the widely-distributed LR Amphora 2, but they seem limited to the earliest and the latest deposits in the period under analysis here. One early example is of a cylindrical form with a slightly flaring rim (**247**).[1273] Another neck, handles and shoulder of an amphora (**248 (P-5)**), like the Attic example above, also bears a superficial similarity to the series of 5th-century amphoras in Northeast Peloponnesian cooking fabric

a Boiotian closed vessel was recovered from the pre-construction fills of Lot 2001-038. See also **244**, below.

[1273] The form should not be confused with pitchers like that published in Slane and Sanders 2005, p. 272, no. 3-40, fig. 9; although superficially similar, the proportions of **247** are significantly larger, and the walls significantly thicker.

(the *Agora* V, M 325).[1274] A final early example seems to be a fragment of a prototype of the LR Amphora 2 (**249**), but here with a more vertical neck. Later amphoras in southern Argolid fabric include a thick, outwardly-thickened rim from a deposit of the second half of the 6th century (**250**), and another contemporary find with a flaring mouth (**251**). A final example with an inwardly-tapering neck was found in the 7th-century pit (**252**), where it appeared in addition to a large concentration of LR Amphora 2.

Two major types of LR Amphora 2 in southern Argolid fabric were recognized in the Panayia Field.[1275] The earliest appearances of this amphora were generally characterized by a short neck and large mouth (**253 (P-18)**; **254**; **255**; **256 (P-45)**; **257**),[1276] but these characteristics were also noted to continue into the 7th-century pit.[1277] The second type of LR Amphora 2 displayed a longer neck and smaller, narrower mouth (**258**; **259**; **260**) and was generally limited to later deposits.[1278] Two examples might be

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[1274] See note above regarding **234**. Compare **270** to **273 (P-21)**. Its fabric was demonstrated petrographically.

[1275] In general terms, these correspond to the basic divisions of the *Saraçhane* type 9A and type 9B amphoras, respectively; see *Saraçhane*, p. 66. Hayes' observation that straight and wavy grooving/ridging correspond with types 9A and 9B, respectively, cannot be substantiated here, as straight and wavy combing were both noted in the 7th-century pit. However, almost all instances of LR Amphora 2 in late 4th to early 5th-century lots from the Panayia Field seem to exhibit straight combing or ridges. For the development of the form as based on finds from Scythia, see Opaiţ 2004b, pp. 10-12. See also Opaiţ 2007 for the evolution of the LR Amphora 2 from the Dressel 24 amphora. For further summary of dating criteria, see Hjohlman 2005, p. 162.

[1276] The differences in the fabric of **257** are most likely due to overfiring in the kiln.

[1277] Although only the most diagnostic examples are catalogued here, deriving from lots of the early 6th century or later in which the LR Amphora 2 commonly occurs, the amphora is already present in small quantities by about the second quarter to mid-5th century. Two fragmentary rims of the short-necked version, 96-45:21 and 96-45:90, appeared in Lot 1996-045 with several associated horizontally-combed body sherds; the rims generally have the same profile as **255**, but 96-45:90 possesses a sharper angle on the exterior before the incurved lip. The contemporary pit deposit represented in Lot 2000-007, in addition to containing amphora fragments in southern Argolid fabric of various forms (see above, **247**; **248 (P-5)**), also yielded a very fragmentary lip of a LR Amphora 2 (that bears similarity with **254** but is slightly more inwardly-thickened) and six associated horizontally-combed body sherds. The LR Amphora 2 continues to appear in modest yet regular quantities throughout the 5th century.

[1278] The earliest appearance of the long-necked LR Amphora 2 in the Panayia Field is an unnumbered rim found in Lot 1995-070, an ash deposit from the cleaning of the functional hypocaust system of the bath's *tepidarium*, before it became popular towards the end of the 6th century and appeared in great numbers in the 7th-century pit.

variations on the longer-necked variety (**261**; **262**),[1279] while a fractional version with a vertical neck was discovered in the 7th-century pit (**263**). A possibly late variation of the LR Amphora 2 includes a rim, handle and shoulder that may be intrusive in the Long Building fills (**264**). In more canonical examples, the globular bodies terminate in either rounded bases with a small, central button, or in a small knob toe (**265**).[1280] *Dipinti* are also found on these amphoras (**260**; **266**), and indicate a certain tendency for regulation of their contents. Decoration is limited to the presence of straight or wavy combing on the shoulders and upper body, except in the case of a curiously un-combed globular amphora in the 7th-century pit (**267**).

A final variation of this amphora is the so-called fruit amphora, so-called for its wide mouth that would have made it impractical for liquid contents.[1281] One example with incised decoration, possibly intrusive in the Long Building deposits, might be interpreted as one such vessel (**268**).[1282] Another, reconstructed, example from the 7th-century pit (**269**) corresponds in shape to fruit amphoras manufactured in Northeast Peloponnesian cooking fabric (see below).

Amphoras in Northeast Peloponnesian Cooking Fabric

[1279] Morphologically, **262** bears some relation to *Saraçhane*, p. 71, fig. 23:3, "Type 29" (mainly a 7th-century type, but perhaps also 8th), or pp. 73, 112, nos. 35.31-32, fig. 57, "Type 43" (an 8th-century type).
[1280] Opaiţ 2004b, p. 11, comments that basal knobs disappear by the end of the 6th century.
[1281] See Slane 2000, pp. 305-306; Slane and Sanders 2005, p. 287.
[1282] Similar examples of such pithoi were found in Late Roman contexts at Halieis and Asine. For Halieis, see Rudolph 1979, p. 309, nos. 11-13, fig. 5; for Asine, see Höghammar 1984, no. 5604:2, fig. 11. Another fruit amphora, with a similar orientation to the neck, is published in Slane and Sanders 2005, p. 271, no. 3-27, fig. 8, in a context of the end of the 6th century, but in Northeast Peloponnesian cooking fabric and without the wavy incised lines.

A variety of amphoras were produced in Northeast Peloponnesian cooking fabric. Perhaps the most numerous is the *Agora* V, M 325 amphora.[1283] The type appears in lots throughout the 5th century (**270**; **271**; **272 (P-1)**), and possibly extends as late as the beginning of the 6th century (**273 (P-21)**).[1284] The amphora exhibits an almond-shaped body with broad shoulders, a conical neck and an outwardly-thickened, cup-like mouth. None of these amphoras were found intact, but a (possible?) non-joining fragment (see **271**) preserves a portion of a flat base; others found in Corinth reveal a more articulated base.[1285]

Another early amphora in this fabric was found in a late 4th-century deposit (**274**), with another (later descendant?) found residually in a tile-filled pit north of the Long Building (**275**). Another somewhat popular amphora form in this fabric includes that similar in profile to an imported type (**220**; see above) with a characteristic groove on top of the lip,[1286] although few examples in this fabric with sufficient diagnostic features were preserved in the lots analyzed here.[1287]

Numerous new amphora forms were introduced after production in this fabric seemingly increased around the end of the 5th or beginning of the 6th century. An example found in a small pit dug into a corner of the Long Building (**276**), contemporary with the building's use, bears striking similarities in profile to an imported amphora in a highly

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[1283] First published in *Agora* V, p. 115, no. M 325, pl. 32.
[1284] Although this lot was likely constituted of re-deposited material that was used to fill the pool.
[1285] See Slane and Sanders 2005, p. 255, no. 1-27, fig. 3; the authors (p. 285) see this form as a continuation of the earlier *Agora* V, G 197.
[1286] See also Slane and Sanders 2005, p. 255, no. 1-26, fig. 4, in a "regional" fabric, dated to the first half of the 5th century.
[1287] Some larger fragments were noted within the dumped fills on the eastern side of the site, pre-dating the construction of the bath and Long Building; see Lots 1998-014 (which also includes one possibly in southern Argolid fabric), 2000-017, 2001-038, 2002-009, and an earlier robbing trench represented in Lot 2002-008.

micaceous red fabric.[1288] Various other amphoras were found within the fills of the Long Building (**277**; **278**; **279**), or in the fill against wall 133 (**280**). The 7th-century pit produced a nearly complete table amphora in this fabric (**281**).

Amphoras in this fabric were also known to interpret imported types; one example from the second quarter of the 5th century to ca. 450 resembles the profile of a Keay XIX from Portugal (**282**).[1289] Prototypes modelled after the regionally-manufactured LR Amphora 2 are more common, with an early example from the Panayia Field dating to the first half of the 6th century (**283**).[1290] Thereafter, numerous amphoras and table amphoras appear by the late 6th and early 7th century, interpreting both the short- and long-necked varieties of the LR Amphora 2 (**284**; **285**; **286 (P-35)**; **287 (P-26)**; **288**; **289**), which continue to appear in the 7th-century pit (**290**; **291**; **292**; **293 (P-51)**).

Fruit amphoras, with a shape as that of the example in southern Argolid fabric (see above), were also manufactured in this fabric (**294**; **295**; **296**). These are typically found in 7th-century contexts in Corinth, but if the example from the Long Building fills (**296**) is not intrusive, it could suggest an earlier, 6th-century, start-date. As with the example in southern Argolid fabric, the form here is characterized by its large ovoid body, small horizontal handles, and tall, wide mouth.

<u>Amphoras in LR Corinthian Lamp Fabric (?)</u>

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[1288] The imported amphora, numbered 98-29:34, was too fragmentary to warrant inclusion in the catalogue.
[1289] 97-50:4 is another similar example. For the prototype, compare the example published from Corinth in Slane and Sanders 2005, p. 254, no. 1-20, fig. 4, in a context of the first half of the 5th century.
[1290] This piece is closely paralleled with Slane and Sanders 2005, p. 264, no. 2-33, fig. 5, dated there to the second half of the 5th century to 500 or later. The authors note (p. 287) that amphoras in this fabric based on the LR Amphora 2 appear by the 6th century.

One amphora found beneath the floor of the entrance hall of the bath (**297**) is a unique amphora manufactured in what seems to be LR Corinthian lamp fabric. If the fabric identification is correct, it would expand the known ceramic classes that potters utilizing this fabric produced, but the single example from the Panayia Field suggests that that shapes were rare and not in great demand.

*Imported Cooking Wares*

Late Roman Micaceous Aegean Ware

Imported cooking ware vessels were most common in the early deposits of the Late Roman Panayia Field, before vessels manufactured in Northeast Peloponnesian cooking fabric became the dominant variety. Most common among the imports is the so-called Late Roman micaceous Aegean ware. The ware first appears in the Panayia Field in the early 5th century, probably around the second quarter of that century,[1291] and is most common in the form of a casserole with both tall- (**298**; **299**; **300**) and short-rimmed (**301**; **302**) varieties. In the Panayia Field an example from the fill of the cement feature that was likely used in the construction of the bath and Long Building (**300**) might represent one of the latest appearances of this form, with examples in later deposits generally considered as residual. Other shapes in this fabric are also noted in early to mid-5th-century contexts (**303**;[1292] **304**; **305**), including a non-joining round-bottomed base that may belong to either the "tall" or "short" casseroles (**306**). A final rim, potentially from a different form of casserole recovered from the possible use-layer of a

[1291] Lots 1996-039, 1996-040, 1996-045, 1996-070, 2000-011, 2000-018, 2000-029, 2002-023, and 2004-007. Of these, the largest concentrations are in Lots 1996-045 and 2000-018, with moderate concentrations in Lots 1996-040, and 2000-011.

[1292] For a somewhat similar profile, cf. Slane and Sanders 2005, p. 255, no. 1-29, fig. 3, dated first half of the 5th century.

floor in the Long Building (**307**), may also be counted among the latest variations of cooking vessels in this fabric to appear in the Panayia Field.

Unidentified Cooking Ware 1

In addition to Late Roman micaceous Aegean ware, a variety of other imported cooking wares are noted in the Panayia Field in the late 4th and early 5th century. Stewpots in a distinctive white-gritted fabric (**308**) appear in a tall ovoid form. Another stewpot, residual in its context, might testify that imperfect products that were heavily vitrified and possibly warped could still reach the market (**309**). Accompanying these is a series of lids with characteristic inwardly-folded/thickened lips (**310**; **311**). Preliminary observation seems to suggest that this ware was arriving in Corinth before Late Roman micaceous Aegean ware, but further analysis of late 4th and early 5th century deposits at Corinth is required before its chronology becomes clear.

Unidentified Cooking Ware 2

Another unidentified cooking ware series was also noted in the Panayia Field, characterized by a large, sloping rim with a deep groove in the exterior rim-face. A large stewpot with a flatter rim from a late 4th-century robbing context may represent an early example in the series (**313**),[1293] but its fabric differs from the other (later) cooking vessels discussed here. Later vessel types that appear in the 5th century include a unique example of a casserole (**312**), a variation of the stewpot with a slightly more vertical wall

[1293] Other examples, considered residual, were noted in Lot 1996-072 of the mid-5th century, among the material of a late 5th- or early 6th-century robbing trench in Lot 2002-008, and among the fills of the basement rooms of the Long Building in Lot 1998-022.

(**314**),[1294] and the more common globular stewpot (**315**).[1295] Due to the inconsistent appearance of this ware in the Panayia Field, its chronology relative to that of Unidentified Cooking Ware 1 and Late Roman micaceous Aegean ware is unclear.

Various Imported Cooking Wares

It is of some interest that the Panayia Field produced no instances of certain 5th-century Palestinian casseroles that have been noted in other areas of Corinth.[1296] Various other cooking wares appear in the Late Roman Panayia Field, but are typically limited to the late 4th or early 5th century and usually appear as single examples. A cooking pan in Unidentified Cooking Ware 3 (**316 (P-6)**) was recovered, possibly as a residual find, from a pit of the second quarter of the 5th century to ca. 450.[1297] Three rims (**317**; **318**; **319**), the latter two possibly residual in their contexts, are identified as casseroles based on the close similarity of their profiles to examples known in Late Roman micaceous Aegean ware, but differ in their fabric descriptions and should be considered to have originated from different sources.[1298]

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[1294] Another fragmentary rim appears residually in the late 6th-century *tepidarium* fill, Lot 1995-061. Although **314**, from a mid-5th-century context, is the best-preserved example of this form, a third example from a context of the second quarter to mid-5th-century context, in Lot 2000-018, testifies to its earlier appearance.

[1295] Other examples of this rim were noted in Lots 2000-017 and 2001-038. A fragmentary rim that might illustrate the transition between **313** and **315** appears in Lot 2001-011, basket 16.

[1296] See Slane and Sanders 2005, p. 256, nos. 1-32, 1-33, fig. 3.

[1297] Another unnumbered rim was noted residually in Lot 2000-003. See the discussion of Unidentified Cooking Ware 3 in Chapter 3 for the dating of this form to the 4th or 5th century.

[1298] **317** might have a parallel in Carthage; cf. *Carthage BM* I.2, p. 187, fig. 70, no. 29.3, dated ca. 475-500 to 525, but noted to possibly be residual. The fabric is described (pp. 24-25) as containing volcanic inclusions, with Italy or the Aegean as possible sources. For similar profiles to **317** and **319**, cf. Slane and Sanders 2005, p. 255, no. 1-28, fig. 3, in a context of the first half of the 5th century, but identified there in Late Roman micaceous Aegean ware. For a similar profile to **318**, cf. Slane and Sanders 2005, p. 264, no. 2-34, fig. 6, in a context of the second half of the 5th century to 500 or later, also identified there in Late Roman micaceous Aegean ware.

A stewpot with a squared rim from a late 4th-century robbing trench (**320**) shares similarities in profile, if not in fabric, with another stewpot found in a near-contemporary context from elsewhere in Corinth.[1299] Two stewpots, one in the micaceous Unidentified Cooking Ware 4 from a second quarter to mid-5th-century context (**321 (P-7)**),[1300] and another in a non-micaceous fabric and probably residual (**322**), share a similar stepped profile; the former is possibly from an Aegean source, while the latter has many parallels on Crete (see Chapter 3). Of two other imported stewpots, one from a mid-5th-century context (**323**) lacks any known comparanda, while the other from a late 5th- to early 6th-century context (**324**) shows some correspondence with examples from the eastern Adriatic (see Chapter 3).

By the end of the 5th century cooking vessels in Northeast Peloponnesian cooking fabric come to dominate the Panayia Field deposits to the effective exclusion of any imports. The late 6th-century *tepidarium* fill did produce two imported stewpots of similar profile with sparkling inclusions, but employing different fabrics (**325**; **326**); these may be products from the Black Sea that are residual in the lot (see Chapter 3). A final stewpot rim (**327**), imported from an unknown source, was noted in a fill over an earthen floor in a context that included a "Slavic Jar" and dated, at the earliest, to the late 6th century.

*Regional and Local Cooking Wares*

<u>Cooking Ware in Northeast Peloponnesian Cooking Fabric</u>

[1299] For similar profile, cf. Slane and Sanders 2005, p. 256, no. 1-35, fig. 3.
[1300] See the discussion of Unidentified Cooking Ware 4 in Chapter 3 for the likely 5th-century date of this form.

Imported cooking wares do not seem to maintain any significant presence beyond the 5th century with the result that by ca. 500, with the exception of rare examples, all cooking ware in the Panayia Field is manufactured in Northeast Peloponnesian cooking fabric. It is uncertain whether or not the increased local production was stimulated by a decrease in imports, or whether the increase in local production drove out imported products. Interestingly, casserole shapes seem to disappear along with the imports; the few examples found here in this fabric coincide with the period of long-distance import of such shapes in the 5th century. Of the few examples of casseroles in Northeast Peloponnesian cooking fabric, two were recovered from a deposit of the second quarter to mid-5th century and are contemporary with the height of popularity of imported casseroles in Late Roman micaceous Aegean ware, even appearing to be modelled on their general form (**328**; **329**).[1301] A unique example found in a deposit of ca. 500 (**330**) may also be interpreted as a casserole, or some other form of cooking bowl or baking dish.[1302] Stewpots with deep ovoid shapes are also rare in these deposits; one example in Northeast Peloponnesian cooking fabric (petrographically confirmed) might have been an interpretation of those in the imported white-gritted fabric (see Unidentified Cooking Ware 1) (**331 (P-15)**). Another example of the second quarter to mid-5th century, while not preserving the lower body, seems to belong to a deep stewpot characterized by a wavy segment of wall beneath the rim (**332**).[1303]

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[1301] 98-15:25 is another example as **329**. **328** may possibly be a precursor to **336** and other later 5th-century cooking vessels such as Slane and Sanders 2005, p. 265, no. 2-39, fig. 6.
[1302] A possible parallel for **330** was noted in the late 6th- to early 7th-century occupation phases at Pyrgouthi (likely as a residual find), but with a vertical handle; see Hjohlman 2005, p. 149, no. 43, fig. 22.
[1303] Other, residual examples were noted among the pre-construction dumps in Lots 2000-017 and 2001-038, and in the early 6th-century Lot 1997-053.

Globular stewpots begin sometime in the late 4th century and continue into the 5th century; one example is noted in a pit of the second quarter to mid-5th century (**333**), but is also attested in some later 5th-century contexts. Another form is equally long-lived, but is more commonly noted in Corinth (**334**; **335 (P-9)**); similar stewpots were already appearing in the latest stages of the Sanctuary of Demeter and Kore,[1304] and continued to be found through the 5th century.[1305] These are the precursors to a continuous evolution of stewpots found in the Panayia Field that can be traced from about the second quarter or mid-5th century to the time of the 7th-century pit.[1306] The earliest forms have horizontal, everted rims with grooves on top of the lip. In the Panayia Field, one of the earliest examples (**336**) shows the close transition from earlier stewpots like (**334**). This form continues to develop through to the early 6th century as it effectively replaces imported cooking wares (**337**; **338**; **339**; **340**; **341**). Some of these examples exhibit a flat rim, as opposed to the grooved rims, but strict chronological distinctions are difficult as both rim types are found in the same deposits.[1307]

At some point in the early decades of the 6th century, a transition to stewpots with triangular rims begins. A few examples from the Panayia Field document this transition that was accomplished by the potter simply leaving the everted rim at a 45 degree angle (**342**).[1308] Early versions of developed triangular rims ("type 1") are found in small numbers within the pre-construction dumps (**343**; **344**) as well as in the fill of the cement-mixing feature that was likely used in the construction of the bath and Long Building

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[1304] *Corinth* XVIII.2, pp. 77, 85, nos. 186, 187, fig. 21; see also Slane 2008b, pp. 480-481.
[1305] Slane and Sanders 2005, p. 256, no. 1-36, fig. 3, and p. 264, no. 2-38, fig. 6.
[1306] A typology of their evolution is proposed here, but with the expectation that it will be subject to later refinements, especially when future deposits that better illustrate the late 5th to early 6th century and the early to mid-7th century are excavated in Corinth.
[1307] See also Slane and Sanders 2005, p. 265, nos. 2-39, 2-40, fig. 6, where both rims are found in a deposit of the second half of the 5th century to 500 or later.
[1308] Another rim is noted in Lot 2000-038.

(**345**). More complete examples exhibit a more pronounced incurving upper body just below the rim; one example was found within a context of later road repair (related to water management) (**346**), with other examples appeared in the fills of the Long Building (**347**; **348**).[1309]

Various other morphological distinctions are observed within the series of triangular-rimmed stewpots, although division along chronological lines is difficult to argue at present. One variation displays a tendency to place the rim above a sharp interior overhang ("type 2"). Early(?) examples with gentler transitions are found in the Long Building fills (**349**; **350**), while others exhibiting a sharper overhang are found in numerous deposits, including a water-maintenance context on the old road (**351**; **352**), ash deposits from the cleaning of the bath's hypocaust during its period of use (**353**), and (residually) from the dumped fill within the *tepidarium* (**354**).[1310] Another variation is the overhanging rim that is nearly vertical (or half-round) ("type 3"), found only in the later contexts of the fills against wall 133, and in the *tepidarium* dump (**355**; **356**). The latest examples of stewpots with triangular rims that appear from the end of the 6th century through to the 7th-century pit ("type 4") seem to tend towards an even squatter, rounder appearance in the body (where preserved), with rims that are also squatter and thicker

[1309] Such a date for the beginning of stewpots with triangular rims is loosely corroborated by the finds from Pyrgouthi which occur in mixed deposits of various refurbishment, occupation/destruction, and post-destruction levels, indicating that their original contexts were disturbed by the late 6th and early 7th-century activity at the site; see Hjohlman 2005, pp. 132, 149, 170, 177, 205, 209, 223, nos. 8 (with incurving upper body), 42(?), 96, 111, 206, 223, 265, figs. 5, 21, 39, 44, 72, 75, 87.

[1310] A fragment of a stewpot with a triangular rim and interior overhang was recovered from the Long Building's final, post-construction, levelling fill against the north wall, as represented in Lot 1999-031; therefore the structure must have operated during, or after, the use-life of such forms. The entirety of the Long Building's dumped fills revealed only ten examples of interior overhangs, mostly small fragmentary rims, and no examples of any later variations. The implications that this has for the dating of the Long Building fills is outlined in Chapter 2.

than their predecessors (**357**; **358**; **359**; **360**; **361**; **362**).[1311] Additionally, **361** was the only stewpot to preserve a joining spout, although non-joining spouts were occasionally noted in late 6th- and 7th-century lots.[1312]

Certain stewpots from the 7th-century pit do not easily fit this proposed typology, with the disassociation possibly due to the lack of deposits bridging the gap between the early 7th century and the pit of the mid- to third quarter of the 7th century. One nearly reconstructed example possesses a thinner rim than its 6th-century counterparts, exhibiting a half-round profile (**363**), which may have some similarity with 8th- and 9th-century imported stewpots found in the Panayia Field.[1313] The profiles of three other rims show some similarity with previous examples in regard to their general features (**364 (P-56)**; **365**; **366**),[1314] but a natural progression cannot as yet be illustrated.

A large amount of both bell-lids and flat lids were found in these deposits. Bell-lids are described as being fairly tall, hollow, domed lids. They appear early in the period under study here and are still found in large number in the *tepidarium* dump of the late 6th century; they may have gone out of use after the early 7th century as they were not found in the 7th-century pit. The morphological variations exhibited in the bell-lids cannot be currently demonstrated to possess chronological implications, but these were regularly noted and include rims that are described here as "straight" (**367**), "round" (**368**), "semi-

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[1311] The possibility that some of these might have been residual in the 7th-century pit is recognized, but this can only be confirmed with future excavation of early to mid-7th-century deposits at Corinth. Similar finds from Pyrgouthi only appeared in late 6th- and early 7th-century deposits; see Hjohlman 2005, pp. 149, 188, 190, 216, 223, 225, nos. 40-41, 161-162, 177, 247, 266-267, 279, figs. 21, 55-56, 58, 82, 87, 89.
[1312] Another spouted stewpot was published from an end of the 6th-century deposit at Corinth; see Slane and Sanders 2005, p. 272, no. 3-32, fig. 8. An unpublished spouted stewpot on display at the Nemea museum (P 1594) which also contained a coin hoard of 18 fractional bronze coins and one gold coin of Justinian I (538-574), has possible parallels with **361**; the fabric was confirmed by personal observation.
[1313] Profiles of 98-18:1 and 99-29:1 show some superficial similarity.
[1314] Another example similar to **364 (P-56)** appears in Lot 1995-063, suggesting that this rim might be residual in the 7th-century pit.

round" (**369**; **370**), and "splayed" (**371**;[1315] possibly **372**). The knob handle on top is often hollow, and any decoration on the body is limited to the occasional incised line (**373**). However, in a few cases the tops of the knobs themselves were inscribed with a Christian monogram; most often these consist of a roughly incised Alpha and Omega within the lower arms of a simple cross (**374**; **375**; **376**), although one example is set within the lower arms of a Chi-Rho (**377**).[1316] Two of these examples (**374**; **377**) also illustrate solid knob handles.

The morphological traits of flat lids do not, at present, seem to be closely tied to any chronological significance, with most rims displaying a simple "sloped" rim (**378**). Other flat lids exhibiting a sharply "upturned" rim might be concentrated in the 5th century (**379**). Handles can be simple mounds of clay atop the shallow dome (**380**), while others bear definitive evidence of being string-cut (**381 (P-11)**; **382**), and others still may have had knobs formed when simply pinched-off the wheel (**383**; **384**). **383** also shows the most articulation that a flat lid could attain, displaying a single step in the profile. The range of lids recovered from the 7th-century pit show that the entire range of handle variations were practiced simultaneously and that their production was meant to accommodate a range of vessel diameters (**385**; **386**; **387**; **388**; **389**).

A small number of miscellaneous cooking forms were recovered from the Panayia Field. One was a possible "frying pan" reconstructed from fragments found in the Long Building fills (**390**). The other has been published elsewhere as a "coal scuttle" (**391**), found in the 7th-century pit.[1317] In both cases, the objects consist of a small, bowl-shaped

[1315] Another example appeared in Lot 1995-061.
[1316] Another find from an unlotted context of an inscribed lid from the area of the Panayia Bath was also published in Sanders 1999, p. 473, no. 24, fig. 16, found in Corinth Notebook 881, basket 125.
[1317] Slane and Sanders 2005, p. 279, no. 4-29, fig. 12.

vessel that was held over a fire by a long protruding handle, as evidenced by heavy traces of burning on both pieces.

*Imported Plain Wares*

Unguentaria in Micaceous Water Jar Fabric and Plain Ware in Samos Cistern Amphora Fabric

Examples of a well-known type of unguentarium in a micaceous red fabric were found in two deposits of the Panayia Field. The fabric appears to be the same as that of the micaceous water jars which are sourced to the area around Ephesus.[1318] An unnumbered toe that may possibly belong to the type was discovered in the fill of the southeast room of the Long Building (Lot 1999-038), while a fragmentary example, but with a nearly complete upper profile, was found in the 7th-century pit (**392**).[1319] One find in the Panayia Field may testify that the clay source used in the manufacture of the Samos cistern amphora was also employed in plain wares; a one-handled jug (**393**) was recovered from the 7th-century pit whose fabric seems macroscopically indistinguishable from these (primarily) late 6th-century amphoras (see above).

Various Imported Plain Ware

[1318] It should be noted that another, larger, class of Late Roman unguentaria, the "early Byzantine ampullae" (see Lochner, Sauer and Linke 2005), identified in great numbers in Athens (*Agora* XXXII, p. 116, nos. 1778-1813) were not noted in the Panayia Field, with the exception of one possible example of a fragment of a lower body found in Lot 1995-061. For an earlier presentation of this type, see Hayes 1971.
[1319] These are both better illustrated by an example from the Hill of Zeus cemetery (C-1933-1512), from Grave 3 (G279). The same burial context also produced C-1933-1513, a fragmentary unguentarium of similar type, but with a solid (?) toe.

A number of plain wares of unknown origin were noted throughout the Late Roman Panayia Field. They are treated here with the long-distance imports as they do not resemble the now-recognizable products of regional and local wares. Much like the cooking wares, the greatest variety of imported or unknown fabrics is concentrated in the late 4th and early 5th century, with a modest number in the late 6th and 7th century.

Miscellaneous open shapes include two vessels from a context of the second quarter to mid-5th century; one is tentatively identified as a honey jar (**504**) based on the deep groove around the lip that could be filled with water to prevent access to insects, while the other is identified as a funnel (**505**) based on parallels of the profile at the Athenian Agora.[1320] An undecorated mug in a coarse red fabric was recovered from a contemporary context (**506**). A few open shapes, possibly in Boiotian fabric, were recovered from late 6th-century contexts and include a basin with incised decoration (**507**), a partial rim with twisted handle and attached, partially-preserved appliqué (**508**),[1321] and the rim of a large basin or possibly beehive (**509**).[1322] A final open shape is a large bowl from the 7th-century pit (**510**) that could not be confidently placed within any of the known fabric groups.[1323]

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[1320] Cf. *Agora* V, p. 108, no. M 253, pl. 71, dated there to the mid-4th century, identified as a funnel but missing the spout (context date retained in *Agora* XXXII). Personal observation revealed that the fabric is not the same.

[1321] Two other similar examples, but lacking the appliqué, were recovered from Lots 1995-070 and 1995-061.

[1322] Its identification as a beehive is complicated by the lack of the usual internal striations. For another similar profile in southern Argolid fabric, cf. **431**.

[1323] A smaller fragment of another rim of a similar vessel, 97-57:41, was also found in the same context. The bowl was originally published in Slane and Sanders 2005, p. 279, no. 4-36, fig. 12, as being in the locally available cooking fabric (Northeast Peloponnesian cooking fabric), but the presence of sparkling, and overall better sorted, inclusions, lack of visible chert, as well as a granular rather than the typical hackly break warrants a re-identification of the fabric; LR Corinthian lamp fabric was considered, but could not be confidently confirmed. Curiously, the rim was not found to be perfectly round, but whether this was due to simple warping during manufacture or to some functional purpose (a spout?) remains uncertain in light of the limits of preservation.

A small variety of pitchers and jugs were also noted. The near-complete profile of a large, funnel-mouthed pitcher with pinched spout, for which a Boiotian origin was briefly considered (see Chapter 3, Unidentified Plain Ware 2), was recovered from a dump of the second quarter to mid-5th century (**511 (P-84)**). A rim and handle of another pitcher from an unidentified source (**512**) was also found in the same context,[1324] as was a nearly reconstructed small, red slipped, one-handled pitcher or lekythos (**513**). The latter could not be matched with any known fabric, but the *shape* found correspondence with a vessel in Attic fabric (although proportionally larger), as well as another in an unknown, but possibly Boiotian, fabric (**514**) found among the pre-construction dumps.[1325] An early 5th-century fill produced the mouth of trefoil-/pinched-mouth pitcher (**515**) in a hard-fired, coarse fabric that appeared in only one other instance in the Panayia Field (see Chapter 3, Unidentified Plain Ware 1).[1326] The Long Building fills produced the upper profile of a trefoil-mouthed pitcher in a coarse red fabric (**516**) that might have some relation to LR Corinthian lamp fabric. A rim of a pitcher (**517**), manufactured in a micaceous fabric and preserving possible traces of a red slip or wash, was recovered from the late 6th-century *tepidarium* fill and noted to correspond with other pitchers manufactured in Northeast Peloponnesian cooking fabric.[1327] Several fragments of

[1324] Cf. *Corinth* XVIII.2, p. 104, no. 218, fig. 25, for a very similar profile, found there in a mixed deposit with material as late as the second half of the 4th century.
[1325] For the example in Attic fabric, cf. **394**. The profile also found a parallel with vessels in so-called "Late Roman 'Light-Colored' Ware" found in the Athenian Agora, but the fabric is not the same; cf. *Agora* XXXII, p. 252, no. 1450, fig. 43, from an early 6th-century context; personal examination of this piece and other examples of "Late Roman 'Light-Colored' Ware" confirmed that this fabric is not readily identifiable in the Panayia Field. A later (late 6th or early 7th century) flat-bottomed lekythos of a generally similar form (C-1933-1505) was recovered from the Hill of Zeus cemetery.
[1326] A robbing trench of the second quarter to mid-5th century produced 00-18:2 (P-13) which was analyzed petrographically and found no matches with any of the other tested samples.
[1327] Cf. **486** for a parallel of the profile.

another red-slipped pitcher, possibly in Boiotian fabric, were recovered from activity post-dating the abandonment of the bath (**518**).[1328]

The appearances of unguentaria in the Panayia Field were generally limited, even taking into account those from Ephesian sources discussed above. Two unique pieces were both found in the fill above the floor in room 1 of the Long Building, interpreted by the excavators as the use layer of the room. The first (**519**) is an inwardly tapering, corrugated rim in an unknown red fabric, while the second (**520**) is the hollow base/toe of an unguentarium in a micaceous reddish yellow fabric that is dissimilar to that of micaceous water jars. Miscellaneous closed shapes are limited to a few shapes. A small "dipper" was recovered from the pre-construction dumps on the western side of the site in a fabric that might be Boiotian (**521**).[1329] The rim and neck of a pitcher or amphora in a coarse, red fabric was recovered from the Long Building fills whose form may be loosely based on micaceous water jars (**522**). Later closed shapes include a spouted jug (baby-feeder?) (**523**) from the 7th-century pit, and the rim of a "Slavic Ware" beaker (**524**) recovered from the fill above an earthen floor dated to no earlier than the late 6th century.[1330] The source of manufacture of these latter vessels is currently unknown,[1331]

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[1328] Roughly similar shapes of one-handled pitchers have been published from 7th-century contexts in the Aegean; for the Yassi Ada shipwreck, see Bass 1982, pp. 168-169, nos. P 14 to P 16, fig. 8-10 (but squatter); for Emporio on Chios, see Boardman 1989, p. 103, nos. 180-190, fig.32.

[1329] Another, similar find was described in Williams and Zervos 1983, p. 29 (= C-1982-5), identified as a "LR dipper" and found inside the jug described on p. 30, no. 82, pl. 11, in a context dated ca. 600; personal examination determined that this dipper was manufactured in southern Argolid fabric. Profiles of similar vessels have been published from the Athenian Agora; cf. *Agora* V, p. 45, no. G 215, pl. 7, layers II-III dated 1st to early 2nd century, identified as a "liqueur cup" or "coffee cup," and noted to be common in deposits of the 1st to 3rd century; cf. Hayes 2008, nos. W 900-908, fig. 10, and no. P 9916, fig. 15, with the latter being catalogued among "medical (?) and ritual vessels;" cf. also Hayes 2010, p. 24, fig. 4 (top row), noting that they "form a sequence through to the late 3rd century."

[1330] The bibliography concerning "Slavic Ware" is vast and need not be considered in depth here. For an introduction, see Weinberg 1974, pp. 514-515, no. 1, with references; Curta 2001, pp. 285-294. For more on the phenomenon of handmade pottery in Late Roman contexts throughout the Mediterranean, see Rautman 1998. For finds in Scythia, see Opaiţ 2004b, pp. 52-53, pl. 40:1-10. The vessels are perhaps best known within Greece from a cemetery at Late Roman Olympia; see Vryonis 1992; Vida and Völling 2000.

and these have previously been little recognized at Corinth;[1332] **524** is the only example from a Late Roman context in the Panayia Field, although other fragments have been inventoried from later contexts.[1333]

Imported plain ware lids are few. A sombrero lid, with wide rim and tall central knob, from an early 5th-century dump (**525**) may have been used for an amphora or another closed vessel with a small mouth. Another small lid (**526**) was found in the 7th-century pit and was also possibly meant for a closed plain ware vessel or amphora; this low, arched lid consists of a roughly-formed pinched handle that was not completed, leaving an elongated, off-center gap.[1334] Another lid from the Long Building fills (**527**), possibly meant for a pithos due to its thickness and large diameter, was nevertheless found with traces of burning on the underside and thus one cannot rule-out uses for

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Several such finds have been found in Greece; for Hyettos in Boiotia, see Vroom 2003, pp. 141, 143, fig. 6.2:W2a.1; for the many examples at Isthmia, see Gregory 1993; for several finds from Argos, see Aupert 1980a; for Tiryns, see Gregory 1993, p. 152 (but without references). One example is known from the stadium tunnel at Nemea, see Miller 1979, p. 99, pl. 38:d (left), which is included among the "cooking pottery in the uppermost silt in the tunnel," but note that this piece was excluded from discussion of the same context in *Nemea* II, p. 132, figs. 241-242; personal observation of this piece confirms that it is in accordance with other examples of "Slavic Ware" vessels.

[1331] Given the amount of chert that was used as a tempering agent in many of the personally-observed examples at Nemea and Isthmia, some of the finds from the Corinthia may have been made using local resources; see Chapter 4 for the use of chert as the primary temper in Northeast Peloponnesian cooking fabric. See Gregory 1993, p. 152, for the macroscopic analysis of examples from Isthmia which identified eight different fabric groups; T. Gregory (pers. comm.) reported that the results of the chemical analyses of the same pieces from Isthmia characterized at least four different fabrics. Samples of such vessels from Isthmia have also been included in a forthcoming petrographic analysis conducted by the present author and H. Graybehl, through the kind permission of T. Gregory.

[1332] A number of "Avar" graves on the slopes of Acrocorinth did not produce any examples (see Davidson and Horvath 1937), but a grave dug in the colonnade of the South Stoa did produce one complete example; see Weinberg 1974, pp. 514-515, no. 1, pl. 110:c.

[1333] C-1997-017a, C-1997-017b, C-1997-018, and C-1999-056 from Middle Byzantine dumping contexts.

[1334] Cooking lids with pre-fired, perforated holes, made in order to release steam, were discovered in the southern Sinai with parallels cited from Kellia and Jerusalem, see Calderon 2000, p. 191, figs. 4:57-58. Any relation between the Panayia Field example and these can only be speculated, and the small diameter of the Panayia Field example makes it unlikely that it was used for cooking.

cooking;[1335] the identified comparanda suggest that this is a later, possibly late 7th-century, intrusion with a probable Aegean source (see Chapter 3).

*Regional and Local Plain Wares*

Plain Wares in Attic Fabrics

As the cooking wares, the plain wares recovered from the Panayia Field revealed that local and regional sources were greatly preferred. Plain wares from Athens were not as numerous as the fine wares and lamps, but some examples could still be identified among the late 4th- and earlier 5th-century material. The neck and handle of a red-slipped pitcher (**394**) preserves enough details to suggest that it was related to imported prototypes.[1336] Another red-slipped rim of a pitcher or jug from the eastern dumps has loose parallels with finds from Athens (**395**),[1337] while a rim of an unidentified closed vessel (**396**) was also likely of Attic manufacture. Perhaps better recognized are the so-called "gouged jugs," although only a handful of examples were recovered in these deposits (**397**; **398**).[1338] One miscellaneous closed vessel, belonging to perhaps a storage jar (**399**), was also identified.

Plain Wares in Boiotian Fabric

Among the plain ware shapes in identified Boiotian fabric is a type of one-handled mug which commonly appears in deposits of the second half of the 6th century and into the early 7th century (**400**; **401**), although this form likely began at least as early

[1335] Another example, lacking any context, is stored in Lot 1999-005, GTFBP ("Good Things From Bad Places").
[1336] Cf. **513** and **514** for proportionally smaller examples of the same shape.
[1337] Cf. Hayes 2008, p. 446, fig. 14, right. Another rim was noted in Lot 1999-030 (residual in lot).
[1338] Few other fragments were also noted in Lots 2000-017, 2001-038, 2001-39, 2002-009, and 2002-011.

as the first half of the 6th century.[1339] Another shape, a red-slipped jar (**402**), appears in the 7th-century pit, and appears to be in this fabric. More commonly found in Corinth are small lekythoi that are often used as grave goods in other areas of the site (see Chapter 4), but only one example was recovered from the Panayia Field in Grave 1998-029 (**403**). Typically in the Panayia Field, importation of the same shape in different fabrics is uncommon, thus the importation of lekythoi in this fabric as well as the manufacture of those in LR Corinthian Lamp fabric (as well as Northeast Peloponnesian cooking fabric; see below) is of some note. Finally, one miscellaneous narrow neck of a closed, red-slipped vessel with a built-in strainer was found in the *tepidarium* dump (**404**).

Plain Wares in Southern Argolid Fabric

Unlike the imported Attic and Boiotian products that mainly consisted of lamps, fine, and semi-fine plain wares, products in southern Argolid fabric were relied upon mainly for coarse, utilitarian wares. The full profile of a shallow corrugated basin (**405**) was recovered from a late 4th-century robbing event north of the pool; the piece could very well be dated with the original Middle Roman material that was disturbed,[1340] but it serves to illustrate the main form that was occasionally found in other, 5th-century, deposits. Variations on the regular form of southern Argolid shallow basins were noted in a second quarter to mid-5th century pit (**406**), with other clear variations found residually

[1339] Two fragmentary rims, although with a shorter rim profile, appear in Lot 1998-015, a pre-construction dump. Fragmentary examples with rim profiles corresponding to that of the illustrated example appear in Lot 2002-011, another pre-construction dump, and in the final levelling fill against the north wall of the Long Building represented by Lot 1999-031.
[1340] Cf. Slane 1994, p. 146, no. 59, fig. 12, from a deposit of ca. 300.

(**407**; **408**) in later contexts.[1341] One type of bulbous, hooked rim found on a shallow basin in this fabric from the Long Building fills (**409**) seems similar in profile to basins with hammerhead rims found in Northeast Peloponnesian cooking fabric elsewhere in Corinth,[1342] while another was seen on a more round-bodied basin in the *tepidarium* dump (**410**).[1343] Finally, a unique basin, also from the Long Building fills, but clearly of a shallow depth as attested to by the orientation of the body, possesses a rim similar to that of deep basins in this fabric (**411**), but the surface treatment is combed like the LR Amphora 2, not corrugated as earlier basins.[1344]

Deep corrugated basins in southern Argolid fabric are clearly more numerous in the lots analysed here. A nearly full profile of a deep corrugated basin from a mid-5th-century lot (**412**) is very similar to an example from a Tetrarchic-era deposit from elsewhere in Corinth,[1345] although the everted rim is somewhat shortened. Deep basins with short rims continue to be found in some number in the pre-construction dumps, similar to that found in the fill of the cement feature (**413**). By the 6th century, deeper basins in Northeast Peloponnesian cooking fabric are appearing more regularly, and southern Argolid examples such as (**414 (P-65)**; **415**) should probably be considered as being residual in their deposits, although these two pieces display some variations to the standard form. A later series of deep basins appears in late 6th- and early 7th-century lots,

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[1341] Other examples as **407** appear residually in Lot 1999-038, while the presence of a more fragmentary piece, 04-52:6, in an early 5th-century lot indicates the early date of this shape. Another rim, similar to **408**, appears (probably residually) in Lot 1998-023, but the rim is less squat.
[1342] See Slane and Sanders 2005, p. 265, nos. 2-44, 2-45, fig.6, in a deposit of the second half of the 5th century to 500 or later.
[1343] 97-50:2, from a first half of the 6th century context of construction debris between the cement floors of the bath, is another similar example.
[1344] The combed decoration is similar in technique to examples of LR Amphora 2, or pitchers such as **436**.
[1345] Cf. Slane 1994, p. 146, no. 58, pl. 34, from a deposit of ca. 300. Deep basins in southern Argolid fabric appear in such quantity in the 5th-century lots here that this 4th-century form must have enjoyed continuous manufacture into the 5th century; see also the chronological discussion of the ware in Chapter 4.

with thinner walls and smaller everted rims (**416**; **417**; **418**), but their presence is not very well-attested.

A number of bowls in southern Argolid fabric were also recovered. Among the earliest might be some large bowls whose shape may be related to basins like **409**; one example was found in the eastern construction dumps (**419**), while another, similar profile, but lacking any corrugations, was recovered from the Long Building fills (**420**). A bowl from a deposit that filled a small pit in the (functioning?) Long Building presents a unique open shape with subtly corrugated/ridged walls (**421**), while another bowl with a simple vertical rim was found in the Long Building fills (**422**). A possible example of a folded rim bowl might be residual in the *tepidarium* dump (**423**). Finally, a type of bowl with a wide lower body and narrowing rim, employing a refined version of this fabric,[1346] seems to have been popular in the mid- to late 6th century deposits here, but with one example from the Long Building fills; variations are noted in the angle of the rim and the presence or absence of a foot (**424**; **425**; **426**; **427**; **428**; **429**; **430**).[1347]

A miscellaneous open form recovered from the *tepidarium* dump was also noted in this fabric (**431**), with its large diameter identifying it as a large basin or storage vessel, or possibly a beehive although the typical scarring on the interior is lacking. A number of closed plain wares were also noted including a large one-handled jar in a dump of the second quarter of the 5th century (**432**), as well as a fragment of a possible jug with

[1346] See Chapter 4 for the petrographic analysis of sample P-28.
[1347] An earlier start-date for this form might be possible. **430** was found among the re-deposited Long Building fills and might suggest an earlier 6th-century date, but other late 6th- and early 7th-century material was noted in Lot 1998-029. A comparable bowl from the Athenian Agora, whose fabric was personally confirmed, was recovered from an early 6th-century context; for the bowl, see *Agora* V, p. 117, no. M 355, pls. 33, 71; for the dating of layer XIII, see *Agora* XXXII, p. 300.

gouged decoration possibly modelled on a vegetal motif (**433**).[1348] A small number of pinched- or trefoil-mouth pitchers were found (residually?) in late 6th-century lots (**434**; **435 (P-66)**; **436**), usually with flat bases, bodies combed like the LR Amphora 2, lightly corrugated necks, and strap handles.[1349] Other, later varieties of one-handled pitchers were recovered from the 7th-century pit (**437**; **438**). Other miscellaneous closed shapes include the rim and handle of a small flask from the pre-construction dumps (**439**), as well as miscellaneous bases of closed vessels from various 6th-century contexts (**440**; **441**; **442**). Lids in southern Argolid fabric include a small, flat lid probably intended for use in a LR Amphora 2 (**443**) from a robbing event of ca. 500,[1350] and another small lid from a late 6th-century dump which seemed to be intended for use in a trefoil-mouth pitcher (**444**).

Plain Wares in Northeast Peloponnesian Cooking Fabric

The earliest Late Roman basins in this fabric are interpretations of 4th-century basins in southern Argolid fabric (**445**; **446**);[1351] they are both likely residual in their lot and were uncommon in the late 4th- and 5th-century lots here.[1352] Fragments of deep

[1348] Further fragments of gouged jugs in southern Argolid fabric were also noted in Lot 2001-038, including one example with a similar vegetal motif. For similar gouged vegetal decoration (in an unconfirmed fabric), see *Agora* V, p. 117, no. M 358, pl. 33, layer XIII, re-dated to the early 6th century (*Agora* XXXII, p. 300).
[1349] Such pitchers are first attested to in lots of the late 5th or first half of the 6th-century, including one in Lot 1999-031 (the final foundation fill against the north face of the Long Building), one in Lot 2002-011 (a pre-construction dump), in Lot 2002-008 (a late 5th or early 6th-century robbing trench), and Lot 2002-009 (a pre-construction dump). Comparanda from the Athenian Agora might suggest an even earlier, 5th-century date; see *Agora* V, p. 118, no. M 370, pl. 34, layer XII re-dated to the late 4th to mid-5th century (*Agora* XXXII, p. 300). For another comparable example from the Athenian Agora, see Hayes 2003b, p. 534, fig. 3, dated mid- to end of the 5th century; see also Hayes 2008, p. 441, fig. 5 (right); Hayes 2010, p. 23, fig. 2 (right), where it is dated only generally to the 5th century.
[1350] For a similar example illustrated with a corresponding amphora, cf. *Saraçhane*, p. 66, fig. 22.12.
[1351] 01-11:13 is another example that is similar to **445**.
[1352] A rim as **445** in this fabric was already attested in ca. 300; see Slane 1994, pp. 142-144, no. 50, fig. 10, which seems to be a general interpretation of shallow basins like **405**. **446** seems to interpret deep basins such as **412**; a later development of this interpretation is illustrated in Slane and Sanders 2005, p. 265, no.

"pedestal kraters," found elsewhere in Corinth,[1353] were uncommon in the Panayia Field and mainly appeared in residual contexts, and only in small fragments. The regular manufacture of basins in Northeast Peloponnesian cooking fabric may have begun within the first decades of the 5th century with basins with folded rims ("type 1"), occasionally combed on the exterior face, appearing in small numbers in a variety of early lots.[1354] One rim might be representative of the early beginnings of this form (**447**) (in which case the rim is residual in its context), in which the potter simply increased the proportions of the long-lived folded rim bowl (discussed below).[1355] Examples of the developed form increasingly appear from the second quarter to mid-5th century (**448**; **449**) and continue into the 6th century as they remain the dominant basin form in the various pre-construction dumps and occur in some number in the redeposited Long Building basement fills (**450**).

Certain shallow-bodied basins with hammerhead rims ("type 2"), attested elsewhere in Corinth in the second half of the 5th century to 500 or later,[1356] were likely residual in the rare contexts in which they did appear (**451**). Another residual example of a hammerhead rim, from the 7th-century pit (**452 (P-49)**), aptly illustrates the transition between the folded rims and the next major form which develops sometime in the early

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2-46, fig. 6, but does not appear in the Panayia Field. For the evolution of basins in Northeast Peloponnesian cooking fabric from those in southern Argolid fabric, see Slane and Sanders 2005, pp. 288-289.

[1353] Slane and Sanders 2005, p. 257, nos. 1-41, 1-42, figs. 3-4, in a context of the first half of the 5th century; see also p. 289, n. 82, where the authors explore the possibility that the form of the pedestal krater was a 4th-century development.

[1354] The earliest lots include Lots 1996-045, 1996-070, 2000-007, 2000-011, 2000-018, and 2004-007. The profile is generally as that published in Slane and Sanders 2005, p. 256, no. 1-39, fig. 3, in a deposit of the first half of the 5th century.

[1355] There is, however, a possibility that this basin form began as yet another interpretation of products from the southern Argolid, as rare examples were noted in Lot 2000-011 and 1998-014, in southern Argolid fabric. In this case, this basin form would have had to have developed from basins similar to **405**, as already noted in Slane and Sanders 2005, p. 289. Thus, **447** would have to be viewed as a unique variation.

[1356] Slane and Sanders 2005, p. 265, nos. 2-44, 2-45, fig. 6.

6th century, exhibiting slightly deeper bodies with inwardly-rolled rims ("type 3"); an early example from the fill of the cement feature shows the rolled rim, but it still retains the shallow body (**453**). Rims found residually in later deposits (**454**; **455**) illustrate the formation processes of the rim, which is inwardly-folded and then (normally) smoothed over to hide the point of contact. These residual rims also show the increasing verticality of the wall immediately below the rim, thus deepening the shape. Reconstructed examples from the fills of the Long Building illustrate the full form, with flat base, deep rounded body, horizontal handles, and finished, or nearly finished, rounded rims (**456**; **457**). These basins probably enjoyed a floruit sometime in the first half of the 6th century.

Developing alongside the basins with inwardly-rolled rims is a series of basins with incurving rims ("type 4"). Again, an early example was recovered from the fill of the cement feature (**458**),[1357] with another in the construction fills of the bath (**459**).[1358] These early examples exhibit round(?) bodies that bend inwardly before the rim, then dramatically curve back forming a concavity below an everted, or overhanging, rim; a horizontal handle was placed just below. In later examples the everted rim is rolled underneath in order to form a solid knob, as it appears in numerous examples in the *tepidarium* dump (**460**). If these basins were not already residual in this latter deposit, they soon fell out of use as they only appear rarely, and likely residually, in later lots associated with LRC, Hayes form 10A.

The final large group of basins are those with outwardly-rolled rims ("type 5"). These begin to appear in small quantities in various fills of the Long Building, and are rare in the fill of the pit represented in Lot 2002-006, before being found in greater

[1357] Another rim is found in Lot 2000-038, dated to the second half of the 5th century.
[1358] Other examples include 96-76:16 (lot dated second half of the 5th century), and one rim in Lot 1999-031 (dated mid-6th century).

numbers in the *tepidarium* dump (**461**), and regularly in the post-abandonment features of the bath as well as the latest fills against wall 133 (Lot 2001-009) where they are associated with LRC, Hayes form 10A. Similar basins continue to be found in the 7th-century pit (**462 (P-48)**; **463**; **464**), although whether they are contemporary with the context or not is not certain.[1359] The body of these basins is now nearly vertical, with a rim that is simply rolled back; one of the later examples, **463**, preserves a non-joining, footed base.[1360] Finally, one rim and upper body of a basin (or storage jar?), with no evident relation to this developmental series, was found in the 7th-century pit consisting of a large, probably globular, body which sharply incurves to a square-like rim (**465**).

Other types of plain wares manufactured in Northeast Peloponnesian cooking fabric include the long-lived folded rim bowls. These are attested already in the Middle Roman period, where they appear in a context of ca. 300, as well as in a deposit of the second half of the 4th century from the sanctuary of Demeter and Kore.[1361] They appear here in deposits of the late 4th and early 5th century (**466**; **467**; **468 (P-10)**),[1362] while finds from deposits dated to later in the 5th century (**469 (P-3)**; **470**; **471**), or the late 6th century (**472**), might be residual as the end date of the form is difficult to ascertain.[1363] A rim

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[1359] Another rim, similar to **463** and **464**, is found in Lot 1995-063, the destruction fill over the hypocaust ash layer.

[1360] Footed bases like this are attested on a "globular bin" published from elsewhere in Corinth from a context of the end of the 6th century; see Slane and Sanders 2005, p. 273, no. 3-46, fig. 9. Rims belonging to such vessels are unattested in the Panayia Field.

[1361] For ca. 300, see Slane 1994, p. 142, nos. 44-46, fig. 10; for the Demeter sanctuary, see *Corinth* XVIII.2, p. 126, no. 275, fig. 33, pl. 16, and Slane 2008b, p. 482. Several examples were also recovered from a 4th-century well at Nemea; see Miller 1979, p. 74, pl. 20:a. For 4th-century examples from Argos, see Abadie-Reynal 2007, p. 199, nos. 327.1-2, pl. 48.

[1362] **467** could date as early as the early 4th century and be residual in the lot, as a parallel was noted with Slane 1994, p. 142, no. 44, fig. 10, dated ca. 300.

[1363] Most of these folded rim bowls find similarities with *Corinth* XVIII.2, p. 126, no. 275, fig. 33, pl. 16, dated second half of the 4th century, or Slane and Sanders 2005, p. 265, nos. 2-42, 2-43, fig. 6, from a deposit of the second half of the 5th century to 500 or later; see Williams and Zervos 1982, p. 138, no. 69, fig. 2, with a discussion of typology. A folded rim bowl similar to **471** from the Late Roman graves at Isthmia was dated to the late 4th century; cf. *Isthmia* IX, p. 105, no. 10, fig. 2.93. Excavations at Pyrgouthi

from the Long Building fills might be related to this series (**473**). Other miscellaneous bowls include one with a knob-like rim (**474**) from a late 4th-century context,[1364] an example with a tall, vertical rim from the Long Building fills (**475**), and another with a short vertical rim from the 7th-century pit (**476**). Various miscellaneous open shapes include a possible jar with flaring rim from the construction contexts of the bath (**477**)[1365] and, from the Long Building fills, a storage jar similar in profile to 6th-century basins with incurring rims (see above, "type 4"), but with much thicker walls (**478**), and a thin-walled mug with incised decoration (**479**).

A reconstructed profile of a globular, one-handled pitcher from the fills of the Long Building (**480**) illustrates the general form of a popular shape; the form continues to appear into the late 6th century (**481**; **482**), and in the 7th-century pit (**483**; **484**) along with another variation (**485**). A similar two-handled vessel from the fills against wall 133 might be considered a pitcher or a (table) amphora (**486**), a fragmentary rim and handle from the same general context has no other parallel (**487**), and a small base from the *tepidarium* dump (**488**) might belong to another pitcher or jug shape. Examples of lekythoi in this fabric were limited to a single example from the *tepidarium* dump (**489**), while miscellaneous closed forms include a possible jar from a mid-5th-century context (**490**), and fragments of a closed vessel from the 7th-century pit that was decorated with lines of burnishing and an incised cross (**491**).

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produced numerous examples of folded rim bowls from mid-6th- to early 7th-century contexts, as well as from clearly residual finds from later levels; see Hjohlman 2005, pp. 132, 141, 151, 168, 177, 180, 188, 201, 205, 215, 232, nos. 3, 21, 58-59, 83-85, 106, 121, 159, 184, 197-199, 233-236, 288-289, figs. 4, 14, 24, 37, 44, 48, 55, 68, 71, 80, 95.

[1364] Another example is found (residually?) in Lot 2000-018.

[1365] Other examples are found in Lots 1995-066 (dated late 6th to early 7th century) and 1998-019 (dated mid-6th century).

Plain Wares in LR Corinthian Lamp Fabric

The earliest appearance of plain wares in LR Corinthian lamp fabric is of a bowl with a vertical rim found within a context interpreted as the cleaning from the (functioning?) *tepidarium* hypocaust (**492**).[1366] Another form possesses a short, triangular rim, and appeared in the *tepidarium* dump (**493**), with traces of a fugitive red slip noted on the interior and exterior.[1367] Other variations with flanged rims appeared in late 6th to early 7th-century lots in association with LRC, Hayes form 10A (**494**; **495**). Small dishes manufactured in this fabric appear in the fills of the Long Building (**496 (P-71)**), as well as the *tepidarium* dump (**497**; **498**; **499**).[1368] Fragments of a certain form of small pitcher with a pinched mouth appear in the Long Building fills and continue into the late 6th and early 7th century (**500**; **501 (P-74)**).[1369] Lekythoi were also manufactured in this fabric and often appear as grave goods in other areas of Corinth (see Chapter 4), with one complete piriform lekythos found in Grave 1998-034 (**502**), post-dating construction of the Long Building, and the base of another was found within the fills against wall 133 (**503**).[1370] The rather unique situation of the presence of lekythoi in both Boiotian fabric and this one (as well as Northeast Peloponnesian cooking fabric) has already been noted above.

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[1366] Another example, 95-61:72a-b (P-70), was found in the *tepidarium* dump, and another, **494**, in post-abandonment activity at the bath.
[1367] Another example, 98-29:7 (P-69), was noted in the fills of the Long Building and was also covered in a thin, light red slip; its presence in these redeposited fills might place it as early as the first half of the 6th century, but Lot 1998-029 also contained other late 6th- and early 7th-century material.
[1368] For the published rim of another small dish from an unlotted context associated with the Panayia Bath, see Sanders 1999, p. 465, no. 6, fig. 8. The profile is similar to that of **496 (P-71)**.
[1369] A similar pitcher, probably in this fabric (?), was published from a deposit of the end of the 6th century at Corinth; see Slane and Sanders 2005, p. 272, no. 3-40, fig. 9.
[1370] The basic shape as well as the double set of wavy incised lines of **502** bear some resonance with a red-slipped lekythos recovered from the Athenian Agora, although the fabric and various details of manufacture are obviously different; cf. *Agora* V, p. 118, no. M 367, pl. 34, layer XIII re-dated to the early 6th century (*Agora* XXXII, p. 300).

# CONCLUSION

*Ceramics as Indicators of Activity*

Several of the ceramic forms from the Late Roman Panayia Field are attested here in print for the first time, despite the fact that excavations in Corinth have been conducted for over a century.[1371] One possible explanation for these differences is the proximity to the probable Late Roman wall circuit, thereby implying a level of contact with the consumption habits of the actual inhabited space of the later 6th century that has not been previously available. In any case, each of the five ceramic classes are well represented by a large variety of forms and these attest, even if in a general manner, to the wide array of activities practiced on or near the site. Comparison of material from before and after the mid-6th century is informative as to how these activities might have changed after the reorientation of the city and the urban renewal (construction of the Panayia Bath and the Long Building) that occurred within the Panayia Field.

The quantity and quality of identifiable lamp finds overall were comparatively less than the other four ceramic classes, with the present catalogue often being reliant on the inclusion of very fragmentary pieces in order to document the range of lamp types present on the site. Attic glazed lamps are perhaps the most numerous here; the fragmentary condition of most is possibly the result of the high amount of redeposition on the site during the construction phases. The Attic lamps testify that 24-hour activity, such

[1371] Likewise, the site does not account for every Late Roman form published from Corinth. For example, in comparing the catalogued material here with the pieces published under "assemblages 1, 2, and 3" in Slane and Sanders 2005, one finds that imported fine wares, amphoras and plain wares such as nos. 1-6, 1-12, 1-13, 1-14, 1-32, 1-33, and 1-38 are not attested at all here. Vessels in Northeast Peloponnesian cooking fabric such as nos. 1-46, 2-46, 3-27, and 3-46 are also not attested here at all, while others, such as nos. 1-41, 1-42, 2-44, and 2-45, were only rarely found in the Panayia Field. Although the material from the Panayia Field offers an unparalleled presentation of Late Roman wares at Corinth, no single excavated area of an ancient site can be expected to yield the complete range of ceramics that was available during antiquity.

as habitation (or even squatting) took place in the decades following the destruction of the *domus*. The biggest lull in lamps might be the late 5th to early 6th century, for which period the Panayia Field preserves only a limited amount of Attic post-glazing lamps and earlier types of lamps in LR Corinthian lamp fabric, indicating that whatever activity was occurring on or near the site at this time (such as agriculture, dumping, quarrying of building materials, and construction) was best conducted during the day. After the mid-6th century, however, lamp numbers, now interpretations of North African types, are still comparatively low, possibly indicating that activities associated with the bath and Long Building were not generally nocturnal. Another possibility is that these structures may have employed lighting devices in glass or metal, but these have yet to be positively identified. The continued absence of ceramic lamps in the 7th-century pit is hardly surprising as their use is generally regarded to have universally declined during the 7th century. Finally, it should be noted that no lamps at any period can be confidently connected to any ritual or religious use here, as none were found directly associated with the graves on site.

Fine wares, from varying sources, are nearly always present on the site. Until roughly the mid-5th century, the presence of significant numbers of AfRS (mainly form 50B with some 53B), Attic RS, and the earliest examples of LRC (forms 1/3, 1, and 2) likely suggest the presence of activities such as habitation and dining. But, like the lamps, the limited, and often isolated, finds of Vandal-period AfRS and certain LRC forms (especially early variants of form 3 and form 5), as well as the near-total absence of Attic RS bespeak a drop in fine ware consumption on or near the site in the late 5th and early 6th century. This is not unexpected if the site was being used for activities such as

agricultural practices, dumping, quarrying, and, finally, major construction. Fine wares are better accounted for after the mid-6th century with the return of AfRS products, increased numbers of LRC (later variants of form 3 and form 10A), and Boiotian RS. These are suggestive of the return of dining-related activities on or near the site which continued well into 7th century, as evidenced by the continued presence of AfRS, even if the availability of fine ware sources might have dropped.

Amphoras are continually present throughout the Late Roman period and are suggestive of either the consumption of imported goods or any secondary use. While this ceramic class is always indicative of distribution networks and commercial connections, it cannot be stated whether or not such exchanges were actively occurring within the Panayia Field. Before the 6th century, there are few concentrations of single amphora types, as they more often tended to appear in isolated examples. This begins to change in the construction dump deposits when Riley's Late Roman amphora package begins to appear in regular frequency. After the mid-6th century large concentrations of fewer amphora types are noted, indicative perhaps of more purposeful strategies of consumption or, more likely, the involvement in very specific distribution networks. The 7th-century pit reveals large concentrations of even fewer amphora types; the lack of any significant number of new amphora types at this time suggests that the same distribution networks, although now reduced, were still in use. There may also have been a move to more purposeful storage, or possibly agricultural production, on site as attested by the presence of the fruit amphoras and proliferation of other wide-mouthed amphoras in the same deposit.[1372]

[1372] For the probability of the non-liquid contents of fruit amphoras, see Slane 2000, pp. 305-306; Slane and Sanders 2005, p. 287. But see also Hjohlman 2005, for the significant number of fruit amphoras that were

Of special note is the use of amphoras, namely those from Gaza, as burial containers for neonates or infants placed along the Panayia road and along the north wall of the Long Building. Examples for the similar use of amphoras can be found outside of Corinth, such as at Carthage during the Late Roman period.[1373] A cemetery near an estate in Ashkelon that manufactured Gaza amphoras had an associated cemetery in which infants were buried in Gaza amphoras with broken rims.[1374] In Corinth, the fragmentary container of Grave 99-06 (stored in Lot 1999-055) and the intact container of Grave 00-02 (stored in Lot 2000-010), were also both missing their rims, as were the "jar burials" noted in the Lerna Court in Corinth;[1375] other instances of Gaza burials were noted in the area of Corinth's gymnasium complex.[1376] Elsewhere in Late Roman Greece, a child's burial in an unidentified cylindrical amphora was noted in the Byzantine occupation levels at Halieis,[1377] whereas at Torone in the Chalkidiki both cylindrical and globular amphoras were used.[1378] Such practices may have been based on Early Roman burial customs of infants buried in ceramic vessels, *a vaso* (*enchytrismos*), but the position of the graves directly against the north wall of the Long Building may also have antecedents in a practice known in Italy as *subgrundaria* (or *suggrundaria*), meaning "beneath the

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associated with the wine production facility at Pyrgouthi, possibly suggesting their use in the manufacture of liquid products, but probably not in their transportation.

[1373] See, for example, Norman 2002, esp. pp. 306, 310, 316, and Norman 2003, both with further references and comparanda in other parts of the Roman Empire. The amphora types, however, are not specified.

[1374] Israel 1995a, p. 105.

[1375] See *Corinth* XIV, p. 163, pl. 67:4; see also Sanders 2004, p. 180. The absence of the rims is not unexpected as they were likely broken off in order to insert the remains; see also Papadopoulos 1989, p. 78, where amphora bases are broken off for the same purpose.

[1376] Wiseman 1967b, p. 419, n. 41, pl. 88:d, reports the excavation of two such burials; one amphora (not illustrated) was fragmentary while the other was found intact.

[1377] Rudolph 1979, p. 300, grave 5, and p. 309, no. 10, fig. 4; the LR Amphora 2 was far from scarce on the site, but the preference was nevertheless to use a differently-shaped amphora, strongly suggesting that cylindrical forms were preferred for such burials.

[1378] Papadopoulos 1989, pp. 70-71, figs. 8:b-c, 9:a-b, 10, with further comparanda noted in n. 17. These burials appear in the Torone type I (LR Amphora 2), type II (LR Amphora 1), type III (probably a Black Sea type with a tall ovoid body), and type VI (the cylindrical Africana II "Grande") amphoras, thus displaying the re-use of both globular and cylindrical amphoras for this purpose.

eaves," in which infant burials were placed in proximity to the walls of domestic structures with archaeologically-documented instances reaching as far back as the Iron Age (Plin. *HN* 7.15, 7.72).[1379] Writing in the late 5th century, possibly in Carthage, Fulgentius (Fulg. 7) refers to *suggrundaria* as being among 62 then-obsolete words, defined as the burial of children who died within 40 days of their birth.[1380] Although the term itself may have no longer been in use, some version of the practice may have survived over the millennia and combined itself with the practice of burying infants in ceramic vessels. The exclusive use of Gaza amphoras for this purpose in the Panayia Field likely had no greater significance beyond a perceived appropriateness of the shape, although the fact that these vessels bore wine from the Holy Land may have been a happy coincidence for some.

There seems to be no break in the presence of cooking wares on the site implying that food preparation was practiced on or near the site continuously throughout the Late Roman period. The last vestiges of the tall, deep stewpots of the 4th century are briefly encountered here, with shorter, globular stewpots and, at least in the first half of the 5th century, casseroles being the dominant forms, indicating a change in food preparation. The preponderance of both bell-shaped and flat cooking lids from the late 4th or early 5th century to the early 7th century suggests that different kinds of cooking were also practiced here. Domed bell lids may have functioned as the modern Moroccan tagine, used to slow cook meats and vegetables with the conical lid continuously returning moisture to the bottom. Although the examples here were undoubtedly of local

[1379] See also Becker and Nowlin 2011, p. 34 (my appreciation to E. Adkins for this source).
[1380] See also Norman 2002, pp. 309-310 (my appreciation to K. Slane for this source).

production, their conception may have come from the eastern Mediterranean where domed lids have also been found.[1381]

The near total absence of pans and casseroles by the mid-6th century indicates another change in cooking practices. The rarity of miscellaneous cooking vessels other than stewpots might denote limited forms of food preparation, with the exception of any variety offered by either of the two lid types. The Christian inscriptions that a few bell lids (**374-377**) carry raise the question that these might be signs of ecclesiastical ownership, or simply some form of apotropaic device. *If* these were indicators of possession, the church might also have been feeding people on or near the site, with the possibility raised again that the Long Building may have served as part of a greater ecclesiastical complex (see Chapter 2). The exclusivity of stewpot shapes found here might support this scenario if they were being used by the church for the preparation of large amounts of uncomplicated foods for the feeding of the poor,[1382] and the church would also be able to afford to replace cooking vessels that outlived their use through repeated exposure to open flame.[1383] Cooking wares continue to remain a major component of the ceramic record here as preserved in the 7th-century pit, although the

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[1381] See for example Johnson 1988, pp. 201-203, nos. 639-657, fig. 7-44, for a low convex shape that was typical at the Late Roman site of Jalame in modern Israel. For a similar co-existence of bell-shaped and flat cooking lid types noted at sites in Scythia, see Opaiţ 2004b, p. 57; however, Opaiţ's references to other similar instances of co-existence at the Athenian Agora, Sardis and Thasos are all rather more in keeping with the various shapes of flat lids presented here.

[1382] Although it should be noted that the exclusivity of stewpots among cooking vessels is also a regional phenomenon, as attested by comparison of published assemblages from nearby sites; see below, and Appendix 2, Table 4.

[1383] See Sanders 2014, who draws attention to the substantial cost and effort that went into pottery production and the unlikelihood that the poorest segments of society would have been able to afford, let alone constantly replace, ceramic vessels. Cooking wares, the use of which requires exposure to heat, may have only survived a limited number of uses before replacements were required. A kitchen devoted to the service of the poor would certainly have been able to afford these replacements if it was owned and operated by the church.

absence of bell lids from this context might indicate another change in food preparation or cuisine.

As with the cooking wares, there seems to be a nearly unbroken presence of certain plain ware forms throughout the Late Roman period, even if they appear in different fabrics. A clear example is illustrated with the various basin forms found on site, in which the dominance of products in southern Argolid fabric is clearly noted in the early centuries, overlapping with and then being replaced by products in Northeast Peloponnesian cooking fabric which thereafter present an unbroken chain of typological development. Pitchers and jugs are also continuously noted, even though their sources are far from consistent. Before the mid-6$^{th}$ century, various imports are found in isolated examples, including those from regional centers such as Attica and perhaps the southern Argolid. Afterwards, another unbroken typological chain of development begins in Northeast Peloponnesian cooking fabric, while isolated appearances of imported examples appear in the late 6$^{th}$ and 7$^{th}$ century alongside small examples in LR Corinthian lamp fabric. Plain ware bowls are also continuously noted, at first appearing with folded rims in Northeast Peloponnesian cooking fabric before the 6$^{th}$ century, then appearing in reduced number in the face of new products in southern Argolid and LR Corinthian lamp fabric. The continuous presence of basins, pitchers (or jugs), and bowls is not very notable in and of itself, as these represent basic utilitarian forms that could have been used for diverse daily activities. One exception might be made for the occasional presence of white-plastered surfaces on the interiors of some basins, more often those in southern Argolid fabric, which might be indicative of their use in mixing plaster for use in construction activity; the typically thick walls of the southern Argolid basins that pre-

date the mid-6th century would have resulted in fairly durable vessels that would have been particularly useful for such an activity.

After the mid-6th century new plain ware vessels are noted that were either not present previously, or begin to appear in greater number. These include fragments of mugs, especially those in Boiotian fabric, although it must be admitted that drinking containers manufactured in glass may have already been present on the site. The presence of unguentaria, although in very limited numbers and in various fabrics, is nevertheless notable, as they were not noted previously; as these small containers are usually associated with valuable liquids, such as perfumes, their presence carries a new level of significance to the site that did not previously exist. Small lekythoi now appear, although these are better associated with funerary offerings in two of the grave contexts; their presence is thought to be part of the burial liturgy that took place when the bodies were interred.[1384] Finally, small numbers of small dishes, with diameters of 0.080-0.142 m (in LR Corinthian lamp fabric), are also now found, the purpose of which is unknown. A similar range of plain wares continue to be concentrated in the 7th-century pit, now also with some evidence of Christian inscriptions that may have had the same significance as discussed for the bell lids (see above).

Typically, as most of the material on site was dumped from elsewhere, the intended use (or even secondary or tertiary uses) of the ceramics are not connected to the context from which they were recovered. There are very few lots whose ceramic assemblages might have been recovered from their contexts of primary use. These might include portions of the ceramic material collected from Lot 2006-025, the fill inside the

[1384] See Sanders 2004, pp. 179, 184, 2005, p. 436. Small lekythoi occasionally appeared on site previously (**513**; **514**), but these were not associated with any funerary context.

stone drain of the pool's *castellum*, but the ceramics that reflect the use of the pool as a source from which to draw water pre-date the period under analysis here.[1385] Naturally, ceramics collected from graves are reflective of their deposition in the context in which they were last actively used. The lekythoi from Graves 1998-029 and 1998-034 (**403** and **502**, respectively) were interred with the deceased likely immediately after their use in the burial liturgy (see above). The Gaza amphoras such as **176** from Grave 1999-005, as well as those from Graves 1999-006 (Lot 1999-055) and 2000-002 (Lot 2000-010), were functionally used as containers to hold the remains of the deceased; the ceramic material from Lot 2001-003 also contained the fragmentary remains of a Gaza amphora that, although later disturbed, was effectively still in its context of use as a burial container. If any lamps were placed on or near the graves through later acts of mourning, they were no longer in situ when excavated.[1386]

Of special interest is one lot that might be representative of an in situ domestic deposit belonging to an individual of modest means. Lot 1995-065, from the floor of the post-bath building that was sealed by an earth and tile fill (Lot 1995-064), contained material that is easily in keeping with this interpretation, including a substantial portion of a locally-made made lamp (**25**), several fragments of regional (but not imported) fine wares (including **155**),[1387] a nearly complete locally-made stewpot (**358**), and plain wares that include a rim of a local basin (similar to **461**), a bowl (**494**) and a pitcher (**501 (P-74)**) in LR Corinthian lamp fabric, and a rim of a mug (similar to **400**) and fragments of

[1385] Such ceramics are comprised of numerous pitcher fragments belonging to forms of (probably) the Middle Roman period.
[1386] For such placement of lamps noted elsewhere in Corinth, see Walbank and Walbank 2006, pp. 270-274, nos. 1-6, figs. 2-3.
[1387] Other fragmentary fine wares include a Boiotian flanged bowl, and the flat base of another Boiotian RS bowl. The light green glass pedestal base of a cup (?) was also found.

another closed vessel in Boiotian fabric. The small fragments of amphoras that appear here (including LR Amphora 1 and Palestinian baggy amphora sherds) should be interpreted as incidental finds, as none were preserved enough to indicate that such vessels were part of that particular household assemblage.

Ascribing a great deal of the material from the Panayia Field to the church, as hypothesized above in regard to the inscribed bell-lids, would neatly account for the ability to marshal the necessary resources behind the appearance of all of these wares and forms; it is worth drawing attention once again to the probability that the Long Building had some religious function (see Chapter 2). Such a suggestion, however, must remain conjectural until the ecclesiastical landscape within Corinth's walls is properly ascertained, and it is very likely that portions of this material, especially those pre-dating the construction of the Long Building, are the product of dumping from other, secular, contexts. Regarding the probable identification of the owner of the modest, short-lived domestic structure built against the abandoned Panayia Bath, while the lack of goods from long-distance sources among the material would indicate that that owner did not have access to imports, the regionally- and locally-sourced ceramics were nevertheless of high quality and would have required a standard of living that was at least above subsistence level. What is certain is that the ceramic material from the Panayia Field is not representative of the poorest segments of Corinthian society, as at least a middle- or upper-class level of affluence would have been required to have access to such ceramic material.[1388]

[1388] See again the arguments raised in Sanders 2014.

*Comparison of Regional Assemblages of the Mid-6th to Early 7th Century: The Panayia Field's Distribution Networks in Context*

As noted at the beginning of Chapter 1, the Late Roman ceramic material from the Panayia Field is the most comprehensive for approximately the mid-6th to beginning of the 7th century.[1389] This period comprises the short-lived period of use of the Panayia Bath and Long Building, the graves, the latest non-intrusive material in the Long Building fills, the dumps in the abandoned bath and against wall 199, and the traces of post-abandonment activity in the vicinity of the bath. Furthermore, this activity immediately post-dates any renovation that Justinian and/or his agents conducted within the city, likely including the construction of the new city wall, the western side of which the Panayia Field was, at least, in proximity to. The primary aim of the catalogue was the illustration of as many unique forms as possible with the purpose of presenting the full range of products available in each ware; chronological or form preference, or quantitative superiority were not factors in the selection of material to illustrate. As a result, the catalogued forms for the mid-6th to early 7th century, accounting for approximately 20% of the entire time period under analysis here, account for nearly 40% of the entire 300-year range of the catalogue. Some further discussion focused on the material from this 50- to 60-year period is thereby required.

Other assemblages have been published from other areas of Corinth and other regional sites that overlap with part or all of this period, and offer the opportunity to discuss the associated material within a broader context. These assemblages include: an assemblage from an underground chamber near the Baths of Aphrodite at Corinth, dated

[1389] Further chronological refinement is difficult, as many forms seem to have been in use throughout the duration of this period.

to the end of the 6th century;[1390] Deposit M 17:1 (layer XIII) from a well in the Athenian Agora;[1391] the material excavated from a private bath near Bath A at Argos;[1392] and the reoccupation, use and abandonment levels of the Hellenistic tower at Pyrgouthi, spanning the second half of the 6th century to the early 7th.[1393] The detailed fabric descriptions provided in the publication of the Pyrgouthi finds in addition to the personal examination of much of the material from these comparative assemblages (with the unfortunate exception of Argos) allows for the ability to attribute much of this published material to the regional and/or local wares recognized in the Panayia Field. Comparing these assemblages with the material from the Panayia Field in the tables presented in Appendix 2 can further the interpretation of the use of the site and the general activities and consumption patterns evidenced here. Furthermore, such comparisons can place the long-distance, regional and local network relationships revealed here into a wider context, illustrating that while specific sources might be unique to each site, the network relationships recognized here are broadly comparable to other neighboring sites during the mid-6th to early 7th century.

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[1390] Slane and Sanders 2005, pp. 266-273, "assemblage 3." This material was additionally supplemented with material from the lower level of a pit excavated in Forum Southwest. The material is understood to be more heavily concentrated towards the end of the chronological range being compared here.

[1391] The contents of layer XIII were originally dated by Robinson to the late 6th century; *Agora* V, p. 84. Hayes (1998, p. 15, n. 32) reconsidered the date of the fine wares, feeling that they better fit the "earlier years of the 6th century," with accumulation in the well likely coming to an end in 520-540. See more recently *Agora* XXXII, p. 300, where Hayes, in addition to republishing the fine wares and unguentarium from this layer, provides an early 6th-century date, but notes that the period of use of the well extended to the late 6th century. This material is therefore used with caution here; several correspondences with the material from the Panayia Field suggest that at least some of the material from the well may date within the chronological range being compared here, but the with the acknowledgement that the assemblage as a whole should be kept to the earlier end of that range.

[1392] Appearing in Aupert 1980b, with some of the "Slavic ware" from the assemblage also published in Aupert 1980a. Aupert believed that the material had a terminus ante quem of 585 in connection with the supposed Slavic invasion of that year; see now Slane and Sanders 2005, pp. 266, 294, n. 108, who argue for a later date based on correspondences with their "assemblage 3," dated to the end of the 6th century. The assemblage certainly contains residual material, as there are numerous correspondences with the mid-6th- to early 7th-century material from the Panayia Field.

[1393] Hjohlman 2005.

Table 1 compares the lamps from these various sites. In each case, identifiable imported lamps are rare, although lamps from unknown sources occasionally appear. Generally-speaking, demand for lamps seems to have been satisfied by whatever constituted the most locally-available source, with some limited supplementary supply from nearby regional sources which in the cases here seem to have most often been from the southern Argolid. The question continues to remain, however, whether or not Argos was manufacturing its own lamps,[1394] or if it was relying on regional production in LR Corinthian lamp fabric from the area around Corinth. From this cursory glance, it seems that the picture from the Panayia Field (and other areas of Corinth) is in keeping with urban centers like Athens and Argos which had access to lamps from at least two different sources during this time period, with local (or locally-*available*) sources dominating. The smaller agricultural site of Pyrgouthi seems to have been completely reliant on locally-available sources.[1395]

The fine wares are compared in table 2. In terms of the major long-distance imports (AfRS and LRC), the Panayia Field, like Argos, seems to have had access to generally the same range of forms. The limited number of fine wares listed for Athens and the underground chamber at Corinth are not necessarily in disagreement with this picture, as each assemblage is respectively dated to a point either early or late in the mid-6th- to early 7th-century date range. Some differences among the assemblages from Corinth and those from Athens and Argos are noted when considering the regional fine

[1394] Bovon 1966, pp. 86-87; Aupert 1980b, p. 454; see also Chapter 4, under the discussion of LR Corinthian lamp fabric.
[1395] A similar situation was personally noted among the excavated material from Nemea; the majority of lamps dated to this period seem to have been manufactured in LR Corinthian lamp fabric, although there were several unknowns whose identification in this fabric could not be confirmed. Only one example was noted to have been in southern Argolid fabric. For further discussion, see Chapter 4.

wares from each. While small quantities of red-slipped vessels in southern Argolid fabric seem to have reached each of the three cities, excavations in Corinth have thus far revealed no Central Greek Painted Ware, and excavations from Argos have yet to publish any examples of Boiotian fine wares. Small numbers of these latter two wares have been found in the Athenian Agora, but were not found in the particular assemblage examined here.[1396] Thus it would appear that the major urban centers were supplied with generally the same imported fine wares, but relied on different regional sources for supplementary material; these may be further reflected in the number of fine wares from unknown sources listed among the material from Athens and Argos. The most notable deviation is again noted by comparison with the material recovered from the rural site at Pyrgouthi; for the time period under examination here, the site did not seem to have access to any of the major long-distance fine wares,[1397] although it did have access to some other local or regional sources. The most surprising fact about Pyrgouthi's fine wares is the apparent attestation of slipped wares manufactured in Northeast Peloponnesian cooking fabric which have yet to appear among Corinthian material; evidently high quality imports and regional products, the supply of which must have been such that they were readily and cheaply available, were preferred over slipped table ware manufactured in cooking fabric.

Table 3 compares the amphoras from these various assemblages. The very limited number of amphoras published from the Athenian Agora assemblage exclude it from the following discussion, but they do reveal some level of long-distance networks with the

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[1396] For Central Greek Painted Ware, see Agora XXXII, p. 252, nos. 1456-1457, fig. 44, pl. 70, generally dated to the 6th century; for Boiotian fine wares ("Askra/Thespiae Stamped Ware"), see p. 255, nos. 1474-1476, fig. 44, pl. 72, from only late 5th- to early 6th-century contexts and do not include examples of flanged bowls or interpretations of LRC form 3.

[1397] Although earlier forms of AfRS were recovered from the site, suggesting that access to these goods changed over time.

east and the Aegean. These general sources are more fully illustrated with the material from the two Corinthian assemblages and Argos, which show the same focus on eastern sources, with limited amounts of Aegean sources. Western sources are almost completely unattested in all of these assemblages.[1398] The presence of the Unidentified Amphora 1 in the Panayia Field, as well various unidentified amphoras among the other Corinth assemblage and that from Argos, is a reminder that various other sources could have infrequently supplied these centers. The LR Amphora 2 was present at all of these sites,[1399] but the presence of other regional or local amphoras are not well represented in publications outside of Corinth. The Panayia Field reveals that this part of the site was well-supplied with the LR Amphora 2 and other forms from the southern Argolid, as well as some table amphoras from Boiotia and a great number of amphoras in Northeast Peloponnesian cooking fabric, a picture that is partially reflected by the published material from the other assemblage from Corinth. The overall impression from Corinthian material is that the city was heavily supplied with amphoras from long-distance, regional and local sources. It is currently unclear if a similar situation existed for Athens and Argos, as any Late Roman amphoras uniquely local to either city are currently unrecognized, but the lack of published amphoras corresponding to profiles in Northeast Peloponnesian cooking fabric could indicate that these cities were less dependent on regional sources. Turning again to the rural site of Pyrgouthi, one notes that imported and regional amphoras are extremely rare on the site.[1400] Local amphoras would

[1398] Although see Slane 2000, p. 304, for the presence of African amphoras in other areas of Corinth between ca. 550-600.
[1399] Although not appearing in the assemblage from Athens, numerous examples were personally noted within the storerooms of the Athenian Agora.
[1400] It is also worth noting that the single complete imported amphora is quite small, and therefore easily transportable; see Hjohlman 2005, pp. 142, 159-160, no. 28, figs. 16, 32, similar to the micaceous water jar.

also be considered to be rare on the site if it were not for the large numbers of fruit amphoras in Northeast Peloponnesian cooking fabric, but these were most likely present in order to fill a very specific agricultural function. The discrepancy between the numbers of fruit amphoras, and all amphoras generally, at Pyrgouthi and the assemblages at Corinth aptly illustrate a characteristic difference between urban (with maritime access) and (land-locked) rural contexts. Following this observation further, the increasing number of fruit amphoras in 7th-century assemblages in the Panayia Field may therefore suggest an increasing de-urbanization for this part of the site.

The comparison of cooking wares in Table 4 reveals a striking change in that now the Corinthian assemblages have more in common with the rural site of Pyrgouthi than the urban sites of Athens or Argos. Obviously Corinth and Pyrgouthi were both well within the same orbit of the supply of cooking wares manufactured in Northeast Peloponnesian cooking fabric and did not need to rely on any other source. Many of these same profiles of cooking wares were published from Argos suggesting that it too was supplied by the same source, but published profiles *without* any correspondence to the recognized range of forms in this fabric also suggests that Argos was supplied by additional sources. Limited evidence from the Athenian assemblage might also suggest that that city was supplied by various sources, but with absolutely no forms in Northeast Peloponnesian cooking fabric recognized in this or (currently) any other assemblage at Athens. Despite any differences in fabric, it is important to note that all of these assemblages present the same limited range of shapes of cooking vessels as the Panayia Field, being generally limited to stewpots and flat lids. The absence of casseroles or other miscellaneous cooking forms in the Panayia Field may therefore be reflective of cooking

practices in general, and not be limited by any specific context of the Panayia Field. It is also of some note that the bell lid form is present at the urban sites of Corinth and Argos, but is absent at the rural site of Pyrgouthi where the repertoire of forms in Northeast Peloponnesian cooking fabric is otherwise nearly identical to that of the Panayia Field, thus making its absence quite marked. If the purpose of the bell lid was in fact for the slow cooking of meat and other foods (as hypothesized above), the process would have required a greater amount of time and, perhaps, combustible fuel. It is therefore tempting to speculate that this ceramic form carried some socio-economic aspect that caused it to be more readily found in urban contexts.[1401]

Finally, Table 5 compares the numerous plain wares from these assemblages. Imported plain wares, while appearing in limited number, are not a significant component of the ceramic character of the Panayia Field or the underground chamber at Corinth, appearing only infrequently. Some imported plain wares are also noted at Athens and Argos, but many of these could just as easily be products of currently unrecognized sources that are local or regional to these sites. Unguentaria were a somewhat common import, with those from the Panayia Field and Athenian Agora assemblages sharing the same source as the Micaceous Water Jar. Examples of so-called "Slavic Ware" were absent from nearly all of these assemblages, with only a single piece found in the Panayia Field; Argos stands out in this regard for having produced several examples. The import of Attic ware, notably the gouged jug, was discontinued in Corinth during the course of the 5th century (and perhaps also at Argos?), but continued to be among the locally-

[1401] Any economic implications arrived at through such a comparison should be very carefully considered, as the ability to afford to replace the large number of cooking vessels found at Pyrgouthi as they became over-used would not have been insignificant expense; see above. Urban versus rural should not automatically be equated with wealthy versus poor.

available wares in the Athenian Agora. Corinth alone seems to have been supplied with plain wares from Boiotia, namely mugs and lekythoi,[1402] while a number of mugs and various small vessels were supplied to Argos in currently unidentified (local, or regional?) fabrics. Although appearing in the Panayia Field far less frequently than examples in Northeast Peloponnesian cooking fabric, plain wares in southern Argolid fabric are attested in numerous different shapes; only some of these can be confidently identified among the assemblages from Athens and Argos, most often including a series of bowls similar to **424-430**, pitchers, and perhaps a type of bulbous, painted jug that was not found in the Panayia Field but appears in some number at the cave at Andritsa.[1403] However, the overall lack of more plain wares that can be identified as southern Argolid products at Argos is a puzzling feature of its assemblage, and suggests that a more local source was in place to properly supply the city.[1404] The majority of plain wares in the Panayia Field and in Corinth generally were manufactured in Northeast Peloponnesian cooking fabric, and seem to have accounted for the need for basins and pitchers/jugs especially, with small numbers of bowls and other small vessels; drinking vessels such as mugs are noticeably absent, perhaps accounting for the import of Boiotian products. As with the case of the cooking wares, Corinth and Pyrgouthi were within the same orbit of distribution of Northeast Peloponnesian cooking fabric and the same shapes are generally

[1402] Material from the Hill of Zeus cemetery in Corinth indicates that the supply of these shapes from Boiotia were more frequent than the Panayia Field or other published assemblages from Corinth reveal.
[1403] Among the material from Athens, nos. M 355 (bowl), M 371 (pitcher) and M 368 (lekythos) were personally confirmed. Although M 362 (a painted jug) was not personally examined, the published photograph bears a very striking similarity to a jug recovered from the cave at Andritsa; cf. Kormazopoulou and Hatzilazarou 2010, p. 175, fig. 7:6. Similar fragments of painted jugs were also published from Argos; cf. Aupert 1980b, p. 442, nos. 333-338, fig. 47. Personal examination of the material from the cave, although lacking clean breaks by which to properly ascertain the fabric, did not exclude the possibility that these jugs were manufactured in southern Argolid fabric.
[1404] Recognized basins in southern Argolid fabric for this and earlier periods are especially noticeably absent from the publications of ceramics from Argos generally, despite the geographic proximity of Argos to the source of production; see the discussion regarding the distribution of southern Argolid products in Chapter 4.

present at both sites with almost no recognized regional or long-distance plain wares at the rural site;[1405] the absence of the latest form of basin in this fabric at Pyrgouthi, here identified as the type 5, is another mystery, especially given the longevity of the site into the 7th century. Plain wares in the Panayia Field were additionally supplemented by vessels in LR Corinthian lamp fabric; corresponding vessels with the same profile are found at Argos and account for nearly every shape found here, raising significant questions as to why assemblages in Corinth and Argos should share more similarities in this ware rather than in Northeast Peloponnesian cooking fabric, the forms associated with which are nearly completely unattested at Argos beyond the globular pitcher.[1406] Finally, unique among the plain wares, the small lekythos was supplied to the Panayia Field in numerous fabrics, including Boiotian and LR Corinthian lamp fabrics, with one example in Northeast Peloponnesian cooking fabric.[1407] Among the assemblages here, only that from Athens included a similar form, possibly from a local or regional source; the lack of any funerary context associated with the assemblages compared here likely accounts for the lack of further comparable vessels.

The assemblage from Argos is a reminder that vessels in glass could also comprise a significant portion of an assemblage during this period.[1408] Despite its limited

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[1405] The one exception is a single globular, painted jug, which at first sight bears some superficial similarity to M 362 from the Athenian Agora (see note, above). However, the published fabric description does not seem to suggest that it was manufactured in southern Argolid fabric; see Hjohlman 2005, p. 184, no. 138, figs. 51, 62, who compares the piece to M 365 from the Athenian Agora.

[1406] Like basins in southern Argolid fabric, recognizable basins in Northeast Peloponnesian cooking fabric for this and earlier periods are also noticeably absent from the publications of ceramics from Argos, despite the presence of numerous cooking wares as attested by published profiles of corresponding shapes; see the discussion regarding distribution of this ware in Chapter 4; see also comments in Slane and Sanders 2005, p. 289.

[1407] Again, the frequency of the lekythos in Boiotian and LR Corinthian lamp fabrics is underscored by their presence among the Hill of Zeus cemetery material.

[1408] Aupert 1980b, pp. 443-449, nos. 341-425, figs. 48-50. Categories of vessels include ovoid/globular bottles with tubular necks (nos. 341-379), squat bottles (nos. 380-385), small ovoid/globular bottles with

access to imported and regional ceramics, the material from Pyrgouthi also contained some glass vessels within it.[1409] The preponderance of small closed shapes among the glass finds from both sites suggests that they supplemented the small numbers of ceramic drinking vessels; only a small number of ceramic mugs (but also a number of small bowls possibly utilized for drinking) were identified at Argos,[1410] and a small number of ceramic drinking vessels are among the material from the rural site of Pyrgouthi.[1411] A similar situation seems to have existed in the Panayia Field; although the glass finds could not be included in this study, brief examination alongside the lots revealed the presence of numerous diagnostic pieces that may belong to drinking vessels and other small shapes, in addition to a large quantity of window glass. Identifiable ceramic drinking vessels were not commonly identified here, with the notable exception of the Boiotian mugs (**400**; **401**); it is also possible that the series of small bowls in refined southern Argolid fabric (**424-430**) may have served a similar purpose. It thereby seems clear that glass vessels were an important component of mid-6th- to early 7th-century assemblages in the region around Corinth and served an important utilitarian need that is not fully documented by the ceramic evidence alone. Late Roman glass factories in the area of Corinth and its surrounding regions are not currently known, but given the fragile nature of the vessels one can surmise that they would not have travelled far to their place of consumption. Workshops that formed the imported raw material may have existed in

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short flaring necks (nos. 386-401), skyphoi or bowls (nos. 404-409), stemware (nos. 410-420), jugs or oinochoes (nos. 402-403, 421), bottles, goblets or lamps (nos. 422-424), window glass (no.425).

[1409] Hjohlman 2005, pp. 151, 170, 206, 224, nos. 49 (beaker), 98 (body fragment), 209 (stemmed glass goblet), 271 (bottle), 272 (beaker), figs. 23, 39, 73, 88.

[1410] For identified cups, see Aupert 1980b, pp. 426, 428, nos. 217-220, fig. 40; various small bowls are illustrated on figs. 38-40.

[1411] For vessels identified as drinking shapes (or are similar in appearance to such vessels) from Pyrgouthi, see Hjohlman 2005, pp. 176-177, 180, 189, 201, nos. 104-105, 108 (?), 120, 167, 191 (?), figs. 44, 48, 56, 69; no. 104 can likely be dated before the mid-6th century based on a very similar, uncatalogued rim (96-76:8) recovered from a robbing trench in the Panayia Field dated to the second half of the 5th century.

the hinterland of most major urban centers, mass-producing glass vessels for general consumption;[1412] in such a scenario, glass vessels, at least in terms of the finished products, would be counted among locally- or regionally-available products.

Through the comparison of various contemporary assemblages published from Athens, Argos, and Pyrgouthi, it is made clear that these sites, at least the urban sites, had connections to their own long-distance, regional and local networks during the mid-6th to early 7th century that operated similarly to those documented here for Corinth. The specific sources that each site drew upon, however, were unique, although some overlap in some wares or specific forms are occasionally noted, especially in regards to imports to urban sites within the same region. Each site deviates from one another in the local and regional resources that it drew upon, strongly indicating that these networks were primarily formed by opportunistic factors, such as geography or pre-existing maritime routes, rather than preferential selection. This study of the ceramic material from the Panayia Field shows that thorough typological and fabric analyses can elucidate the nature of a site's local and regional network connections to a significant level of detail; a similar program of analysis practiced at these other regional sites would not only reveal their own unique networks, but also further clarify the regional networks in which Corinth operated.

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[1412] Glass-related distribution could include the manufactured products or raw materials. The Belus River, near Akko and just north of the Late Roman glass factory at Jalame in Israel, was famous in antiquity for the quality of its sand that was used in glassmaking; see Weinberg 1988, pp. 24-25, n. 1; see also Plin. *HN* 5.75; Strabo 7.16.25; Joseph. *BJ* 2.10.2. Glass was worked in two stages, with glassmakers receiving not the raw sand, but smaller portions broken from a large block created after the raw material was initially melted together. Thus, good sand travelled to a processing installation, portions of raw glass from the initial melting travelled to the glassmakers, and finished products were then distributed for consumption. See also Kingsley 2001, p. 46, who feels that while the raw glass was likely sold to regional shops in Palestine, glass played a small part in overseas markets.

*Conclusion*

Although typically disassociated from its primary, functional contexts and original owners, the ceramic material from the Panayia Field is nevertheless fairly informative regarding the various types of activities that occurred on or near to the site, while changes in the ceramics from one period to the next can occasionally be reflective of changes in the types of activity. Comparison of a cross-section of the material with contemporary material excavated from other parts of Corinth and other regional sites reveals that the Panayia Field's reliance on local and regional networks, while unique in its details (but also with occasional overlap), was in keeping with general patterns of production and distribution seen elsewhere. Having thus placed the pottery, and thereby the site (both the Panayia Field specifically, and Corinth generally), in the context of its long-distance, regional and local networks (Chapters 3 and 4), and having now both explored the various activities that are attested by the ceramics and tested the regional applicability of such patterns of distribution networks, the following and final chapter will now turn to the various social and historical implications that the study of the ceramic material from the Late Roman Panayia Field has revealed.

# CHAPTER VII. FINAL REMARKS

## SUMMARY

In the course of this study of the ceramic wares from the Late Roman Panayia Field in Corinth, this dissertation has characterized the forms and fabrics related to each, examined the mechanisms responsible for their distribution, reconstructed the probable routes by which each travelled to Corinth, and demonstrated various relationships in their distribution and consumption (Chapters 3 to 6). In addition to including the better-recognized range of long-distance wares in this study and considering them within the context of Corinth's role as an emporium and a node along both official *annona* and commercial routes, a significant contribution to the understanding of the city of Corinth and the northeastern Peloponnese is made through the characterization of the major regional and local wares. These include the wares originating from Attica, Boiotia and the southern Argolid, as well as the locally-sourced wares whose products were manufactured in Northeast Peloponnesian cooking fabric and LR Corinthian lamp fabric. The comprehensive presentation of this material underscores the fact that a study of any city's history and economy benefits from taking all three levels of production and distribution into consideration lest risking an incomplete picture; while the presence or absence of imported goods is certainly of great economic importance and can comment upon a site's level of connectivity within systems of long-distance distribution, the study of regional and local wares highlights the networks that would have impacted the city on a daily basis. Furthermore, preliminary comparison with other regional sites reveals that the tripartite levels of network connection characterized at Corinth are also found more

broadly, inviting the opportunity for future in-depth analyses to explore the economy and networks of the northeastern Peloponnese as a whole.

These ceramics have also been examined in regards to revealing the specific activities that took place in the area of the Panayia Field (Chapter 6). Unfortunately, despite the array of general activities indicated by the pottery, the specific uses of the Panayia Field are typically best told through the built features, which include evidence for habitation (5th-century house, reuse of the bath), public gathering (bath), monumental display (Long Building), and ritual/mortuary activity (graves). When the area was not actively being used for a specific purpose, the land was available for low scale activities such as agriculture, the quarrying of building materials, or dumping (occasionally involving the digging and filling of pits). There is little direct association between the activity that took place within the built features and the ceramic material that was recovered from their excavation, as the latter was often redeposited from its primary context through acts of dumping. But the dumping shows a diverse cross-section of activities, the range of which is indicative of the discarded refuse of the middle- to upper-class residents of a thriving urban community. The remnants of everyday utilitarian activities, commercial enterprises, and even life-and-death itself found themselves mixed together in the common disposal grounds of the Panayia Field. While the proximity of the site to Corinth's Late Roman circuit walls, as suggested by G. Sanders (see Chapter 1), may impart a greater significance to the material remains and their corresponding activities as they would belong to an as-yet little understood new center of urban activity (Plan 1), this presentation of the material from the Panayia Field nevertheless currently

constitutes the most exhaustive and comprehensive illustration of Late Roman Corinth's ceramic products and network connections.

## FURTHER THOUGHTS: POSSIBLE ECONOMIC, SOCIAL AND HISTORICAL IMPLICATIONS BASED ON THE RECOGNITION OF REGIONAL AND LOCAL CERAMICS

### *Introduction*

Having characterized the regional and local wares, identified their associated products, and addressed nearly every aspect of their production and distribution as the present state of evidence allows (Chapter 4), two questions yet remain: why are regional and local products so readily visible in these deposits, and what greater insights are revealed by their presence in regards to the city of Corinth and its neighboring regions? The following section is admittedly somewhat speculative, but builds upon the models and case studies presented in Chapter 1 and is aimed to explore the economic, social and historical implications that this material brings to light. Most critically, this section argues that the pronounced appearance of the regional and local ceramic wares observed in the Late Roman Panayia Field was tied to a context of economic stability, if not growth, as opposed to one of desperation or crisis.

### *Itinerant Potters, A Ceramic* Koine*, and the Role of the Middleman*

Among the regional and local wares, it was uncommon that the same shape appeared in the Panayia Field in different fabrics.[1413] For example, imported lamps, either

[1413] An interesting exception exists with the small funerary lekythoi, which are here noted in Boiotian fabric (**403**), Northeast Peloponnesian cooking fabric (**489**), and LR Corinthian lamp fabric (**502**, **503**). The material from the Hill of Zeus cemetery in Corinth presents a similar picture, and with even closer morphological parallels; of the 32 lekythoi recovered, preliminary examination revealed that 13 are in

from regional or long-distance sources, become increasingly rare here after the mid-5th century as local production in LR Corinthian lamp fabric was preferred, even despite the availability from other regional centers.[1414] In another example, while the attested array of products manufactured in southern Argolid fabric was quite large (see Chapter 4), some of the catalogued shapes appear in the Panayia Field as only rare or solitary examples, including red-slipped fine wares (**145**; **146**), fruit amphoras (**268**; **269**) and circular lamps (**11**; **12**).[1415] The paucity of these finds implies that they were not regularly imported into the Panayia Field as other sources met the needs for these shapes, but they were being *produced*.[1416]

The evidence suggests that ceramic production in a number of regional centers witnessed a growth in the range of products available from each. Although each industry may have strove for self-sufficiency,[1417] gaps in production could remain unfilled if regional or long-distance options remained both accessible and affordable. The growth of the array of products manufactured at regional centers implies, on the most basic level, that there was an increased demand for ceramics. Concurrently, an increase in demand

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Boiotian (or similar?) fabric, while 12 are in LR Corinthian lamp (or similar?) fabric. Either local production was not enough to satisfy demand, or local production was begun in order to supplement the already high demand for this shape. Alternatively, the coarse, undecorated versions in LR Corinthian lamp fabric may have been regarded as an inexpensive option, while the Boiotian lekythoi, with their finer finish, might have represented slightly more luxurious products.

[1414] See Chapter 4 for the discussion regarding the evidence of the production of North African-inspired lamps in numerous neighboring and nearby regions in addition to those produced locally in LR Corinthian lamp fabric.

[1415] Some fragments of pitchers in southern Argolid fabric (**434** to **438**) as well as late forms of basins (**411**, **415** to **418**) also appear in the 6th and early 7th century, but are likewise rather low in number. Beehives (found at Isthmia), lamps interpreting African prototypes (found elsewhere in Corinth), and burial lekythoi (found elsewhere in Corinth and in the Athenian Agora) are not attested in the Panayia Field at all (see Chapter 4).

[1416] There is also evidence from Pyrgouthi that slipped fine wares were also manufactured in Northeast Peloponnesian cooking fabric; their absence in the Panayia Field indicates that imports in finer fabrics (AfRS, LRC, and Boiotian RS) were easily and affordably available through long-distance connections and were generally better-preferred. For slipped wares from Pyrgouthi in "fabrics 2 and 3," equated to a "medium coarse" version of Northeast Peloponnesian cooking fabric, see Hjohlman 2005, pp. 188, 191, 208, 232, nos. 159, 181, 212-213, 288, figs. 55, 58, 74, 95.

[1417] See, for example, arguments for such a scenario at Delphi and Demetrias; Pétridis 2007, p. 53.

creates more work for potters. If this demand was to be met, either new potters had to be trained (either apprentices or perhaps slaves), products had to travel more often, or existing potters had to become more mobile. The role of itinerant potters deserves some consideration in this regard.[1418] The best direct evidence for itinerancy is from Egypt where papyrological evidence preserves contracts for potters to produce a given amount of vessels ("wine jars," probably amphoras) within a specified period using the resources provided by another's estate.[1419] These potters were itinerant, were possibly organized into a form of guild, and were distinct from those who operated their own workshops.[1420] Although a one-to-one comparison between production in Egypt and other parts of the Mediterranean should be made cautiously, the simple attestation of itinerant amphora-makers in one part of the empire could help to explain, for example, how the form of the LR Amphora 1 or baggy Palestinian amphora could be replicated in different fabrics over wide areas while retaining the same basic forms;[1421] the potters could simply have travelled to the agricultural centers where their work was needed.[1422] Although creating the shapes that they were familiar with, the itinerant potter would also have dealt with

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[1418] For the itinerant craftsman and his role in Mediterranean connectivity, see Horden and Purcell 2000, pp. 346, 370, 386.

[1419] Cockle 1981, publishes three contracts of the mid-3rd century from Oxyrhynchus for the manufacture of large numbers of "wine jars" of three different capacities, the vast majority in each case being those of the mid-range (4-choes) size. The first contract, published in full, details the manufacture of 15,300 jars per year for two years, while the remaining two, representing contracts for only one-third and one-quarter of the total ceramic production, respectively, agree to produce 8,135 and 4,115 jars. See also Gallimore 2010, pp. 168-169.

[1420] Cockle 1981, see esp. p. 91 for guilds; Gallimore 2010, pp. 159, 161, for itinerant versus sedentary craftsmen and the occasional mention of a *koinon* of potters, and see generally for the applicability of the manufacturing processes of amphoras as described in Egyptian papyri to other centers of the Mediterranean world.

[1421] See, for example, van Alfen 1996, for discussion regarding volumetric standardization of amphora shapes.

[1422] A similar, but less formalized, system can be cited from Early Modern Thrapsano, Crete, where pithos-makers from the village seasonally embarked to other parts of the island in order to manufacture their wares for other localities using the local clay sources. See Voyatzoglou 1972, 1973, 1974, 1984; Day 2004; Psaropoulou and Simantirakis 2007; see also Hammond (in prep.).

different raw materials and catered to new local markets, thus introducing opportunities for variation.[1423]

Another, less likely, scenario for the manufacture of similar shapes at numerous different centers could be one based on direct inspiration, as one potter may admire the product of another and seek to replicate it. Such a scenario, however, not only requires the attachment of a significant artistic concept to the craft of ceramic production in the ancient world, but also requires the potter's presence at the commercial setting where the competing product is being sold and can be viewed. While this may not seem too implausible, it contradicts the model of nucleated workshop production that these local and regional wares seem to follow in that potters at this level made use of a middleman to sell their goods.[1424] In another scenario, J. Poblome, in his reconstruction of the local ceramics production at Sagalassos, places most of the decision-making regarding morphology upon the elite landowners who controlled access to the raw materials,[1425] but such a level of micromanagement on the level of the landowners seems unlikely as it is ill-suited to stand as an explanation for such a wide-spread phenomenon.

Whether or not similar regional morphology can be explained by itinerant potters, the finds from the Panayia Field nevertheless testify to the fact that Corinth and its surrounding regional centers were linked to one another and the greater Mediterranean world in a sort of shared tradition (or common language) in regard to ceramics. Similarities in form may be termed as "imitations" in ceramic scholarship, thus implying

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[1423] Pétridis 2007, p. 53, argues against the possibility of itinerant potters in Delphi and central Greece, mainly in terms of lamp-makers, based on differences in details that imply that the molds did not travel from place to place.
[1424] Peacock 1982, pp. 9, 40. See also Poblome 1996, pp. 92-95, 2004, pp. 495-498, who, however, postulates some relation between potters and commercial agents in order that the former would be able to respond to consumer demand.
[1425] Poblome 1996, pp. 78-79, 96, 2004, pp. 499-500, 2006; Poblome et al. 2008. The elite landowners also served the role of the contractors in the Egyptian papyri.

the existence of a prototype and a derivative; in the course of this analysis, the term "interpretation" has been employed in order to make allowance for a more flexible concept. In 1975, G. R. Edwards, in his analysis of Hellenistic pottery from Corinth, speculated upon the possibility of a "superficial *koine*" in Greek pottery that could account for the existence of similar shapes in different fabrics at the same time, although still relying on the idea of a single prototype.[1426] The concept of the ceramic *koine*, or other similar concepts that denote a shared morphological knowledge among geographically separate potting centers, continues to appear in recent scholarship on Late Roman pottery.[1427] While this concept is applicable to the situation here, it does not seem to address the process by which morphological knowledge was actually *transmitted* over geographic distances, and underplays the significance of any variations that similar forms may actually exhibit. In light of the material from the Late Roman Panayia Field, this concept has been reconsidered and a slightly revised definition is offered. A ceramic *koine* is defined here as the transmission, by whatever means, of conceptual morphologies from one potter (or, more generally, a center of ceramic manufacture) to

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[1426] *Corinth* VII.3, p. 7; see also pp. 6-7 for his warnings regarding the dangers of dating the same shape in different fabrics to the same date. Edwards qualified his concept of a *koine* as "superficial," and not very closely knit, due to his view that the shapes in question were "probably first imitated in the different centers at various stages of development," and once adopted underwent their own course of development that may have went faster or slower than that of the prototype.

[1427] Poblome's concept of a "model of negotiation" for the potters at Sagalassos takes into account elite fashions and popular tastes (see discussion, Chapter 1); Poblome 2006. Pétridis, remarking on the local production at Late Roman Delphi, saw mainland Greece as a place where, in the face of decreasing distribution of long-distance products, "creative exchanges or mutual imitations" are still noted. Thus, while smaller settlements like Delphi became more self-sufficient in their ceramics and imported far less, they were not isolated from other workshops or international fashions; local potters were still able to display a knowledge of a common repertory of motifs and adapt their productions to the types in fashion; Pétridis 2007, p. 53. See also Slane 2008a, who has recently begun to recognize a broadly shared *koine* in the Corinthian Gulf and Adriatic Sea, noting several Early to Late Roman ceramic forms that were likely manufactured at several sites. Poblome and Firat 2011, p. 54, have employed the term to broadly define the socio-cultural affiliations stemming from the major fine wares of AfRS, LRC and LRD that smaller-scale ceramics producers could "join;" the authors connect their concept of a ceramic *koine* with Bonifay's (2004, p. 7) concept of "faciès géographiques" of pottery production which was used to link groupings of similar chronological and physical details shared amongst various North African wares.

another, allowing for minor variations or modifications but staying true to a basic concept that can be recognized among the products of different ceramic manufacturers despite any geographic distance. A linear or diachronic development should not be assumed, but rather a back-and-forth dialogue of renegotiation, or re-*interpretation*. Theoretically, the *koine* reaches its limit when the variations make the morphology unrecognizable. The search for a prototype is less important in this revised concept as it would mitigate the effects of each act of transmission in which the morphology is reinterpreted.

Material from the Panayia Field offers numerous examples that may be illustrative of the existence of the concept of a ceramic *koine*. For the sake of simplicity, the following examples are presented in a prototype/derivative fashion, but numerous intermediary stages in each shape's transmission may have occurred, and the importance lies in the variations/modifications that occurred in each act of transmission. In the 4th century, Attic fine wares are considered to have been modelled on AfRS forms[1428] while in the 5th it seems that LRC, Hayes form 1 (**74** to **75**) may have provided some additional inspiration to Attic shapes (**126** to **128**). The Attic potters were not striving for exact replicas, which would certainly have been possible if they were indeed employing molds in the manufacture of fine wares as is believed.[1429] LRC, Hayes form 3 (**82** to **97**) may have served as the loose inspiration for the vertical rim bowls produced in Boiotia (**130 (P-85)** to **135**), and while the Boiotian flanged bowl bears some relation to AfRS, Hayes form 91 (**47**), it was freely interpreted, evidently several decades later, with new decorative techniques such as stamps or combing on the flange (**137** to **142**). Other (possibly) Boiotian products, such as interpretations of AfRS form 104 (**57** to **65**), are

[1428] Hayes 2008, p. 442, 2010, p. 25.
[1429] Hayes 2008, p. 443, 2010, pp. 22-23.

less creatively unique but are still not direct copies (**154**; **155**). Lekythoi are attested in the Panayia Field in Northeast Peloponnesian cooking fabric (**489**), LR Corinthian lamp fabric (**502**; **503**) and Boiotian fabric (**403**), with similar products manufactured in refined southern Argolid fabric found in other areas of Corinth and in Athens, and with further examples from Athens and Delphi being representative of other sources still (see Chapter 4); variation is achieved in the mixing of individual elements.

Potters working at different workshops were free to interpret in the details based on what was generally dictated by their own skills, material, or local tastes; even if elite landowners did have some influence in the morphology of locally-produced wares, it is difficult to imagine that the potters were unable to introduce some variations. The morphology of the ceramic vessels produced within the *koine* to which Late Roman Corinth belonged was not closely regulated, nor was the goal of the potters operating within this *koine* to slavishly manufacture copies of international types. Basic morphological concepts were clearly shared among these various manufacturers, but whether these concepts were transmitted by means of itinerant potters or another process entirely is currently unknown. The question remains, however, whether or not lamps should properly be termed as "imitations." For example, although most of the individual elements that appear on LR Corinthian lamps (**23** to **27**) also appear on North African lamps and suggest direct copying,[1430] comparable examples from various centers on the Greek mainland have been argued to significantly differ from one another suggesting that

[1430] For ivy-leaves on the rim, see Bonifay 2004, types 54-57, 64-66, 68-70; for the wreath pattern on the rim, see types 58-59, 61, 65, 70; for the right-facing, thick-bodied Chi-Rho with widened ends in the discus, see types 54, 57, 64, 66, 68. The same jeweled crosses with dots at the ends of each arm are not illustrated in Bonifay 2004. The preserved portions of **27** are additionally mirrored in a lamp mold found in Tunisia suggesting that surmoulage of African prototypes may at times have occurred; see Bussière 2005, fig. 1:a-b. My thanks to J. Bussière for this reference.

local lamp-makers showed some degree of innovation in creating their own lamp moulds.[1431] At any rate, a ceramic *koine* certainly existed among the potters of central Greece. As more regional wares are characterized and their products are presented in typological studies, the relationships among the different workshop centers and their interactions through undiscovered regional networks will be made clearer.

Given the presence of this ceramic *koine* that was evidently populated with innovative potters, the observation introduced at the beginning of this section, namely the fact that the same shapes generally did not appear together in different fabrics in the Panayia Field, seems to be a rather curious phenomenon. A possible reason for this situation may be found in the model of local production that J. Poblome has reconstructed for the site of Sagalassos in Asia Minor (see Chapter 1). Poblome suggested that the local landowning elite, wishing to take advantage of the resources on their land, encouraged the development of craft industries such as pottery production. Poblome postulates that these workshops were organized on Peacock's model of nucleated workshops in which specialized potters relied on middlemen for the distribution of their products. These middlemen bought the goods directly from the potters' workshops, or purchased them wholesale at large markets, in order to sell at urban shops, rural markets or even fairs.[1432]

In this scenario, the middleman would know what he has collected for his own stock and may be less likely to acquire the same shape in different fabrics. This would especially hold true if he was gathering goods directly from a single workshop at which

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[1431] See Pétridis 2007, pp. 52-53, who discusses the general similarities and, more importantly, the differences in the products of the various lamp-producing centers of Athens, Corinth, Delphi and Demetrias. Due to the differences, Pétridis feels that lamp molds did not travel, nor does he allow for surmoulage of the same prototypes. Compare the earlier observations by Wohl (1993, pp. 135-137), who saw a "free adaption" of North African-modelled lamps in Corinth, and Greece generally, starting in the early to mid-6th century, but one that was devoid of variety.
[1432] Peacock 1982, pp. 9, 40-43; Poblome 1996, 2004, 2006.

only a single fabric was worked. His chosen mode of land-based transportation may have also determined his maximum load, and issues of time and/or cost may have dissuaded him from seeking to diversify his hold of merchandise. Could the middleman have exercised any consumer choice himself based on his own knowledge of the fashions of his target market, or did he make his acquisitions simply based on what was most readily available? The gathering of merchandise in the most opportunistic manner seems most likely; in the case of Corinth, vessels in Northeast Peloponnesian cooking fabric likely represented the most cost effective ware to obtain, hence its dominance on the site. As the development of forms in this ware increased, such as the adoption of basins in the repertoire, the same middleman may have been less likely to obtain the same shape from imported sources, such as basins from the southern Argolid. This scenario suggests that, despite any innovation displayed by the potters at different centers, the products of these regional industries were not desired for any distinctive aesthetic value; rather, their distribution was dependent on their ability to adequately fill a required utilitarian need and their proximity to markets relative to other sources of the same shape.

*The Expansion of Local Industry*

With the re-assessment of official distribution routes in the first half of the 5th century (see Chapter 1),[1433] and the state's intensification of olive oil production in the southern Argolid for the *annona*, it is clear that Corinth's network connections were significantly rearranged. It may be no coincidence that imported cooking and plain wares soon disappeared; all of the various but less-attested imports of these classes drop away

[1433] See Scheidel 2014, p. 26, who now ascribes the division of the empire in 395 to deep-seated imbalances in the connectivity between the eastern and western halves of the empire.

during the course of this century while imported cooking vessels in Late Roman micaceous Aegean ware (**298** to **307**) are unlikely to have survived past ca. 500.[1434]

The presence of imports is usually interpreted as a sign of a strong economy, while their absence signals crisis and a gap in supply which a desperate population must fill by resorting to local production. An alternative view would be to see local production as the ability to exploit natural resources resulting in a state of self-sufficiency, as opposed to a forced reliance on imports due to limited local resources.[1435] While the need to fill deficiencies in availability might serve as an initial impetus, thriving local production can signal not only the presence of useful resources, but also an area's financial and administrative ability to utilize and exploit those resources to their fullest extent.[1436] In such a context, imports could be viewed as an inexpensive alternative to developing local production if they could be obtained opportunistically;[1437] thus, the absence of imports has less to do with the purchasing power of the consumer, and more to do with the market availability of high-quality, local alternatives. In the case of Late Roman micaceous Aegean ware, importing it in the early 5th century may have been cheaper than intensifying local manufacture of high-quality cooking wares at this time;

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[1434] The decrease and eventual absence of Aegean products may have been an early symptom of what was later institutionalized in 536 with the creation of the *quaestor exercitus* and the earmarking of Aegean goods in order to supply the Danube (see Chapter 1). Others have downplayed the novelty of Justinian's decision, and have suggested that it was based on a pre-existing, if less official, arrangement that was already sending Aegean products to the north; see Elton 2005, p. 693.

[1435] For arguments of this nature regarding the lack of imports in the Nemea Valley during historical periods, see Wright et al. 1990, pp. 658-659; for the import-heavy island of Keos during Geometric to Hellenistic times, see Sutton 1991, p. 248. For the interdependency of urban coastal sites that outgrew the capacities of their hinterlands in the Early Roman Period, and the necessity of imports, see Fulford 1987.

[1436] Poblome 1996, p. 86, stresses the significant capital investment required to bring ceramic production to the stage of mass-production.

[1437] See Leitch 2011, pp. 189-190, whose assessment of the distribution of African cooking wares led to a similar conclusion; these ceramics were produced for export only along the coast and were distributed primarily to coastal sites, with inland penetration only in cases of well-connected sites. The mobility of these wares was dependent on cheap transportation and a high degree of price sensitivity; additional land transportation would have made them less profitable.

by the end of the century, after routes were significantly altered, it may have then proved cheaper to rely solely on local production in Northeast Peloponnesian cooking fabric.

Lamps, pitchers, and cooking vessels had been manufactured in the local Northeast Peloponnesian cooking fabric during the Early Roman period (see Chapter 4),[1438] thereby providing the pre-existing infrastructure from which Late Roman production continued. By the late 4th and early 5th century, however, the number of manufactured forms were limited, with lamps and pitchers not attested at all. Nevertheless, this industry was not governed by desperation and characterized by the manufacture of low quality goods; on the contrary, the forms were highly standardized and the fabric petrographically displays a consistent coherence to a standard recipe among the samples tested from the deposits spanning the duration of the Late Roman period (see Chapter 4). By the second half of the 5th century, vessels in this fabric began to dominate the cooking wares found on site as imports waned and also began to include, and even oust, shapes that were still regularly imported, as in the case of the basins manufactured in southern Argolid fabric that certainly continued to be imported well into the 5th century with no apparent reason for discontinuity.[1439] One possibility may be that as the import of cooking wares decreased, the increasing importance of Northeast Peloponnesian cooking fabric introduced an opportunity for the industry to expand its repertoire of forms. Manufacture in this fabric quickly grew to include more shapes in the course of the later 5th and early 6th century with the result that by the time of the 7th-

[1438] Other local ceramics manufacturers, such as those employing the Corinthian "buff" clays in red-slipped fine wares and mold-made lamps, also existed through the Middle Roman period.
[1439] Cooking wares in Late Roman micaceous Aegean ware (**298** to **307**) were evidently still imported through the 5th century while production of globular stewpots with everted rims in Northeast Peloponnesian cooking fabric (**336** to **341**) were steadily increasing. Thus, as with the basins, it seems possible that import of the former may have been phased out slowly while the latter was being established.

century pit nearly all cooking and plain wares, and large numbers of amphoras, were in this fabric. The deposits in the Panayia Field dated to about the mid-6th century reveal intense long-distance contact testifying to continued involvement within official, and commercial, systems of distribution while the architectural features testify to a local building boom. Hence the increased reliance on Northeast Peloponnesian cooking fabric should not be seen as a symptom of a declining economy, but rather as representative of a local industry that was given the opportunity to thrive in the context of economic stability.

A related situation is noted in the local manufacture of lamps. With the decline of Attic imports sometime around the middle of the 5th century, LR Corinthian lamps emerge employing both crude versions of the old Corinthian buff fabric and a new red fabric (LR Corinthian lamp fabric) before the former quickly gives way to the latter. By the 6th century this industry had not only kept abreast with changing fashions by the adoption of interpretations of North African lamps, but even expanded to include the manufacture of various plain ware forms by the mid-6th century. The decision to manufacture locally is indeed curious, as lamps from Asia Minor were certainly available (for example, **33**) and could have travelled along with the LRC fine wares that were appearing in Corinth at this time, assuming that both products could be collected from the same eastern emporium. Nor can the presence of this local industry be assumed to exist in a context of desperate need as LR Corinthian lamps first appear at a time when Attic lamps were still imported in great numbers.

*The Intensification of Regional Connections*

Despite the discontinuity with the regional source of ceramics from Attica early in the period under analysis here, the state-led impetus to intensify production and distribution of southern Argolid olive oil had the corollary effect of strengthening other regional ties. Ties between Corinth and the southern Argolid strengthened overall due to Corinth's role in the distribution of the LR Amphora 2 (see Chapter 4), even despite the discontinuation of imports of basins from the region in favor of its own burgeoning manufacture.[1440] Another region with which commercial ties were strengthened was Boiotia. Isolated fragments of vessels in Boiotian fabric might appear in the Panayia Field as early as the first half of the 5th century, but the fabrics are not definitively confirmed and, in any case, their appearance is rare.[1441] Small numbers of confirmed Boiotian fine ware bowls, as well as mugs and possibly amphoras, appear by the end of the 5th and the early 6th century, but are not found in large enough quantity to be considered to have filled a gap that was left by the absence of Attic or African sources at this time. In fact, the popularity of Boiotian ceramics in the later 6th century seems to coincide with the period when AfRS had once again returned and long-distance connections with Asia Minor and the eastern Mediterranean were strong. It is thereby unlikely that Boiotian wares were introduced in order to meet deficiencies or become a serious market competitor; they are in fact representative of Corinth's healthy economy that was growing through the intensification of pre-existing commercial links in the Gulf of Corinth, possibly encouraged by its role as a distributor of surpluses from the southern

[1440] As evidenced by the dominance of basins in Northeast Peloponnesian cooking fabric in the Panayia Field that was complete by the mid-6th century at the latest. This emphasizes again that the choice to manufacture basins in Northeast Peloponnesian cooking fabric was not due to any disruption of this network, but represented the healthy expansion of a growing local industry.
[1441] See catalogue entries in Chapter 5 marked as "possible Boiotian fabric." Preliminary petrographic results might now suggest that these tentative identifications are correct (see Chapter 4).

Argolid.[1442] Boiotian fine ware bowls were therefore supplementary to the long-distance fine wares imported into Corinth. Boiotian lekythoi even existed side-by-side those in LR Corinthian lamp fabric,[1443] while the mugs might have been filling a vacant niche or they might have been supplementing available glassware. The driving focus of this regional distribution might possibly have been whatever the contents within the Boiotian table amphoras were; by the time of the 7th-century pit, these table amphoras were still very conspicuous in the assemblage. Given the fact that no ceramic class of Boiotian ware seems to dominate its respective market, it may be assumed that their import was not strictly for their own intrinsic value or quality of manufacture, but that they should in fact be seen as being indicative of a period when Corinth's fortunes allowed for the intensification of its regional networks.

*Exploring the Intensified Presence of Local and Regional Products: A Historical Perspective*

In opposition to traditional "decline and fall" interpretations of the Late Roman period which would see the decline of imported goods as a sign of societal collapse, one fact remains undeniably clear: the Panayia Field demonstrates that reliance on or, better put, the *growth* of local industries and regional connections are not signs of a failing economy. Rather, in this case, participation within a healthy and robust economy led to the growth of pre-existing local industries and regional network connections, which in turn led to a more streamlined, and less redundant, importation of goods.

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[1442] This regional tie was indeed an "intensification" of earlier routes as the presence of basins and stewpots, resembling 5th-century forms in southern Argolid fabric and Late Roman micaceous Aegean ware, respectively, were discovered on the island of Makronisos, just south of the Boiotian coastline; see Gregory 1986, p. 297, nos. 5, 8, 10, figs. 12, 13:e, f. Personal observation of finds from Thespiae that included southern Argolid shallow and deep basins of 4th- and 5th-century date also attest to the earlier existence of this distribution network crossing the gulf.

[1443] As aptly demonstrated among the finds from the Hill of Zeus cemetery in Corinth.

Examination of historical evidence might be useful in explaining why local ceramic production came to increasingly dominate so much of the pottery lots from the Panayia Field in the Late Roman period. Following the destruction of the *domus* in the Panayia Field and the minor instances of re-appropriation of the area during the 5th century, the site was completely re-appropriated yet again for the mid-6th-century construction of the bath and Long Building. In ca. 525 Procopius (*Aed.* 4.2.24; *Anec*. 18.41-44) specifically reports that an earthquake struck Corinth, followed by a devastating plague; following these catastrophes, the emperor Justinian is documented to have renewed Corinth's circuit wall (*Aed.* 4.2.23-24) as well as reconstruct the Trans-Isthmian/Hexamilion Wall (*Aed.* 4.2.27-28) (see Chapter 1). The 525 earthquake may also have severely damaged the harbor at Lechaion,[1444] allowing an opportunity for the imperially-sponsored building of the Lechaion Basilica to follow afterwards as part of the renovation project.[1445] In addition to these projects, imperial patronage also brought a general building boom that resulted in, at least, a number of new churches and new elite rural habitations associated with increased agriculture and prosperity; this boom is felt to have resulted in a significant overall impact on the economy of the region as local laborers found new employment, wealth was redistributed to the local economy, and the new influx of military garrisons stationed at the new fortifications required the development of their own facilities and continual provisions.[1446] It is therefore not difficult to imagine that the Panayia Bath and Long Building may have been part of a general boom that was initially inspired by imperial benefaction.

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[1444] Hadler et al. 2011; Minos-Minopoulos et al. 2013.
[1445] Brown 2008, p. 171.
[1446] Caraher 2014, pp. 153-159. Some of Caraher's evidence is based on the finds collected during the Eastern Korinthia Archaeological Survey (EKAS), as well as Gregory's (1985) investigation of the Akra Sophia villa site.

Such a building boom would alone have required significant resources and must have required an intensification of pre-existing local and regional resources that included ceramic manufacture. The extra provisions that would have been required for the garrisons of the new fortifications were very likely drawn upon from locally-available resources as much as was possible, just as the troops garrisoned on the limits of the empire were encouraged to do.[1447] The local and regional ceramic industries discussed here were already well-established and had been steadily growing more diverse in their production over the course of the 5th century as Corinth's relationships with long-distance distribution networks were rapidly changing. As a result, these industries were ready to intensify production when there was a sudden demand for local and regional resources. By the mid-6th century and continuing into the 7th, the presence of regionally- and locally-produced wares of quality manufacture witnessed their highest numbers in the Late Roman Panayia Field and, as an array of long-distance products were also present, their presence cannot be attributed to a context of desperate reliance on the nearest-available resource.

But this boom that is specific to Corinth must also be seen within the greater context of regional economic activity resulting from the demands of the *annona* on the southern Argolid, and Corinth's maritime and administrative role in the long-distance distribution of the products shipped in the LR Amphora 2. Surely, Corinth's role in the provisioning of troops through the *annona militaris* must have at least been a partial factor in the decision to renew Corinth following its 6th-century catastrophes. Corinth had always served as an emporium for Mediterranean commerce, but in the Late Roman period a major regional product required Corinth's harbor facilities for its export. The

[1447] See Jones [1964] 1986, p. 458; Carrié 1999, p. 302.

establishment of any industry of significant proportions, such as that in the southern Argolid, inevitably becomes a source of reliance for numerous other lesser industries; state demand, after it had begun in the 5th century and was sustained for over two centuries, would have come to have influenced much of the region's economic character and provided a constant, reliable source for its general economic stability.

*The Consequences of the Withdrawal of State Interests: Towards a Re-Assessment of the "Dark Ages" in the Northeastern Peloponnese*

The removal or alteration of state-sponsored supply routes had the potential to have consequences for local or regional exchange patterns. One recorded example occurred under Justinian when the *cursus publicus* was severely reduced in Asia Minor and the eastern provinces in order to mitigate the enormous economic burden it caused the state (Procop. *Anec*. 3.1-11). Procopius reports the effect that this had on local landowners in the province of Asia who had grown accustomed to selling their crops to these stations, procuring the revenue with which they were able to pay their taxes in gold. Reduction of a number of stations along these routes evidently left many in dire straits.[1448]

In the early 5th century AfRS was still reaching Corinth, supplemented with a significant number of Attic fine wares which had been arriving along with lamps since the early 4th century. Within a generation or so, both wares vanish almost completely along with various imported cooking wares, LRC becomes the dominant fine ware, and lamp production is taken up by local artisans. The connection, if it exists at all, between AfRS and Attic ware is unclear, but the timely disruption of both imports might imply

[1448] Jones [1964] 1986, p. 834.

that the export of Athenian goods to Corinth was in some way reliant on the long-distance distribution routes of the time.[1449]

Much more serious consequences were faced when state demand for the agricultural output of a given area disappeared. Such might be the case for the widely-distributed LR Amphora 2 from the southern Argolid; although it may have reached numerous sites by means of private commercial enterprise, O. Karagiorgou is likely correct in suggesting that it owed much of its mass-production to state interests concerned with supplying the Danubian border forts.[1450] Generally-speaking, the intensification of production for the purposes of distribution is linked to the predictability of the location;[1451] in other words, demand precedes supply. With the collapse of the northern borders during the course of the 7th century and the absence of military supply demands, the impetus for the industry was gone and remaining demand was simply not strong enough to justify its continued existence at the same level. Taken a step further, the diminishment of such a massive production industry would have had serious repercussions on the economy and general prosperity of the region as a whole.

While factors such as plague, earthquakes and invasions might have had some effect, the immediate consequences on the regional economy through the cessation of state reliance may have been the most significant catalyst for the onset of the so-called

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[1449] The possibility of a Vandal attack on Athens in 467 or 476 is another consideration; see *Agora* XXIV, pp. 78-79; Karivieri 1996, pp. 56-58. Alternatively, it may be worth exploring further the possibility, presented in Chapter 1, that Athens was indeed a seat for major political players in the first half of the 5th century; Corinth undoubtedly would then have been compelled to stay in regular contact with Athens and the increased communication may also have promoted economic activities. If Athens suddenly lost that status in the second half of the 5th century, the disruption in communication links could account for the sudden drop of Attic products in Corinth.
[1450] Karagiorgou 2001b; see discussion in Chapter 4.
[1451] Horden and Purcell 2000, p. 374.

"Dark Ages."[1452] After all, the Roman Empire had shown itself to be quite adept at repopulating cities and regions following natural catastrophes and episodes of violence, provided that there was any interest in the endeavor. Intensified contribution to the *annona* for nearly two centuries had defined much of the economic character of the northeastern Peloponnese; simply put, the industry brought with it supporting opportunities for livelihood. Supplying the olive oil for the army on such a large scale would have resulted in increased farming, tool manufacture, raising of beasts of burden, ceramic manufacture to make the shipping containers, shipbuilding, and so on. When the Danubian borders eroded away (followed by the loss of the eastern and African provinces through Persian and Arab conquests), so too did the economic infrastructure that had come to serve for so long as a major framework for much of the northeastern Peloponnese; the production of massive *annona* supplies in the southern Argolid for military personnel stationed on the now-collapsed borders became superfluous, Corinth's role as an emporium diminished as the number of long-distance distribution routes vanished, and imperial benefaction disappeared as the area ultimately became less valuable to the empire. Further pursuit of a theory involving a major economic crisis as the one postulated here might prove to be rewarding in understanding the onset of the so-called "Dark Ages" in the northeastern Peloponnese.

*Conclusion*

The regional and local industries identified here were not born in a vacuum, but had some pre-existing form upon which they could grow under favorable economic

[1452] See again Chapter 1, for the discussion of the archaeological evidence from the northeastern Peloponnese that proves that settlement did not come to an end with the supposed "Slavic invasions" of the 580s, documenting material remains that date at least as late as the early 7th century.

circumstances.[1453] In the case of Attic, southern Argolid, and Northeast Peloponnesian cooking fabrics, products manufactured in these fabrics have been identified that pre-date the period under study. Concerning southern Argolid wares, state-led agricultural intensification and the long-distance distribution that was associated with it did not (and could not) spontaneously come into existence, as a pre-existing infrastructure of production and distribution was required to provide a foundation upon which to build and ultimately link to larger networks. Of the remaining wares, products in Boiotian fabric may have been arriving in Corinth irregularly since at least the early 5th century, from which time modest distribution routes between Corinth and southern Boiotia have been documented before larger numbers of Boiotian ceramic products began to appear in the second half of the 6th century. In regards to LR Corinthian lamp fabric, a lamp industry had once existed in Corinth in the Early and Middle Roman periods which may have provided some level of infrastructure to the renewed lamp industry of the 5th century, and preliminary petrographic results currently suggest a possible Hellenistic antecedent for the fabric. The growth of these ceramic industries required an environment of at least economic stability, if not prosperity, and could not have developed in a context of poverty and decline. In the case of Late Roman Corinth, the reorientation of long-distance networks, increased agricultural demand by the state and a building boom associated with imperial benefaction were all contributing factors to the steady growth of local industries and regional connections.

## CONCLUSION

[1453] See Chapter 4 for the evidence that the following paragraph draws upon.

These final considerations have attempted to illustrate that studying local and regional systems of distribution alongside the better-understood systems of long-distance distribution has the potential to achieve a nuanced understanding of an ancient city's history and working economy. Developments in fabric analyses, continual refinements of ceramic typologies, and publication of cooking and plain wares have made it possible to identify and characterize the local, regional and long-distance products that arrived in Late Roman Corinth. The ever-increasing number of comparative, regional material makes it possible to shed light on how these products moved, the networks that moved them, and how these networks interacted with one another. This study of the material from the Late Roman Panayia Field, in addition to characterizing the major ceramic wares and offering new insight on a lesser-known area of the city of Corinth, has also demonstrated the value of considering local and regional ceramic wares and their corresponding networks together with their long-distance counterparts in understanding a city's economic, social and historical character, especially during periods of significant transition.

# APPENDIX 1:
# CERAMIC SAMPLES SUBMITTED FOR PETROGRAPHIC ANALYSIS

The following provides a summary of all ceramic samples from the Late Roman Panayia Field submitted for petrographic analysis.

If the sample appears in the catalogue (Chapter 5), the corresponding catalogue number is given, otherwise the closest parallel is cited as "sim." (similar to), "as" (profile as), or "rel." (related to). Original macroscopic readings are provided, whether or not they were confirmed or shown to be erroneous. These are abbreviated as "NEPCF" (Northeast Peloponnesian cooking fabric), "S. ARG." (southern Argolid fabric), "LRMAW" (Late Roman micaceous Aegean ware), "LR COR." (Late Roman Corinthian lamp fabric), "BOI" (Boiotian), and "mic." (unknown micaceous fabric).

Some results currently remain forthcoming, therefore no petrographic groups are given for samples after P-62; numbers that are given correspond to the following petrographic groups arrived at during H. Graybehl's (2010) analysis: 1, Chert Group (= Northeast Peloponnesian cooking fabric); 2, Micrite & Fine Mica Group (= southern Argolid fabric); 3, Schist Group (probably related to 1); 4, Chert & Igneous Rock Group (probably related to 1); 5, Igneous & Metamorphic Rock Group (= Unidentified Cooking Ware 3); 6, Quartz & Plagioclase Group (= Unidentified Plain Ware 1); 7, Biotite & Granitic Rock Group (= Unidentified Cooking Ware 4); 8, Fine Mica & Quartz Group (= Late Roman micaceous Aegean ware). Arrangement here is by ware (whether petrographically confirmed or currently hypothesized), in the order that they were discussed in Chapters 3 and 4.

| P-# | LOT# | CLASS | GENERAL ID | PART | CAT. # or COMP. | MACRO | PETRO |
|---|---|---|---|---|---|---|---|
| 16 | 00-18:5 | COOK | Casserole | Rim | sim. **300** | LRMAW | 8 |
| 17 | 00-18:6 | COOK | Casserole | Rim | sim. **299** | LRMAW | 8 |
| 36 | 95-61:13 | COOK | Casserole | Rim | sim. **299** | LRMAW | 8 |
| 6 | 00-07:2 | COOK | Cooking Pan | Rim-Base | **316** | LRMAW | 5 |
| 7 | 00-07:3 | COOK | Stewpot | Rim | **321** | LRMAW | 7 |
| 13 | 00-18:2 | PLAIN | Trefoil Pitcher | Rim | as **515** | NEPCF | 6 |
| 75 | 96-45:28 | FINE | Ptd. Keel-rim bowl | Rim | **112** | ATTIC 1 | |
| 76 | 00-07:13b | LAMP | Glazed lamp | Base | sim. **3** | ATTIC 1 | |
| 77 | 00-07:11 | FINE | Ptd. Keel-rim bowl | Rim | **113** | ATTIC 2 | |
| 78 | 00-07:10a | FINE | Bowl | Rim-Base | **118** | ATTIC 2 | |
| 79 | 00-07:34 | LAMP | Glazed lamp | Body | sim. **1** | ATTIC 2 | |
| 80 | 96-70:6 | FINE | Bowl | Rim-Base | **119** | ATTIC 3 | |
| 81 | 00-18:17 | FINE | Bowl (*Agora* V, M 209) | Rim | rel. **118/P-78** | ATTIC 3 | |
| 82 | 00-07:35 | LAMP | Glazed lamp | Body | N/A | ATTIC 3 | |
| 83 | 01-03:3 | LAMP | Post-glazing lamp | Handle | **9** | ATTIC 3 | |
| 85 | 98-15:8 | FINE | Bowl | Rim | **130** | BOI | |
| 86 | 97-52:1a,b | FINE | Bowl | Rim, Base | **131** | BOI | |
| 87 | 95-61:56 | FINE | Bowl | Rim | sim. **133** | BOI | |
| 88 | 95-61:100 | FINE | Flanged Bowl | Rim | sim. **142** | BOI | |
| 89 | 99-08:4 | PLAIN | Piriform Lekythos | Base | rel. **502** | BOI | |
| 90 | 01-10:5 | PLAIN | Mug | Rim | sim. **400** | BOI | |
| 93 | 97-57:53 | AMPH | Table Amphora | Rim-Hand. | **241** | BOI | |
| 94 | 97-57:54 | AMPH | Table Amphora | Rim-Hand. | as **240** | BOI | |
| 84 | 96-45:11 | PLAIN | Pitcher | Rim-Hand. | **511** | BOI. ? | |
| 91 | 01-11:26 | AMPH | Amphora | Base | **201** | BOI. ? | |
| 92 | 02-06:18 | AMPH | Amphora | Rim | **197** | BOI. ? | |
| 5 | 00-07:1 | AMPH | *Agora* V, M 325 | Neck-Hand. | **248** | NEPCF | 2 |
| 18 | 01-04:1 | AMPH | LR Amphora 2 | Rim | **253** | S. ARG. | 2 |
| 22 | 01-05:1 | AMPH | LR Amphora 2 | Handle | N/A | S. ARG. | 2 |
| 23 | 01-05:2 | AMPH | LR Amphora 2 | Sherd | N/A | S. ARG. | 2 |
| 27 | 95-61:27 | AMPH | LR Amphora 2 | Sherd | N/A | ? (mic.) | 2 |
| 28 | 95-61:5 | PLAIN | Bowl | Sherd | sim. **427** | NEPCF | 2 |
| 29 | 95-61:6 | AMPH | LR Amphora 2 | Rim | sim. **255** | ? | 2 |
| 33 | 95-61:10 | AMPH | LR Amphora 2 | Handle | N/A | S. ARG. | 2 |
| 39 | 95-61:16 | AMPH | LR Amphora 2 | Rim | sim. **256/P-45** | S. ARG. | 2 |
| 40 | 95-61:17 | AMPH | LR Amphora 2 | Sherd | N/A | S. ARG. | 2 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 45 | 95-61:22 | AMPH | LR Amphora 2 | Rim | **256** | S. ARG. | 2 |
| 46 | 95-61:23 | AMPH | LR Amphora 2 | Handle | N/A | S. ARG.? | 2 |
| 58 | 97-57:35 | AMPH | LR Amphora 2 | Rim | sim. **258** | S. ARG. | 2 |
| 59 | 97-57:36 | AMPH | LR Amphora 2 | Rim | sim. **258** | ? (mic.) | 2 |
| 60 | 97-57:37 | AMPH | LR Amphora 2 | Sherd | N/A | ? (mic.) | 2 |
| 61 | 97-57:38 | AMPH | LR Amphora 2 | Sherd | N/A | NEPCF | 2 |
| 62 | 97-57:39 | AMPH | LR Amphora 2 | Sherd | N/A | NEPCF | 2 |
| 63 | 00-07:33 | PLAIN | Basin | Rim (near) | as **412** | S. ARG. | |
| 64 | 00-07:20 | PLAIN | Basin | Rim | sim. **405** | S. ARG. | |
| 65 | 01-10:21 | PLAIN | Basin | Rim | **414** | S. ARG. | |
| 66 | 02-06:11 | PLAIN | Trefoil Pitcher | Rim | **435** | S. ARG. | |
| 67 | 02-06:34 | LAMP | Circular Lamp | Base | rel. **12**(?) | S. ARG. | |
| 68 | 97-57:75b | PLAIN | Pitcher | Rim | rel. **435/P-66** (?) | S. ARG. | |
| 1 | 96-70:1 | AMPH | *Agora* V, M 325 | Rim | **272** | NEPCF | 1 |
| 2 | 96-70:2 | AMPH | *Agora* V, M 325 | Rim | as **271** | NEPCF | 1 |
| 3 | 96-70:3 | PLAIN | Folded Rim Bowl | Rim | **469** | NEPCF | 1 |
| 4 | 96-70:4 | COOK | Stewpot | Rim | sim. **337** | NEPCF | 1 |
| 8 | 00-07:4 | COOK | Stewpot | Rim | sim. **334** | NEPCF | 1 |
| 9 | 00-07:5 | COOK | Stewpot | Rim | **335** | NEPCF | 1 |
| 10 | 00-07:6 | PLAIN | Folded Rim Bowl | Rim | **468** | NEPCF | 1 |
| 11 | 00-07:7 | COOK | Flat Lid | Knob Hand. | **381** | NEPCF | 1 |
| 12 | 00-18:1 | AMPH | *Agora* V, M 325 | Rim | sim. **271** | NEPCF | 1 |
| 14 | 00-18:3 | COOK | Stewpot | Rim | sim. **335/P-9** | NEPCF | 1 |
| 15 | 00-18:4 | COOK | interpret. **308** | Rim | **331** | NEPCF | 1 |
| 19 | 01-04:2 | COOK | Bell Lid | Rim | sim. **369** | NEPCF | 1 |
| 20 | 01-04:3 | COOK | Stewpot | Rim | sim. **337** | NEPCF | 1 |
| 21 | 01-04:4 | AMPH | *Agora* V, M 325 | Rim | **273** | NEPCF | 1 |
| 24 | 95-61:24 | COOK | Stewpot | Rim | sim. **358** | NEPCF | 1 |
| 25 | 95-61:25 | PLAIN | Basin | Rim | sim. **461** | NEPCF | 1 |
| 26 | 95-61:26 | AMPH | interpret. LR Amphora 2 | Rim | **287** | NEPCF | 1 |
| 30 | 95-61:7 | COOK | Flat Lid | Knob Hand. | sim. **387** | NEPCF | 1 |
| 32 | 95-61:9 | COOK | Bell Lid | Knob Hand. | sim. **373** | NEPCF | 1 |
| 34 | 95-61:11 | COOK | Bell Lid | Rim | sim. **370** | NEPCF | 1 |
| 35 | 95-61:12 | AMPH | interpret. LR Amphora 2 | Rim | **286** | NEPCF | 1 |
| 37 | 95-61:14 | PLAIN | Basin | Rim | sim. **459** | NEPCF | 1 |
| 38 | 95-61:15 | PLAIN | Basin | Rim | sim. **461** | NEPCF | 1 |
| 41 | 95-61:18 | COOK | Stewpot | Rim | sim. **358** | NEPCF | 1 |
| 42 | 95-61:19 | COOK | Bell Lid | Knob Hand. | sim. **373** | NEPCF | 1 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 43 | 95-61:20 | PLAIN | Pitcher(?), ring-base | Base | N/A | NEPCF | 1 |
| 44 | 95-61:21 | PLAIN | Pitcher | Rim | sim. **480** | NEPCF | 1 |
| 47 | 97-57:24 | PLAIN | Basin | Rim | sim. **461** | NEPCF | 1 |
| 48 | 97-57:25 | PLAIN | Basin | Rim | **462** | NEPCF | 1 |
| 49 | 97-57:26 | PLAIN | Basin | Rim | **452** | NEPCF | 1 |
| 50 | 97-57:27 | AMPH | Amphora | Rim | as **292** | NEPCF | 1 |
| 51 | 97-57:28 | AMPH | interpret. LR Amphora 2 | Rim | **293** | NEPCF | 1 |
| 52 | 97-57:29 | COOK | Flat Lid | Knob Hand. | sim. **382** | NEPCF | 1 |
| 53 | 97-57:30 | COOK | Flat Lid | Knob Hand. | sim. **389** | NEPCF | 1 |
| 54 | 97-57:31 | COOK | Stewpot | Rim-Hand. | sim. **366** | NEPCF | 1 |
| 56 | 97-57:33 | COOK | Stewpot | Rim | **364** | NEPCF | 1 |
| 31 | 95-61:8 | COOK | Stewpot | Rim | sim. **353** | NEPCF | 3 |
| 55 | 97-57:32 | COOK | Stewpot | Rim | sim. **353** | NEPCF | 3 |
| 57 | 97-57:34 | COOK | Stewpot | Rim | sim. **358** | NEPCF | 4 |
| 69 | 98-29:7 | PLAIN | Bowl | Rim | sim. **493** | LR COR. | |
| 70 | 95-61:72a,b | PLAIN | Bowl | Rim, Base | as **492** | LR COR. | |
| 71 | 98-23:4 | PLAIN | Small Dish | Rim-Base | **496** | LR COR. | |
| 72 | 95-61:35 | LAMP | Interpret. African | Shoulder | as **24** | LR COR. | |
| 73 | 95-61:113 | LAMP | Interpret. African | Nozzle | as **24** | LR COR. | |
| 74 | 95-65:4a-c | PLAIN | Pitcher | Rim | **501** | LR COR. | |

## APPENDIX 2: COMPARISON OF MID-6TH- TO EARLY 7TH-CENTURY REGIONAL ASSEMBLAGES

Presented here are the summaries of the assemblages discussed in Chapter 6, illustrated in a series of tables distinguished by ceramic class. In the following tables, the entries in each field refer to the catalogue numbers given in each publication. A question mark (?) indicates that the identification (usually of the fabric) is uncertain, repeating once again the difficulty in assigning membership to a specific fabric or ware based on limited fabric descriptions and/or photographs alone in the published literature. An asterisk (*) indicates that the precise date of one or more of the catalogued items cited in the field might possibly fall outside the chronological range (either earlier or later) of the mid-6th to early 7th century. Some effort has additionally been made to exclude clearly residual material that may have been included in each publication. Additional footnotes are provided for entries that require further information.

Table 1: Lamps of the Mid-6th to Early 7th Century

| | **Panayia Field** | **Corinth** | **Athens**[1] | **Argos** | **Pyrgouthi** |
|---|---|---|---|---|---|
| **Asia Minor lamp** | 33* | | M 384 | | |
| **Attic, late types** | | | M 378 | | |
| **Attic, Asia Minor types** | | | M 375-377; M 379 | | |
| **Attic (?), N. African type** | | | M 380 | | |
| **S. Argolid, round lamps** | 11*; 12 | | M 381; M 382-383? | 58-80? | |
| **LR Cor., round lamps** | 21* | 3-6 | | | |
| **LR Cor., N. African type** | 22?*; 23-27; 31? | 3-1 - 3-3; 3-4? | | 10-56? | 12; 16; 69; 103; 128; 146 |
| **Other** | 32* | 3-5; 3-7 | | 9?; 57? | |

1. These lamps were republished by Perlzweig in *Agora* VII, nos. 356 (M 384), 2581 (M 379), 2641 (M 378), 2807 (M 375), 2808 (M 376), 2809 (M 377), 2827 (M 380), 2834 (M 382), 2835 (M 381), and 2837 (M 383).

Table 2: Fine Wares of the Mid-6th to Early 7th Century

| | Panayia Field | Corinth | Athens[1] | Argos | Pyrgouthi |
|---|---|---|---|---|---|
| **AfRS 97** | | | M 349 | | |
| **AfRS 99B** | 51 | | | 87-99 | |
| **AfRS 99C** | 52-53 | 3-8 | | 100-115? | |
| **AfRS 103B** | 55-56* | 3-12? | | | |
| **AfRS 104B** | 59-61 | | | | |
| **AfRS 104C** | 62-65 | | | 116 | |
| **AfRS 105** | 66 | 3-9 - 3-11 | | 117-118 | |
| **AfRS 109** | 70 | | | 119? | |
| **AfRS 110** | | | | 120 | |
| **LRC 3E/F** | 88-89 | | | | |
| **LRC 3F** | 90-95 | | M 350-351 | 127-133 | |
| **LRC 3F/G** | 96-97 | | | | |
| **LRC 3H** | 98-100* | | | | |
| **LRC 10A** | 102-106 | 3-13 - 3-15 | | 134-146 | |
| **Central Greek Painted Ware** | | | | 159-161 | |
| **Boiotian RS, Bowl** | 132-136* | 3-16 | | | |
| **Boiotian RS, flanged bowl** | 137-142 | | | | |
| **Boiotian RS, LRC 3** | 144; 156? | | | | |
| **S. Argolid RS, Various** | 146 | | M 354 | 210?[2] | |
| **NEPCF (?), Slipped** | | | | | YES*[3] |
| **Other** | 157 | | M 352-353; M 356 | 121-124; 157-158 | YES*[4] |

1. Certain fine wares were republished by Hayes; see *Agora* XXXII, nos. 1149 (M 349), 1283 (M 350), and 1284 (M 351).
2. The question as to whether or not this piece is in southern Argolid fabric is raised by comparison of the very similar profile with M 354 from the Athenian Agora which was personally confirmed to be in this fabric.
3. Certain slipped vessels were identified with fabric descriptions that can be equated with Northeast Peloponnesian cooking fabric, see Hjohlman 2005, nos. 159, 181, 212-213, and 288. A typological knowledge of fine wares in this ware is lacking, thereby making it difficult to date these vessels within the mid-6th- to early 7th-century range under comparison here.
4. Various fragments of slipped vessels were published without clear correspondence to recognized fabrics; see Hjohlman 2005, nos. 3-4, 57, 59, 77, 82, 107-108, 253, and 290. The lack of identification of these fragments also makes it difficult to comment whether or not they are contemporary with the mid-6th to early 7th century.

Table 3: Amphoras of the Mid-6th to Early 7th Century

| | Panayia Field | Corinth | Athens | Argos | Pyrgouthi |
|---|---|---|---|---|---|
| **LR Amphora 1** | YES[1] | | | 322 | |
| **Micaceous Water Jar** | 167-168* | | M 373 | 327 | |
| **Possible Mic. Water Jar** | 169-170 | | | | |
| **Gaza Amphora** | 173-176; 177-179* | | | 323-324a | |
| **Palestinian Amphora, vert.** | 181; 182* | 3-21 | | 321a | |
| **Palestinian Amphora, baggy** | YES[2] | 3-19 - 3-20 | YES* (sim. M 329) | 320a; 321; 329 | |
| **Palestinian Amphora, carrot** | YES[3] | | YES?* (sim. M 334) | | |
| **Samos Cistern Amphora** | 193-195, 196? | | | 324b? | |
| **Unid. Amphora 1** | 197-201 | | | | |
| ***Spatheion*** | 207* | | | | |
| ***Saraçhane* type 22** | 230 | 3-28 | M 372 | | |
| **Other Imported** | 227; 228-229* | 3-29 | | YES | 28; 141; 264 |
| **Boiotian, table amphora** | 236-239; 245-246 | | | | |
| **Boiotian, amphora** | 243 | | | | |
| **S. Argolid, various amphoras** | 250-251 | | | | |
| **S. Argolid, LR Amphora 2** | YES[4] | 3-22 | | 325-325a | 38-39 |
| **S. Argolid, fruit amphora** | 268* | | | | |
| **NEPCF, various amphoras** | 276*; 277-280 | 3-25 - 3-26 | | | |
| **NEPCF, LR Amphora 2** | 284-288; 289* | 3-23 - 3-24 | | | 25; 29 |
| **NEPCF, fruit amphora** | 296* | 3-27 | | | 33-37; 64-65; 93; 216; 262-263 |

1. None of the catalogued entries belong with certainty to the mid-6th to early 7th century, but this amphora type was certainly present in lots dated to this period.
2. See previous note.
3. Although this amphora type was most notable in the 7th-century pit, fragments already appeared in deposits belonging to this period (Lots 1995-061, 1999-038, and 2002-006).
4. Of the catalogued pieces, **255** and **256** (both short-necked versions), as well as **261** and **265** (unidentified versions) are certainly dated within this period; other, uncatalogued, examples of long-necked versions also belong to this period but were not catalogued.

Table 4: Cooking Wares of the Mid-6th to Early 7th Century

| | **Panayia Field** | **Corinth** | **Athens** | **Argos** | **Pyrgouthi** |
|---|---|---|---|---|---|
| **Other Imported** | 327* | | M 374[1] | 286-290c?; 311a? | |
| **NEPCF, tri-rim, type 2** | 351-354 | | | 269?; 285a? | 66; 246 |
| **NEPCF, tri-rim, type 3** | 355-356 | 3-30 | | | 248-249; 268 |
| **NEPCF, tri-rim, type 4** | 357-358 | 3-32 | | 285b? | YES[2] |
| **NEPCF, bell-lids** | 369-377* | | | 307-307a?; 309-310? | |
| **NEPCF, flat lids** | 382-384* | 3-33 | | 316? | YES[3] |
| **NEPCF, misc. forms** | 390* | | | | 43* |

1. Various fabrics were utilized for cooking vessels in Athens; J. Hayes (pers. comm.).
2. Examples of triangular-rimmed stewpots (type 4) in Northeast Peloponnesian coking fabric at Pyrgouthi are numerous; see Hjohlman 2005, nos. 40-41, 161-162, 177, 247, 266-267, and 279.
3. Examples of flat lids in Northeast Peloponnesian coking fabric at Pyrgouthi are numerous; see Hjohlman 2005, nos. 10-11, 45, 112, 115, 144, 163, 178-179, 224-225, 251, and 270.

Table 5: Plain Wares of the Mid-6th to Early 7th Century

| | Panayia Field | Corinth | Athens | Argos | Pyrgouthi |
|---|---|---|---|---|---|
| **Mic. Water Jar, unguentarium** | YES?*[1] | | M 369[2] | | |
| **Other Imported, unguentarium** | | 3-34 - 3-39? | | | |
| **Other Imported, misc. open** | 507-509 | | | YES? | |
| **Other Imported, pitchers/jugs** | 516*, 517-518 | 3-44? | M 363-366; M 370 | | 138? |
| **Other imported, unguentarium** | 519-520 | | | | |
| **Other Imported, lekythos** | | | M 367 | | |
| **Other Imported, misc. closed** | | | | YES? | |
| **"Slavic Ware"** | 524* | | | YES[3] | |
| **Attic, gouged jug** | | | M 357- 361? | | |
| **Boiotian, mug** | 400-401 | 3-17 | | | |
| **Boiotian, lekythos** | 403 | | | | |
| **Boiotian, misc. closed** | 404 | | | | |
| **S. Argolid, deep basins** | 414-418 | | | | |
| **S. Argolid, various bowls** | 421-423* | | | | |
| **S. Argolid, bowls** | 424-430 | | M 355 | 213-215? | |
| **S. Argolid, misc. open** | 431 | | | | |
| **S. Argolid, pitchers/jugs** | 434-436 | 3-18 | M 362?; M 371 | 226?; 333-338? | |
| **S. Argolid, misc. closed** | 440-442* | | M 368 | | |
| **S. Argolid, lids** | 444 | | | | |
| **NEPCF, basin, type 4** | 460* | | | | 145; 217; 293 |
| **NEPCF, basin, type 5** | 461 | 3-45 | | | |
| **NEPCF, folded rim bowl** | 472* | | | | YES*[4] |
| **NEPCF, misc. open** | 477 | 3-46 | | | |
| **NEPCF, globular pitcher** | 480-482 | 3-43 | | 221-223? | 14; 143; 160; 244; 258-259 |
| **NEPCF, pitchers/jugs** | 486-488 | 3-41 - 3-42 | | | 26?; 30 |
| **NEPCF, lekythos** | 489 | | | | |
| **NEPCF, misc. closed** | | | | | 27? |
| **LR Cor., bowls** | 492-495 | | | 172?; 175? | |

| | | | | | |
|---|---|---|---|---|---|
| **LR Cor., small dishes** | 496-499 | | | 190; 195-196; 210? | |
| **LR Cor., pitchers/jugs** | 500-501 | 3-40? | | 229a? | 124? |
| **LR Cor., lekythos** | 502-503 | | | | |

1. A fragmentary, unnumbered toe that might belong to this type of unguentarium was recovered from the Long Building Fills (Lot 1999-038).
2. Hayes later republished this piece; see *Agora* XXXII, no. 1814.
3. For the "Slavic ware" from this assemblage, see Aupert 1980a, pp. 376, 378, 380, 383, nos. 4, 5, 11, 31, 32, 41, 42, figs. 5, 10, 21, 22, 27, 35; see also Aupert 1980b, pp. 101, 103-104, fig. 10.
4. For folded rim bowls at Pyrgouthi, see Hjohlman 2005, nos. 3, 21, 58-59, 83-85, 106, 121, 159, 184, 197-199, 233-236, and 288-289. Given the amount of residual material on the site, it is not clear whether any of these bowls are contemporary with the second half of the 6th- to early 7th-century use of the tower.

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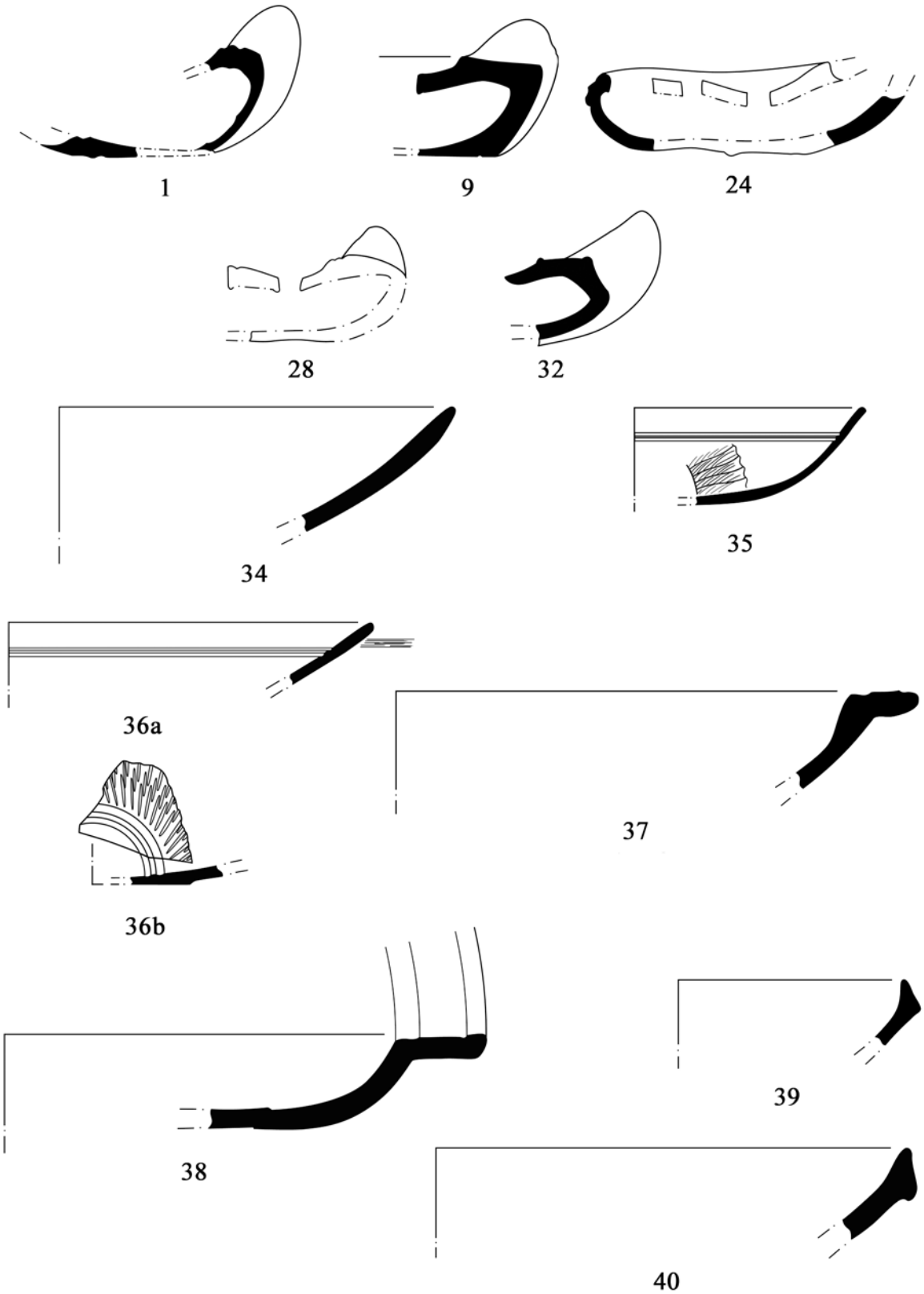
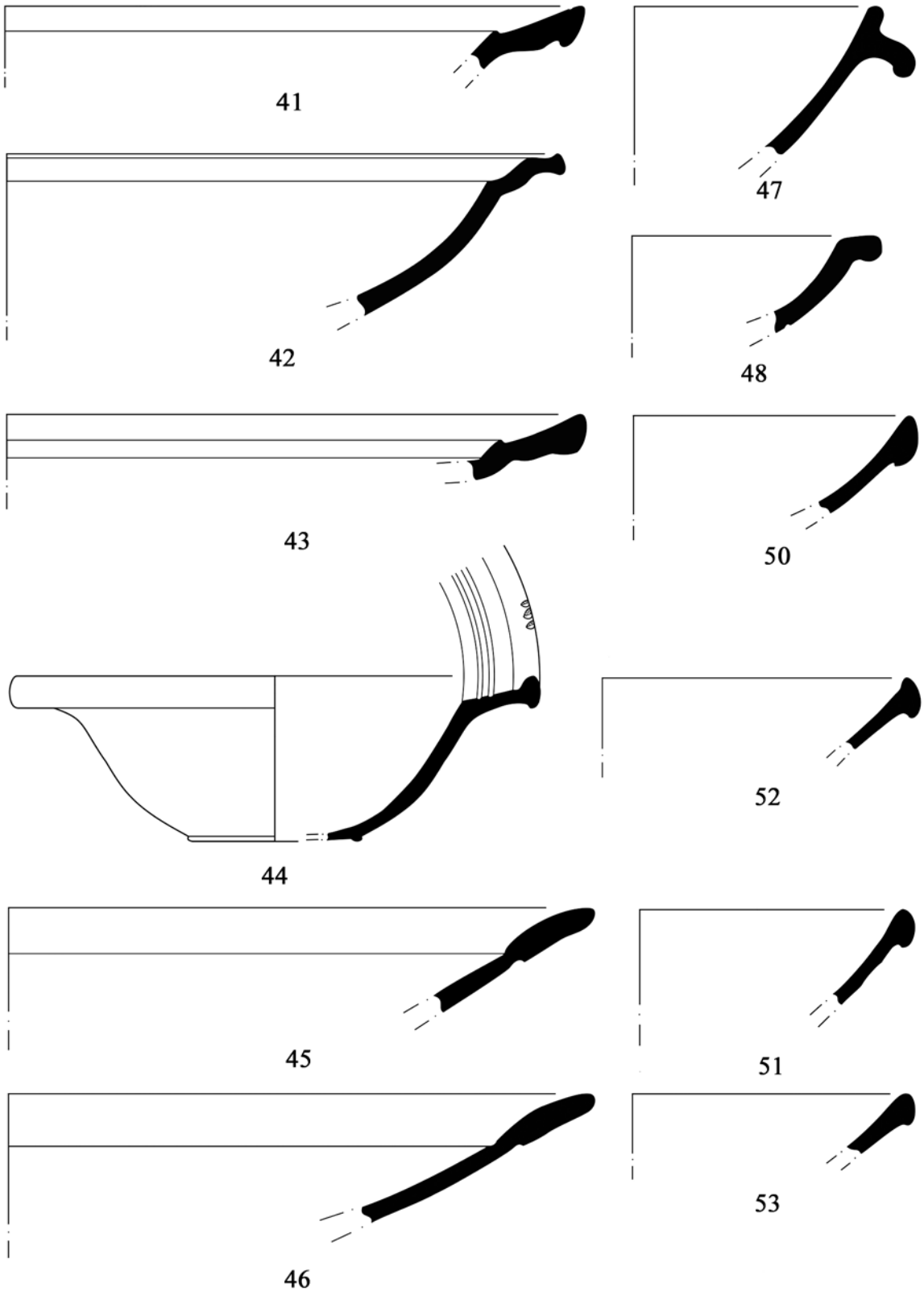
FIGURE 1



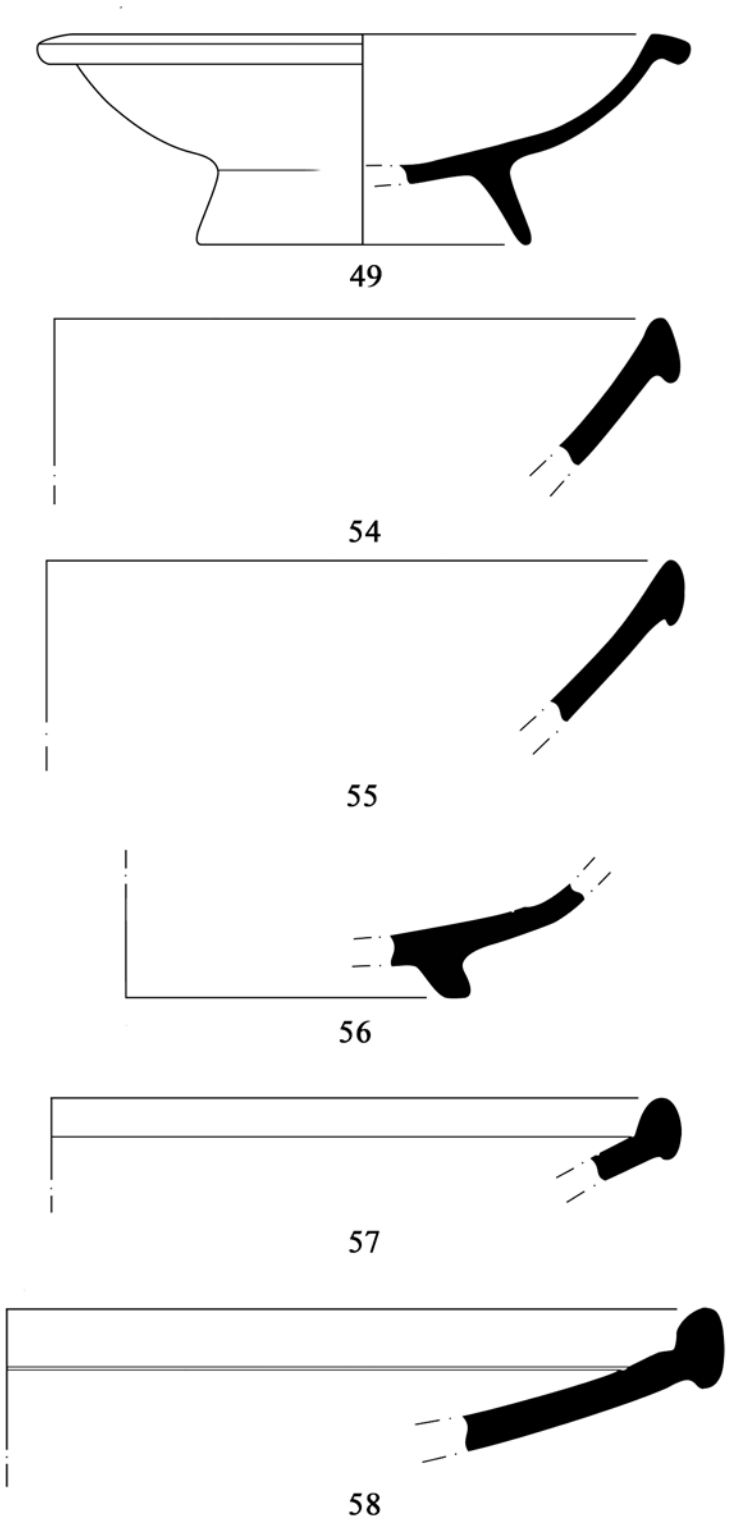

Lamps. Fine wares. (Scale 1:2)

FIGURE 2



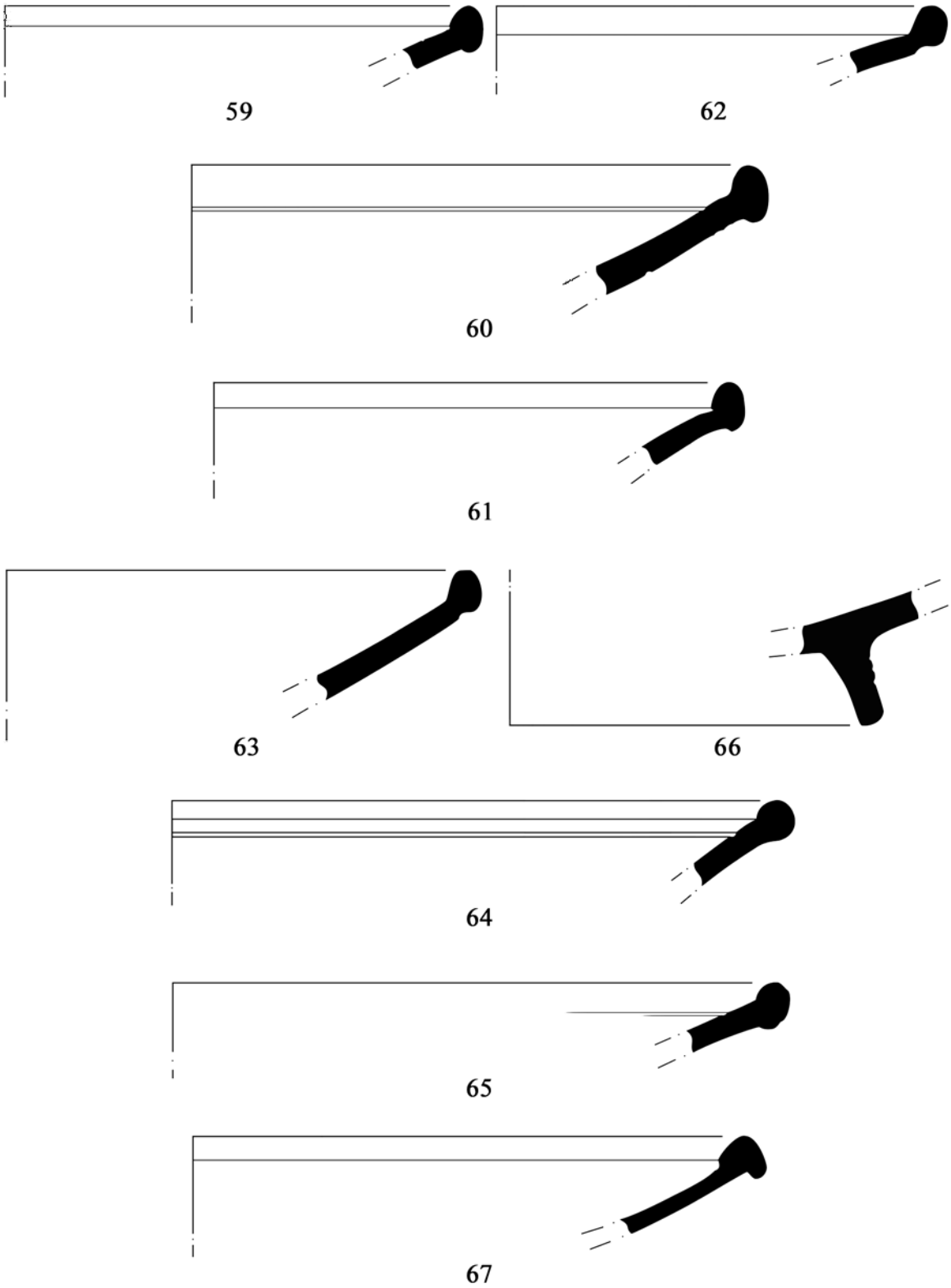

Fine wares. (Scale 1:2)

FIGURE 3



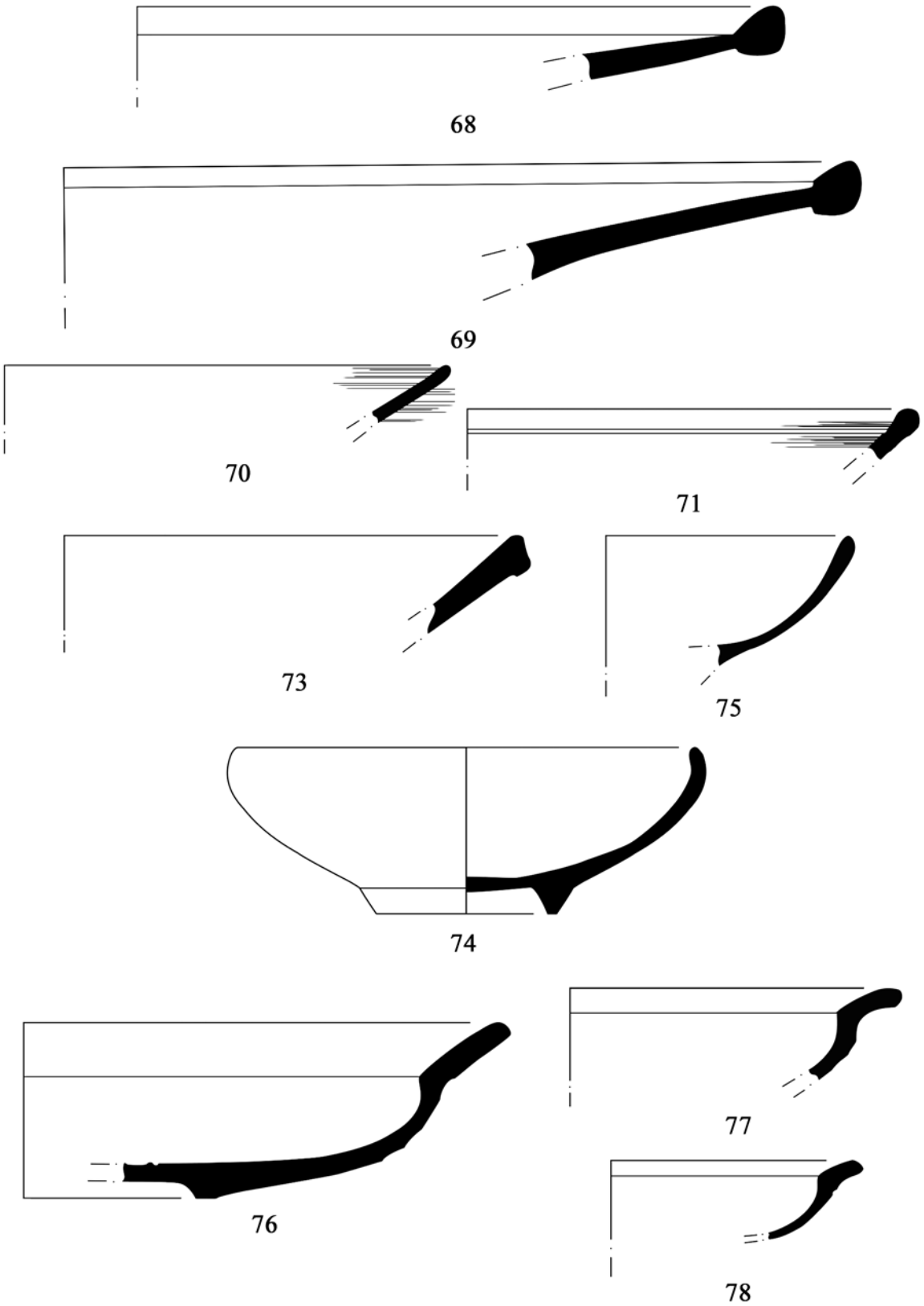

Fine wares. (Scale 1:2)

FIGURE 4



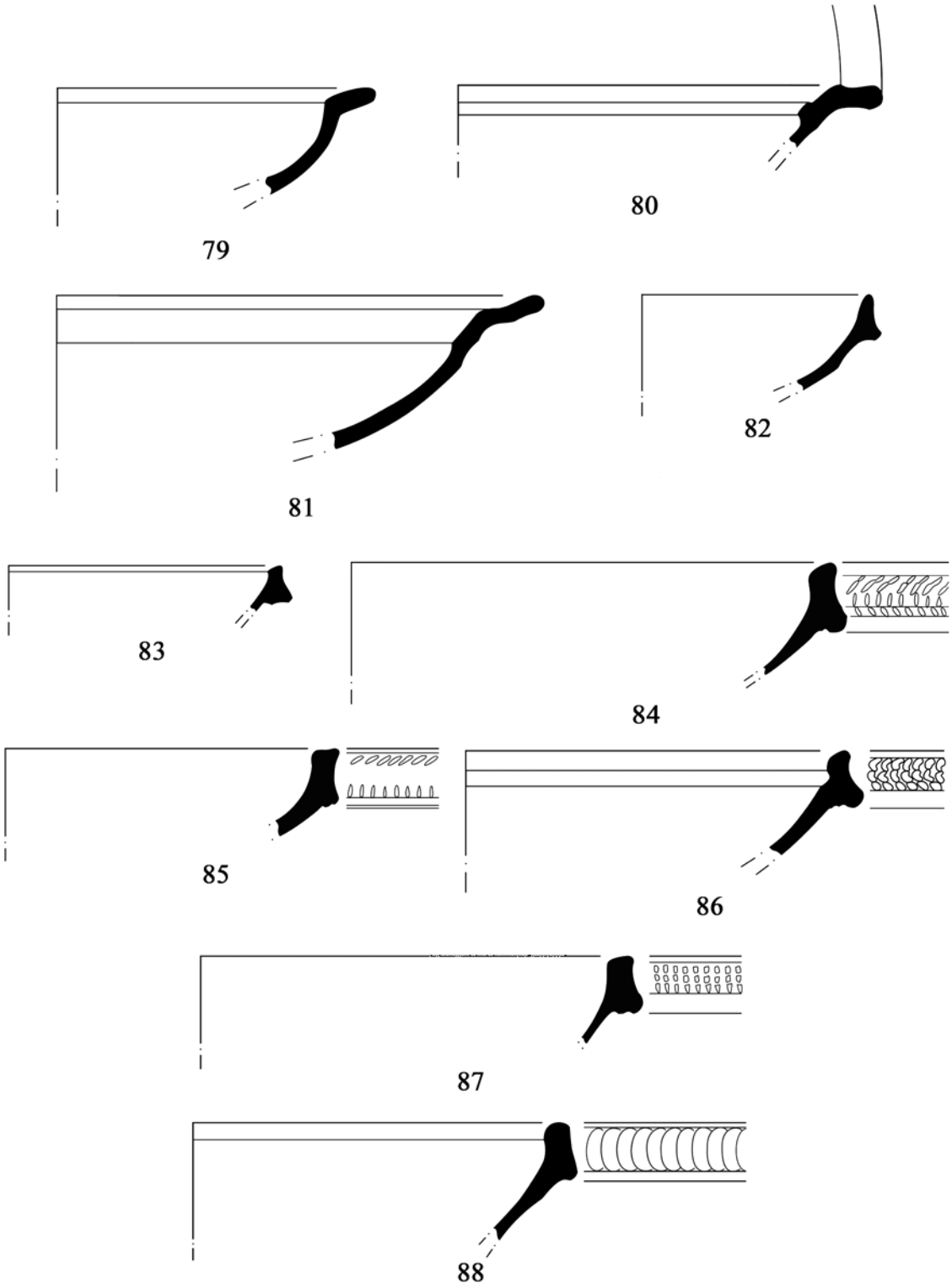

Fine wares. (Scale 1:2)

FIGURE 5



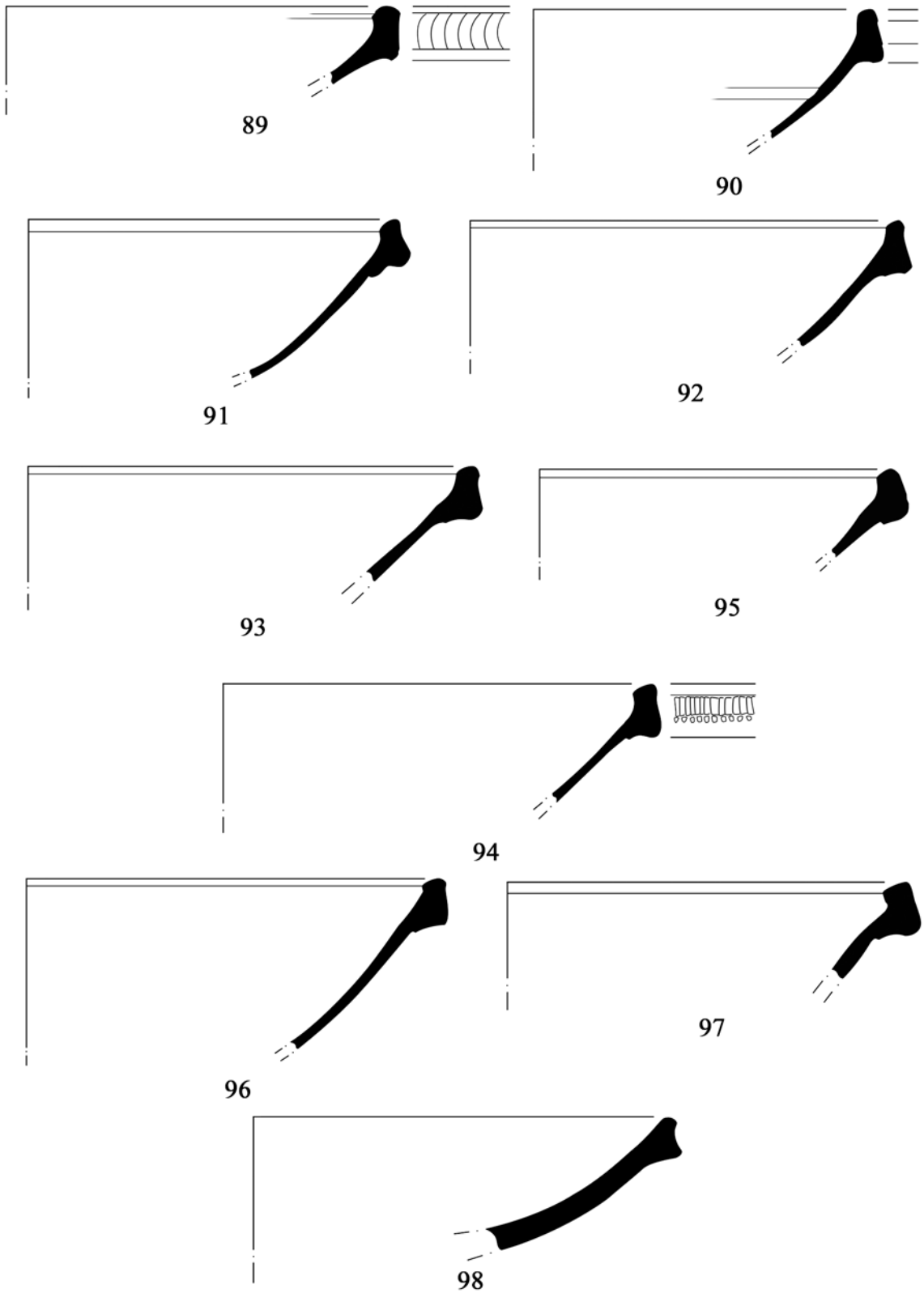

Fine wares. (Scale 1:2)

FIGURE 6



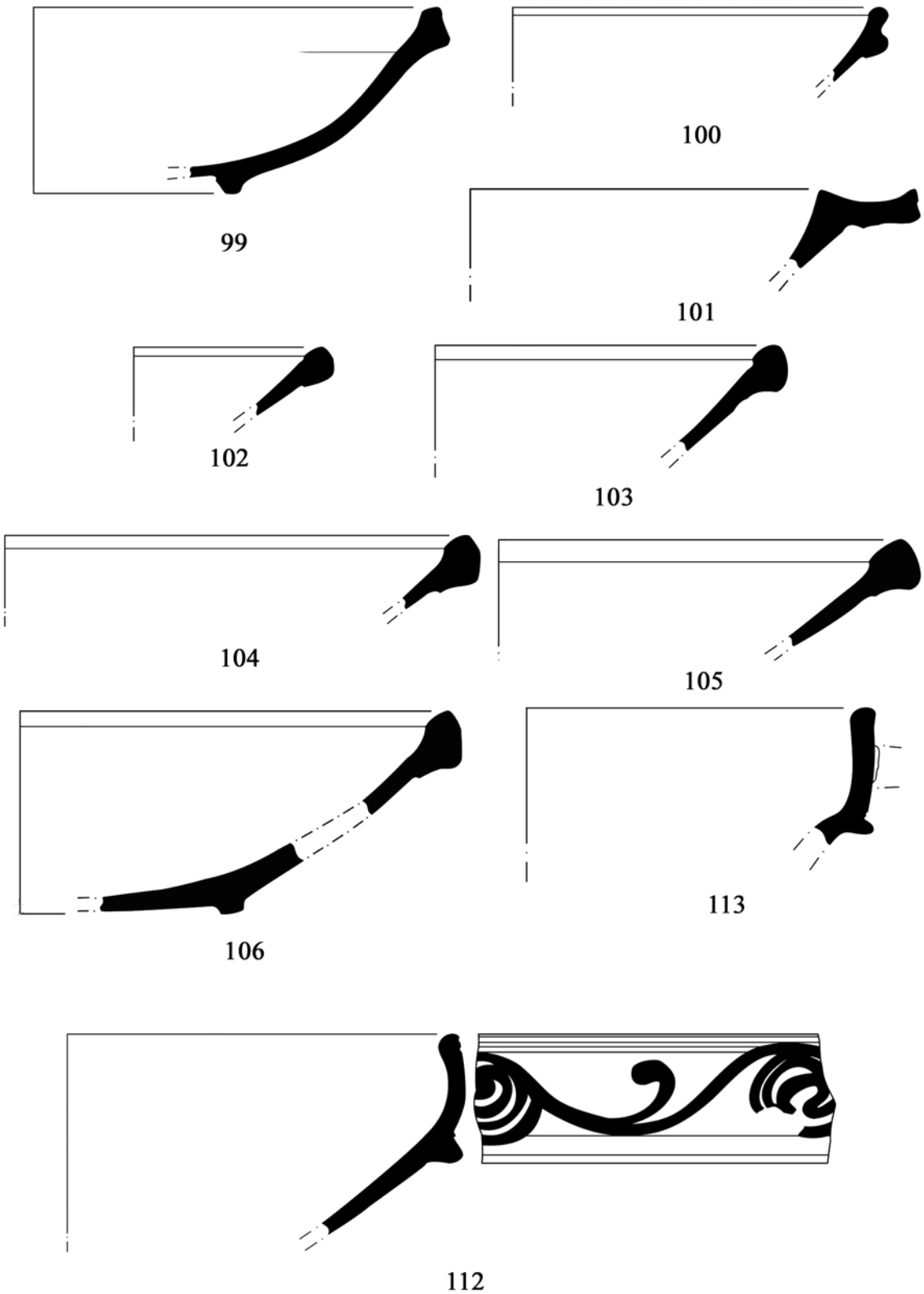

Fine wares. (Scale 1:2)

FIGURE 7



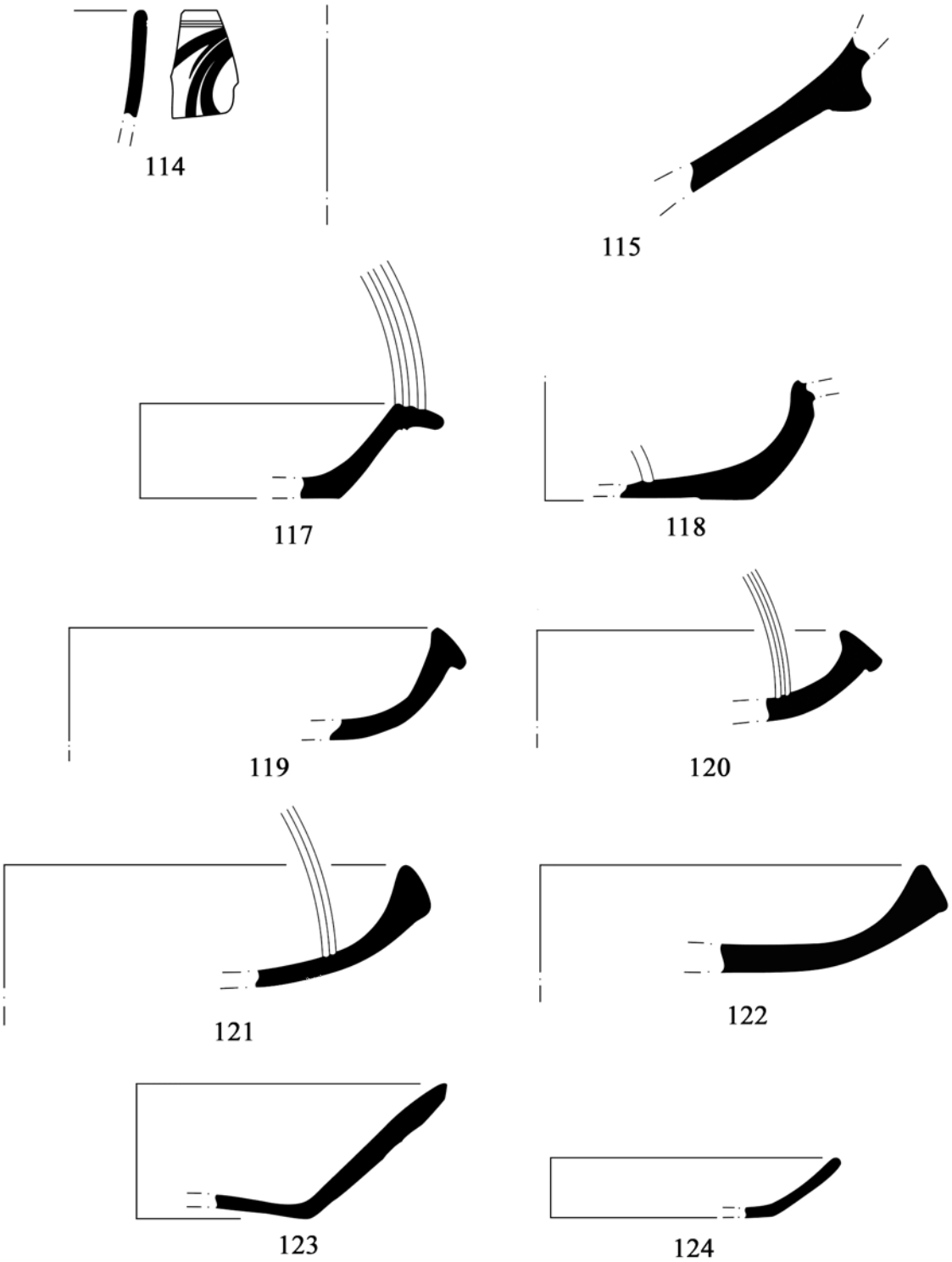

Fine wares. (Scale 1:2)

FIGURE 8



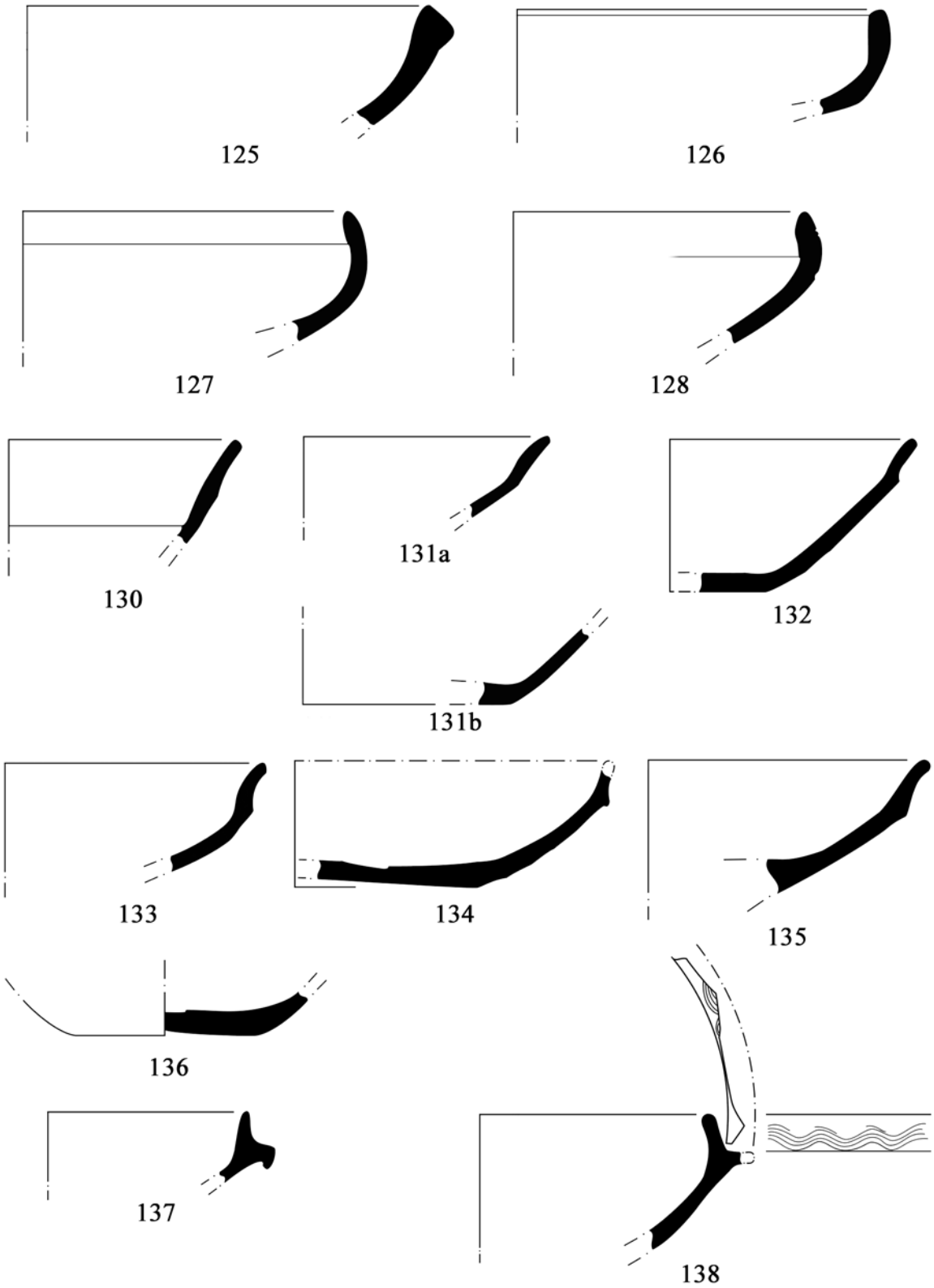

Fine wares. (Scale 1:2)

FIGURE 9



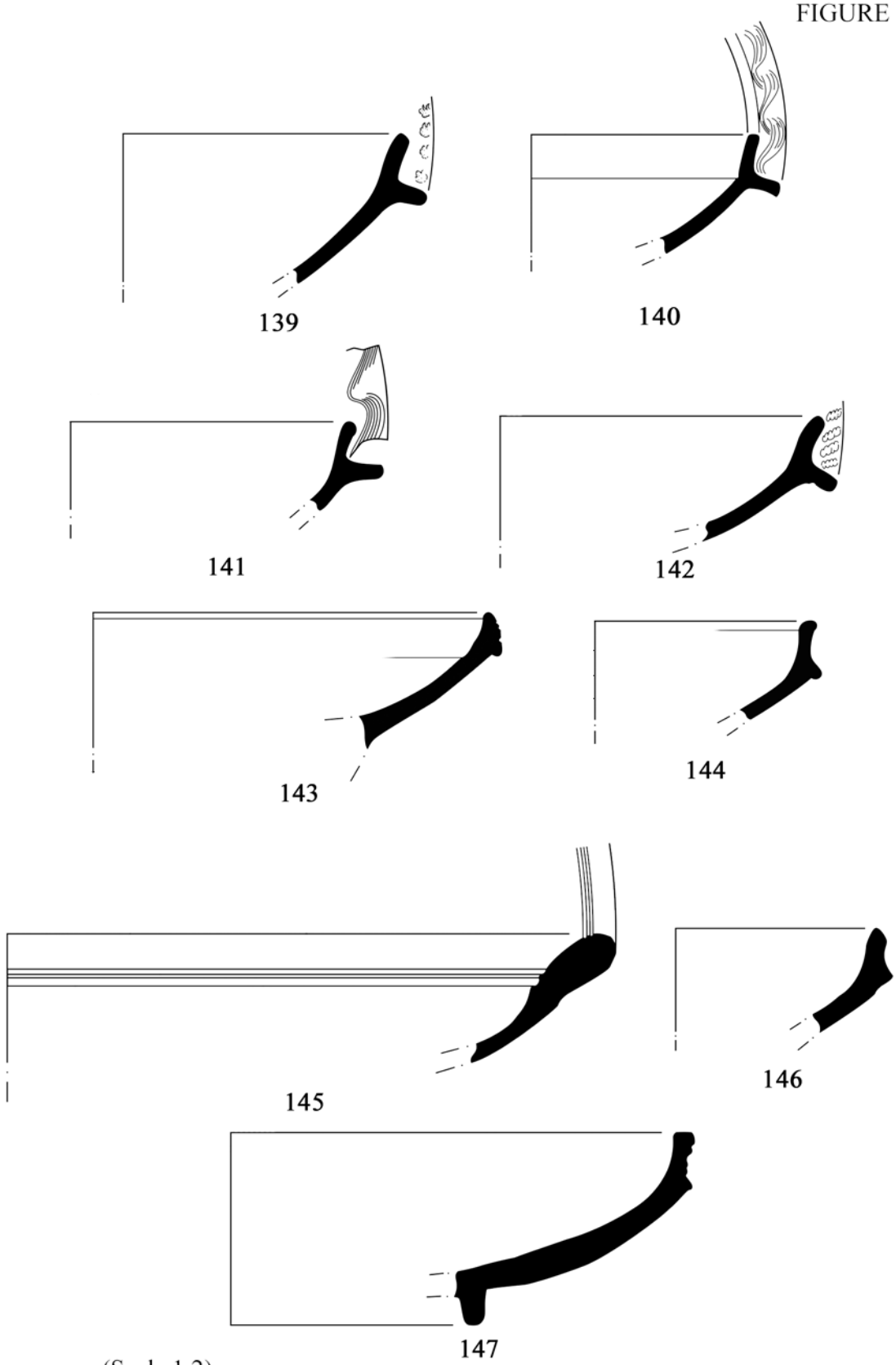

Fine wares. (Scale 1:2)

FIGURE 10



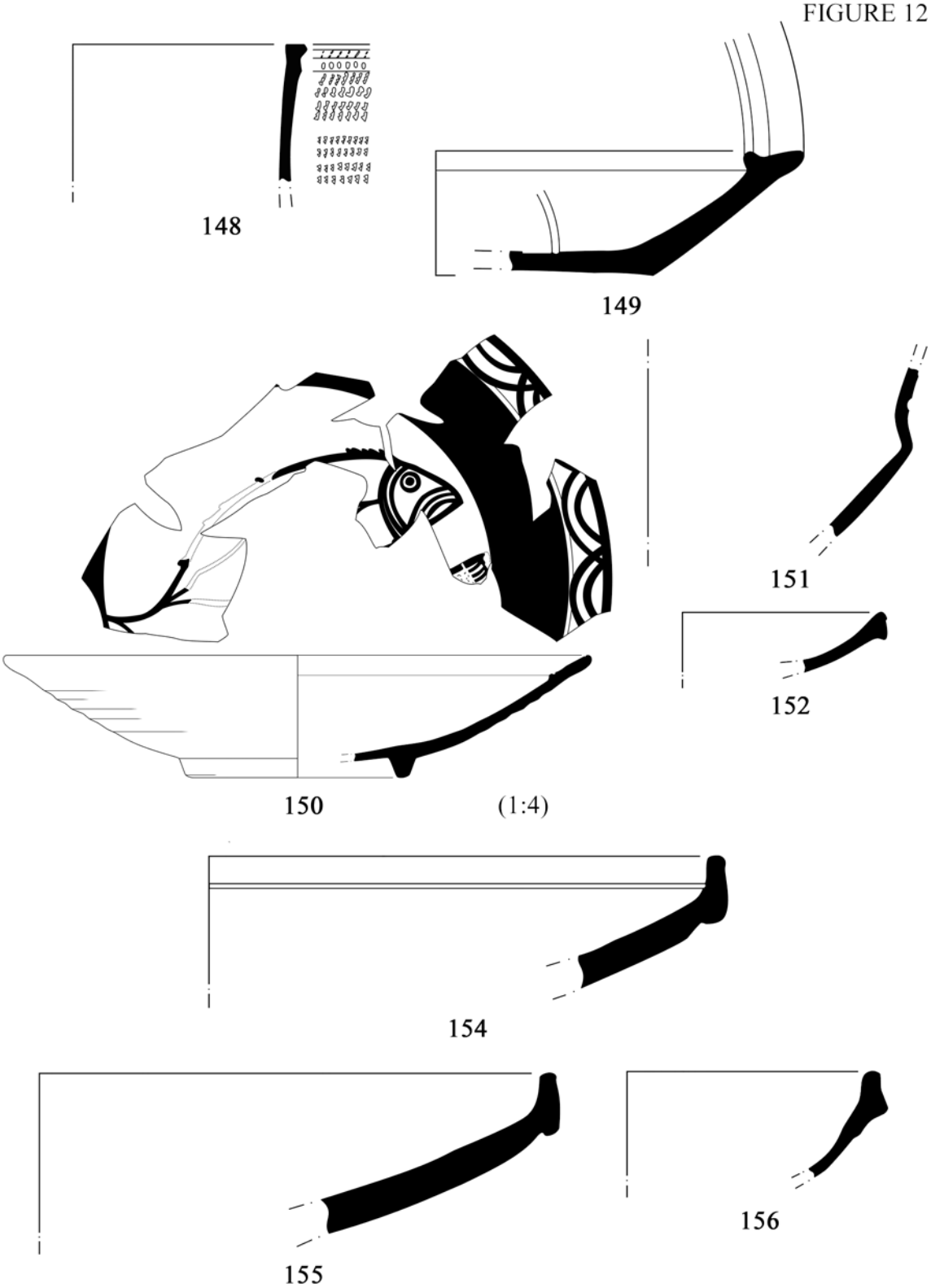

Fine wares. (Scale 1:2)

FIGURE 11



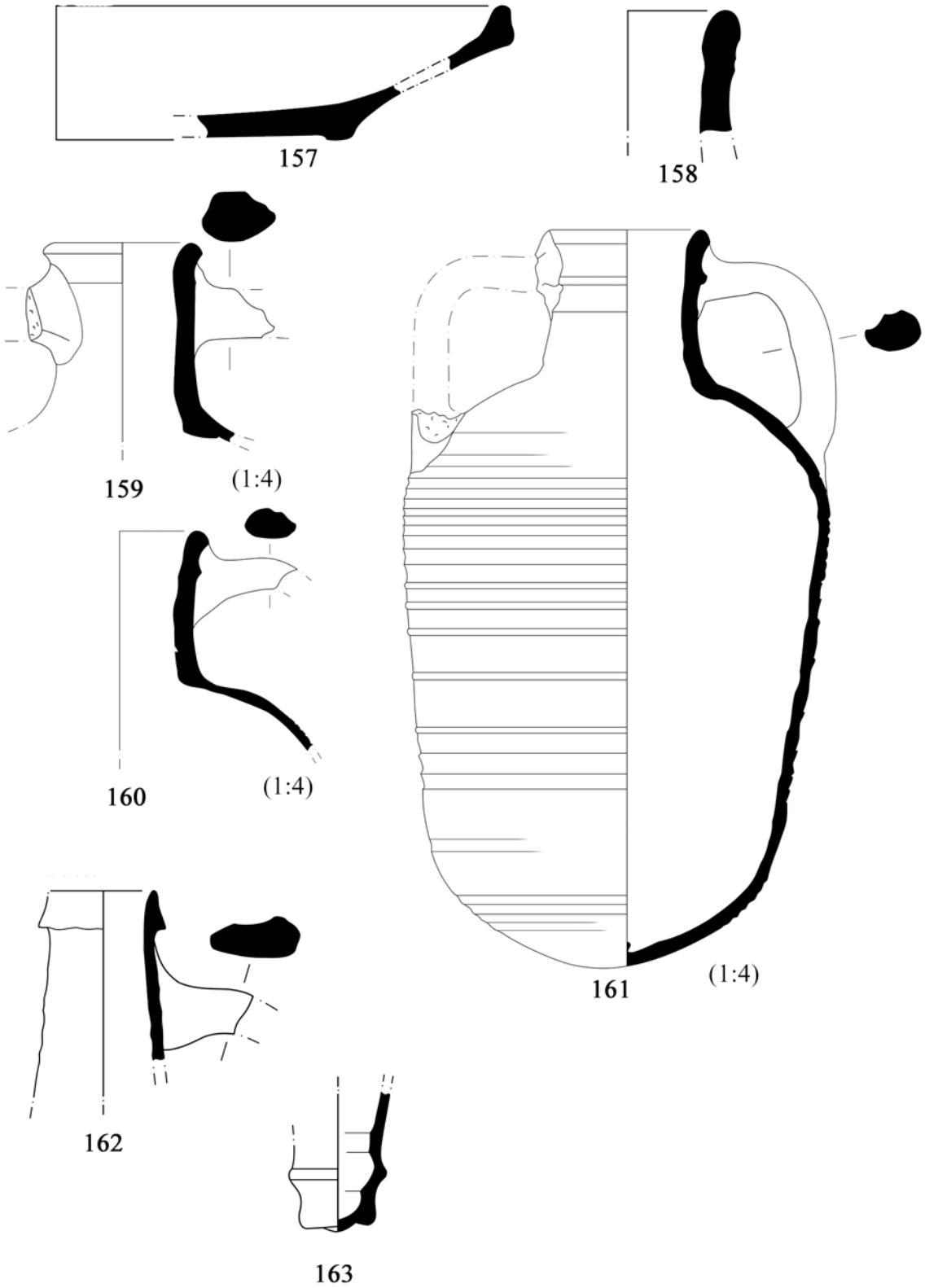

Fine wares. (Scale 1:2)

FIGURE 12



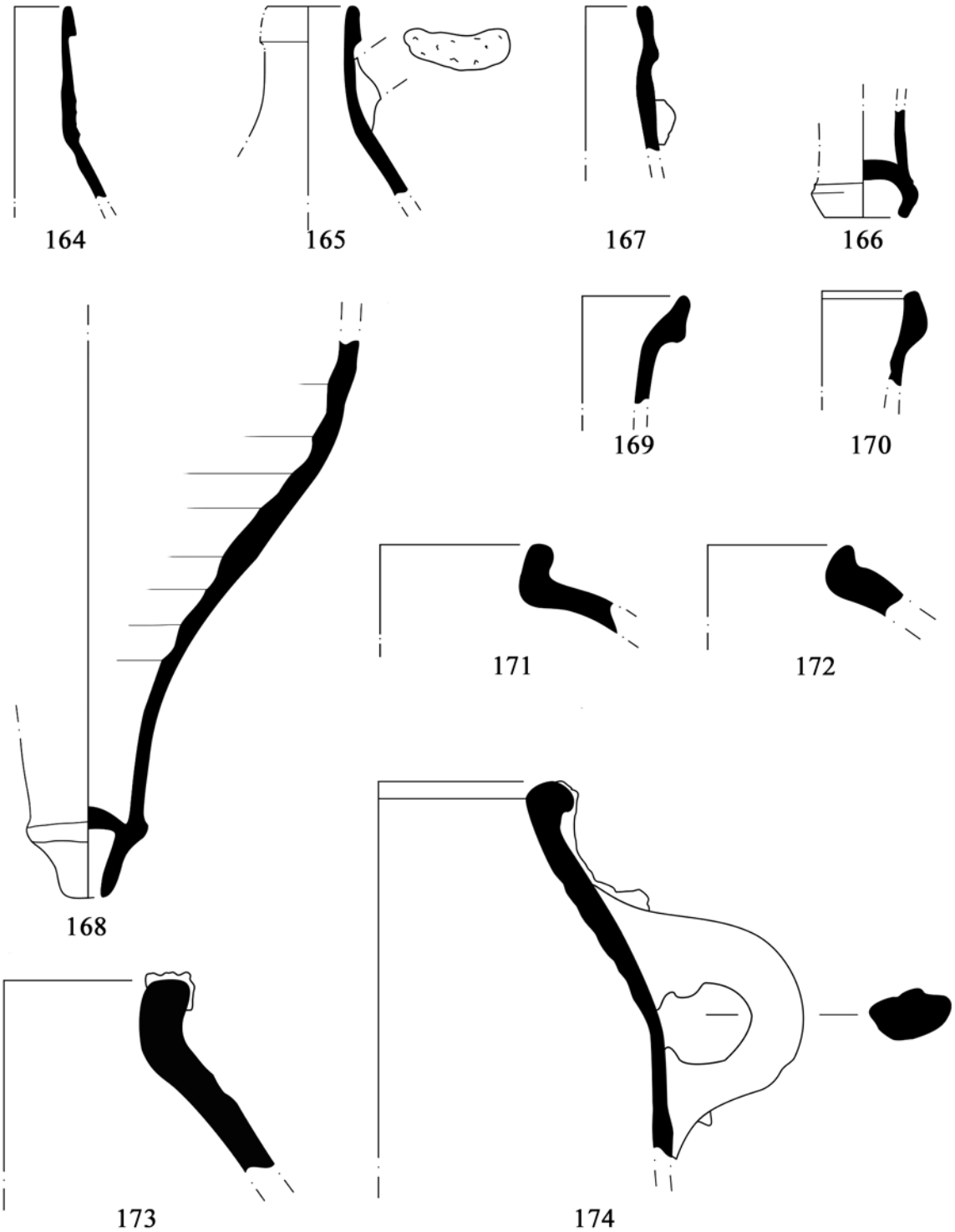

Fine wares. (Scale 1:2)

FIGURE 13



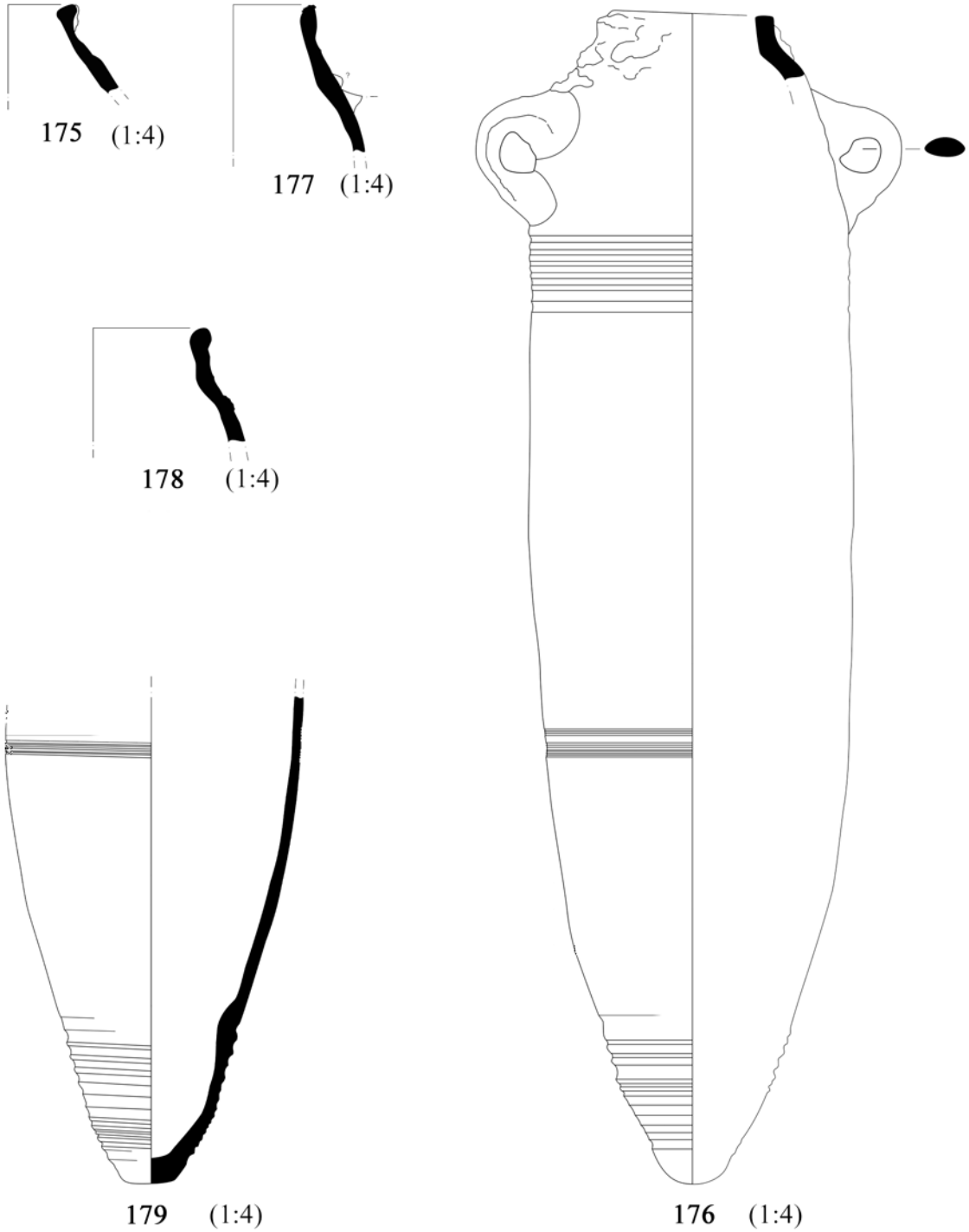

Fine wares. Amphoras. (Scale 1:2)

FIGURE 14



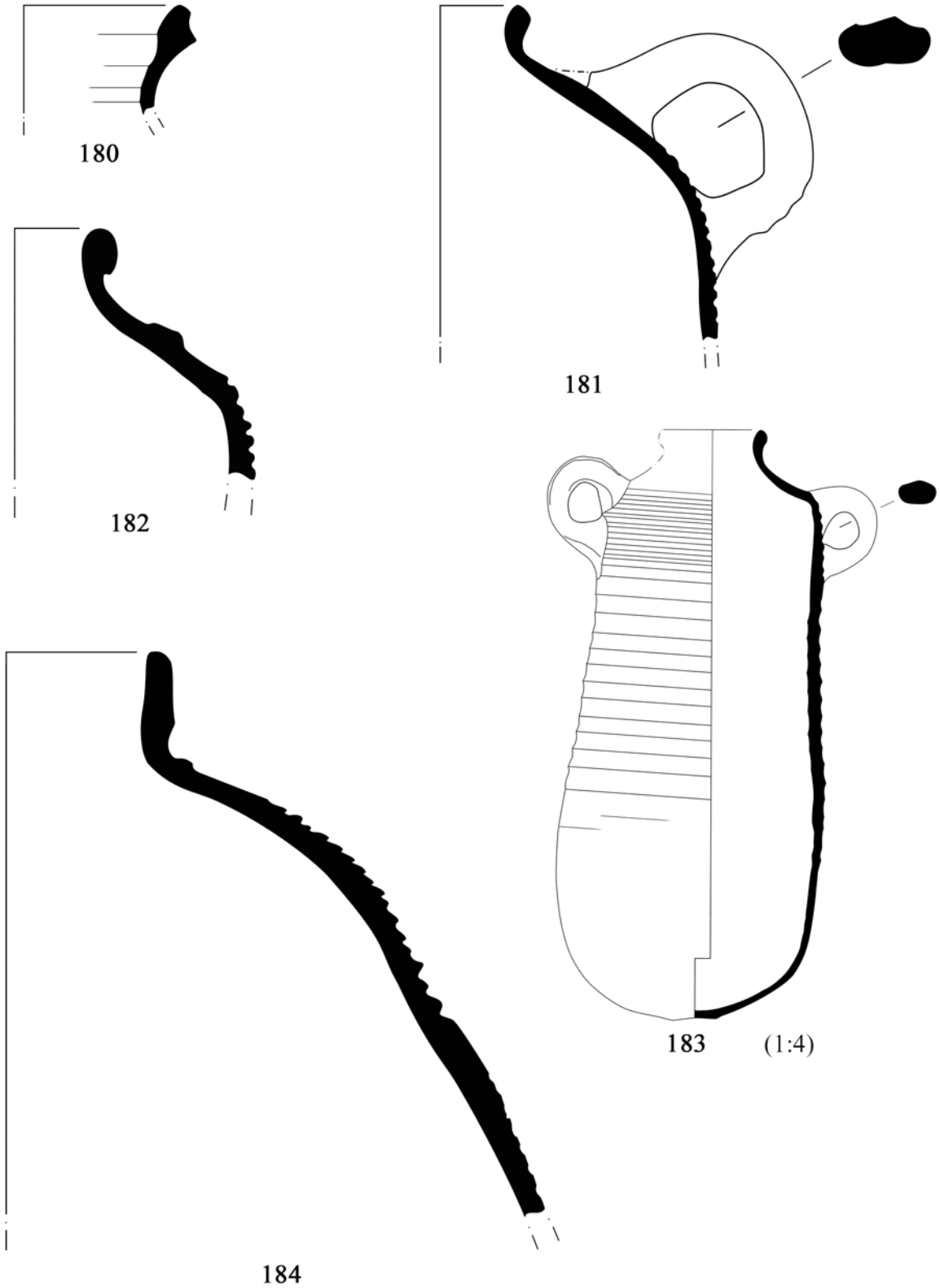

Amphoras. (Scale 1:2)

FIGURE 15



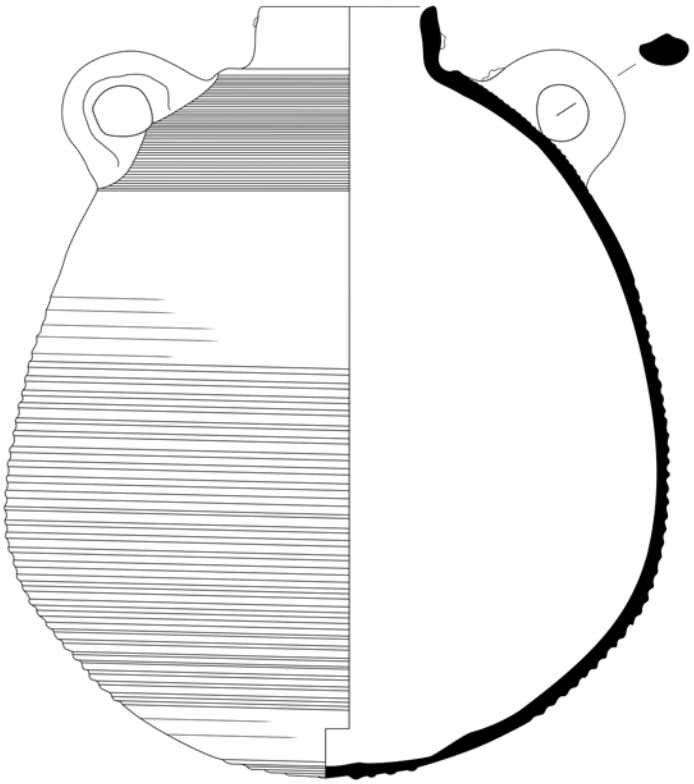

Amphoras. (Scale 1:2)

FIGURE 16




Amphoras. (Scale 1:2)

FIGURE 17



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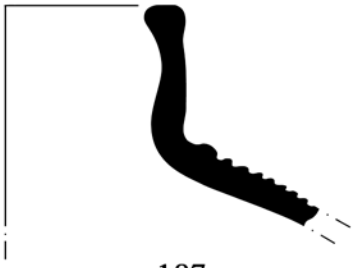

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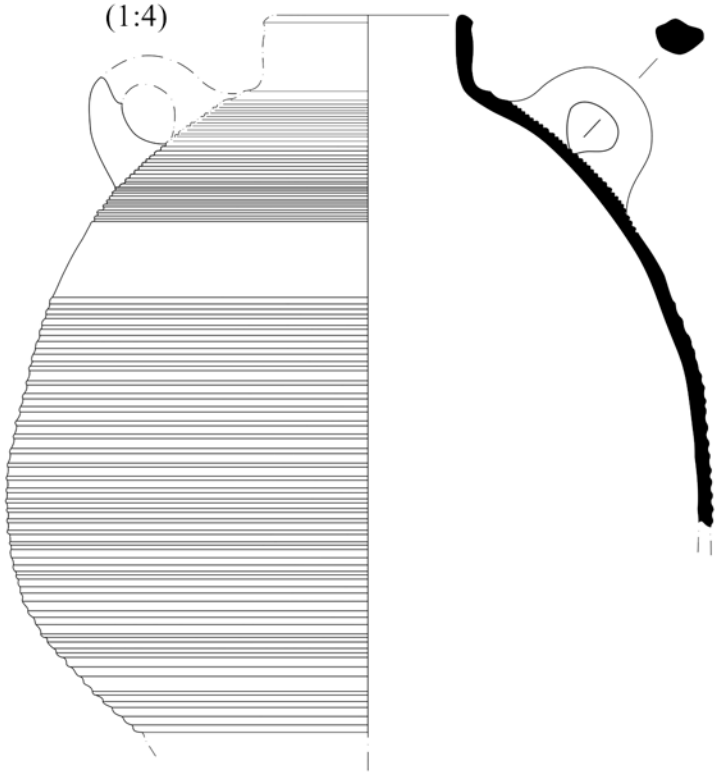

186 (1:4)

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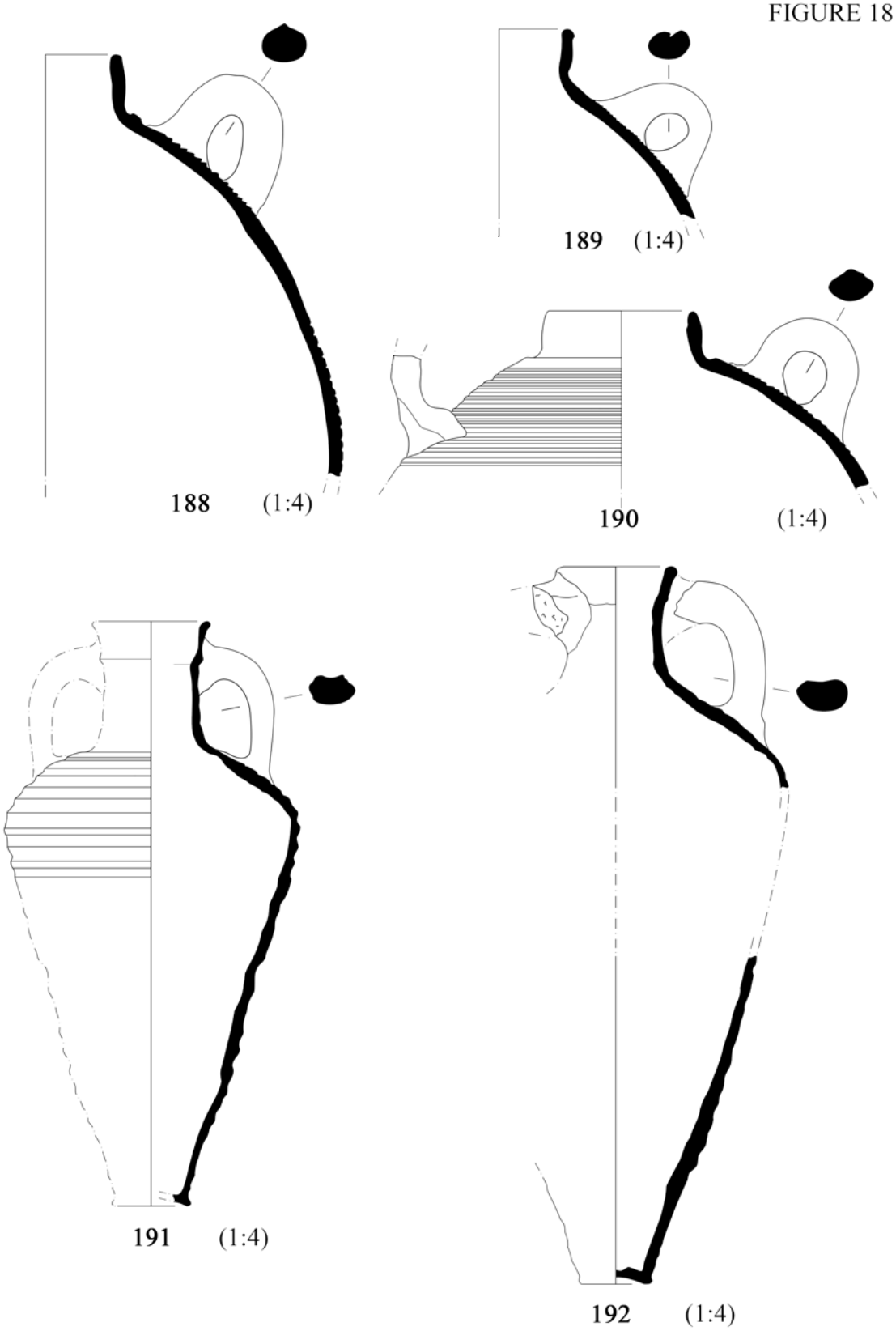


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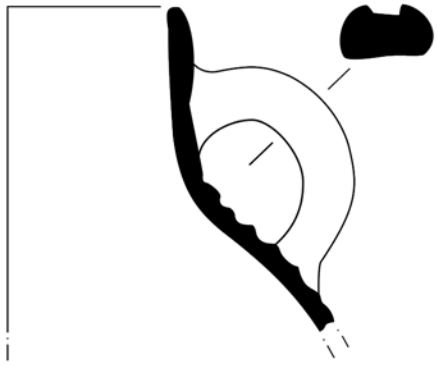
FIGURE 19



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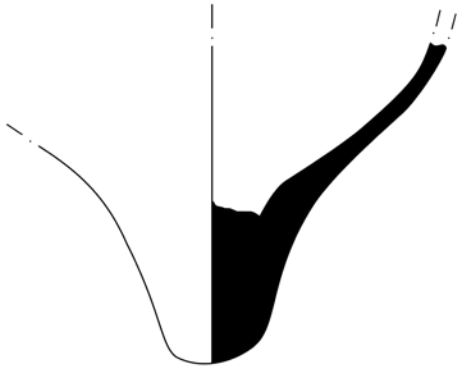

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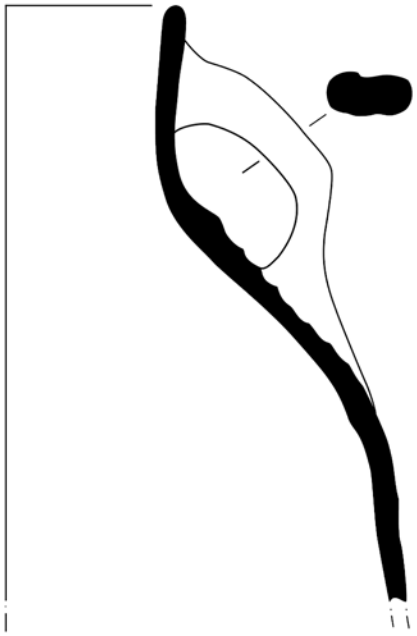

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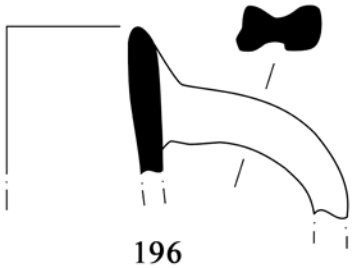

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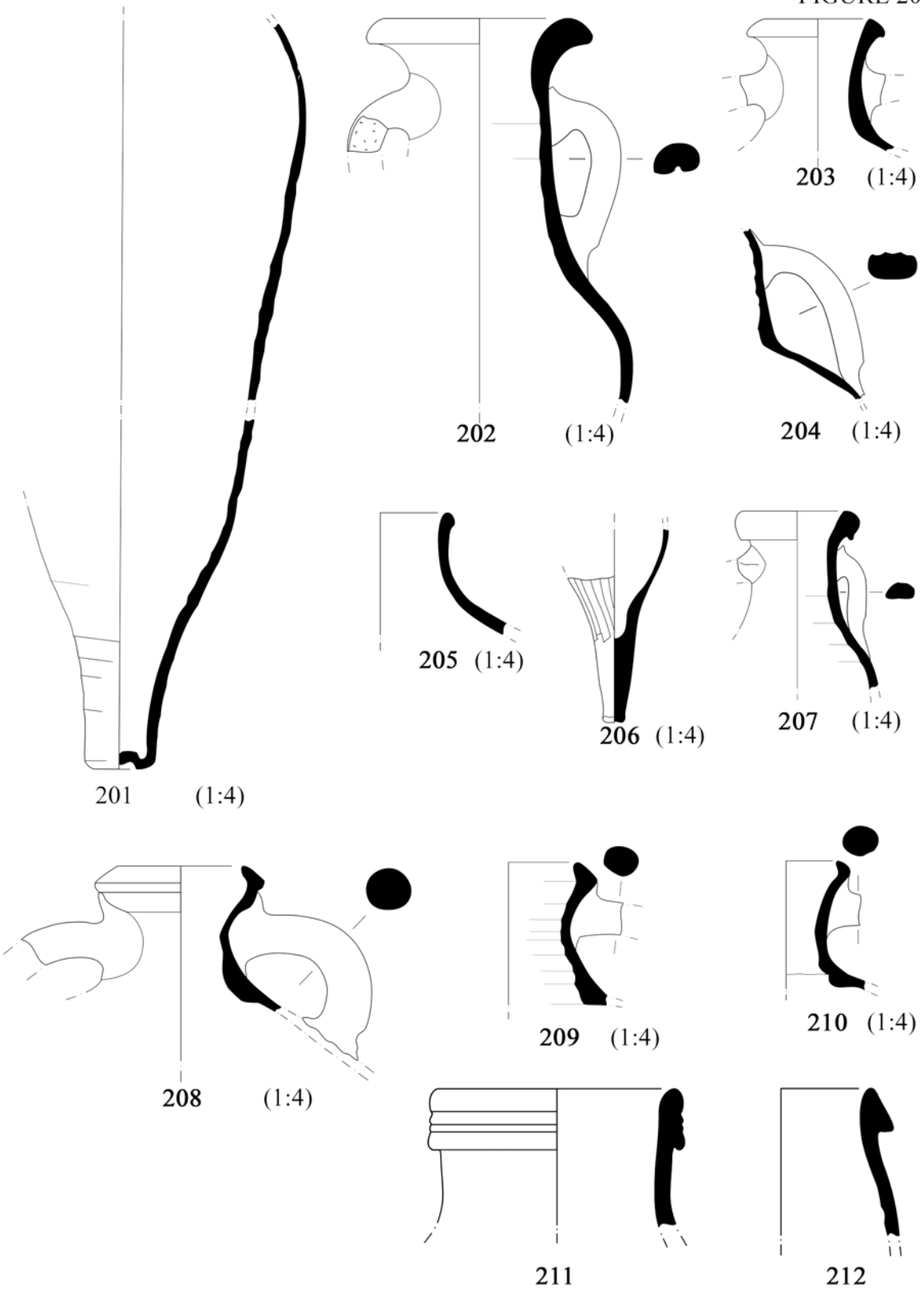


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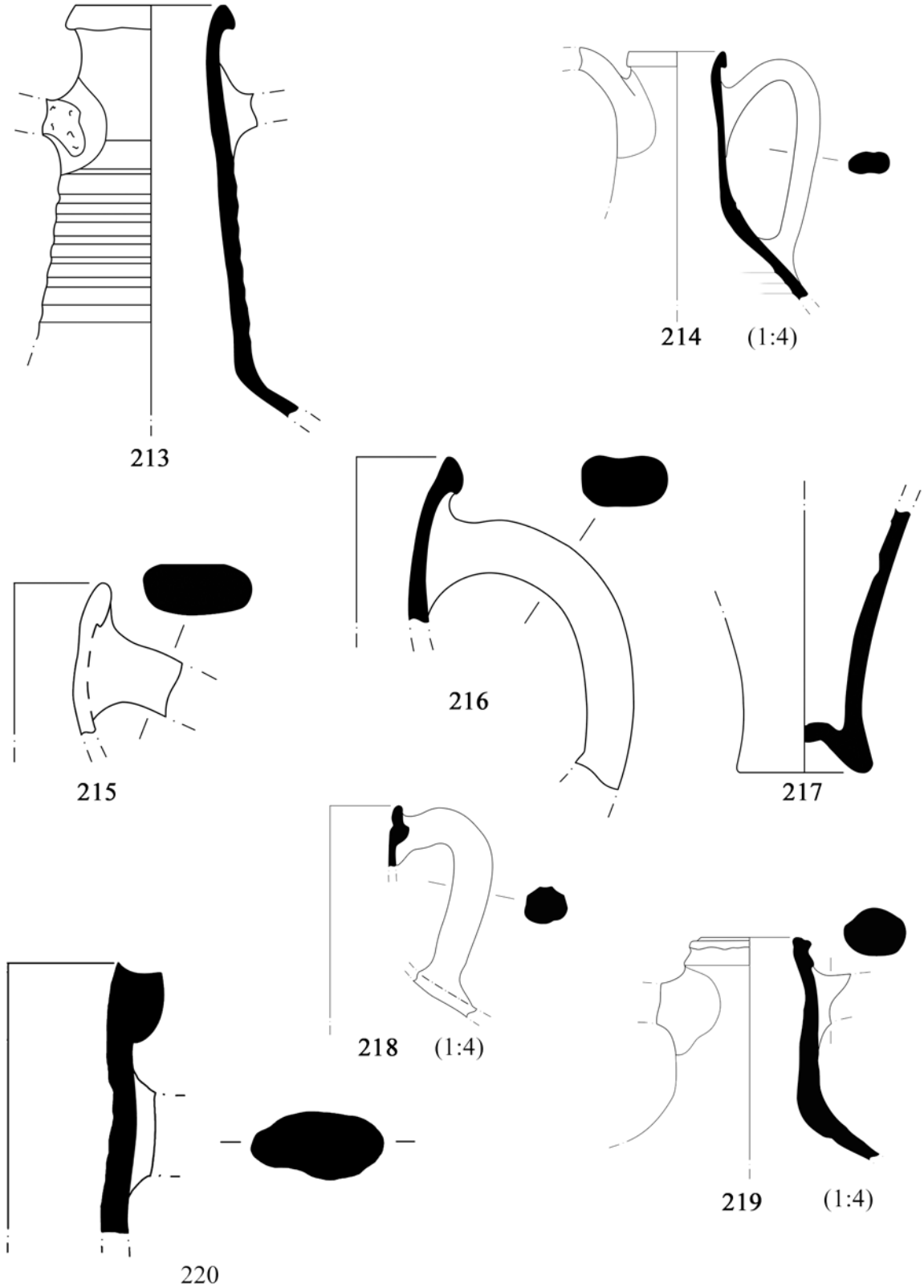


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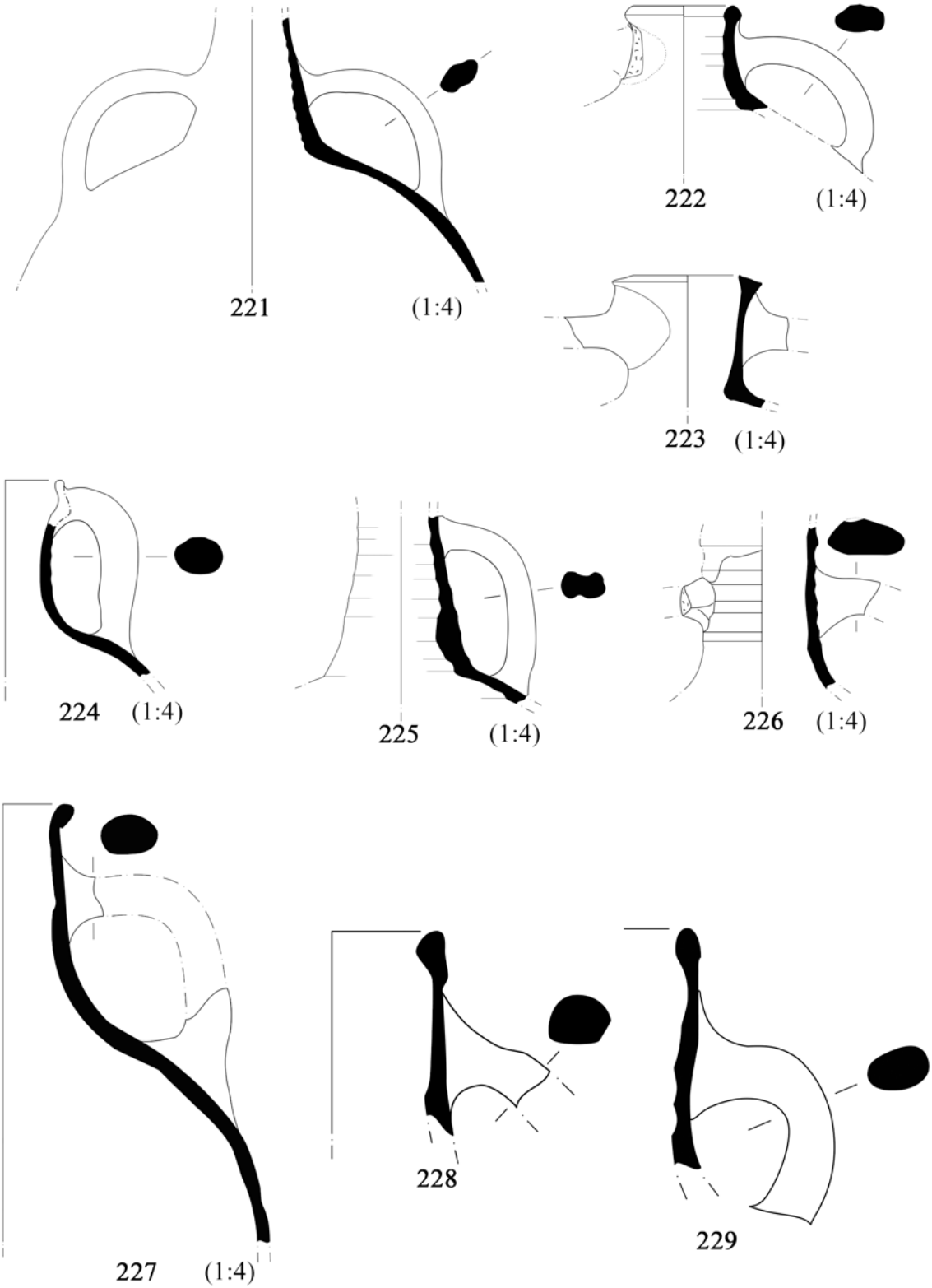


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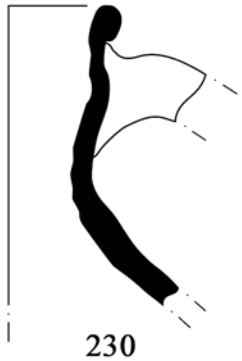

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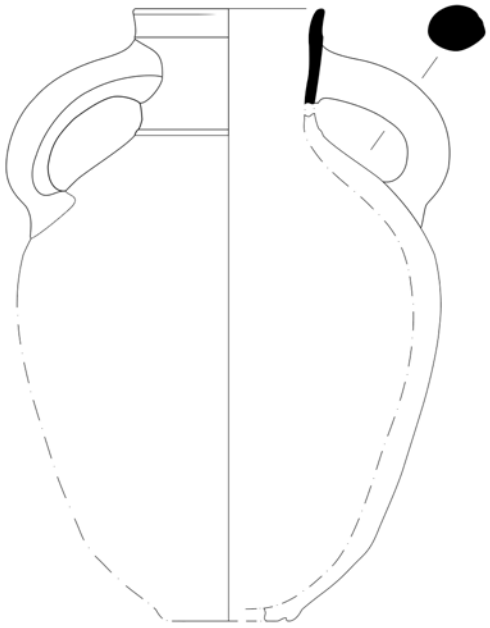

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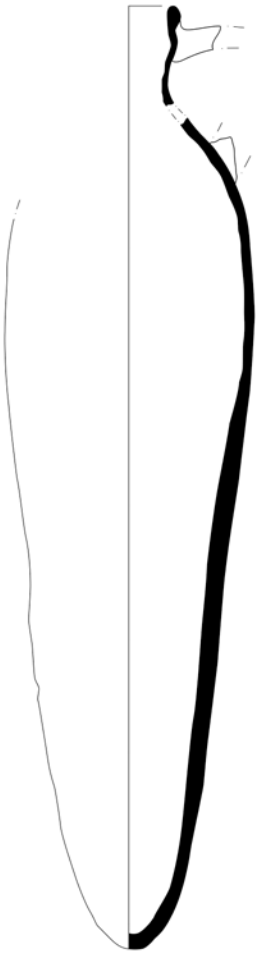

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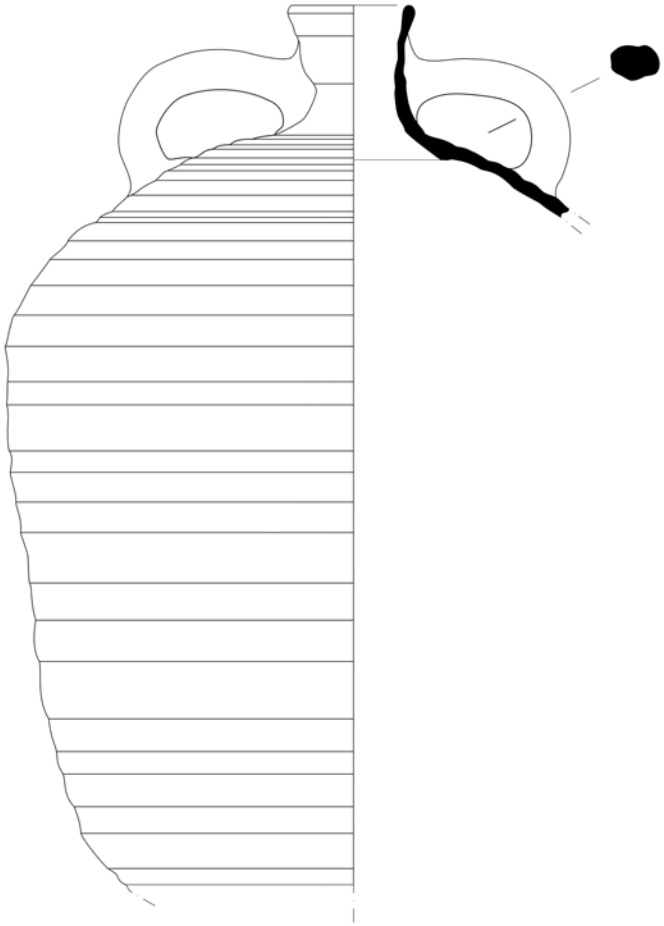
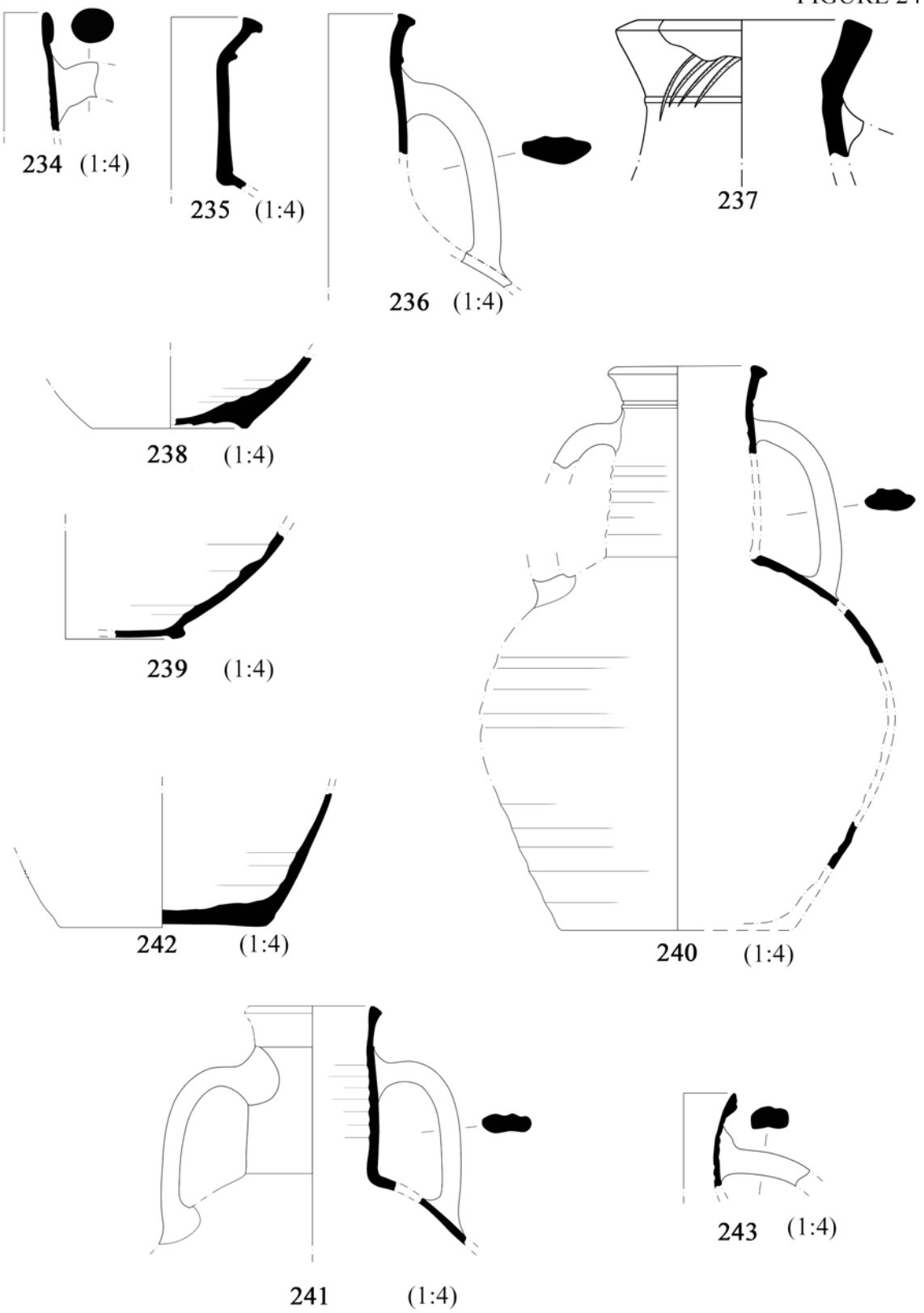


233 (1:4)

Amphoras. (Scale 1:2)

FIGURE 24

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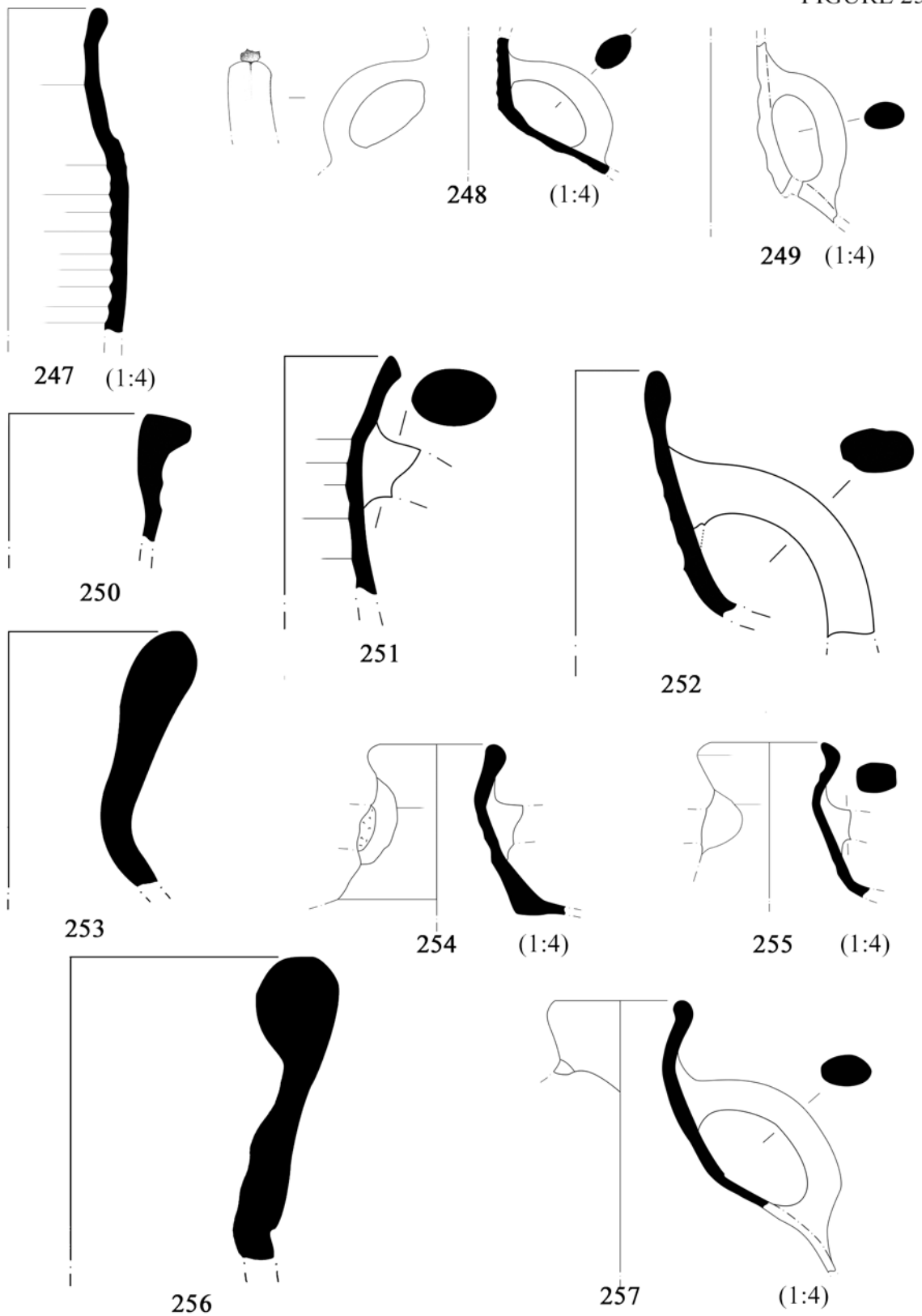


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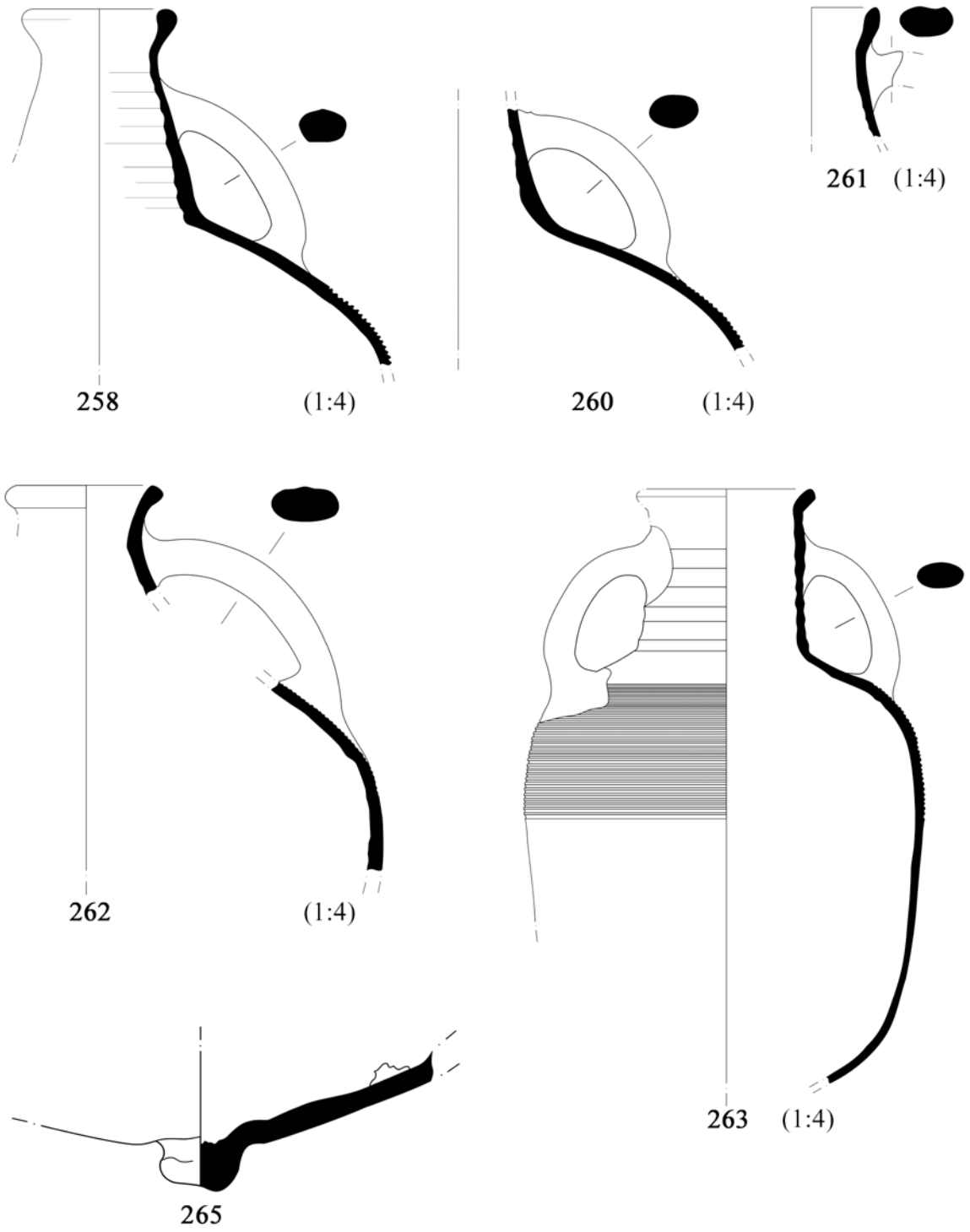
FIGURE 26

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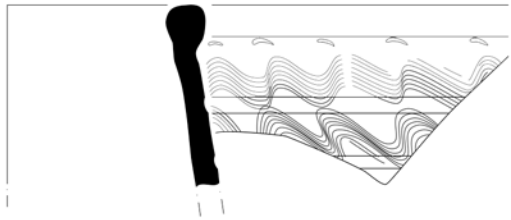

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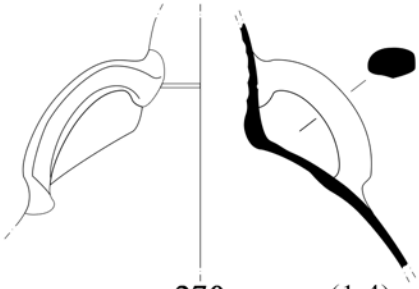

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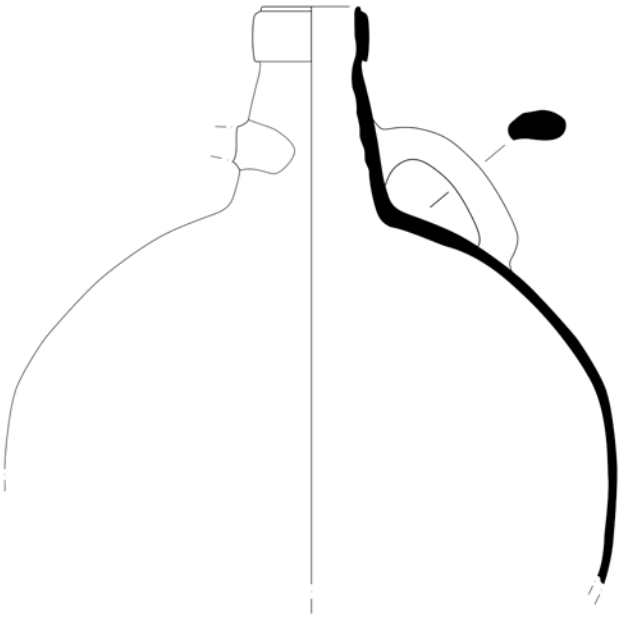

271a (1:4)

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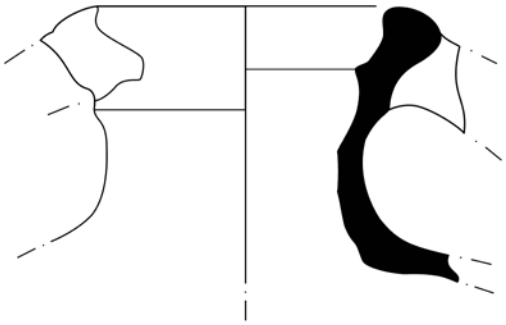
271b (1:4)

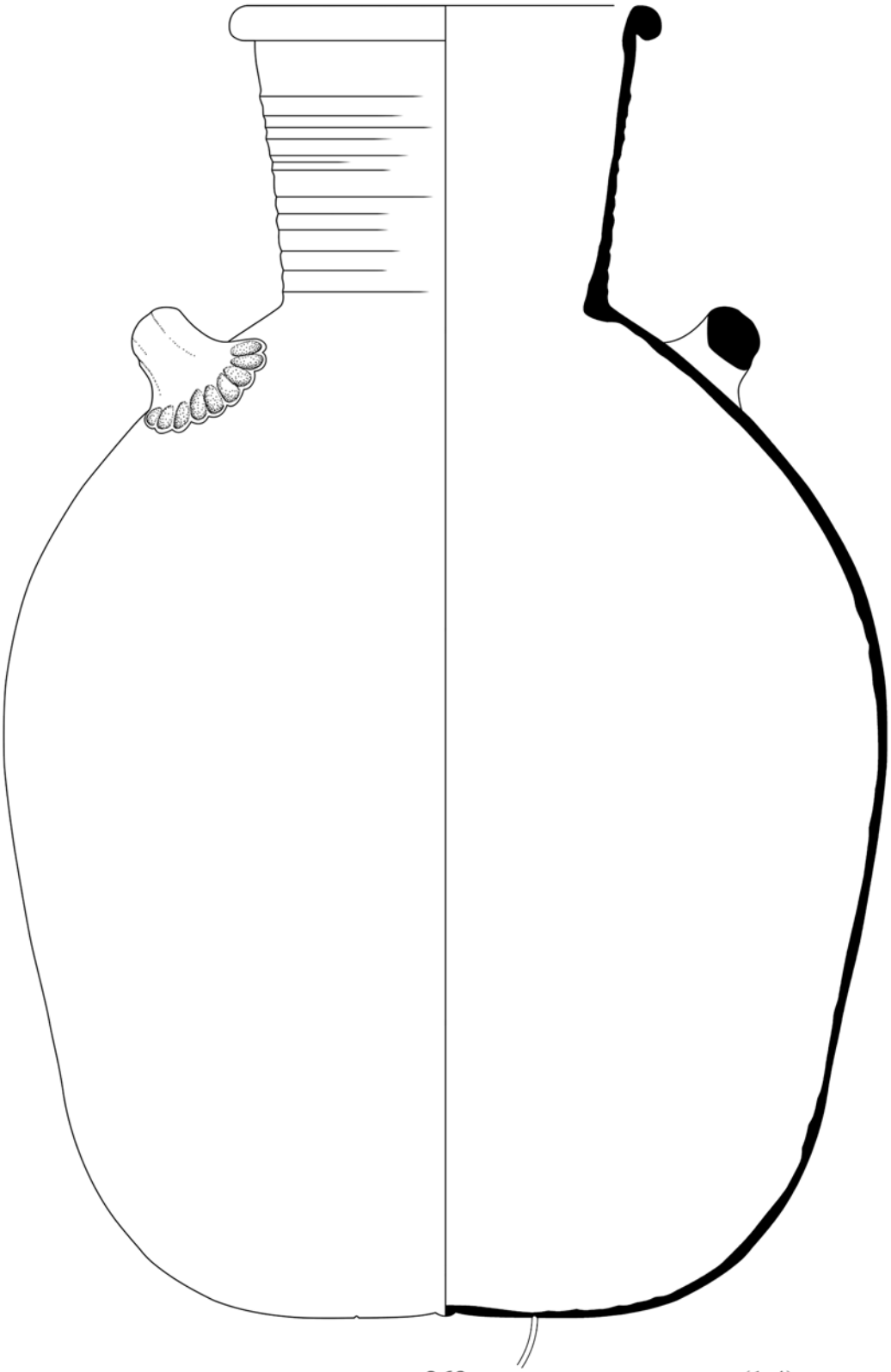
274



275

Amphoras. (Scale 1:2)

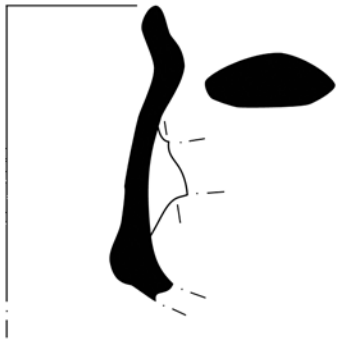
FIGURE 28



**269** (1:4)

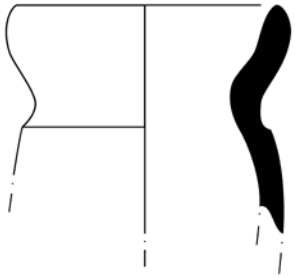
Amphoras. (Scale 1:2)

FIGURE 29

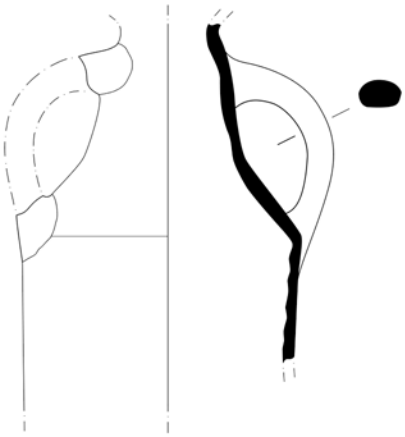


276

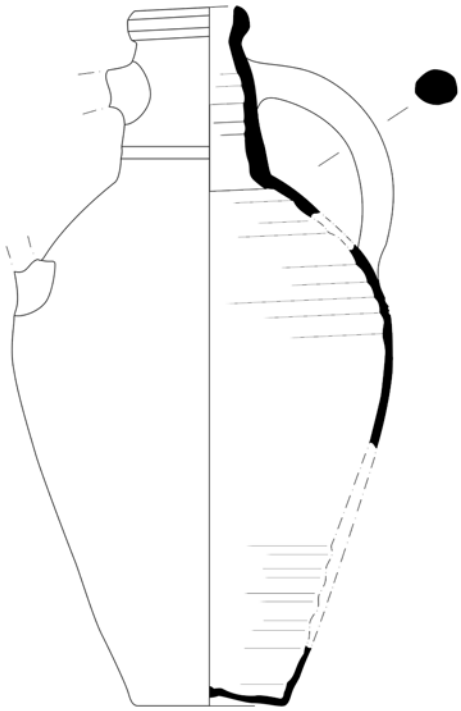
277



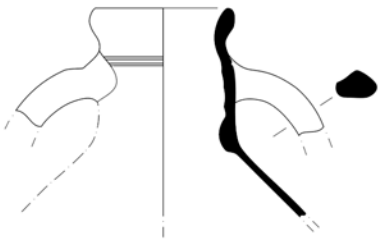
278



279 (1:4)



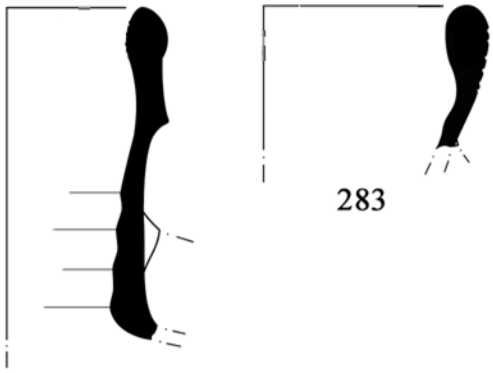
281 (1:4)



280 (1:4)

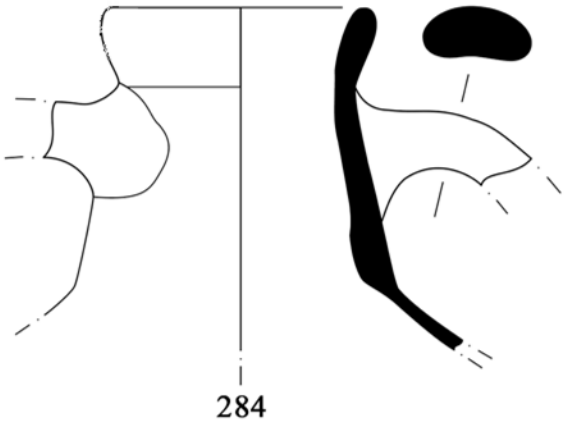
Amphoras. (Scale 1:2)

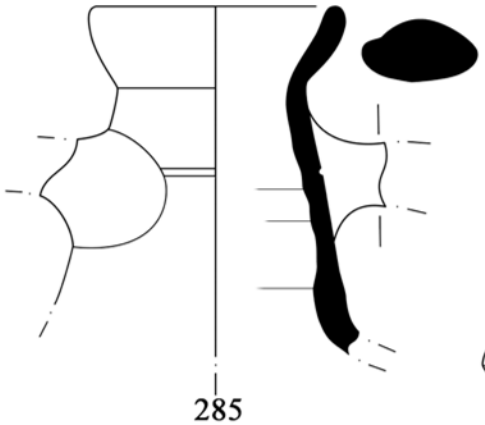
FIGURE 30



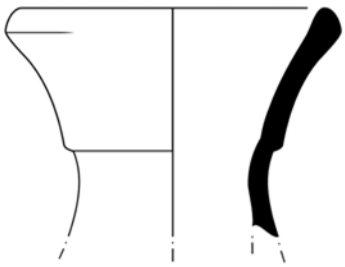


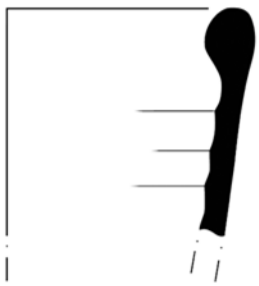


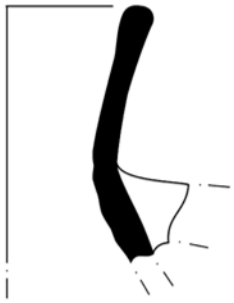




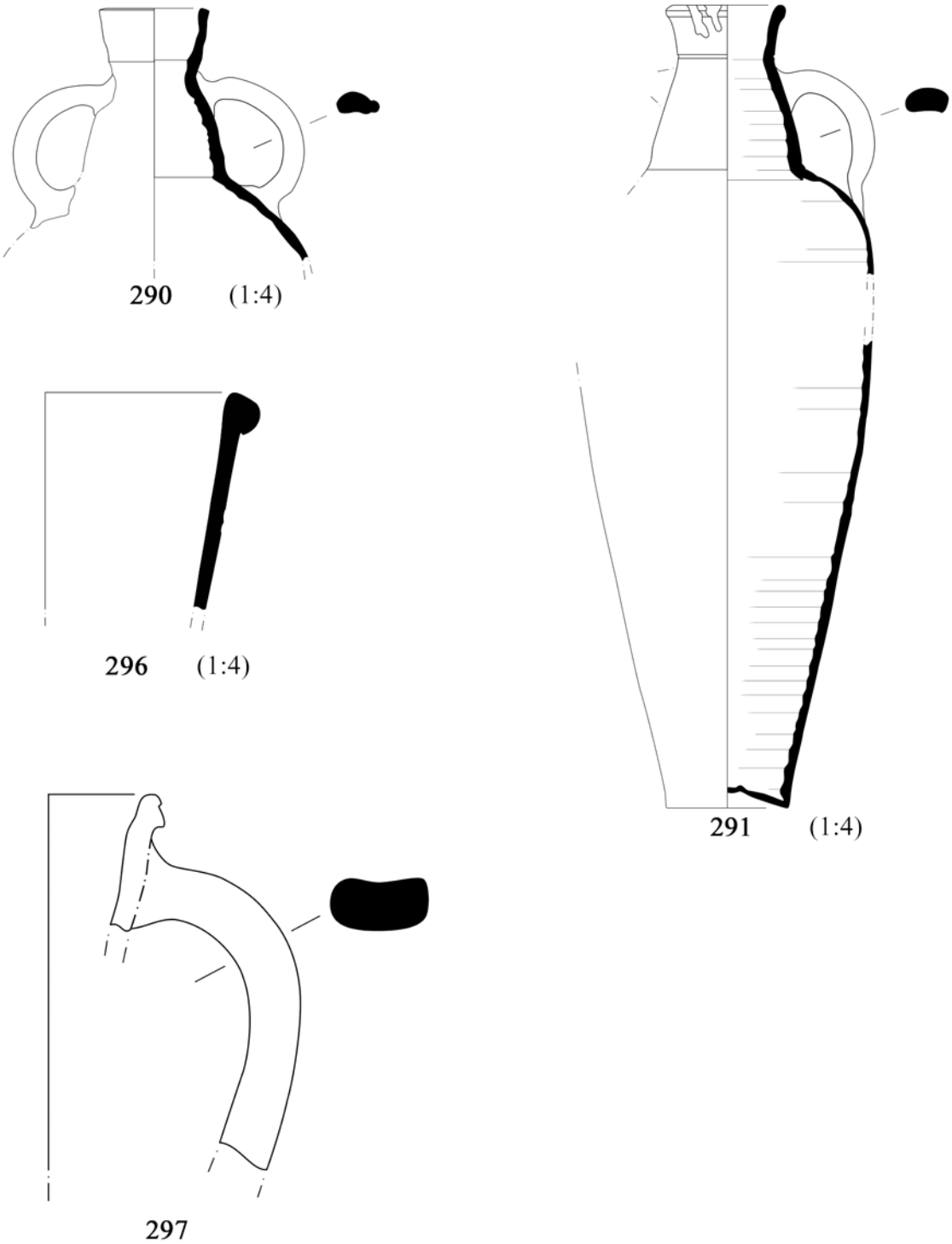





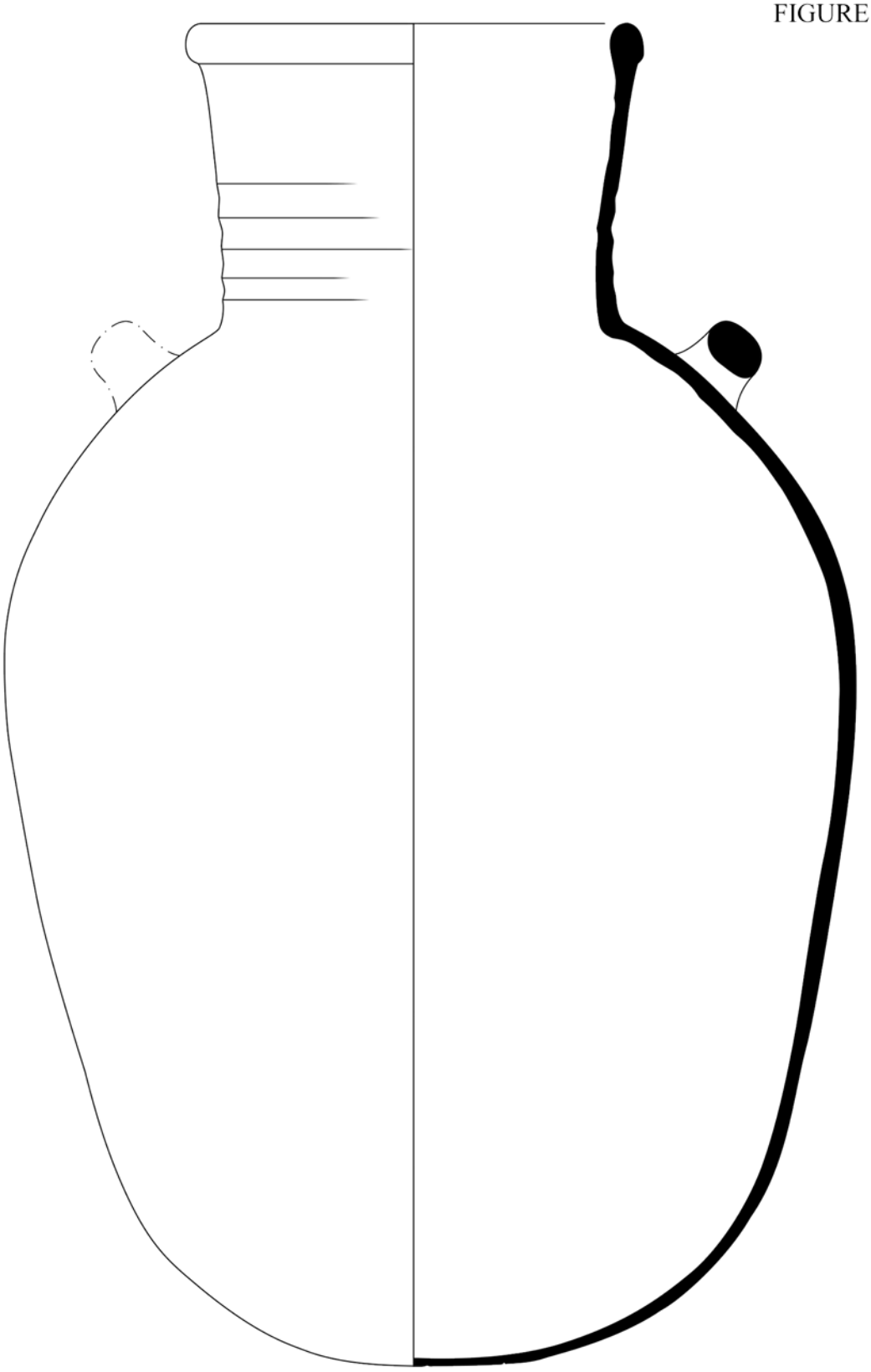
Amphoras. (Scale 1:2)

FIGURE 31



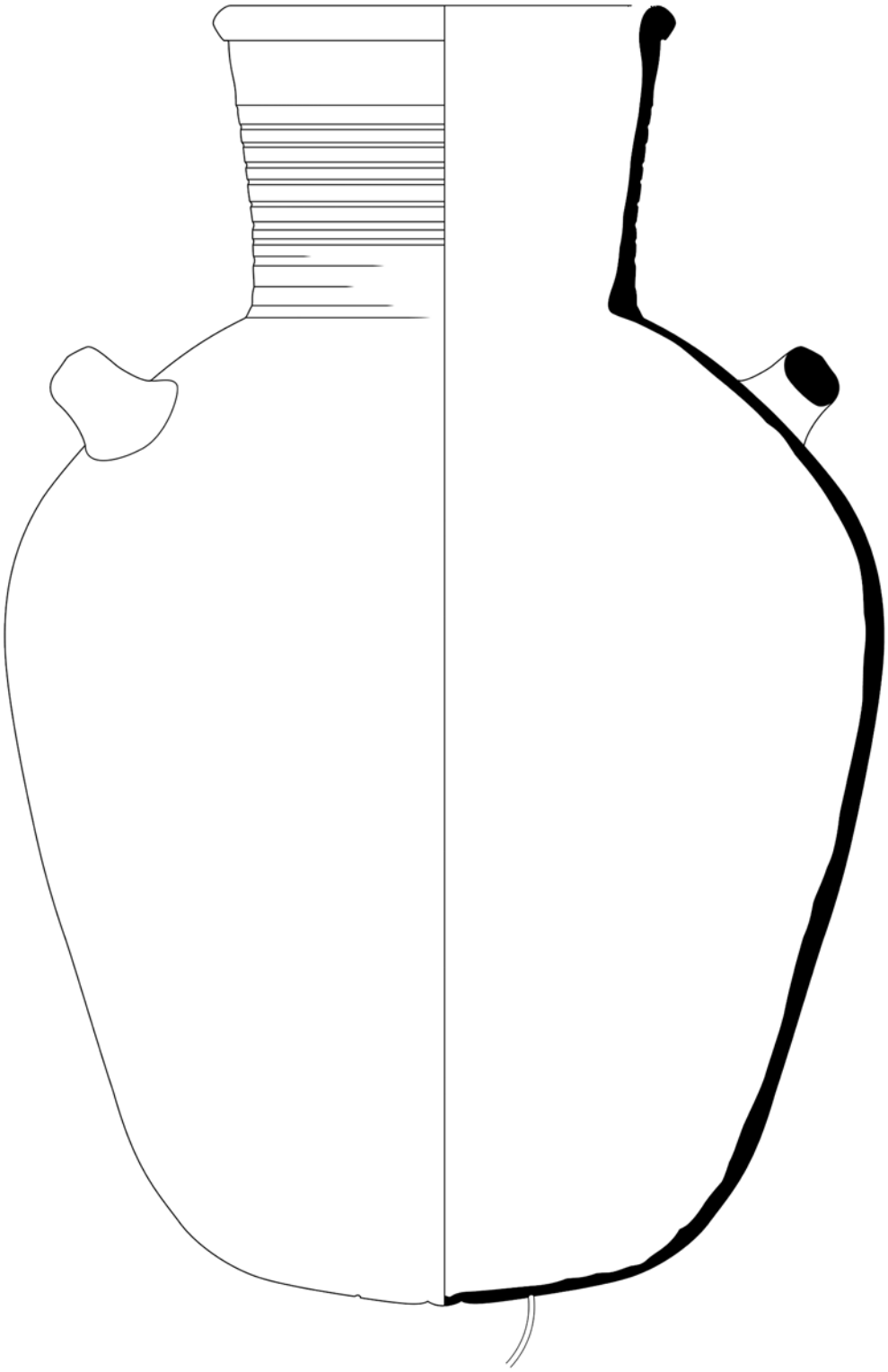

Amphoras. (Scale 1:2)

FIGURE 32



Amphoras. (Scale 1:2) **294** (1:4)

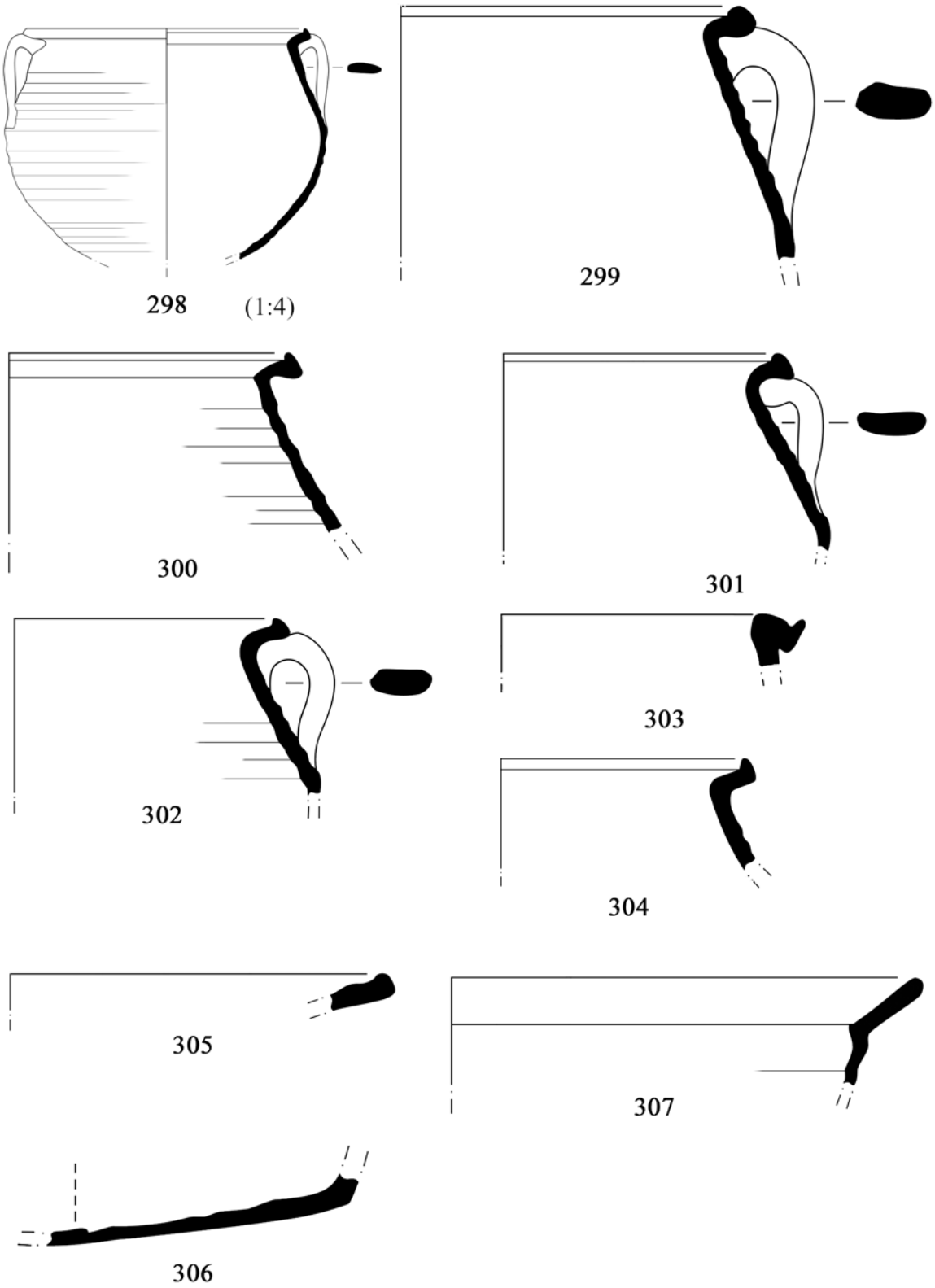
FIGURE 33



**295** (1:4)

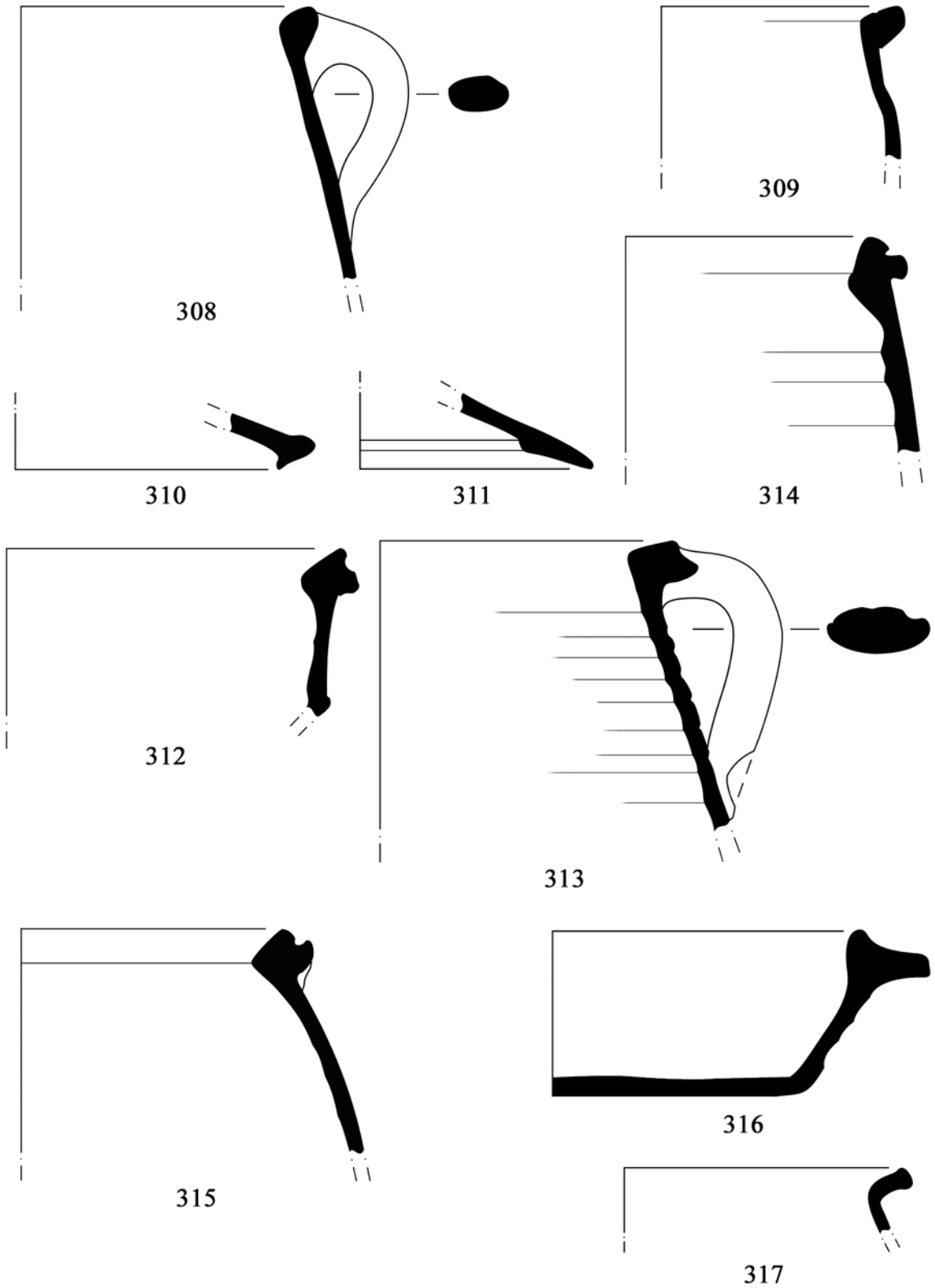
Amphoras. (Scale 1:2)

FIGURE 34



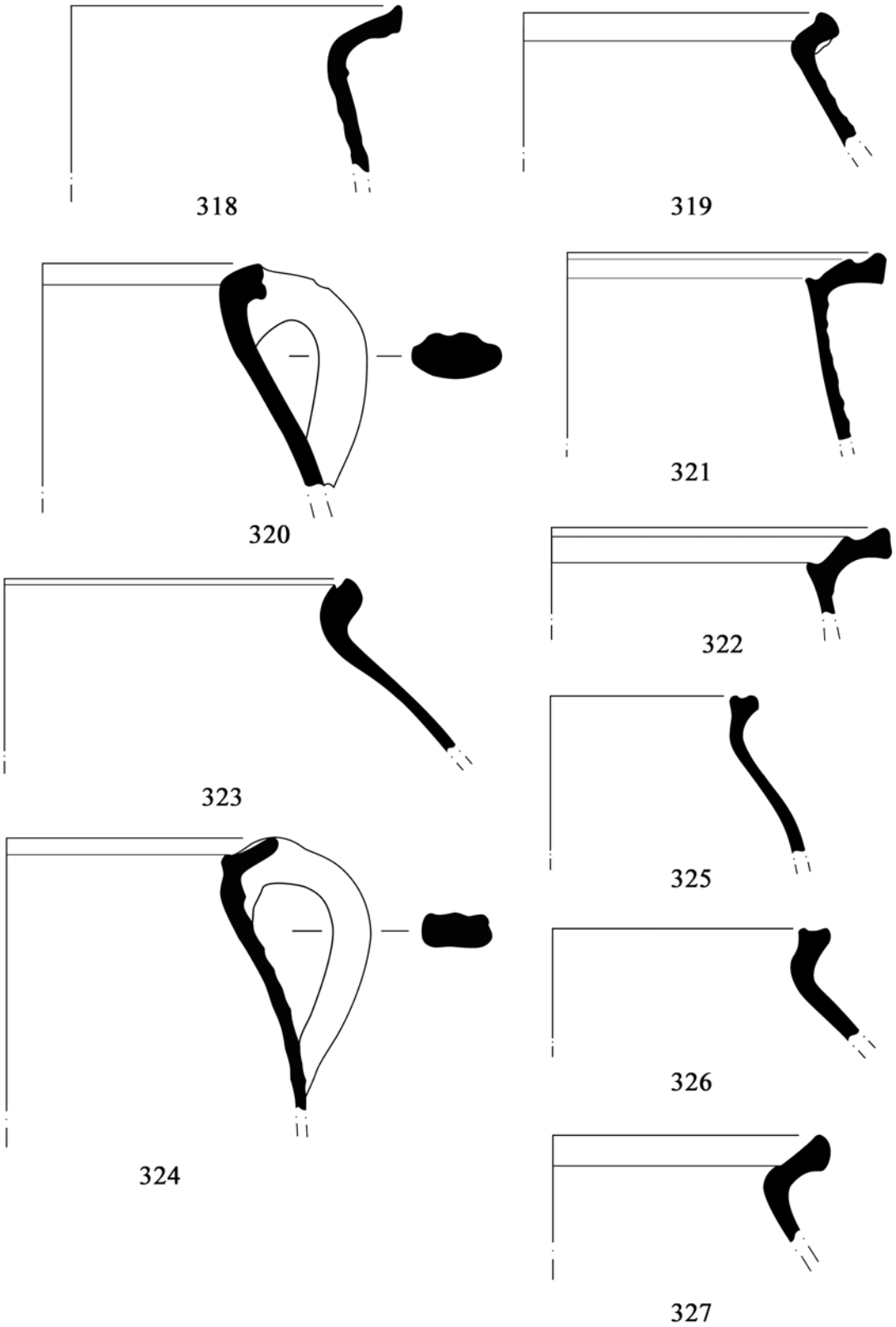

Cooking wares. (Scale 1:2)

FIGURE 35



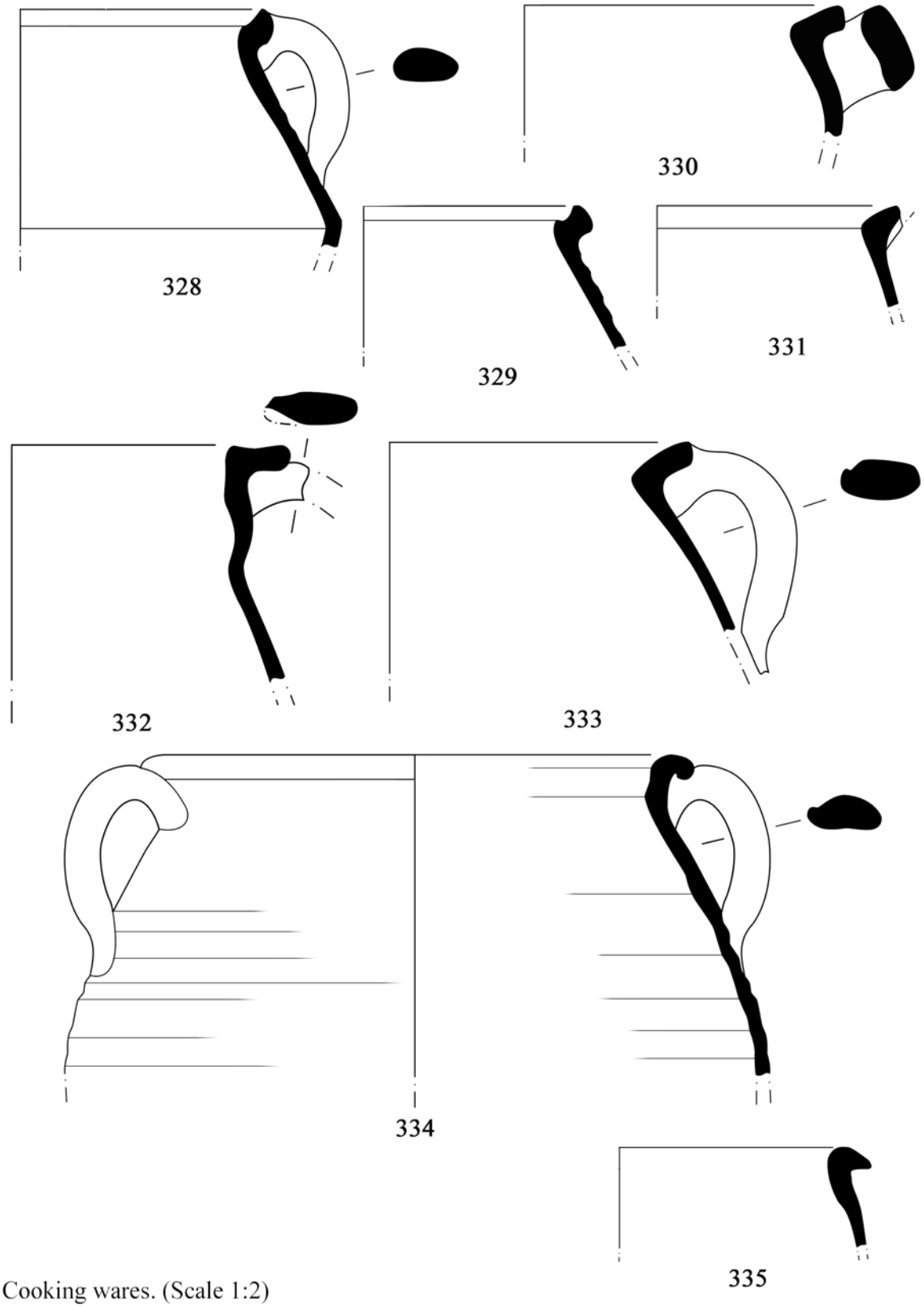

Cooking wares. (Scale 1:2)

FIGURE 36



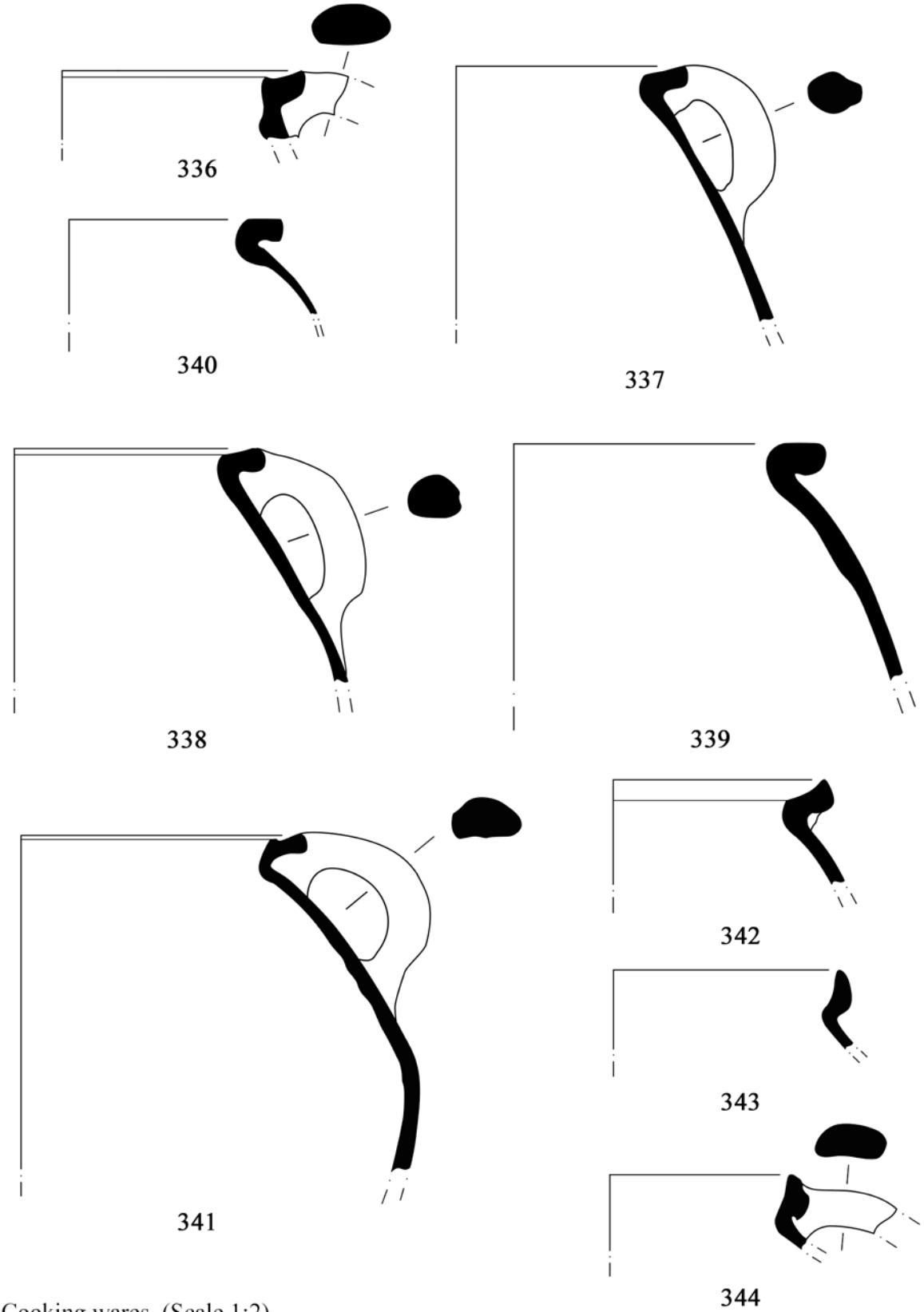

Cooking wares. (Scale 1:2)

FIGURE 37



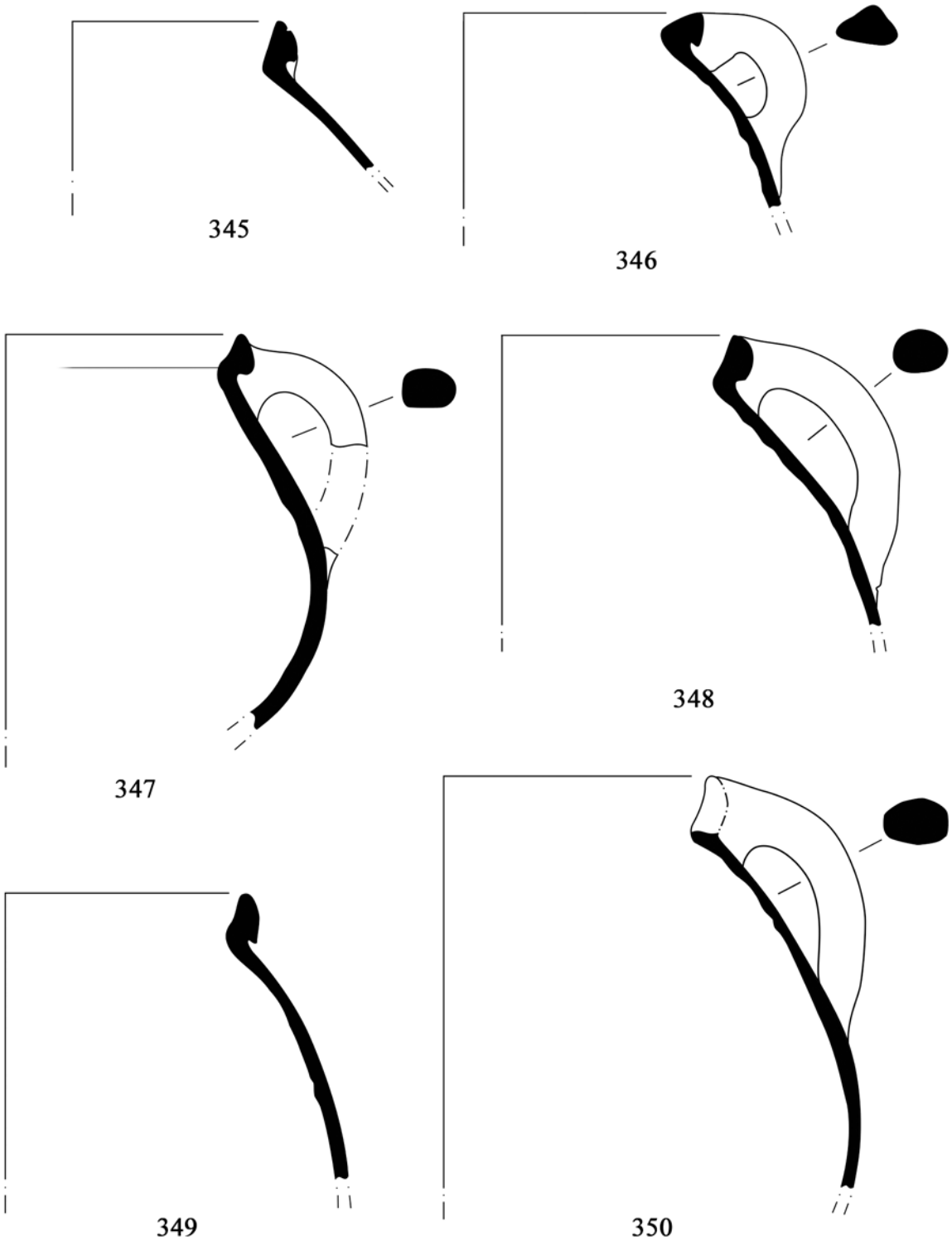

Cooking wares. (Scale 1:2)

FIGURE 38



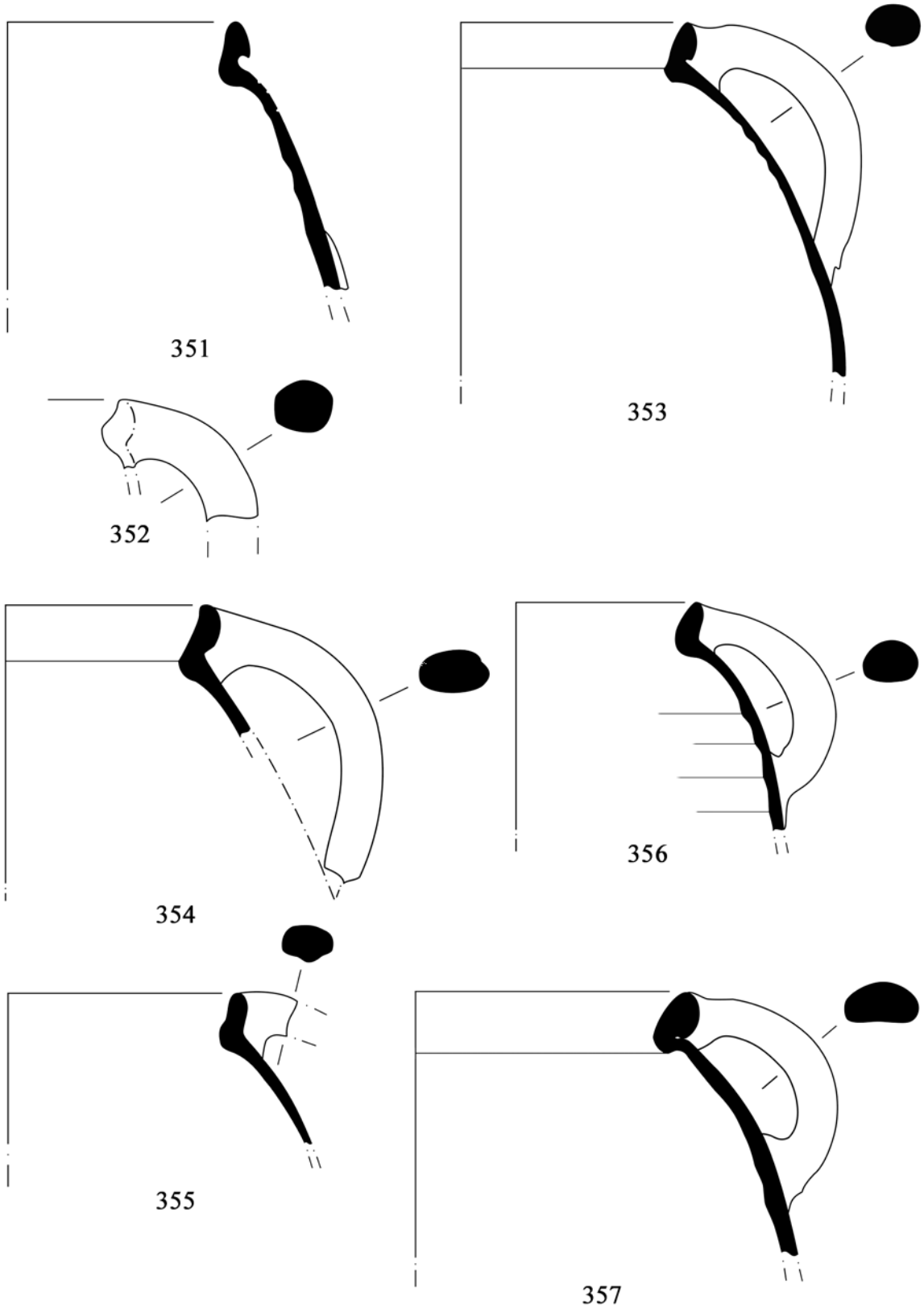

Cooking wares. (Scale 1:2)

FIGURE 39



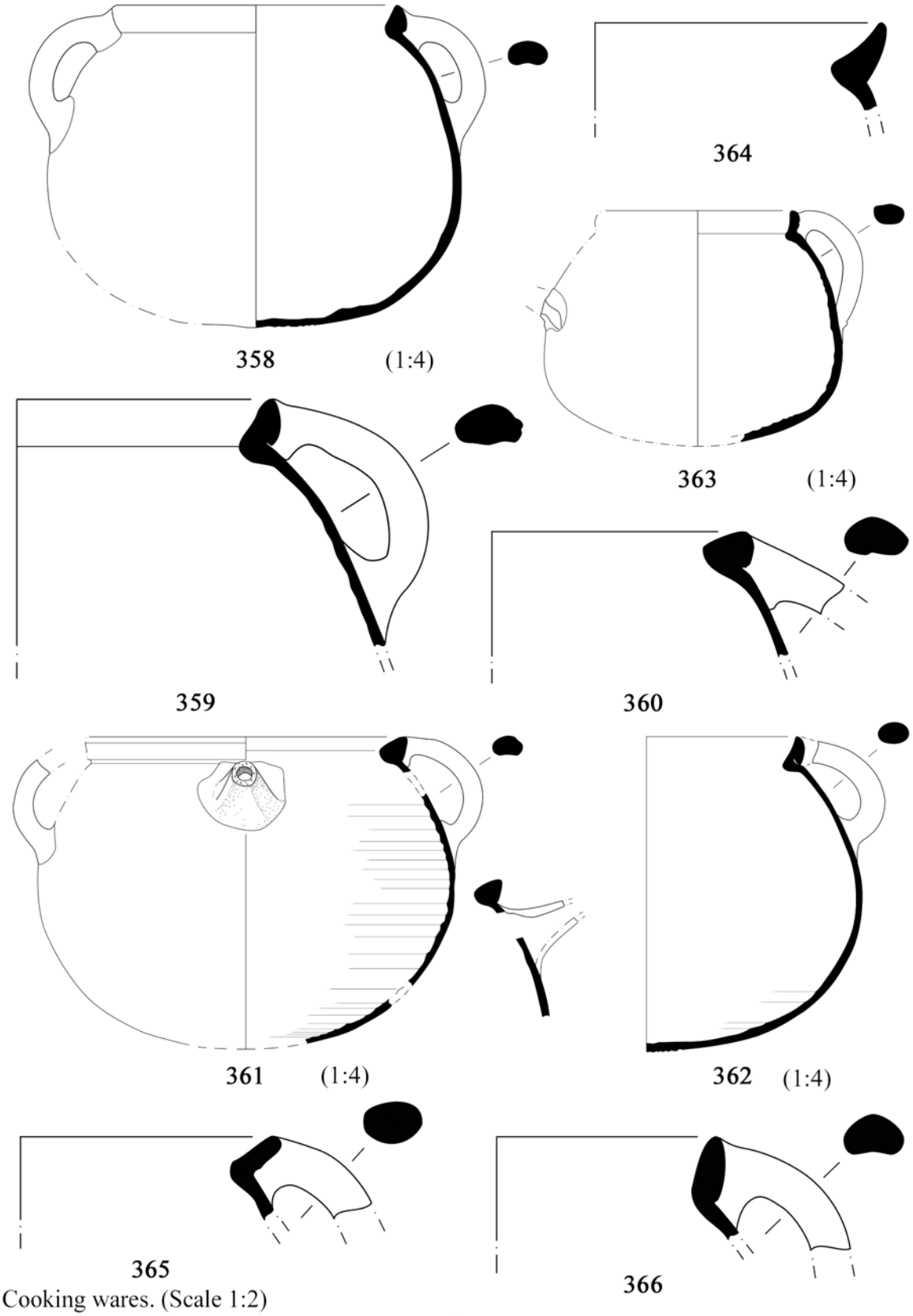

Cooking wares. (Scale 1:2)

FIGURE 40



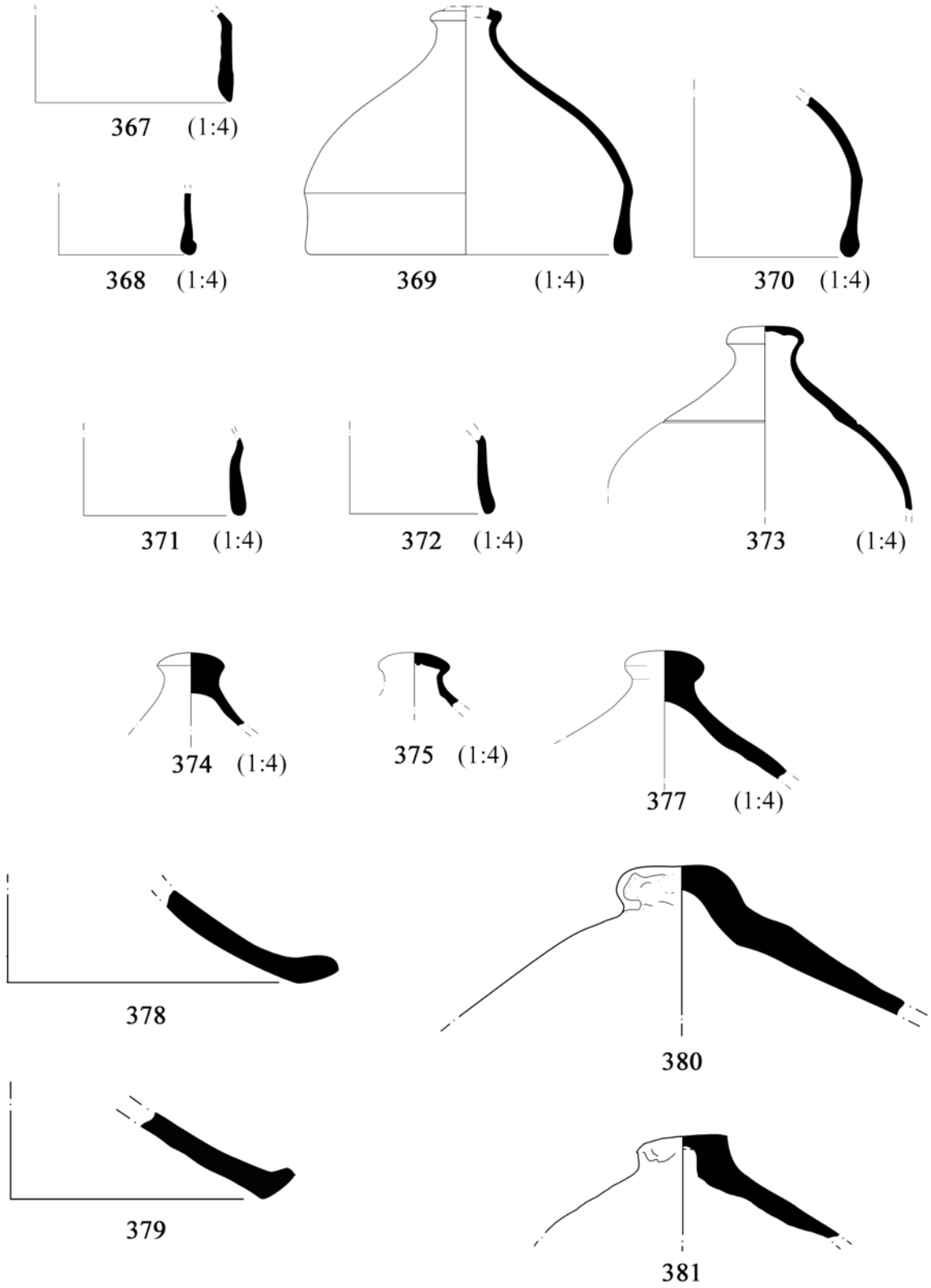

Cooking wares. (Scale 1:2)

FIGURE 41



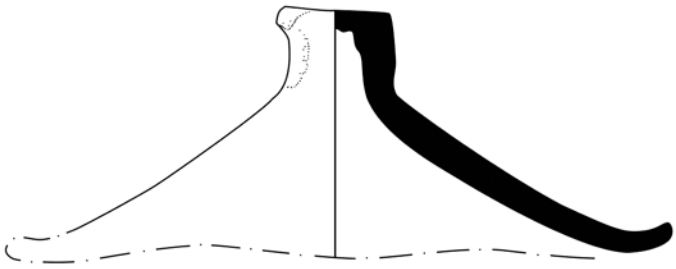

Cooking wares. (Scale 1:2)

FIGURE 42

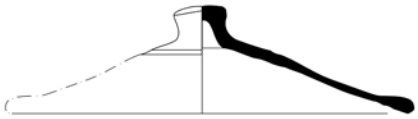



Cooking wares. (Scale 1:2)

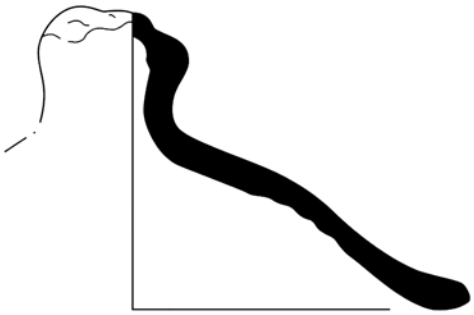
FIGURE 43



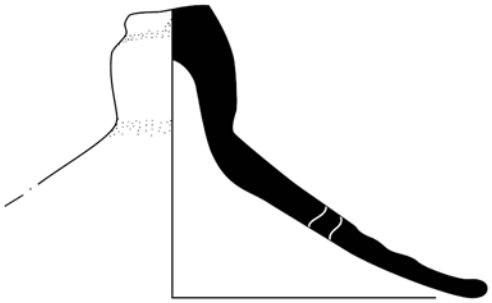
382



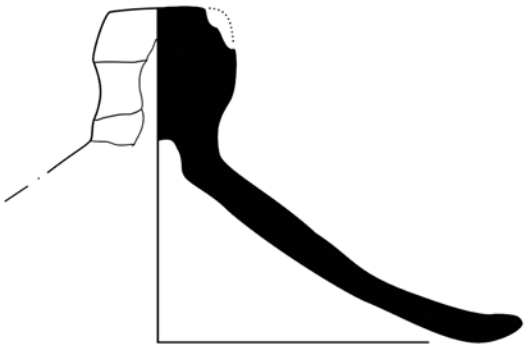
385 (1:4)



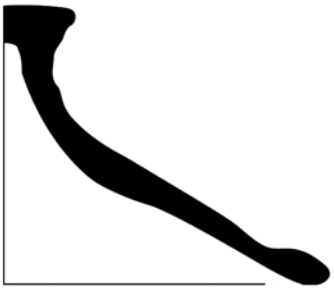
383



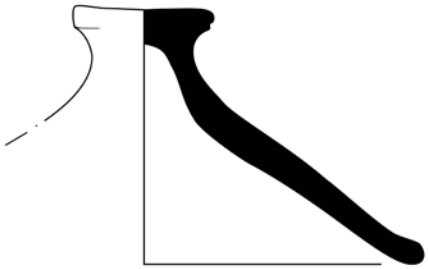
384



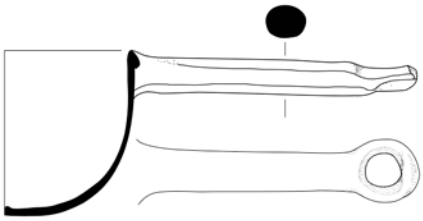
386



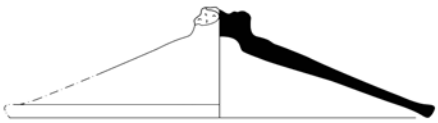
387



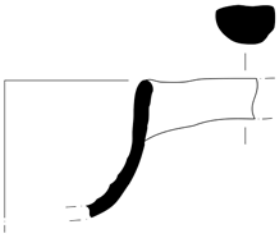
388



390 (1:4)



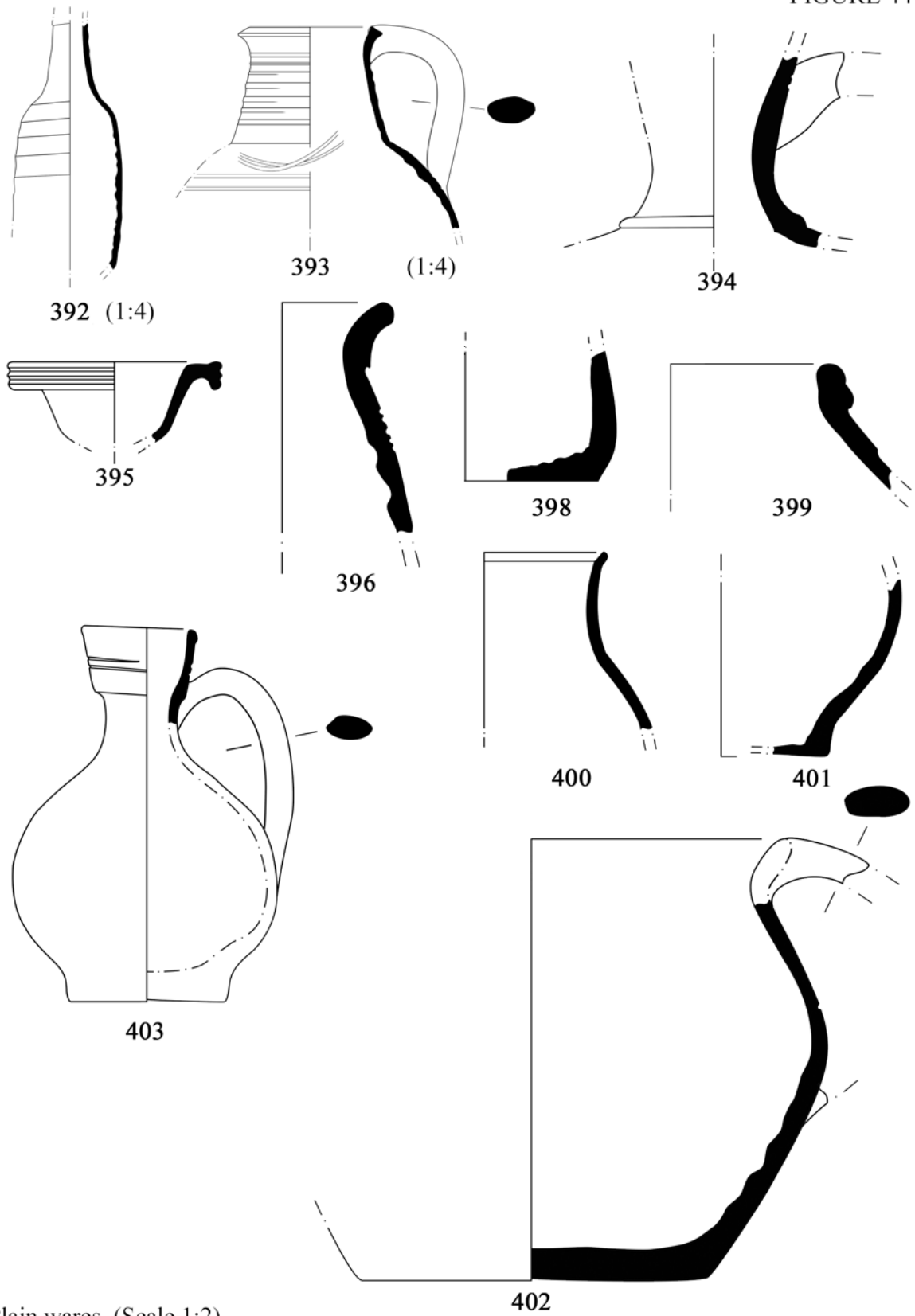
389 (1:4)



391 (1:4)

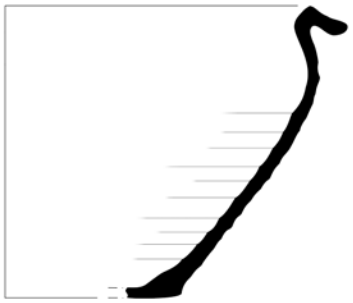
Cooking wares. (Scale 1:2)

FIGURE 44

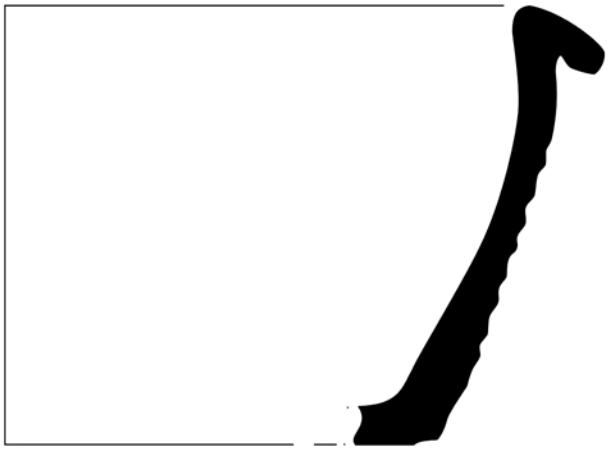



Plain wares. (Scale 1:2)

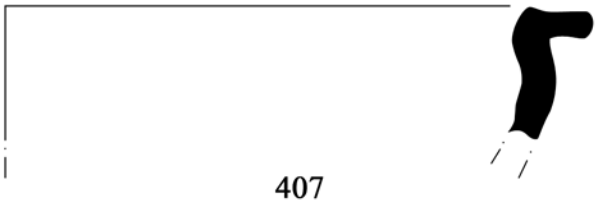
FIGURE 45



405 (1:4)



406



407

408

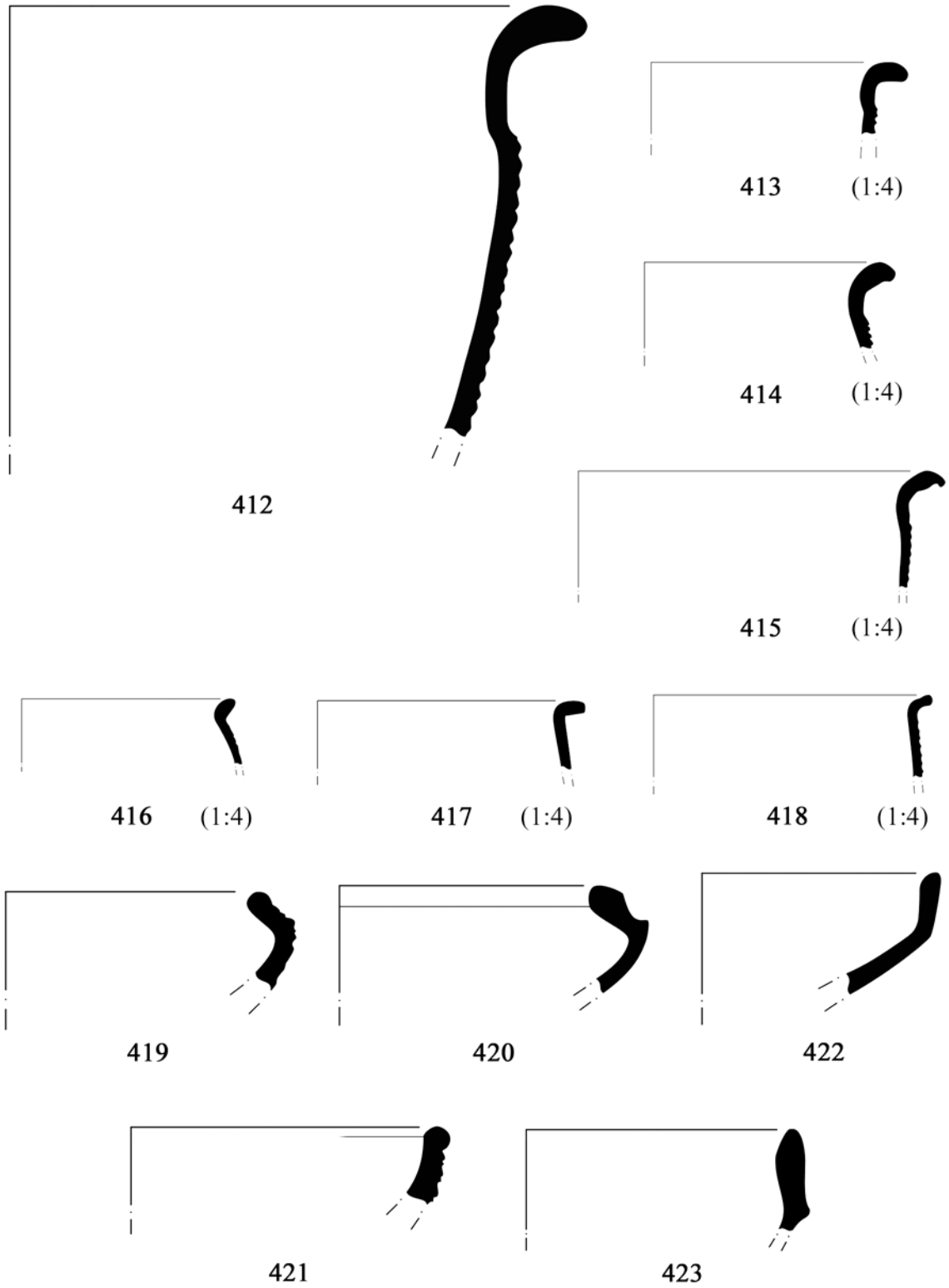
409 (1:4)

410

411

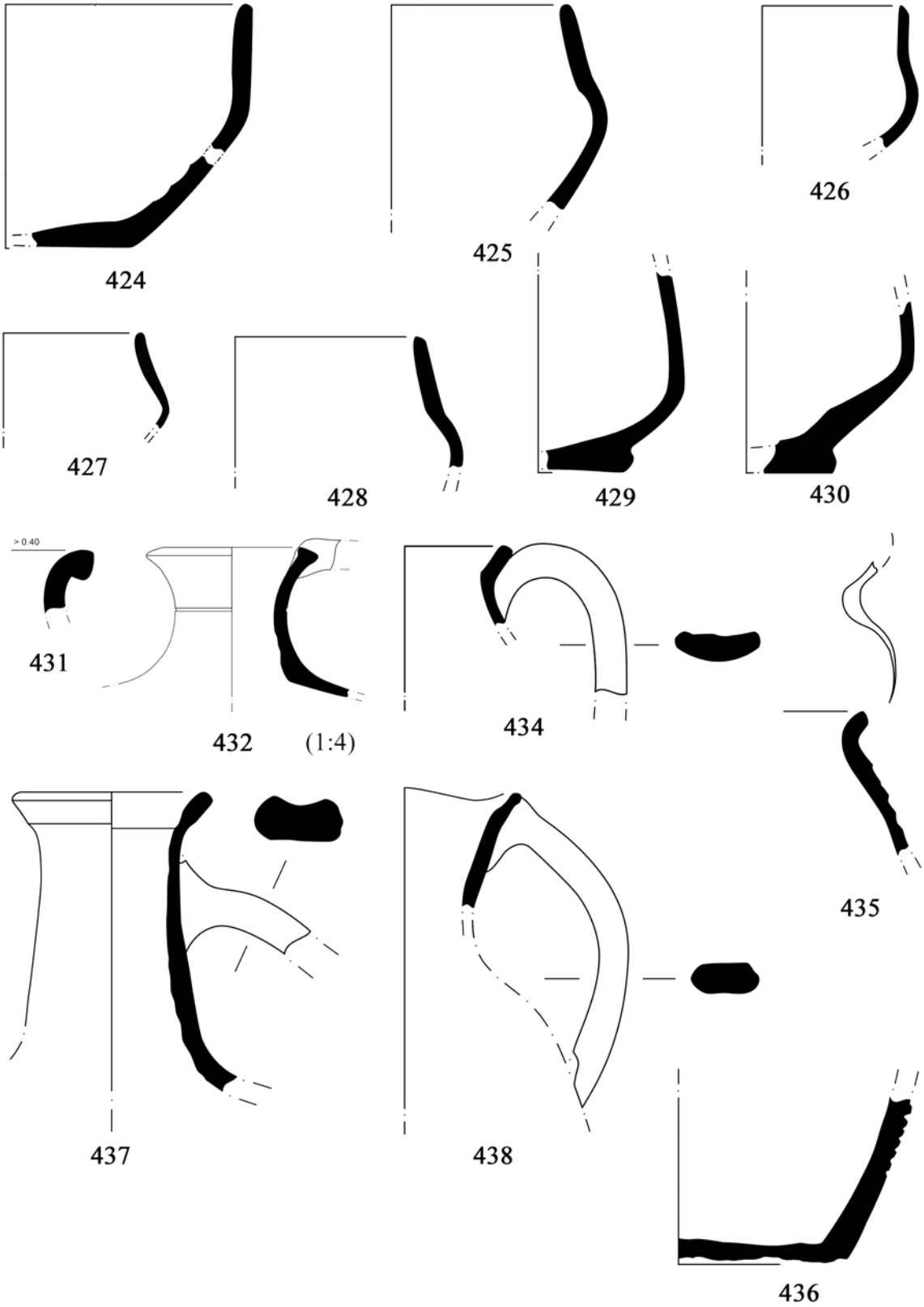
Plain wares. (Scale 1:2)

FIGURE 46



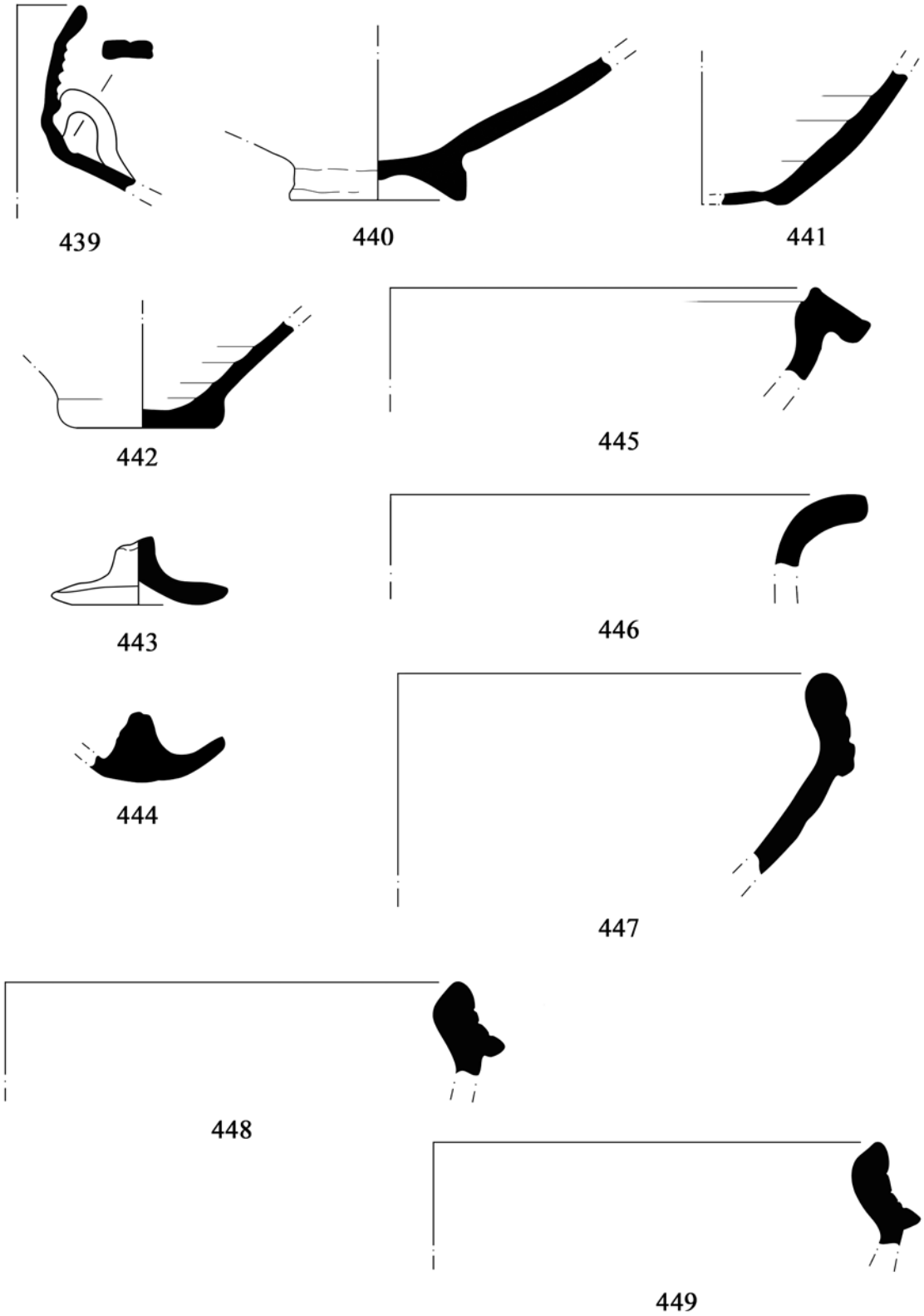

Plain wares. (Scale 1:2)

FIGURE 47




Plain wares. (Scale 1:2)

FIGURE 48

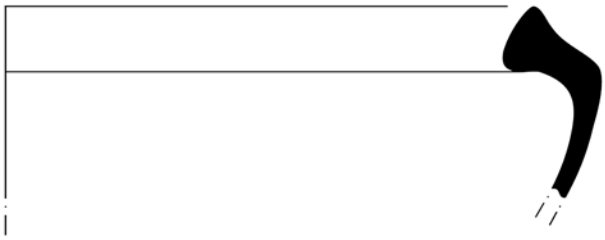



Plain wares. (Scale 1:2)

FIGURE 49

450a

450b



451

452

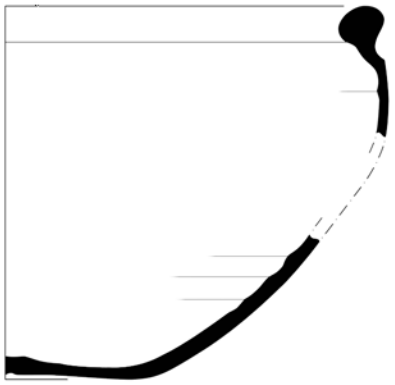
453

454

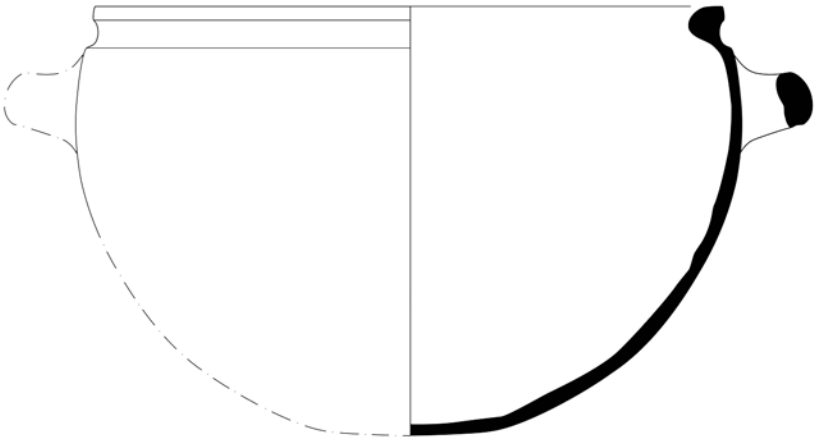
Plain wares. (Scale 1:2)

FIGURE 50

455



457 (1:4)



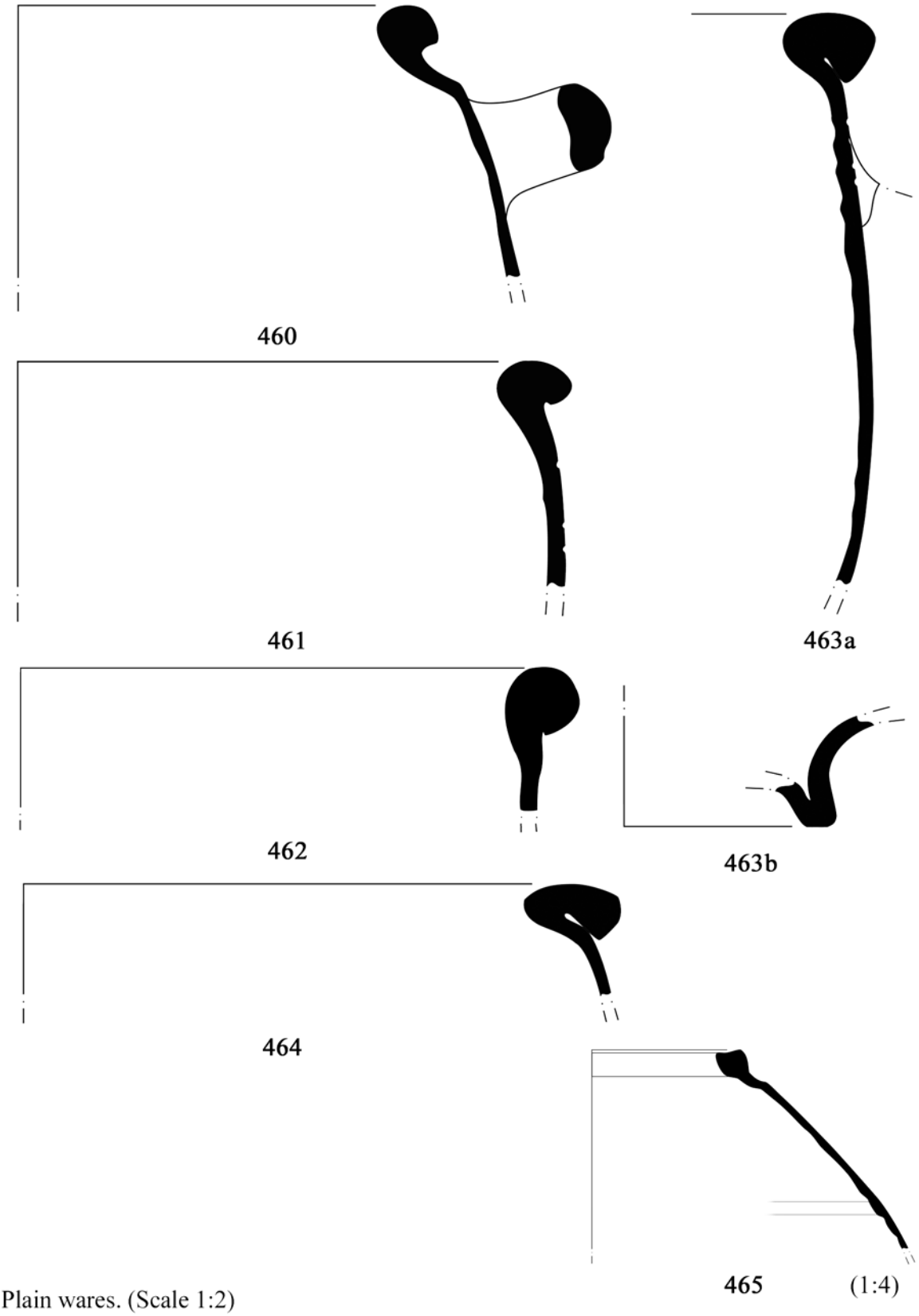
456 (1:4)

458

459

Plain wares. (Scale 1:2)

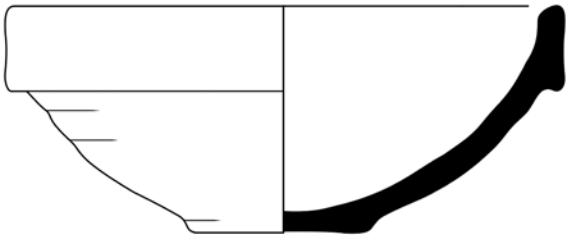
FIGURE 51



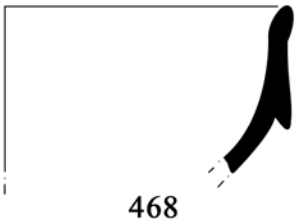

Plain wares. (Scale 1:2)

FIGURE 52

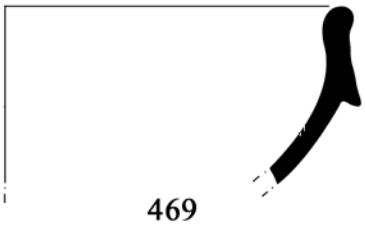
466



467

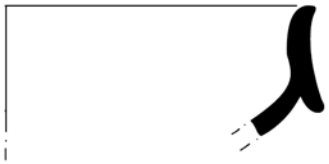


468

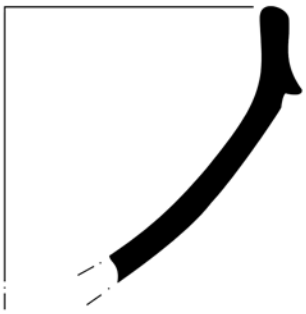


469

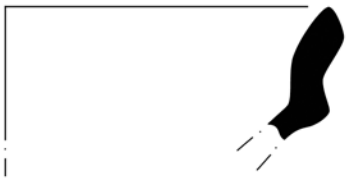
470



471

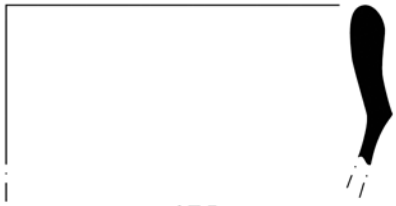


472



473

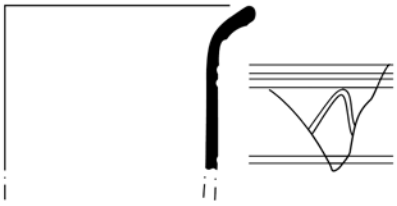
474



475

476

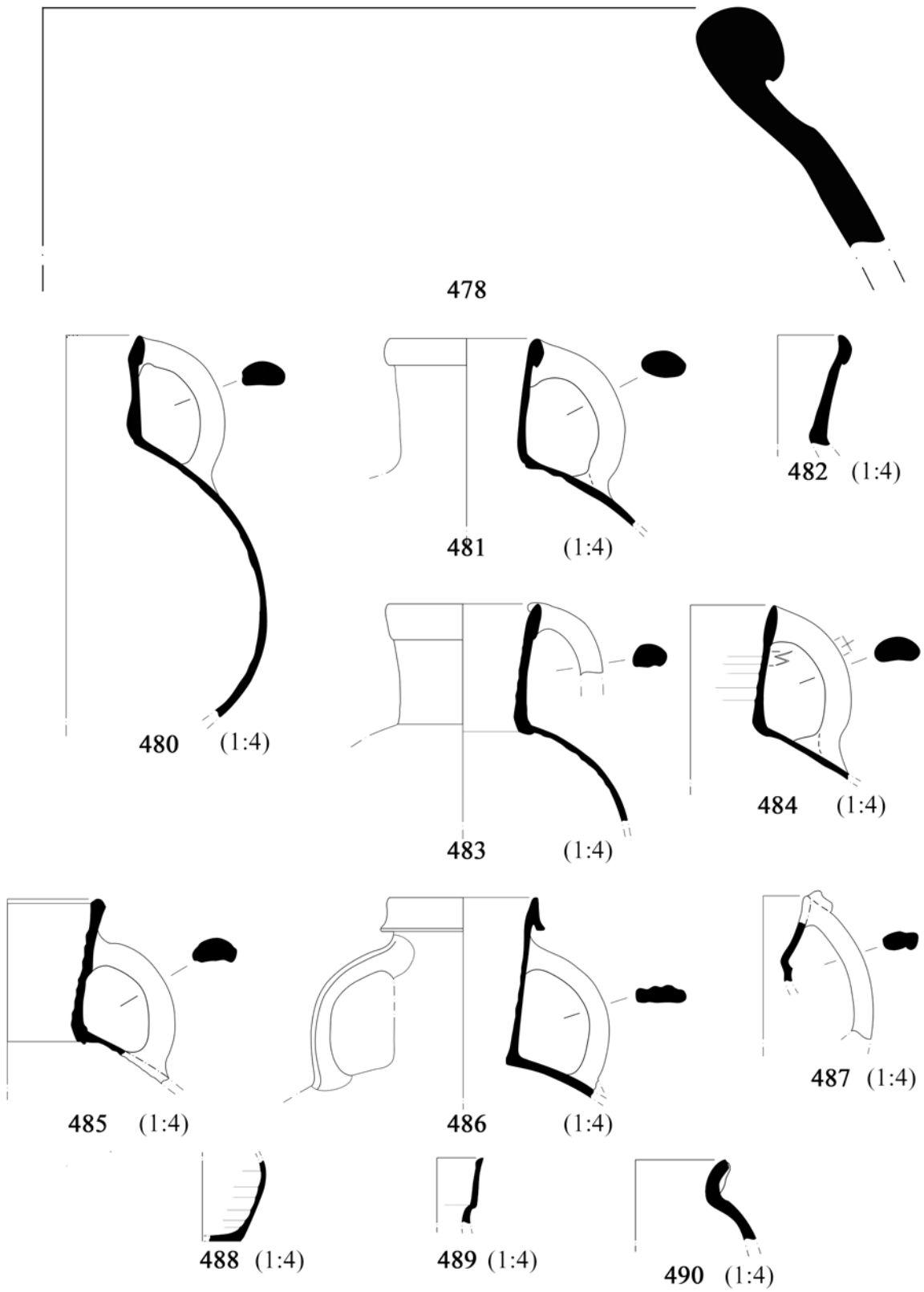
477



479

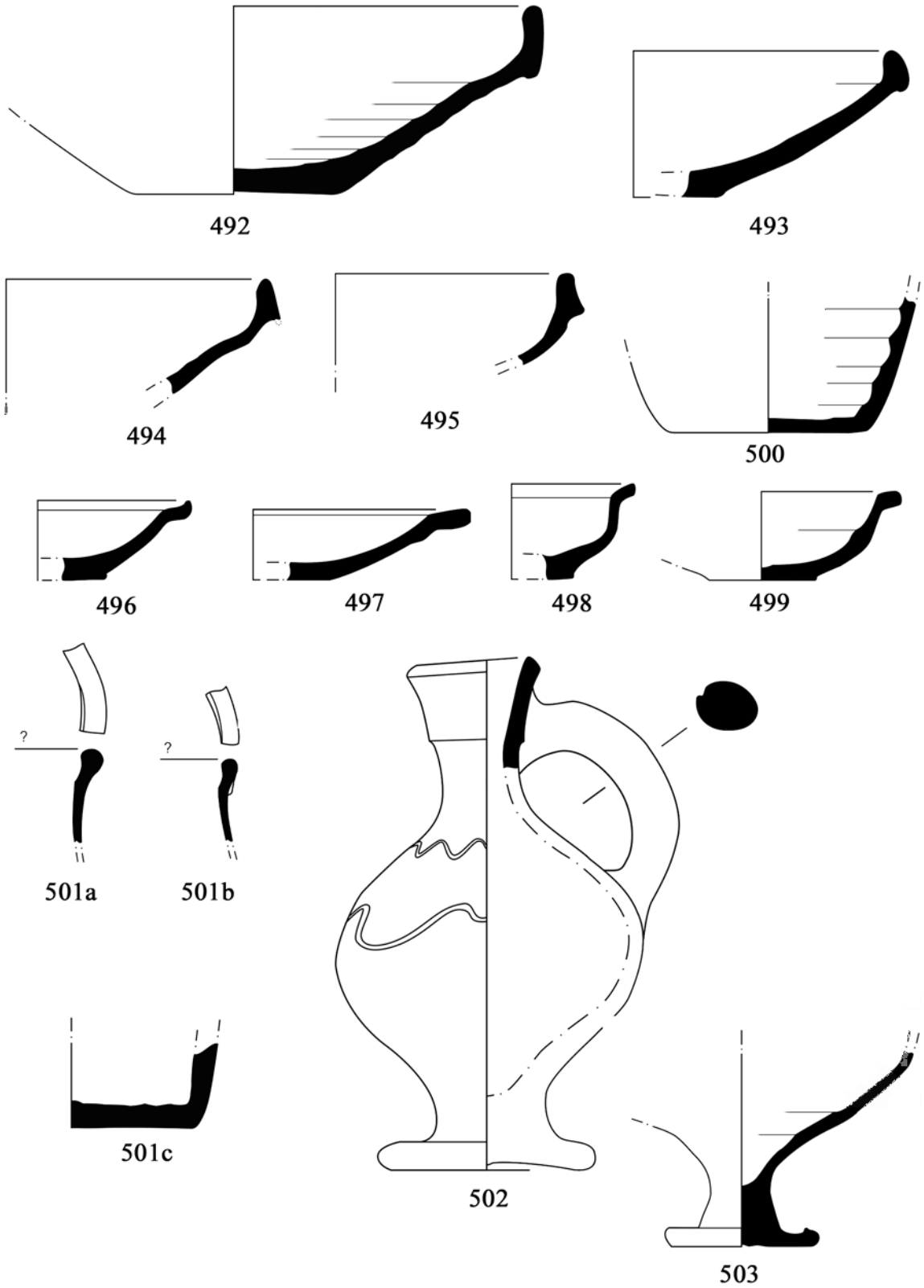
Plain wares. (Scale 1:2)

FIGURE 53



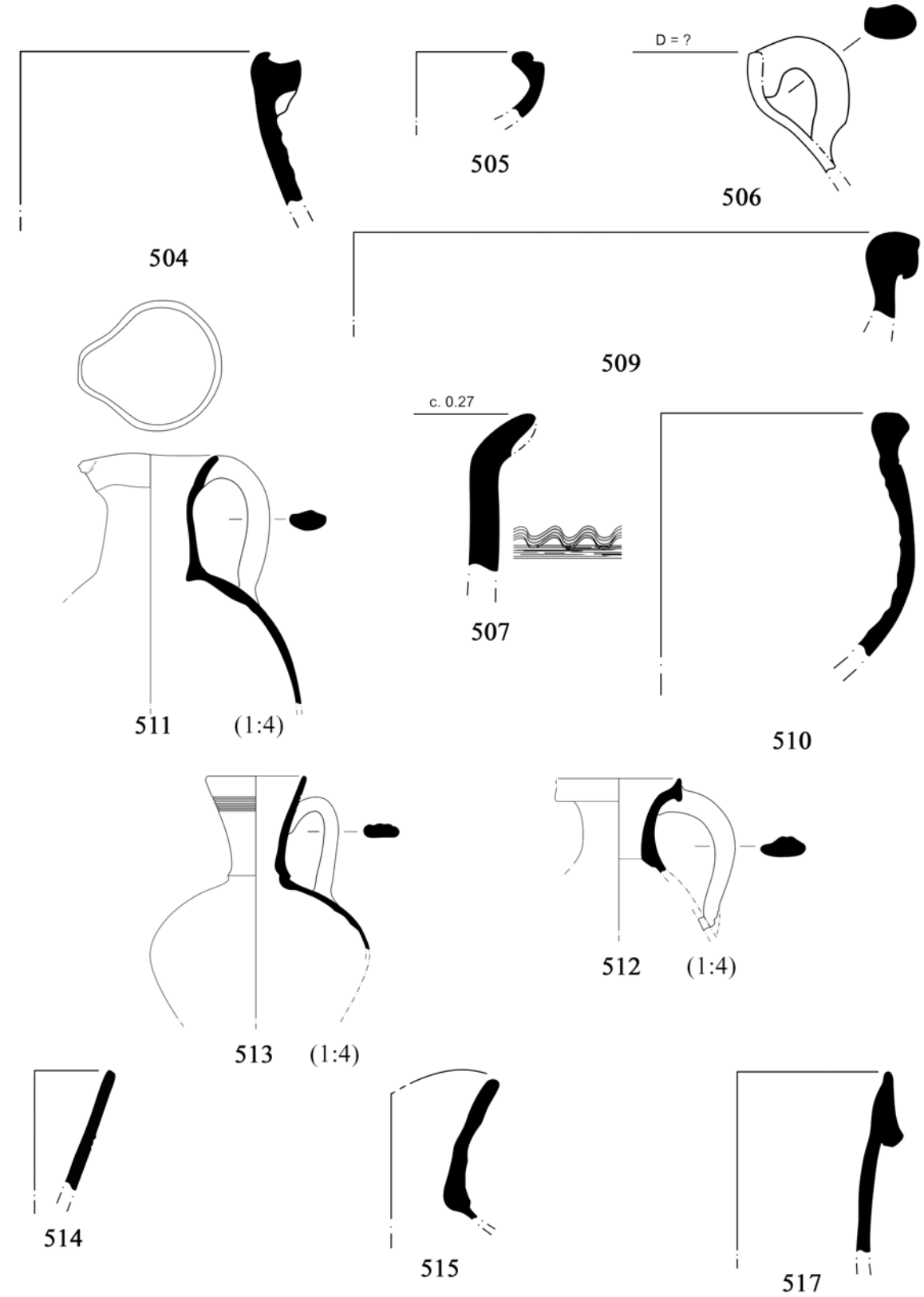

Plain wares. (Scale 1:2)

FIGURE 54



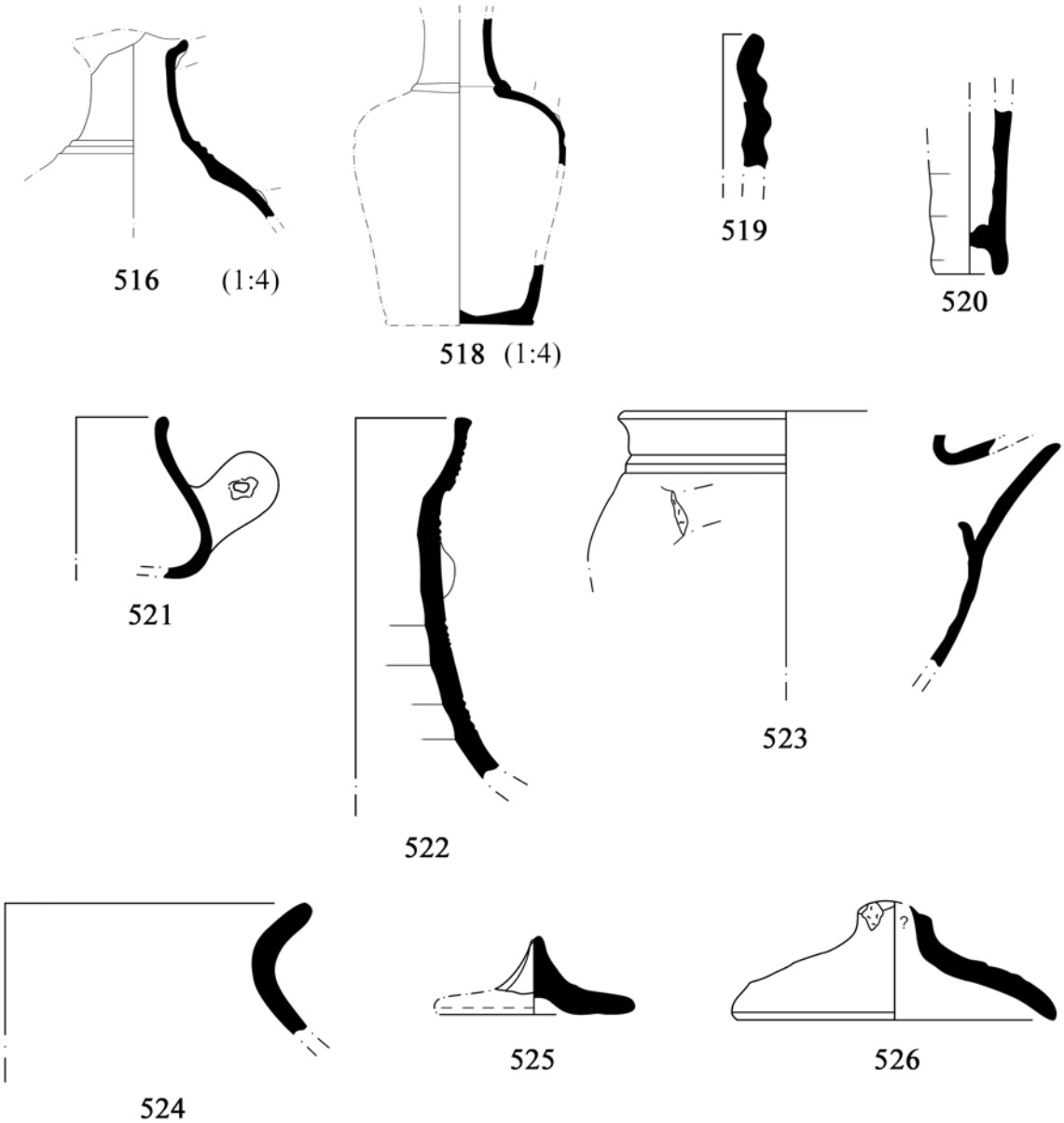

Plain wares. (Scale 1:2)

FIGURE 55




Plain wares. (Scale 1:2)

FIGURE 56




Plain wares. (Scale 1:2)

PLATE 1


1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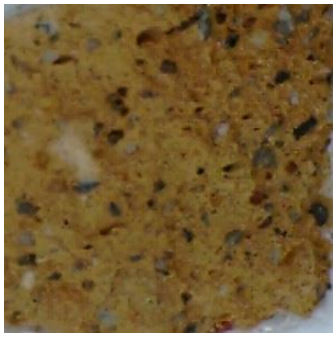
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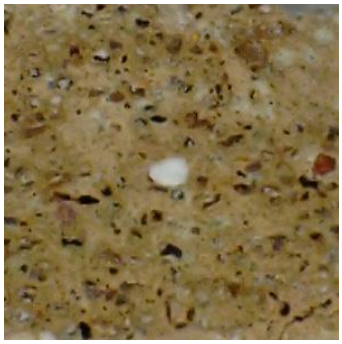
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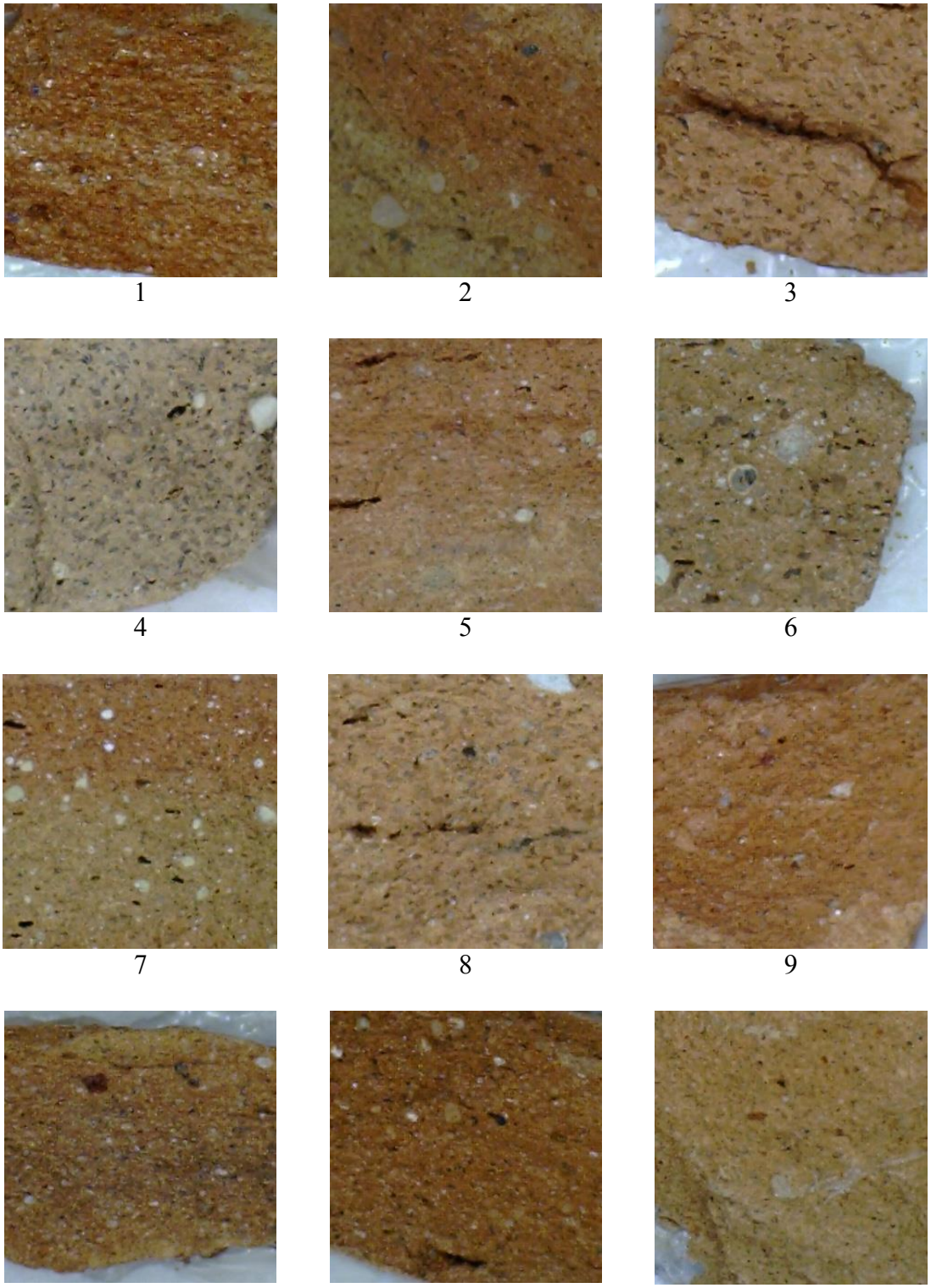
Imported Fabrics. (Depicting areas measuring 0.004x0.004 m.)

PLATE 2




Imported Fabrics. (Depicting areas measuring 0.004x0.004 m.)

PLATE 3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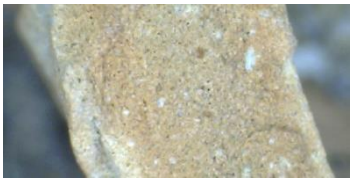
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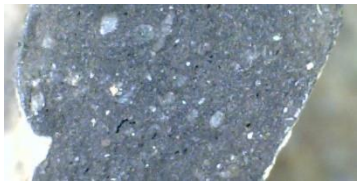
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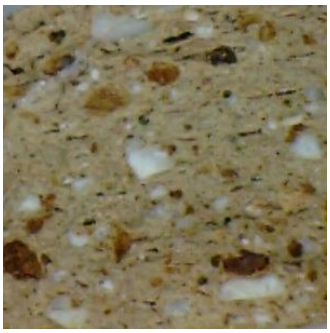
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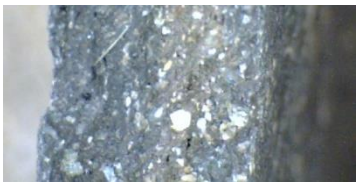
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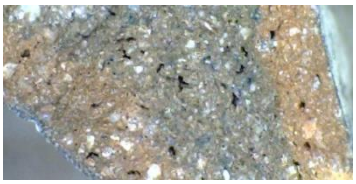
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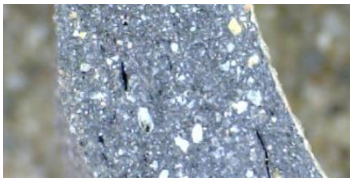
Imported Fabrics. (Depicting areas measuring 0.004x0.004 and 0.004x0.008 m.)

PLATE 4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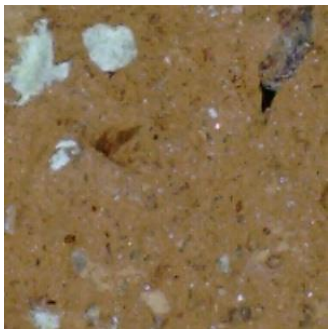
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Imported Fabrics. (Depicting areas measuring 0.004x0.004 and 0.004x0.008 m.)


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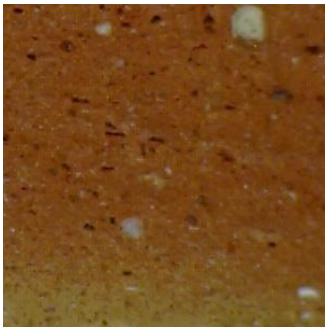
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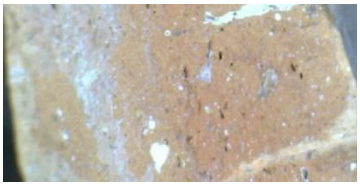
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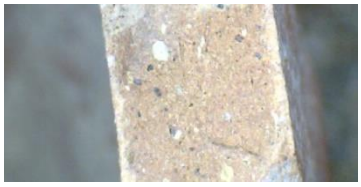
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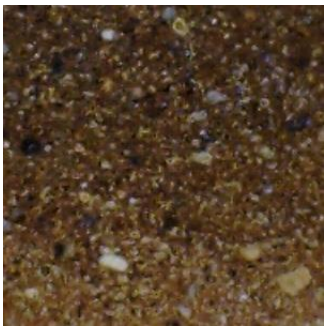
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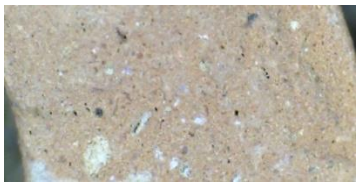
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Regional Fabrics. (Depicting areas measuring 0.004x0.004 and 0.004x0.008 m.)


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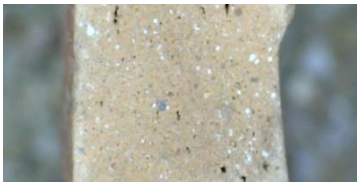
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Regional Fabrics. (Depicting areas measuring 0.004x0.004 and 0.004x0.008 m.)


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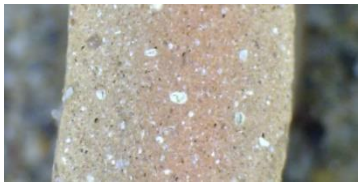
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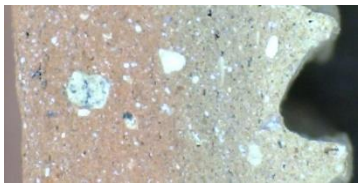
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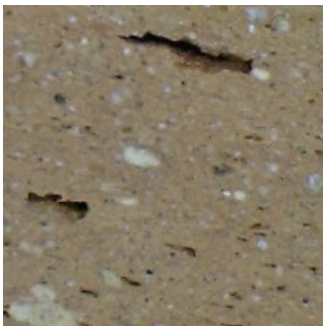
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Regional Fabrics. (Depicting areas measuring 0.004x0.004 and 0.004x0.008 m.)


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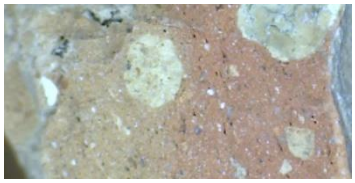
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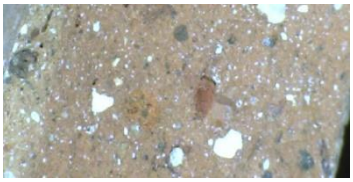
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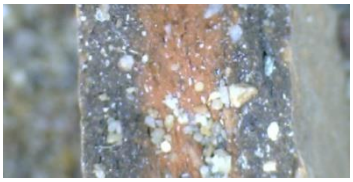
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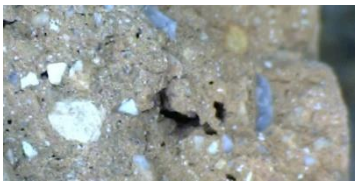
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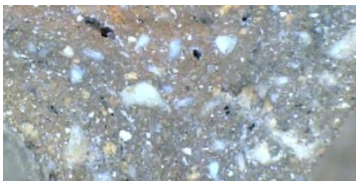
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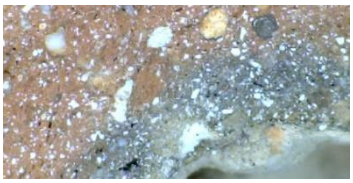
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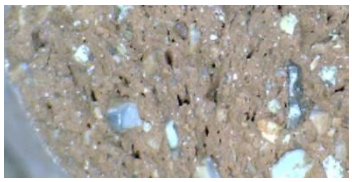
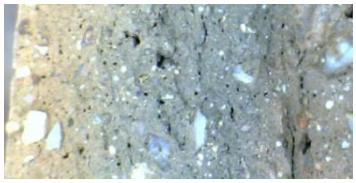

12

Regional Fabrics. Local Fabrics. (Depicting areas measuring 0.004x0.004 and 0.004x0.008 m.)

PLATE 9


1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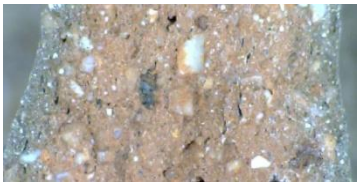
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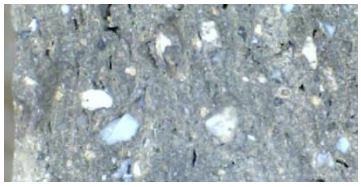
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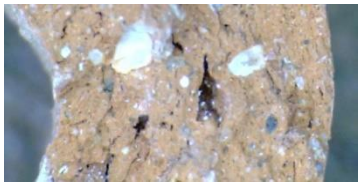
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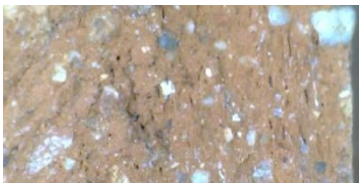
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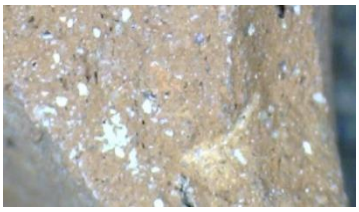
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Local Fabrics. (Depicting areas measuring 0.004x0.004 and 0.004x0.008 m.)


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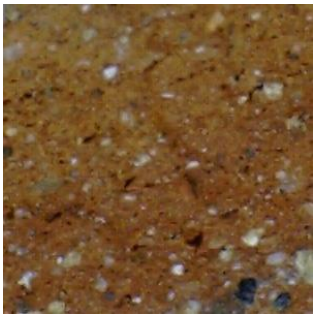
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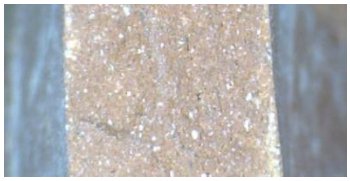
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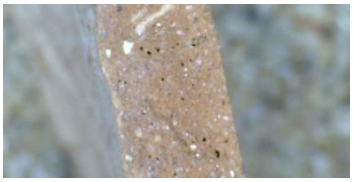
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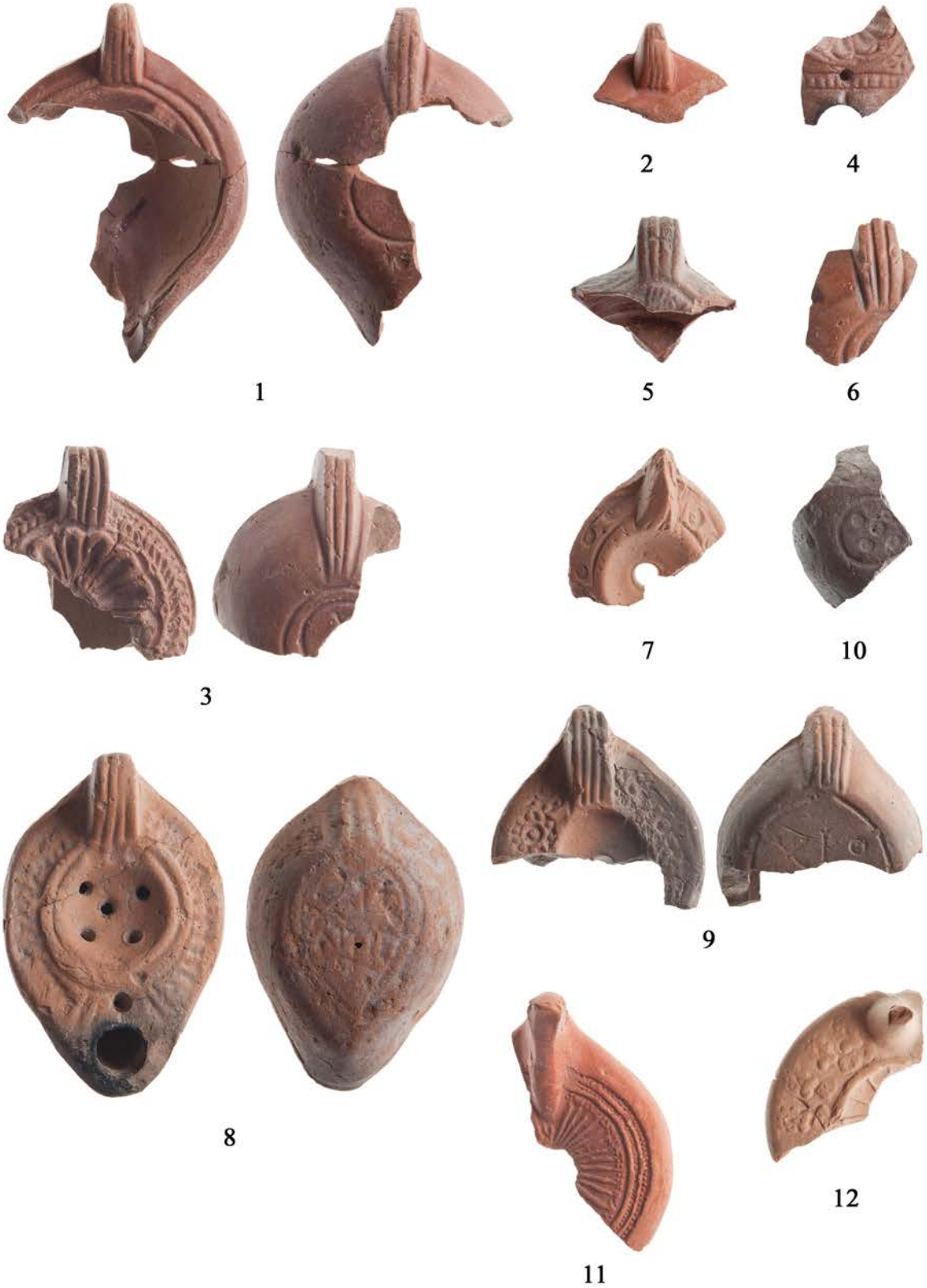
Local Fabrics. (Depicting areas measuring 0.004x0.004 and 0.004x0.008 m.)




Lamps. (Scale 1:2)


Lamps. (Scale 1:2)

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24

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33

107

36

72

108

109

Lamps. Fine wares. (Scale 1:2)

**76**, detail

**76**

**110**

**111**

**116**

**118**

**129**

**134**

**136**

**149**

**153**

Fine wares. (Scale 1:2)

**229**

**244**

**245**

**246**

**260**, detail

**266**

**295**, detail

**267** (1:4)

Amphoras. (Scale 1:2)

374

375

376

377

397

404

433

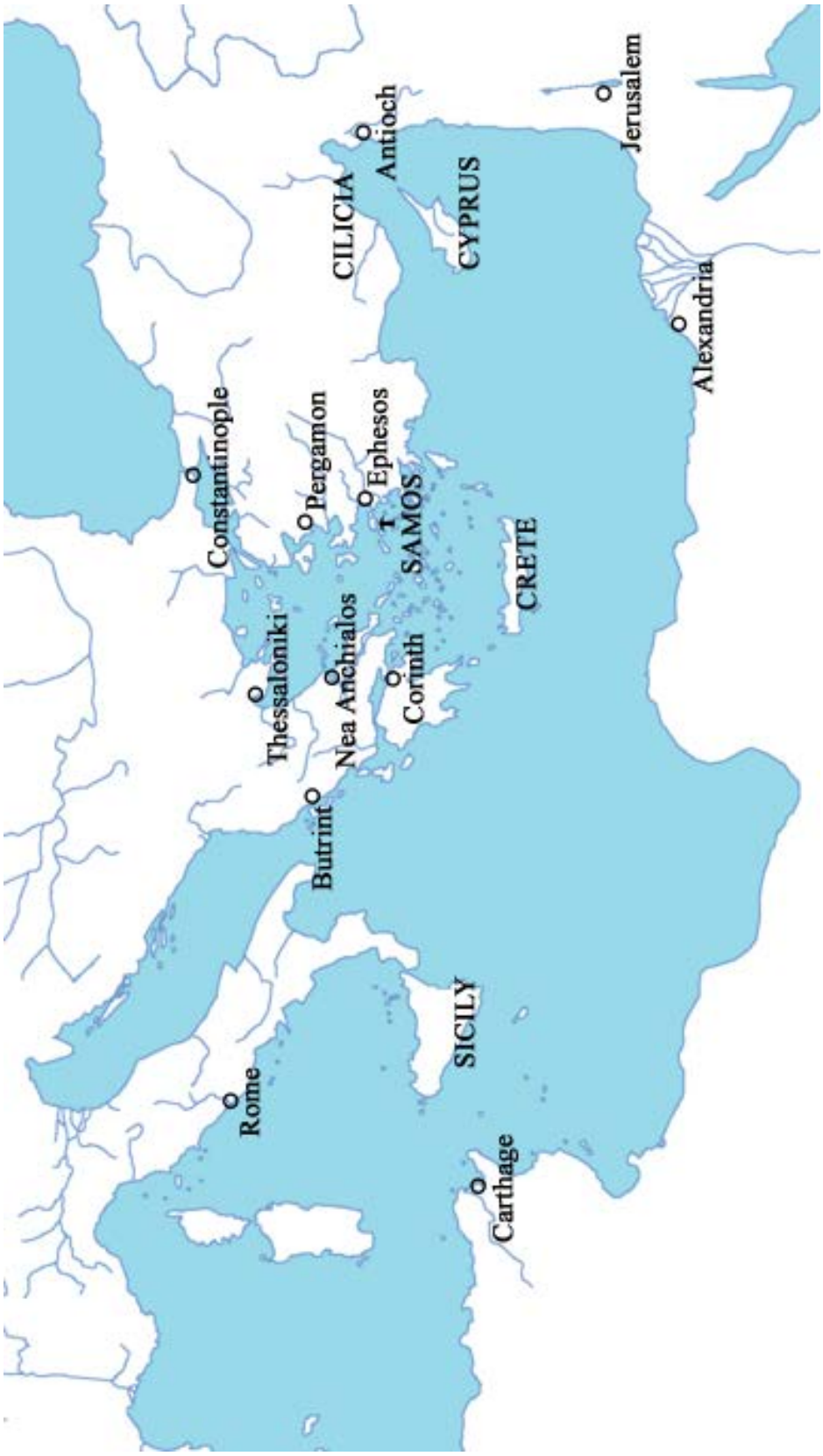
491

**508**, side

**508**, top

527

Cooking wares. Plain wares. (Scale 1:2)


Constantinople
Thessaloniki
Butrint
Rome
Pergamon
Nea Anchialos
Ephesos
SAMOS
Corinth
CILICIA
Antioch
CYPRUS
CRETE
SICILY
Carthage
Alexandria
Jerusalem

Map 1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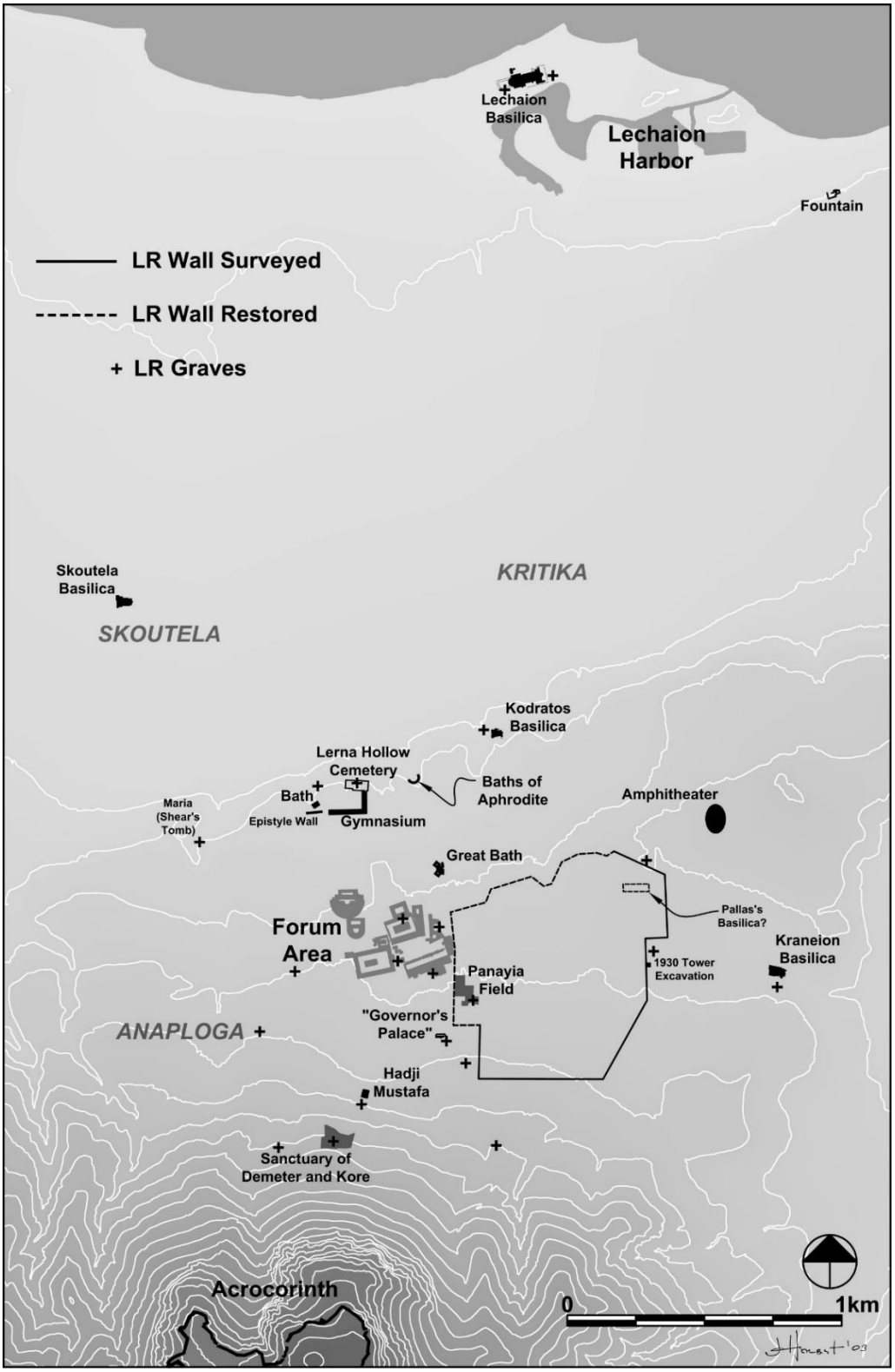
Map 2

Map 2, Legend

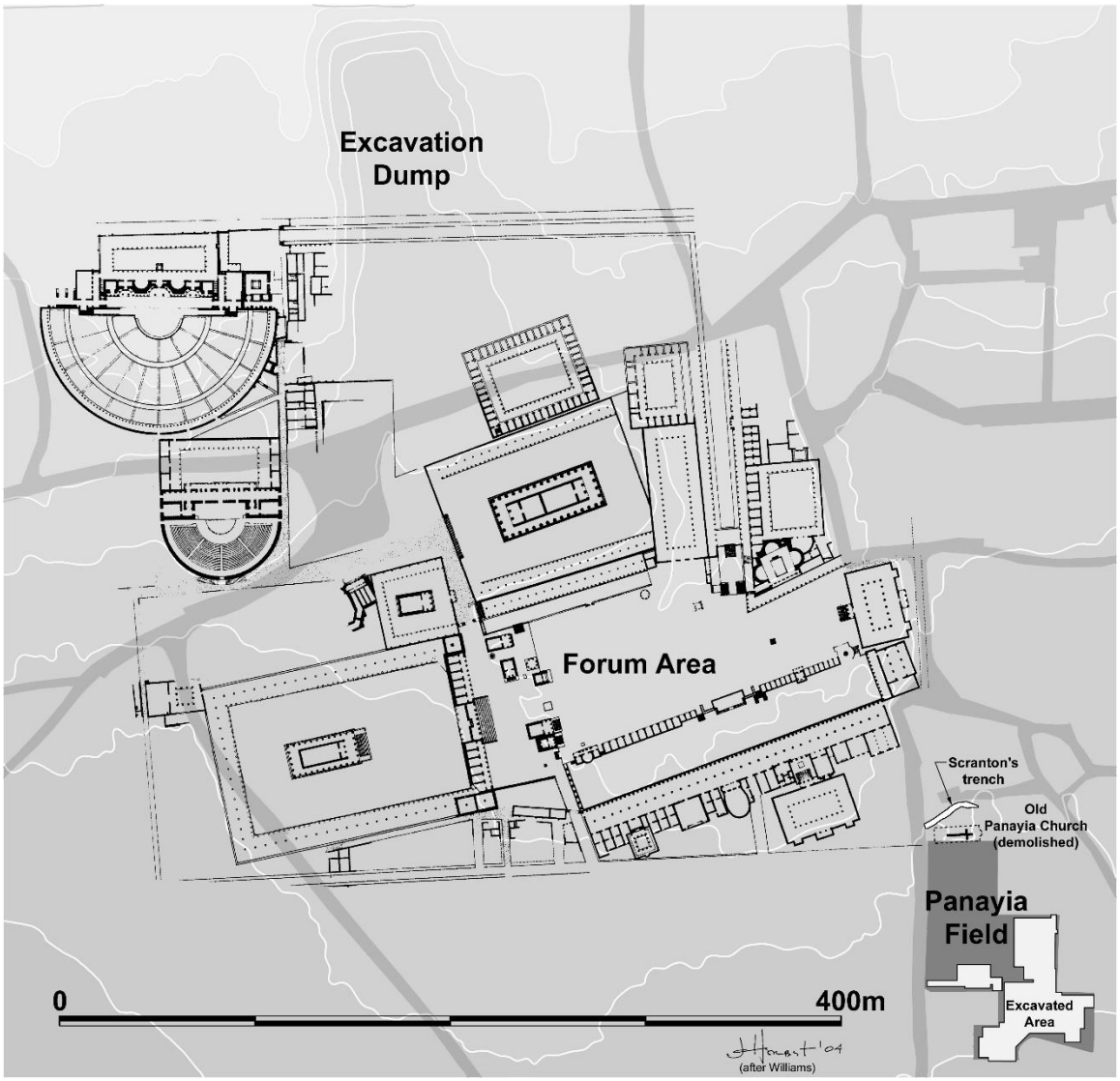
1. Delphi
2. Askra
3. Thespiae
4. Thebes
5. Thisbe
6. Kouveli
7. Diporto (Makronisos)
8. Creusis
9. Egosthena
10. Plataea
11. Erythres
12. Perachora
13. Schinos
14. Dourachos
15. Pagae
16. Chani Derveni
17. Loutraki
18. Crommyon
19. Megara
20. Athens
21. Sikyon
22. Lechaion
23. Corinth
24. Isthmia
25. Kenchreai
26. Evraionisos
27. Phlious
28. Nemea
29. Kleonai
30. Ag. Sostis
31. Ag. Vasilios
32. Tenea
33. Mycenae
34. Pyrgouthi
35. Argos
36. Epidauros
37. Palaia Epidauros
38. Vathy (Methana)
39. Andritsa
40. Lerna
41. Asine
42. Mases
43. Panayitsa
44. Korakia
45. Halieis
46. Khinitsa
47. Kounoupi
48. Hermion
49. Dokos
50. Phourkari

PLAN 1



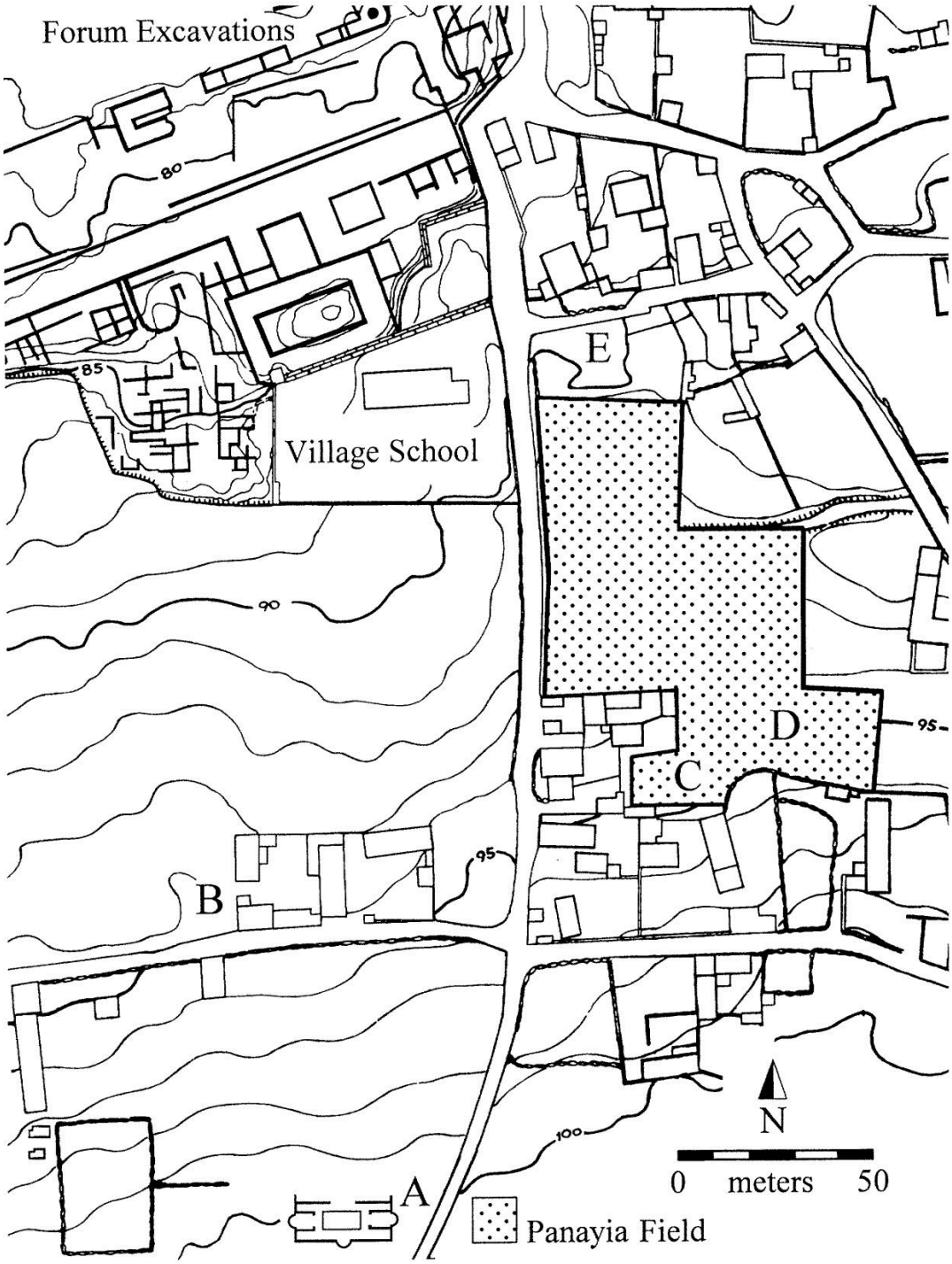

Late Roman Corinth, General Plan

PLAN 2



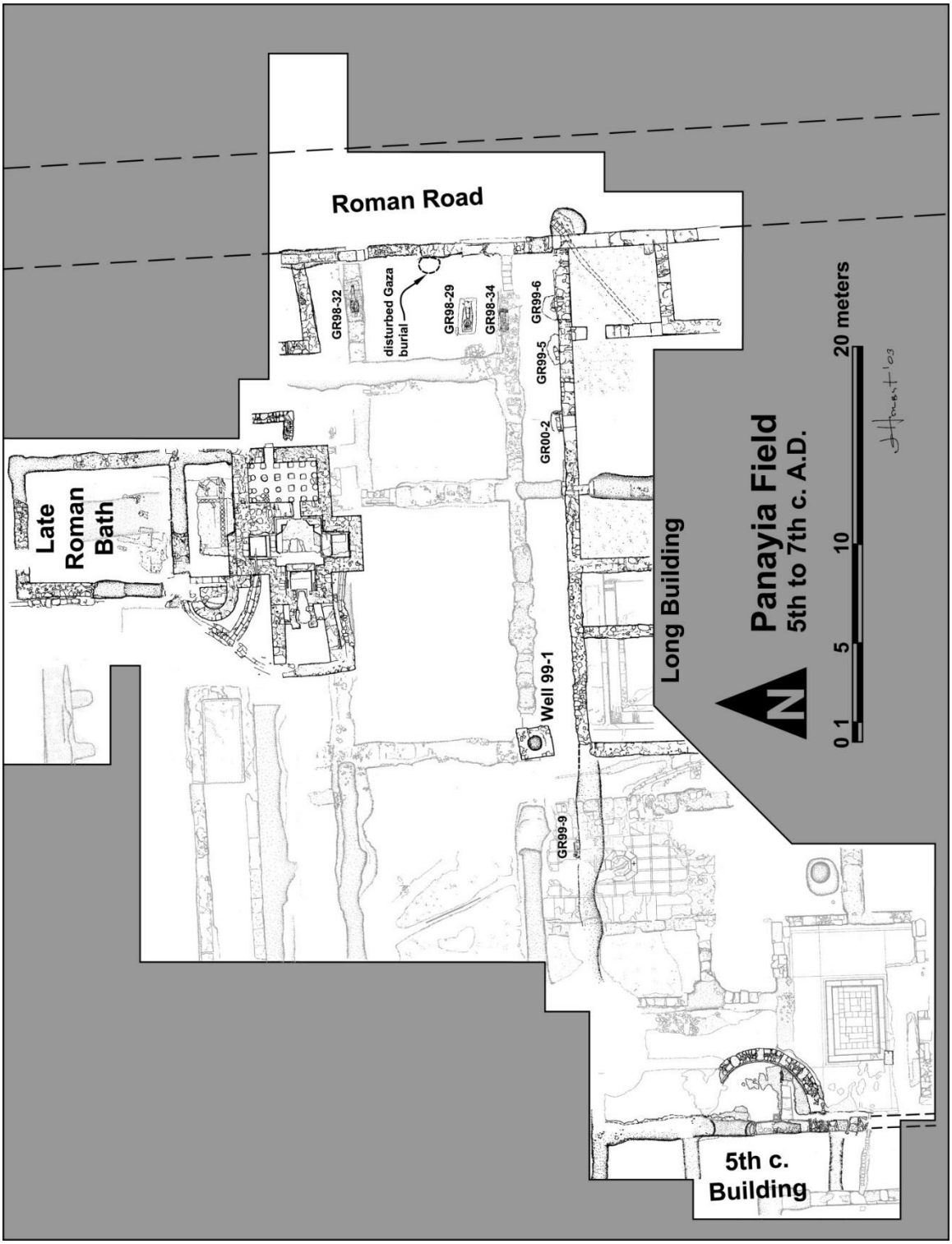

Central Corinth, with the Panayia Field

PLAN 3

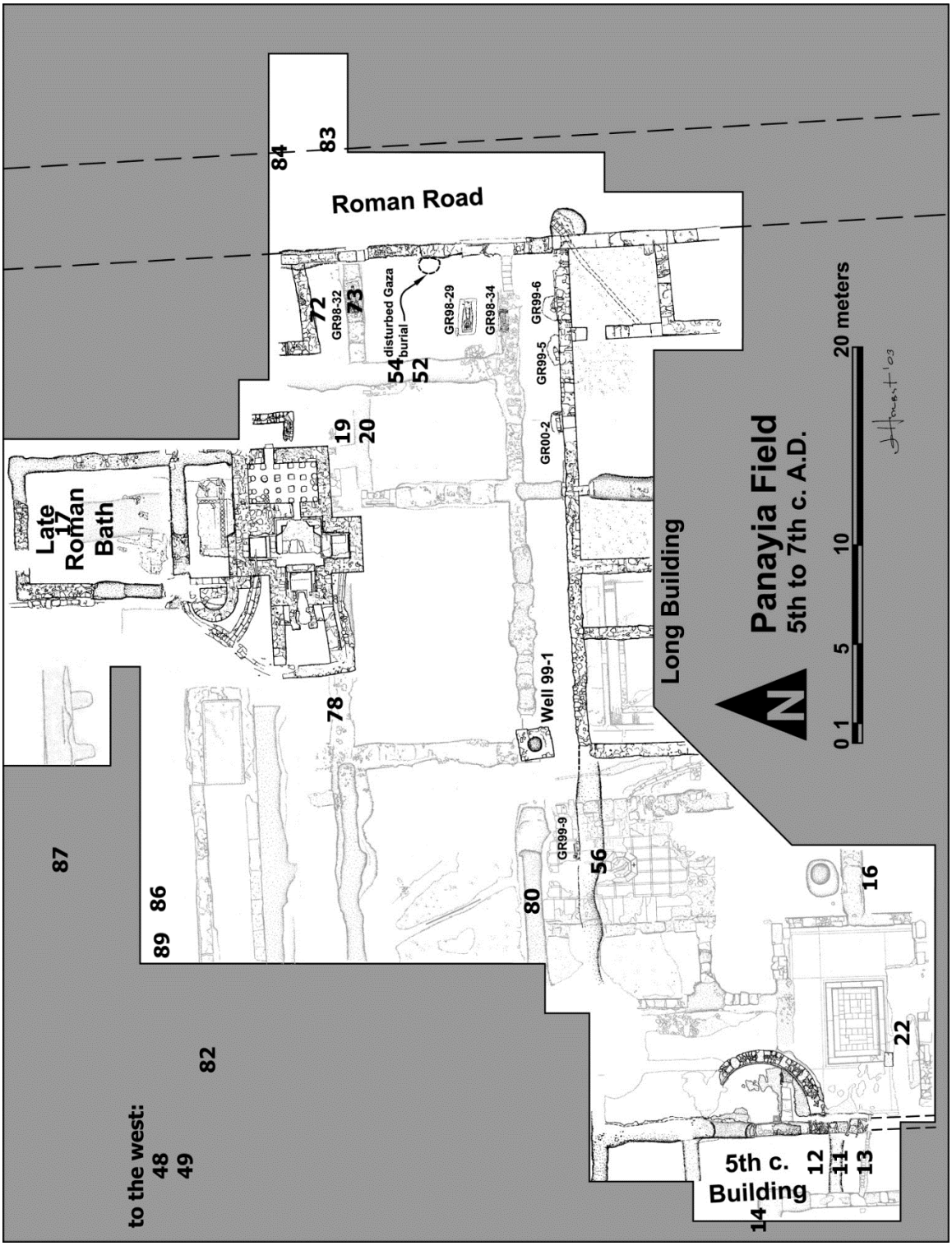



The Panayia Field and Nearby Excavations (after Sanders 1999, fig. 1)

PLAN 4

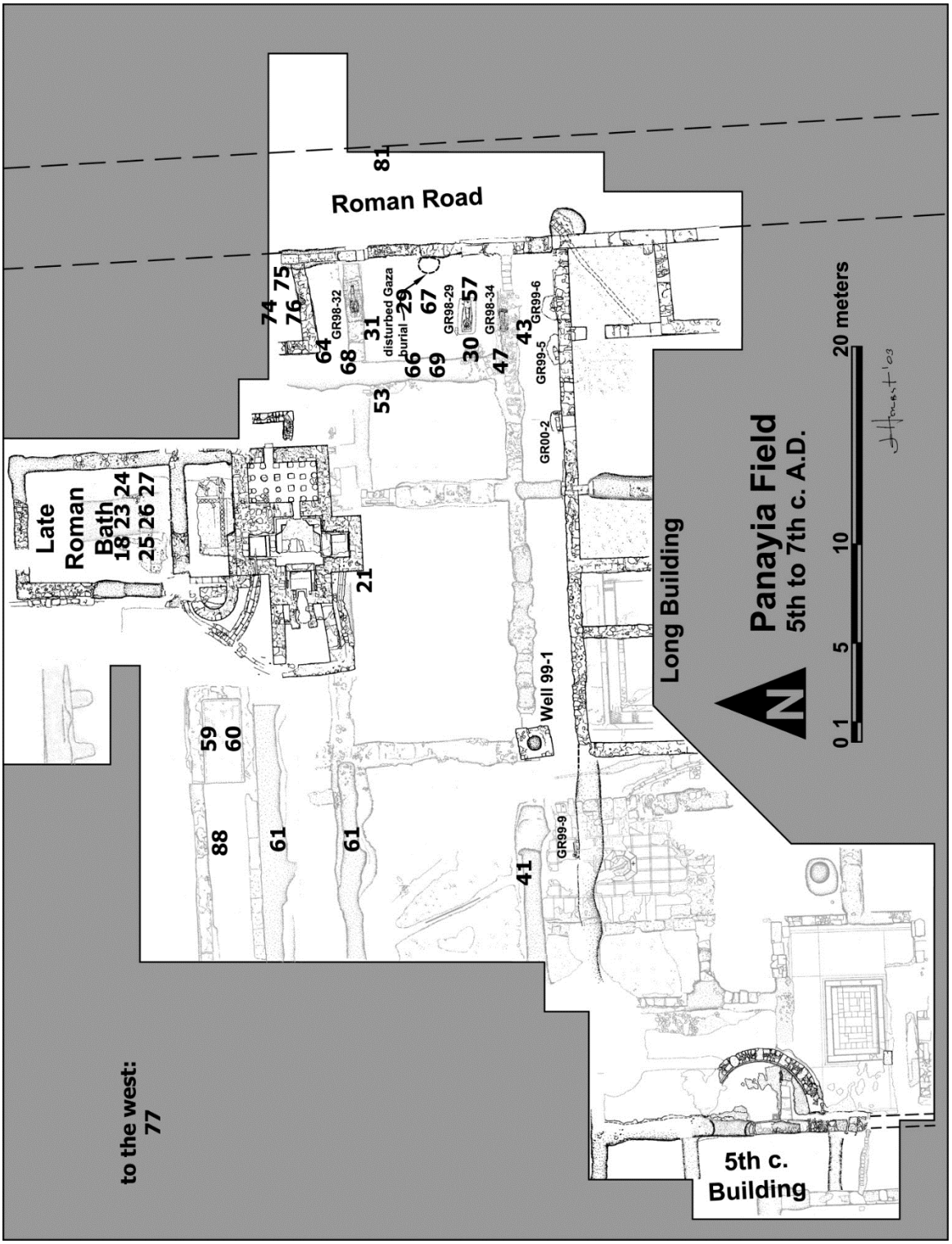



The Late Roman Panayia Field

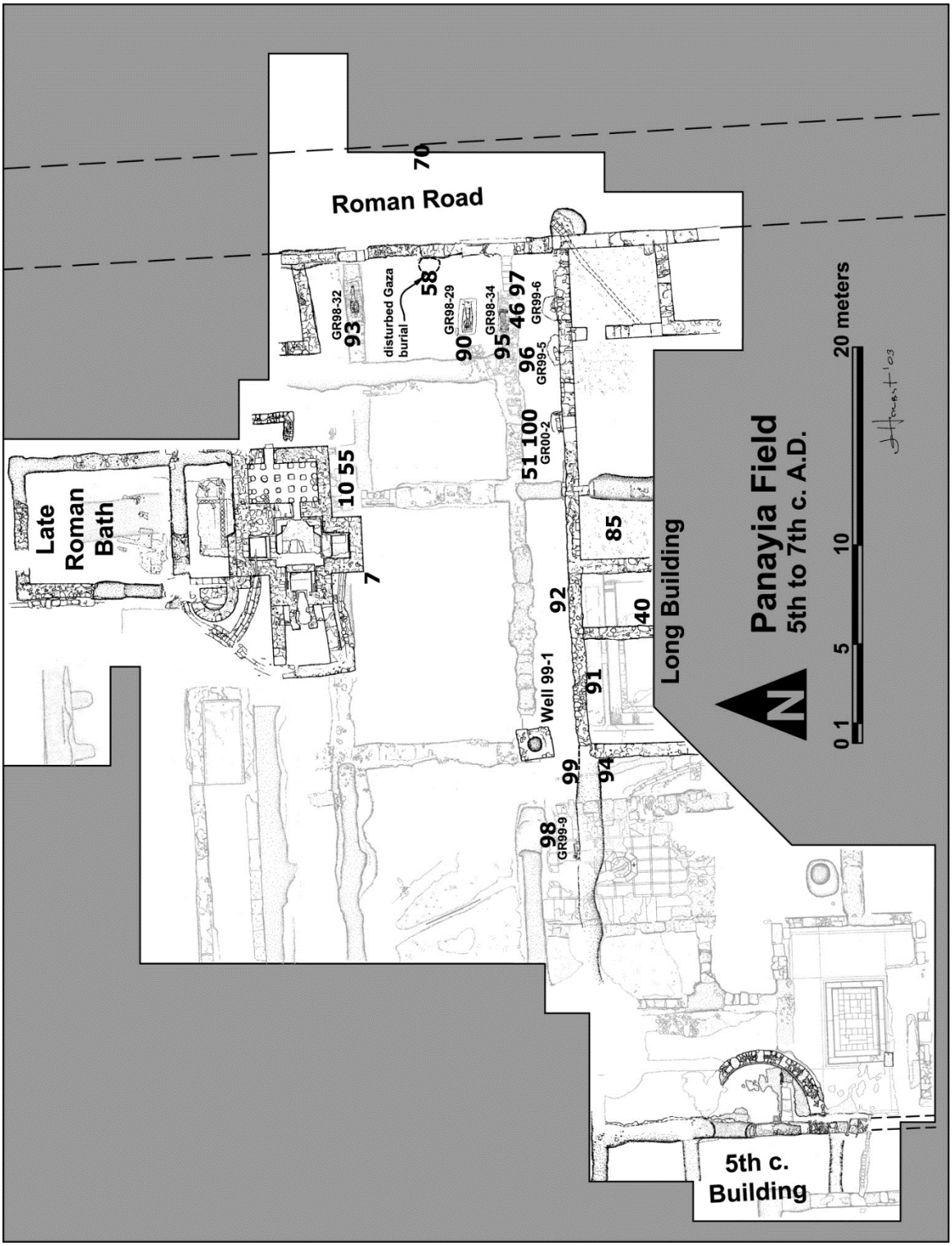



The Panayia Field Lot Locations, Early Activity

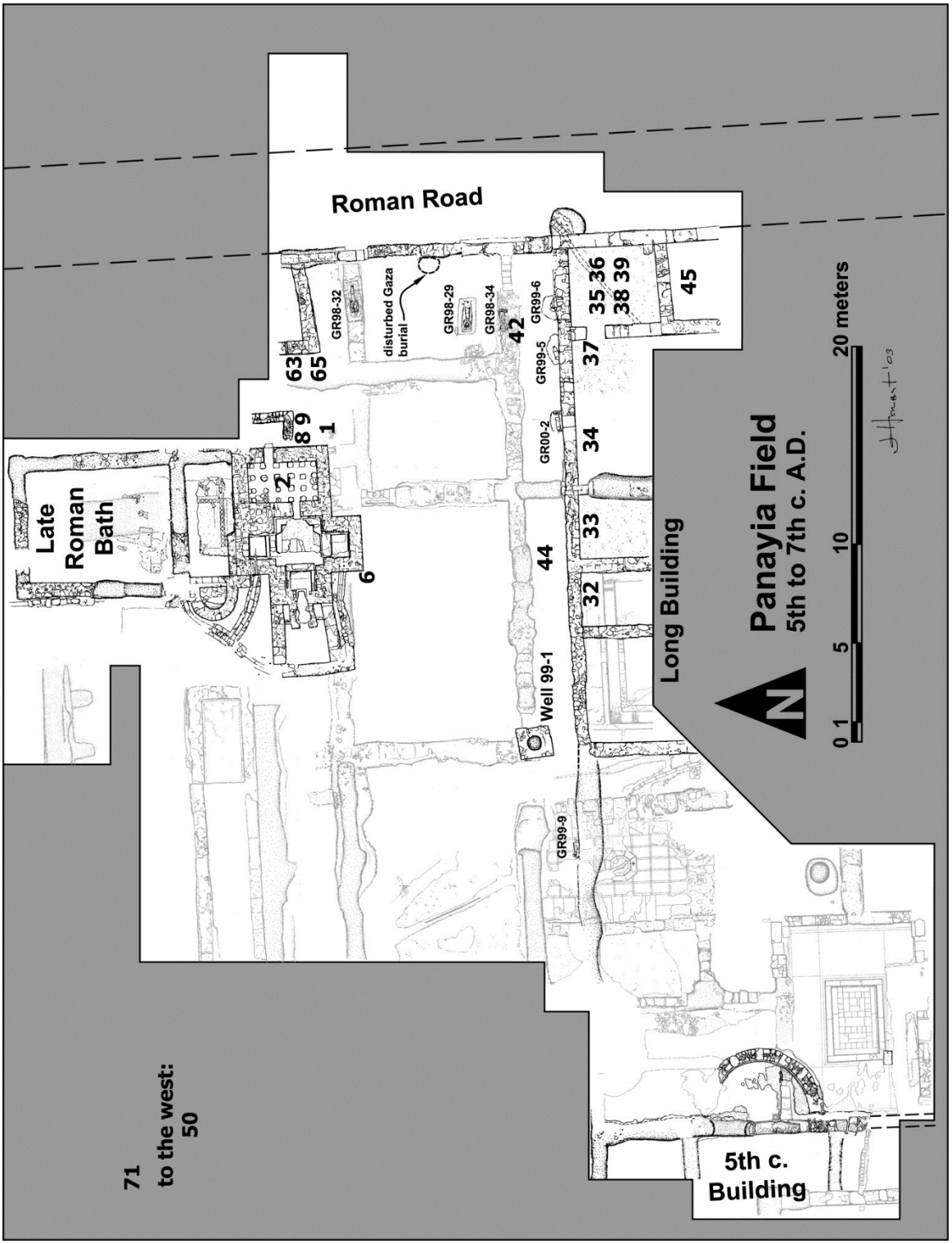
PLAN 6



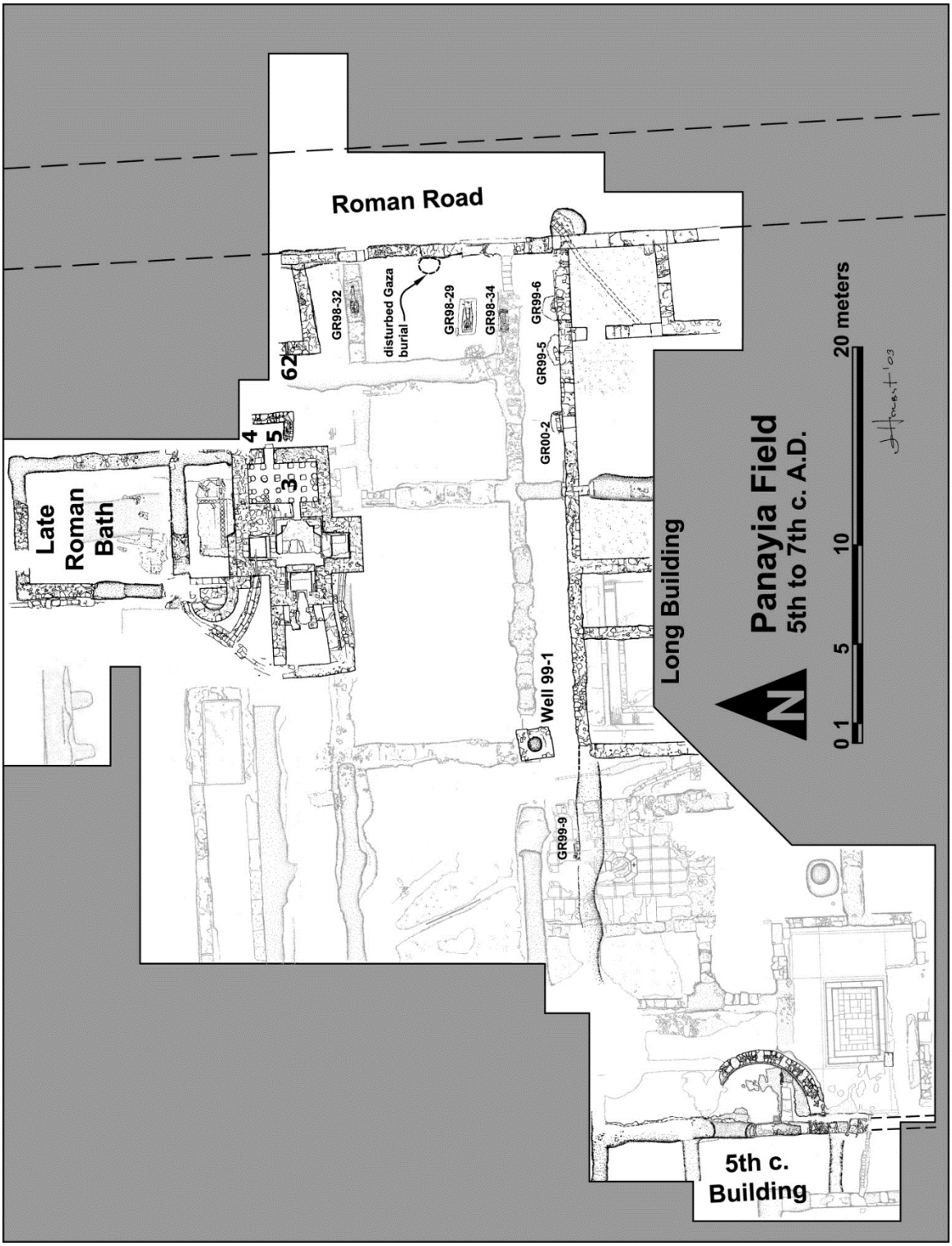

The Panayia Field Lot Locations, Pre-Construction and Construction Activity



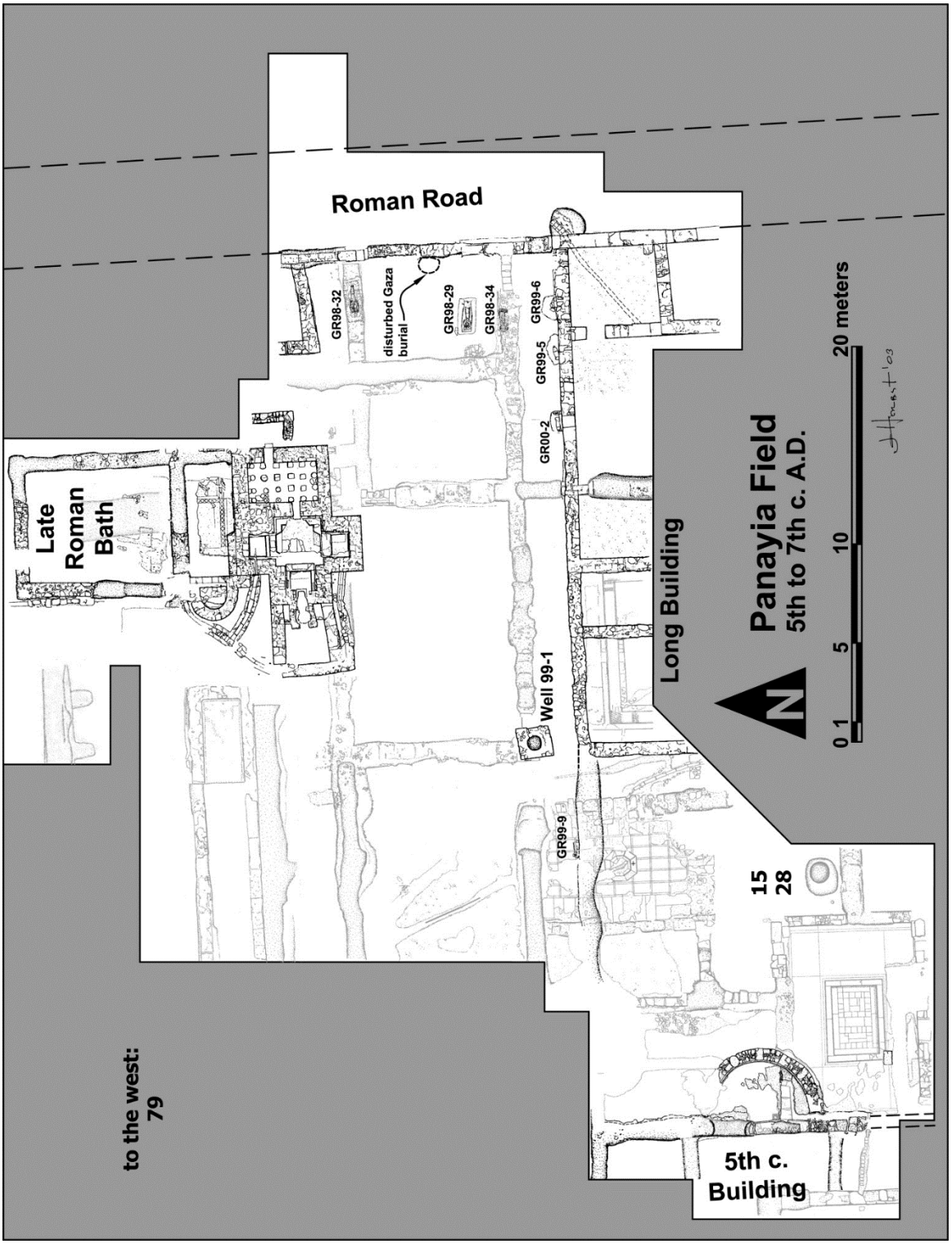

The Panayia Field Lot Locations, Period of Use of the Panayia Bath and Long Building




The Panayia Field Lot Locations, Abandonment




The Panayia Field Lot Locations, Post-Abandonment Activity




The Panayia Field Lot Locations, Late Activity

# VITA

Mark D. Hammond was born on August 6, 1979 in St. Catharines, Ontario, Canada. After receiving his B.A. (Honours) in Classics at Brock University with an emphasis in Ancient Art and Archaeology in the spring of 2003, he began his graduate career in the Department of Art History and Archaeology at the University of Missouri-Columbia in the fall of 2003, earning his M.A. in 2006. After completing his coursework and comprehensive examinations, he spent four years (fall 2008 to summer 2012) at the American School of Classical Studies at Athens, both in Athens as a Regular Member (School Fellowship), and in Ancient Corinth as an Associate Member (Homer A. & Dorothy B. Thompson Fellowship, Henry S. Robinson Corinth Research Fellowship, and Eugene Vanderpool Fellowship) while conducting dissertation research. He has participated in numerous archaeological projects, including excavations, surveys and study seasons on the island of Cyprus, and on the islands of Crete and Kythera, and in Corinth, in Greece. He earned his Ph.D. in May 2015, with a minor in Ancient Studies.