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A MIDDLE-LATE BYZANTINE POTTERY ASSEMBLAGE FROM SAGALASSOS: Typo-Chronology and Sociocultural Interpretation

Author(s): Athanasios K. Vionis, Jeroen Poblome, Bea De Cupere and Marc Waelkens

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# A MIDDLE-LATE BYZANTINE POTTERY ASSEMBLAGE FROM SAGALASSOS

## TYP0-CHRONOLOGY AND SOCIOCULTURAL INTERPRETATION

### ABSTRACT

A 12th–13th-century A.D. ceramic assemblage from Alexander's Hill at Sagalassos in southwestern Turkey provides new evidence for the typo-chronological study of Byzantine pottery. A functional analysis of the assemblage, along with textual and iconographic evidence, archaeozoological and palynological analyses, and chemical analysis of cooking-pot residues, contributes to the reconstruction of diet and cooking practices in Anatolia. While baked fish, vegetables, pulses, and bread are usually regarded as the staples of Byzantine peasant cuisine, diners at Sagalassos were enjoying beef stews before the Fourth Crusade, when the technique of stewing meat was allegedly introduced to the eastern Mediterranean from the West.

### INTRODUCTION

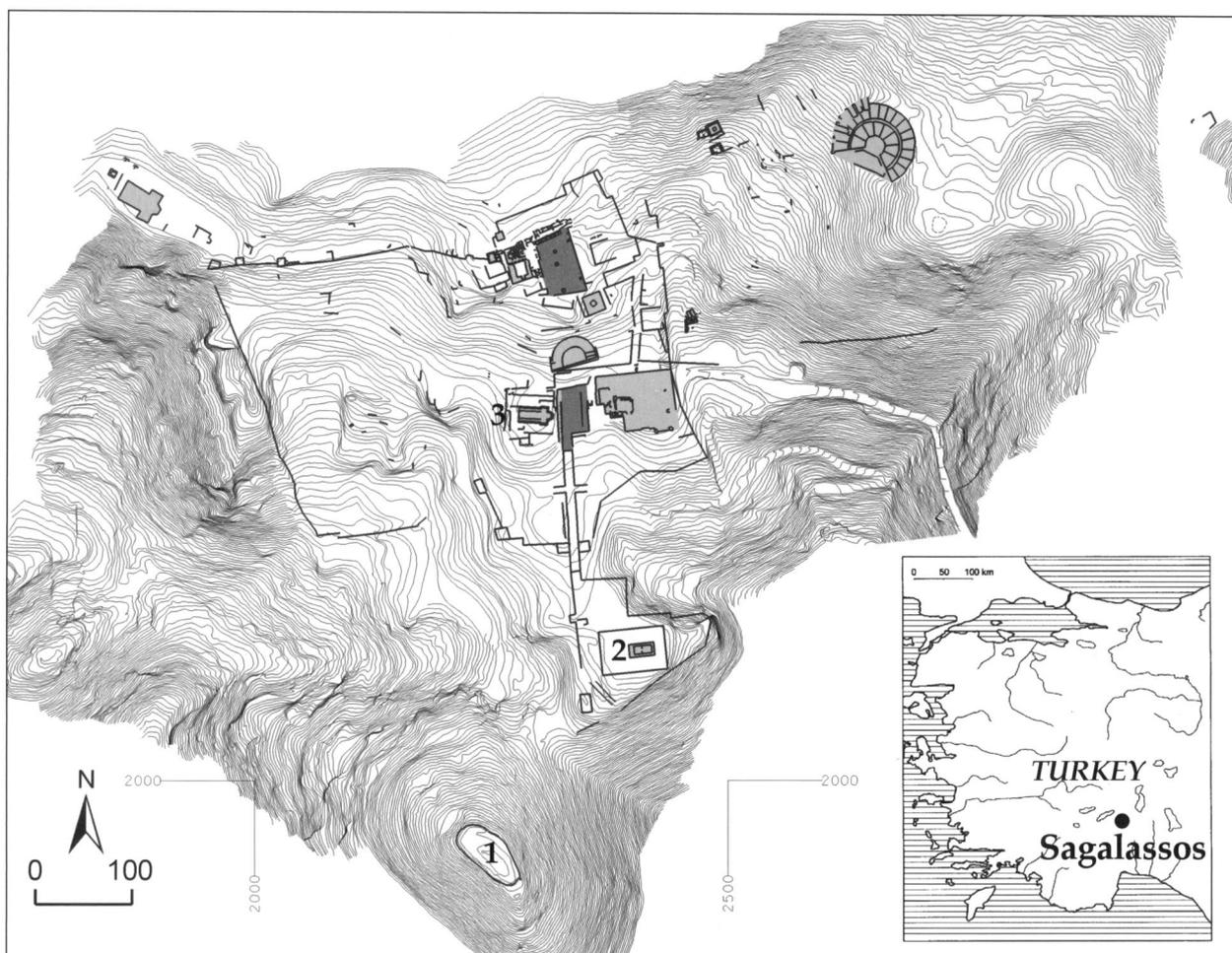
Using ceramic evidence recovered during excavations by Katholieke Universiteit Leuven at ancient Sagalassos in southwestern Turkey, this article is intended to contribute to the typo-chronological and sociocultural study of medieval pottery in the Byzantine provinces.<sup>1</sup> More specifically, this study presents a complete 12th–13th-century assemblage comprised of undecorated common wares and decorated glazed tablewares from Alexander's Hill, located just outside the city (Fig. 1).

1. The text of this article was written by Athanasios Vionis in 2007–2008, while holding a Fellowship for Scientific Research in International Mobility from Katholieke Universiteit Leuven (Belgium), and with additional financial support from the Sagalassos Archaeological Research Project. The main author wishes to express his gratitude to Marc Waelkens (director of the Sagalassos Archaeological Research

Project and of the Centre of Archaeological Sciences) and Jeroen Poblome (codirector of the Project and head of ceramic studies at Sagalassos) for their invitation to study and publish the Byzantine and medieval pottery from Sagalassos. Poblome, the main excavator of Alexander's Hill, supplied the necessary information about the excavations; Waelkens interpreted the pieces of church sculpture; and Bea De Cupere

kindly contributed the analysis of the faunal remains.

Special thanks are owed to the editors and to the anonymous *Hesperia* reviewers for their useful comments, and to Gene McGarry for his invaluable help and editorial assistance. Unless otherwise indicated, all illustrations are provided by the Sagalassos Archaeological Research Project. Eliane Mahy kindly inked all of the pottery profile drawings.



The archaeological site of Sagalassos is located in the modern province of Burdur, some 110 km north of the city of Antalya and 7 km north of the present-day village of Ağlasun, lying at an altitude of about 1,500 m above sea level. Marc Waelkens (Katholieke Universiteit Leuven) has been directing systematic excavations, surveys, and large-scale restoration projects at Sagalassos since 1990. The scope of the Sagalassos Archaeological Research Project includes the site of the ancient city itself and its vast territory, as defined in Roman times. Both the city and its countryside are being systematically studied by an interdisciplinary team.<sup>2</sup>

Alexander's Hill (henceforth AH) was a strategic location in the landscape of Sagalassos. This conical, flat-topped hill controlled the main southern approach to the ancient city (Fig. 2). When Alexander the Great advanced on Sagalassos in 333 B.C., the local resistance chose this position as the center of defensive operations. However, no traces of the historical battle, or any related occupational stage, were found on the hill.

Excavations conducted in 2000, 2001, and 2003 on the northern part of the summit revealed an early-6th-century basilica church. The last occupational phase on AH can be dated to the Middle-Late Byzantine period (between the 12th and the first half of the 13th century), when the early Christian basilica, probably already in ruins, was dismantled and a cistern and a circuit wall were constructed. Thick layers of ash testify to the

**Figure 1. Site plan of Sagalassos:**  
(1) Alexander's Hill; (2) Temple of Hadrian and Antoninus Pius;  
(3) Temple of Apollo Klarios

2. On Sagalassos and its territory in general, see Waelkens 1993; Vanhaverbeke and Waelkens 2003. Research by Waelkens and Poblome is conducted within the framework of ICRATES, the Belgian Programme on Interuniversity Poles of Attraction, the 2007/02 Concerted Action of the Flemish Government, and a Methusalem-funded project, "A Plea for a 'Holistic' Archaeology: Interdisciplinarity and the Interaction Man-Environment during the Holocene at and around Sagalassos."



Figure 2. Alexander's Hill (AH), view from the north. Photo A. K. Vionis

thorough destruction and forced abandonment of the site, probably as a result of Seljuk activity in the region during the first half of the 13th century.

We present here the complete Middle–Late Byzantine ceramic assemblage from AH, along with a quantitative analysis of its composition. The assemblage is then examined for indications of the types of food that were consumed at the site, as well as their manner of preparation. The evidence provided by the pottery itself, including residual analysis of cooking-pot fragments, is supplemented by textual and visual sources, palynological analysis, and archaeozoological analysis of the faunal remains from AH. This study is not intended as an excavation report of the site on AH, and thus it does not provide a detailed account of excavation data or the architectural and other finds.<sup>3</sup>

### EXCAVATIONS ON ALEXANDER'S HILL

Ten trenches were dug in the platform on top of AH during the 2000, 2001, and 2003 excavation seasons at Sagalassos (Fig. 3). The north side of the inhospitable hill, which faces Sagalassos, was the main area explored (Fig. 2). The flat area on the hilltop enclosed by the circuit wall does not exceed 2,860 m<sup>2</sup> (0.28 ha); the area excavated represents 17% of the total walled ground surface.

The aim of the sondages on AH during the first excavation campaign in 2000 was to establish the nature and chronology of the site's occupation. In particular, the excavators looked for signs of a pre-Hellenistic settlement preceding the urban layout at Sagalassos, as well as any traces of settlement following the gradual contraction of the Late Antique city in the 7th century. Several phases in the occupation of the hill, from the Late Hellenistic period to the 13th century, were identified during the three seasons of archaeological exploration.

3. The site awaits final publication by the excavators, Jeroen Poblome and Peter Talloen. For a preliminary report on the 2000, 2001, and 2003 seasons, see Poblome and Talloen 2005.

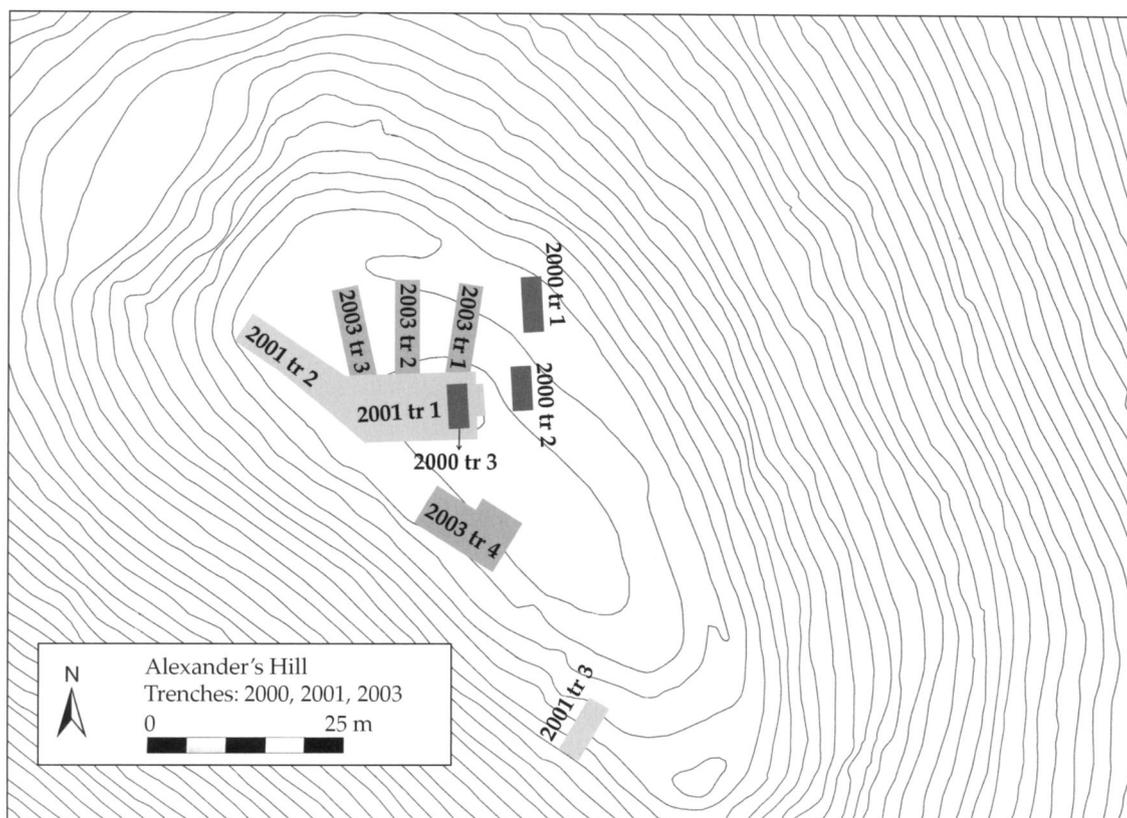


Figure 3. Trenches on AH excavated during the 2000, 2001, and 2003 seasons. Contour interval 1 m

### 2000 SEASON: TRENCHES 1–3

All three trenches of the 2000 season were laid out on the northern side of the hilltop (Fig. 3), facing the town of Sagalassos. Two layers were identified in each trench, while the limestone bedrock was reached at a depth of ca. 0.60–1.10 m.

Trench 1 measured  $7 \times 2$  m and included the remains of what seemed to be a circuit wall on the northern edge of the trench. This was a badly preserved mortared rubble wall whose width was impossible to determine; nor could the wall be dated, as no material could be associated with its construction. Both layers in trench 1 contained animal bones (mainly cattle and pig) and pottery (including lead-glazed dishes of the 12th–13th century), while ashes and charcoal were abundant in layer 1 (under the surface layer). A hexagonal base that probably supported an *ostothekos* was identified on top of the bedrock, indicating that from Late Hellenistic to Imperial times the hill was part of the South Necropolis of Sagalassos, which stretches out along the foot of the hill.

Trench 2 measured  $5 \times 2$  m and was located 5 m south of trench 1. Trench 3 had the same dimensions and was laid out southwest of trenches 1 and 2, higher up the hilltop platform. Both layers in trenches 2 and 3 revealed a ceramic assemblage similar to that recovered from trench 1, comprised of lead-glazed dishes, a larger number of utilitarian wares (dating to the 12th–13th century), and some residual Late Roman Sagalassos Red Slip ware. No architectural features were identified here, apart from additional bases of burial monuments (at the northwest corner of trench 2 and the southwest corner of trench 3).

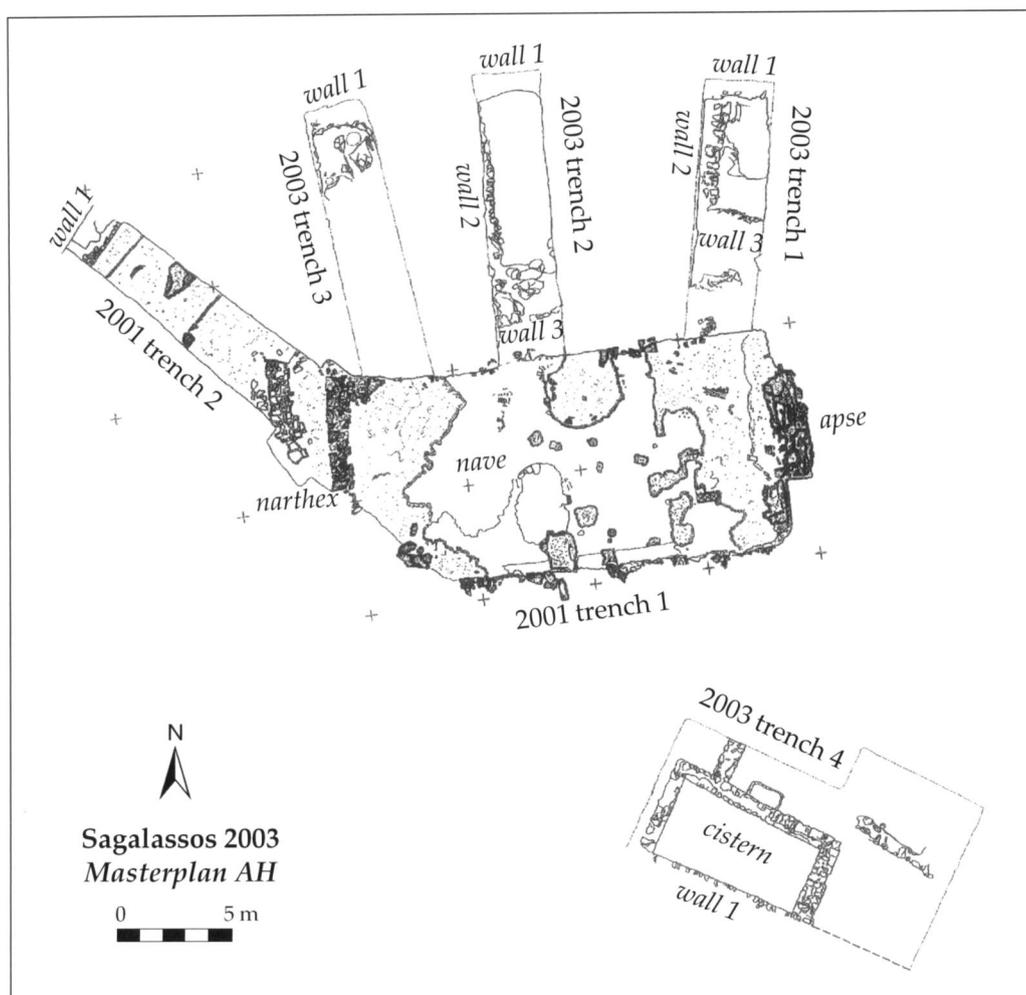


Figure 4. Site plan of the northwest part of AH, showing features excavated in 2001 and 2003

### 2001 SEASON: TRENCHES 1–3

Trenches 1 and 2 were also laid out on the northern side of the platform (Fig. 3). The main discovery in trench 1 was the aforementioned 6th-century basilica church (Fig. 4). Trenches 2 and 3 were opened to provide further evidence for the circuit wall from the northwestern and southern sides of the hilltop, respectively.

Trench 1 followed the remains of a long building with an east–west orientation and overall dimensions of ca.  $19.40 \times 9.10$  m. Only the lowest part of its south wall and the western end of its northern wall were preserved. On the eastern side, a more or less rectangular niche (5 m wide) was cut into the bedrock; this must have served as the substructure for the apse of the building. The lower course of the west wall was preserved to a width of 0.92 m. An area to the west of the western wall, measuring 1.60 m wide, was paved with tile fragments and may be identified as a narthex. Two floor levels were identified inside the building. The upper floor was a mosaic, as indicated by a patch of mosaic stones preserved in situ and large amounts of tesserae.

Apart from the badly preserved circuit wall, these were the earliest monumental remains discovered on the hill, identified as a tripartite(?) basilica. The material associated with the only attested foundation deposit

could be dated to the late 5th or early 6th century. The ceramic assemblage from trench 1, however, dates primarily to the 12th–13th century, with a considerable amount of residual Sagalassos Red Slip ware. Thick patches of ash and charcoal within the layer covering the church remains suggest a violent destruction by fire.

It seems that the basilica was intentionally and systematically dismantled or destroyed, and the building was cleared to its (bedrock) foundation layers. Little of the material used to construct the basilica was recovered during the excavations, indicating that it was removed from the site and possibly recycled. Detached elements of its original mosaic floor, painted plaster, and marble wall veneering, as well as parts of the church furnishings, were found in the surrounding excavation trenches (see below).

Trench 2, measuring 3 m wide, ran between the paved section of the narthex and the circuit wall, which stood 1.15 m tall. Tesserae, probably from the church, and a few potsherds dated to the 12th and early 13th centuries were gathered from the foundation trench of the circuit wall. This material is limited and fragmentary, but it suggests that the circuit wall (wall 1) was constructed sometime in the Middle–Late Byzantine period.

Trench 3 measured 2 × 8 m and was laid out on the southern side of AH (Fig. 3). On the southwest part of the trench, the remains of the circuit wall, reaching a height of 1.10 m, were revealed. The wall here had a thickness of 1.36 m and consisted of mortared rubble. Layers 1 and 2, from the final occupational phase of the hill, contained ceramics dated to the later 12th and first half of the 13th century.

#### 2003 SEASON: TRENCHES 1–4

During the 2003 excavation season, three trenches were laid out along the northern edge of the hilltop (trenches 1–3) and a fourth one (trench 4) on the southwestern side (Figs. 3, 4).

Trench 1, with overall dimensions of ca. 12.00 × 3.00 m, was laid out between the circuit wall and the northeast corner of the church (Fig. 4). The northern and southern faces of the circuit wall (wall 1) consisted of large mortared rubble stones, tuff stone, tiles, and reused blocks. A second wall (wall 3) was excavated ca. 6.00 m south of wall 1; it has an east–west orientation and a preserved height of 0.58 m. Another mortared rubble wall (wall 2), perpendicular to the circuit wall, was constructed on bedrock, running between walls 1 and 3. It was preserved to a width of 0.64 m and to a maximum height of 0.46 m. The ceramic contents of all four layers in trench 1 are dated between the mid-12th and mid-13th century, with some residual pieces of 6th-century Sagalassos Red Slip ware. In addition, layer 1 contained abundant organic remains, charcoal, and ashes.

Trench 2 was laid out 5 m west of trench 1, with overall dimensions of 12.75 × 3.00 m; it spanned the area between the circuit wall and the basilica (Fig. 4). The circuit wall (wall 1) was also revealed here. A rubble wall in dry masonry (wall 2) with a north–south orientation and a length of 6.9 m was discovered on the western side of the trench. A mortared rubble wall (wall 3) with an east–west orientation and a width of ca. 1.00 m was excavated on the southern side of the trench. The excavators suggest

that wall 3 in trenches 1 and 2 served as a platform for the construction of the basilica. The ceramic assemblage retrieved from layer 4 was dated to the late 5th and early 6th century, with some intrusive pieces dated to the second half of the 12th and first half of the 13th century. Layers 1–3 contained ceramics dated to the 12th and 13th centuries, as well as large amounts of animal bones and charcoal (especially in layer 1).

Trench 3, located 3 m west of trench 2, with overall dimensions of ca. 13.00 × 3 m, was also laid out between the circuit wall and the basilica (Fig. 4). The badly preserved remains of the circuit wall (wall 1) were the only architectural feature discovered in this trench. The ceramic assemblage from layers 1–4, interpreted as primary refuse (especially in layers 2 and 3), can be dated to the 12th and 13th centuries; it includes some residual pieces from the 2nd to the 6th century.

Trench 4 was laid out to the south of trench 1. It originally measured 8.00 × 6.00 m but it was later expanded to the northwest by 7.50 m from the northwest corner of the trench, over a width of 6.00 m, in order to completely expose the cistern encountered along the northwestern profile of the original trench. The circuit wall (wall 1) was exposed over a length of 13.50 m, standing to a maximum height of 0.67 m; wall 1 also served as the southwestern wall of the cistern. The rest of the cistern's walls, standing to a maximum height of 1.90 m, were built of mortared rubble, brick, tuff stone, and reused blocks. The inner face of all four walls was lined with two layers of hydraulic plaster. A small basin with overall dimensions of 1.42 (L.) × 0.71 (W.) × 0.58 m (D.), internally lined with plaster, was built against the northeastern wall of the cistern.

Nine layers were identified in trench 4. The foundation fill from layer 9 itself consisted of residual pieces of Sagalassos Red Slip ware (ranging between the 2nd and 6th centuries) and pottery dated mainly to the 12th century. Pieces of an ambo plate and a door lintel, both attributable to the 10th–12th century and probably originating from the church, were also found in the foundation trench of the cistern. Because the cistern was constructed during the final occupational phase of the hill, the basilica must have already been largely dismantled. The ceramic material recovered from the foundation fill of the cistern indicates that the removal of the basilica could have happened during or before the second half of the 12th century.

The ambo plate found in trench 4 is decorated with a quatrefoil surrounding a cross with flaring arms at its center (Fig. 5). Each lobe of the quatrefoil is filled with a shell. The four outer corners of the plate each contain a single-banded circle. The circles in both left corners are filled with a crosslike ornament with rounded intersecting arms,<sup>4</sup> while the circles in the right outer corners are each filled by a flaring cross with concave extremities.<sup>5</sup> The closest parallels for the decoration on the ambo plate can be found on a 10th–11th-century sculpted plate from the Church of Saint Nicholas at Myra in Lycia.<sup>6</sup>

The majority of the material discussed in this article was excavated on the inside of the northern stretch of the circuit wall, and can therefore be associated with the final occupational phase of AH. Taken together, the circuit wall, large cistern, subsidiary structures, and material culture

4. Similar crosses occur on the iconostasis of the *Katholikon* of Osios Loukas in central Greece, dated to the 10th century: Dennert 1997, pl. 4.

5. Compare the crosses on 10th–12th-century A.D. capitals from Akşehir and Karaman Köy: Dennert 1997, pl. 30:166, 167.

6. Feld 1975, pl. 122:c, no. 46.



Figure 5. Decorated ambo plate from the cistern on AH. Photo M. Waelkens

suggest that the site was a defensive installation where the population of the wider area could take refuge in times of need. The absence of permanent water sources on the hill and the restricted area of occupation (0.28 ha) on this exposed and windy site seem to preclude a permanent presence on AH.

No published study has addressed the size of Byzantine farms, hamlets, and villages, but intensive survey work in other rural provinces suggests that a site of 0.28 ha was probably no more than a hamlet.<sup>7</sup> Recent studies have sketched a settlement pattern for Byzantine Anatolia, and more specifically the Middle Byzantine province of Pisidia, that is based on hamlets and villages.<sup>8</sup> According to this model, the village superseded the Classical city-state as the dominant unit of social and commercial organization, and cities themselves became large or minor villages.<sup>9</sup> In the medieval period, however, the settlement hierarchy was complicated by the emergence of *kastra*, or fortified hamlets. The *kastron* usually served as the administrative center

7. J. L. Bintliff (pers. comm.) made this evaluation on the basis of information from intensive surface surveys in Boiotia by the past Durham-Cambridge Boeotia Survey Project and the ongoing Leiden-Ljubljana Ancient Cities of Boeotia Survey Project.

8. Mitchell 2000, p. 145; Waelkens

et al. 2006; Vanhaverbeke et al. 2009; Waelkens et al., forthcoming.

9. This pattern can be inferred from *Novella* 24.1 of Justinian (A.D. 535/36), which refers to the “very populous villages” of Pisidia. See Mitchell 2000, p. 145; Vanhaverbeke, Martens, and Waelkens 2007.

of a group of hamlets, although some *kastra* had a purely military function, which seems to have been the role of the settlement on AH.<sup>10</sup> A number of dispersed contemporary settlements (such as farms and hamlets) have also been identified in the rural territory of Sagalassos through extensive and intensive surface survey.<sup>11</sup>

The fact that the material discussed below was found in heavily burned strata, while the contemporary structures were demolished and the cistern was backfilled, indicates that defensive structures were indeed required by the local population. The concentration of the material, its degree of preservation, and its stratigraphic association in burned layers suggest that the material does not necessarily stem from the occupation of the hill, but from its final conquest and the demolition of its structures so that the site could no longer serve as a refuge. It is not clear at this point how significant the destruction of the site may have been in the region's history, nor is the identity of the parties involved certain, but the size and nature of the ceramic assemblage (see below) suggests a very short span of occupation, if not a single event.

## BYZANTINE POTTERY FROM ALEXANDER'S HILL

The chronology of Byzantine ceramics is continually being refined. The establishment of a more reliable ceramic typo-chronology is essential in order to fashion a more realistic interpretation of the material remains at Sagalassos.<sup>12</sup> A number of fundamental questions have been raised during the course of excavations at Sagalassos and AH, such as whether the Middle Byzantine unglazed common wares and glazed tablewares were produced locally or were imported. This question has been answered through (as yet unpublished) fabric analyses, which have revealed that the glazed wares, and more surprisingly the majority of the common-ware vessels, were made outside the territory of Sagalassos.<sup>13</sup>

Although primarily used as a chronological indicator on archaeological sites, pottery has a much wider application in the study of economic, social, and cultural behavior. Ceramic vessels used for food preparation, cooking,

10. Recent intensive surface survey in the area around ancient Tanagra in Boiotia by the Leiden-Ljubljana Ancient Cities of Boeotia Project has shown widespread signs of recovery in the Byzantine countryside between the (10th?)–11th and early 13th centuries. Middle Byzantine settlement is well attested in the territory, with diagnostic surface pottery reaching its peak in the 11th–13th centuries. These new settlements are interpreted, according to their size, as small nucleated hamlets and villages located at

regular intervals (reminiscent of the modern nucleated village pattern). These settlements, located both in the lowland (nondefensive) and on hilltops (defensive), are usually concentrated around churches that possibly functioned as parish churches for each settlement; J. L. Bintliff (pers. comm.). See also Vionis 2004–2005, pp. 572–574; 2006a, p. 785.

11. Vanhaverbeke and Waelkens 2003; Vanhaverbeke, Martens, and Waelkens 2007; Vanhaverbeke et al. 2009.

12. As Sanders (2003, p. 385) has pointed out in the case of Byzantine Corinth, “until we know when, discussions of where, why, and how are inaccurate, largely irrelevant, and abstract scholarly exercises.”

13. Patrick Degryse of the Centre for Archaeological Sciences at Katholieke Universiteit Leuven is leading the archaeometric research on pottery samples from the site of Sagalassos. Petrographic analysis of fabrics from AH is also in progress.

**TABLE 1. QUANTIFICATION OF CERAMICS AND TILES FROM ALEXANDER'S HILL**

<i>Shape</i>	<i>Weight (g)</i>	<i>Sherds</i>	<i>ENV</i>
Hemispherical bowl	508	6	1
Biconical cup	1,751	21	3
Carinated dish	1,475	20	2.5
Jug	22,344	805	22
Costrel	23,338	470	12
Mixing vessel	3,114	24	2
Cooking pot	19,731	615	13
Storage jar	4,321	38	14
Pithos	70,682	68	12
Glazed dish	3,405	122	6
Tile	3,500	96	12.5
Total	154,169	2,285	100.0

ENV = equivalent number of vessels

serving, and eating, as well as for storage and transport, provide important evidence for social change at all periods and social levels. As far as the Byzantine and medieval periods are concerned, scholarly attention has generally focused on glazed and decorated tablewares, but the sherds of unglazed common wares that make up the bulk of the ceramic remains at any site can be used to reconstruct many features of everyday life.<sup>14</sup> The study of pottery as an indicator of changing culinary habits still constitutes a novel field of research in the eastern Mediterranean. Recent scientific and archaeological advances in the study of cooking and serving utensils yield data that can be combined with literary sources to produce a more accurate picture of cooking and dining customs of the Byzantine Middle Ages.<sup>15</sup>

Because vessel function will play a leading role in the latter part of this study, the following description of the assemblage from AH presents the common-ware vessels according to shape. The glazed vessels, which are all open dishes, are categorized according to decorative technique. Table 1 and Figure 6 present breakdowns of the entire ceramic sample from AH, quantified by sherd weight and sherd count.

14. For the problems of post-Roman pottery chronology and classification, see, e.g., Sanders 1987, 2000, 2003; Hayes 1992. More general studies of post-Roman pottery chronology, pottery function, and social change have also been published by ceramic specialists working in the Aegean region since the 1980s; see Bakirtzis 1980, 1989; Armstrong 1996, 2006; Papanikola-Bakirtzi 1996, 1999b; Vroom 1998, 2003, 2004; Vionis 2001, 2006a, 2006b; Dori, Velissariou, and Michailidis 2003; Blake 2005.

15. In northwest Europe and the

United States, scholars of medieval and post-medieval archaeology have been pioneers in using visual representations, texts, and material culture to reconstruct everyday life. Vroom's (2003) doctoral thesis (based on material from the Boeotia Project) was one of the first attempts in Greece to adopt this approach. Vroom studied tableware assemblages from the Boeotia Project in the light of Byzantine and post-Byzantine icons; she did not, however, make full use of new methodologies, and the omission of site context makes her work of limited value for studying

individual sites. For early studies of Byzantine pottery, cooking, and diet (with a focus on the Aegean within the borders of modern Greece), see Joyner 1997; Papanikola-Bakirtzi 1998; Vroom 1998. For aspects of Graeco-Roman and Byzantine cooking traditions, see generally Koder 1992; Dalby 1996, 2003; Papanikola-Bakirtzi 2002, 2005; Vionis 2005, pp. 277–301; forthcoming. Koukoules 1952, pp. 9–205, remains the most valuable source of textual and historical references on food preferences and cooking and eating practices in the Byzantine empire.

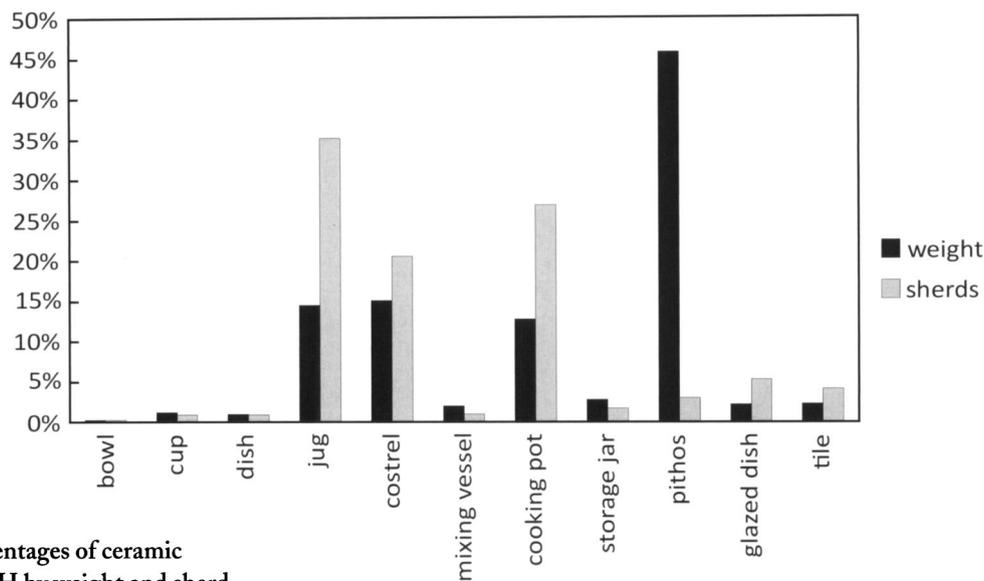


Figure 6. Percentages of ceramic shapes from AH by weight and sherd count. A. K. Vionis

## COMMON WARES

### FABRICS AND PROVENANCE

The term “common wares” here refers to unglazed vessels made of coarse fabrics—in other words, fabrics with inclusions discernible by the naked eye. Although the distinction between common wares and glazed tablewares is made on the basis of fabric characteristics, it should be noted that there is also a functional difference: glazed wares at AH consist almost exclusively of open tableware vessels used for consumption. By contrast, common wares appear in a range of shapes used for preparing, cooking, serving, and storing food. In some cases, coarse-fabric characteristics determine the wall thickness of a vessel, which itself determines function: larger vessels require thicker walls designed for storage, while vessels for cooking require thinner walls that better conduct heat.<sup>16</sup> Despite their humble appearance, the plain/undecorated vessels required a high degree of craft specialization in their production in order to meet the demands of use.<sup>17</sup>

Five fabric types were used in the common wares retrieved from AH as well as from other sites with post-7th-century activity within the ancient city of Sagalassos.<sup>18</sup> As noted above, the majority of common wares do not seem to have been made from raw materials from within the territory of Sagalassos (as defined in Roman times) and should therefore be treated as imports.<sup>19</sup>

16. Rice (1987, pp. 207–243) presents detailed discussion of vessel function in terms of form and technology.

17. According to Rye (2002, p. 26), the thin walls and coarse fabric of cooking pots are qualities that produce “good resistance to thermal shock in order to withstand repeated heating and cooling without fracturing,” while the thick but permeable walls of storage

vessels allow water to “percolate to the outer surface, evaporate, and thus cool the contents.”

18. The full results of fabric and petrographic analyses of pottery samples from AH by Degryse (see n. 13, above) will appear in a separate article.

19. P. Degryse (pers. comm.). One of the components of fabric 100 is schist, a foreign element in the region’s

geology. The equivalent of fabric 100 at Early Imperial to Late Roman/Early Byzantine Sagalassos is fabric 4 (local/regional in origin), which was similarly used for the production of common wares: domestic vessels such as cooking pots and jars of all shapes, as well as Sagalassian amphoras. See Degeest 2000, pp. 84–85.

Fabric 100 (“gritty fabric”) was the main fabric used during the post-Roman period for the production of a wide range of plain vessels found on AH, such as unglazed cups and bowls, plain dishes, jugs, cooking pots, and transport and storage jars. Its color is reddish yellow (ranging between 5YR 6/8 and 5YR 5/8); its hardness ranges from hard to very hard, its feel is smooth, it has a biscuit break, and its exterior surface is usually smoothed. The frequency of inclusions is sparse to moderate, consisting of medium to fine schist, mica, and some black specks. Nearly 92% by weight of the common wares retrieved at AH are made of fabric 100.

Fabric 101 (“gray-core gritty fabric”) is very similar in terms of composition to fabric 100 but was initially separated because of its gray core (due to reduced firing); the core color is gray-brown (10YR 5/2) and the surface varies between light brown (7.5YR 6/4) and brown (7.5YR 5/4). Fabric 101 accounts for almost 4% by weight of the common wares; the only shape in this fabric is a two-handled jar. Fabric 105 (“coarse light red fabric”) is another coarser version of fabric 100 of light red color (2.5YR 6/6). It was mainly used for the manufacture of lids/stoppers and tiles, and by weight it accounts for 3% of the common wares.

Fabric 102 (“mica-dusted fabric”) seems to have been used solely for two specific ceramic forms, a carinated dish and a jug; it is similar to the “mica-dusted miniature ware” of the Sagalassos Late Roman/Early Byzantine pottery spectrum.<sup>20</sup> Vessels in fabric 102 are not found in large quantities, comprising 0.5% by weight of the common-ware assemblage. Its color is reddish brown (ranging between 5YR 6/4 and 5YR 5/4); its inclusions comprise a large amount of fine mica and some limestone and black specks. The fabric is hard and the feel of its irregular fracture is mostly rough. Although fabric 102 is coarser than the aforementioned Sagalassos mica-dusted miniature ware, its origin should still be sought outside the territory of Sagalassos.

Fabric 104 (“pale hackly fabric”) is equally rare, amounting to only 0.5% of the assemblage by weight—a pithos and a lid fragment. Its hackly irregular fracture, pale reddish yellow fabric (ranging from 5YR 7/6 to 5YR 6/6), and large inclusions of limestone, mica, and grog make it quite distinctive; its origin should be sought outside the region of Sagalassos.

In short, fabric 100 and the very similar fabrics 101 and 105 account for 99% by weight of the common wares from AH, while the uniformity of the vessels—in particular their regular and relatively thin walls—points to a specialized workshop outside the immediate area of Sagalassos that produced a variety of plain vessels.

## TYPOLGY AND CHRONOLOGY

This section presents a representative sample of the common-ware shapes recovered from AH, a set of open and closed forms serving different functions (Fig. 7). None of these shapes are slipped or glazed; some shapes are decorated with incised wavy and/or straight lines. The common wares described here are dated between the mid/late-12th and mid-13th century on the basis of the associated glazed vessels. Common-ware shapes did not change radically through time; most of the shapes on AH find 10th- and 11th-century antecedents at a number of other excavated sites, such as Saraçhane in Istanbul.<sup>21</sup> Nevertheless, as noted above, in light of the

20. Fabric 102 corresponds to fabric 7 at Sagalassos, used for the production of miniature vessels; its distinctive characteristic is a finely dispersed mica dusting on its exterior (Degeest 2000, p. 88). Degeest also identifies it with the “mica dusted ware III” from Saraçhane, dated as “mid-Byzantine or earlier”; see Hayes 1992, p. 49.

21. See nn. 28, 30, and 34, below.

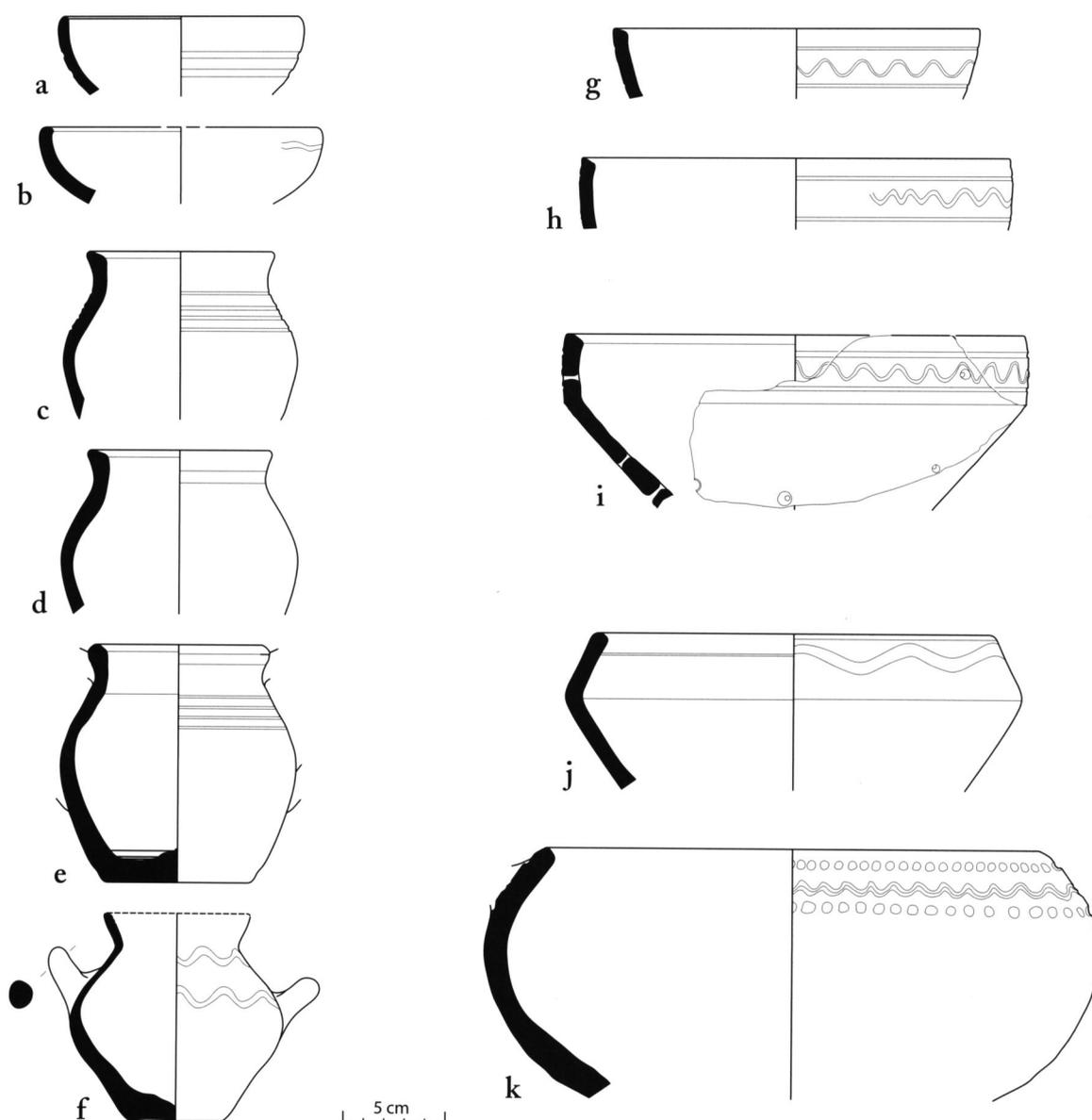


Figure 7. Common-ware shapes from AH: (a, b) hemispherical bowls; (c–f) biconical cups; (g–k) carinated dishes

stratigraphy on AH, the majority of vessels recovered must represent the final phase of occupation.

The standard *Guide to the Classification of Medieval Ceramic Forms (MPRG)* was consulted for the description of vessel forms and shapes. A code is assigned to each vessel type, as defined by fabric, the general form of the vessel, and the specific Byzantine shape.<sup>22</sup> This coding system follows the general fabric designation system already in use at the Sagalassos Archaeological Research Project, which originated with the Roman assemblage.<sup>23</sup> Unless otherwise noted, all the vessels described below are made of fabric 100 (“gritty fabric”).

**Hemispherical bowl**

Only six fragments of unglazed small hemispherical bowls (100F100) were retrieved from AH, comprising about 0.3% of the total assemblage by weight and sherd count (Fig. 6). These vessels have a rounded, slightly inturred rim whose diameter ranges between 12 and 14 cm; possibly they

22. E.g., for type 100F100, “100” refers to the fabric, “F” to the general form (bowl), and “100” to the specific shape (hemispherical bowl).

23. For details of the system, see Poblome 1999.

rested on a plain flat or stemmed base (a chalice?). The surface is smoothed inside and out, while one or two straight or wavy incised lines decorate the exterior walls below the rim (Fig. 7:a, b). This shape is comparable to open shapes among the glazed white wares from Saraçhane, such as Glazed White ware I (early 9th century)<sup>24</sup> and II (early 12th century).<sup>25</sup> Plain bowls of a very similar profile have been identified in Frankish contexts at Corinth (13th century).<sup>26</sup> Most of the bowl fragments from AH were found in association with Incised Sgraffito/Champlevé ware and Green and Brown Painted ware.<sup>27</sup>



Figure 8. Small biconical cup with round handles (see Figure 7:f)

### *Biconical cup*

An unglazed small biconical cup (100A100) with characteristically thick lower walls and a thick flat base comprises 1.1% of the assemblage by weight and 0.9% by sherd count (Fig. 6). More specifically, this vessel type has a thick flat base with either a central nipple or a shallow hollow on its interior; its body is biconical or rounded with convex walls, and its short flaring neck ends in a slightly outturned rounded rim (Fig. 7:c–f). The average diameter of the rim ranges between 7 and 8 cm, the average diameter of the base between 4 and 6 cm, and the body width is usually near 10 cm; this shape usually does not exceed 10 cm in height. What is notable about this vessel type is its small size, heavy base, and two horizontal round handles (Fig. 8); there are also fragments that preserve no handles at all (Fig. 7:c, d). Its surface is smoothed and unslipped, while incised wavy lines usually decorate the upper body just below the neck.

This is a quite distinctive and relatively unknown ware type of the Middle–Late Byzantine period. The samples from Sagalassos are similar

24. See Hayes 1992, p. 176, fig. 56:35.6.

25. See Hayes 1992, p. 193, fig. 73:46.1.

26. See Williams and Zervos 1995, p. 32, fig. 7:36.

27. Hemispherical bowls were

mainly found in the 2003 trench 2, layer 3 (SA2003AH/46), with glazed wares dated from the mid/late-12th to the mid-13th century; this is one of the contexts/layers representing the last occupational phase on AH.

in size and shape to examples of 11th-century Unglazed White wares III and IV and, even more so, to early-12th-century “cooking pots” from Middle Byzantine contexts at Saraçhane.<sup>28</sup> Fragments of biconical cups from AH have been found in association with Incised Sgraffito ware, in a destruction deposit containing ashes and charcoal.<sup>29</sup>

#### *Carinated dish*

An open shape, a plain dish (100D100) with a carinated profile on the upper body and a rounded or beveled rim (Fig. 7:g–j), makes up 1% of the AH assemblage by weight and 0.9% by sherd count (Fig. 6). The rim diameter ranges between 18 and 24 cm, and it is assumed that the vessel rested on a flat or ring base; base fragments in the same fabric are absent from the assemblage. With an average width of 22 cm, it is a rather broad dish; it is usually decorated (just below the rim and above the carination) with a wavy incised line between two parallel ones. Vessels from Saraçhane (dated to the 11th–12th century) are similar in shape to the Sagalassos carinated dish.<sup>30</sup>

Another open vessel (102D100) is assigned to the same form as the carinated dish, although its shape differs slightly. It is made of the mica-dusted fabric 102 and has a hemispherical body with a rounded inturned rim (Fig. 7:k). Its rim diameter is 24 cm, while its maximum body width reaches 30 cm. Only two fragments of this bowl have been recovered, with decorative incised wavy lines within a continuous band of impressed dots just below the rim; one of the fragments preserves a handle base very close to the rim.<sup>31</sup>

#### *Jug*

A closed form, a single-handled jug (100H100), is one of the most common shapes in the assemblage, comprising 14.5% by weight and 35.2% by sherd count (Fig. 6). It has a flat or concave base, a pear-shaped or shouldered profile, a narrow neck, an upright or everted plain rim, and a vertical strap handle (Fig. 9). The dimensions of this vessel vary slightly. The diameter of the rim is 4–5 cm, the diameter of the base 10–11 cm; the body width ranges between 12 and 17 cm, and the average vessel height between 19 and 22 cm. Its exterior surface is smoothed, and it is usually decorated with a band of combed or incised lines on the shoulder, and sometimes on the neck below the rim. The shape and flat base of this jug are seen in every period from the 6th century A.D. onward. It is a shape found in almost every layer on AH; however, it is mostly found in occupational refuse deposits with Incised Sgraffito/Champlévé ware of the late 12th and early–middle 13th century.<sup>32</sup>

28. Hayes (1992, pp. 134, 196, fig. 76:50.31) refers to them as “cooking pots”; it is very possible that the biconical cup from AH also served as a small cooking vessel for individual or single portions of food. For parallels to Unglazed White wares III and IV, see Hayes 1992, p. 190, fig. 70:43.27, 43.34, 43.35.

29. This deposit was found in 2003

in trench 2, layer 1 (SA2003AH/29).

30. Bowls and dishes with bulging walls, carination, and a continuous band with incised patterns are common at Saraçhane; see Hayes 1992, p. 26, fig. 9:2–7.

31. Fragments of this open vessel were retrieved in 2003 in trench 1, layer 4 (SA2003AH/24), below layer 3, which contained coins from the late

11th to early 12th century. However, dates cannot be ascribed to particular wares at Sagalassos solely on the basis of coin finds.

32. An almost complete jug of small dimensions was found in a refuse deposit in 2003 in trench 2, layer 3 (SA2003AH/46), that included late-12th–early/middle-13th-century imported glazed wares.

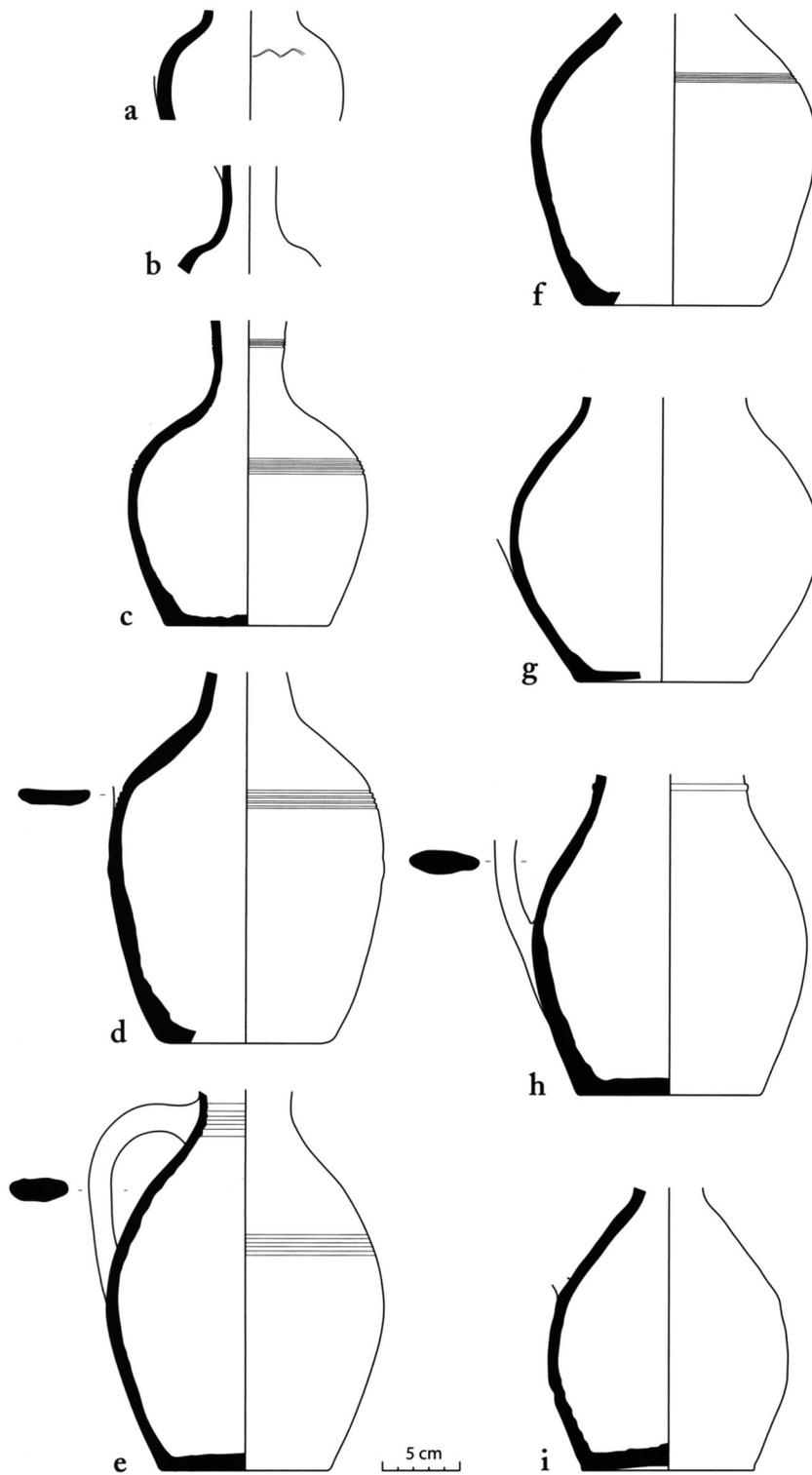


Figure 9. Single-handed jugs

Five fragments of a closed thin-walled vessel, possibly a jug, in mica-dusted fabric 102 are also grouped under this category of jugs (not illustrated). Fragments of this type (102H100) are decorated with continuous rows of impressed lines on the shoulder.

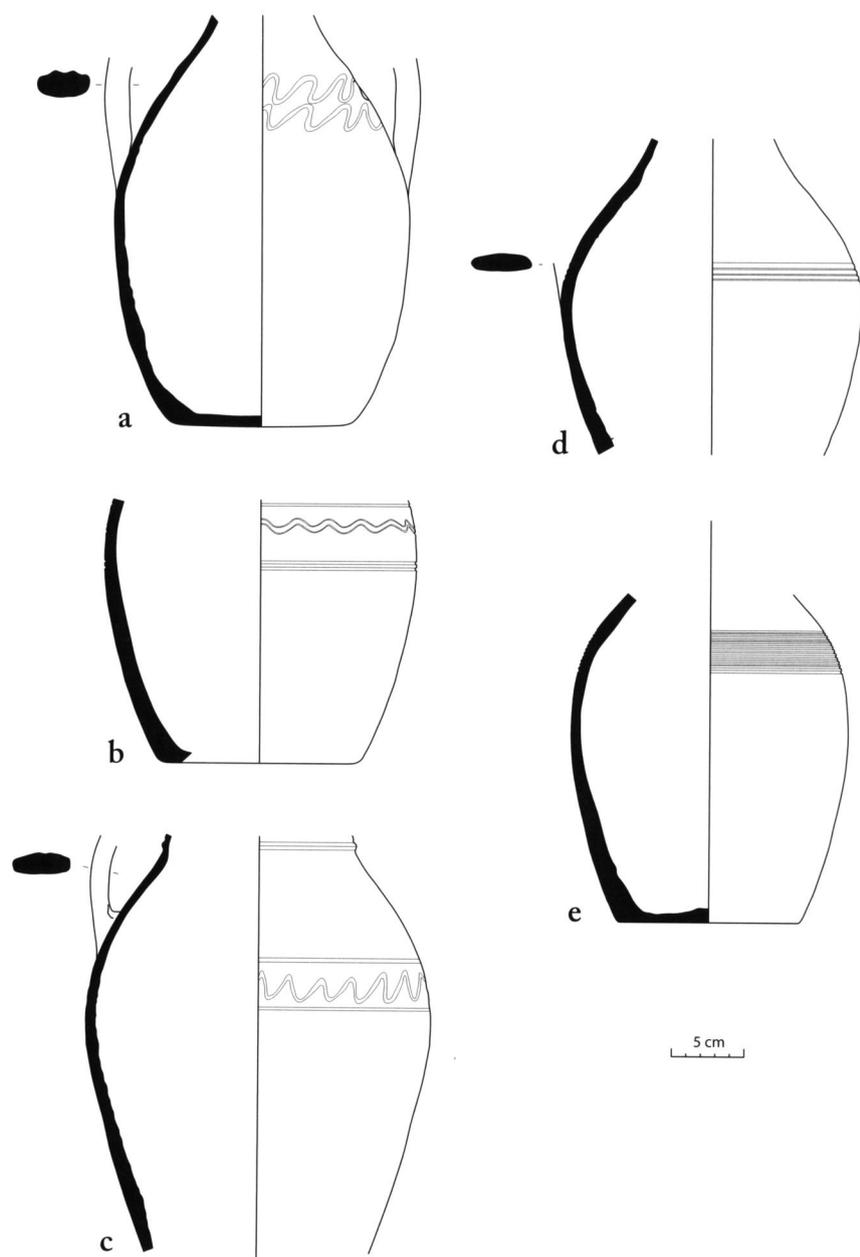


Figure 10. Standing costrels or two-handled jars

*Costrel*

A two-handled jar or standing costrel (100I100) is another common shape in the AH assemblage, comprising 15.1% by weight and 20.6% by sherd count (Fig. 6). It has a flat base whose diameter ranges between 11 and 14 cm, a pear-shaped profile with a belly diameter of 19–23 cm, two opposed oval or strap handles, a medium shoulder, and an upright simple or thickened rim of 6–10 cm in diameter; its overall height ranges between 22 and 35 cm (Fig. 10). Its exterior surface is smoothed, and incised linear wavy designs are often found between a band of combed lines above the belly (Figs. 10:b, c; 11). A few neck fragments preserve a small collarlike ledge. This type (and its gray-core fabric variant, 101I100) is found in

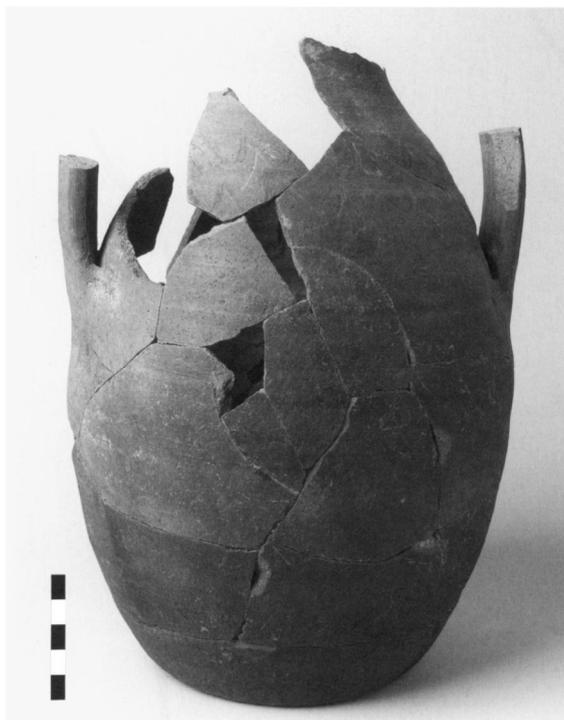


Figure 11. Standing costrel with incised wavy designs on its upper body (see Figure 10:a)

nearly all layers together with other common wares (e.g., carinated dishes and jugs) and tablewares (i.e., glazed dishes of the late 12th to mid-13th century).

#### *Mixing vessel*

A new vessel shape was identified at AH, providing further evidence for diet in contemporary Sagalassos; in form it resembles the standing costrel but it has been termed a “mixing vessel” (100I120). It constitutes 2% of the assemblage by weight and 1% by sherd count (Fig. 6). It has the typical pear-shaped body of the standing costrel, with a belly diameter of ca. 22 cm, a flat base with an average diameter of 13 cm, an upright simple or thickened rim of 8 cm in diameter, and an average height of ca. 33 cm (Fig. 12). Its distinctive features are its two opposed vertical and one or two horizontal strap handles, a short horizontal spout (a little above the belly), and three or four cylindrical projections attached on the interior of the base (Fig. 13). Its closed shape and the attached cylindrical projections make it comparable to modern mixing vessels. The exterior surface is smoothed and decorated with straight and wavy incised lines on the belly and notches on the neck. Fragments of the mixing vessel were found in the top layer of three of the trenches excavated in 2003, suggesting that its production and use should be assigned to the final phase of occupation on AH.<sup>33</sup>

#### *Cooking pot*

A flat-bottomed, single-handled cooking pot (100Q100) from AH is another shape that constitutes a relatively large part of the assemblage, accounting for 12.8% by weight and 26.9% by sherd count (Fig. 6). These cooking vessels occur in two sizes. The group of larger vessels has a flat

33. On the basis of the glazed wares (see below), this phase of occupation can be estimated to have occurred between the late 12th and middle of the 13th century.

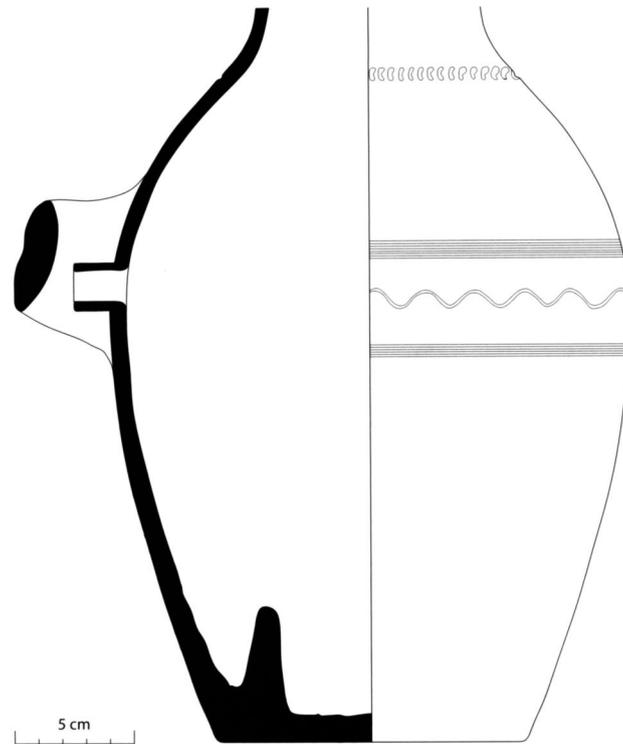


Figure 12. Mixing vessel with spout and cylindrical projections at base



Figure 13. Interior view of mixing vessel shown in Figure 12

base with an average diameter of 11–12 cm, a rounded profile with an average body width of 20 cm, a vertical strap handle, an everted simple or thickened rounded rim of 13–14 cm in diameter, and an average height of 23 cm (Fig. 14:a, b). The rim diameter of the smaller group measures 10–13 cm, the diameter of the base 7–9 cm, the width of the body 11–15 cm, and the height 11–15 cm (Fig. 14:c, d). The most common decorative feature in each of the shapes is an exterior decorative ledge between the upper part of the body and the lower part of the short neck, while the exterior surface is also smoothed (Fig. 15).

Flat-bottomed cooking pots with one handle are very common in northwest Turkey, the southern Balkans, and in various Aegean regions.

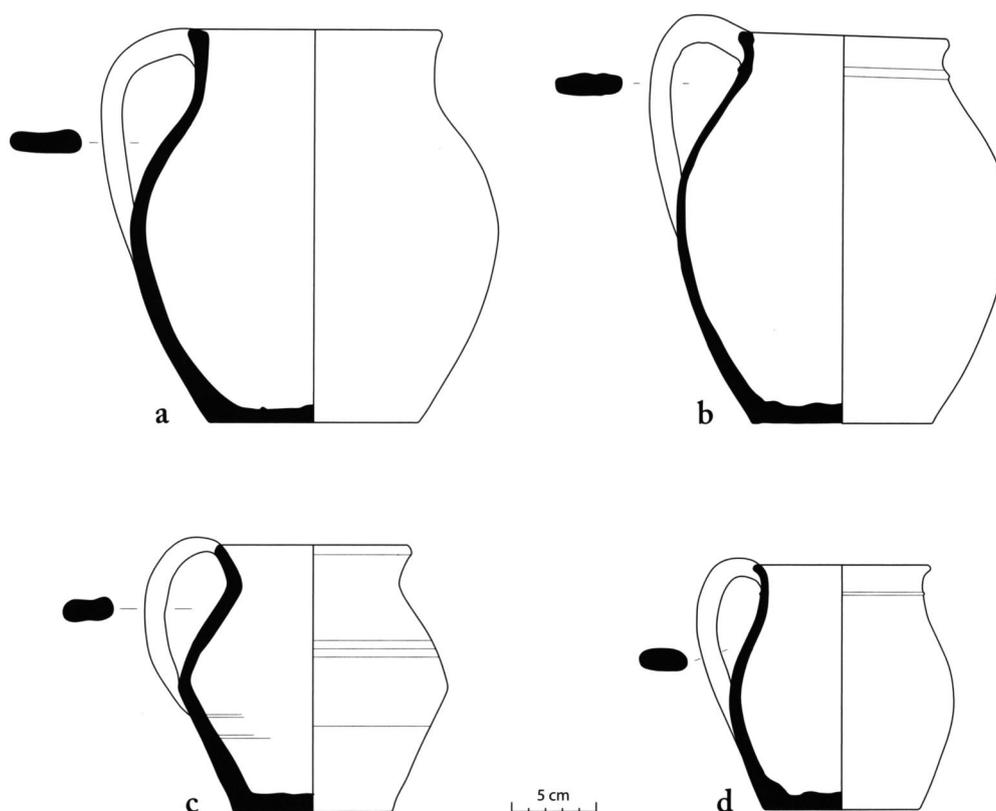


Figure 14. Cooking pots

Single-handled flat-bottomed cooking pots have been recovered from contexts dated to the 9th, 10th, 11th, and 12th centuries at Saraçhane;<sup>34</sup> evidence from Amorium in Asia Minor and Kavala and Thebes in Greece suggests that this cooking-vessel type was in use at least until the late 13th century.<sup>35</sup> Cooking pots of both small and large dimensions have been identified in all layers on AH, associated with diagnostic glazed wares of the 12th and 13th centuries.

#### *Storage jar*

Storage jars of small size and capacity (100G100) for short-term storage and short-distance transport cannot be described with certainty, for only a few rim and base fragments have been retrieved from the site, accounting for 2.8% of the assemblage by weight and 1.7% by sherd count (Fig. 6). This shape has a flat base of ca. 20 cm in diameter, a rounded body, and a wide neck ending in an everted simple rounded or flattened rim of 12–18 cm in diameter. Its distinctive feature is an applied strip/rope decoration on the neck and on the rim (Fig. 16). Small storage jars have not been found consistently in one layer or in a single deposit.

34. For similar shapes in red fabric, see Hayes 1992, pp. 176, 181, figs. 56:35.14, 61:38.14; in white fabric, p. 36, fig. 58:36.6. For flat-bottomed cooking pots with an exterior ledge

from Saraçhane, see Hayes 1992, p. 196, fig. 76:50.32.

35. For evidence from Amorium (although placed in a different cultural context), see Lightfoot and Ivison 1996,

p. 106, fig. 7. For evidence from Kavala, see Papanikola-Bakirtzi 2002, p. 348, nos. 397–399; for Thebes, see Koilakou 1987, pl. 67:b.

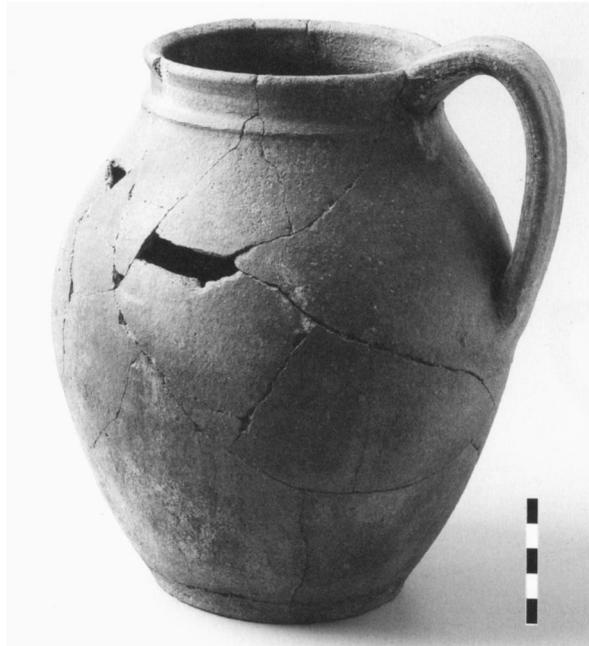


Figure 15. Cooking pot with an exterior ledge below the rim (see Figure 14:b)

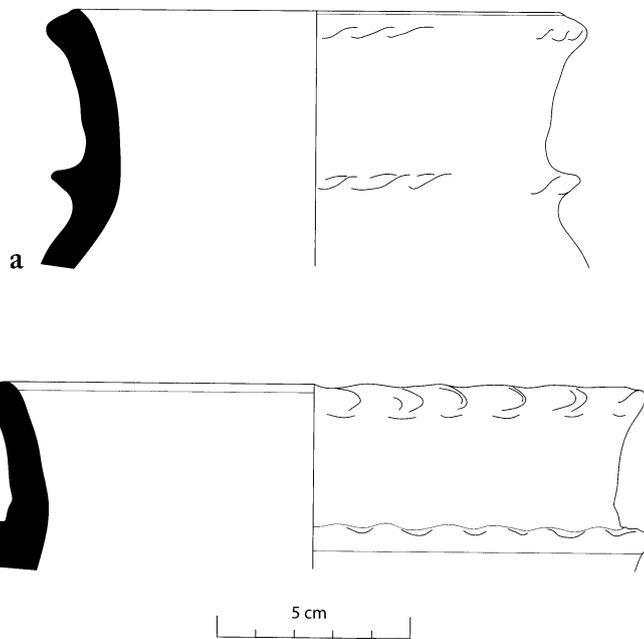


Figure 16. Decorated rims of storage jars

*Pithos*

Although fragments of large storage jars or pithoi (100G110) from AH are not numerous, making up only 3% of the assemblage by sherd count, they constitute nearly half of the assemblage (45.8%) in terms of weight (Fig. 6). The pithoi come in two sizes; the larger ones were probably not designed to be moved, while the smaller ones were more easily transported. Although the typological development of large storage vessels has not been studied in depth, it would appear that they tend to remain unchanged for

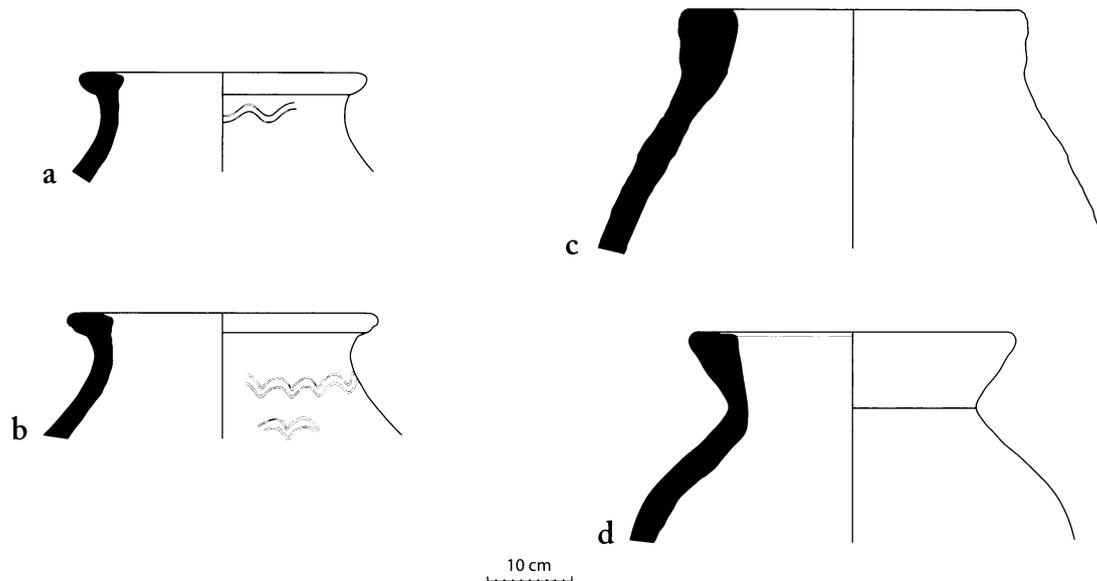


Figure 17. Pithos rims

long periods of time. On the basis of fragments recovered from AH, the basic pithos shape has a flat base, a spherical body with walls up to 5 cm in thickness, and a thick everted rim 32–40 cm in diameter (Fig. 17). Only the smaller pithoi are decorated, with double incised wavy lines on their upper body (Fig. 17:a, b).

## GLAZED TABLEWARES

### FABRICS AND PROVENANCE

The group of glazed wares recovered from AH comprises open vessels used for food consumption. They are made of a fine paste, and their fabrics share no compositional characteristics with those used for the common wares. There is no evidence for the production of glazed vessels at Sagalassos or within its territory.<sup>36</sup>

The samples presented here are lead-glazed red-bodied wares. They have been decorated with designs painted in white slip (Slip-Painted ware), or they have been covered with a whitish slip and decorated with designs either scratched with a blunt tool (Sgraffito ware) or painted (Green and Brown Painted ware). The fabric of each group of glazed decorated wares is different, suggesting different geological sources and probably different production centers.

The most common glazed types on AH are two wares of the sgraffito group: Incised Sgraffito ware<sup>37</sup> and Champlévé ware.<sup>38</sup> Apart from their decoration, no distinction can be made between the two wares here because the fabrics, the quality of the glazes, and the vessel shapes are very similar. The fabric is red or light red (2.5YR 6/8 to 5/8 and 5YR 6/6), soft, and medium-fine with some medium limestone inclusions and a few fine micaceous particles.

Previous fabric analysis and petrographic examination of pottery sherds and wasters of the well-represented Incised Sgraffito and Champlévé wares (series I) found at Pergamon have shown that they were probably imported, although the available evidence “still leaves open the possibility

36. P. Degryse (pers. comm.).

37. Also known as “Aegean glazed ware” after Megaw 1975; see also Sanders 2003, pp. 388–389, fig. 23:2.

38. The term *champlévé* (“raised field”) describes the decorative technique of removing slipped clay to leave a raised figure against an unslipped background; see Papanikola-Bakirtzi 1999b, p. 20; Vroom 2003, p. 163.

of considering them local, made with a clay other than that used for the main Byzantine production.”<sup>39</sup> Meanwhile, more recent research carried out on the potting and glaze of Champlévé ware at Corinth, one of the production centers of glazed pottery during the Middle Byzantine period, has shown that it cannot be a Corinthian product but was possibly made on the mainland of Asia Minor.<sup>40</sup> Neutron activation analysis of Incised Sgraffito ware has shown that it was produced in Cyprus at the end of the 12th century (after the Latin conquest of the island) and was exported to Syria, Palestine, and the Aegean.<sup>41</sup> Archaeological evidence from throughout the Aegean world and the eastern Mediterranean, as well as from shipwrecks at Kastellorizo and Skopelos, provides direct evidence for the bulk transport and trade of Incised Sgraffito and Champlévé wares; Constantinople and sites in Cyprus and Asia Minor (possibly Ephesos?) are generally thought to be their production centers.<sup>42</sup>

Only a handful of Painted Fine Sgraffito sherds were retrieved from AH; this ware constitutes a variant of the so-called Fine Sgraffito ware. Its fabric has a pale pinkish to reddish yellow color (7.5YR 7/6 to 6/6), it is moderately soft, and has many lime inclusions and sometimes a few fine voids. Thessaloniki and the eastern Aegean (probably the western coast of Asia Minor) have been suggested as probable places of origin of Painted Fine Sgraffito ware.<sup>43</sup> Pergamon and Ephesos should also be considered candidates for the production of this ware.<sup>44</sup>

The presence of Green and Brown Painted ware is equally limited, yet significant because it is another imported glazed product from the Byzantine world. The fabric of the sherds from AH has a reddish yellow color (5YR 7/6 to 6/6); it is moderately soft and medium-fine with fine limestone inclusions and fine voids. Its provenance is not yet certain, although southern and central Greece (Corinth, Sparta, Thebes?) have been suggested as candidates for its production.<sup>45</sup>

Similarly, Slip-Painted ware is another glazed tableware type of uncertain provenance; it is certainly an imported product at Sagalassos. This ware is distinctive for its spiral-painted designs. The fabric of the two fragments identified on AH has a reddish yellow color (5YR 6/6 to 7/6); it is moderately soft and medium-fine with some medium limestone and a few fine micaceous inclusions. Corinth has been linked to the production

39. Waksman and Spieser 1997, pp. 115–116. Tripod stilts, wasters, and unfinished wares found at Pergamon provide credible evidence for local ceramic production during the Byzantine period.

40. MacKay 2003, pp. 403–404.

41. See Boas 1994.

42. Kritzas 1971; Philotheou and Michailidou 1986; Armstrong 1991; Boas 1994; MacKay 2003, p. 404; Vroom 2005, pp. 90–93. Although dendrograms do not show a close correspondence between the ceramics found at Pergamon and reference

groups from Sardis and Ephesos, the fabric of Pergamon series H (Manganese-Stained Sgraffito ware), I (Incised Sgraffito and Champlévé wares), and F (Green and Purple Stained Sgraffito ware) resembles that of ceramics from Sardis and Ephesos; see Waksman and Spieser 1997, pp. 114, 117.

43. Hayes 1992, p. 46; Papanikola-Bakirtzis, Mavrikiou, and Bakirtzis 1999, p. 81; Vroom 2003, p. 153.

44. The Green and Purple Stained ware in group 6 (II) at Pergamon is associated with products from Sardis

and especially Ephesos, and although its origin is controversial, its finely executed incised decoration and abstract painted designs of dark brown and green color stylistically resemble examples from sites in Greece and western Turkey; see Waksman and Spieser 1997, pp. 122–123, 126, pl. III.

45. *Corinth* XI, p. 72; Sanders 2003, p. 394. Large quantities of this ware discovered during intensive surface survey work in Boiotia may point to a production center in either the rural region of the province or its capital, Thebes; see Vroom 2003, p. 151.

of Slip-Painted ware.<sup>46</sup> Fabric analysis of published fragments of this ware from Pergamon suggests that they belong to the main group of locally produced tablewares; the quality, however, of their glaze and decoration suggests that they belong to a group of Slip-Painted wares dated slightly later, from the early 13th to the 14th century.<sup>47</sup> Slip-Painted ware has a long life span, making its dating even more difficult; the decoration technique was well known from the late 11th century onward.<sup>48</sup> Pamela Armstrong notes that if a distinction were to be made between early and later examples of Slip-Painted ware, it would be based on the type of glaze: the Byzantine glaze is thin and matte, while the later one is thick and glossy.<sup>49</sup> The samples from Sagalassos are dated to the 12th and early 13th century (or even as early as the late 11th century) on the basis of their thin and matte glaze, and the fabric seems similar to published examples from Corinth.

#### TYPOLGY AND CHRONOLOGY

The groups of glazed tablewares identified on AH can all be dated from the mid/late-12th to the mid-13th century on the basis of parallels from dated contexts.<sup>50</sup> Middle-Late Byzantine glazed tablewares constitute only 2.2% by weight and 5.3% by sherd count of the total assemblage at AH (Table 1, Fig. 18). Incised Sgraffito and Champlévé examples constitute the majority of the glazed wares—93.4% by weight and 89.4% by sherd count (Fig. 19). The presence of other decorated wares is minimal: Painted Fine Sgraffito ware constitutes 3% by weight and 3.3% by sherd count; Green and Brown Painted ware, 1.2% by weight and 2.4% by count; Slip-Painted

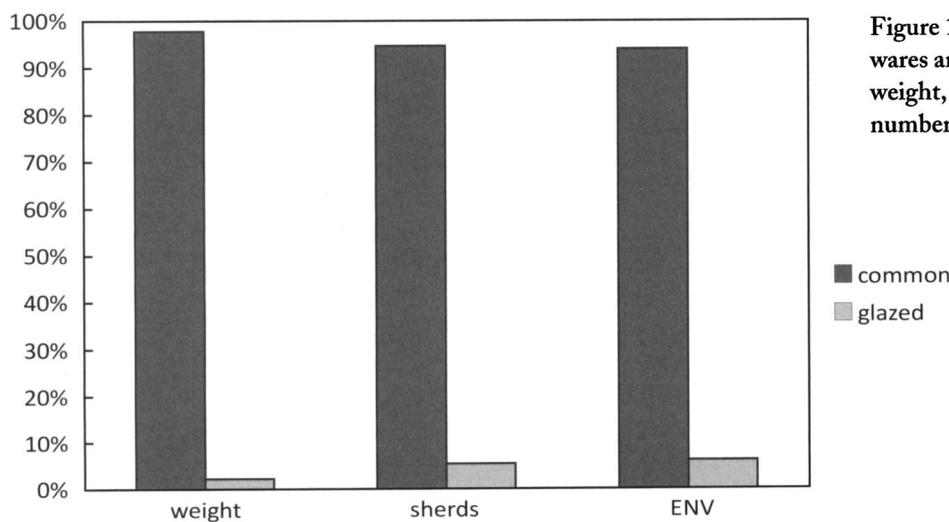


Figure 18. Percentages of common wares and glazed tablewares by weight, sherd count, and equivalent number of vessels (ENV). A. K. Vionis

46. Wasters of Slip-Painted ware have been discovered at Corinth; see Megaw and Jones 1983, pp. 238–239.

47. Waksman and Spieser 1997, pp. 120, 129, pl. 6.

48. *Corinth* XI, pp. 95–103.

49. Armstrong 1989, p. 42.

50. The main reference point for

glazed tableware chronology is Corinth, where the pottery has been found with coins. Corinth was a major city of the Byzantine world and, according to its excavators, technological innovations in glazed pottery must have appeared there earlier than they did in other production centers in Greece, let alone

minor sites in the provinces; according to Sanders (2003, p. 394), “none of the claimed 8th- to 11th-century glazed pottery, with the exception of material from several sites on Melos and one on the Strymon Delta, dates earlier than the late 11th to mid-12th century.”

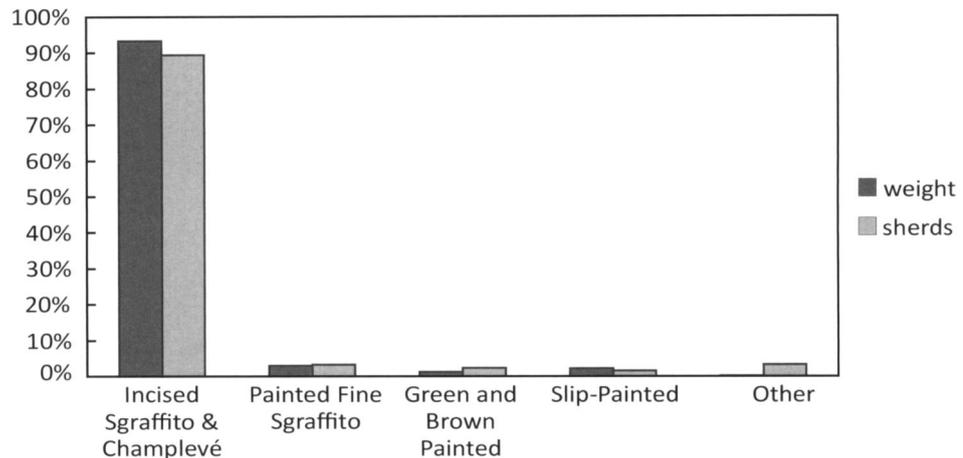


Figure 19. Percentages of decorated glazed tablewares by weight and sherds count. A. K. Vionis

ware, 2.2% by weight and 1.6% by count; and other worn, unidentified potsherds (probably monochrome glazed) constitute 0.2% by weight and 3.3% by count (Fig. 19). All the glazed vessels described below are dishes.

#### *Incised Sgraffito and Champlevé Ware*

The most common shape among the Incised Sgraffito and Champlevé vessels from AH is a large dish with relatively thick walls, a slightly concave profile, an everted or rounded ring-foot base 10–12 cm in diameter, and a thickened vertical or slightly incurved rim (with rounded lip) averaging 25–28 cm in diameter (Fig. 20).

Champlevé ware fragments from the site are yellow-glazed and sometimes decorated with a hare in a central medallion (Figs. 20:a, b, 21:a). An off-white slip was applied directly to the red body of the pot; then the slip-covered clay was carefully scraped away to produce a figure in low relief against a red background. Fragments of Incised Sgraffito ware are either yellow- or green-glazed, decorated with heavy linear incisions in the shape of stylized snakes(?) wiggling toward the center of the vessel (Fig. 20:c, e–h), diamond-shaped motifs with a cross over them (Fig. 20:d), or a crosshatched motif below the rim on the inside (Fig. 21:b). Fragments of this ware with the same decorative patterns have been identified during excavations at Corinth in a deposit dated to the second quarter and middle of the 13th century.<sup>51</sup> This group has been dated to the early 13th century on the basis of its presence in the destruction fills from the 1222 earthquake at Paphos on Cyprus, while evidence from Corinth suggests a similar date (ca. A.D. 1200–1260).<sup>52</sup> On the basis of the closely dated examples from Cyprus and Corinth, the Incised Sgraffito and Champlevé finds from AH are assigned to the first half of the 13th century.

Most of the apparently imported lead-glazed Incised Sgraffito and Champlevé ware fragments recovered from AH have repair holes (Fig. 20:a, g, h; 21:a). This is not the first time that this practice is attested in a Middle Byzantine ceramic assemblage; indeed, it seems that repairing broken glazed pottery with lead thread was a common practice during that period.<sup>53</sup> A repair indicates that a vessel was valued by its owner, perhaps because it could not be easily replaced; this would have been true for vessels imported from outside the territory of Sagalassos, whether the western coast of Anatolia or the Greek mainland, such as the lead-glazed tablewares.

51. Fill 1977-1, lot 1977-11; see MacKay 2003, pp. 406–407, fig. 24:3.

52. For Paphos, see Megaw 1968, 1989; for Corinth, see Sanders 2000, pp. 159–161; and n. 51, above.

53. For Athens and Thrace, see Papanikola-Bakirtzi 1999, pp. 33, 36, 74, nos. 14, 17, 75; 2002, p. 333, no. 369. For rural Boiotia, see Vroom 2003, pp. 281, 283, fig. 10.1:a–c.

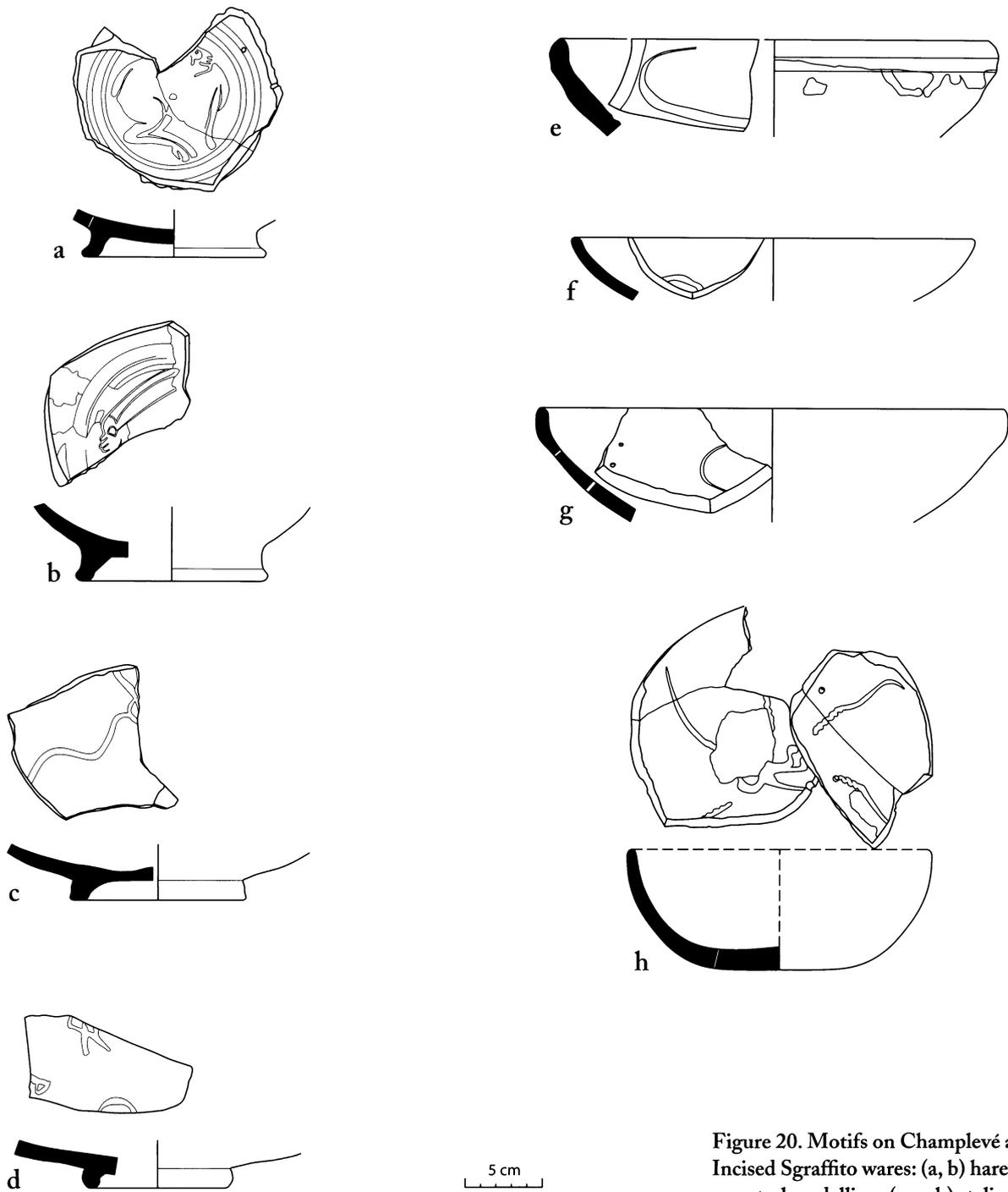


Figure 20. Motifs on Champlevé and Incised Sgraffito wares: (a, b) hares in a central medallion; (c, e–h) stylized snakes(?); (d) diamond-shaped motifs with a cross over them

#### *Painted Fine Sgraffito Ware*

The limited number of Painted Fine Sgraffito ware fragments from AH suggests that the most common shape at the site was a large shallow dish with a low ring-foot base, a slightly concave profile, and a simple rim with rounded lip. In the technique of fine sgraffito, a whitish slip was applied over the interior surface of the vessel; fine lines incised with a sharp tool

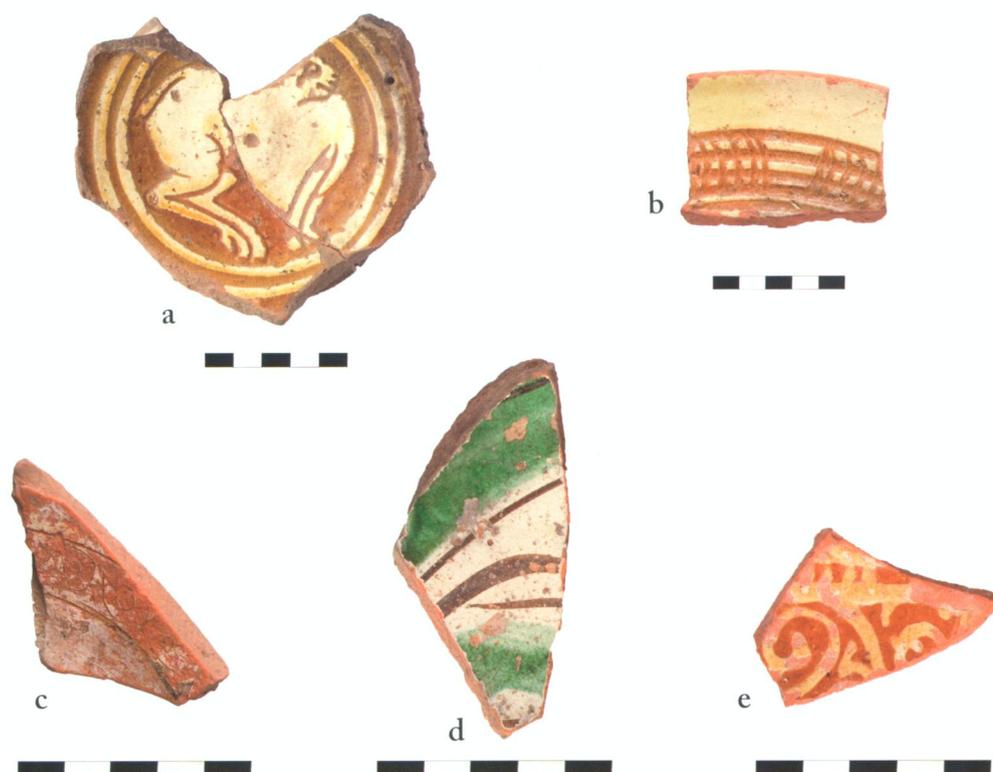


Figure 21. Decorated glazed fragments: (a) base fragment of a Cham-plevé ware dish with a hare in the central medallion and a surviving repair hole; (b) rim fragment of an Incised Sgraffito ware dish with a crosshatched motif; (c) body fragment of Painted Fine Sgraffito ware; (d) body fragment of Green and Brown Painted ware; (e) body fragment of Slip-Painted ware

exposed the dark clay beneath the slip.<sup>54</sup> Painted linear motifs in green and brown enhanced the area decorated with fine incisions, and finally a yellow-tinted lead glaze was applied. Fragments from AH are decorated with zones of scrolls and spirals, with additional linear green and brown motifs (Fig. 21:c). On the basis of recently excavated evidence, mainly from Saraçhane and Corinth, Painted Fine Sgraffito ware has been dated to the middle and second half of the 12th century.<sup>55</sup>

#### *Green and Brown Painted Ware*

The only Green and Brown Painted ware shape present in the assemblage from AH is a deep dish with a low ring-foot base, a fairly deep rounded profile, a convex divergent lower wall, and a straight flat-topped rim. A white slip was applied to the interior of the vessel; lozenges, spiral motifs, and wavy bands were then painted in matte green and brown and covered with a thin and transparent yellow-tinted lead glaze (Fig. 21:d). This ware is generally assigned to the second half of the 12th and the beginning of the 13th century on the basis of dated excavated evidence. At Corinth, where this ware has been recovered with coins, several variants of Green and Brown Painted ware have been found in late-11th-, 12th-, and early-13th-century contexts.<sup>56</sup>

54. The decorative technique of sgraffito derives its name from the Italian word *sgraffiare*, “to scratch”; Papanikola-Bakirtzi 1999b, p. 18.

55. Hayes 1992, p. 46, fig. 17:2, pl. 11:g; Sanders 2000, pp. 159–161; 2003, pp. 392–393; Vroom 2003, p. 153; 2005, pp. 86–87.

56. Sanders 2000, pp. 159–161. See also Hayes 1992, p. 46, fig. 17:12, pl. 11:e2; Vroom 2003, pp. 151–152.

### *Slip-Painted Ware*

The Slip-Painted ware fragments retrieved from the site suggest the presence of a fairly deep dish with a low ring-foot base, a flaring or rounded profile, and a simple rim. The designs are painted in white slip against the natural clay and then covered with a thin colorless lead glaze; the decorative repertoire includes spirals and crosshatchings, appearing in light yellow on a brown background under the clear over-glaze (Fig. 21:e). Slip-Painted ware is dated to the late 11th and 12th century, as proposed initially by Charles Morgan, who described this particular slip-painted linear decoration type at Corinth as “later linear style.”<sup>57</sup> Morgan’s dating has been confirmed by more recent excavations at Corinth, as well as at Saraçhane, Thebes, and other sites.<sup>58</sup>

## POTTERY QUANTIFICATION AND ASSEMBLAGE COMPOSITION

The quantification of excavated ceramics is always a laborious task for the archaeologist. The large quantities of ceramic fragments recovered during excavation must be sorted and classified, counted and weighed. The process of quantification also poses a methodological problem: how to convert the raw data of weights and sherd counts to a more useful scale of measurement, namely, the number of intact vessels represented by the fragments.

In the preceding description of the assemblage, the proportion in which each shape of common ware and each style of tableware appeared at AH was expressed as percentages by weight and by sherd count (Figs. 6, 19). Neither of these ratios, however, is a reliable indicator of how many vessels were present at AH. Counting feature sherds, such as rim and base fragments, or weighing sherd totals for each shape provides only a very rough estimate of vessel quantity, and the results can be contradictory. Fragments of the jug shape, for instance, make up 14.5% of the assemblage by weight and 35.2% by sherd count. Such a large difference in percentages is expected, for a light thin-walled jug will break into more fragments than a thick-walled storage jar.

Fortunately, the state of preservation of the assemblage at AH permits the use of an effective method for estimating the number of vessels present. The site has yielded examples of whole or half vessels in almost every shape; and because the various shapes were produced in a relatively standardized fashion, with regular sizes and wall thicknesses, it is possible to estimate the weight of each vessel type. For example, in the commonware assemblage of AH, the average weight of a jug is 1,000 g, while a large thin-walled cooking pot averages 1,500 g. Thus, it was possible to calculate the equivalent number of vessels (ENV) for most shapes by sorting sherds by fabric and vessel shape, determining the total sherd weight for each vessel type, and dividing that total by the mean vessel weight.<sup>59</sup> The equivalent numbers of large and small storage jars (here distinguished as “pithoi” and “storage jars”) were calculated on the basis of rim and base fragments.<sup>60</sup> By these methods, it was estimated that a total of 100 vessels

57. *Corinth* XI, pp. 100–104.

58. Hayes 1992, p. 46; Koilakou 1996, pp. 76–77, pl. 33:a; Sanders 2003, pp. 392–393; Vroom 2003, pp. 150–151.

59. For a summary of methods of counting and weighing sherds and estimating vessel equivalents, see Blake and Davey 1983, pp. 23–34; Rice 1987, pp. 288–293.

60. The limited number of jar fragments and their very large size and weight required a modification of the method used for other shapes.

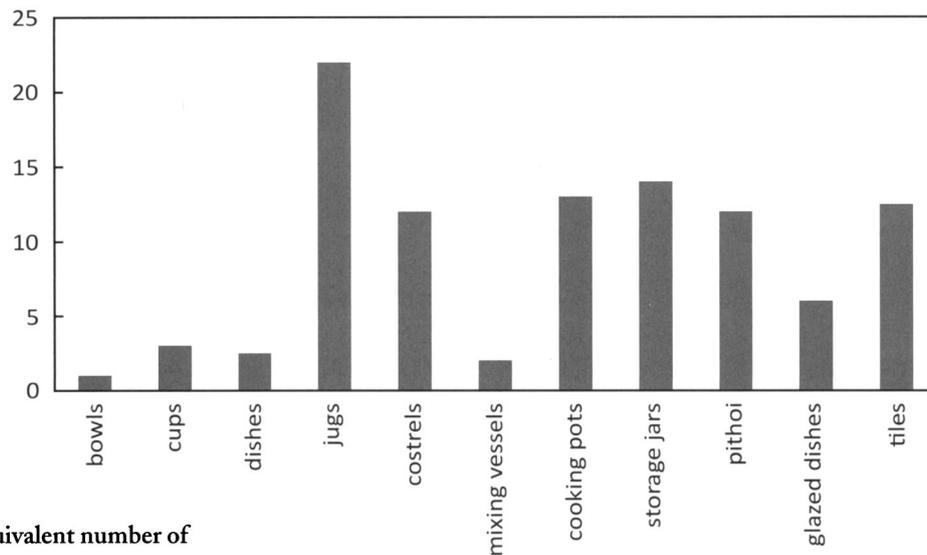


Figure 22. Equivalent number of vessels (by estimated vessel weight) of common-ware and glazed table-ware shapes. A. K. Vionis

(including individual tiles) were recovered from the excavated trenches on AH (Table 1, Fig. 22), including 81.5 common wares, 6 glazed tablewares, and 12.5 tiles.

Unfortunately, it is difficult to situate the estimated vessel counts from AH in a broader context. No secure comparisons can be made between the quantified 12th–13th-century assemblage from AH and those from other sites in southwest Anatolia, due to the lack of fully published contemporary pottery assemblages from other sites. Furthermore, no known Middle Byzantine written sources describe the composition of contemporary domestic assemblages or record inventories of pots in individual households.

Nevertheless, the composition of the assemblage from AH, and in particular the predominance of certain vessel types and their presumed functions, may disclose something about the use of the site and the relative status of its occupants.<sup>61</sup> A functional analysis of the assemblage (Fig. 23) shows a relative balance between shapes used for serving and consumption (jugs and glazed dishes), cooking and processing (hemispherical bowls, biconical cups, carinated dishes, mixing vessels, and cooking pots), storage (storage jars and pithoi), and transport (costrels). Jugs make up a significant proportion of any ceramic assemblage, for water is the most basic element in the human diet. Some shapes fulfilled more than one function: the unglazed biconical cup probably served both as a vessel for eating and drinking (consumption), and as a cooking pot for warming up individual portions (cooking). On the analogy of medieval cooking pots from Rome, it has been suggested that Byzantine cooking pots (τσουκκάλια) of small dimensions with a flat base must have served for food preparation in small quantities (one to three portions).<sup>62</sup> Similarly, the shape of the hemispherical bowl suggests that it was used for both food and beverage consumption. Furthermore, some of the plain carinated dishes preserved repair holes (Fig. 7:i); perhaps these open vessels were considered valuable and worth repairing because they had multiple functions, such as food preparation, serving, and consumption.

61. Rice 1987, pp. 300–301.

62. Mazzucato 1972, p. 23; Bakirtzis 1989, p. 41, n. 63.

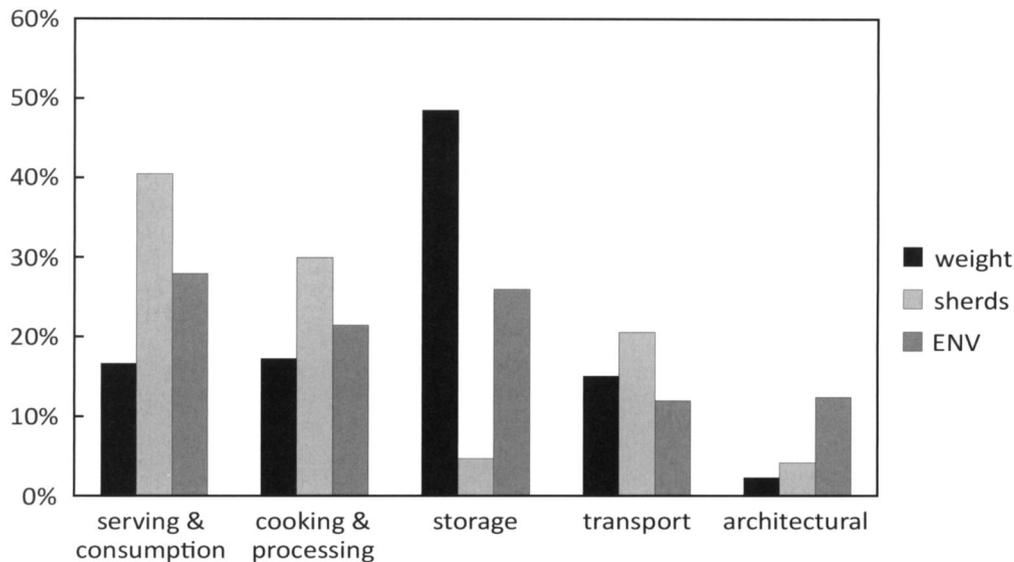


Figure 23. Functional analysis of vessels by weight, sherds count, and equivalent number of vessels (ENV).  
A. K. Vionis

Taken as a whole, this group of vessels represents a domestic assemblage, produced in order to satisfy basic daily needs: cooking, serving, transport, and storage. This assessment is congruent with the interpretation of the small settlement on AH as a defensive outpost. The low number of decorated glazed tablewares, reaching a maximum of six vessels, is not surprising. All of the glazed wares (as well as common wares) were items brought to the site from outside the region of Sagalassos; the fact that most of the glazed pottery fragments show signs of repair indicates their higher value relative to other ceramic wares in the assemblage. A comparison can be made between the AH assemblage and the mid-14th- to early-15th-century assemblages from Panakton in Boiotia, where the proportion of glazed tablewares from a number of houses is minimal compared to the bulk of utilitarian common wares.<sup>63</sup>

The low number of vessels reserved for serving and consumption at AH is similarly not unusual. References to serving equipment, such as deep or flat dishes of earthenware or wood and drinking cups or glasses, are relatively rare in Byzantine inventories of household equipment; such items tend to appear in monasteries but rarely in houses.<sup>64</sup> As Nicholas Oikonomides observes, "Poor peasants no doubt constituted a large percentage—in certain periods, the majority—of the Byzantine emperor's subjects, but their dwellings lack interest because they certainly contained very little."<sup>65</sup> The fact that serving equipment appears often as property in monasteries and very rarely in houses seems to agree with ceramic evidence

63. Gerstel et al. 2003, pp. 218–221. According to the excavators, the small number of imports at Panakton suggests the limited resources available and the nonurban character of the settlement.

64. It is very possible that wine-glasses were an item reserved for the

wealthy; households at the lower end of the social hierarchy must have shared drinking cups of cheaper material (mainly clay) at the table. See Oikonomides 1990, p. 212; Vionis 2005, p. 286.

65. Oikonomides 1990, p. 205.

from contemporary urban centers, such as Constantinople (Sarıhan in Istanbul) and Corinth, where the percentage of glazed vessels is minor during the Middle Byzantine period but rises steadily and then escalates dramatically only during Late Byzantine times.<sup>66</sup> Although the technique of lead glazing was already known during the Roman and Late Roman periods, glazed products were very rare; it was only during the Middle Byzantine period that, in John Bintliff's words, "they became a type-fossil for the recovery of population and economy."<sup>67</sup>

Finally, in addition to recording the tablewares found at AH, we should also note what was absent. Archaeological evidence for serving equipment from AH is restricted to glazed and unglazed open forms; knives, forks, and spoons have not been discovered at the site, and they appear in inventories extremely rarely.<sup>68</sup> It is assumed that knives, along with clay, metal, or glass vessels, where available, were used communally at the table, as attested in Middle Byzantine church frescoes. Although forks and knives had been known since the 10th or 11th century,<sup>69</sup> food seems to have been placed in a central bowl and eaten with the fingers, after the diners had washed their hands with water.<sup>70</sup> Comparative research on medieval Britain and northwest Europe has shown that the use of spoons must have been confined to eating accompanying sauces or gravies, while individual portions of food could have been moved from the central dish to wooden trenchers or bread rolls in front of each guest.<sup>71</sup> Indeed, pictorial evidence indicates that the use of individual wooden trenchers or bread rolls (instead of individual serving plates) was also a relatively common practice in the Byzantine provinces.<sup>72</sup> Textual, pictorial, and archaeological evidence points to the continual use of cutlery on the Byzantine table, especially during the 12th and 13th centuries, but to a much lesser extent in the succeeding period. This apparent decline in the use of cutlery may bear some relation to the greater number, wider variety, and different types of ceramic serving vessels in use after the 13th century.<sup>73</sup>

66. Hayes 1992; Sanders 2000; Vionis 2004–2005, p. 573, n. 47.

67. Bintliff 2008, p. 1287. Bintliff goes on to note that "most probably, the inspiration (for glazing) comes from the Islamic ceramic production of states neighboring Christian Southern Europe, which was always far in advance technologically and artistically in pottery production." The influence of lead-glazed ceramics from Islamic lands became more evident in Byzantine pottery production and decorative styles from the 9th century onward; glazed vessels seem to have served initially as a substitute on the Byzantine table for metal vessels, which were highly valued. See Vionis 2001, pp. 93, 95.

68. Oikonomides 1990, p. 212.

69. The use of forks must have been confined to elite households and the Byzantine court. It has been argued that the invention of the (two-pronged) fork dates back to the 11th century, when, according to Petrus Damianus, it was introduced to Venice by the Byzantine princess Theodora; see Petrus Damianus in Koukoules 1952, p. 148. In northwest Europe the individual fork first appears around the 16th century, as the utensil slowly spread from Venice; see Braudel 1985, pp. 205–206; Vionis 2005, pp. 286–287. Excavations at various places in Greece, such as Panakton, Corinth, and Mistra, show that knives and forks were in use at least since the Middle and Late Byzantine/Frankish periods; see *Corinth* XII; Gerstel 1996; Papanikola-Bakirtzi

2002; Gerstel et al. 2003. According to a recent reassessment of evidence for the use of cutlery, the earliest evidence for the use of table forks dates to the 10th century: Parani, forthcoming. We are grateful to Maria Parani for sharing her paper on Byzantine cutlery with us.

70. Koukoules 1952, p. 170; Oikonomides 1990, p. 212; Gourgiotis 1991, p. 81.

71. Mennell 1985, p. 51.

72. See Vroom 2003, p. 317; Vionis 2005, p. 286.

73. The decline in iconographic depictions of cutlery after the 13th century may reflect changes in diet, in particular a rise in the consumption of more liquid foods. See Parani 2003, and forthcoming.

## COOKING POTS AND CUISINE AT ALEXANDER'S HILL

Pottery can indicate cultural and social conditions, as well as the identity of a cultural group; features such as the size or shape of a vessel—a cooking pot, for example—and its distribution can also provide evidence for changes in diet and cooking practices.<sup>74</sup> By combining the ceramic data from AH with textual sources, as well as zooarchaeological analysis of the faunal remains at the site, lipid analysis of the cooking-pot fragments, and palynological analysis of the countryside around Sagalassos, it is possible to refine the current picture of Byzantine culinary practices and food preferences in the 12th–13th century.

Recent research suggests that the mainstays of Middle Byzantine diet in the Aegean provinces were fish and vegetables; these conclusions are based on the study of tableware shapes as well as depictions of meals in church frescoes and illuminated manuscripts.<sup>75</sup> Textual sources indicate that pulses and bread also played an important role in Byzantine diet, followed by meat and dairy products.<sup>76</sup>

The Byzantines ate mallow (hollyhock), spinach, asparagus, cabbage, cauliflower, turnips, artichokes, cucumbers, carrots, zucchini, eggplant, and most often, onions and garlic.<sup>77</sup> Indeed, many Byzantine dishes combined different vegetables, or vegetables with pulses and crushed wheat—for example, χορτερή, made from wild greens, onions, and herbs, or another dish made of spinach and crushed wheat.<sup>78</sup> Byzantine cuisine also included pulses, such as fava beans, lentils, and chickpeas, which were boiled and served either mashed or as a soup.<sup>79</sup> The wide variety and availability of pulses as well as cereals, not only in the eastern Mediterranean but also in other parts of Europe, made them a cheap source of protein. While vegetables usually served as accompaniments to meat and fish, they moved to the center of the menu during the frequent and austere fasting seasons (especially before Christmas and Easter). Monastic diet was particularly harsh during these periods; the 12th-century poet Theodoros Prodromos (also known as Ptochoprodromos) observes that the principal constituents of this diet were cereals and pulses, and thin meatless soups, or “holy soups” (ἁγιοζούμιν).<sup>80</sup> Byzantine textual sources explicitly note that vegetable dishes were always perceived as the “food of the poor.”<sup>81</sup>

Byzantine texts are full of references to bread, distinguishing the “clear” or white bread enjoyed by the rich from the “unclear” or brown bread (full of bran) reserved for the poor.<sup>82</sup> Bread could be preserved for a long time, either in a dried form called παξιμάδιον,<sup>83</sup> or stored in a cool and dry cupboard that the Byzantines called ἄρκλα. Dried bread (βούκελλος) also constituted the most basic food for the army throughout the Byzantine era.<sup>84</sup>

Milk was a component of numerous beverages. Drinks made of milk and other liquids are described in Byzantine sources, such as a mixture of milk, wine, and water to be consumed by soldiers before the main meal<sup>85</sup> or a mixture of milk and honey or wine probably prepared by shaking it in a hollowed-out log or a ceramic vessel.<sup>86</sup> The new ceramic vessel shape identified above, the mixing vessel, should be mentioned here. According to available Byzantine written sources,<sup>87</sup> it was probably used in the production of a butter or sour yogurt drink, equivalent to what is known today as *ayran*.

74. Cunliffe 1976, pp. 273, 286; Blake and Davey 1983, p. 8.

75. Vionis 2001, p. 94; 2006b, pp. 488–491; Vroom 2003, pp. 313–321, 367.

76. Moutsias 1998, pp. 105, 154; Haldon 2000, pp. 67, 72; Vroom 2003, p. 367; Vionis 2006b, pp. 488–491; Joyner 2007, p. 190.

77. Zambelios 1857, p. 548; Koukoules 1952, pp. 88–96.

78. Moutsias 1998, p. 81; compare the modern Greek dish of *spanakorizo* (spinach and rice).

79. Koukoules 1952, pp. 96–99.

80. Ptochoprodromos 3.290–301, cited in Hesselting and Pernot 1910, pp. 61–62.

81. Koukoules 1952, pp. 88–89.

82. Ptochoprodromos 3.317–318, cited in Hesselting and Pernot 1910, p. 62; see also Koukoules 1952, p. 14.

83. Koukoules 1952, p. 29–30.

84. Koukoules 1952, p. 24; Kolias 1984, pp. 197–198; Dalby 2003, p. 99.

85. Kolias 1984, p. 202.

86. Ptochoprodromos 4.109–110, cited in Hesselting and Pernot 1910, p. 77; Koukoules 1952, pp. 121–122, n. 5.

87. Koukoules 1952, pp. 121–122.

As for meat dishes in the Middle Byzantine period, it has been assumed that they were usually prepared by the application of dry heat—by roasting or baking. Prodromos explains that baked vegetables, meat, and fish were garnished by various special sauces made from pomegranates (a substitute for lemon juice), giving them a sweet-and-sour taste.<sup>88</sup> Archaeological evidence confirms such textual references: a special ceramic form, the σαλτσάριον, or chafing dish,<sup>89</sup> was used on the table for keeping such dressings or sauces warm.<sup>90</sup> These “sophisticated” dining practices must have been common among wealthy as well as poor households, as identical pottery forms have been recovered at both urban and rural contexts by excavation and surface survey. Only one chafing-dish fragment, however, dated to the 12th century, has so far been identified at Sagalassos, at the site of the former Temple of Apollo Klarios (Fig. 1).<sup>91</sup>

Given this picture of Middle Byzantine diners who favored roasted meat, scholars have assumed that it was the Latins of the Fourth Crusade who introduced the use of wet heat and the preparation of meat stews into the Frankish states in the former Byzantine empire, around the beginning of the 13th century.<sup>92</sup> The design of Late Byzantine/Frankish cooking pots from late-13th-century Corinth seems to support this hypothesis: the pots have a taller neck that “was probably an adaptation to retain a greater proportion of liquid, keeping the stew relatively moist.”<sup>93</sup> The 12th–13th-century cooking pots from AH, however, exhibit similar characteristics; they have a closed shape, a rounded body, a small rim diameter, and a relatively high neck. These vessels would also appear to have been designed “for greater heat and water retention, through stewing and boiling, generally leading to the production of semi-liquid foods.”<sup>94</sup> The cooking pots from AH thus pose the following question: Were the inhabitants of Sagalassos enjoying meaty stews prior to any Western influence on their cuisine?

88. Ptochoprodromos 3.148, cited in Hesselting and Pernot 1910, p. 54; see also Motsias 1998, pp. 89–90.

89. The σαλτσάριον, an internally glazed bowl set on a hollow ventilated stand filled with burning charcoal, was usually made of reddish clay and appears in urban as well as rural contexts from the late 8th/9th to the 12th century A.D. See Koukoules 1952, p. 154; Bakirtzis 1989, pp. 55–65, pl. 38; Hayes 1992, pp. 23–24, fig. 8:9, 10; Papanikola-Bakirtzi 2002, pp. 327–329, nos. 361–363. Another Byzantine term for a chafing dish was γαρύριον or γαρύριον, derived from *garum*, a special sauce made of fish blood, fish intestines, and salt (Koukoules 1952, pp. 40–41).

90. The Byzantines referred to these sauces by the Latin term *sapor* (Koukoules 1952, p. 40). These savories were seasoned with several herbs and plants (*condimenta*), including a spice of the same family as cumin as well as cinnamon and nutmeg.

91. The former Temple of Apollo Klarios is situated to the west of the Lower Agora on top of a natural hill. It seems that the pagan sanctuary went out of use toward the end of the 4th century; in the first half of the 5th century, the temple was converted into a Christian tripartite transept-basilica reusing building material from the former sanctuary. The basilica site was last used in the Middle/Late Byzantine period, from the 11th to the mid-13th century (on the basis of ceramics studied in 2005 and 2007). See Vionis, Poblome, and Waelkens 2009, p. 149.

92. The Byzantines considered the Franks to be unclean and their cooking unhealthy, for they “mix[ed] their suet and lard with oil” (Lock 1995, p. 194). The large number of pilgrims visiting Jerusalem in the 12th century purchased food cooked by vendors located on one of the central streets; the food was probably greasy and prepared in unsanitary conditions. See Boas 1999,

p. 25; Vionis 2001, p. 94. Historical research on medieval Venice has shown that fish and meat cooked in their own juices were favorite dishes, especially during the late medieval period; see Mosto 1983; Vionis 2005, pp. 282–283.

93. Joyner 2007, p. 190. Papanikola-Bakirtzi (1998) was the first scholar to argue that Westerners introduced different cooking and eating habits into the eastern Mediterranean at the time of the Crusades. Vroom (1998, 2003) has applied Papanikola-Bakirtzi’s hypothetical model to the Byzantine ceramic assemblages from Boiotia, comparing pottery shapes with vessels that appear in Byzantine religious art depicting meals (e.g., the Last Supper, the Hospitality of Abraham).

94. Arthur 2007, p. 18. According to Arthur, open cooking pots are intended to cook food through evaporation, which yields relatively dry dishes.

Several types of evidence can be brought to bear on this question, including literary sources, the analysis of faunal remains at AH, and lipid analysis of the cooking pots themselves. In addition, palynological evidence helps to reconstruct changes in long-term patterns of herding and cultivation that may have influenced diet at Sagalassos and AH.

Literary sources indicate that meat stews were a part of Byzantine cooking prior to the 13th century. Byzantine recipes indicate two main methods for cooking meat: roasting or grilling, and stewing. The early-6th-century doctor Anthimos notes that “beef can be stewed, or boiled in a pot and served with a sauce” and advises that its “flavour is better if cooked in earthenware.”<sup>95</sup> Similarly, “pigs are very good and suitable stewed, or served in sauce after roasting in an oven.”<sup>96</sup> Flat-bottomed cooking pots have been discovered in a Middle Byzantine oven during excavations at the town site of Paliochora-Maroneia,<sup>97</sup> possibly indicating that such vessels were used not solely for stewing meat over a fire but also for roasting it in an oven, instead of using baking vessels with clay or metal lids. Domestic animals as well as game were quite common in the Byzantine diet: roosters, peacocks, pheasants, pigeons, partridges, quails, ducks, geese, and deer were usually eaten roasted or cooked in wine.<sup>98</sup> Large quantities of meat were preserved by salting; according to Constantine Porphyrogenetos writing in the 10th century, this “sun-dried salted meat” was known by the Byzantines as *ἀπόκτια*.<sup>99</sup>

The faunal remains from AH are an index of food availability and preferences around Sagalassos during the Middle–Late Byzantine period. Preliminary conclusions show the clear dominance of beef, followed by pork, among the meat consumed from domestic animals (Fig. 24). In addition, the presence of game (red deer and fallow deer) is noted rather frequently, representing about 10% of the consumed animals (Fig. 25). Domestic fowl, as well as wild birds and fish, are rare or completely lacking. The prominence of cattle among the consumed domestic animals is very striking: pig, sheep, and goat bones combined constitute less than half of the material, while pig remains are more abundant than those of sheep and goats.

The faunal material from the 12th–13th century at AH is quite different from the Roman and Late Antique remains recovered within the city of Sagalassos. The animals most frequently consumed within the city were ovicaprines (41.1%), followed by cattle (35.2%) and pig (22.9%).<sup>100</sup> On AH, by contrast, cattle bones are dominant, followed by pig; also, while red deer and fallow deer are relatively abundant in the AH material, they are less so in the earlier material from Sagalassos. The increased proportion of red deer and fallow deer may point to a change in vegetation: because deer prefer landscapes that include forested sections, it is possible that the environment around AH was much more wooded during the 12th–13th century than it had been in Roman and Late Antique times. Overall, it seems that the population living on AH in Middle–Late Byzantine times preferred animals with a high meat yield; sheep and goats would provide much less meat than cattle, pigs, or deer. This preference for high-yield meat sources is another feature suggesting that AH was a military outpost.

95. Anthimos, *Letter on Diet* 3, cited in Dalby 2003, pp. 174–175.

96. Anthimos, *Letter on Diet* 10, cited in Dalby 2003, p. 175.

97. Doukata–Demertzi 1998, p. 361; Papanikola–Bakirtzi 2002, p. 348, no. 399.

98. Koukoules 1952, pp. 52, 68–75.

99. Porphyrogenetos, *On Ceremonies* 464.1, cited in Koukoules 1952, p. 64; Dalby 2003, p. 175.

100. De Cupere 2001, pp. 137–139.

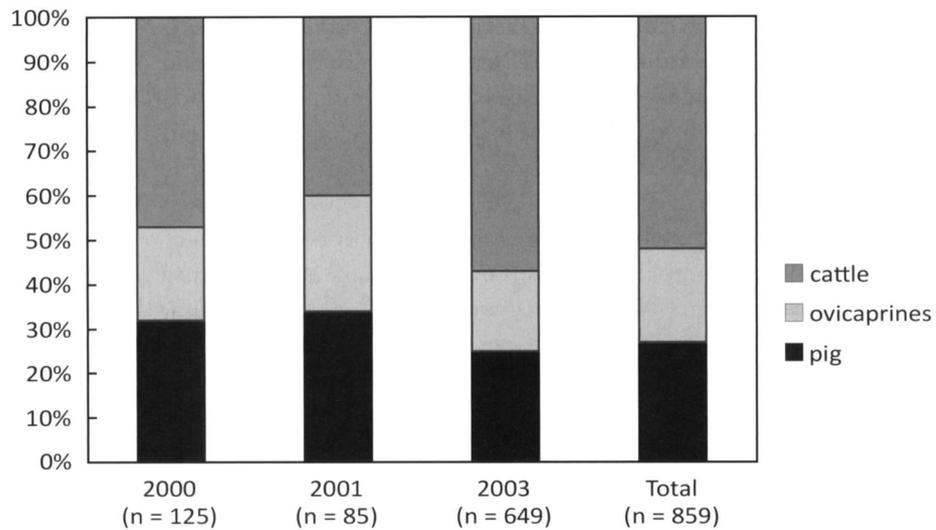


Figure 24. Consumption of domestic stock (animal bones) by year of excavation. A. K. Vionis, based on data provided by B. De Cupere

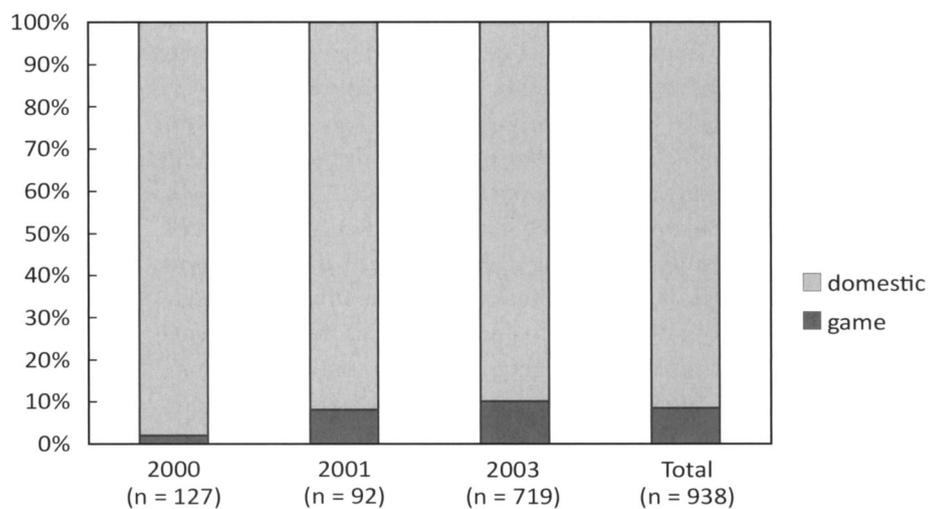


Figure 25. Consumption of game and domestic stock by year of excavation. A. K. Vionis, based on data provided by B. De Cupere

Turning to the cooking pots, which make up a large part of the assemblage on AH, it should be possible to deduce some facts about culinary practice from their shape. All of the cooking pots found at AH have flat bottoms. Charalambos Bakirtzis has argued that cooking pots with flat bottoms were associated with a rural way of life, whereas round-bottomed pots reflect an urban setting.<sup>101</sup> Ongoing excavations and recent studies of cooking wares from Corinth have shown that Byzantine cooking vessels must have been placed directly in the embers of a fire, whereas Late Byzantine (Frankish) “stewpots” were suspended over the fire during cooking.<sup>102</sup> An urban household would have been equipped with metal tripods or stands that could support a round-bottomed cooking pot from above or below. The ceramics from AH, however, fit the profile of a rural site, where flat-bottomed pots would have been placed directly on the fire.

101. Bakirtzis 1989, p. 41.

102. Williams et al. 1998, p. 250; Joyner 2007, p. 190.

Further research is needed in order to test this argument; for example, flat-bottomed cooking pots are reported from Middle Byzantine urban contexts, such as at Saraçhane and Maroneia.<sup>103</sup>

The closed shape of the cooking pots at AH is also seen commonly at contemporary sites in the Aegean and in Constantinople (Saraçhane in Istanbul). What is striking, however, is that the proportion of closed vessels (jugs, costrels, and cooking pots) from AH is larger than that of open vessels associated with food processing and consumption (plain hemispherical bowls, small biconical cups, plain carinated dishes, and lead-glazed dishes) (Figs. 6, 22). Paul Arthur has recently shown that throughout the ancient world, the distribution of open cooking pots (or casseroles) seems to coincide with the distribution of areas in which faunal assemblages are dominated by sheep and goat, whereas closed globular cooking vessels (or ollae) are generally a feature of more northern areas (from Britain across the Rhineland to central Europe), where cattle- and pig-breeding was dominant.<sup>104</sup>

If Arthur's model is correct, then the 12th–13th-century flat-bottomed closed cooking pots from AH (and from the contemporary Aegean, mainland Greece, and Constantinople, as well as other sites in Anatolia) should correspond to a diet rich in cattle and pig, rather than sheep and goat. Lipid analysis can identify the source of animal fat preserved within the matrix of ceramic vessels. Cooking-pot fragments from the 12th–13th-century site at AH and three Late Roman/Early Byzantine sites at Sagalassos were recently subjected to three methods of lipid analysis.<sup>105</sup> Matching profiles of nonruminant adipose fat were observed several times, especially in the samples from AH, while samples from the earlier sites presented a mixed pattern. The results revealed a 12th–13th-century food pattern at AH different from that of the Late Antique settlement within the city of Sagalassos.<sup>106</sup> The diet of people living on AH seems to have favored animals with a high meat yield—mainly beef, followed by pork. This picture fits Arthur's model, which predicts that closed cooking pots reflect a diet high in beef and pork. It also matches the results of the analysis of the faunal remains—again, mostly beef, then pork. The implication is clear: the occupants of AH frequently dined on beef and pork stewed in closed cooking pots. Closed pots, however, were not used exclusively for cooking meat; one pot fragment from Sagalassos bore traces of milk fat, perhaps from the preparation of porridge.<sup>107</sup>

Pottery and faunal remains at Sagalassos from Hellenistic times to the late 6th and 7th centuries A.D., however, do not validate Arthur's model. Late Roman cooking pots found within the ancient city are predominantly

103. See Hayes 1992, p. 196, fig. 76:50.32; Papanikola-Bakirtzi 2002, p. 348, nos. 397–399. Poblome (pers. comm.) believes that flat-bottomed cooking pots may have been placed on a grill of some kind, possibly resting on channels built of brick and filled with charcoal, as suggested by Late Roman stoves excavated in the Domestic Area

and the Potters' Quarter at Sagalassos.

104. Arthur 2007, p. 18.

105. The material analyzed consisted of 26 cooking-pot sherds from different loci within Sagalassos: the palatial mansion (DA), the east portico of the Lower Agora (LA1/LA2), the Late Roman/Early Byzantine complex northeast of the Upper Agora

(NEG), and Alexander's Hill (AH). The first three sites represent mostly 6th–7th-century material, while the samples from AH are dated to the 12th–13th century. See Romanus et al. 2007, pp. 730–731.

106. Romanus et al. 2007, p. 744.

107. Romanus et al. 2007, pp. 736–737.

round-bellied and closed in shape (with provision for a lid), but the faunal remains at the site indicate that sheep and goats were the animals most frequently consumed.<sup>108</sup> A recent study of ceramic evidence from room 2 in the Northeast Building of the Upper Agora at Sagalassos has demonstrated continuity in closed cooking-pot shapes from Hellenistic times to the end of late antiquity, and this tradition seems to have been maintained from the early Middle Ages into the 13th century.<sup>109</sup> This continuity suggests that the use of closed vessels to cook sheep and goat in late antiquity reflects cultural tradition, rather than only practical considerations.

Assuming that the Byzantines of the 5th through 7th centuries had a taste for stewed beef—as suggested by Anthimos’s recommendation of beef cooked in earthenware—how is their preference for ovicaprines to be explained? It has been suggested that unstable conditions and insecurity in the region of Sagalassos around A.D. 400 meant that investing in ovicaprines was less risky than raising cattle and farming.<sup>110</sup> It should be noted, however, that beginning in the 11th century, the arrival of Seljuk nomads in the territory of Sagalassos would have brought instability to the region once more. Palynological analysis suggests that an increase in pastoralism occurred between A.D. 1000/1030 and A.D. 1295/1390, probably as a result of seasonal settlement by Seljuk nomads and Turkmen tribes in the area.<sup>111</sup> This switch to a pastoral economy implies the gradual or partial abandonment of agriculture during the 11th–14th centuries; it certainly meant an increased reliance on sheep and goat herding, “since the financial risk caused by the loss of individual animals or part of the herd is small.”<sup>112</sup> Pastoralism would also have reduced the number of cattle kept as draft animals.<sup>113</sup> Why, then, were the occupants of AH dining richly on beef and pork, whose production is closely associated with agriculture?

Despite the incursions by nomadic Seljuks relying exclusively on herding, it appears that agricultural activity continued in the area around Sagalassos into the 12th century. The palynological record in the valley of Ağlasun, to the south of Sagalassos, has shown that despite growing insecurity during the 7th century, olive cultivation and farming activities continued, if on a reduced scale, in the period between A.D. 685/780 and A.D. 1000/1030, before the turn to pastoralism.<sup>114</sup> Some 14 km southwest of Ağlasun, however, in the basin of Gravgaz, even as the palynological record points to a decline in olive cultivation, it also indicates that small-scale cereal cultivation continued to about A.D. 1040/1155, followed by signs of a rise in pastoralism.<sup>115</sup> In other words, in some parts of the territory of Sagalassos, farming continued into the 12th century, albeit on a smaller scale, and was apparently not interrupted by the increase in herding activity.

Thus, the preference for beef at AH is explained if the site’s occupants were a “Byzantine” population that continued to engage in farming activities and also retained access to glazed tableware markets. The *kastron* of AH, with its satellite hamlets, seems to have functioned much like a village in the model proposed by Alain Ducellier.<sup>116</sup> According to this model, which probably best represents Byzantine reality, a village (defined as a cluster of houses surrounded by farmland) was associated with nearby

108. Poblome et al. (forthcoming) argue that Asia Minor seems to display the intriguing combination of a traditional reliance on sheep/goat as a meat source with the use of closed vessels. This correlation would require an adjustment to Arthur’s (2007) conclusions on the possible functional relationship between pot shapes, dishes, and ingredients.

109. Poblome et al., forthcoming.

110. Vanhaverbeke and Waelkens 2003, p. 59.

111. Vanhaverbeke and Waelkens 2003, pp. 40–41, 43; Vermoere 2004, p. 86.

112. De Cupere 2001, p. 141. See also Vanhaverbeke and Waelkens 2003, p. 309.

113. Vanhaverbeke and Waelkens 2003, p. 59.

114. Vanhaverbeke and Waelkens 2003, pp. 40, 43.

115. Vanhaverbeke and Waelkens 2003, pp. 31–32, 52; Vermoere 2004, p. 140.

116. Ducellier 1986, pp. 187–188.

vegetable gardens; a wider area of cultivable fields, pasturelands, and isolated farmsteads; and hamlets or *agridia* occupied by peasants or serfs who were dependent on the main village.<sup>117</sup> Gardens and patches of cultivable land in the immediate territory of Sagalassos would have supplied the inhabitants at AH with staples such as cereals, dry legumes, vegetables, and probably olive oil. Thus, Sagalassos and its associated pockets of cultivable land comprised an agricultural economy that continued to operate as the region was given over to pastoralism.

## SUMMARY AND CONCLUSIONS

The Middle–Late Byzantine ceramics retrieved from Alexander’s Hill at Sagalassos constitute a complete domestic assemblage—including vessels for transport, storage, the kitchen, and the table—on a site that was probably used for defense. The occurrence of glazed tablewares at AH, identical to glazed pottery produced and circulating in the contemporary Aegean and Cyprus, is of special significance. Some of these glazed table vessels (such as fragments of Champlevé ware decorated with hares) have repair holes, possibly indicating their reuse after they were broken, and their aesthetic and monetary value as imported items. The percentage of glazed wares rises steadily during the 12th and 13th centuries not only at Sagalassos and inland Anatolia but also at urban centers (e.g., Saraçhane and Corinth)<sup>118</sup> and other rural regions (e.g., Boiotia in central Greece)<sup>119</sup> in the Byzantine provinces, as revealed by ongoing excavations and surface surveys. The technique of glazing and the use of glazed tablewares developed in Islamic lands. Glazing started to influence the Byzantine pottery industry around the 9th century; glazed vessels initially served as a substitute for precious metal vessels on the Byzantine table.<sup>120</sup> The widespread use of glazed vessels by rural populations in the provinces may indicate a rise in the standard of living.

Apart from their implications for the development of ceramic technology and changes in economic and settlement patterns, new pottery forms may also reflect changes in cooking practices and eating habits. Firmly dated evidence from the Aegean and Saraçhane after the 7th century shows a preference for closed round-bodied cooking pots. The same pattern is noted at Sagalassos in the 12th–13th-century occupational layers at AH, where flat-bottomed globular cooking pots with strap handles and a small rim diameter are the norm. This shift appears to coincide with a change in cooking practices, namely an increase in the use of wet heat to prepare meat dishes such as stews. Furthermore, archaeozoological evidence and lipid analysis of closed cooking-pot fragments from AH indicate that whereas the Late Roman residents of Sagalassos ate mostly sheep and goat, the occupants of AH during the Middle–Late Byzantine period preferred beef, followed by pork and deer.

117. Gounaridis 1993, pp. 29–30; Armstrong 2002, p. 344.

118. Hayes 1992; Sanders 2000.

119. Vionis 2004–2005, pp. 573–574.

120. Vionis 2001, pp. 93–95.

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### *Athanasios K. Vionis*

UNIVERSITY OF CYPRUS  
DEPARTMENT OF HISTORY AND ARCHAEOLOGY  
ARCHAEOLOGICAL RESEARCH UNIT  
P.O. BOX 20537  
NICOSIA 1678  
CYPRUS  
vionis@ucy.ac.cy

### *Jeroen Poblome*

KATHOLIEKE UNIVERSITEIT LEUVEN  
DEPARTMENT OF ARCHAEOLOGY, ART HISTORY, AND MUSICOLOGY  
BLIJDE INKOMSTSTRAAT 21-BUS 3314  
B-3000 LEUVEN  
BELGIUM  
jeroen.poblome@arts.kuleuven.be

### *Bea De Cupere*

ROYAL BELGIAN INSTITUTE OF NATURAL SCIENCES  
VAUTIERSTRAAT 29  
B-1000 BRUSSELS  
BELGIUM  
bdecupere@naturalsciences.be

### *Marc Waelkens*

KATHOLIEKE UNIVERSITEIT LEUVEN  
DEPARTMENT OF ARCHAEOLOGY, ART HISTORY, AND MUSICOLOGY  
BLIJDE INKOMSTSTRAAT 21-BUS 3314  
B-3000 LEUVEN  
BELGIUM  
marc.waelkens@arts.kuleuven.be