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2023

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SCUOLA ARCHEOLOGICA ITALIANA DI ATENE

2023

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# THE SHIFTING TIDES OF THE MIDDLE BYZANTINE AEGEAN: MARITIME NETWORKS THROUGH THE LENS OF THE ECCLESIASTICAL COMPLEX AT HEPHAESTIA (LEMNOS - GREECE)\*

ROSSANA VALENTE

**Riassunto.** Nell'intricato spazio geopolitico bizantino, il Mar Egeo ebbe una ragguardevole importanza strategica, economica e politica. A partire del VII sec. d.C., con l'espansione del califfato arabo nel bacino del Mediterraneo, Costantinopoli perse il controllo su parte dell'Asia Minore, Palestina, Siria, Armenia, Cipro, Creta, Nord Africa e Sicilia, ma si assicurò l'egemonia sul Mar Egeo. Questo *mare internum* bizantino, era, difatti, un nodo nevralgico delle rotte marittime e commerciali lungo la direttrice che collegava Oriente e Occidente. Il presente contributo focalizza l'attenzione sui contesti archeologici indagati dalla Scuola Archeologica Italiana di Atene presso il sito monastico di Efestia, sull'isola di Lemno (Grecia), indagato in collaborazione con l'Eforia alle Antichità di Lesbo. L'obiettivo è di analizzare la storia economica del Mar Egeo per il periodo medio bizantino, identificando alcuni dei suoi agenti e degli indicatori archeologici delle relative rotte commerciali che collegavano l'Egeo con il Mediterraneo occidentale e orientale. Queste rotte appaiono essere veicolo non solo di merci, ma anche vie di diffusione di *know-how* artigianale e pratiche quotidiane nel periodo medio bizantino.

**Περίληψη.** Μέσα στο σύνθετο γεωπολιτικό τοπίο της Βυζαντινής εποχής, το Αιγαίο κατείχε έναν ιδιαίτερα σημαντικό στρατηγικό, οικονομικό και πολιτικό ρόλο. Από τον 7<sup>ο</sup> αιώνα με την εξάπλωση του Αραβικού Χαλιφάτου στη Μεσόγειο, η Κωνσταντινούπολη έχασε τον έλεγχο τμήματος της Μικράς Ασίας, τη Συρο-Παλαιστίνη, την Αρμενία, την Κύπρο, την Κρήτη, τη Βόρεια Αφρική και τη Σικελία διατηρώντας όμως την κυριαρχία στον αιγαιακό χώρο. Αυτή η βυζαντινή *mare internum* αποτελούσε νευραλγικό σημείο των εμπορικών και θαλάσσιων διαδρομών σύνδεσης της Ανατολής με τη Δύση. Η παρούσα μελέτη εστιάζει στις αρχαιολογικές μαρτυρίες που ερεύνησε η Ιταλική Αρχαιολογική Σχολή Αθηνών στο συγκρότημα της βασιλικής της Ηφαιστίας στη Λήμνο σε συνεργασία με την Εφορεία Αρχαιοτήτων Λέσβου. Στόχος είναι να διερευνηθεί η οικονομική ιστορία του Αιγαίου κατά τη μέση βυζαντινή περίοδο, εντοπίζοντας κάποιους παράγοντες και κάποιες αρχαιολογικές μαρτυρίες των θαλάσσιων οδών που συνέδεαν το Αιγαίο με την ανατολική και τη δυτική Μεσόγειο. Αυτές οι οδοί φαίνεται να μην είχαν αποκλειστικό ρόλο τη διακίνηση των εμπορευμάτων, αλλά αποτελούσαν οδούς διακίνησης τεχνογνωσίας και πρακτικών της καθημερινότητας στη μέση βυζαντινή περίοδο.

**Abstract.** In the intricate geopolitical landscape of the Byzantine era, the Aegean Sea held paramount significance, both strategically and in terms of its economic and political importance. From the 7<sup>th</sup> c., with the expansion of the Arab Caliphate in the Mediterranean, Constantinople lost control over Asia Minor, various regions in the Near East, North Africa and Sicily. However, it secured its hegemony over the Aegean Sea. This Byzantine *mare internum* served as a pivotal hub within the commercial and maritime passage connecting East and West. Nevertheless, short and medium-range maritime cabotage sea networks have tended to be overlooked. To augment this field of research, this paper will scrutinise material culture evidence from the Middle Byzantine monastic complex at Hephaestia - Lemnos (Greece), excavated by the Italian Archaeological School at Athens in collaboration with the Ephorate of Antiquities of Lesbos. The objective is to explore some of the various actors and commodities navigating the Aegean maritime pathways, which facilitated the exchange of goods, artisanal expertise and everyday life practices along the Aegean coasts and beyond.

## 1. INTRODUCTION

Mechanisms of short and medium-range maritime cabotage trade have tended to be overlooked in Middle Byzantine historical discourse, since research has primarily focused on the major trans-Mediterranean economic players and on long-distance trade in the period 700-1204 AD. From the 7<sup>th</sup> c. AD, the

\* I would like to express my gratitude to the Director of the IASA, Prof. Emanuele Papi, for granting me permission to study the pottery from the excavations of the so-called basilica complex at Hephaestia. I also would like to thank for the constructive collaboration Dr. Carlo De Domenico (University of Milan - IASA), field director of this project. Moreover, I would like to extend my thanks to Dr. Dario

Anelli (Università di Pavia) and all the regular members of the IASA for the value-added teamwork in the 2023 fieldwork season. Finally, I would like to express my gratitude to Prof. Christopher Pfaff, director of Corinth Excavations (The American School of Classical Studies at Athens, hereafter ASCSA) for granting me permission to study and publish the Corinth material here presented.



Fig. 1. Hephaestia in the Mediterranean with the sites mentioned in the text highlighted (el. R. Valente).

Aegean Sea and its islands experienced an unprecedented geopolitical and economic importance in the line of communication between Constantinople, the capital of the Byzantine Empire, Mainland Greece, and further west towards the Italian Peninsula. Despite the Aegean in this period becoming the route of the Arab fleet to capture Constantinople and despite its territorial losses and gains, the Byzantine Empire never lost control of those coastlines, but in fact dominated the north-eastern Mediterranean and the Black Sea<sup>1</sup>. It is within this strategic and commercial scenario that the island of Lemnos will be discussed here. Situated in the heart of the northern Aegean Sea, Lemnos is a key node in Aegean seaways, as for instance between Constantinople and Thessaloniki<sup>2</sup>. Theodore Studite's personal account provides an illustration of this route. In March 793, he sailed from Eleountes, a town located on the northern shore of the Dardanelles in Turkey, to Lemnos. After describing a one week delay in his journey due to unfavourable winds, Theodore recorded that in nine hours the ship covered 45 nautical miles, corresponding to ca. km 83.34. Scholars have hypothesised that Theodore, having received hospitality from the bishop of Lemnos, might have landed at Hephaestia, which was the capital of the island at that time<sup>3</sup>. From there, Theodore and the other monks continued their journey sailing towards Kanastron, modern Cape Paliouri, in twelve hours, and passed by Pallene before disembarking at Embolos on the Chalkidike peninsula. From there they travelled by land to Thessaloniki, as he noted in a letter to his uncle Platon<sup>4</sup>.

Lemnos was, moreover, an important gateway in what Michael McCormick has labelled the «ancient trunk route running from Rome to the Aegean» in his discourse on the Early Medieval economy<sup>5</sup>. In a context where shipping continued to be the most efficient and possibly the least expensive means of transportation, sailing was generally done by cabotage, especially in the Aegean Sea where the *meltemi* could make navigation dangerous if not even impossible<sup>6</sup>. While we cannot assume for certain that the ships stopped by the island in this transit, archaeological and literary sources allow us to speculate that the island was indeed an important station, as this article will discuss (Fig. 1). The historical evidence analysed here is the material cultural data brought to light

<sup>1</sup> BRUBAKER-HALDON 2010, 485, 490-493.

<sup>2</sup> AHRWEILER 1974, 167.

<sup>3</sup> MCCORMICK 2001, 489.

<sup>4</sup> KAZHDAN 1999, 250-251.

<sup>5</sup> MCCORMICK 2001, 302.

<sup>6</sup> AHRWEILER 1978.

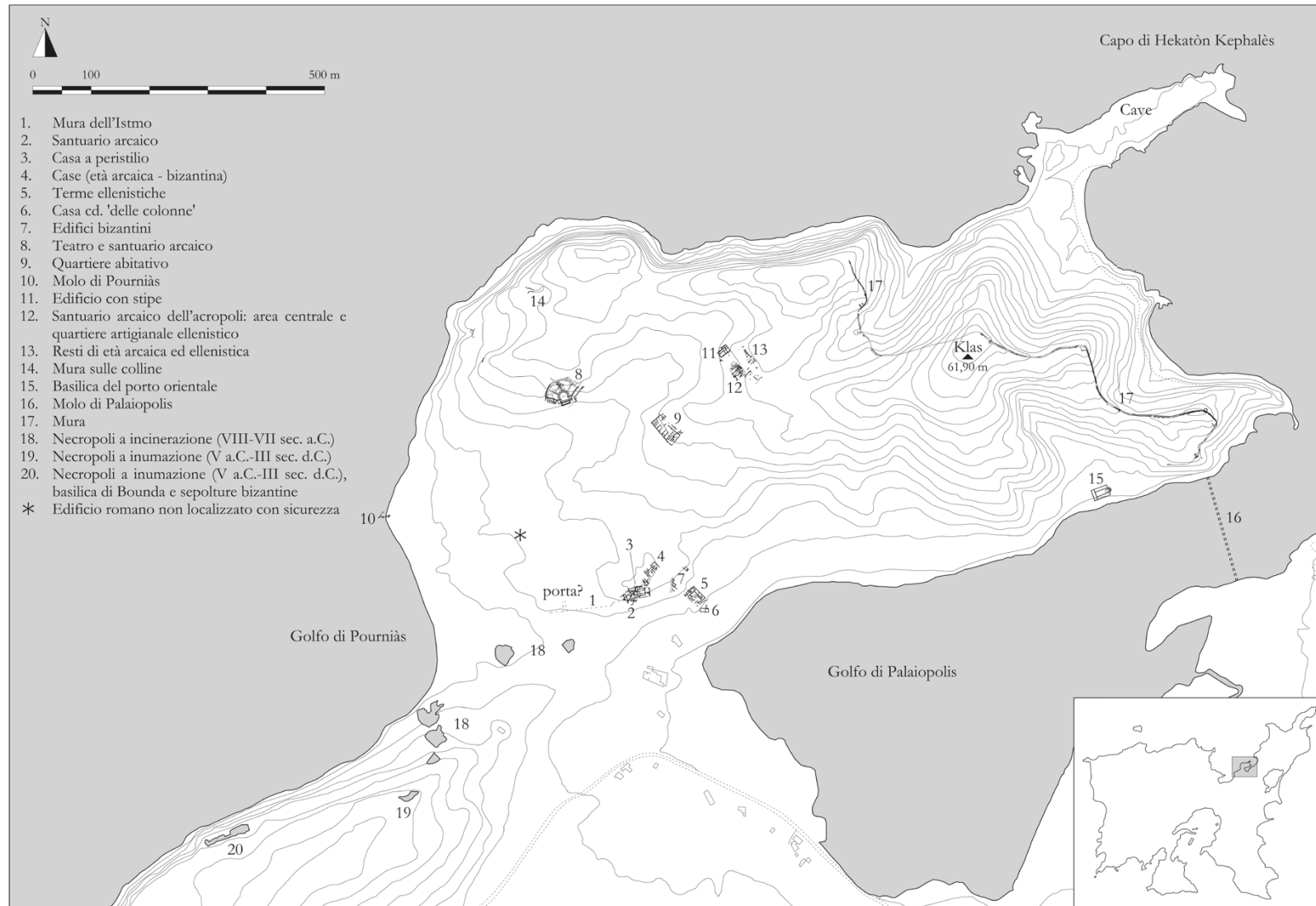


Fig. 2. The topography of Hephaestia (el. C. De Domenico - R. Di Cesare; © Archivi SAIA, NIG 7137).



by the Italian excavations of the so-called harbour basilica complex at Hephaestia, located in the north-western region of Lemnos (Fig. 2). By the 9<sup>th</sup> c., Lemnos became an archbishopric and was included in the theme of the Aegean Sea. Since antiquity its capital had been located at Hephaestia<sup>7</sup>. This article will focus specifically on the material culture of the 8<sup>th</sup>-12<sup>th</sup> c. AD, since, as C. Wickham recently pointed out, this period

saw a considerable increase in agricultural production, in commercial exchange and markets, and in urbanization and urban production, both in north-west Europe and around the Mediterranean Sea, whether in Christian- or Muslim-ruled lands. [...] But what caused it, and what its very nature was in different places, seem to me to be widely misunderstood, even in its most basic elements<sup>8</sup>.

If we wish to describe the forms of local and regional exchange in the Aegean heartland, what was produced and by whom, where these goods circulated and who consumed them, there are several questions that need to be addressed.

## 2. BYZANTINE HEPHAESTIA: THE CASE OF THE SO-CALLED BASILICA COMPLEX EXCAVATIONS

Numerous narratives have been presented on the transformation of the landscape of urban centres in the Middle Ages in Mainland Greece, Asia Minor and the Balkans, but on the Aegean islands the landscape of the Middle Byzantine period remains largely uncharted. Archaeological evidence documents a coastline dominated by Christian basilicas, but the character of daily activities, the socio-economic patterns and artisanal traditions remain little understood and present necessary questions for further research<sup>9</sup>. This appears to be applicable to Lemnos as well.

Over the past decade, archaeological investigations have sought to identify sites and artefacts that could offer evidence of presence and activity from the 8<sup>th</sup> c. onward. This period, often overshadowed by a textually driven historical discourse centred on the geopolitics of the Byzantine Empire, witnessed challenges from the Persians, Muslims, Avars, Bulgarians and the Slavic invasions<sup>10</sup>. Furthermore, the Arab naval offensive managed to penetrate the Aegean over the course of the 7<sup>th</sup> c. It is within this context of naval offensives that coastal attacks and raids also damaged the islands in the Aegean along this military route. However, the degree and scale of damage is difficult to estimate as is whether this could really have been sufficient to cause major dislocation of the settlement pattern. Safety concerns may have been one of the reasons driving the construction of *kastra* in this period<sup>11</sup>. However, settlements were not exclusively shifting inland. Archaeological investigations over the last decade in the Aegean have begun to document strongholds, warehouses and workshops located both on newly established hilltop settlements and at coastal sites where there seems to have been no break in occupation after the 6<sup>th</sup> c. AD<sup>12</sup>. This new data from the archaeological record includes also the typological variety and diverse provenances of material culture dated between the late 7<sup>th</sup>-9<sup>th</sup> c. AD in the Aegean region and beyond. The new dataset of material culture dated to these centuries provides an essential counterweight to the insufficient textual sources available for these centuries, demonstrating a degree of socio-economic complexity, as well as evidence of a networks of seaways in this region, that has often been oversimplified and underestimated in previous assessments of this period<sup>13</sup>.

Future archaeological research should aim to address the typology and hierarchy of sites and their recognisable functions as producers, consumers and potentially even as *emporía* involved in trade and exchange in short-medium range and trans-Mediterranean commerce. Studies such as the Hephaestia excavations can add further evidence to this broader field of research and enable us to engage with some of

<sup>7</sup> GREGORY 1991.

<sup>8</sup> WICKHAM 2023, 1.

<sup>9</sup> For a synthesis on this debate: MAGDALINO 2015; 2018, 20.

<sup>10</sup> War on multiple fronts brought about the drastic shrinkage of territories under Byzantine control. The attacks of the Avars and the Persians in 626 are notorious, including a combination of naval and land operations with the ultimate goal of capturing Constantinople. The first attempted siege is traditionally dated between 674 and 678. The weakened empire also resisted the failed siege of 717-718, which signalled a shift in the political history of the Byzantine empire. After the failed siege of Constantinople, major disruption in maritime communication in the Aegean can be linked to the seizure of Crete in 827, making the coastal sites exposed to regular attacks and raids in the 9<sup>th</sup> c.

especially in the Cycladic region.

<sup>11</sup> These fortified citadels represent an important new element in the strategic geography and the wider settlement pattern that emerged by the end of the 7<sup>th</sup> c. AD in Greece and Anatolia that reflects a substantial level of state investment in technology and resources at a time of profound societal and geopolitical transformation of the Byzantine empire.

<sup>12</sup> POULOU 2019; VIONIS 2020; ΠΟΥΛΟΥ-ΛΕΟΝΤΣΙΝΗ 2022; ΠΟΥΛΟΥ 2023; VALENTE *et alii* 2023.

<sup>13</sup> The increased corpus of archaeological evidence dating to these centuries proves that the label “Byzantine Dark Ages” is misleading for the period (PANAYIOTIS-JACOBS 2023).



Fig. 3. The Italian excavations of the so-called harbour basilica complex directed by Alessandro Della Seta and Luciano Laurenzi in 1926 (© Archivi SAIA, A/531).



Fig. 4. The triconch church as brought to light in 1926 (© Archivi SAIA, A/375).

these ongoing debates. This excavation project has, in fact, brought to light material cultural evidence dated to the 8<sup>th</sup> c. and later, as discussed below.

In 1926 the Italian Archaeological School at Athens brought to light an Early Byzantine basilica complex, built in the 6<sup>th</sup> c. AD, and located in the southern section of the peninsula of Hephaestia (Fig. 2, No. 15). The Middle Byzantine phases of occupation, despite being unearthed, were at the time interpreted as evidence of a Late Antique bath complex (Figs. 3 and 4). It is only since the excavations were resumed in 2018 that the complexity of the settlement has been the object of a systematic investigation, which has identified a Middle Byzantine triconch church complex, inhumations and a series of dwellings and working spaces that make the excavators speculate that the religious architecture could be a *katholikon* of





Fig. 5. The so-called harbour basilica complex today (el. C. De Domenico - C. Mendolia; © Archivi SAIA, V/67).

a monastic complex<sup>14</sup>. As outlined in the excavation season report of 2023, west of the church complex a sequence of vernacular architecture has revealed signs of artisanal workshops, including constructions for olive oil production (Fig. 5)<sup>15</sup>.

### 3. AN INTERWOVEN BYZANTINE HEPHAESTIA: NEW ARCHAEOLOGICAL EVIDENCE IN CONTEXT

Over the last decade the number of Byzantine shipwrecks in the Aegean is responsible for 26% of the total discovery of amphora cargoes dated to all periods in Hellenic territorial waters<sup>16</sup>. Within this field of research, the ongoing Italian-Greek project investigating Lemnian underwater cultural heritage is further recording the material culture evidence of Byzantine maritime networks<sup>17</sup>. Meanwhile, excavations of the Hephaestia basilica further enrich this dataset.

During the course of the 8<sup>th</sup> c. and the first half of the 9<sup>th</sup> c., among the ceramic transport containers imported to Hephaestia, cargo shipments brought those amphoras labelled in the archaeological literature as the “globular type”, which according to a microscopic fabric analysis might have been of diverse and multiple origins (Fig. 6, Nos. 1-4)<sup>18</sup>. At the current stage of research, we can only hypothesise an Aegean provenance, perhaps from the Aegean islands or the Anatolian region<sup>19</sup>. However, these were not the only imports in this period. It is noteworthy the examples of closed shaped cooking ware dated to this period, which the most up-to-date publications increasingly identify in the Aegean and beyond (Fig. 6, Nos. 5-8), were imported together with some of these amphoras. This cooking ware is characterised by a fabric rich in gold mica, possibly biotite, and can be related to some of the types that Hayes labelled as Cooking Ware 4, “Micaceous brown ware” among the Constantinopolitan cooking vessels<sup>20</sup>. As noted by Hayes, and as confirmed at Hephaestia,

<sup>14</sup> DE DOMENICO 2018; DE DOMENICO *et alii* 2019; DE DOMENICO 2021; DE DOMENICO *et alii* 2022.

<sup>15</sup> DE DOMENICO 2023.

<sup>16</sup> KOUTSOULAKIS 2020, 448-449.

<sup>17</sup> DAVIDDE PETRIAGGI *et alii* 2022.

<sup>18</sup> The examples found at Hephaestia appear to share close similarities to the examples from Constantinopolitan deposits 34 and 35, 177

dated to the 8<sup>th</sup> c. (HAYES 1992).

<sup>19</sup> For an overview on the complex theme of the “globular amphoras”, see ARTHUR 2018; edition. No. 45 of the journal *Archeologia Medievale* (2018) provides an overview on the complexity of the current state of the field.

<sup>20</sup> HAYES 1992, 55-57. For a synthesis on this ware and its findings: VALENTE *et alii* 2023, 215-216.

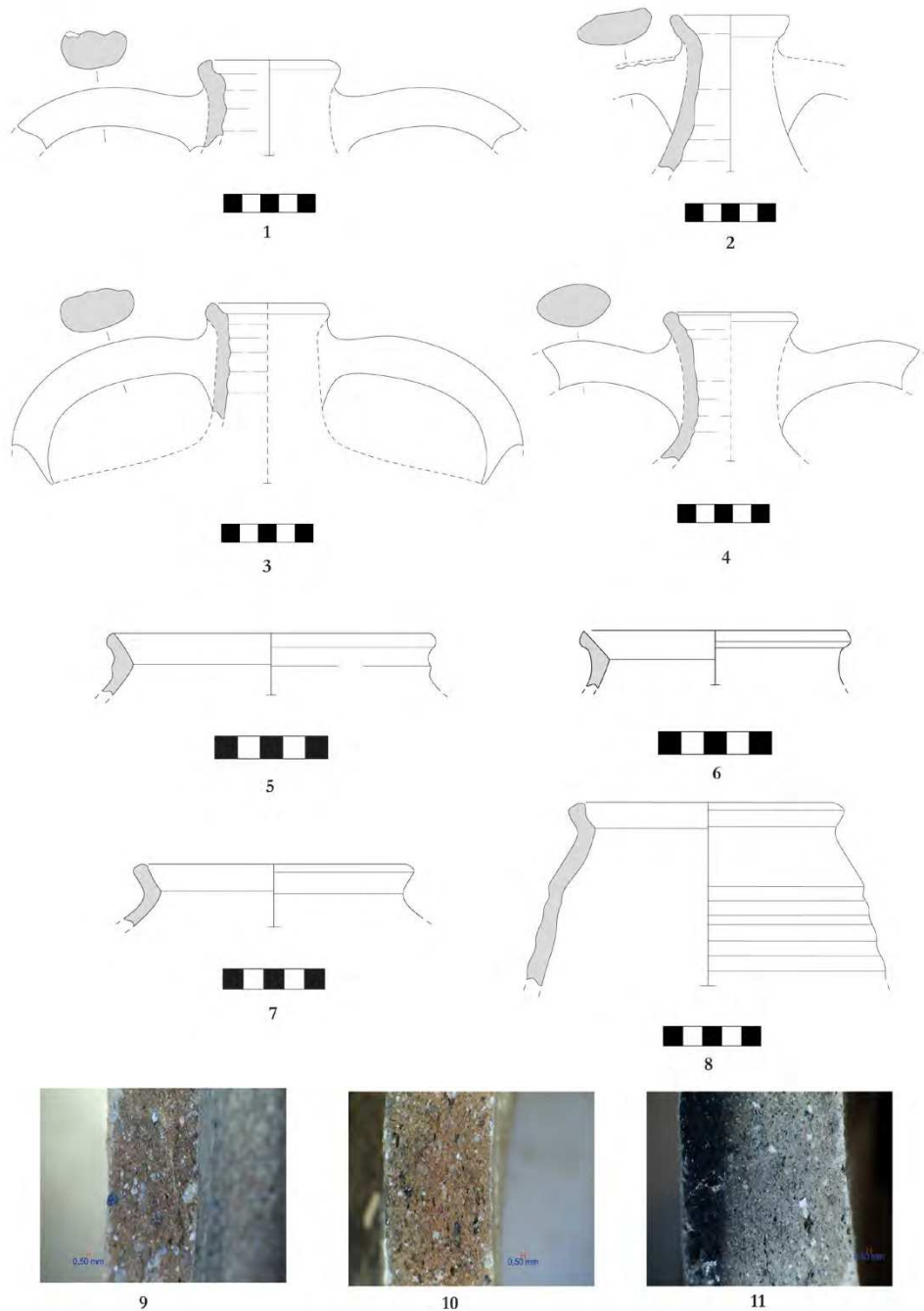


Fig. 6. Finds from Hephaestia excavations. Nos. 1-4. globular amphoras; Nos. 5-8. cooking vessels with possible biotite inclusions; Nos. 9-11. photos of their fabrics (el. R. Valente; © Archivi SAIA, V/75).

within the same stratigraphic units there exists significant variability in morphological details among vessels made using a very similar clay recipe according to a macroscopic analysis. For instance, the cooking vessel with flaring rim and rounded lip (Fig. 6, No. 7) macroscopically appears to have a fabric resembling the stewpot characterised by a flaring rim with flattened lip (Fig. 6, Nos. 5 and 6). This last stewpot appears in Hephaestia, but also on Chios<sup>21</sup>, in Constantinople<sup>22</sup>, Cyprus<sup>23</sup>, in Corinth<sup>24</sup>, in Syracuse<sup>25</sup> and in Rome<sup>26</sup>. Finally, this may be the cooking vessel type found among the artefacts of the Bozborun shipwreck<sup>27</sup>. According to this

<sup>21</sup> BALLANCE *et alii* 1989, 114-115.

<sup>22</sup> HAYES 1992, deposit 34, fn. 49.

<sup>23</sup> *Id.* 2003, 504-505, Nos. 334, 335, 515-516, Nos. 405-409.

<sup>24</sup> VALENTE 2018, Nos. 22-25.

<sup>25</sup> CACCIAGUERRA 2018, 153.

<sup>26</sup> SANGUÌ *et alii* 1997, 46-47, Nos. 16-18.

<sup>27</sup> HOCKER 1998, 15; 2004, 61.

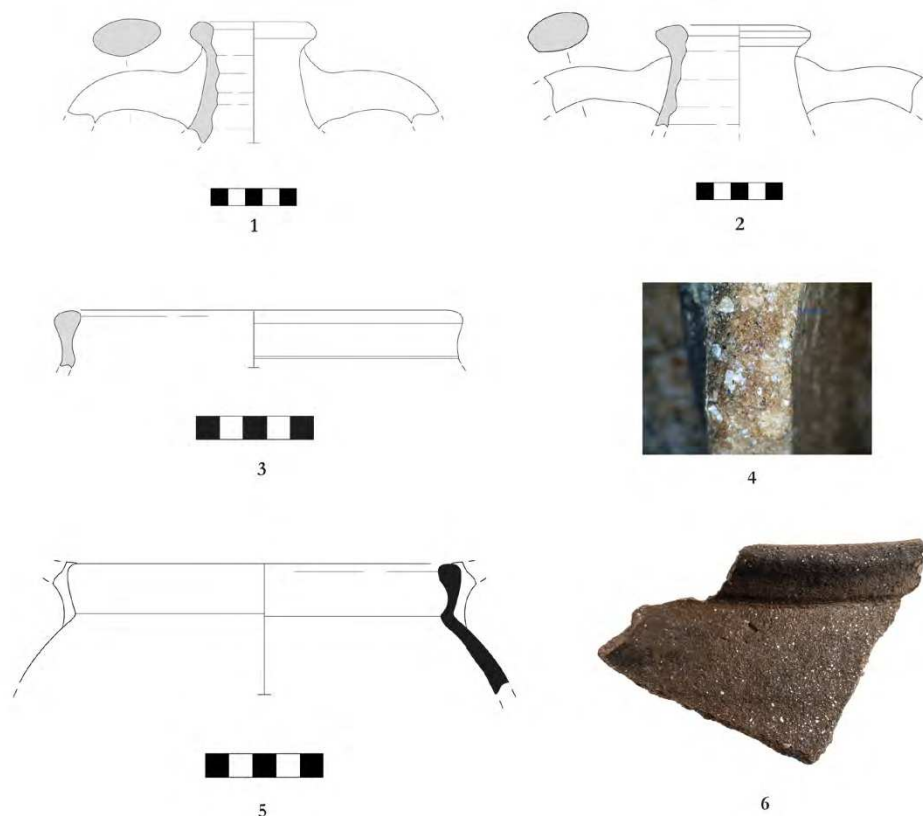


Fig. 7. Finds from Hephaestia excavations: Nos. 1-2. imported amphoras; Nos. 3-4. imported cooking ware with “white mica”, possible muscovite inclusions (el. R. Valente; © Archivi SAIA, V/76); Nos. 5-6. imported cooking vessel at Corinth (photo P. Dellatolas and drawing C. Kolb, ASCSA, Corinth Excavations).

set of evidence, this globular stewpot would have been in use between the second half of the 8<sup>th</sup> and the 9<sup>th</sup> c. The possibility has been raised that it was produced in the region between Çandarlı and Phokaia in Western Turkey<sup>28</sup>. However, at this point in our research, this variability of shapes makes it impossible to establish a clear typology for this ware, and here a systematic typological, petrographic and chemical study is advocated for to clarify this ware’s provenance and distribution.

Indeed, it is noteworthy that this was not the sole imported cooking vessel during this period. Globular stewpots with concave rim in a fabric rich in what could potentially be identified as white muscovite are also recorded (Fig. 7, Nos. 3-6). This cooking vessel has also been identified in Corinth, where seriation of this ware with identification of different types suggests a date from the second half of the 8<sup>th</sup> to the early 10<sup>th</sup> c<sup>29</sup>. Similar types of cooking pots to the Hephastian finds have also been found in the excavations at Otranto, where stratigraphic evidence suggests an 8<sup>th</sup>- to 9<sup>th</sup>-c. date, narrowed by the scientific dating method of rehydroxylation analysis to the first half of the 9<sup>th</sup> c<sup>30</sup>. In 1995, Sanders proposed a similar date for the Spartan contexts in which this ware was found<sup>31</sup>. Petrographic analysis conducted at the University of Salento suggests an Aegean-Asia Minor provenance<sup>32</sup>. Moreover, ongoing petrographic investigation of the Sparta theatre ceramic material suggests, at the current state of research, the likelihood of a western Anatolian origin, possibly in the Ephesus area<sup>33</sup>. If this is the case, the finds from Hephaestia should be added to the growing number of examples of this stewpot type so far identified on Melos<sup>34</sup> and Therasia

<sup>28</sup> VROOM 2016, 161.

<sup>29</sup> VALENTE 2018, 81-83.

<sup>30</sup> ARTHUR *et alii* 2017, 181-186, cat. No. 4.

<sup>31</sup> SANDERS 1995, material re-appraised by the author.

<sup>32</sup> Marco Leo Imperiale, personal communication. Investigation is ongoing as part of a major research program, *Byzantine Heritage of Southern Italy* (<https://byzantineitaly.it>), coordinated by the University of Salento under the auspices of the Italian Ministry of Universities and Research.

<sup>33</sup> The petrographic analysis currently ongoing on the Sparta findings from the British School at Athens excavations at the Fitch Laboratory confirms that the fabric recipe of this cooking pot is not consistent with Peloponnesian geology and that the area of origin should be sought within the so-called metamorphic Cycladic unit which spans Southern Euboea through the Cyclades to Samos and Western Anatolia (VALENTE-KIRIATZI *forth.*).

<sup>34</sup> Examples were found in the British survey project on the island of Melos (Guy Sanders, personal communication).



in the Cyclades<sup>35</sup>, at Isthimia<sup>36</sup>, Corinth<sup>37</sup>, Sparta<sup>38</sup>, and as mentioned at Otranto. Altogether this new evidence suggests the course of one of the sea routes that connected the Eastern Aegean to the Italian peninsula in the 8<sup>th</sup> and 9<sup>th</sup> c.

To articulate the variety of importation in Hephaestia, the question might be raised whether or not these gold and white micaceous stewpots were travelling in association with another of the ovoid amphoras, also found at Hephaestia, which resembles the Bozburum class 1 and 4 amphoras (Fig. 7, Nos. 1-2)<sup>39</sup>. These specific two amphora types have been hypothesised to be produced, respectively, in the region of Samos or on the opposite coast of Asia Minor<sup>40</sup> and in the Ephesus region<sup>41</sup>. Interestingly, the cargo of this shipwreck gives an indication of what these transport containers might potentially have contained in the case of Hephaestia as well, since the cargo included amphoras full of unrefined wine with traces of grape skins, lees and seeds. Moreover, the wine was flavoured with aromatic herbs, fruits and plants like pistachio and carob, to mention a few examples. Finally, some of the amphoras also had wine flavoured with γάρου, the well-known fish sauce, still widely used in Byzantine cuisine<sup>42</sup>. The chronology of these vessels is confirmed on the basis of the Hephaestia stratigraphic data to the late 8<sup>th</sup>-9<sup>th</sup> c. AD.

During the Middle Byzantine period, seaborne connections are identified in the archaeological record also by the so-called Günsenin type I, which dominates among the imported *megarika* in Hephaestia<sup>43</sup>. This amphora has been documented here in a sub-variation of its rim profile, dimension and capacity, as it has firstly been noted by Nergis Günsenin<sup>44</sup> (Fig. 8, Nos. 1-6). This transport container appears to have been identified in contexts dated between the late 9<sup>th</sup> to the 12<sup>th</sup> c. AD<sup>45</sup>. Produced in the Sea of Marmara-Propontis region, specifically in the territories of Ganos, modern Gaziköy in Western Turkey, in Chora, modern Hoşköy, at the west coast of the Marmara Sea. The manufacture of Günsenin type I amphora has been linked to a thriving monastic settlement and pilgrimage site. Additionally, other workshops were located along the north-western shore of Marmara Island, at Saraylar and Topaçac, where kilns and wastewaters have been identified by Nergis Günsenin<sup>46</sup>. Worth noting is that recent studies conducted by F. van Doorninck are highlighting a certain degree of standardization pointing out a relationship between body dimensions of the amphora as weight capacities increased or decreased<sup>47</sup>.

Among the Middle Byzantine assemblages from Hephaestia, in an 11<sup>th</sup>-c. context, a radial stamp on a Günsenin type I amphora handle has been recognised (Fig. 8, No. 3). This stamp has so far been identified on examples found in Constantinople and also among the finds of the notorious 11<sup>th</sup>-c. shipwreck discovered in the bay of Serçe Limanı, located off the southern coast of Turkey, in the proximity of Rhodes. Residue analysis run on these amphoras suggests that this transport container held grapes seeds as well as fruits like plums, peaches, apricots and pomegranate, nuts such as almonds and even spices like sumac<sup>48</sup>. Worth noting, in this respect, are the studies conducted on the finds in the Bodrum Museum of Underwater

<sup>35</sup> BORKAH 2021, 330-331, fig. 6i-ia.

<sup>36</sup> HAYES-SLANE 2022, cat. No. 919.

<sup>37</sup> VALENTE 2018, 91, cat. Nos. 40-41.

<sup>38</sup> *Ead.* forth.

<sup>39</sup> Fig. 7, Nos. 1 might be related to Bozburum class 1 – Yanikapi 12, whereas Fig. 7, Nos. 2 might be related to Bozburum class 4. As pointed out by J. Vroom, detailed drawings of the Bozburum findings are highly desirable to clarify their classification (2017, 298).

<sup>40</sup> POULOU-PAPADIMITRIOU - NODAROU 2014, 876, fn. 3 (figs. 10a and b); this type resembles type 45 of Hayes classification (1992, 73, fig. 52.16).

<sup>41</sup> VROOM 2017 provides a synthesis of these two amphora classes.

<sup>42</sup> TODOROVA 2020, 405-406 provides an up-to-date synthesis of the bibliography currently available on the content of the Bozburum amphoras. On this topic also GORHAM 2000, 60-153.

<sup>43</sup> GÜNSENIN 1992; 1998. This amphora is also labelled type 2 according to Bakirtzis (1989, 76-77). The author registers among diverse finds in the Mediterranean, underwater discovery of Günsenin type I from the NE shipwreck from Lemnos, (pl. 17, No. 3 and fig. 39B). According to the typology established by J. Hayes this amphora is labelled Saraçhane type 54 (1992, 73-75). Koutsouflakis also reports a high number of Günsenin type I amphora brought to the port police and local museums in the Northern Aegean. According to the indication given on the locations of the post-finds or of the trawl-line, they appear to be found in the area of the waters of Lemnos with a minimum number of 40 amphoras. These have been interpreted as indicative of a large

number of Middle Byzantine shipwrecks, which ranges between the number of four to nine. Byzantine seafaring in the Northern Aegean is further documented by this material which potentially was trawled from Lemnos towards Kavala and the Chalkidiki peninsula, suggesting the existence of seafaring from here then heading towards the channel of Euboea, the Pagasetic Gulf and the northern Sporades, and finally reaching the major Byzantine centres of Chalkis, Athens and Corinth (KOUTSOUFLAKIS 2020, 452-453 also fn. 12).

<sup>44</sup> GÜNSENIN 1993, 193.

<sup>45</sup> A 12<sup>th</sup>-c. date for the end of the production of this amphora has so far been suggested only on the basis of the finds from the Agora excavations (*Ead.* 1990, 23). The author has documented Günsenin type I amphora in contexts from Corinth (ASCSA excavations) where it has been found in association with glazed table ware like Green and Brown Type III, Measles Ware and fine Sgraffito, allowing the suggestion of a date in the second half of the 12<sup>th</sup> c. It is worth noting that this amphora has also been found in association with imported cooking wares in Corinth, which resemble the types with everted rim, ovoid body and flat base similar to those documented in Constantinople (here Fig. 11.6) also identified in the Hephaestia excavations.

<sup>46</sup> *Ead.* 1989, 269-271; GÜNSENIN-HATCHER 1997; GÜNSENIN 1999, 19, 21-22; 2009, 147-149; 2018, 95-96.

<sup>47</sup> VAN DOORNINCK 2015. It is worth noting that in the Byzantine metrological system the capacity was measured in weight, one *litra* corresponded to ca. g 315 (*ibid.*, 52).

<sup>48</sup> VAN DOORNINCK 2002, 141; WARD 2004, 499-508.

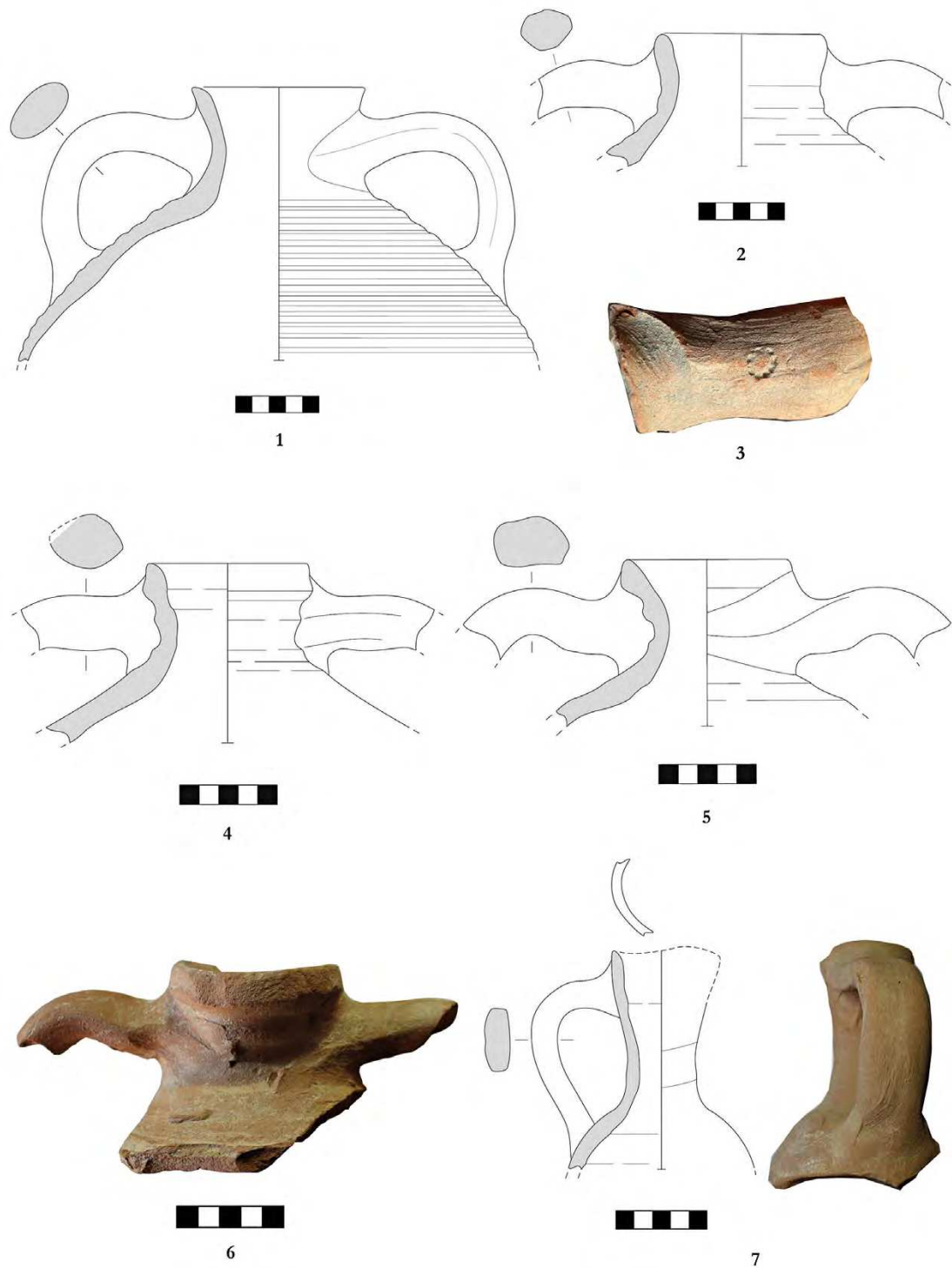


Fig. 8. Middle Byzantine pottery from Hephaestia excavations: Nos. 1-6. Günsenin amphoras; No. 7. imported pitcher (el. R. Valente; © Archivi SAIA, V/77).

Archaeology by E.L. Garven, who noticed that the capacity of the Günsenin type I corresponds to a *modios tripinakion*<sup>49</sup>. The *modios tripinakion* equates to  $\frac{3}{4}$  of a *thalassion modios*, ca. l 12.813, and it was the unit generally adopted for bulk transportation of goods, which according to written sources are generally identified as dried fruits and grain<sup>50</sup>. Finally, according to a graffito on an example of Günsenin type I, honey was also stored and transported in them<sup>51</sup>.

<sup>49</sup> In TODOROVA 2020, 407.

<sup>50</sup> SCHILBACH 1970, 96-98.

<sup>51</sup> TODOROVA 2020, 408.

At the current stage of research, and on the basis of the material cultural evidence available, it is not possible to specify whether in the case of the Hephaestia Byzantine settlement these amphoras were exclusively importing wines for the inhabitants of this religious context or if fruits and spices in secondary use were also imported for the daily and culinary necessities of its inhabitants<sup>52</sup>. However, it is worth noting that at Hephaestia it is possible to record, to the knowledge of the author for the first time, also the interesting case of an imported table jug with trefoil rim, ovoid body and strap handle and plain, undecorated surface. The manufacturing technique of this pitcher and a macroscopic observation of its fabric makes a very strong case for associating this table vessel to the workshops manufacturing the Günsenin type I (Fig. 8, No. 7). The surface, in fact, appears not to have been smoothed, but rather the clay is spread over the vessel's surface, a distinctive manufacturing aspect of the Günsenin type I amphoras (Fig. 8, No. 6).

For the consumption of imported wines and food, the dining and drinking ceramic set adopted by the religious community inhabiting the Hephaestia complexes included imported vessels, like the so-called White Glazed Table Ware, class II. Cups, bowls and a chafing dish (Fig. 9, Nos. 1-5) have been registered, all reasonably imported from Constantinople. This provenance is based mainly on the studies elaborated by Hayes in his major pottery study from the Saraçhane excavations<sup>53</sup> and on the preliminary chemical investigation of the White Wares finds from Corinth in 1983<sup>54</sup>. Subsequent petrographic analysis on the examples of Glazed White Wares conducted by Harriet White in 2009 have labelled the White Ware clay as an "Altered Feldspar" fabric class relating its provenance to the region of Constantinople<sup>55</sup>. Worth noting are the very recent chemical investigations conducted by Sylvie Yona Waksman on the kiln bars and the structure of what has been identified as a pottery kiln found at the Vezneciler metro station in Istanbul, which supports the Constantinopolitan origin of the Middle Byzantine Glazed White Ware II<sup>56</sup>. The petrographic study of imported Glazed White Wares at Corinth has recognised diverse fabric groups in this white-grey matrix characterised by quartz and altered feldspathic inclusions. These differences do not appear to be related to diverse clay sources, but rather to diverse technological practices, such as in the preparation of the raw materials and in the firing procedures. The pinkish colour observable, for instance, in the margins of the Glazed White Ware vessels is due to an oxidizing atmosphere in the firing conditions (Fig. 9, Nos. 6-9). Furthermore, petrographic studies document that the fine Glazed White Wares appear to have been produced by the potter without the intentional addition of any temper. In fact, the inclusions seem to be naturally present in the clay and their variation within this fabric class due again to natural differences in the clay deposits and in the preparation of the raw material<sup>57</sup>.

On the basis of these petrographic evaluations, it is here hypothesised that the same Constantinopolitan group of workshops producing Glazed White Wares could be related to the production of a series of utilitarian vessels which were left completely unglazed or sparsely glazed. According to a macroscopic observation of the fabric conducted by the author with the use of a portable 20-400x magnification USB Digital Microscope, closed shape ceramic pots are attested with a white-grey micromass or pinkish fabric, which in the case of the unglazed vessels can turn into a pinkish outer surface due to the firing conditions (Fig. 9, Nos. 6-7). These unglazed White Wares appear to have an unevenly carbonised surface which could be interpreted as firing marks. However, the question is raised here whether the potter was, in the case of the unglazed examples, intentionally adding temper in order to make these vessels resistant to thermal shocks. The unglazed or sparsely glazed fabric appears, based on a macroscopic observation, to be a coarser version of the clay recipe adopted for the glazed counterparts. These unglazed vessels are characterised by sub-angular spherical inclusions, white opaque in colour, potentially quartz, which can reach up to cm 1 in length. Among the vessels produced in this coarser fabric are pitchers with concave bottom, central bulge (diam. cm 1.8, H. cm 0.7), and a globular body. The neck is cylindrical and mainly with a trefoil rim with tapered, flaring lip. Generally, these pitchers have a strap handle from the point of maximum diameter to below lip. The outer surface of the body is not smoothed or burnished, but it is rather left wheel-ridged, a typical feature of small vessel used on fire (Fig. 9, Nos. 11 and 13). Additionally, the body of these jugs was sprinkled with yellow glaze (Fig. 9, No. 12). Finally, some examples have spouts on the shoulder.

The function of these jugs might be hypothesized not only on the basis of the fired-blackening of the body, as documented on ca. 50% of the fragments investigated at Hephaestia, but, interestingly,

<sup>52</sup> On the reuse of amphoras cf. VAN DOORNINCK 1989.

<sup>53</sup> HAYES 1992, 12.

<sup>54</sup> MEGAW-JONES 1983, 242-243.

<sup>55</sup> WHITE 2009, 94-98.

<sup>56</sup> WAKSMAN 2021.

<sup>57</sup> WHITE 2009, 97.



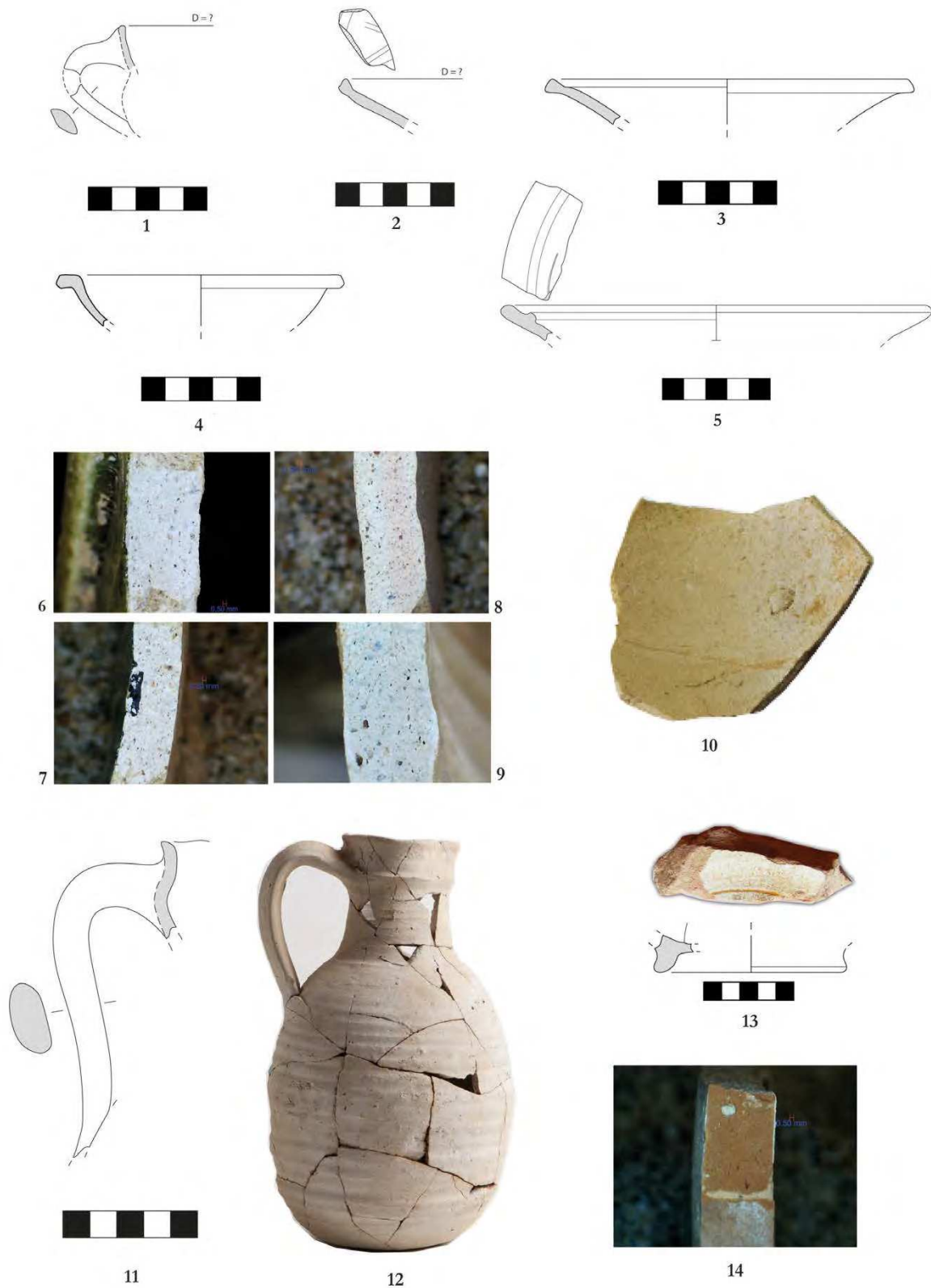


Fig. 9. Nos. 1-5. Glazed White Wares II from Hephaestia excavations; Nos. 10-11. WW kettles from Hephaestia; No. 12. an example from Corinth (photo P. Dellatolas, ASCSA, Corinth Excavations). Fabric photos of glazed (Nos. 6-7) and unglazed (Nos. 8-9) white wares from Hephaestia excavations; Nos. 13-14. imported fine sgraffito plate and its fabric (el. R. Valente; © Archivi SALA, V/78).

by analysing the evidence in the inner surface, which is often covered by a layer of calcium carbonate (Fig. 9, No. 10). Examples analysed by the author both at Hephaestia and in Corinth document this evidence. This has been interpreted to be the residue caused by water boiling and it is therefore argued that these jugs may have been used mainly as kettles. Finally, a few examples of unglazed beakers produced in the same white potentially Constantinopolitan fabric, made with very thin walls like the kettles, are also represented. However, according to the quantified evidence from Hephaestia and Corinth, they were imported in lower quantities than the glazed Constantinopolitan wares. Though their importation might have to be related to a specific dining or drinking habit that made trading this specific type of kettles worthwhile, the thin walls of which otherwise make them quite fragile. At the current stage of research, these unglazed white wares have been recorded in Constantinople and Athens in addition to Hephaestia and Corinth<sup>58</sup>. These types are so far registered in the Middle Byzantine contexts at Hephaestia and can most likely be dated to the second half of the 10<sup>th</sup> c., and certainly to the 11<sup>th</sup> and very early 12<sup>th</sup> c. AD.

Byzantine urban contexts document the practice of using imitations of shapes of Glazed White Table Ware in the dining set, especially cups, plates and bowls which appear among locally produced table ware, although this imitation was exclusively a matter of shape, leaving the vessels completely unglazed and undecorated<sup>59</sup>. However, this appears not to be the case in the dining set adopted on the tables of the Hephaestia community, which preferred to use only the glazed Constantinopolitan dining ware. Additionally, and very surprisingly, at the current stage of research, no brown glazed chafing dishes have been recorded by the author among the ceramic finds from the Hephaestia church settlement. As previously mentioned, this ceramic type appears only in Constantinopolitan White Ware<sup>60</sup>. Chafing dishes have been interpreted as serving plates primarily for *γάρος*, and this sauce would have often been served diluted with water, vinegar, wine, or oil<sup>61</sup>. Dipping raw radishes into *garum* was a common practice, as often depicted on Middle and Later Byzantine representations. Also served as an opening dish, this culinary tradition was believed to have the additional benefit of preventing wine drunkenness, in accordance with the common beliefs reported by Middle Byzantine textual sources<sup>62</sup>.

The Middle Byzantine dining set was also enriched by plates and bowl imported from Euboea. More specifically, at the current stage of research, a single example of a yellow glazed plate decorated with a fine sgraffito decoration (Fig. 9, No. 13 and 14) and four fragments of plain glazed open shapes should be noted. These fragments, according to a macroscopic observation of the fabric, appear to belong to the so-called “Middle Byzantine production” manufactured in the Chalcis region<sup>63</sup>. These are not the only imports from this region. Middle Byzantine Günsenin type II amphora are documented in a total of six fragments at Hephaestia. As recent studies confirm, Günsenin type II amphora were produced at least in two different workshops: one has not yet been located, while another centre was situated in Chalcis, whose harbour played an important role in the Aegean at this period. Dated between the 10<sup>th</sup> and early 12<sup>th</sup> c. AD, these transport containers have been generally been related to wine and olive oil<sup>64</sup>.

At the current stage of research, this absence of local imitations of Constantinopolitan White Ware shapes is unlikely to be linked to the absence of local production of ceramic utilitarian vessels in the Byzantine period on the island. From the Hephaestia excavations, in fact, the author has identified at least two examples of overfired or very high-fired utilitarian vessels, possibly an amphora and a bowl, made in what could be a calcareous clay<sup>65</sup>. These wasters have been located in the northern sector of the monastic complex, with one example partially covered in mortar as it had been reused in the masonry of one of the adjunct rooms to the *katholikon* (Fig. 10)<sup>66</sup>. To bolster this argument, it should be noted that the 2023 excavation of the topsoil in the western sector of the basilica complex has uncovered evidence of what may be a kiln. At the current stage of research, it is not possible to conclude with

<sup>58</sup> For the example from Corinth: VALENTE 2018. For the Constantinople examples: HAYES 1992, 38-40, in deposit 50, cat. Nos. 108 and 137, and deposit 51, cat. Nos. 50 and 51. For Athens the identification is based on the drawings published by SAGARA-TSOĞKA 2021, 895, cat. No. ISAP 12-48. The author has also personally observed some examples in the ASCSA – Agora storerooms.

<sup>59</sup> VALENTE 2018.

<sup>60</sup> The type found at Hephaestia is similar to type 9 published from the Saraçhane excavations (HAYES 1992, 23 and 179, fig. 59, No. 11).

<sup>61</sup> VASSILIOU 2016, 254.

<sup>62</sup> ANAGNOSTAKIS-PAPAMASTORAKIS, 2005, 162.

<sup>63</sup> WAKSMAN *et alii* 2014.

<sup>64</sup> GÜNSENIN 1990, 26-27.

<sup>65</sup> This identification is based on the macroscopic analysis of the surface and fabric in break where halos and white spots have been identified suggesting that these could be overfired sherds. This preliminary observation can be proved or dismissed by petrographic analysis conducted in combination of SEM investigation to study the state of the vitrification.

<sup>66</sup> On the practice of using wasters in building construction CUOMO DI CAPRIO 2017, 336.

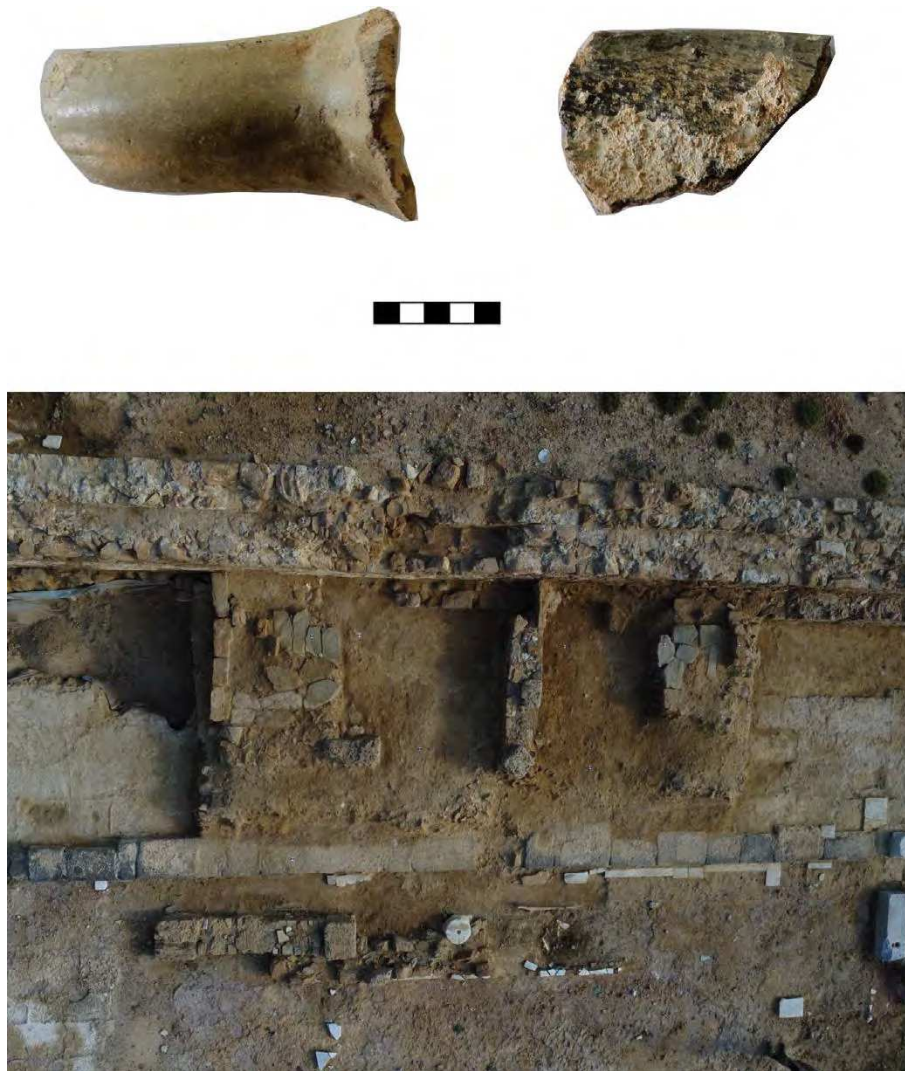


Fig. 10. On top, examples of wasters from the Hephaestia excavations found in the northern rooms of the Middle Byzantine monastic complex room (el. R. Valente; © Archivi SAIA, V/74). Below, the northern rooms as visible before the 2023 excavation season (photo C. De Domenico; © Archivi SAIA, V/74).

certainty whether it was utilized for firing pottery or architectural terracottas. Nevertheless, it is already possible to observe the architectural evidence of what could be the firing chamber, rectangular in shape, with reinforced sides made of bricks and a possible central support (Fig. 5)<sup>67</sup>. On the basis of its dimension and the identification of the aforementioned pottery wasters it is most likely that this was a pottery kiln belonging to the artisanal spaces related to the Middle Byzantine complex. Moreover, the example of a tile with what appears to be a dripping of brown glaze and diverse examples of Middle Byzantine sparsely brown glazed cooking vessels give rise to the question of whether manufacturing of glazed pottery occurred alongside the manufacturing of unglazed coarse and cooking wares in this workshop (Fig. 11, Nos. 1-3)<sup>68</sup>.

Among the Middle Byzantine utilitarian vessels, there are examples of table service pots, like pitchers characterised by *excisa*, gouged decoration (Fig. 11, No. 4), distinctive of the 10<sup>th</sup>- and 11<sup>th</sup>-c. artisanal tradition documented at diverse sites throughout the Byzantine Empire such as in Constantinople, Cherson, Ephesus, in the Aegean area such as at Naxos, in Butrint, in Athens, Corinth and on the Italian Peninsula

<sup>67</sup> DE DOMENICO 2023. This kiln could be catalogued as type II/a according to the typology presented by HASAKI-RAPTIS 2016 and reappraisal of Cuomo di Caprio's studies on kiln typology also in CUOMO DI CAPRIO 2017, 364-365.

<sup>68</sup> Archaeological findings of pottery kilns on the island have currently

been attributed to the 15<sup>th</sup> c. AD. This workshop is located in the Medieval castle of Kotzinas, documenting local production of glazed wares, such as subtypes of Zeuxippous Ware (PENNA 1983; FRANÇOIS 1995, 86.)

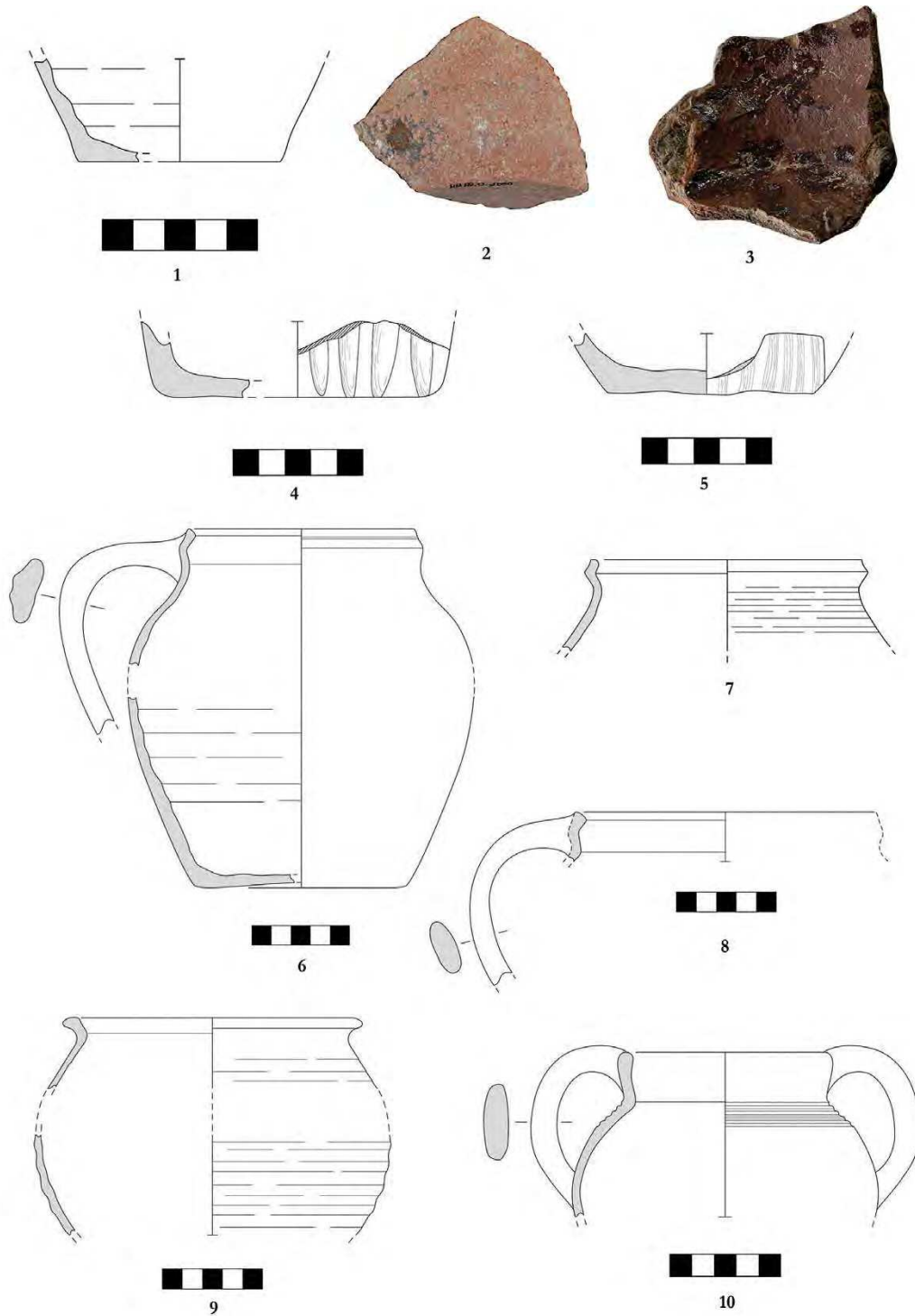


Fig. 11. Middle Byzantine pottery from Hephaestia: Nos. 1-3. sparsely glazed cooking wares; Nos. 6-10. unglazed pots; No. 4. gouged pitcher; No. 5. burnished pitcher (el. R. Valente; © Archivi SAIA, V/79).

including from Apigliano in Salento (Apulia)<sup>69</sup>. Moreover, another typical pitcher of the Middle Byzantine table set presents a burnished surface (Fig. 11, No. 5). According to a macroscopic examination of the fabric these may also be examples of local production.

In essence, one can envision a ceramic dining set that incorporated both Constantinopolitan and potentially local tableware. Nevertheless, it is important to acknowledge that glassware and potentially

<sup>69</sup> For Constantinople: HAYES 1992, 50; on Corinth: VALENTE 2018, 365; for the case of Naxos is under study by the author; on Salento

examples: ARTHUR *et alii* 2015, 42. For an overview of the other mentioned sites: VROOM 2005, 68-69.



wooden and metal vessels were also quite probably integrated into the cooking and dining wares of the Hephastian community.

The morphology of the ceramic cooking vessel is an informative piece of material evidence on culinary practices, cooking furniture and therefore of a certain degree of cultural unity. The majority of Byzantine cooking vessels fabricated in clay so far documented among the finds of the Hephastia excavations appear to be characterised by a flat base, an ovoid body closed in shape, and very often a vertical rim, with concave inner profile, bevelled-in lip, and a single strap handle (Fig. 11, Nos. 6-8). However, this is not the only cooking ware shape documented in the Middle Byzantine period at Hephastia. At the current stage of research ca. 5% of the total finds of the Middle Byzantine cooking ware are characterised by a globular body, a collar rim with a concave profile and two vertical handles (Fig. 11, No. 10). These specific types of collar rim stewpots very closely resemble the Corinthian typology and are dated to the 9<sup>th</sup> and 10<sup>th</sup> c. AD. This collar rim stewpot type is well documented in Mainland Greece, especially in the Peloponnese and Attica, and in southern Apulia, where it has been included in the cooking ware Corinto-Mitello, as labelled by archaeologists working in Italy<sup>70</sup>. At this point in the investigation, it is not possible to determine whether on Lemnos these examples were imported or locally produced. Nevertheless, the morphological variation of a flat base and concave base stewpot with collar rim in the case of Hephastia clearly highlights that morphological similarities in cooking wares are not consistent throughout the entire Byzantine Empire, but rather regional variations can be observed. As first highlighted by Arthur, in the eastern part of the Byzantine Empire, including Asia Minor and Crimea, and documented at sites like Constantinople, Hierapolis and Chersonesos, spherical stewpots were not commonly produced and were not commonly used; instead, here flat base cooking pots were preferred<sup>71</sup>. The case of *Hephastia* further supports this case. The flat base vessels adopted in the eastern part of the empire were not often imported into the areas in which the round shaped ones were widely used, like in the Peloponnese. It is likely that this shape was not fulfilling the demands of the local market, nor fitting into a different tradition of kitchen furniture<sup>72</sup>. In commenting on the mass-production of unglazed cooking wares, J. Hayes stated that, while Constantinopolitan exports of cooking ware to other Byzantine regions are documented between the 6<sup>th</sup> and the 8<sup>th</sup> c., «the later (10<sup>th</sup> to the 12<sup>th</sup> c.) series do not seem to have been found elsewhere, which is surprising in view of their superior quality»<sup>73</sup>. Petrographic and chemical analyses could provide a further perspective on this topic. Examples of cooking ware found in Hephastia, characterised by an everted thickened rim (Fig. 11, No. 9) appear to very closely resemble the contemporary Constantinopolitan finds<sup>74</sup>. Were these exports from Constantinople, or imports from a third site, or finally, as the present author suggests, are these examples of a shared know-how in artisanal manufacturing traditions and culinary habits?

#### 4. CONCLUSIONS

This preliminary overview of some of the archaeological evidence from the Hephastia religious complex is part of an ongoing research project that aims to address network distributions in the Aegean, in which Lemnos participated. A fundamental step if we are to evaluate the diffusion of ceramics as evidence of networks of distribution is to quantify these data, which in the case of Hephastia is currently in preparation for the final publication of this excavation project. Such an approach will enable systematic estimation of the varied nature and degree of seaborne network distribution in the Aegean region. Quantified datasets could, in fact, help to challenge the socio-economic picture which has so far dominated the historical discourse on the 8<sup>th</sup>-12<sup>th</sup> c. AD.

Archaeology, and especially ceramics, can contribute to evaluating the development of regional economic complexity, which was based on local demand, both of military, religious and civilian landowners on lower classes as merchants, artisans and peasants. The aforementioned methodological approach applied to this category of archaeological evidence could also prove fruitful in assessing the interplay and

<sup>70</sup> Mitello is the name of the plot excavated in Otranto where a workshop producing this form of stewpot has been discovered (ARTHUR *et alii* 1992; LEO IMPERIALE 2004, fig. 5.4, C).

<sup>71</sup> HAYES 1992, 56-59; ARTHUR 1997; 2004.

<sup>72</sup> On the hypothesis that this differentiation responded also to different kitchen furniture and fireplaces in Byzantine houses, see VALENTE

2018, 215-218. It is important to observe that this comparison is drawn specifically among stewpots of similar capacity. Smaller cooking vessels designed with a flat base for practical reasons were typically placed in close proximity to the fire.

<sup>73</sup> HAYES 1992, 53.

<sup>74</sup> *Ibid.*, deposit 45, cat. No. 5.

intersections between various social variables influencing production, consumption, and trade. Research on ports in the Middle Byzantine Aegean is a fruitful theme of investigation predominantly centred on architectural installations, their masonry, and associated fortifications<sup>75</sup>. However, the exploration of the cargoes, encompassing both perishable and non-perishable items loaded and unloaded at these ports, has received comparatively less attention<sup>76</sup>. Ceramics, especially utilitarian vessels, continue to be widely neglected in Eastern Aegean excavation publications.

David Jacoby has significantly enhanced our understanding of the rise in purchasing power among the social elite and the urban middle class in Middle Byzantine Constantinople, which manifested in evolving consumption patterns related to food, clothing, and other goods. This increase of purchase power over the Middle Byzantine period led to an increased and more diversified demand for agricultural, pastoral, and manufactured commodities. The instances of requests for Cretan cheese, various brands of wine, olive oil, and raisins imported into Constantinople from different regions of the empire and beyond in this period can serve as paradigmatic examples<sup>77</sup>. The case of the Middle Byzantine amphoras, moreover, and their high degree of standardisation has been interpreted as a functional measure to estimate the capacity of amphoras that the hold of a ship could contain, with a quantification done by weight. In a time when there was an increasing demand for bulk exchange, the knowledge of the weight and capacity of the amphoras would have been an important point of practical information for preparing cargo for shipping<sup>78</sup>. The diverse varieties of wines shipped to Hephæstia, like the sweet and dry wines imported from the region of Ganos, can be interpreted as an example of local and short-medium distance exchange of goods demanded by the local community. Vineyards were quite common within the Mediterranean Byzantine territories, though many peasants produced mainly small amounts of wine for the household consume, as for instance, documented by the *Praktika* of the monasteries of Mount Athos<sup>79</sup>. However, elsewhere, like in the Ganos region, a large surplus was produced for the supply of consumers like the inhabitants of Hephæstia. Moreover, this trade also incentivized the market of utilitarian ceramics, like table ware and cooking vessels, which would probably be shipped as secondary cargo. The dining and drinking ceramic set in Hephæstia appear to follow mainly the Constantinopolitan cooking and serving manners, as the White Wares glazed ceramics and kettles for instance suggest.

The overall material culture presented here creates a picture of how, on the short peninsula of Hephæstia, a monastery flourished in the Middle Byzantine period. This complex overlooked the so-called gulf of Palaiopolis, a lagoon basin. At the current stage of research, the Italian-Greek underwater investigation hypothesises that this lagoon could not have functioned as a harbour in the historic period (Fig. 12). Moreover, the coastline of Hekaton Kephales cape, the eastern section of the peninsula of Hephæstia, appears to have been an unfavourable coastline for landing being exposed to the winds. Nevertheless, along this section of the coast of Lemnos artefacts dated to the Middle Byzantine period have been identified in the underwater survey (Figs. 2 and 13). The harbour infrastructure located in the gulf of Ormos Pournias, at the site of Hephæstia, have been identified as useful for the loading and unloading of cargo (Fig. 14)<sup>80</sup>. It will be the object for future investigations to clarify if this could have been a proper port or a sheltered roadstead, as it is currently hypothesised, and to define its exact chronology. Meanwhile, the material culture here presented from the monastic complex unquestionably confirms that this region of Lemnos was well integrated in the sea-routes of the North Aegean and beyond. This monastic community was capable of taking part in maritime connections with the broader Byzantine world.

In the Byzantine period, one of the main harbours of the island was located at Kotzinas, situated km 5 to the northwest of Hephæstia, where also the Byzantine navy was stationed (Fig. 2). Historical sources document how in the Late Byzantine period, some of the port infrastructures at Kotzinas were managed by a monastery there to ship the agricultural production from the Lemnian *metochia* to the monasteries in Mount Athos and for the distribution of production surplus to nearby markets<sup>81</sup>. The Middle Byzantine topography of this north-eastern side of the island of Lemnos is still very little investigated. It is, therefore,

<sup>75</sup> For a very informative publication on Byzantine and Medieval ports, see KARAGIANNI 2015.

<sup>76</sup> For an important methodological study on harbours, sea-routes and the networks by which mercantile, political, religious and cultural interactions took place cfr. PREISER-KAPPELLER - DAIM 2015.

<sup>77</sup> JACOBY 2010, 128.

<sup>78</sup> VAN DOORNINCK 2015, 52.

<sup>79</sup> JACOBY 2010, 134.

<sup>80</sup> DAVIDDE PETRIAGGI *et alii* 2022, on the Italian survey at Ormos Pournias: 229-233; on the underwater material culture at Hekaton Kephales: 235-236; Lagoon of Hephæstia or Ormos Palaiopolis: 239-244.

<sup>81</sup> ΓΟΥΜΑΤΙΑΝΟΣ 2014, 364. On the economic interests of the monasteries of Late Byzantine Lemnos cfr. KONDYLI 2010.





Fig. 12. The lagoon of Hephaestia seen from above, with the monastic complex highlighted (drone photo F. Mauri; © Archivi SAIA, U/13389).



Fig. 13. The cape of Hekaton Kephales seen from the southwest (drone photo F. Mauri; © Archivi SAIA, U/13384).





Fig. 14. The peninsula of Hephaestia with the monastic complex highlighted on the left and Ormos Pournias on the right (drone photo F. Mauri; © Archivi SAIA, U/13348).

not yet possible to assert conclusively, though it might be raised as a hypothesis, that the anchorage installations at Ormos Pournias could be a *σκάλα* managed by the monastic complex at Hephaestia to ensure the distribution and importation of agricultural and artisanal goods<sup>82</sup>.

In conclusion, the overall consumption patterns documented by the material culture from Hephaestia set this monastic community in the wider Byzantine network of exchange, which facilitated not only the distribution of agricultural products, but also social contacts, cultural exchange of daily habits and working practices. This monastic community, in fact, adopted culinary traditions, table manners, and storage strategies shared with other regions of the Byzantine Empire. The Middle Byzantine Aegean can, therefore, be conceptualized as a network of maritime trade, fostering the interchange of not only goods but also of artisanal expertise and daily ways of life.

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<sup>82</sup> If not managed by the monastery, this harbour installation at Hephaestia could have been a *ἐπίγειον* or *κατάβολος*, a satellite harbour

in the Byzantine period (DAVIDDE PETRIAGGI *et alii* 2022, 261). For an analysis of the Byzantine harbours and ports cfr. VEIKOU 2015.



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