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VĚRA KLONTZA-JAKLOVÁ

## **SPECIFICS OF AEGEAN BYZANTINE AMPHORAE STUDIES: THE EXAMPLE OF PRINIATIKOS PYRGOS, EAST CRETE**

This article deals with the specific aspects of Early Byzantine amphorae which arise from their function as a shipping container. This type of pottery has a very long tradition in the eastern Mediterranean; at least since the Middle Bronze Age. The shape of the vessel and the technology used were virtually constant from the Late Classical period until the Middle Byzantine period. The design of the vessel was determined by its original transportation function and this simultaneously defined the user's approach to it. Fragments of amphorae constitute a significant part of many archaeological contexts. The distribution of amphorae in the Mediterranean and beyond makes them an important historical source suitable for the study of trade relations in the then known world.

Byzantine pottery – Late Roman and Byzantine amphorae – pottery analysis – Byzantine archaeology

**Specifika studia byzantských amfor v Egejdě na příkladu lokality Priniatikos Pyrgos na východní Krétě.** Článek se zabývá specifiky studia raně byzantských amfor, vyplývajícími z jejich funkce přepravního obalu. Tento typ užitné keramiky má ve východním Středomoří tradici nejméně od střední doby bronzové. Tvary nádob i technologie se téměř neměnily od pozdního klasického období až po střední byzantské období. Funkce a určení nádoby coby přepravního materiálu určovaly také specifické zacházení tehdejšího člověka s touto keramikou. Zlomky amfor tvoří nezanedbatelnou část archeologických souborů. Jejich rozšíření ve Středomoří i mimo něj činí z amfor velmi důležitý typ artefaktu vhodný pro studium obchodních vztahů tehdejšího světa.

byzantská keramika – pozdně římské a byzantské amfory – analýza keramiky – byzantská archeologie

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### **1. Introduction**

Although fragments of ceramic containers usually represent the largest part<sup>1</sup> of pottery collections from Early and Middle Byzantine archaeological contexts<sup>2</sup>

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<sup>1</sup> In the senses of volume, number and weight.

<sup>2</sup> Contemporary Byzantine archeology uses the historical chronology, wherein the Early

(Hayes 1992, 61)<sup>3</sup>, amphorae studies still present complex problem. Byzantine amphorae developed continuously – both typologically and functionally – from transport pottery, whose use in the Mediterranean has been dated from as early as the Middle Bronze Age, and they are direct successors of ancient transport amphorae. Early Byzantine amphorae are traditionally studied together with their late Roman predecessors. They are generally included in the amphorae databases covering the period from Imperial Rome to the Macedonian Dynasty (1<sup>st</sup>–9<sup>th</sup> century AD)<sup>4</sup>, which is reasonable given that the traditions of Roman trade and Roman “ideals” remained both strong and recognizable during the entirety of the Byzantine empire’s existence (Reynolds 2005, 561). However, amphorae are also studied as a special pottery category regardless of their chronology (Eiring – Lund eds. 2004). The study of Byzantine amphorae is largely a relatively recent phenomenon, having developed within the last thirty years alongside the development of modern Byzantine archaeology (Klontza-Jaklova et al., in preparation). Although the first article, about stamped amphorae, was published in the 19<sup>th</sup> century (Stoddart 1850), plain amphorae and their fragments had to wait more than a century to attract detailed attention from scholars. Indeed, in many regions where their production and use were massive (and their finds extremely frequent), they were even discarded. The situation was different in certain regions where Mediterranean amphorae represented rare evidence of special historical value (e.g. contemporary Russia: Klanica 2009, 7; Sazanov 2007). This provided some stimulation for further studies and another proof of the need to study and publish the plain amphorae (Eiring – Lund eds. 2004, 11). Riley’s (1979) publication, wherein was documented an example of Benghazi/Berenice amphorae, made it clear how important detailed study of plain, apparently unimportant, amphorae fragments can be. Due to this history of relative neglect, it is still true today that in some regions and some chronological horizons it is impossible to date amphorae other than stratigraphically<sup>5</sup> (e.g. Crete, Klontza-Jaklova 2014).

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Byzantine period starts in the mid of 4<sup>th</sup> century AD and finishes in the 8<sup>th</sup> century AD. The Middle Byzantine period then finishes with the 12<sup>th</sup> century AD. Some years ago the centuries up to the period of Justinian’s reign were included in the Late Roman period (cf. Hayes 1992; Hayden et al. 2005). There are also specific regional chronological scales, e. g. the Byzantine period on Crete was interrupted by the Arabian period (824–961 AD) and finishes in the beginning of 13<sup>th</sup> century AD when the island was ruled by the Venetians (Apostolakou et al. 2010).

<sup>3</sup> There are also rare exceptions: e.g. Eleftherna placed on Psyloritis slopes (Vogt 2000).

<sup>4</sup> Roman Amphorae: a digital resource, University of Southampton, [http://archaeologydataservice.ac.uk/archives/view/amphora\\_ahrb\\_2005/index.cfm](http://archaeologydataservice.ac.uk/archives/view/amphora_ahrb_2005/index.cfm); Late Roman Coarse & Cooking Wares, [www.LRCW.net](http://www.LRCW.net).

<sup>5</sup> The period from 9<sup>th</sup> to 11<sup>th</sup> century AD on Crete is archaeologically almost unknown. With only a few exceptions (Poulou-Papademetriou 2003) this material has not been published, or even recognized by field archaeologists.

## 2. Specifics of Late Roman and Byzantine amphorae

When studying Late Roman and Byzantine amphorae, it is necessary to bear in mind some specifics of this vessel type which, although related mainly to its function, also relate to its means of production and distribution. Despite the numerous special studies dedicated to these cargo containers and the fact that scholars (archaeologists at least) don't doubt their importance as an historical source (*Eiring et al. 2004*), there still remain many unsolved problems and a comprehensive text book has not yet been published. The need for a handbook is evident. It would be especially welcomed by young scholars, as well as by those field archaeologists lacking expertise in Byzantine pottery<sup>6</sup>. The aim of this article is, at least partly, to fill this gap and to present – mainly to adepts of Byzantine studies and to Mediterranean field archaeologists – the main aspects of amphorae studies. It is intended both to give them the basic guidelines on how to understand, to work with and to study this material and also to define the main problems of Byzantine cargo amphorae studies.

Amphorae served to facilitate long distance bulk transport, mainly, but not exclusively, of precious liquids. The majority was used for wine. A smaller percentage (circa 40%) was used for other commodities such as olive oil, vinegar, fish sauce, honey, raisins etc. (*Hayes 1992, 61*).

Sea-going trade, mainly in wine and olive oil, was well developed in Mediterranean from at least the Early Mycenaean period and, when the international political scene was favorable, this trade took place on a massive scale. It could be said that the Mediterranean, in its entirety, was the normal territory for Early Byzantine trade, after it succeeded the Roman Empire in the East (*Amouretti et al. 1993; Hamilakis 1996; McGovern 2003*), but Byzantine amphorae have been found in the British Isles, in the Black Sea region and along major Russian rivers, which were used to transport special goods from the Mediterranean and Near East to South Scandinavia. They are common in all the Balkans but are largely absent from the mainland of Central and West Europe, from which it is possible to deduce, or to illustrate some historical conclusions.

With the spread of Christianity, wine and oil became important, and profitable, trade goods<sup>7</sup>. They played a central role in Christian rituals but also, particularly in the case of wine, were seldom absent from any table: from the emperor's palace to the least village household. Oil would be used not only for cooking and for

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<sup>6</sup> The lack of such literature makes it difficult to introduce young scholars to the field of Byzantine amphorae studies and there are still today field archaeologists who cannot differentiate between modern and Byzantine pottery (*Vroom 2005*). Late Roman, Early and Middle Byzantine pottery represents a nightmare for survey archaeologists. In many cases (e.g. *Hayden 2005*) the authors simplified the problem and divide their pottery into late Roman/Early Byzantine and Venetian pottery, even though they know that the first horizon is too long and that they overlook a complex historical period of three centuries of 9<sup>th</sup> to 11<sup>th</sup> century AD.

<sup>7</sup> Wine and oil trade was of major importance at least from the Late Roman Republic, if not earlier.

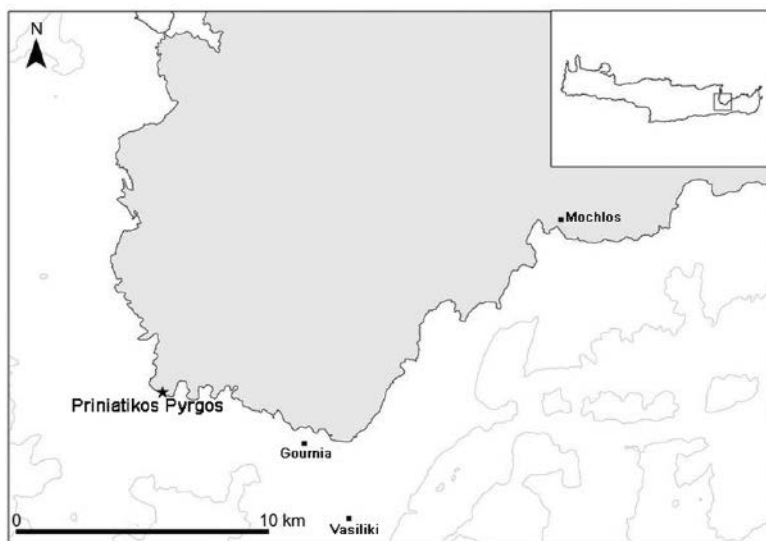


Fig. 1. Location of Priniatikos Pyrgos (courtesy of Priniatikos Pyrgos project).

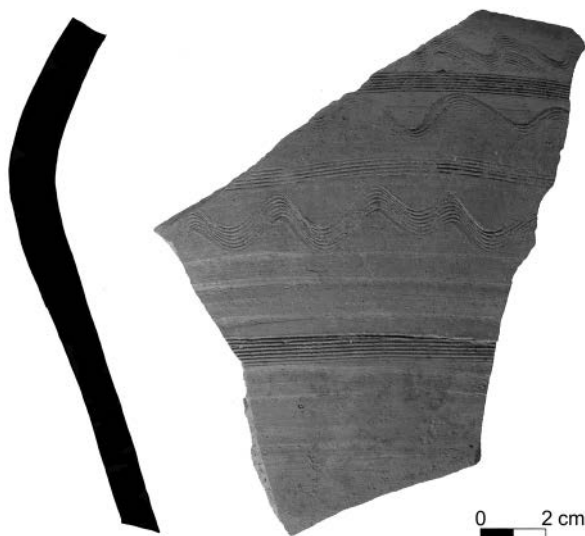


Fig. 2. Body fragment of amphora probably made in Kalo Chorio region (Illustration: Věra Klontza-Jaklová).

cosmetic and medical purposes but also for lighting, with ceramic, glass or metal lamps. Vine cultivation was a very lucrative activity during almost all the Byzantine period. Its importance is demonstrated by the fact that the emperor personally

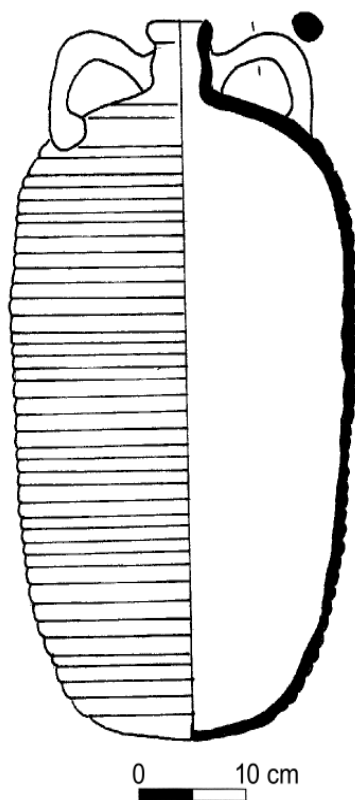


Fig. 3. So called Cretan Amphora (after Yangaki 2005).

Priniatikos Pyrgos (fig. 1) amphorae collection<sup>11</sup>, most of which is dated to the horizon of the 5<sup>th</sup>–8<sup>th</sup> century AD, contains many imported amphorae originating from the Aegean, Cyprus and Asia Minor, with fewer coming from other Cretan regions and only exceptionally from North Africa. At the same time local amphora production seems very probable: kiln wasters are quite frequent as is a fabric, containing temper of granodiorites and biotites, which is very characteristic for the region. They were specifically covered with multiple combinations of fine

supervised the harvesting and the pressing of grapes<sup>8</sup> (*Anagnostakis 2008, 44–5*). The best vineyards in the most fruitful regions were owned by the emperor himself, or by high chieftains and officers, by elite aristocrats, the church, wealthy monasteries, or directly by the patriarch. A common practice was the leasing of vineyards in return for a share of the crop (*Anagnostakis 2008, 38–39*). The chapters concerning vine cultivation occupy most of *Geoponika*<sup>9</sup>.

Grapes were not only cultivated in the Aegean. The conditions for vine cultivation are extremely favorable throughout the Mediterranean, hence the wine trade was part of everyday life. Even in the regions which produced and traded their own wines, other varieties were imported, as amphorae studies demonstrate. They indicate the universal presence of wine, given that the containers used to store and transport it are found on all archaeological sites<sup>10</sup>. Moreover, the presence of amphorae, imported from elsewhere on the island as well as from destinations overseas, at all published Cretan Early Byzantine sites attests the widespread nature of the wine trade. The

<sup>8</sup> The Emperor's vineyards were in Bethany region, where the most famous wine came from. This wine was replaced by Peloponnese, Cretan and Cyprus wines at the end of Byzantine period due to the Turkish occupation of the Bethany region.

<sup>9</sup> The main source for Byzantine agriculture, a farming manual written probably during the 6<sup>th</sup> century AD by Kassianos Vassos (*Decker 2007; Anagnostakis 2008, 38–39*).

<sup>10</sup> In some case the frequency of amphorae is lower or their provenance is limited and, of course many small agricultural sites remain unknown.

<sup>11</sup> Priniatikos Pyrgos project's official web page, <http://www.priniatikos.net>.





Fig. 4. Amphorae emptying and filling of storage containers. Mosaic “Wedding in Cana”, Monastery of Chora, Constantinople. Beginning of 14<sup>th</sup> century AD (after *Anagnostakis 2008*).

combed bands (fig. 2). The so called Cretan Amphora, common on other Cretan sites (*Yangaki 2005*) is very rare in Priniatikos Pyrgos contexts (fig. 3). It is possible that the region, being very fruitful, was exporting its own Cretan wines and that special varieties, from the more distant regions mentioned above, were imported through the harbour in preference to other Cretan varieties.

It is also likely that wine transport was much easier (and cheaper) by sea than by road and this may explain the lack of Mediterranean amphorae in central European regions.

The first thing we must keep in the mind when studying amphorae is that the vessel represented only the transport packaging of its much more important contents. Wine and other goods were not kept in amphorae. Amphorae are, generally and at least originally, transport pottery and not storage pottery and, on reaching their destination, the amphorae were opened and the wine was emptied into larger or smaller containers (fig. 4; 5). The package, in this case an amphora, was usually broken during this process, although, in some cases or certain regions, complete

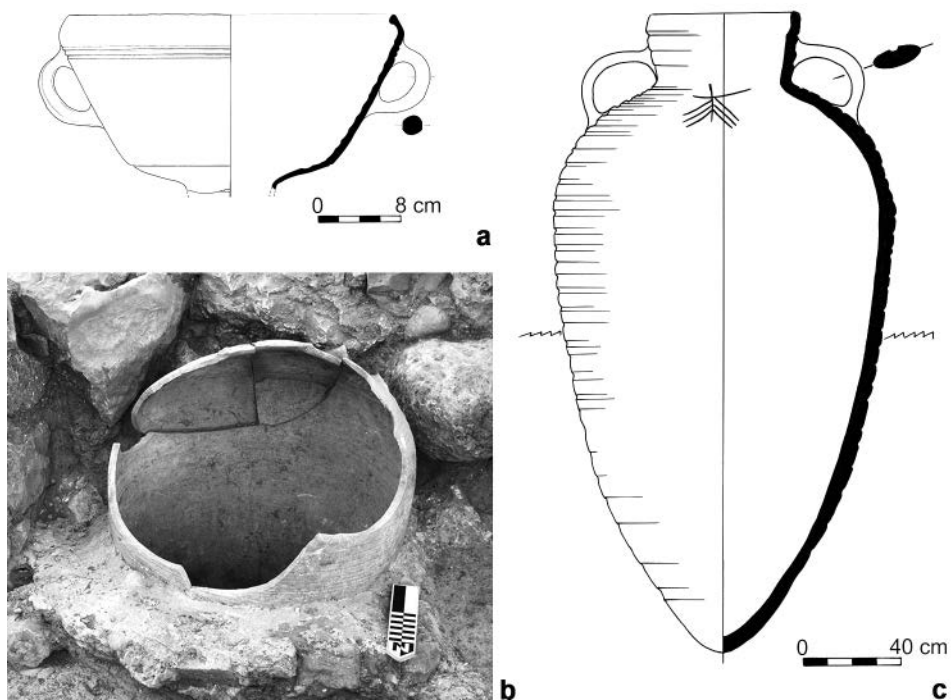


Fig. 5. Priniatikos Pyrgos. a – funnel found behind the storage amphora (b, c); b – large amphora (probably North African) re-used as a storage container (courtesy of Priniatikos Pyrgos project); c – drawing reconstruction of the large amphora. Illustration: Věra Klontza-Jaklová (a, c).

amphorae were used again as storage vessels or as water jars (fig. 5: b, c). Time was not wasted in removing stoppers (fig. 6) fixed with cloth, clay or wax and rope. The neck was cut out and the container emptied. Thus the amphorae were damaged and discarded. This process was observed on Priniatikos Pyrgos, where there are deposits containing almost exclusively necks with handles (trench A4000 and A6000) and other deposits of systematically broken bodies. The majority of amphorae are therefore found in fragments (*Hayes 1992, 61*), which greatly complicates the reconstruction of their shapes and the identification of combinations of rims, bodies, bases, handles etc. Consequently the character of amphorae doesn't easily facilitate use of the classical typological approach. Huge amphorae dumps are known (e.g. Roman Monte Testaccio; *Rodrigues Almeida 1984*) but complete vessels are found in relatively rare circumstances: such as in storage rooms (as storage containers or unused vessels; fig. 8) or in shipwrecks (e.g. *Bass – van Doornick 1982*). Large concentrations of amphorae fragments, which are impossible to join, usually identify a dump or may form part of a construction, e.g. the use of fragments of approximately equal size as the main component of floor packing (*Klontza-Jaklova 2014; Eiring et al. 2004, 464*).





Fig. 6. Amphora stopper made from amphora body sherd. Priniatikos Pyrgos (Photo: Chronis Nikolakopoulos).

Transport amphorae represent functional pottery: their aesthetic was much less important than their functional quality. Handles are usually massive and were not specially worked to look nice. Neck parts were very roughly connected to the body and often the body was much thinner than the neck. The production of amphorae was in some cases almost industrial in scale and the speed of production probably played an important role in determining profit for the producer.

Amphorae typology is thus determined by function, which means that it is very limited (fig. 7). Neither size nor volume is standard. Vessel

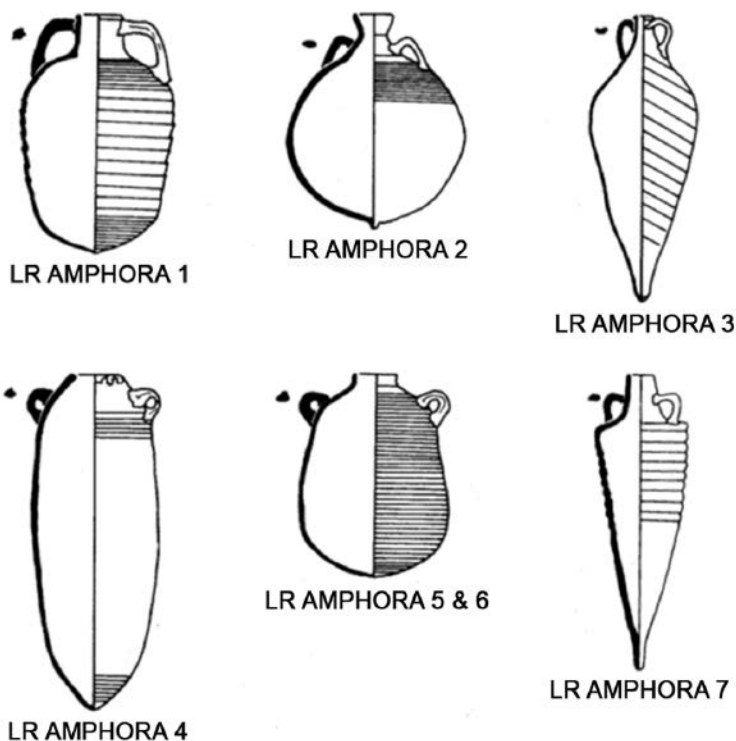


Fig. 7. Seven main LR amphorae types (after Riley 1982).

design had to provide the correct balance of volume and weight; it must be possible to carry the filled vessel, it must be easy to carry and load the vessels as cargo – they must be ergonomic. Vessels must fit each to the other for easier and safer transportation. The large massive handles placed on the lip, under it or in the middle of the neck and attached on the shoulders are clearly functional. Such considerations apply also to the toes or tapered bases, and to the ridged or combed bodies, designed to avoid accidental slippage. Nonetheless, it is possible to observe some typological priorities and tendencies. Amphorae of the 6<sup>th</sup>–9<sup>th</sup> century AD, mainly in East Mediterranean, tend to have egg shaped (fig. 8) (derived from LRA1, so called LRA1 survivors, *Poulou-Papademetriou 2001, 245*) or globular bodies. They have extremely massive coarse handles, usually oval in section, and they don't have toes. Their rims are plain or slightly thickened. These vessels were transported vertically and placed in the low parts of boats, unlike the “carrot-shaped” amphorae, which were ‘fitted’ to each other horizontally. The

vessel walls had to be thin, to avoid superfluous weight, but they could not be so fragile as to make their transport complicated, unsafe or even impossible. Shapes were very uniform for all of the long period during which amphorae were in use and clay recipes and firing technology were remarkably similar. Some types were successfully made and used for more than 500 years (e.g. LRA1 and its derivatives).

The concept of the transport amphora as a liquid container was so successful that, e.g. on Crete, it is not easy to distinguish Byzantine amphorae and Ottoman or even Modern water jars (so called *stamna*). The water jars have thicker walls and wider necks and rims (an amphora rim diameter is usually  $\frac{3}{4}$  that of a water jar rim)<sup>12</sup>. In such long settled regions, the inhabitants traditionally used the same clays from identical clay sources, and repeated every time the same tried and tested technologies (fig. 9).



Fig. 8. Complete amphora, 8<sup>th</sup> century AD. Priniatikos Pyrgos (Photo: Chronis Nikola-kopoulos).

<sup>12</sup> One popular Greek song says that the man provided the household with very heavy water jars and his wife cannot carry them. She is always late returning from the well and her husband is always complaining (“*Βαρύ σταμνί μου δίνει να έχει να παραπονεθεί*”).

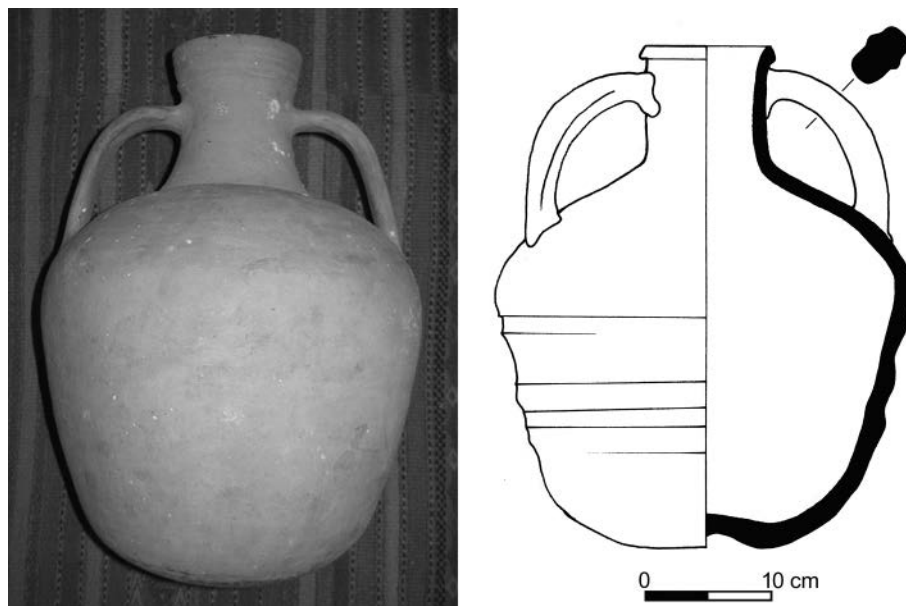


Fig. 9. Water jar of 19<sup>th</sup> century AD (Folklore museum of Agios Nikolaos; Photo: Věra Klontza-Jaklová) and Early Byzantine “Cretan” amphora (after *Yangaki 2005*).

Classical typological methods are therefore confusing or simply don't work at all. Amphorae studies start with macroscopic fabric classification. Petrography, both microscopic and chemical, is commonly used. Inclusions within the ceramic (whether natural or deliberately added) are classified and their probable origin can be established or excluded. Knowledge of the geology of the studied macro- and micro-region is essential. The pottery specialist must know how to describe and classify the fabrics, clays, intrusions, tempers, ceramic texture, firing temperature, surface treatment etc. Even the initial macroscopic observation can yield essential information about the provenance of the vessel. In combination with good geological knowledge it can discriminate between imported and local production, e.g. the absence of volcanic stones on Crete is one of the main criteria in Cretan amphorae classification and the mix of granodiorites and biotites is the main indicator for East Cretan Mirabello region (*Poulou-Papademetriou – Nodarou 2007*).

The study of stratified sites is very important, especially for the end of Early Byzantine period and for all Middle Byzantine period. Petrography and comparison with material from a wide region in which amphorae appear is essential (*Eiring et al. 2004, 460–461*).

Another major problem of amphorae studies is not caused by the natural character of the objects but by those who study them: it is terminology. The lack of agreement on how to create new types, how to describe and name them, and even

on what constitutes a separate type, is almost total. The terminology is created individually and the terms and classification proposed are not always accepted by others in the field. Recently efforts have been made to unify the terminology (e.g. *Dupont 2000*) or to stabilize and accurately define the terms in use (*Portale – Romeo 2000; Yangaki 2005*). There are sometime tens of names used for only














Type	4 <sup>th</sup> C	5 <sup>th</sup> C	6 <sup>th</sup> C	7 <sup>th</sup> C	8 <sup>th</sup> C	9 <sup>th</sup> C	10 <sup>th</sup> C	11 <sup>th</sup> C	12 <sup>th</sup> C	13 <sup>th</sup> C	Notes
	→										LR 3
	→										LR 7
	→										LR 4
	→										LR 5 & 6
	→			→							Spatheio
	→							→			LRA 1 and its derivatives. The most usual type in Aegean.
	→										LR 2
	→			→							“Cretan”
							→				Sarachane 60, 61
									→		Sarachane 60, 61
						→		→			Günsenin 1 – 4 Sarachane 54

Fig. 10. Scheme of Early Byzantine Aegean amphorae’s typology (Illustration: Věra Klontza-Jaklová).

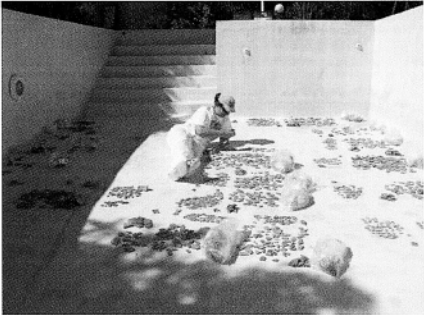
<b>AMPHORAE STUDY CHART</b>	
This approach is based on the experience of the Byzantine study team at Priniatikos Pyrgos	
<p style="text-align: center;"><b>Starting notes:</b></p> <ul style="list-style-type: none"> <li>- before starting a theoretical framework is necessary</li> <li>- before starting the study the methods must be defined and established</li> <li>- transport pottery must be studied within its context</li> <li>- transport pottery can be a valuable source of historical information</li> <li>- typological analyses should always be related to the historical background</li> <li>- always bear in mind the questions for which the study is expected to provide answers</li> <li>- record everything</li> <li>- always consult your colleagues</li> </ul>	
<p><b>HYPOTHETICAL CLASSIFICATION OF THE STUDIED CONTEXT</b></p> <ul style="list-style-type: none"> <li>- study field reports and notebooks</li> <li>- interview the excavators</li> </ul>	 <p style="text-align: center; font-size: small;">Author sorting amphorae fragments being used as a part of floor packing. Priniatikos Pyrgos, Context 26.</p>
<p><b>ARTICULATION OF THE MAIN QUESTIONS</b> (e. g. date of context, mechanics of its deposition, its function etc.)</p> <p><i>* Remember that the amphorae play an active role: There are special reasons why and how they came to be there.</i></p>	
<p style="text-align: center;"><b>PRELIMINARY CLASSIFICATION OF THE CONTEXT</b></p> <p>Statistics and sorting:</p> <ul style="list-style-type: none"> <li>→ cooking wares</li> <li>→ other vessels for preparation of food</li> <li>→ table wares</li> <li>→ <b>amphorae</b></li> <li>→ other (lamps, candles etc)</li> <li>→ undiagnostic fragments (never underestimate this group!): <i>Don't decide for material which you don't know! This group can be worked statistically if the pottery unit is large enough. It is likely to contain approximately the same categories in approximately the same proportions as the diagnostic material. Return to it 2 or 3 times during study process and after.</i></li> </ul> <ul style="list-style-type: none"> <li>• <i>Keep records of size and approximate date!</i></li> </ul>	
<b>AMPHORAE CLASSIFICATION</b>	
<b>COMPLETE VESSELS (OR RECONSTRUCTABLE ITEMS)</b>	<b>FRAGMENTS</b>
<b>Always start with FABRICS!</b>	
<p><b>Describe:</b></p> <ul style="list-style-type: none"> <li>→ Colour</li> <li>→ Inclusions &amp; temper (what, density and size)</li> <li>→ Firing temperature (using indicators as calc-pits, vitrification of clay etc.)</li> <li>→ Surface treatment (burnishing, slip, decoration, inscription etc.)</li> </ul> <p><b>Sort out:</b></p> <ul style="list-style-type: none"> <li>→ Imported fabrics</li> <li>→ possibly local fabrics (Don't forget to define what means local in your studies! E.g. within Priniatikos Pyrgos fabric sorting: local means Mirabello Bay fabrics)</li> </ul>	
<p><b>Classical typological studies:</b></p> <ul style="list-style-type: none"> <li>→ Morphology</li> <li>→ Surface treatment</li> <li>→ Decoration</li> <li>→ Inscriptions, stamps etc.</li> </ul>	<p><b>In each fabric groups sort out</b></p> <ul style="list-style-type: none"> <li>→ Rims</li> <li>→ Necks</li> <li>→ Handles</li> <li>→ Body sherds</li> <li>→ Bases</li> </ul> <p style="text-align: right;"><b>Look for joins!</b> <i>(Complete vessels or profiles go to COMPLETE VESSELS)</i></p>
<b>Combine the findings from the FABRIC and TYPOLOGICAL STUDIES</b>	
<b>SUMMARIZE THE RESULTS!</b>	
<ul style="list-style-type: none"> <li>• statistically</li> <li>• archaeologically</li> </ul>	
<b>GO BACK TO YOUR QUESTIONS AND GOALS!</b>	
<p>Which of them were or can be answered? What other question have appeared? Compare with the studies of other pottery categories and of other materials from the context.</p>	
<b>Go back to the studied material and sort it out again in order to proof your conclusions!</b>	

Fig. 11. Manual chart to amphora classification (Illustration: Věra Klontza-Jaklová).

one type of amphora<sup>13</sup> (e.g. the overlaps in the terminology of Aegean Amphorae in *Vroom 2005*).

Amphorae in the Byzantine Empire were still in use in the 13<sup>th</sup> century when they started to be replaced by wooden barrels in line with West European custom. Late amphorae are different and very distinctive, but their studies are still at an early stage (*Hayes 1992, 75*).

Despite all the problems outlined, it is possible to sketch the main characteristic amphorae types in use in the Aegean, although it is necessary to use the chart only for a first orientation rather than as an absolute rule (fig. 10) and it should be emphasized that complete or reconstructable vessel profiles are very rare.

Amphorae provide a quite exceptional source of information on many aspects of the economies and cultures among which they were so widely used but, in order to obtain accurately the rich historical perspective they present, they must be understood not only in context but in all their complexity (fig. 11).

### 3. Conclusions

Although much has been achieved in amphorae studies during the last 20 years, particularly via scientific analysis, which has yielded substantive results, there remain some historians who doubt the historical value of archaeological sources (*Anagnostakis 2008, 95*). Study of the amphorae (and archeology in general) can provide the “written” history with data answering causal questions or even give rise to new ones. In the case of amphorae these relate mainly to economic, social and technological aspects of life (*Eiring et al. 2004, 459*): “Amphorae (...) provide us not with an index of the transportation goods, but with direct witness of the movement of certain foodstuffs which were an essential part of Roman culture. It is hard to conceive any archaeological material better suited to further our understanding of Roman trade” (*Peacock – Williams 1986, 2*).

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<sup>13</sup> E.g. Robinson K114, Riley MR13, Hayes 7, Peacock-Williams 42, Beltrán 75, Ostia I: 451, Ostia IV: 440–441, Bjelajac III, Opait VII and Dyczeck 5 are different significations for one amphora type.



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## SPECIFIKA STUDIA BYZANTSKÝCH AMFOR V EGEJDĚ NA PŘÍKLADU LOKALITY PRINIATIKOS PYRGOS

Zlomky keramických „kontejnerů“ tvoří obvykle objemově největší část keramických souborů raně a středně byzantských kontextů (*Hayes 1992, 61*), přesto jejich studium ještě dnes představuje komplexní problém. Byzantské amfory navazují jak typologicky, tak funkčně na transportní keramiku, jejíž užívání ve Středomoří se datuje od střední doby bronzové, přičemž jsou přímými následovníky antických amfor. Raně byzantské amfory jsou tradičně studovány společně s pozdně římskými a jsou obvykle zahrnuty do databázi amfor tohoto období. Amfory jsou také studovány jako zvláštní kategorie bez ohledu na jejich chronologii (*Eiring – Lund eds. 2004*). Studium byzantských amfor je velmi mladým oborem (*Klontza Jaklova et al., v přípravě*), i když první článek o kolecích na amforách byl publikován již v polovině 19. století (*Stoddart 1850*). Zlomky nekolkovaných amfor byly donedávna ignorovány, případně skartovány (*Eiring – Lund eds. 2004, 11*). To se změnilo až po publikaci J. A. Rileyho (1979). Ještě dnes v některých oblastech a některých časových horizontech není možné amfory datovat jinak než stratigraficky (např. Kréta).

Při studiu byzantských amfor je třeba mít na zřeteli mnohá specifika týkající se především funkce, ale také způsobů produkce a distribuce tohoto keramického typu. Dosud nebyla publikována žádná souhrnná syntéza, která by byla nápomocna novým zájemcům o problematiku, popřípadě sloužila jako pomůcka pro terénní archeology, kteří nejsou nutně specialisty v oboru a pro něž je právě tento materiál značným problémem. Cílem tohoto příspěvku je alespoň částečně zaplnit tuto mezeru.

Amfory sloužily hlavně k hromadnému transportu drahých tekutin na velké vzdálenosti, přičemž většina amfor byla používána při transportu vína (*Hayes 1992, 61*). Zářmořský obchod s vínem a olejem byl velmi rozvinutý nejméně od mykénského období (*McGovern 2003*). Byzantské amfo-

ry jsou nalézány až na britských ostrovech, v Černomoří, podél toků velkých ruských řek i v jižní Skandinávii. Běžné jsou také na Balkáně, naopak chybějí ve vnitrozemí střední a západní Evropy.

Víno bylo běžné ve většině středomořských regionů, s přebytky se obchodovalo, současně se ale dovážela vína z jiných částí Středomoří. Amfory nechybějí v žádném z archeologických souborů dosud prozkoumaných center. Na lokalitě Priniatikos Pyrgos (obr. 1) byly v dřívě většině nalezeny zlomky importovaných amfor, přičemž byla potvrzena místní produkce amfor zdobených kombinovanou vlnicovou výzdobou (obr. 2). Také tzv. krétská amfora, běžná na ostatních krétských lokalitách, je zde výjimečným nálezem (obr. 3).

Amfora představovala pouhý obal, který sloužil výhradně k přepravě cenného nákladu. Víno se v amforách neuchovávalo po delší dobu, na místě určení bylo z amfor přeléváno do keramických zásobnic (obr. 4; 5). Obal byl obvykle při tomto procesu zničen; známa jsou celá tzv. amforová pohřebiště (*Rodrigues Almeida 1984*). V některých případech byly amfory znovu použity jako zásobní nádoby (obr. 5: b, c). Většina amfor se nachází v drobných zlomcích, což podstatně komplikuje rekonstrukci jejich tvaru a tudíž klasická typologická studium. Kompletní amfory se nacházejí buď ve skladištích, kde zůstaly in situ, nebo ve ztroskotaných lodích (*Bass – van Doornick 1982*). Z toho vyplývá, že velké koncentrace zlomků amfor, které není možné polepit, identifikují buď odpadiště, nebo jsou součástí konstrukčního horizontu (*Klontza-Jaklova v tisku b; Eiring et al. 2004, 464*).

Estetická stránka amfor je potlačena na úkor funkční. Typologie je poměrně omezená (obr. 7), ale ani velikostí, tedy objem, nejsou standardní. Při stavbě nádoby musela být zachována rovnováha mezi objemem a hmotností, amfory musely mít takový tvar, aby se při přepravě daly snadno skládat do sebe. Byzantské amfory (zvláště východostředomořské, datované od poloviny 6. století až do 8. století) jsou globulární, případně vejcovitého těla s výrazně velkými uchy, a nemají spodní výčnělek (angl. „toe“). Stěny nádoby musely být natolik tenké, aby jí zbytečně nepřidávaly na váze, ale zároveň natolik silné, aby nepraskaly při sebemenším nárazu. Jejich tvar se proto příliš neměnil po celou dobu jejich užívání. Jen těžko se rozlišují některé typy, které se užívaly s úspěchem po více než 500 let (např. LRA1 a jeho deriváty). Amfory se v Byzanci užívaly poměrně dlouho, a to až do 13. století, kdy začaly pod západoevropským vlivem převládat dřevěné sudy.

Klasické typologické metody z výše uvedených důvodů často selhávají. Nádoby jednoho typu byly rozšířeny beze změny na rozsáhlém území, často po dlouhou dobu. Při studiu amfor je velmi často a úspěšně využívána petrografie, která se stala standardní součástí typologických analýz. Znalost geologie studovaného regionu je nutná a úzká spolupráce s petrografem také. V součinnosti s tím je velmi důležité studovat stratigrafikované lokality s dlouhým trváním. Zvláště pro období 8. století a dále je téměř nemožné datovat amfory typologicky.

Dalším problémem při studiu amfor je také absence jednoznačně přijímané terminologie. V současnosti dochází ke snahám terminologii sjednotit (např. *Dupont 2000*) nebo stabilizovat pojmenování některých tvarů (*Yangaki 2005*). Pro některé typy existuje celá řada typových označení.

Je možné určit některé charakteristické tvary byzantských amfor užívaných ve východním Středomoří (obr. 10). K analýze amfor není možné přistupovat izolovaně; je součástí komplexního studia pramene (obr. 11).

Někteří historikové dosud pochybují o schopnostech archeologie (a studia keramiky zvláště) přispět k řešení zásadních historických problémů (*Anagnostakis 2008, 95*). Studium amfor je velmi důležitým oborem, neboť ilustruje mnoho aspektů lidské činnosti v minulosti, a může pomoci objasnit mnohé otázky ekonomických, politických a sociálních dějin (*Eiring et al. 2004, 459*).

Obr. 1. Poloha lokality Priniatikos Pyrgos (archiv projektu Priniatikos Pyrgos).

Obr. 2. Fragment těla amfory vyrobené pravděpodobně v regionu Kalo Chorio (kresba autorky).

Obr. 3. Tzv. krétská amfora (podle *Yangaki 2005*).

Obr. 4. Plnění a vyprazdňování zásobních nádob na víno. Mozaika „Svatba v Káni Galilejské“, klášter v Choře, Konstantinopol, počátek 14. století (podle *Anagnostakis 2008*).

Obr. 5. Priniatikos Pyrgos. a – keramický trychtýř nalezený za zásobní amforou (b, c); b – objemná amfora (patrně pocházející ze severní Afriky), sekundárně použitá jako zásobní nádoba (foto z archivu projektu Priniatikos Pyrgos); c – rekonstrukce zásobní amfory. Kresby autorka (a, c).

Obr. 6. Víčko na amforu, vyrobené z keramického střepu. Priniatikos Pyrgos (foto Chronis Nikolakopoulos).

Obr. 7. Sedm základních typů pozdně římských amfor (podle *Riley 1982*).

Obr. 8. Intaktní amphora z 8. století. Priniatikos Pyrgos (foto Chronis Nikolakopoulos).

Obr. 9. Nádoba na vodu z 19. století (Etnografické museum v Agios Nikolaos; foto autorka) a raně byzantská amfora (podle *Yangaki 2005*).

Obr. 10. Typologicko-chronologické schéma amfor užívaných v Egejdě (kresba autorky).

Obr. 11. Přehled postupu při zpracování a studiu keramických souborů obsahujících zlomky amfor (grafika autorky).

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