

# PRODUCTION, TRADE AND DISTRIBUTION OF AMPHORAS AND PITHOS IN SYRIA AND CILICIA IN LATE ANTIQUITY

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Since the Bronze Age, the provinces of Cilicia and Syria have exhibited dynamic commercial activity, particularly in ceramic production and exportation. This vitality continued into the Late Antique period. This study examines in detail the regional commerce, potential production centers, and distribution areas of ceramics – specifically amphorae and pithoi – produced in these regions during Late Antiquity. We evaluate amphorae types specific to Cilicia, including Agora M 239, Late Roman (LR) 1, Zemer 40, and Zemer 41 (Agora G 199). For Syria, we assess LR 4, LR 5/6, and Agora M 334 (LR 9/Beirut) amphorae. The pithoi discussed are vessel forms that have remained unchanged since early periods. Analogous evaluations were conducted with vessels from many settlements in Anatolia, as well as in Syria and Cilicia during the Late Antique period. These amphorae were predominantly used in maritime trade, exporting products like olive oil and wine to numerous settlements across the Mediterranean. While they were preferred for sea trade due to their ease of transport, pithoi were more commonly used in land trade. Amphorae were primarily produced in coastal production centers, whereas pithoi were produced in both coastal and inland settlements. Both containers were essential during the Late Antique period for storage, preservation, and commercial functions. Their widespread discovery throughout the Mediterranean region provides concrete evidence of active trade networks.

## INTRODUCTION

This study examines various forms of amphorae and pithoi produced in the regions of Cilicia and Syria during the Late Antique period. These vessels were primarily used for the trade and storage of olive oil and wine, key products of the region. Amphorae and pithoi manufactured in local ceramic workshops were distributed to various parts of the Mediterranean through interprovincial trade networks. Through typological and analogical analysis, the study seeks to reconstruct this trade network – largely facilitated by amphorae – along with its commercial potential and the associated maritime and overland trade routes. By mapping the distribution areas of the amphorae, the study aims to identify the export destinations of the goods they once contained. Pithoi, on the other hand, were generally utilized in rural contexts where large-scale storage was required. The analysis of their distribution patterns seeks to determine not only where these vessels were used, but also the nature and location of the storage facilities. The study aims to highlight the economic roles of amphorae and pithoi within broader trade systems by examining their production and distribution networks. It also investigates their connections to both urban centers and rural areas. Furthermore, it explores shifts in trade dynamics in response to political, social, and economic transformations during the Late Antique period. Ultimately, this research aims to assess the role of regional ceramic production centers in shaping the economic landscape of Anatolia, with particular emphasis on their contributions to interstate trade and patterns of distribution.

## Cilicia and Syria Province

Although the exact origin of the term “Cilician Region” remains uncertain, Egyptian sources suggest that the region was referred to as “Kedi” or “Kode” in the 12<sup>th</sup> c. BC (Koçak-Yaldir 2002, 4). Assyrian sources from the 8<sup>th</sup> c. BC indicate that Rough Cilicia was known as “Hilakku” and Lowland Cilicia as “Que” (Tekocak 2006, 4). According to Herodotus, the area was temporarily called “Hypachoea” before

it eventually became known as Cilicia, named after Cilix, the son of the Phoenician king Agenor, who is said to have settled there (*Hdt. VII*, 91). During this period, Cilicia fell under successive control by the Hittites, Assyrians, Persians, Greeks, and Romans (*Koçak-Yaldir 2002*, 4). The geographical boundaries of Cilicia shifted until the Roman Imperial Period (*Tekocak 2006*, 4). Before the Roman Imperial Period, the borders of the Cilicia Region initially extended over a wide area from the Kızılırmak (Halys) River in the north to Egypt in the south. Later, before the Roman Imperial Period, it is known that the borders of the Cilicia Region extended from the Manavgat (Melas) River, which was a more limited area, to the Amanus Mountains. In antiquity, based on geological features, Cilicia was divided into two regions: Rough Cilicia (Tracheia, Aspera, or Tracheiotis) and Lowland Cilicia (Pedias and Campestris; *Strabon 2000*, 5). These areas were separated by the Lamas (Limonlu) Stream (*Tekocak 2006*, 4, 5). Rough Cilicia extended from Koraksion (Alanya) to Soli Pompeipolis (Viranşehir), while Plain Cilicia stretched from Soli Pompeipolis to Alexandreia kat Isson (Iskenderun; *Koçak-Yaldir 2002*, 4). During the Roman period, Cilicia's boundaries encompassed the area from Cape Rhosus (Hızır) in the east to the Pyramus (Ceyhan) River, the Gulf of Issus, the Melas River in the west, the Mediterranean Sea to the south, and the southern slopes of the Bolkar Mountains to the north (*Tekocak 2006*, 4). The term "Syria" first appears in cuneiform inscriptions and hieroglyphs as early as the 3<sup>rd</sup> millennium BC. In Ugaritic literature, it is referenced as "Şıryan", while in Hebrew texts, it appears as "Siryon". The Greeks later defined the borders of Syria, encompassing an extensive area from the Taurus Mountains in the north to the Sinai Peninsula in the south, the Mediterranean in the west, and the Badiye Desert in the east (*Alalı 2017*, 1).

## ORIGIN, PRODUCTION AND USE OF AMPHORAE AND PITHOI

### Amphora

Ceramics, composed primarily of terracotta, have been crafted in diverse forms and types throughout human history to meet various needs and aesthetic preferences. These materials have been favored for their ease of production from widely available clay, making them economical and accessible (*Soydan 2023*, 37). Among the various ceramic forms, amphorae hold particular significance. They serve as tangible evidence of commercial activity, mobility, and the economy in the Ancient Period (*Bezdan 2023*, 34; *Bilir 2014*, 91). From this evidence, we understand that commercial amphorae were widely used in both land and maritime trade (*Keser 2019*, 19). Excavations in ancient cities, shipwrecks, and port sites have revealed amphorae in hundreds of different forms, illustrating the extensive commercial and cultural exchanges across the Aegean, Mediterranean, and Black Sea regions (*Öniz 2016*, 3). The term "amphora" originates from the Greek word *amphoreus* (ἀμφορεύς) or *amphiphoreus* (ἀμφιφορεύς). It derives from *amphi*, meaning "on both sides" or "mutual" and *pherein*, meaning "to carry" (*Bayrak 2011*, 9; *Bettles 2003*, 21; *Zemer 1977*, 1). The term describes a vessel designed to be carried by gripping it from two sides. The earliest reference to the word "amphora" appears on a Mycenaean clay tablet from the Achaeans – ancestors of the Greeks – dating to the latter half of the 2<sup>nd</sup> millennium BC. The tablet, inscribed with the Linear B syllabary, reads a-pi-po-re-we, which corresponds to *amphoreus* or *amphiphoreus* in Greek (*Doğer 1991*, 7). This syllabary is symbolized by a figure resembling a double-handled jug, underscoring the characteristic form of the amphora (*Dündar 2012*, 14).

The term "amphora" first appears in written sources in Homer's *Odyssey*, where Homer describes Telemachus storing wine in amphorae during his journey from Ithaca to Pylos (*Grace 1979*, 9). Amphorae were continuously produced from the Late Bronze Age through to the Byzantine Period, particularly in regions such as Western Anatolia and the Levant (*Yaman 2018*, 288), though they were known by various names over time. During the Roman period, they were referred to as *amphoras*, as *kouphon* in the Early Christian Period, and as *megarikon* or *magarikon* in the Byzantine Period (*Firat 2011*, 99). Despite these changes in terminology, their primary function remained consistent: amphorae served as commercial vessels, commonly referred to as commercial amphorae (*Akkurnaz 2016a*, 45). Commercial amphorae were integral to both the Greek and Roman worlds, primarily designed for the transport and sale of liquids and dry goods, although they were also utilized for storage purposes (*Firat 2011*, 99).

While commercial amphorae transported various liquid and dry goods, they primarily carried essential commodities like olive oil, wine, and fish oils, which were central to daily life in the Roman world and grew in significance within both production and trade (*Peacock/Williams 1986*, 31). Other items transported in amphorae included lamp oil, lard, butter, gum oil, milk, cheese, beer, vinegar, honey and

resin (Öniz 2016, 10). Additionally, terebinth resin, amber beads (Pulak 1991, 295), glass beads, turpentine resin, dried fruits, cereals, legumes, nuts, hazelnuts, almonds, walnuts, sesame, bitter almond (Öniz 2016, 10), pine nuts, pomegranates, figs, wheat, barley, coriander, black cumin, sumac, capers (Pulak 1995, 220, 221), olives (Keser 2019, 24), and meat were among the diverse goods transported. Fish products such as fish sauce, pickled fish, dried fish, smoked birds, and kipper were also included, along with items like poultry, ointments, eye paints, Arabic glue (Öniz 2016, 10), myrrh (a type of incense), various spices, fragrances (Grace 1979, 6, 7) and liquid pitch (Dündar 2012, 15). Apart from their commercial role, amphorae also served as funerary vessels. Larger amphorae were sometimes used for burial, particularly for infants and children, a practice that continued until the Early Byzantine Period. This custom may have been inspired by the vessel's resemblance to a mother's womb (Doğer 1991, 64). Additionally, amphorae were often used as grave goods; Homer, in the *Iliad*, describes how Achilles placed amphorae filled with olive oil and honey in the tomb of Patroclus (Doğer 1988, 22).

Beyond their role in wine fermentation, amphorae had numerous additional functions. They served as water carriers, flower pots, money storage containers, coolers, lime carriers, and even boundary markers. An unusual use of amphorae was as urinals for sanitation purposes; in Rome and Pompeii, amphorae were placed at street intersections and filled with urine, which blacksmiths then used – a practice noted by Pliny. Amphorae also served as makeshift toilets in military garrisons in Britain (Doğer 1991, 64). Broken amphora fragments were repurposed in various ways. They were used to fill abandoned wells and cisterns, line the walls of baths, ovens, and stoves for heat retention, and construct the walls of public buildings like theaters and stadiums. Fragments also served as flooring material for forums, roof tiles in buildings, infrastructure for sewage pipes within and outside cities, and as military decoys. According to Herodotus, amphora pieces were placed upright in trenches during wartime to break the legs of enemy horses falling into these traps (Doğer 1991, 65).

### Pithos

In scholar literature, large vessels with wide or narrow mouths, swollen bodies, and substantial capacities are referred to as pithoi. During the Roman period, these containers were known as *dolium* (Hilgers 1969, 58). These vessels, which lack a neck, could have either narrow or wide mouths, and their characteristic swollen shape classifies them as a type of standing jar (Akkurnaz 2016a, 50). Pithoi are generally categorized as rough-made vessels, often with thick walls and second-class workmanship, and their clay contains high amounts of coarse inclusions (Aydin 2019, 189, 190). These large and thick-walled containers often feature coarse stone and abundant lime inclusions within their paste structure, with some examples incorporating straw or grass fibers. These organic additives facilitated slight permeability, enabling the pithoi to “sweat” and thus keep the contents cool (Mimaroglu 2011, 141). Potters who specialized in making these vessels were known as *doliarii*, and the earlier term for these vessels, *calpar*, predates *dolium* (Akkurnaz 2016a, 50). The mouths of pithoi were sealed with stone or terracotta lids to preserve freshness and protect the contents, a practice referenced by the ancient writer Pollux (Akkurnaz 2016a, 59).

Since some pithoi were made with no base or with pointed bottoms, they were either buried in the ground or supported on three legs to provide stability (Akkurnaz 2016a, 59). Additionally, the bases of pithoi vary in design; some are wide and flat, while others are disk-shaped (Sezgin 2017, 43). Certain terracotta pithoi have capacities reaching approximately 790 liters and can stand up to 3 meters in height. The ancient writer Varro describes these large vessels, known as *dolium* (or pithos), as being used for wine storage (Akkurnaz 2016a, 50). Smaller pithoi are referred to as *pitharion* (Akkurnaz 2016a, 59). In the Roman Period, the Latin term for these vessels was *dolium* (singular), with the plural form *dolia* (Fidanci 2016, 5; Tekcam 2007, 177). During the Byzantine (Eastern Roman) Period, they were referred to as pithos in the singular and pithoi (πίθος, πίθοι) in the plural (Fidanci 2016, 5; Tekcam 2007, 177). The peak production and use of *dolia* occurred during the Roman Imperial period, driven by increased production, expanding trade networks, and the Roman Empire's dominance over the Mediterranean. From the 2<sup>nd</sup> to the 4<sup>th</sup> c. AD, *dolia* were actively traded across coastal settlements in Anatolia, mainland Greece, Italy, and Spain.

Although Late Roman ceramics declined with the Arab raids of the 7<sup>th</sup> c. AD, the trade of *dolia* and amphorae persisted, continuing into the middle Ages. Researcher Lane referred to the transport of pithoi during this period as the “Container Revolution” (Lane 1964, 213). Throughout the Byzantine Period, both large and small pithoi remained in use. Large pithoi served as tankers, water tanks, or cisterns, while smaller pithoi were used for everyday purposes, such as demijohns. In this period, pithoi became

smaller and adopted a more spherical shape compared to the Roman period, reflecting the reduced trade capacity of Byzantium in contrast to Rome. During the Byzantine Period, pithoi were widely employed in rural and agricultural areas for efficient storage and preservation. Transfers of goods from large to small pithoi were common in these regions, indicating localized rural production (Fidanci 2016, 21, 22). Pithoi were also used for water and grain storage in agricultural areas, where the water stored within was employed for irrigation. Notably, these pithoi were often rented seasonally by their owners to meet agricultural needs (Giannopoulou 2010, 45).

In the middle Ages, pithoi used by Armenian merchants, who played an active role in trade, were referred to as *karasy* (Fidanci 2016, 5). Spanish merchants of the period called these vessels *tinaja* (Bişkin 2019, 14), while Middle Eastern sources used the term *zir* (Cytryn-Silverman 2010, 103). In Modern Greek, pithoi are known as *pitharia*, and in Turkish, they are called *cubes*, a term derived from Arabic (Blitzer 1990, 677). Throughout history, pithoi have served a variety of purposes, primarily as storage containers, with their use documented extensively in publications. These vessels were generally employed to store, preserve, and protect both dry and liquid foods, or to transport them for trade (Tekocak 2006, 84). In antiquity, pithoi contained a wide range of products, including wine, olive oil, vinegar (Akkurnaz 2016a, 50, 51), olives, figs, grains, dried foods, honey (Akkurnaz 2016a, 59), flour, wheat, fruit, water (Kowarska/Lenarczyk 2012, 643; Tekocak 2006, 84), and a type of brine made from water and salt. They were also used to preserve items like cheese, meat, and fish by soaking them in brine. In addition to storage, pithoi were crucial for the fermentation of wines; during this process, the inner surfaces of the pithoi were often coated with pitch to prepare them for wine storage. This technique extended their utility to storing grains, brine, and various liquid substances (Akkurnaz 2016a, 50, 51).

Pithos were used as a refrigerator, keeping especially liquid products cool, thanks to their thick walls that contain a large amount of various additives (Hürmüzli 1995, 20; Mimaroglu 2011, 141, 142). An additional, lesser-known use of pithoi was as a game board for playing nine men's morris; a pithos found at Kadikalesi/Anaia bears scratched markings for the game, created with a pointed tool (Fidanci 2016, 6). Pithoi also served as water storage tanks, a function that continues in some areas today. In another use, fragments of thick-walled pithoi, particularly those broken during the Late Roman Period, were repurposed in wall construction (Fidanci 2016, 12–18; Giannopoulou 2010, 34). In addition to olive oil, wine, and vinegar, pithoi were used to store and preserve various foods, including olives, figs, grains, dried foods, and honey (Akkurnaz 2016a, 59, 60). Wine fermented in large, immovable pithoi was transferred to amphorae using kitchen tools like the *kyathos* (ladle) and *khone* (funnel), allowing for convenient consumption at the table and facilitating commercial transport to other regions. This data highlights the role of pithoi and amphorae in ancient production and trade systems (Kızıllarslanoglu 2016, 48). Remarkably, the form of these vessels changed very little over thousands of years, from the Bronze Age through Late Antiquity.

Moreover, the functions, socio-economic roles, symbolic significance, sizes, shapes, and decorations of pithoi have remained remarkably consistent over time. Examining the architectural characteristics and locations where pithoi – primarily used for storage – were found offers insights into local socio-economic structures. By analyzing these storage areas in conjunction with the presence of pithoi, we can gain critical information regarding the economic foundations of the city (Sezgin 2017, 43, 44). Unlike thinner-walled ceramics, pithoi were constructed in segments due to their size, which made them incompatible with traditional potter's wheels. Clay rolls, 3–5 cm in diameter, were formed into rings and shaped on the wheel. At this stage, the shoulder and upper body, the lower body, and the base were each prepared separately and then joined with binding clay. The mouth and handles were added afterward, allowing for the creation of both large and small pithoi (Sezgin 2017, 43). Pithoi were commonly used for storage in *villa rustica* farm settlements during the Roman Imperial and Late Roman Periods. Given their critical role in rural settlements, the production of pithoi was both more labor-intensive and costly than that of finer ceramics. The Roman Emperor Diocletian issued an edict in 301 AD, at the onset of the Late Antique Period, which set the price of a single pithos at 1,000 denarii – equivalent to more than five weeks of wages for a rural farmer (Akkurnaz 2016b, 69; Mimaroglu 2011, 141, 142).

Evidence regarding the price of pithoi suggests that individuals involved in grain production and storage in rural areas, such as landowners and olive oil merchants, could typically afford only two or three pithoi in their lifetime. This underscores the high economic value of pithoi and their substantial cost. As a result, pithoi were reused multiple times over many years. Artisans specializing in pithos production – a significant branch of ancient pottery – were known as *doliarii* (Akkurnaz 2016b, 69; Mimaroglu 2011, 141, 142). This specialized production continued into the Late Roman Period. Although pithoi from the Late Roman Period retained their traditional forms, their improved craftsmanship makes them easier to distinguish com-



pared to earlier examples. Additionally, slight variations in pithos design may be observed, reflecting the influence of local master potters and the specific characteristics of regional workshops (*Witnther-Jacobsen 2005, 290, 291*). The trade of pithoi began to be conducted systematically during the Late Roman and Early Byzantine Periods, specifically in Late Antiquity (*Lightfoot 2007, 278*). Manuscript evidence also indicates that pithoi were donated to monasteries in the Early Byzantine Period (*Figueras 1995, 434*). Given their high cost – valued at 1,000 denarii – pithoi represented a substantial economic asset. For instance, Theodosius, a priest from the Oboda (Avdat) Monastery in Israel, sent pithoi filled with wine or olive oil to a monastery in the city of Negev. In this period, the gifting of a large pithos between monasteries was not only a gesture of goodwill but also a symbol of political power and prestige (*Fidanci 2016, 11*).

## PRODUCTION AND DISTRIBUTION CENTERS OF AMPHORAS AND PITHOI IN CILICIA AND SYRIA

### Production Centers of Amphoras

During the Roman Imperial Period, Christianity was established as the official state religion. As Christianity spread further during the Late Imperial and Early Byzantine periods, interest in the Holy Lands grew, leading to an increase in pilgrimage journeys. These pilgrimages facilitated the transfer of products such as olive oil, wine, and sesame oil from the Levant to Roman provinces via commercial amphorae. This growing demand prompted an increase in both agricultural output and amphora production in the region (*Yaman 2018, 288*). In addition to the Levant, the Cilicia region was a major producer of olive oil, wine, and grain. The storage and distribution of olive oil, in particular, required a developed commercial infrastructure supported by amphora production. These goods were transported by land and sea to Rome in commercial amphorae (*Soydan 2023, 36*). Amphora production in Cilicia and Syria thus expanded in tandem with agricultural production, reflecting the regions' importance in supplying the Roman Empire.

In the Late Antique Period, amphora production sites emerged in various settlements. Four primary factors influenced the establishment of amphora kilns. First, agricultural lands were necessary for cultivating products like olives and grapes (*Öniz 2016, 26*). Second, because olive oil and wine were predominantly transported in commercial amphorae, production facilities needed to be close to areas where these products were processed, allowing for efficient bottling of liquid goods. Third, suitable clay deposits were essential for producing high-quality amphorae (*Doğer 1991, 65–67*). Finally, access to a port was critical for the distribution and marketing of the filled amphorae. In the Cilicia region, these four factors were particularly influential in kiln placement (*Öniz 2016, 26*). The wine and olive oil trade, which flourished during the Roman Imperial Period, continued into Late Antiquity. As a result, amphora kilns were constructed in Rough Cilicia at locations such as Syedra, Bıçkıcı, Anemurium, Antiocheia and Cragum, and along the Delice Stream; in Lowland Cilicia, they were established in Elaiussa Sebaste, Soli-Pompeipolis, Aigeai, Seleucia, Tarsus, and Kazanlı (*Öniz 2016, 30*). The expansion of agricultural production in both Rough (Cilicia Trachea) and Lowland Cilicia (Cilicia Pedias) created a need to export surplus goods, fostering the development of amphora production in the region (*Bilir 2014, 92*).

The rapidly expanding olive oil and wine industries in the region spurred the need for amphora production workshops to support international trade (*Öniz 2016, 26*). As a result, amphora kilns were established throughout Cilicia, becoming a significant revenue source for the Roman economy (*Bilir 2014, 92*). Excavations conducted by J. Russell in the city of Anemurium in Rough Cilicia uncovered an amphora kiln (*Williams 1989, 91–95*), while three additional kilns were discovered near Gazipaşa. In the far west of the region, the Syedra Kiln Site (SKS) is situated on a sand dune at the mouth of the Yeşilöz Stream, while the Bıçkıcı Kiln Site (BKS) lies at the mouth of the Bıçkıcı Stream. The Antioch Kiln Site (AKS) was identified adjacent to a school building in the southern village of the ancient city of Antiocheia ad Cragum (*Autret/Rauh 2010, 111*). In the vicinity of these three kilns, archaeologists identified mortaria used for crushing olives and lever press beds for extracting oil, suggesting the presence of integrated production complexes in these areas (*Autret/Rauh 2010, 115, 116*). Additional amphora production sites in Cilicia Pedias include Delice Çay, located about 2 km north of the Bıçkıcı Stream (*Autret 2012, 254*), and Elaiussa Sebaste, which hosts six amphora kiln sites in various parts of the city. There are kiln ruins to the east of Elaiussa Sebaste, along with another kiln site on a 5 meter-high hill about 500 meters west of the port. At Soli Pompeipolis, an LR 1 amphora bothros was found, and remnants of an amphora kiln were discovered in the ancient city of Aigeai, located in the Yumurtalık district of Adana (*Empereur/Picon 1989, 237, 241*).



Fig. 1. Map of the Eastern Mediterranean. Finds of amphora kilns in Cilicia, Syria, and Cyprus. Drawing author.

In Adana's Antioche du Pyrame (Karataş) settlement, a workshop was identified near the harbor entrance, where LR 1 amphorae and thin-walled ceramics were produced (Empereur/Picon 1989, 237). It is also believed that an amphora kiln existed around Şeytan River in Korykos (Öniz 2016, 35). In the ancient city of Tarsus, three amphora kilns were identified: one located along the Berdan (Cyndus) Stream and two outside the city limits (Autret 2012, 254). Additionally, an amphora dump site, used as a bothros, and a probable amphora workshop were found in Kazanlı, a settlement 10 km east of Mersin and 16 km southwest of Tarsus (Öniz 2016, 36). Numerous ceramic production centers also existed in the Syrian province. In Seleucia Pieria, located in the Gulf of İskenderun (Alexandretta ad Issum), an amphora kiln was identified (Empereur/Picon 1989, 236, 237). Another site at the beginning of the Northern Levant region is Rhusus, where an amphora kiln was discovered among the city's ruins. This kiln was first documented through surface research conducted by Jean-Yves Empereur and Maurice Picon in 1989 (Demesticha 2013, 70).

The production site in Beirut, known as BEY015, was active in ceramic production from the 2<sup>nd</sup> c. BC until the 7<sup>th</sup> c. AD (Reynolds 2005, 569). In Syria, Ras al-Bassit is situated to the north, with Latakia to the south, and the Orontes River mouth and Seleucia Pieria further north. During Paul Courbin's excavations from 1971 to 1984, Late Antique ceramic workshops were discovered in this area (Mills/Beaudry 2007, 745). Amphora production also took place in Amrit and Tartus, coastal settlements in the Northern Levant region of Lebanon (Reynolds 2005, 568, 594, pl. 7; fig. 46–54). In Jiyeh, ceramics were produced continuously from the 1<sup>st</sup> c. BC until the 7<sup>th</sup> c. AD (Wicenciak 2016, 628). Additionally, at the so-called "7<sup>th</sup> workshop" in Akko, a coastal settlement in the Eastern Levant, ceramics were produced from the 3<sup>rd</sup> to the 7<sup>th</sup> c. AD (Wicenciak 2016, 626, 627). Cyprus, adjacent to the Cilicia and Syrian provinces in the Eastern Mediterranean, was a significant center for maritime trade in antiquity and held a key geopolitical position in politics and art. Archaeological excavations on Cyprus have identified production sites for LR 1 amphorae, specifically in Zygi-Petrini, Paphos, Amathous, and Kourion (Fig. 1; Demesticha 2013, 270, 271; Taner 2022, 36).

### Types of Amphorae in the Study Area

In Late Antiquity, unique amphora types were produced in Cilicia and Syria, distributed across the Mediterranean via both maritime and land trade routes. This study examines several amphora types specific to the Cilician province, including Agora M 239, LR 1, Zemer 40, and Zemer 41 (Fig. 2). The first of

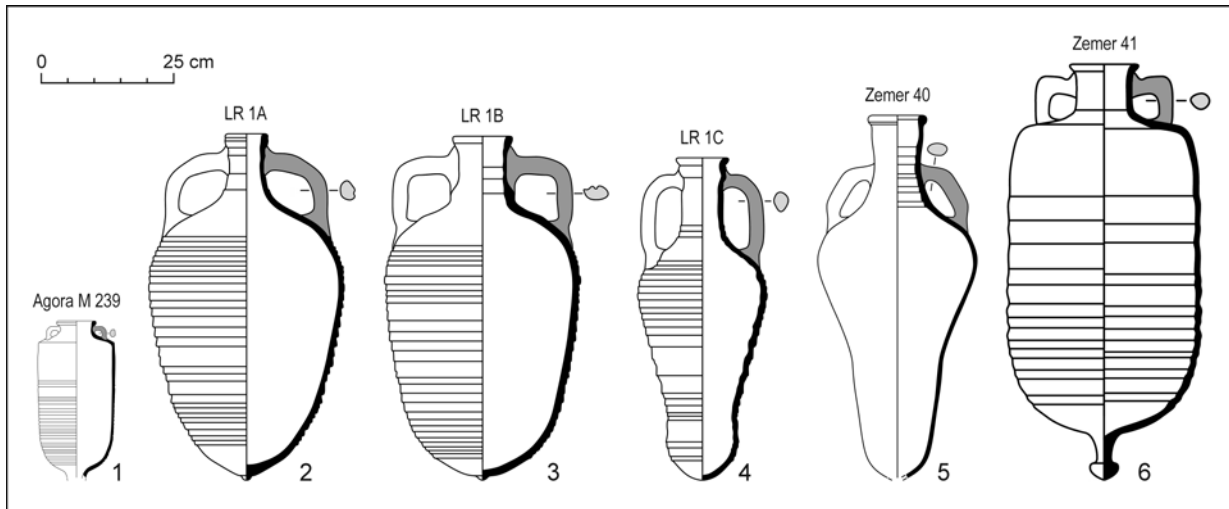


Fig. 2. Typology of Cilician amphorae. After Akkaş 2020, 373, fig. 3.5.6; Alkaç 2013, 114, fig. 8; Söğüt 2023, 25, fig. 3.6; Tekocak/Zoroğlu 2013, 138, fig. 9.

these, the Agora M 239 amphora, features an everted rim with a rounded and triangular profile, a wide, short neck, and a thick, oval handle that extends from the middle of the neck to the shoulder. Its body is grooved, and it has a conical base with a central hollow (Bilir 2014, 101). Produced extensively from the 1<sup>st</sup> to the 4<sup>th</sup> c. AD, these amphorae have been found not only in Cilician cities but also in diverse locations such as Beirut, the Sinai Peninsula, Egypt, Ephesus, Tomis, Pompeii, Athens, and Corinth (Alkaç 2013, 113). Samples of Agora M 239 amphorae were unearthed from Cnidus and date back to between the end of the 4<sup>th</sup> and the beginning of the 5<sup>th</sup> c. AD (Sözel 2023, 273, 274, 1070–1073, pl. 261–264; kat. no. 815–819).

### Agora M 239 Amphorae

Similar examples of Agora M 239 amphoras in Silifke Museum (Alkaç 2013, 113, 114, fig. 8) and İçel Museum (Şenol/Kerem 2000, 96; pl. 18; kat. no. 20) in Cilicia Region. Also another examples were unearthed in Anemurium (Reynolds 2005, 564, 588, fig. 5), Phaselis (Orhan 2023, 581, kat. no. 682), Türkler (Çaylak-Türker 2014, 271, 272, 277, fig. 2: 1), Kızılcaşehirkalesi (Çaylak-Türker 2014, 271, 272, 277, fig. 2: 12), Naula, Elikesik, Akkale and İncekum (Çaylak-Türker 2014, 271, 272, 277, fig. 3: 1) in Pamphylia Region.

### LR 1 Amphorae

The second amphora type specific to the Cilicia region is the LR 1 amphora, characterized by its rounded mouth, an oval, grooved handle extending from below the lip to the shoulder and merging with the body, an ovoid body, and a simple protruding base (Çibuk 2019, 59). In Cilicia, LR 1 amphorae were produced in locations such as Elaiussa Sebaste, Soloi, Karataş Aigai, Tarsus and Yumurtalık Bay, while in Syria, they were manufactured in Seleukeia Pieria. Production also occurred on the island of Cyprus in settlements like Amathous, Kourion, Zygi-Petrini, Paphos, and Panayia Ematouse (Alkaç 2012, 325, 326). Dominique Pieri and Andrei Opait classified LR 1 amphorae into three subtypes: A, B, and C (Öniz 2016, 31), a division further refined by Demesticha. According to Demesticha, LR 1A amphorae date to the 4<sup>th</sup> and 5<sup>th</sup> c. AD, LR 1B to the late 5<sup>th</sup> and 6<sup>th</sup> c. AD, and LR 1C to the 7<sup>th</sup> c. AD (Demesticha 2013, 172–176).

Samples of LR 1A amphorae were unearthed in Saraçhane (Hayes 1992, 64, 167, fig. 47; kat. no. 156, 157), Tripolis (Katırcı 2020, 44, 270, kat. no. 29–34; pl. 7) and Parion (Akkaş 2020, 399, kat. no. 253, 254) in Bithynia, Smyrna (Karcı-Ağlar 2015, 304, 305, 307, kat. no. 291–293, 295), Kyzikos (Erdem 2023, 98, 114, fig. 4: 2, 3), Klazomenai (Gürbüzer 2018, 145, 176, fig. 15: 59, 60), Erythrai (Kırkanlı 2022, 113, 164, fig. 5: 30) and Phokaia (Fırat 2023, 83, 84, 102, fig. 3: 6) in Asia, Myra (Tomay 2023, 334–349, kat. no. 107–134) in Lycia, Knidos (Doksanaltı 2020, 394, 415, fig. 8: 45–47) in Caria, Phaselis (Orhan 2023, 582, 583, kat. no. 683–685) and Syedra (Şengül 2023, 50, 51, 128, 129, kat. no. 120, 121, 150; fig. 12: 120, 121) in Pamphylia, Elaiussa Sebaste (Ferrazzoli/Ricci 2010, 817, 823, fig. 4: 20; 21), Kelenderis (Tekocak/Zoroğlu 2013, 119–121, 139, fig. 12–27), Mersin Museum – 34. Street Excavations (Söğüt 2023, 40, 91, 92, kat. no. 6–9), Anemurium

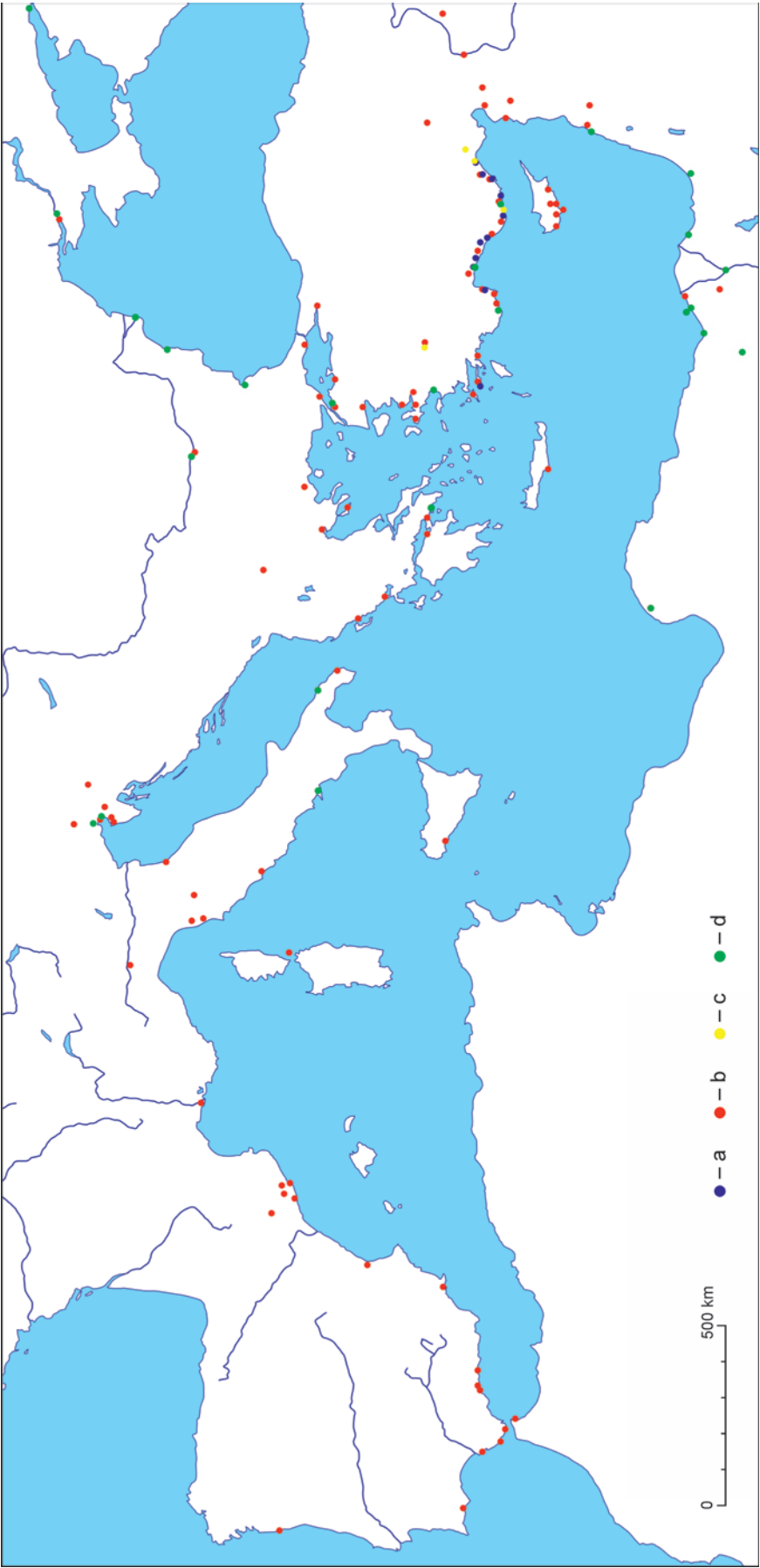


Fig. 3. Distribution map of Cilician amphorae in the Mediterranean. Drawing author. Legend: a – Agora M 239; b – LR 1 Amphorae; c – Zemer 40; d – Zemer 41.



(Reynolds 2005, 566, 567, 591, pl. 4; fig. 31; 32) and Soli-Pompeipolis (Autret/Yağcı/Rauh 2010, 205, 206, fig. 6) in Cilicia, Zeugma (Reynolds 2013, 100, 102, 139, 142), Antiocheia-Tayfur Sökmen Campus Excavation (Kılınçoğlu 2019, 213, kat. no. 129, 130; pl. 24), Dara (Tosun 2020, 218, 219, LR AMP 1; FORM 1, 2; kat. no. 84, 85), Ras Al-Bassit (Mills/Reynolds 2014, 134, 138, fig. 4: 11, 12) Beirut (Reynolds 2010, 110, fig. 7: u, v) and Damascus (Trégliat/Berthier 2010, 867, 868, 871, fig. 3: 8) in Syria, Akrotiri Bay (Leidwanger 2013, 182, fig. 1) in Cyprus, Alexandria (Şenol 2000, 313, 317, kat. no. 58–66, 180–182, 214, 215, 319–335, 369, 370, 386, 450–458) and Wadi Natrun (Konstantinidou 2010, 956, fig. 4: 1–3) in Egypt.

Samples of LR 1B amphorae in Kocaeli Museum (Çibuk 2019, 131, 136, kat. no. 24–29), and some examples were unearthed in Tripolis (Katırançı 2020, 44, 270, kat. no. 35–53; pl. 8–10), Yayabaşı Village (Bilgin-Kopçuk 2022, 230, pl. 10; kat. no. 141), Parion (Akkaş 2020, 400–408, kat. no. 254–266, 269, 270) and Antandros (Açar 2017, 123–127, kat. no. 71–73) in Bithynia. Some examples are in İzmir Archaeology Museum (Sezgin/Şenol/Cankardeş-Şenol 2022, 140–147, kat. no. 102–109) and another examples were unearthed in Smyra (Karcı-Ağlar 2015, 309, kat. no. 299), Klazomenai (Gürbüzer 2018, 145, 176, fig. 15: 61) and Erythrai (Kırkanlı 2022, 113, 164, 165, fig. 5: 31; 6: 32, 33) in Asia, Knidos (Doksanaltı 2020, 394, 415, fig. 8: 48–51) and Miletos (Lüdorf 2006, tab. 16A: 109) in Caria, Myra (Tomay 2023, 349–378, kat. no. 135–190) and Limyra (Çömezoğlu 2014, 667, 674, fig. 8a; Vroom 2004, 294–296, fig. 3) in Lycia, Phaselis (Orhan 2023, 583–585, kat. no. 686–689), Side (Alanyalı/Erkoç 2019, 3, fig. 2: 6) and Syedra (Şengül 2023, 50, 51, 129, 135, kat. no. 122–131, 150–152; fig. 12; 13; 14: 122–131) in Pamphylia, Kelenderis (Tekocak/Zoroğlu 2013, 121, 122, 140; fig. 28–34), in Silifke Museum (Alkaç 2013, 114, 115, fig. 9), Elaiussa Sebaste (Ferrazzoli/Ricci 2007, 677, fig. 2a), Soli-Pompeipolis (Autret/Yağcı/Rauh 2010, 206 fig. 7; 8) and Korykos (Alkaç 2012, 333, 334, 341–344, fig. 4–14) in Cilicia.

Also, in Anemurium (Korkmaz/Tekocak 2023, 29, 38, pl. 5: 20), Mersin Museum-34. Street Excavation (Söğüt 2023, 45, 93–126, kat. no. 10–111), in İçel Museum (Şenol/Kerem 2000, 94, pl. 17, kat. no. 17) and Şarköy (Körsulu 2011, 262–266; pl. LVIII–LVIX; kat. no. 229–231) in Cilicia, Antiokheia-Tayfur Sökmen Campus Excavation (Kılınçoğlu 2019, 214, kat. no. 131; pl. 24), Zeugma (Reynolds 2013, 100; 142), Dara (Tosun 2020, 218, 219, LR AMP 1 FORM 3-4, kat. no. 86–105), Ras Al-Bassit (Mills/Beaudry 2010, 863, fig. 4a A32, A1.2.), Sergilla and Qal'at Sem'an (Pieri 2005, 586, 594, fig. 7: 39–50) and Beirut (Pieri 2007, 315, 316, fig. 3; 4) in Syria, Panayia Ematousa (Jacobsen 2005, 626, 634, fig. 7), Amathous (Empereur 2018, 183–185, fig. 1–3), Kourion (Demesticha 2013, 172, 173, 176, fig. 1–3), Paphos (Gabrielli/Jackson/Kaldelli 2007, 793, 800, fig. 4: 6), Akrotiri Bay (Leidwanger 2013, 183, fig. 4) and Cape Zevgari shipwreck (Leidwanger 2013, 185, fig. 10) in Cyprus, Alexandria (Şenol 2000, 371, 401, 458–464, kat. no. 183, 336–349, 401) and Wadi Natrun (Reynolds 2005, 567, 591, fig. 34; pl. 4) in Egypt.

Similiar samples of LR 1C amphorae were unearthed in Knidos (Sözel 2023, 281, 282, 1082–1085, pl. 273–276; kat. no. 862–869) in Caria, Myra (Tomay 2023, 378–383, kat. no. 191–200) in Lycia, Naula (Antalya) and Gazipaşa (Antalya; Çaylak-Türker 2014, 273, 277, fig. 2: 3, 4) in Pamphylia, Mersin Museum-34. Street Excavation (Söğüt 2023, 46, 127, kat. no. 112, 113) and in Silifke Museum (Alkaç 2013, 115, fig. 10) in Cilicia, Zeugma (Reynolds 2013, 100, 132) in Syria, Amathous (Empereur 2018, 182, 183–185; tab. 1) and Limassol (Demesticha 2013, 173, 177, fig. 4) in Cyprus.

### Zemer 40 Amphorae

The third amphora type specific to Cilicia, the Zemer 40, features a rounded mouth projecting outward, a long conical neck that widens from the rim to the shoulder, and a grooved, oval handle positioned between the lower neck and shoulder. Its body is conical with a hollow, pointed base, and these carrot-shaped amphorae were commonly used for transporting wine (Bilir 2014, 102). Similar examples of Zemer 40 amphorae in the Mersin Museum (Bilir 2014, 102) and İçel Museum (Şenol/Kerem 2000, 93, pl. 17; kat. no. 16) in Cilicia. Also another examples were unearthed in Tripolis (Katırançı/Duman 2022, 341, 360, pl. 3: 17) in Bithynia and Kelenderis (Tekocak/Zoroğlu 2013, 114–116, 138, fig. 8–10) in Cilicia.

### Zemer 41 Amphorae

The fourth type, the Zemer 41 (Agora G 199) amphora, has an everted rim and a short, cylindrical handle descending sharply from the neck to the shoulder, with the handles vertically separated from the center to each side. This amphora has a cylindrical body with a mushroom-shaped base (Karcı-Ağlar 2015, 300, 301). Samples of this amphora type were unearthed in Parion (Akkaş 2020, 369, 370–372, kat. no. 241, 242, 244–246) in Bithynia, Myra (Tomay 2023, 383–406, kat. no. 201–246) in Lycia, Side (Alanyalı/Erkoç 2019, 3, 4, fig. 2: 21, 22) in Pamphylia, Kelenderis (Bilir 2014, 98; Tekocak/Zoroğlu 2013, 113, 114, 137, fig. 4–7) in Cilicia and Alexandria (Şenol 2000, 448–450, kat. no. 315–318) in Egypt (Fig. 3).

### Syrian and Levant Amphora Types

LR 4, LR 5/6 and Agora M334 amphoras are amphora types specific to the Syrian region evaluated within the scope of this study (Fig. 4). The LR 4, LR 5/6, and Agora M 334 amphorae were produced in Syria and Southern Palestine (Yaman 2018, 351). LR 4 amphorae are characterized by a slightly everted, rounded rim, a long cylindrical body, and a grooved conical base. They feature short, oval, vertically oriented handles on the shoulder that resemble small ears (Yaman 2018, 352). In 2005, D. Pieri classified LR 4 amphorae into types A and B, with further subdivisions into A1, A2 and B1, B2, B3 (Akkaş 2020, 410). Evidence from ceramic kilns and bothroi indicates that LR 4 amphorae were produced in various locations outside Gaza, including the region between Pelesium and the Negev on Palestine's southern coast, as well as in Ashdod, the Nile Delta, south of El Arish, and areas like Mefalsim, Bohu, H. Pattish, and Giv'at Amon (Karcı-Ağlar 2015, 322, 323). LR 4 amphorae were produced from the 1<sup>st</sup> c. until the mid-7<sup>th</sup> c. AD, with Gaza as a prominent production center from the 4<sup>th</sup> c. onward. As their commercial use expanded from the 4<sup>th</sup> c., these amphorae were exported to regions including the Eastern Mediterranean, the Western Black Sea coast, Southern France, and Italy.

Although found in limited quantities in Black Sea region settlements, these amphorae were among the most commonly used during the Late Antique period. They are known to have contained Gaza wine, sesame oil (Alkaç 2013, 115), fish sauce, and fish remains (Kızırlarslanoğlu 2016, 198). Gaza white wine is referenced in ancient sources by terms such as Vinum Gazetum, Gazetine, and Gazeticum, with „Gaza“ itself becoming synonymous with wine in the 5<sup>th</sup> and 6<sup>th</sup> c. AD. The renown of this wine, produced in Gaza, spread across the Mediterranean, leading to its widespread export. The rise of Christianity and the growth of the population in Palestine during this period drove an increase in both the production and consumption of wine, further boosting wine production and trade from Gaza (Kızırlarslanoğlu 2016, 197).

### LR 4 Amphorae

Samples of LR 4 amphorae were unearthed in İstanbul Yenikapı Excavation (Wohmann 2016, 70, fig. 1–17; pl. 1; 12), İstanbul-Saraçhane (Hayes 1992, 67, 68, 167, fig. 47; kat. no. 168, 169), Bathonea (Kara 2021, 80, 81, fig. 10), Tripolis (Katırcı 2020, 50, 274, kat. no. 54–61; pl. 11) and Parion (Akkaş 2020, 421–426, kat. no. 271) in Bithynia, Erythrai (Kırkanlı 2022, 115, 165, fig. 6: 35, 36), Phokaia (Fırat 2023, 85, 86, 102, fig. 4: 8) and in İzmir Archaeology Museum (Sezgin/Şenol/Cankardeş-Şenol 2022, 137, kat. no. 101) in Asia, Knidos (Sözel 2023, 288–291, 1096–1099, pl. 287–290; kat. no. 908–916) in Caria, Arykanda (Yaman 2018, pl. 69; 70; kat. no. 460–468), Myra (Tomay 2023, 407, 408, kat. no. 248–250) and Patara (Korkut 2007, 164, 165, fig. 11: 662–664) in Lycia, Phaselis (Orhan 2023, 588, kat. no. 696) in Pamphylia, Mersin Museum-34. Street Excavation (Söğüt 2023, 57, 58, 130, 131, kat. no. 123, 124), in Silifke Museum (Alkaç 2013, 116, fig. 11) and in İçel Museum (Şenol/Kerem 2000, 90, pl. 16; kat. no. 10) in Cilicia. Zeugma (Reynolds 2013, 100, 103, 127, 139, 142, 154, 157), Beirut (Pieri 2007, 318, fig. 6), Horvat Uza (Reynolds 2005, 574, 606, fig. 149) and in Haifa National Museum (Zemer 1977, 61, pl. 18; kat. no. 50), in Syria, Amathous (Empereur 2018, 183, 187, 188, fig. 4: 5) and Avdimou Bay (Leidwanger 2013, 187, fig. 13; 14) in Cyprus, Caesarea (Reynolds 2005, 574, 606, fig. 140–144), Ostrakine (Gabrielli/Jackson/Kaldelli 2007, 793, 800, fig. 4: 4), Wadi Natrun (Konstantinidou 2010, 957, fig. 5: 7–12) and Alexandria (Şenol 2000, 336–339, kat. no. 109–115, 244, 385–389, 404, 483–486) in Egypt.

Also, in Barcelona (Dominguez 2005, 153, 161, fig. 3; kat. no. 9–13), Palau Requesens (Monfort/Millet 2005, 165, 175, fig. 5), Bracara (Braga; Morais 2005, 57, 66, fig. 3; kat. no. 14–17) and Ilesso (Guissona, Lleida; Uscatescu/Jimenez 2005, 84, 85, 100, fig. 3; kat. no. 46). Marseille (Bien 2005, 292, 297, fig. 3; 8; kat. no. 1, 3–5), Lyon (Vallet/Lemaitre/Schmitt 2010, 216, fig. 7: 17), Notre Dame Chapel (Sciallano/Sibella 1991, 104), Otranto (De Mitri 2005, 414, 421, fig. 6; kat. no. 7), Trentino (Maurina/Capelli 2007, 482, 486, fig. 6: 8, 9), Domus Tibertiana (Carboni 2010, 418, 424, fig. 9: 5), Tergeste (Degrassi et al. 2010, 580, 584, fig. 5: 21), Classe (Cirelli 2014,

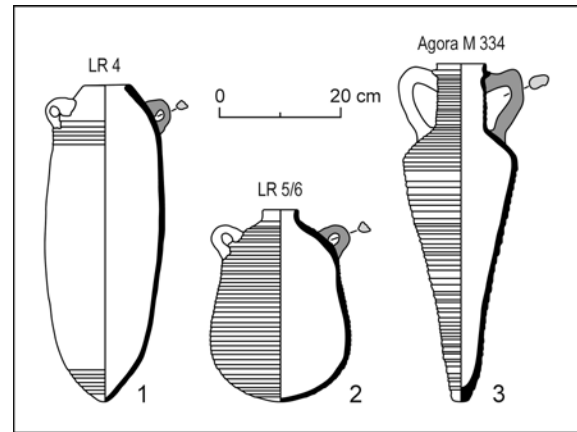


Fig. 4. Typology of amphorae from Syria and the Levant. After Akkaş 2020, 411, 427, fig. 3.6.2; 3.6.4; De Vingo 2005, 353, fig. 3.

552, fig. 9), Koper (*Perko/Zupancic* 2005, 523, fig. 7; 8; kat. no. 5, 6, 7–9), Tonovcov Grad (*Modrijan* 2010, 687, 691, fig. 3: 2), Thessaloniki (*Akrivopoulou/Slampeas* 2014, 288, 293, fig. 3), Megara (*Korosis* 2014, 305, 310, fig. 9), Tanais (*Sazanov* 2007, 813, fig. 5: 1), Chersonesos (*Sazanov* 2007, 813, fig. 5: 2–10, 15–17, 20–26), Novae (Bulgaria; *Klenina* 2010, 1007, 1014, fig. 7: 3), Tsibilium (*Sazanov* 2007, 813, fig. 5: 11–14), Ilichovka (*Sazanov* 2007, 813, fig. 5: 18, 19), Butrint (Albania; *Reynolds* 2010, 96), Tomis (Romania; *Opait* 2021, 84, fig. 2a, b), Murighiol (Romania; *Philippi – Greece; Opait* 2021, 84, fig. 4a, b; *Zachariadis* 2014, 706, 707, 711, 712, fig. 9; 12), Kanistro (Greece; *Vasiliou/Tsigarida* 2014, 724, 735, fig. 5; 10: 10, 11) and Athens (*Opait* 2021, 84, fig. 1a, b).

### LR 5/6 Amphorae

LR 5/6 amphorae were produced from the 1<sup>st</sup> to the 9<sup>th</sup> c. AD. Also known as “Bag-Shaped” amphorae, they are characterized by a rounded, high mouth profile, lack of a neck, double ear-shaped handles, a bag-like body, and frequent horizontal grooves running from below the neck to the base. Riley’s study of amphorae from the Caesarea Hippodrome categorized these examples separately as LR 5 and LR 6. In 1977, Egloff classified these amphorae into five types, a categorization that Pieri later refined and expanded upon in greater detail (*Tomay* 2023, 88). Samples of LR 5/6 amphorae were unearthed in Tripolis (*Katıranlı* 2020, 56, 276, kat. no. 72–76; pl. 13) and Parion (*Akkaş* 2020, 436–438, kat. no. 282–287) in Bithynia, Erythrai (*Kırkanlı* 2022, 116, 117, 165, fig. 6: 37) in Asia, Myra (*Tomay* 2023, 409–412, kat. no. 251–257) and Limyra (*Marksteiner/Schuh* 2008, 45, fig. 6) in Lycia, Naula (*Çaylak-Türker* 2014, 273, 277, fig. 2: 6) in Pamphylia, Anemurium (*Williams* 1989, 98, 99, fig. 60; 61; kat. no. 577, 578) and Elaiussa Sebaste (*Ferrazzoli/Ricci* 2007, 679, fig. 4: 4, 5) in Cilicia, Antakya Hippodrome Excavations (*Pamir* 2016, 306, 307, fig. 5), Zeugma (*Reynolds* 2013, 100, 103, 132, 137, 142, 146, 148, 154, 157, fig. 13), Dara (*Tosun* 2020, 216, 217, LR AMP 5/6 FORM 1; kat. no. 81) and Beirut (*Reynolds* 2018, fig. 3; kat. no. 9, 10) in Syria, Caesarea (*Gabrielli/Jackson/Kaldelli* 2007, 793, 800, fig. 4: 7) and in Haifa National Museum (*Zemer* 1977, 69, pl. 20; kat. no. 56) and Amathous (*Empereur* 2018, 183, 188, 189, fig. 5) in Cyprus, Alexandria (*Şenol* 2000, 344–347, kat. no. 128–133, 398, 399, 490, 491) and Wadi Natrun (*Konstantinidou* 2010, 957, fig. 5: 16) in Egypt. Also, in Iesso (*Uscatescu/Jimenez* 2005, 85, 100, fig. 3; kat. no. 47), Marseille (*Bien* 2005, 292, 297, fig. 3: 8; kat. no. 4, 6–8), Via de Castellani (*Pecci/Salvini/Cantini* 2010, 363, 366, fig. 1: 91, 92), Domus Tiberiana (*Carboni* 2010, 418, 424, fig. 9: 6), Tergeste (*Degrassi et al.* 2010, 580, 584, fig. 5: 20), Classe (*Cirelli* 2014, 552, fig. 9), Tonovcov Grad (*Modrijan* 2010, 687, 691, fig. 3: 7–9), Gortina (*Portale* 2014, 479, 489, fig. 16: 12), Tanais (*Sazanov* 2007, 814, fig. 6: 1), Novae (*Klenina* 2010, 1007, 1014, fig. 7: 5), Dichin (*Swan* 2007, 841, fig. 3: 17), Chersonesos (*Klenina* 2010, 1007, 1014, fig. 7: 6), Panticapaeum (*Opait* 2021, 85, fig. 1a, b), Ilichovka (*Sazanov* 2007, 814, fig. 6: 3), Capidava (*Opait* 2021, 85, fig. 2a, b), Butrint (*Reynolds* 2010, 96), Philippi (*Zachariadis* 2014, 706, 707, 711, 712, fig. 9; 14) and Pefkochori (*Vasiliou/Tsigarida* 2014, 724, 734, 735, fig. 8: 30; 10: 39).

### Agora M 334 Amphorae

The Agora M 334 amphorae are characterized by a rounded, necked mouth profile, a cylindrical neck, oval vertical handles curving from the mouth to the shoulder, and a grooved body tapering from the shoulder to the bottom, giving them a carrot-like shape with a hollow base (*Yaman* 2018, 292). These amphorae are categorized into three types: the most common is carrot-shaped; another has an oval body with a flat profile; and a third type has a spherical body with a rounded bottom (*Karçı-Ağlar* 2015, 333). Agora M 334 amphorae are identifiable by shoulder seals bearing the inscriptions “COLONIA BERYTUS” or “BER” (*Akkaş* 2020, 439). Petrographic and clay analyses indicate that these amphorae were manufactured in settlements such as Akko, Tyre, Ptolemais, Horvat Masref, and Horvat Eitayim. Dominique Pieri further divided these amphorae into three subtypes based on variations in mouth profiles. Produced between the 4<sup>th</sup> and 7<sup>th</sup> c. AD, these commercial amphorae were widely exported to the Eastern and Western Mediterranean, Anatolia, and coastal areas of mainland Greece, primarily for wine transport (*Yaman* 2018, 292). In Eastern Mediterranean trade during the Roman era, particularly under the Pax Romana, the renowned wines of Beirut were frequently shipped in these amphorae (*Tomay* 2023, 90).

Samples of Agora M 334 amphorae were unearthed in Tripolis (*Katıranlı* 2020, 52, 62–71, kat. no. 275; pl. 12), Parion (*Akkaş* 2020, 445–447, kat. no. 288–293), and İstanbul (*Reynolds* 2005, 603, fig. 121; pl. 16) in Bithynia, Pompeiopolis (*Opait* 2021, 85, fig. 8) in Paphlagonia, in İzmir Archaeology Museum (*Sezgin/Şenol/Cankardeş-Şenol* 2022, 132, kat. no. 98) in Asia, Arykanda (*Yaman* 2018, kat. no. 469; pl. 70) and Myra (*Tomay* 2023, 412, kat. no. 258) in Lycia, Elaiussa Sebaste (*Ferrazzoli/Ricci* 2007, 678, fig. 3: 1–3) and Anemurium (*Korkmaz/Tekocak* 2023, 29) in Cilicia, Zeugma (*Reynolds* 2013, 103, 154), Dara (*Tosun* 2020,

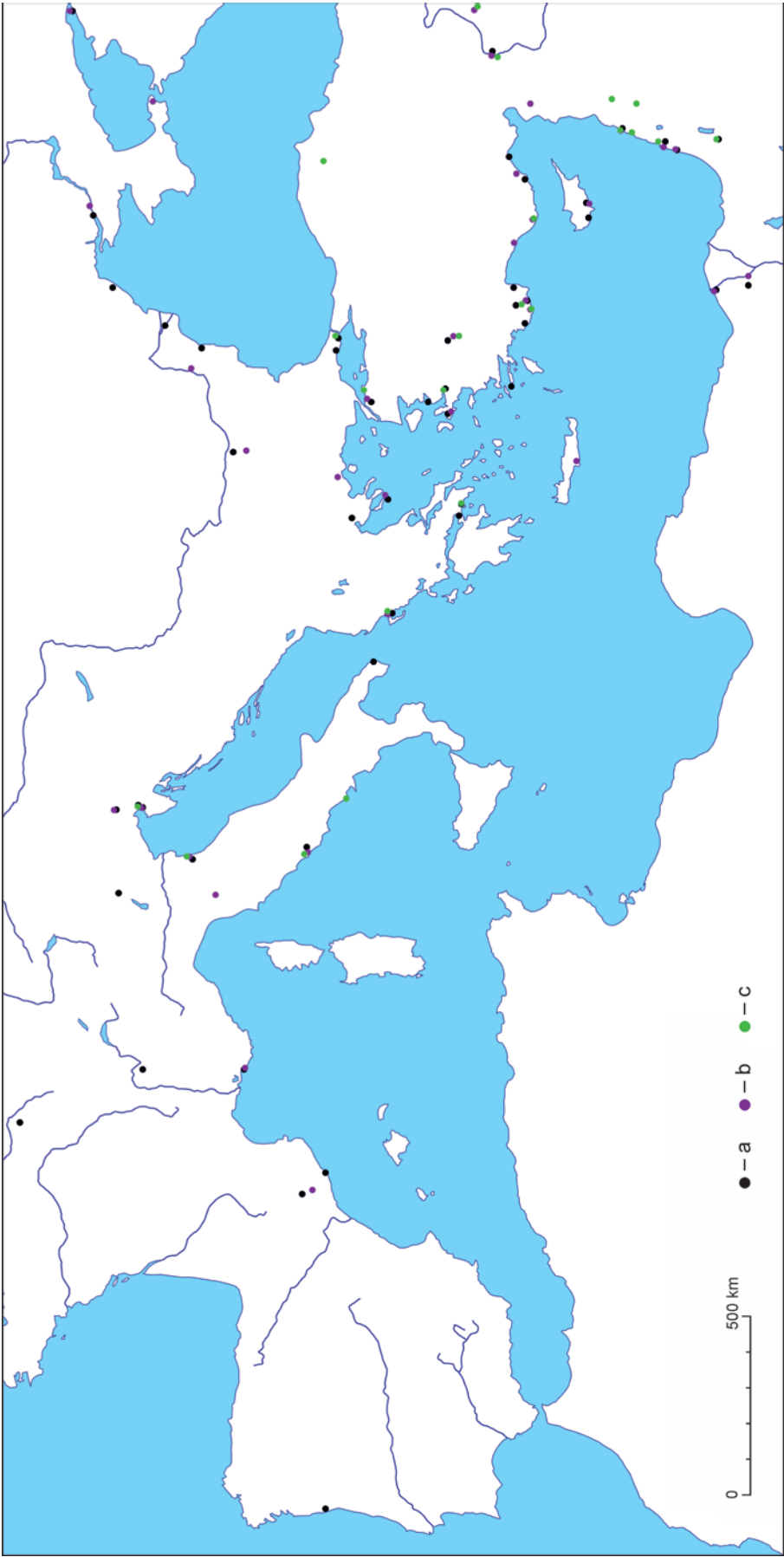


Fig. 5. Distribution map of amphorae from Syria and the Levant. Legend: a – LR 4 Amphorae; b – LR 5/6 Amphorae; c – Agora M 334. Drawing author.



211, 213, LR AMP 9 FORM 1–5; kat. no. 63–80), Damascus (*Tréglia/Berthier* 2010, 867, 868, 871, fig. 3: 1–7), Akko (*Reynolds* 2005, 602, fig. 104–113; pl. 15), Chhim (*Reynolds* 2005, 603, fig. 117; 118; 120; pl. 16), Beirut (*Pieri* 2007, 321, fig. 9), Baalbek (*Hamel* 2010, 882, fig. 11) and Horbat Uza/Khirbet Aiyadiya (*Wicenciak* 2016, 630, 632, fig. 2; kat. no. 2a, b) in Syria Domus Tiberiana (*Carboni* 2010, 418, 424, fig. 9: 8), Tergeste (*Degrassi et al.* 2010, 580, 584, fig. 5: 19), Neapolis (*Carsana/Del Vecchio* 2010, 459, 460, 467, fig. 4: 16), Classe (*Cirelli/Cannavici* 2014, 963, 968, fig. 4: 1–3), Butrint (*Reynolds* 2010, 96) and Athens (Fig. 5; *Kouveli* 2014, 751, 758, fig. 21).

### Production Centers of Pithoi

Research initially identifies various parameters for ceramic production workshops. Pithoi production workshops were structured for seven distinct purposes. First, there were individual workshops where artisans produced ceramics solely for household needs and limited local distribution. Second, larger dispersed workshops catered to local distribution on a broader scale. Third, autonomous workshops engaged in small-scale industry-based production aimed at regional consumption, offering specialized products tailored to community needs. Fourth, large regional workshops produced ceramics not only for local communities but also for wider regional markets. Fifth, some workshops operated seasonally, with craftsmen producing ceramics specifically to meet the administrative needs of a feudal lord or elite group. Sixth, elite-focused workshops employed full-time craftsmen to create goods exclusively for an elite clientele or for specific administrative uses. Finally, large, specialized workshops staffed by full-time artisans and skilled personnel produced items for select customers and high-level administrative purposes (*Giannopoulou* 2010, 51).

These workshops were designed to serve various needs and operated in different forms. The first type was the simple workshop, typically a roofed structure located in or near local settlement areas. In some of these workshops, ceramics were produced on a potter's wheel, while others relied on non-wheel techniques. These areas often included a secure storage space or warehouse to keep prepared clay accessible near the kiln area (*Giannopoulou* 2010, 52). The second type was the open-air workshop, which operated seasonally in designated spaces.

Initially, master potters traveled to different locations, but later, permanent workshops were established. These hut-like structures allowed potters to shape and produce orders, often called *pactone*, directly on the wheel. While most orders were given verbally, some written agreements also existed (*Giannopoulou* 2010, 52, 53). The third type of workshop involved itinerant masters who produced pithoi in small, individual workshops. These traveling craftsmen established workshops in areas where raw materials and agricultural production were accessible, tailoring production to local needs. This localized approach reduced the logistical challenges of transporting large pithoi over long distances, as pithoi were made directly in the regions where they were needed (*Giannopoulou* 2010, 53). Fragments of the mouth or body of these pithoi, dating to the Late Antique period, are commonly recovered. In some cases, nearly complete vessels have been found buried in situ. The pithoi can be classified into several types based on the shape of their bodies, including pear-shaped, egg-shaped, and inverted pear-shaped forms (Fig. 6; *Fidanci* 2016, 26)

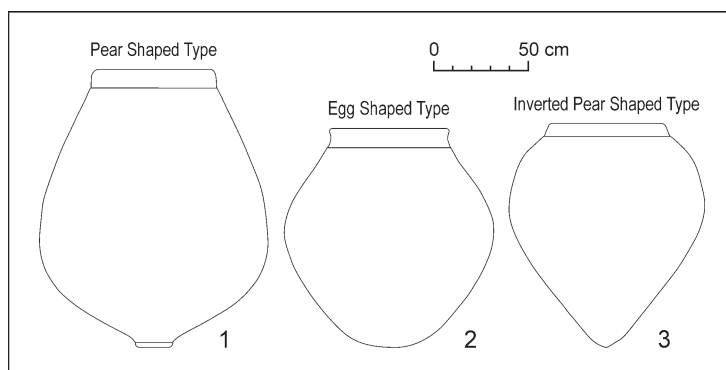


Fig. 6. Different types of pithoi according to body shape. Drawing author.

### Distribution Areas of Pithoi

Pithoi have been documented in numerous settlements across Cilicia dating to the Late Antique Period. At Kelenderis, rim and base fragments of pithoi uncovered in excavations date between the 5<sup>th</sup> and 7<sup>th</sup> c. AD (*Tekocak* 2006, 84, 85, pl. 57; 58; kat. no. 301–305). Surface research conducted around Alanya,

including at the settlements of Kızılcaşehir Castle, Akkale, and Elikesik, also revealed pithos rims dating to the 5<sup>th</sup>–7<sup>th</sup> c. AD (Çaylak-Türker 2009, 215, 216). In the Toslak (Augai) region of Alanya, unglazed pithos rims and lids used for storage were unearthed. These coarse and crudely made pieces are considered to be locally produced and are attributed to the Early Byzantine Period (Doğan 2008, 389, 390). As part of the Göksu Archaeology Project, an extensive surface survey was conducted in the area between Mut and Karaman. Here, 403 pithos fragments were discovered within a 10-square-meter area near Church Hill in the Kıravga settlement, indicating that the church may have served as a storage site. All ceramics from this survey are dated to the Roman and Early Byzantine periods (Elton 2006, 332). In Syedra, Late Roman Period pithos samples, likely of local origin, were uncovered in workshop areas alongside vessels such as amphorae, mortaria, and kardopoi. The presence of locally produced pithoi near an amphora kiln suggests that pithos production was also undertaken within the city (Kızıllarslanoğlu et al. 2017, 245).

Numerous pithos fragments have been unearthed in various locations within the theater of the Ancient City of Diocaesarea, a mountainous settlement in Cilicia. A total of 18 pithos fragments were analyzed, classified into three types, and dated to between the 5<sup>th</sup> and 7<sup>th</sup> c. AD (Uçar 2022, 75–77, 246–253, kat. no. 290–305). Pithoi from both the theater area and the monastery in the Olba Ancient City were similarly dated to the 6<sup>th</sup>–7<sup>th</sup> c. AD (Aydın 2019, 190, 191, 464–478, kat. no. 218–231; pl. 109–116). In Olba, pithoi (or dolia) were discovered within the monastery complex, located near northern agricultural zones. The presence of a designated cellar, along with olive oil and wine workshops and these pithoi, suggests that the building was used for storing agricultural produce. This finding is significant for understanding the role of agriculture in the social life of the city (Aydın 2019, 78). A workshop area was also uncovered on the eastern hill of the Olba monastery. Given Olba's climate, which is less conducive to olive cultivation, it is likely that the workshop focused on wine production, with pithoi found nearby supporting this assumption (Yeğin 2016, 211, 216, pl. 6). In the Ancient City of Anemurium, Williams classified three pithos samples as storage containers, dating them to the 6<sup>th</sup>–7<sup>th</sup> c. AD. based on their context (Williams 1989, 487–489, fig. 48; 49). In the Işıkkale area near Silifke, surface surveys revealed a predominance of pithoi and jars, mostly dating to the Early Byzantine Period. This inland settlement yielded few fine ceramics but numerous storage containers, indicating local production for practical use (Varinlioğlu 2010, 207).

Additionally, surface surveys on Boğsak Island, near the Holmoi (Taşucu) port and close to Silifke, have expanded knowledge of pithos use in the region (Varinlioğlu 2012, 174, 175). Excavations by Goldman at Tarsus Gözlükule uncovered a pithos with an oval body and a grooved, slightly outward-rounded mouth; this half-preserved pithos dates to between the 3<sup>rd</sup> and 7<sup>th</sup> c. AD (Goldman 1950, 278, kat. no. 835). Excavations at the Tarsus Donuktaş Temple also yielded numerous ceramics, including lids from small-sized pithoi, attesting to the use of storage containers. These covers are dated to between the 4<sup>th</sup> and 7<sup>th</sup> c. AD (Baylan 2001, 60, 65, pl. 51; kat. no. 17–19). In the necropolis area of Çokça Tepe, located 1.7 km north of Çeralan Village within the Saimbeyli District of Adana, Late Roman and Early Byzantine pithoi graves and ceramics were found. Similarly dated ceramics were discovered at Dımışkırık (Cereli), 1.4 km north of Kocaharman in Karadut Locality, Saimbeyli, and at Taşoluk, 2.1 km northeast of Avcıpınar Village in the same district (Girginer 2005, 161–163). At Gündoğan (Hurşidiye) Village, approximately 25 km southeast of Ceyhan, Roman-period pithos fragments were unearthed in a rocky area near the Topraklı settlement, 1 km northeast of the village (Kaplan 2015, 138). Additionally, in Taşgediği (Leğengediği), another Ceyhan-area settlement, pithos fragments from the Roman and Byzantine periods were documented. Workshop remains in this area suggest that pithoi may have been used in the production of olive oil and wine (Girginer 2008, 391, 392).

Numerous pithos fragments unearthed from various settlements in Syro-Palestine, within the Levant region, attest to the regional production of pithoi in Late Antiquity. Surface surveys on the Kuseyri Plateau, near Antiocheia, revealed pithos rims in the villages of Çabala, Sungur, and Sürütme in Yayladağı, dating them to the 3<sup>rd</sup>–4<sup>th</sup> c. AD (Kereci 2019, 26, pl. 7; kat. no. 69–72). Additional examples were unearthed in Hisarcık, Kulaç, and Topraktutan villages of Yayladağı date between the 4<sup>th</sup> and 7<sup>th</sup> c. AD (Kereci 2019, 43, 44, pl. 15; kat. no. 158–166). Another Early Byzantine pithos from Kulaç Village in Yayladağı further supports local production in this area, given the high quantity of locally-produced pithoi across different sites (Kereci 2019, 55, pl. 20; kat. no. 231). A Late Roman pithos rim was also found in spaces 2B, 2C, and 2D of Tell Atchana, within the Antiocheia borders (Casana/Gansell 2005, 157). In the Amik Valley, surface surveys revealed pithos fragments in multiple mounds and settlements. Among ceramics from Akpınar Höyük, one pithos dated to the Byzantine period was identified (Casana/Wilkinson 2005, 214,

264, fig. A.6; AS 52), while another pithos from the Roman period was found at Çolaktepe (Akgöl Farm; *Casana/Wilkinson 2005*, 224, 266, fig. A.8; AS 112). A Roman villa rustica was identified at the Tayfur Sökmen Campus, near Antiocheia, offering insights into rural life and production. Storage areas within this building yielded a variety of ceramics, including eight pithos rims dating to the 4<sup>th</sup>–7<sup>th</sup> c. AD (*Kılınçoğlu 2019*, 57–59, pl. 23; kat. no. 121–128) and six pithos bases from different parts of the structure (*Kılınçoğlu 2019*, 81, pl. 37; kat. no. 229–234).

During excavations conducted by Princeton University in the central area of Antakya, ceramics were found in the residential sector 16-O, near the Habibi Neccar Mosque. According to the chronology of Antiocheia, these ceramics, including pithoi, date to the Early Islamic Period (Early Byzantine Period), specifically the 7<sup>th</sup> c. AD (*De Giorgi/Eger 2021*, 263, 264, fig. 5.9). A pithos rim from the Late Antique Period was also unearthed at the Halak Tepe (Halaq) settlement (*Casana/Wilkinson 2005*, 229, 266, fig. A.8; AS 134). Another rim, dating to the Late Roman Period, was found at Beşarslan (Tell Hamda; *Casana/Wilkinson 2005*, 231, 267, fig. A.9; AS 143), and two pithos rims from the Roman Period were uncovered in Uluca Kuzey (*Casana/Wilkinson 2005*, 249, 265, 266, fig. A.7–8; AS 235). At Zeugma, a worn pithos base dating to the early 6<sup>th</sup> c. AD was identified as part of a storage container (*Kenrick 2013*, 66; pl. 37, PT594). Another pithos base from Zeugma, dated to the 5<sup>th</sup> c. AD and likely of local production due to its specific additives, was also documented (*Abadie-Reynal/Martz/Cador 2007*, 185, fig. 11). The Dede Ruins in Gaziantep's Oğuzeli District, a rural settlement from the Late Antique Period, revealed numerous workshops and ceramic artifacts from the same era. In wine workshop number 4, a nearly complete pithos used as a collection chamber was discovered (*Kozbe/Güngör/Caner 2022*, 31, 32, fig. 3.32). Additional storage jars resembling pithoi in form were found in various parts of the building (*Kozbe/Güngör/Caner 2022*, 92, 93, kat. no. 17; pl. 17: 1–8). A pithos rim with a rounded, grooved profile from the Ras Al-Bassit settlement, now within Syria, appears to be of local production and dates to between the 4<sup>th</sup> and 7<sup>th</sup> c. AD (*Mills/Beaudry 2007*, 752, fig. 9, D.34.5).

Numerous mouth fragments, known as dolia or pithos, were excavated from the Ras Al-Bassit settlement, all identified as locally produced. These findings provide compelling evidence of local pithos production in the city, supported by clay analyses on pithoi and other ceramics. Based on the context, these ceramics are dated to between the 5<sup>th</sup> and 7<sup>th</sup> c. AD (*Mills 2014*, 21–34). A pithos rim with a rounded profile was uncovered during surface surveys in and around the Homs (Emasa) settlement in Syria. This rim, believed to be produced in Amrit (Tartus), is dated to between the late 5<sup>th</sup> and 6<sup>th</sup> c. AD. Given the close proximity of Amrit (Tartus) to Homs (Edasa), its presence as an imported item in the area is unsurprising (*Reynolds 2014*, 59, fig. 6d). In the city of Dura-Europos, located in eastern Syria, evidence of occupation persisted until the mid-3<sup>rd</sup> c. AD. Pithos fragments were found in the E8 house of the residential quarter, a district largely inhabited by retired soldiers. It is believed that part of this house served as a storage space, with pithoi used during the early Late Roman Period (*James 2019*, 139–141). In Lebanon, pithos mouths thought to have been used for storage in the Beirut settlement were likely imported from Ras Al-Bassit. These wide-mouthed amphora-like pithoi date from the 3<sup>rd</sup> to the 4<sup>th</sup> c. AD (*Mills/Reynolds 2014*, 134, fig. 5: 19–21). Samples from the Chhim settlement, also in Lebanon, date to between the 5<sup>th</sup> and 7<sup>th</sup> c. AD (*Kowarska/Lenarczyk 2012*, 646, fig. 3: 7; 2014, 128, fig. 3: 5–15). Studies in Chhim identified ceramic pieces with inwardly rounded and flattened rims, double-grooved handles, and bodies categorized as Group I, believed to originate from Amrit/Tartus. These pieces suggest that both imported and locally produced ceramics were present in the region (*Kowarska/Lenarczyk 2014*, 127).

Studies in rural settlements around the Baalbek/Heliopolis Ancient City have uncovered ceramics dating from the Early Roman Imperial Period to the Late Roman Period. Among these finds are storage jars, classified as storage containers and identified in the literature as small pithoi, dating between the 1<sup>st</sup> and 4<sup>th</sup> c. AD (*Fischer-Genz 2014*, 84, 85, fig. 7: 5–8). Chemical analyses confirm that some pithoi, believed to be produced in Lebanon's Bekaa Valley, date to the Late Antique Period (*Wicenciak 2021*, 77). In the Jabal Harun settlement in Jordan, numerous pithos rims were found across various structures. Four rims were uncovered in layers from different phases in the West Building area, and one was found in the southern part of Room 30. Although the forms vary, all date between the 6<sup>th</sup> and 8<sup>th</sup> c. AD (*Gerber 2016*, 136, 142, 147, 158, 160, fig. 7: 86–87; 16: 182; 28: 315; 30: 342). In the Nesher Ramla settlement in Israel, a pithos rim with a double-grooved rim and a grooved body was unearthed, dating to the Byzantine and Early Islamic Periods, specifically the 6<sup>th</sup> to 7<sup>th</sup> c. AD (*Vincenz 2015*, 112, 158, 159, fig. 20: 40). Another pithos example, dating between the 4<sup>th</sup> and 7<sup>th</sup> c. AD, was found among storage containers at the Khirbet El-Hawarit settlement in the Golan region of Israel (*Hartal/Hudson/Berlin 2008*, 133, 134, 146, fig. 12: 9). In the Upper Galilee Region, pithos samples lacking decoration on

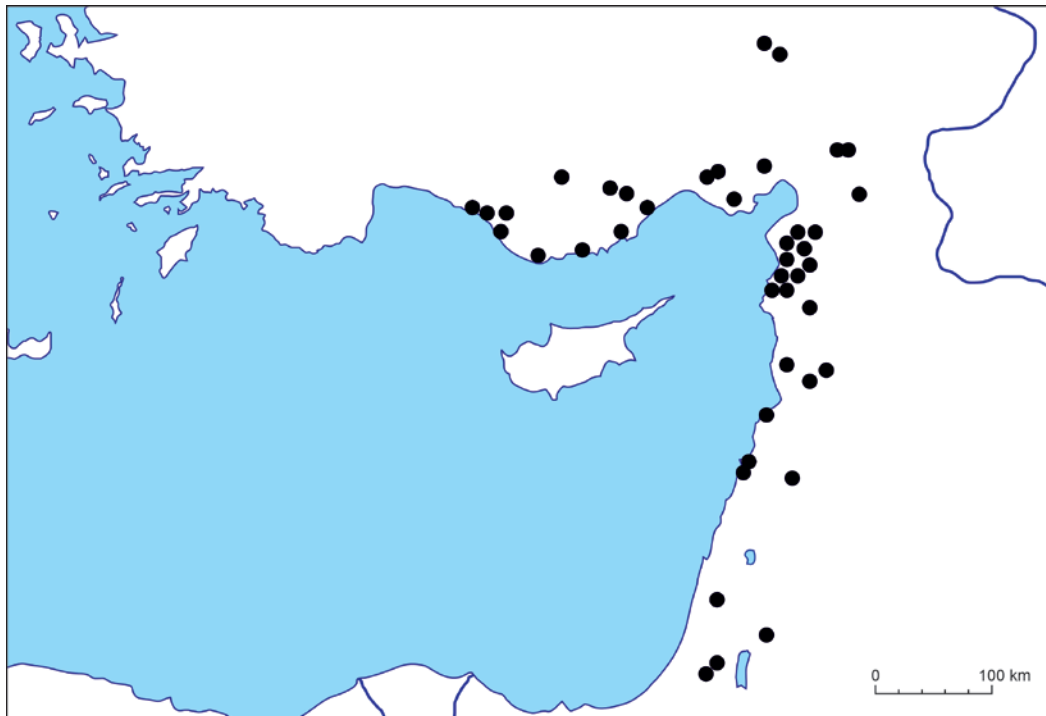


Fig. 7. Distribution of Late Antique pithoi in Cilicia and Syria. Drawing author.

the mouth and body sections were discovered. However, these pithoi feature single or double grooves on the neck and date to the Late Byzantine-Early Islamic Period, between the 6<sup>th</sup> and 7<sup>th</sup> c. AD (*Frankel et al.* 2001, 66, 67, fig. 3.11: 13, 18–21; 6) We can see this pithos samples from South of Levant Area to Western Cilicia (Fig. 7).

## CONCLUSIONS

Analysis of amphoras and pithoi from various Late Antique settlements in Cilicia and Syria reveals their extensive use in both regions. Amphoras, in particular, serve as key artifacts for understanding the Late Roman economy (*Mitchell* 2016, 67). With the onset of the Roman Imperial Period, ceramic production and trade intensified along the western and southern coasts of Anatolia, the Levant, and Cyprus, resulting in the establishment of numerous ceramic workshops and port-adjacent residential areas in these regions. This economic growth paralleled advancements in agricultural organization, leading to significant increases in olive oil and wine production. Cities and their surrounding territories were outfitted with architectural infrastructure to support agricultural activities, fostering urban development. Amphoras and pithoi became essential for the trade and storage of these agricultural products throughout the Mediterranean region. Amphora types from Western Anatolia, Cilicia, Syria, and the Levant began production during the Roman Imperial Period, with production continuing through the Late Antique Period, after which these amphoras were widely exported across Roman provinces. Notably, the Agora M 239, LR 1, Zemer 40, and Zemer 41 amphoras were produced in Cilicia, while the LR 4, LR 5/6, and Agora M334 (LR 9/Beirut) amphoras originated from Syria and the Levant.

This study identified Cilician amphoras in 66 distinct settlements and Syrian amphoras in 111 settlements, while pithoi were documented in 45 settlements across Cilicia and Syria. A detailed examination of these sites reveals that multiple amphora and pithos types were commonly found together in major settlements such as Alexandria, Amathous, Anemurium, Beirut, Butrint, Classe, Dara, Elaiussa Sebaste, Erythrai, Kelenderis, Myra, Naula, Parion, Phaselis, Tergeste, Tripolis, Wadi Natrun, and Zeugma. The recovery of amphoras and pithoi from a total of 131 settlements across the Mediterranean and Black Sea regions highlights the intensity and sophistication of trade during the Late Antique Period (Fig. 8). The presence of these amphora types in both port and rural settlements, spanning from the westernmost to



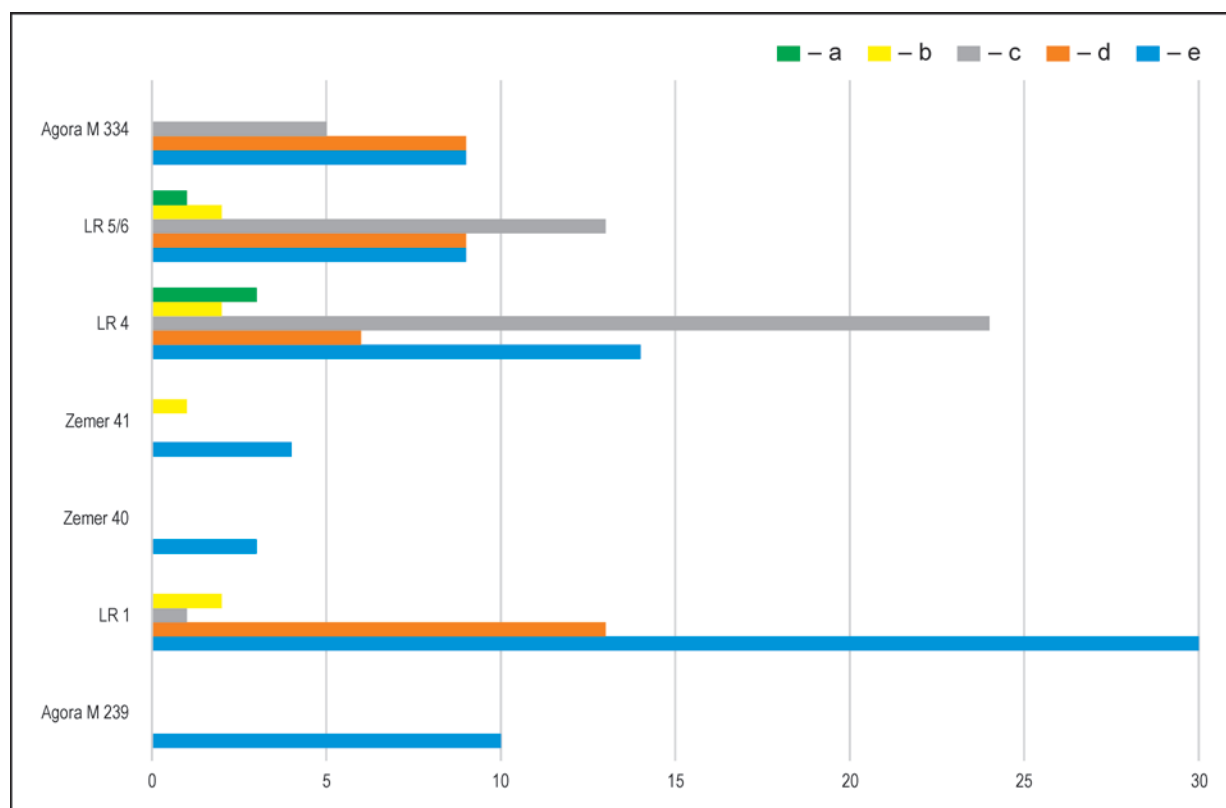


Fig. 8. Distribution of Cilician and Syrian amphorae by settlement and region. Legend: a – Black see; b – Afrika; c – Europe; d – Syria; e – Anatolia. Drawing author.

the easternmost parts of Cilicia, provides valuable insights into the vessels' usage, trade routes, and distribution patterns in the Late Antique period. The widespread detection of Cilician and Syrian amphorae in Mediterranean coastal settlements underscores the advanced commercial network that flourished during this era.

Pithoi, primarily used for storage and trade, played a role in both land and maritime commerce, though less frequently than amphorae. Evidence of pithoi in maritime trade comes from rare examples recovered from shipwrecks, where they were sometimes transported alone or alongside amphorae. While amphorae were more prevalent in sea trade, pithoi were equally common in land trade. Pithoi were produced in various settlements, including those in port areas, nearby coastal settlements, and inland regions. Rural economies, often centered on agriculture, prioritized olive oil and wine production. These products were initially stored in pithoi before being transferred to amphorae for trade, underscoring the importance of both vessel types. Beyond their commercial role, pithoi were essential in rural life due to their versatile storage functions, further emphasizing their significance. Amphora production was typically concentrated in workshops near coastal areas, whereas pithoi were primarily crafted in rural settlements by local or itinerant artisans. As agricultural output increased in both rural and coastal settlements, the demand for storage vessels such as amphorae and pithoi also grew. The intensity of agricultural production reflects the commercial potential of the region, creating a demand for numerous ceramic workshops to produce necessary storage vessels. Consequently, most ceramic workshops in the area served as local production sites. In addition, itinerant artisans could produce pithoi across settlements, an economical solution given the number and density of rural settlements, which facilitated rapid production.

Several key factors shaped this organized agricultural and ceramic production system. First, a structured approach to agricultural production emerged to support both farming and ceramic production. Second, facilities such as olive oil and wine workshops, particularly *mola olearia*, were constructed. Third, the need for ceramic workshops to store products led to increased ceramic production. Fourth, these products were initially stored in pithoi, then transferred to amphorae to prepare them for trade. Fifth, designated areas were established to display products ready for sale. Finally, trading stations were

constructed in ports and commercial centers. Each stage in this interconnected sequence was essential for maintaining the trade network, with any missing element potentially disrupting commerce. When each stage functioned cohesively, the entire process contributed significantly to the region's economy. This organized system began with rural production and culminated in the distribution of goods to other provinces across the empire, thus enhancing commercial activity and interregional exchange. This continuous development fostered growth among provinces and states alike. Given the favorable geographical and climatic conditions in Cilicia and Syria, these provinces led the Mediterranean in olive and grape production. The fertile lands available for agriculture in these provinces further supported this productivity. Consequently, the trade of surplus agricultural goods and the region's economic expansion became inevitable during the Late Antique Period.

## BIBLIOGRAPHY

- Abadie-Reynal/Martz/Cador 2007 C. Abadie-Reynal/A. S. Martz/A. Cador: Late Roman and Byzantine Pottery in Zeugma. Groups of the Beginning of the 5<sup>th</sup> Century. In: B. Böhlendorf-Arslan/A. O. Uysal/J. Witte-Orr (eds.): *Byzas 7. Çanak, Late Antique and Medieval Pottery and Tiles in Mediterranean Archaeological Contexts (Canakkale 1–3 June 2005)*. Çanakkale 2007, 181–194.
- Açar 2017 E. Açar: *Antandros Nekropolü Geç Roma Yerleşimi*. Master Thesis. Institute of Social Sciences. İzmir 2017. Unpublished.
- Akkaş 2020 İ. Akkaş: 2008–2019 Yılları Arası Amphora Buluntuları Işığında Parion Antik Kenti Roma ve Erken Bizans/Geç Roma Dönemi Ticari İlişkileri. Phd. Thesis. Institute of Social Sciences. Mersin 2020. Unpublished.
- Akkurnaz 2016a F. B. Akkurnaz: *Eski Yunan ve Roma Kapları ve İşlevleri*. Master Thesis. Social Sciences Institute. Aydın 2016. Unpublished.
- Akkurnaz 2016b F. B. Akkurnaz: *Eski Yunan ve Roma, Kaplar-İşlevler*. İstanbul 2016.
- Akrivopoulou/Slampeas 2014 S. Akrivopoulou/P. Slampeas: Late Roman Coarse Ware from a Rescue Excavation in Thessaloniki. In: N. Poulou-Papadimitriou/E. Nodaru/V. Kilikoglou (eds.): *LRCW 4. Late Roman Coarse Wares, Cooking Wares and Amphorae in the Mediterranean, Archaeology and Archaeometry the Mediterranean: a Market without Frontiers*. BAR International Series 2616. Thessaloniki 2014, 287–296.
- Alalı 2017 M. Alalı: *Roma Dönemi'nde Suriye*. Master Thesis. Institute of Social Sciences. Gaziantep 2017. Unpublished.
- Alanyalı/Erkoç 2019 H. S. Alanyalı/S. Erkoç: Side 2018 Yılı Çalışmaları. *ANMED* 17, 2019, 1–9.
- Alkaç 2012 E. Alkaç: Korykos Yüzey Araştırmalarında Bulunan LR1 Amphoraları. *OLBA* 20, 2012, 323–344.
- Alkaç 2013 E. Alkaç: "Silifke Müzesi'nden Doğu Akdeniz Üretimi Amphoralar". *Cedrus* 1, 2013, 107–124.
- Autret 2012 C. Autret: Cyprus and Cilicia: Amphora Production, Trade and Relations in The Early Roma Era. In: A. Georgiou (ed.): *Cyprus an Island Culture: Society and Social Relations from The Bronze Age to The Venation Period*. Oxford 2012, 251–267.
- Autret/Rauh 2010 C. Autret/N. Rauh: Roman Amphora Production in Western Production in Western Rough Cilicia. In: Ü. Aydınöğlu/A. K. Şenol (eds.): *Antik Çağda Anadolu'da Zeytinyağı ve Şarap Üretimi, Sempozyum Bildirileri (06–08 Kasım 2008)*. Kilikia Arkeolojisini Araştırma Merkezi. Mersin 2010, 109–122.
- Autret/Yağcı/Rauh 2010 C. Autret/R. Yağcı/N. K. Rauh: Soli/Pompeipolis'te LRA 1 Amphora Fırını Alanı. *ANMED* 8, 2010, 203–207.
- Aydın 2019 S. Aydın: *Olba Geç Roma Dönemi Seramik Buluntuları*. Phd. Thesis. Social Sciences Institute. Ankara 2019. Unpublished.
- Baylan 2001 E. Baylan: Çanak Çömlek Buluntuları. Tarsus Donuktaş Kazı Raporu. Sayı 6, 2001, 57–68.
- Bayrak 2011 Ü. Bayrak: İstanbul Yenikapı Limanı'nda Bulunan Geç Roma-Erken Bizans Amphoraları Üzerindeki Yazıtlar ve Damgalar. Master Thesis. Institute of Social Sciences. İstanbul 2011. Unpublished.
- Bettles 2003 E. A. Bettles: *Phoenician Amphora Production and Distribution in The Southern Levant: A Multi-Disciplinary Investigation into Carinated-Shoulder Amphorae of The Persian Period (539–332 BC)*. BAR International Series 1183. Oxford 2003.
- Bezdan 2023 M. Bezdan: *Suriye-Fenike Tipi Amphoralar*. Phd. Thesis. Institute of Social Sciences. İzmir 2023. Unpublished.
- Bien 2005 S. Bien: Des Nive du VII<sup>e</sup> Siècle Sous le Music-Hall de L'Alcazar a Marseille. In: J. M. G. i Esparaguera/J. B. i Garrigos/M. A. C. Ontiveros (eds.): *LRCW 1. Late Roman Coarse Wares, Cooking Wares and Amphorae in the Mediterranean: Archaeology and Archaeometry*. BAR International Series 1340. Barcelona 2005, 285–298.

- Bilgin-Kopçuk 2022 S. Bilgin-Kopçuk: *Güneydoğu Trakya Bölgesi Hellenistik, Roma ve Geç Roma Yalın Seramikleri Işığında Bölgenin Ekonomik Yapısının İncelenmesi*. Phd. Thesis. Institute of Social Sciences. İstanbul 2022. Unpublished.
- Bilir 2014 A. Bilir: *Roma Dönemi Doğu Akdeniz Deniz Ticaretinde Kıyı Kilikya Bölgesi'nin Yeri ve Önemi*. Phd. Thesis. Institute of Social Sciences. Konya 2014. Unpublished.
- Bişkin 2019 Z. Bişkin: *Kırşehir Merkez Kalehöyük Depolama Kapılarının Sınıflandırılması ve Tabakalara Göre Değerlendirilmesi*. Master Thesis. Social Sciences Institute. Bursa 2019. Unpublished.
- Blitzer 1990 H. Blitzer: Kopfqneika Storage-Jar Production and Trade in the Traditional Aegean. *Hesperia. The Journal of the American School of Classical Studies at Athens* 59/4, 1990, 675–711.
- Carboni 2010 F. Carboni: Roma. Un Contesto Anforico di V Secolo da un Ambiente Della Domus Tiberiana Sul Palatino. In: S. Menchelli/S. Santoro/M. Pasquinucci/G. Guiducci (eds.): *LRCW 3. Late Roman Coarse Wares, Cooking Wares and Amphorae in the Mediterranean: Archaeology and Archaeometry, Comparison between Western and Eastern Mediterranean*. BAR International Series 2185. Parma – Pisa 2010, 417–426.
- Carsana/Del Vecchio 2010 V. Carsana/F. Del Vecchio: Il Porto di Neapolis in Età Tardo Antica. Il Contesto di Iv Secolo D. C. In: S. Menchelli/S. Santoro/M. Pasquinucci/G. Guiducci (eds.): *LRCW 3. Late Roman Coarse Wares, Cooking Wares and Amphorae in the Mediterranean. Archaeology and Archaeometry, Comparison between Western and Eastern Mediterranean*. BAR International Series 2185. Parma – Pisa 2010, 459–470.
- Casana/Gansell 2005 J. J. Casana/A. R. Gansell: Chapter Six: Surface Ceramics, Off-Site Survey, and Floodplain Development At Tell Atchana (Alalakh). *The Amuq Valley Regional Projects Surveys in the Plain of Antioch and Orontes Delta* 1995–2002, 1, 2005, 153–170.
- Casana/Wilkinson 2005 J. J. Casana/T. J. Wilkinson: Appendix A: Gazetteer of Sites. *The Amuq Valley Regional Projects Surveys in the Plain of Antioch and Orontes Delta* 1995–2002, 1, 2005, 203–280.
- Cirelli 2014 E. Cirelli: Typology and Diffusion of Amphorae in Ravenna and Classe between the 5th and the 8th Centuries AD. In: N. Poulou-Papadimitriou/E. Nodarou/V. Kilikoglou (eds.): *LRCW 4. Late Roman Coarse Wares, Cooking Wares and Amphorae in the Mediterranean, Archaeology and Archaeometry the Mediterranean a Market without Frontiers*. BAR International Series 2616. Thessaloniki 2014, 541–552.
- Cirelli/Cannavici 2014 E. Cirelli/A. Cannavici: A 6th Century Dump from Classe (Ravenna). In: N. Poulou-Papadimitriou/E. Nodarou/V. Kilikoglou (eds.): *LRCW 4. Late Roman Coarse Wares, Cooking Wares and Amphorae in the Mediterranean, Archaeology and Archaeometry the Mediterranean: a Market without Frontiers*. BAR International Series 2616. Thessaloniki 2014, 963–974.
- Cytryn-Silverman 2010 K. Cytryn-Silverman: Chapter Nine. The Ceramic Evidence. *Ramla Final Report on the Excavations North of the White Mosque, Qedem Monographs of the Institute of Archaeology* 51, 2010, 97–211.
- Çaylak-Türker 2009 A. Çaylak-Türker: Alanya ve Çevresi Bizans Araştırmaları: Seramik Buluntular. In: F. Bayram/A. Özme (eds.): *26. Araştırma Sonuçları Toplantısı 2. Cilt*. Ankara 26–30 Mayıs 2008. Ankara 2009, 211–222.
- Çaylak-Türker 2014 A. Çaylak-Türker: Roman and Early Byzantine Amphorae from the Archaeological Survey in Pamphylia and Tracheia Cilicia. In: N. Poulou-Papadimitriou/E. Nodarou/V. Kilikoglou (eds.): *LRCW 4. Late Roman Coarse Wares, Cooking Wares and Amphorae in the Mediterranean, Archaeology and Archaeometry the Mediterranean: a Market without Frontiers*. BAR International Series 2616. Thessaloniki 2014, 271–280.
- Çibuk 2019 K. Çibuk: *Kocaeli Müzesi Amphora Koleksiyonu*. Master Thesis. Institute of Social Sciences. Kocaeli 2019. Unpublished.
- Çömezoğlu 2014 Ö. Çömezoğlu: Coarse Wares from the Early Byzantine Episcopal Church of Rhodiapolis: Cooking Wares and Amphorae. In: N. Poulou-Papadimitriou/E. Nodarou/V. Kilikoglou (eds.): *LRCW 4. Late Roman Coarse Wares, Cooking Wares and Amphorae in the Mediterranean, Archaeology and Archaeometry the Mediterranean: a Market without Frontiers*. BAR International Series 2616. Thessaloniki 2014, 665–676.
- De Giorgi/Eger 2021 A. U. De Giorgi/A. A. Eger: *Antioch. A History*. New York 2021.
- De Mitri 2005 C. De Mitri: Otranto, Anfore da Trasporto di eta Tardoromana (IV–VI Sec. D. C.). In: J. M. G. Esparaguera/J. B. i Garrigos/M. A. C. Ontiveros (eds.): *LRCW 1. Late Roman Coarse Wares, Cooking Wares and Amphorae in the Mediterranean: Archaeology and Archaeometry*. BAR International Series 1340. Barcelona 2005, 413–424.
- De Vingo 2005 P. De Vingo: "Liguria in Late Antiquity and in The Early Middle Ages: Its Trade Relations with The Western and Eastern Mediterranean Sea Through Transport Amphorae". In: J. M. Gurt i Esparaguera/J. Buxeda Garrigos/M. A. Cau Ontiveros (eds.): *LRCW 1. Late Roman Coarse Wares, Cooking Wares and Amphorae in The Mediterranean: Archaeology and Archaeometry*. Bar International Series 1340. Barcelona 2005, 341–354.
- Degrassi et al. 2010 V. Degrassi/D. Gaddi/L. Mandruzzato/F. M. Scotti: "Tergeste (Trieste – Itaiia): Materiale Ceramico Dai Livelli di Costruzione Delle Mura Tardo Imperiali (Prima Metà V Sec. D.C.). In: S. Menchelli/S. Santoro/M. Pasquinucci/G. Guiducci (eds.): *LRCW 3.*

- Late Roman Coarse Wares, Cooking Wares and Amphorae in the Mediterranean: Archaeology and Archaeometry, Comparison between Western and Eastern Mediterranean.* BAR International Series 2185. Parma – Pisa 2010, 579–584.
- Demesticha 2013 S. Demesticha: Amphora Typologies, Distribution, and Trade Patterns: The Case of The Cypriot LR1 Amphorae. In: J. Lund/M. Lawall (eds.): *The Transport Amphorae and Trade of Cyprus*. Aarhus 2013, 169–178.
- Doğan 2008 S. Doğan: Alanya ve Çevresinde Bizans Araştırmaları 2006. In: F. Bayram/A. Özme/B. Koral (eds.): 25. *Araştırma Sonuçları Toplantısı 1. Cilt* (Çanakkale 28 Mayıs-1 Haziran 2007). Çanakkale 2008, 381–394.
- Doğer 1988 E. Doğer: *Klazomenai Kazısındaki Arkaik Dönem Ticari Amphoraları*. Phd. Thesis. Institute Of Social Sciences. İzmir 1988. Unpublished.
- Doğer 1991 E. Doğer: *Antik Çağda Amphoralar*. Sergi Yayınevi. İzmir 1991.
- Doksanaltı 2020 E. Doksanaltı: Knidos 'Liman Caddesi' Geç Antik Dönem Atölye/Dükkan ve Buluntuları. *OLBA* 28, 2020, 337–420.
- Dominguez 2005 R. J. Dominguez: Anforas Tardorromanas Halladas en Las Recientes Excavaciones Estratigraficas Efectuadas en el Subsuelo de la Plaza Del Rey en Barcelona. In: J. M. G. i Esparaguera/J. B. i Garrigos/M. A. C. Ontiveros (eds.): *LRCW 1. Late Roman Coarse Wares, Cooking Wares and Amphorae in the Mediterranean. Archaeology and Archaeometry*. BAR International Series 1340. Barcelona 2005, 151–164.
- Dündar 2012 E. Dündar: *Patara Kazılarında Ele Geçen (1989–2010 Yılları) Arkaik, Klasik ve Hellenistik Dönem Ticari Amphoralar ve Amphora Mühürleri*. Phd. Thesis. Institute Of Social Sciences. Antalya 2012. Unpublished.
- Elton 2006 H. Elton: Göksu Archaeological Project 2002–2004. In: K. Olşen/F. Bayram/A. Özme (eds.): 23. *Araştırma Sonuçları Toplantısı 1. Cilt* (Antalya 30 Mayıs–3 Haziran 2005). Antalya 2006, 331–342.
- Empereur 2018 J. Y. Empereur: The Late Roman Amphorae Found in Amathus Harbour. In: J. Y. Empereur (ed.): *The Hellenistic Harbour of Amathus Underwater Excavations 1984–1986*, 2. Paris 2018, 181–190.
- Empereur/Picon 1989 J. Y. Empereur/M. Picon: Les Régions de Production D'amphores Impériales en Méditerranée Orientale. In: *Amphores Romaines et Histoire Économique. Dix ans de Recherche. Actes du Colloque de Sienne (22–24 mai 1986)*. Sienne 1989, 223–248.
- Erdem 2023 A. Erdem: Kyzikos'ta Ele Geçen Geç Roma Amphoraları Üzerine İlk İzlenimler. *Anatolian Archaeology* 2, 2023, 94–116.
- Ferrazzoli/Ricci 2007 A. F. Ferrazzoli/M. Ricci: Elaiussa Sebaste: Produzioni e Consumi di una Citta Della Cilicia Tra v e VII Secolo. In: M. Bonifay/J. C. Treglia (eds.): *LRCW 2. Late Roman Coarse Wares, Cooking Wares and Amphorae in the Mediterranean: Archaeology and Archaeometry*. BAR International Series 1662. Aix-en-Provence 2007, 671–688.
- Ferrazzoli/Ricci 2010 A. F. Ferrazzoli/M. Ricci: Un centro di Produzione Delle Anfore LR 1. Elaiussa Sebaste in Cilicia. Gli Impianti, Le Anfore. In: S. Menchelli/S. Santoro/M. Pasquinucci/G. Guiducci (eds.): *LRCW 3. Late Roman Coarse Wares, Cooking Wares and Amphorae in the Mediterranean: Archaeology and Archaeometry, Comparison between Western and Eastern Mediterranean*. BAR International Series 2185. Parma – Pisa 2010, 815–826.
- Fidanci 2016 F. Fidanci: *Pithos Buluntuları Yoluyla Kuşadası, Kadikalesi'ndeki Bizans Yapılaşmalarına İlişkin Öneriler*. Master Thesis. Social Sciences Institute. İzmir 2016. Unpublished.
- Figueras 1995 P. Figueras: Monks and Monasteries in the Negev Desert. In: L. D. Chrupcala (ed.): *Studium Biblicum Franciscanum. Liber Annus 45*. Jerusalem 1995, 401–450.
- Firat 2011 M. Firat: *Phokaia Geç Roma Dönemi Mutfak Kapları*. Phd. Thesis. Institute Of Social Sciences. İzmir 2011. Unpublished.
- Firat 2023 M. Firat: Phokaia'da Bulunan Roma Dönemi Amphoraları Üzerine Genel Bir Değerlendirme. In: H. E. Ergürer/M. A. Yılmaz (eds.): *SRMKA* 5, 2023, 76–103.
- Fischer-Genz 2014 B. Fischer-Genz: Local Pottery Traditions in the Rural Settlements around Baalbek/Heliopolis, Lebanon. In: B. Fischer-Genz/Y. Gerber/H. Hamel (eds.): *Roman Pottery in the Near East. Local Production and Regional Trade, Proceedings of the Round Table Held in Berlin, 19–20 February 2010*. Berlin 2014, 79–88.
- Frankel et al. 2001 R. Frankel/N. Getzov/M. Aviam/A. Degani: Chapter 3. The Pottery and Other Finds. Settlement Dynamics and Regional Diversity in Ancient Upper Galilee. *Archaeological Survey of Upper Galilee. Israel Antiquities Authority Reports* 14, 2001, 47–95.
- Gabrielli/Jackson/Kaldelli 2007 R. S. Gabrielli/M. P. C. Jackson/A. Kaldelli: Stumbling into The Darkness: Trade and Life in Post-Roman Cyprus. In: M. Bonifay/J. C. Treglia (eds.): *LRCW 2. Late Roman Coarse Wares, Cooking Wares and Amphorae in the Mediterranean: Archaeology and Archaeometry*. BAR International Series 1662. Aix-en-Provence 2007, 791–802.
- Gerber 2016 Y. Gerber: Chapter 5. The Jabal Harun Ceramics. Typology and Chronology. In: Z. T. Fiema/J. Frösen/M. Holappa (eds.): *Petra – The Mountain of Aaron II. The Nabataean Sanctuary and the Byzantine Monastery*. The Finnish Archaeological Project in Jordan II. Helsinki 2016, 129–175.



- Giannopoulou 2010 M. Giannopoulou: *Pithoi. Technology and History of Storage Vessels through the Ages*. Oxford 2010.
- Girginer 2005 S. K. Girginer: 2003 Yılı Adana İli Çevresi Yüzey Araştırmaları (Saimbeyli). In: K. Olşen/F. Bayram/A. Özme (eds.): 22. *Araştırma Sonuçları Toplantısı 2. Cilt. Konya 22–28 Mayıs 2004*. Konya 2005, 159–174.
- Girginer 2008 S. K. Girginer: 2006 Yılı Kapadokya ve Kilikya Yüzey Araştırmaları: Kayseri (Yahyalı ve Adana (Ceyhan İl)). In: F. Bayram/A. Özme/B. Koral (eds.): 25. *Araştırma Sonuçları Toplantısı 2. Cilt. Kocaeli 28 Mayıs–1 Haziran 2007*. Kocaeli 2008, 379–402.
- Goldman 1950 H. Goldman: *Excavations at Gözlü Kule, Tarsus. The Hellenistic and Roman Periods I*. New York 1950.
- Grace 1979 V. Grace: *Amphoras and the Ancient Wine Trade. Excavations of The Athenian Agora Picture Book No. 6*. Princeton 1979.
- Gürbüz 2018 M. Gürbüz: Late Roman Pottery from a Building in Klazomenai. *OLBA* 26, 2018, 135–176.
- Hamel 2010 H. Hamel: Local Coarse Ware Pottery from 4th Century Baalbek/Heliopolis, Lebanon. In: S. Menchelli/S. Santoro/M. Pasquinucci/G. Guiducci (eds.): *LRCW 3. Late Roman Coarse Wares, Cooking Wares and Amphorae in the Mediterranean: Archaeology and Archaeometry, Comparison between Western and Eastern Mediterranean*. BAR International Series 2185. Parma – Pisa 2010, 877–884.
- Hartal/Hudson/Berlin 2008 M. Hartal/N. Hudson/A. M. Berlin: Khirbat El-Hawarit: A Ceramic Workshop on the Mount Hermon Slopes. *Atiqot* 59, 2008, 131–155.
- Hayes 1992 J. W. Hayes: *Excavation at Saraçhane in İstanbul 2*. Princeton 1992.
- Hilgers 1969 W. Hilgers: *Lateinische Gefassnamen. Bezeichnungen, Funktion und Form Römischer Gefasse, nach den Antiken Schriftquellen*. Rheinland-Verlag. Düsseldorf 1969.
- Hürmüzlü 1995 B. Hürmüzlü: *Klazomenai'de M.Ö. 7 ve 6. Yüzyıl Bezemeli Vazo Formları (2 Cilt)*. Master Thesis. Social Sciences Institute. İzmir 1995. Unpublished.
- James 2019 S. James: *The Roman Military Base at Dura-Europos, Syria. An Archaeological Visualization*. Oxford 2019.
- Jacobsen 2005 K. W. Jacobsen: Late Roman Coarse Wares and Transport Amphorae from Panayia Ematousa, Cyprus. In: J. M. G. i Esparaguera/J. B. i Garrigos/M. A. C. Ontiveros (eds.): *LRCW 1. Late Roman Coarse Wares, Cooking Wares and Amphorae in the Mediterranean. Archaeology and Archaeometry*. BAR International Series 1340. Barcelona 2005, 625–634.
- Kaplan 2015 A. Kaplan: *Hellenistik ve Roma Döneminde Kilikia Pedias (Çukurova) Yerleşimleri*. Phd. Thesis. Social Sciences Institute. Konya 2015. Unpublished.
- Kara 2021 Ü. Kara: Constantinopolis'in Hinterlandının Geç Antik Dönem Ticaretine Bir Bakış. In: N. Karul/V. Şahoğlu/G. Işın/H. Özdaş/Ş. Çakmak (eds.): *TÜBA-AR 21*. Ankara 2021, 73–93.
- Karcı-Ağlar 2015 G. Karcı-Ağlar: *Smyrna Agorası'nda Ele Geçen Ticari Amphoralar (1998–2006 Kazıları)*. Phd. Thesis. Institute of Social Sciences. İzmir 2015. Unpublished.
- Katırcı 2020 S. Katırcı: *Tripolis Amphoraları*. Master Thesis. Institute of Social Sciences. Eskişehir 2020. Unpublished.
- Katırcı/Duman 2022 S. Katırcı/B. Duman: Tripolis İthal Amphoraları: Bölgesel İlişkiler, Elit Eğilimler. In: Z. Gider-Büyüközer (ed.): *Arkhaia Anatolia, Anadolu Arkeolojisi Araştırmaları Der-gisi* 5. Konya 2022, 332–363.
- Kenrick 2013 P. M. Kenrick: Chapter One. Pottery Other Than Transport Amphorae. In: W. Aylward (ed.): *Excavations at Zeugma. The Packard Humanities Institute*. California 2013, 1–81.
- Kereci 2019 M. Kereci: *Hatay İli Kuseyr Yaylası Kırsal Yerleşimleri Seramikleri*. Master Thesis. Social Sciences Institute. Hatay 2019. Unpublished.
- Keser 2019 İ. H. Keser: *Deli Halil Amphoraları Işığında Geç Antik Dönem Akdeniz Amphoraları*. Master Thesis. Institute of Social Sciences. Kocaeli 2019. Unpublished.
- Kılınçoğlu 2019 H. Kılınçoğlu: *Tayfur Sökmen Kampüsü Kazısı, Roma Dönemi Günlük Kullanım Seramikleri*. Master Thesis. Institute of Social Sciences. Hatay 2019. Unpublished.
- Kırkanlı 2022 E. Kırkanlı: Erythrai Roma İmparatorluk ve Erken Bizans Amphoraları (1977–1988 Kazıları). In: H. E. Ergürer/M. A. Yılmaz (eds.): *SRMKA. Sayı 4. Karaman 2022*, 100–167.
- Kızıllarslanoglu 2016 A. H. Kızıllarslanoglu: *Antik Çağ'da Elaiussa Sebaste'nin Amphora Üretimi ve Ticari İlişkileri*. Phd. Thesis. Social Sciences Institute. Erzurum 2016. Unpublished.
- Kızıllarslanoglu et al. 2017 B. Can/A. Çakır/B. Cannon/D. Murphy/A. H. Kızıllarslanoglu: *Surveys at Syedra 2016 (Second Season)*. *ANMED* 15, 2017, 242–250.
- Klenina 2010 E. Klenina: Trade Relations between The Mediterranean and The Black Sea Region in The 3rd–6th Centuries A.D. In The Light of Ceramic Artifacts. In: S. Menchelli/S. Santoro/M. Pasquinucci/G. Guiducci (eds.): *LRCW 3. Late Roman Coarse Wares, Cooking Wares and Amphorae in The Mediterranean. Archaeology and Archaeometry, Comparison between Western and Eastern Mediterranean*. BAR International Series 2185. Parma – Pisa 2010, 951–962.

- Koçak-Yaldır 2002 A. Koçak-Yaldır: *İçel Müzesi'ndeki Erken Bizans Dönemi Seramik Buluntuları*. Master Thesis. Institute of Social Sciences, Mersin 2002. Unpublished.
- Konstantinidou 2010 A. Konstantinidou: Aspects of Everyday Life in a Monastic Settlement: Amphorae and Cooking Wares (4<sup>th</sup>–7<sup>th</sup> c.) from the Old Monastery of Baramus in the Wadi Natrun (Egypt): A First Glance. In: S. Menchelli/S. Santoro/M. Pasquinucci/G. Guiducci (eds.): *LRCW 3. Late Roman Coarse Wares, Cooking Wares and Amphorae in The Mediterranean. Archaeology and Archaeometry, Comparison between Western and Eastern Mediterranean*. BAR International Series 2185. Parma – Pisa 2010, 951–962.
- Korkmaz/Tekocak 2023 Z. Korkmaz/M. Tekocak: Anemurium Son Dönem Kazılarında Ortaya Çıkarılan A ve B Yapıları Üzerine Bir Değerlendirme. In: M. Özyıldırım/E. Erten/D. Favro/F. Yegül/Y. Yeğin (eds.): *Seleucia*. Sayı XIII. Mersin 2023, 21–42.
- Korkut 2007 T. Korkut: Die Spätantike und Frühbyzantinische Keramik aus Patara. In: A. O. Uysal/B. Böhlendorf-Arslan/J. Witte-Orr (eds.): *Çanak. Late Antique and Medieval Pottery and Tiles in Mediterranean Archaeological Contexts (BYZAS) 7*. Istanbul 2007, 147–168.
- Korosis 2014 V. D. Korosis: Transport and Storage Vessels and Coarse Wares from Megara, Attica (Greece). The Testimony of the Pottery in Relation to the City During The Early Byzantine Period. In: N. Poulou-Papadimitriou/E. Nodarou/V. Kilikoglou (eds.): *LRCW 4. Late Roman Coarse Wares, Cooking Wares and Amphorae in the Mediterranean, Archaeology and Archaeometry the Mediterranean: a Market without Frontiers*. BAR International Series 2616. Thessaloniki 2014, 305–312.
- Kouveli 2014 A. G. Kouveli: Excavation for the New Acropolis Museum in Athens: Amphorae from a Domestic Well of A Late Roman House. In: N. Poulou-Papadimitriou/E. Nodarou/V. Kilikoglou (eds.): *LRCW 4. Late Roman Coarse Wares, Cooking Wares and Amphorae in the Mediterranean, Archaeology and Archaeometry the Mediterranean: a Market without Frontiers*. BAR International Series 2616. Thessaloniki 2014, 749–760.
- Kowarska/Lenarczyk 2012 Z. Kowarska/S. Lenarczyk: Pithos-Type Vessels from Chhîm. Preliminary Assessment of Finds from 1996–2009. In: P. Bielinski/K. M. Ciałowicz/W. A. Daszewski/W. Godlewski/K. Mysliwiec (eds.): *Polish Archaeology in the Mediterranean 21*. Warszawa 2012, 643–651.
- Kowarska/Lenarczyk 2014 Z. Kowarska/S. Lenarczyk: Pithos-Type Vessels from the Excavations in Chhîm, Lebanon. In: B. Fischer-Genz/Y. Gerber/H. Hamel (eds.): *Roman Pottery in the Near East. Local Production and Regional Trade, Proceedings of the Round Table Held in Berlin, 19–20 February 2010*. Berlin 2010, 125–134.
- Kozbe/Güngör/Caner 2022 G. Kozbe/A. Güngör/E. Caner: *Geç Antik Çağ'da Bir Kırsal Yerleşim, Dede Harabeleri*. Hayat Basım ve Yayınevi. Gaziantep 2022.
- Körsulu 2011 H. Körsulu: *Kappadokia-Komana'sı Hellenistik ve Roma Dönemi Seramikleri*. Phd. Thesis. Institute of Social Sciences. Mersin 2011. Unpublished.
- Lane 1964 F. C. Lane: Tonnages, Medieval and Modern. *The Economic History Review* 2/17, 1964, 212–233.
- Leidwanger 2013 J. Leidwanger: Amphorae and Underwater Survey. Making Sense of Late Roman Trade from Scattered Sherds and Shipwrecks. In: M. L. Lawall/J. Lund (eds.): *In Transport Amphorae and Trade of Cyprus*. Aarhus 2013, 179–190.
- Lightfoot 2007 C. Lightfoot: Trade and Industry in Byzantine Anatolia: The Evidence from Amorium. *Dumbarton Oaks Papers* 61, 2007, 269–286.
- Lüdorf 2006 G. Lüdorf: *Römische und Frühbyzantinische Gebrauchskeramik im Westlichen Kleinasien, Typologie und Chronologie*. Internationale Archäologie 96. Rahden/Westf. 2006.
- Marksteiner/Schuh 2008 T. Marksteiner/U. Schuh: Limyra Kazı Çalışmaları 2007. In: K. Dörtlük/T. Kahya/R. Boyraz (eds.): *ANMED. Anadolu Akdenizi Arkeoloji Haberleri 6*. Antalya 2008, 42–46.
- Maurina/Capelli 2007 B. Maurina/C. Capelli: Anfore Tardoantiche Dall'insediamento Fortificato Di Loppio – S. Andrea (Trentino, Italia). In: M. Bonifay/J. C. Treglia (eds.): *LRCW 2. Late Roman Coarse Wares, Cooking Wares and Amphorae in The Mediterranean. Archaeology and Archaeometry*. BAR International Series 1662. Aix-en-Provence 2007, 481–490.
- Mills 2014 P. Mills: The Local Pottery from Ras El Bassit. In: B. Fischer-Genz/Y. Gerber/H. Hamel (eds.): *Roman Pottery in the Near East. Local Production and Regional Trade, Proceedings of the Round Table Held in Berlin, 19–20 February 2010*. Berlin 2014, 21–36.
- Mills/Beaudry 2010 P. J. E. Mills/N. Beaudry: Pottery from Late Roman Ras El Bassit, Syria. In: S. Menchelli/S. Santoro/M. Pasquinucci/G. Guiducci (eds.): *LRCW 3. Late Roman Coarse Wares, Cooking Wares and Amphorae in the Mediterranean: Archaeology and Archaeometry, Comparison between Western and Eastern Mediterranean*. BAR International Series 2185. Parma – Pisa 2010, 857–866.
- Mills/Beaudry 2007 P. J. E. Mills/N. Beaudry: The Ceramic Coarse Wares from the Basilica Excavations at Ras El Bassit, Syria: A Preliminary Assessment. In: M. Bonifay/J. C. Treglia (eds.): *LRCW 2. Late Roman Coarse Wares, Cooking Wares and Amphorae in the Mediterranean:*

- Archaeology and Archaeometry*. BAR International Series 1662. Aix-en-Provence 2007, 745–754.
- Mills/Reynolds 2014 P. J. E. Mills/P. Reynolds: Amphorae and Specialized Coarsewares of Ras Al Bassit, Syria: Local Products and Exports. In: N. Poulou-Papadimitriou/E. Nodarou/V. Kilikoglou (eds.): *LRCW 4. Late Roman Coarse Wares, Cooking Wares and Amphorae in the Mediterranean, Archaeology and Archaeometry the Mediterranean a Market without Frontiers*. BAR International Series 2616. Thessaloniki 2014, 133–142.
- Mimaroğlu 2011 S. Mimaroğlu: *Kuşadası, Kadikalesi/Anaia Kazısı'nda Ele Geçen Bizans Dönemi Günlük Kullanım Seramikleri*. Phd. Thesis. İzmir 2011. Unpublished.
- Mitchell 2016 S. Mitchell: Geç Roma İmparatorluğu Tarihi M.S. 284–641. In: T. Kaçar (ed.): *Türk Tarih Kurumu Yayınları*. Ankara 2016.
- Modrijan 2010 Z. Modrijan: The Last Phases of The Settlement at Tonovcov Grad (Slovenia) The Ceramic Evidence. In: S. Menchelli/S. Santoro/M. Pasquinucci/G. Guiducci (eds.): *LRCW 3. Late Roman Coarse Wares, Cooking Wares and Amphorae in the Mediterranean: Archaeology and Archaeometry, Comparison between Western and Eastern Mediterranean*. BAR International Series 2185. Parma – Pisa 2010, 687–694.
- Monfort/Millet 2005 C. C. Monfort/P. B. Millet: Late Roman Amphorae in The City of Barcino (Barcelona). In: J. M. G. i Esparaguera/J. B. i Garrigos/M. A. C. Ontiveros (eds.): *LRCW 1. Late Roman Coarse Wares, Cooking Wares and Amphorae in the Mediterranean: Archaeology and Archaeometry*. BAR International Series 1340. Barcelona 2005, 165–178.
- Morais 2005 R. Morais: From OPPIDVM to DIVES BRACARA: The City Trade through the Amphorae. In: J. M. G. i Esparaguera/J. B. i Garrigos/M. A. C. Ontiveros (eds.): *LRCW 1. Late Roman Coarse Wares, Cooking Wares and Amphorae in the Mediterranean: Archaeology and Archaeometry*. BAR International Series 1340. Barcelona 2005, 55–68.
- Opait 2021 A. Opait: A Levantine Trade Diaspora at Pompeipolis? *AWE* 20, 2021, 81–97.
- Orhan 2023 U. Orhan: *Amphora Buluntuları Işığında Phaselis'in Akdeniz Ticaretindeki Yeri. Disiplinlerarası Akdeniz Araştırmaları Dergisi*. Ek Yayın Dizisi 1. Antalya 2023.
- Öniz 2016 H. Öniz: *Doğu Akdeniz'de Amphoralar*. Arkeoloji ve Sanat Yayınları. İstanbul 2016.
- Pamir 2016 H. Pamir: Antakya Hipodrom ve Çevresi Kazısı. In: K. Dörtlük/T. Kahya/R. Boyraz-Seyhan/T. Ertekin/E. Can (eds.): *ANMED. Anadolu Akdenizi Arkeoloji Haberleri* 14. Antalya 2016, 301–307.
- Peacock/Williams 1986 D. P. S. Peacock/D. F. Williams: *Amphorae and the Roman Economy. An Introductory Guide*. Addison-Wesley Longman. London – New York 1986.
- Pecci/Salvini/Cantini 2010 A. Pecci/L. Salvini/F. Cantini: Residue Analysis of Some Late Roman Amphora Coming from the Excavations of the Historical Center of Florence. In: S. Menchelli/S. Santoro/M. Pasquinucci/G. Guiducci (eds.): *LRCW 3. Late Roman Coarse Wares, Cooking Wares and Amphorae in the Mediterranean. Archaeology and Archaeometry, Comparison between Western and Eastern Mediterranean*. BAR International Series 2185. Parma – Pisa 2010, 363–368.
- Perko/Zupancic 2005 V. V. Perko/M. Zupancic: Amphorae in Western Slovenia and in Northern Istria. In: J. M. G. i Esparaguera/J. B. i Garrigos/M. A. C. Ontiveros (eds.): *LRCW 1. Late Roman Coarse Wares, Cooking Wares and Amphorae in the Mediterranean: Archaeology and Archaeometry*. BAR International Series 1340. Barcelona 2005, 521–536.
- Pieri 2005 D. Pieri: Nouvelles Productions D'amphores de Syrie du Nord aux Époques Proto-byzantine et Omeyyade. *Melanges Jean-Pierre Sodini Travaux et Mémoires, Collège De France. Centre De Recherche D'histoire et Civilisation de Byzance* 15, 2005, 583–596.
- Pieri 2007 D. Pieri: Les Centres de Production D'amphores en Méditerranée Orientale Durant L'antiquité Tardive: Quelques Remarques. In: M. Sartre (ed.): *Productions et Échanges dans la Syrie Gréco-Romaine. Actes du 2e Colloque International sur la Syrie Antique (Tours, 12–13 Juin 2003)*. *Topoi Supplement* 8. Tours 2007, 297–327.
- Portale 2014 E. C. Portale: The Sunset of Gortyn: Amphorae in 7th–8th Centuries AD. In: N. Poulou-Papadimitriou/E. Nodarou/V. Kilikoglou (eds.): *LRCW 4. Late Roman Coarse Wares, Cooking Wares and Amphorae in the Mediterranean, Archaeology and Archaeometry the Mediterranean: a Market without Frontiers*. BAR International Series 2616. Thessaloniki 2014, 477–490.
- Pulak 1991 C. Pulak: Uluburun (Kaş) Sualtı Kazısı. 1985 Kampanyası. In: *XII Kazı Sonuçları Toplantısı* 1. Cilt. Ankara 28 Mayıs–1 Haziran 1990. Ankara 2008, 293–310.
- Pulak 1995 C. Pulak: Uluburun Batığı Kazısı (Kaş) 1993 Kampanyası. In: İ. Eroğlu/F. Bayram/H. Eren/N. Ülgen/F. Kaymaz/A. H. Ergüner (eds.): *XVI Kazı Sonuçları Toplantısı* 1. Cilt. Yayın No 1734. (Ankara 30 Mayıs–3 Haziran 1994). Ankara 1995, 219–237.
- Reynolds 2005 P. Reynolds: Levantine Amphorae from Cilicia To Gaza: A Typology and Analysis of Regional Production Trends from The 1st to 7th Centuries. In: J. M. G. i Esparaguera/J. B. i Garrigos/M. A. C. Ontiveros (eds.): *LRCW 1. Late Roman Coarse Wares, Cooking Wares and Amphorae in the Mediterranean: Archaeology and Archaeometry*. BAR International Series 1340. Barcelona 2005, 563–612.



- Reynolds 2010 P. Reynolds: Trade Networks of The East, 3<sup>rd</sup> to 7<sup>th</sup> Centuries: The view from Beirut (Lebanon) and Butrint (Albania Fine Wares, Amphorae and Kitchen Wares). In: S. Menchelli/S. Santoro/M. Pasquinucci/G. Guiducci (eds.): *LRCW 3. Late Roman Coarse Wares, Cooking Wares and Amphorae in the Mediterranean: Archaeology and Archaeometry, Comparison between Western and Eastern Mediterranean*. BAR International Series 2185. Parma – Pisa 2010, 89–114.
- Reynolds 2013 P. Reynolds: Transport Amphorae of The First to Seventh Centuries: Early Roman to Byzantine Periods. In: W. Aylward (ed.): *Excavations at Zeugma II*. California 2013, 93–161.
- Reynolds 2014 P. Reynolds: The Homs Survey (Syria): Contrasting Levantine Trends in The Regional Supply of Fine Wares, Amphorae and Kitchen Wares (Hellenistic to Early Arab Periods). In: B. Fischer-Genz/Y. Gerber/H. Hamel (eds.): *Roman Pottery in the Near East. Local Production and Regional Trade, Proceedings of the Round Table Held in Berlin, 19–20 February 2010*. Berlin 2014, 53–65.
- Reynolds 2018 P. Reynolds: Amphorae in Beirut from the Umayyads to the Crusaders: A Guide to Trends in Local and Imported Products. In: A. Augenti/G. Bianchi/E. Giannichedda/C. La Rocca/M. Milanese/A. Molinari/S. Nepoti/A. A. Settia/G. Vannini (eds.): *Archeologia Medievale, Cultura Materiale. Insediamenti. Territorio* 45. Firenze 2018, 91–110.
- Sazanov 2007 A. Sazanov: Les Amphores Orientales D'époque Protobyzantine au Nord de La Mer Noire: Chronologie et Typologie. In: M. Bonifay/J. C. Treglia (eds.): *LRCW 2. Late Roman Coarse Wares, Cooking Wares and Amphorae in the Mediterranean: Archaeology and Archaeometry*. BAR International Series 1662. II. Aix-en-Provence 2007, 803–816.
- Sciallano/Sibella 1991 M. Sciallano/P. Sibella: *Amphores Comment les Identifier?* Saint-Remy 1991.
- Sezgin 2017 K. Sezgin: *Tlos Antik Kenti Stadyum Alanı Seramikleri*. Phd. Thesis. Social Sciences Institute. Antalya 2017. Unpublished.
- Sezgin/Şenol/Cankardeş-Şenol 2022 Y. Sezgin/A. K. Şenol/G. Cankardeş-Şenol: *İzmir Arkeoloji Müzesi Ticari Amphoraları*. Ege Yayınları. İstanbul 2022.
- Soydan 2023 E. Soydan: *Gemi Batıklarında Bulunan Kilikya Amphoraları Işığında Antik Kilikya Bölgesi'nin Deniz Ticaretindeki Rolü*. Master Thesis. Mediterreanean Civilizations Research Institute. Antalya 2023. Unpublished.
- Söğüt 2023 Y. Söğüt: *Mersin 34. Cadde Kazısı Rome ve Geç Roma Amphoraları (LRA)*. Master Thesis. Institute of Social Sciences. Mersin 2023. Unpublished.
- Sözel 2023 S. Sözel: *Knidos'un Geç Antik Dönem Seramikleri*. Phd. Thesis. Institute Of Social Sciences. Konya 2023. Unpublished.
- Strabon 2000 Strabon: *Antik Anadolu Coğrafyası (Geographika Kitap XII–XIII–XIV)*. In: A. Pekman (ed.): *Arkeoloji ve Sanat Yayınları*. İstanbul 2000.
- Swan 2007 V. G. Swan: *Dichin (Bulgaria). The Fifth and Sixth Century Destruction Deposits and Their Implications for Ceramic Chronology*. In: M. Bonifay/J. C. Treglia (eds.): *LRCW 2. Late Roman Coarse Wares, Cooking Wares and Amphorae in the Mediterranean: Archaeology and Archaeometry*. BAR International Series 1662. Aix-en-Provence 2007, 835–844.
- Şengül 2023 A. Şengül: *Syedra 2020 Yılı Sütunlu Cadde'den Akropol'e Çıkan Ara Merdivenlerde Bulunan Bir Grup Roma Seramiği*. Master Thesis. Institute Of Social Sciences. Karaman 2023. Unpublished.
- Şenol 2000 A. K. Şenol: *İskenderiye Kazılarında Ele Geçen Amphoralar Işığında Kentin Roma Dönemi Şarap, Zeytinyağı, Salamura Balık ve Sos Ticareti*. Phd. Thesis. Institute of Social Sciences. İzmir 2000. Unpublished.
- Şenol/Kerem 2000 A. K. Şenol/F. Kerem: *İçel Müzesinde Bulunan Bir Grup Amphora*. In: M. Durukan/S. Durugönül/G. Brands (eds.): *OLBA 3*. Mersin 2000, 81–114.
- Taner 2022 N. Taner: *Kilikia ve Kıbrıs'ta Late Roman 1 Amphora Üretimi*. Master Thesis. Institute of Social Sciences. Mersin 2022. Unpublished.
- Tekçam 2007 T. Tekçam: *Arkeoloji Sözlüğü*. Alfa Yayınları. İstanbul 2007.
- Tekocak 2006 M. Tekocak: *Kelenderis Roma Çağı Seramiği*. Phd. Thesis. Institute of Social Sciences. Konya 2006. Unpublished.
- Tekocak/Zoroğlu 2013 M. Tekocak/L. Zoroğlu: *Kelenderis'te Bulunan Bir Grup Roma Dönemi Ticari Amphorası ve Düşündürdükleri*. In: S. Durugönül/M. Durukan/G. Brands (eds.): *OLBA 21*. Mersin 2013, 109–140.
- Tomay 2023 B. Tomay: *Myra'nın Limanı Andriake Kazılarında Ele Geçen Ticari Amphoralar*. Phd. Thesis. Institute of Social Sciences. Antalya 2023. Unpublished.
- Tosun 2020 M. Tosun: *Dara (Anastasiopolis) Roma ve Geç Antik Dönem (Parth-Sasani) Seramikleri*. Phd. Thesis. Institute of Social Sciences. İstanbul 2020. Unpublished.
- Trégliia/Berthier 2010 J. C. Trégliia/S. Berthier: *Amphores, Céramiques Communes et Céramiques Culinaires Byzantines de La Citadelle de Damas (Syrie)*. In: S. Menchelli/S. Santoro/M. Pasquinucci/G. Guiducci (eds.): *LRCW 3. Late Roman Coarse Wares, Cooking Wares*



- and Amphorae in the Mediterranean: Archaeology and Archaeometry, Comparison between Western and Eastern Mediterranean. BAR International Series 2185. Parma – Pisa 2010, 867–876.
- Uçar 2022 G. Uçar: *Diocaesarea Tiyatrosu Günlük Kullanım Seramikleri*. Master Thesis. Social Sciences Institute. Mersin 2022. Unpublished.
- Uscatescu/Jimenez 2005 A. Uscatescu/R. G. Jimenez: Pottery Wares from a Fifth Century Deposit Found at Iesso (Guissona, Lleida). In: J. M. G. i Esparaguera/J. B. i Garrigos/M. A. C. Ontiveros (eds.): *LRCW 1. Late Roman Coarse Wares, Cooking Wares and Amphorae in the Mediterranean: Archaeology and Archaeometry*. BAR International Series 1340. Barcelona 2005, 81–104.
- Vallet/Lemaitre/Schmitt 2010 C. B. Vallet/S. Lemaitre/A. Schmitt: Céramiques Communes et Amphores du Début du ve Siècle à Lyon (Fouilles du Musée Gadagne). In: S. Menchelli/S. Santoro/M. Pasquinucci/G. Guiducci (eds.): *LRCW 3. Late Roman Coarse Wares, Cooking Wares and Amphorae in the Mediterranean: Archaeology and Archaeometry, Comparison between Western and Eastern Mediterranean*. BAR International Series 2185. Parma – Pisa 2010, 207–216.
- Varinlioğlu 2010 G. Varinlioğlu: Geç Antik Dönemde Silifke Kırsalında Yerleşim. 2002–2007 Yılları Yüzey Araştırmaları Sonuçları. In: H. Dönmez/C. Keskin (eds.): 27. *Araştırma Sonuçları Toplantısı 3. Cilt (Denizli 25–29 Mayıs 2009)*. Denizli 2010, 201–214.
- Varinlioğlu 2012 G. Varinlioğlu: Boğsak Adasında Yerleşim Arkeolojisi (2010). In: A. Özme (ed.): 29. *Araştırma Sonuçları Toplantısı 2. Cilt (Malatya 23–28 Mayıs 20011)*. Malatya 2012, 171–184.
- Vasiliou/Tsigarida 2014 S. Vassiliou/E. B. Tsigarida: Late Roman Pottery from Recent Excavations at Cassandra in Chalcidice. In: N. Poulou-Papadimitriou/E. Nodarou/V. Kilikoglou (eds.): *LRCW 4. Late Roman Coarse Wares, Cooking Wares and Amphorae in the Mediterranean, Archaeology and Archaeometry the Mediterranean: a Market without Frontiers*. BAR International Series 2616. Thessaloniki 2014, 723–736.
- Vincenz 2015 A. D. Vincenz: Chapter Five: The Roman, Byzantine and Early Islamic Pottery. In: E. Ayalon (eds.): *Wine Presses at the Nesher-Ramla Quarry. A Thousand Years of Wine-making*. Haifa 2015, 99–185.
- Vroom 2004 J. Vroom: Late Antique Pottery, Settlement and Trade in The East Mediterranean: A Preliminary Comparison of Ceramics from Limyra (Lycia) and Boeotia. In: W. Bowden/L. Lavan/C. Machado (eds.): *Recent Research on the Late Antique Countryside 2*. Leiden/Boston 2004, 281–331.
- Wicenciak 2016 U. Wicenciak: Ceramic Patchwork in Hellenistic to Byzantine Phoenicia: Regionalization and Specialization of Vessel Production. In: I. Zych (ed.): *Polish Archaeology in the Mediterranean 25*. Warsaw 2016, 619–690.
- Wicenciak 2021 U. Wicenciak: *From Sacred to Everyday, Common Wares and Amphorae from Chhim in Sidon Hinterland*. Polish Publications in Mediterranean Archaeology 4. Leuven 2021.
- Williams 1989 C. Williams: *Anemurium, the Roman and Early Byzantine Pottery*. Subsidia Mediaevalia. Toronto 1989.
- Witnther-Jacobsen 2005 K. Witnther-Jacobsen: Late Roman Coarse Wares and Transport Amphorae from Panayia Emotousa, Cyprus. In: J. M. G. i Esparaguera/J. B. i Garrigos/M. A. C. Ontiveros (eds.): *LRCW 1. Late Roman Coarse Wares, Cooking Wares and Amphorae in the Mediterranean. Archaeology and Archaeometry*. BAR International Series 1340. Barcelona 2005, 625–634.
- Wohmann 2016 R. Wohmann: *Tableware and Cargo Amphorae of the Late Antique to Late Byzantine Periods from Küçükyalı (Istanbul), A Ceramic Assemblage from The Asian Hinterland Of Constantinople (4<sup>th</sup>–14<sup>th</sup> Centuries Ce)*. Master Thesis. Graduate School of Social Sciences & Humanities. İstanbul 2016. Unpublished.
- Yaman 2018 A. Yaman: *Arykanda Geç Antik Dönem Mahallesi Seramikleri*. Phd. Thesis. Institute of Social Sciences. Muğla 2018. Unpublished.
- Yeğin 2016 Y. Yeğin: Olba Manastırı'nda İşlik Kazısı ve Sonuçların Değerlendirilmesi. In: E. Erten/D. Favro/M. Özyıldırım/T. Akçay (eds.): *Seleucia, Olba Kazı Serisi, Sayı 6*. Mersin 2016, 203–219.
- Zachariadis 2014 S. Zachariadis: Pottery from the Workshop Building, in the Early Byzantine City of Philippi, Greece. In: N. Poulou-Papadimitriou/E. Nodarou/V. Kilikoglou (eds.): *LRCW 4. Late Roman Coarse Wares, Cooking Wares and Amphorae in the Mediterranean, Archaeology and Archaeometry the Mediterranean: a Market without Frontiers*. BAR International Series 2616. Thessaloniki 2014, 705–714.
- Zemer 1977 A. Zemer: *Storage Jars in Ancient Sea Trade*. The National Maritime Museum Foundation. Haifa 1977.

## Výroba, obchod a distribúcia amfor a pithoi v Sýrii a Kilíkii v neskoriantickom období

Hikmet Kilinçoğlu

### Súhrn

Nálezy amfor a pithoi z neskoriantických sídlisk v Kilíkii a Sýrii poukazujú na ich významnú úlohu v obchodovaní a skladovaní poľnohospodárskych produktov, ktoré tvorili základ hospodárstva tejto doby. Amfory slúžili ako kľúčové nádoby na prepravu olivového oleja a vína, pričom ich rozšírenie poskytuje cenné informácie o obchodných sieťach a organizácii hospodárstva v Stredomorí. Rozmach výroby keramiky a obchodu počas cisárskeho obdobia úzko súvisel s rastom poľnohospodárskej produkcie a rozvojom infraštruktúry, najmä na západnom a južnom pobreží Anatólie, Levanty a Cypru. Vidiecke usadlosti a mestá boli vybavené lismi na olej a víno, ktoré umožňovali spracovanie a skladovanie veľkých objemov týchto produktov, aby sa mohli následne prepravovať ďalej. Štúdia sa zaoberá distribúciou a využitím amfor a pithoi, pričom osobitnú pozornosť venuje ich úlohe v obchode a ich významu pre regionálne aj medzinárodné hospodárstvo. Zahŕňa tiež identifikáciu výrobných lokalít, typov nádob a obchodných trás na základe archeologických nálezov. Produkcia amfor bola koncentrovaná hlavne v pobrežných dielňach, zatiaľ čo pithoi sa vyrábali vo vidieckych oblastiach, často putujúcimi remeselníkmi, ktorí pružne reagovali na miestny dopyt. Amfory zo západnej Anatólie, Kilíkii, Sýrie a Levanty boli vyrábané od raného cisárskeho obdobia až po neskorú antiku a ich rozšírenie pokrývalo celé Stredomorie. Typy ako Agora M 239, LR 1, Zemer 40 a Zemer 41 sa vyrábali v Kilíkii, zatiaľ čo LR 4, LR 5/6 a Agora M 334 (LR 9/Beirut) pochádzali zo Sýrie a Levanty. Tieto nádoby sa našli v rôznych centrách, ako sú Alexandria, Bejrút, Dara, Elaiussa Sebaste, Myra či Zeugma, kde sa často objavovali v kombinácii s nálezmi pithoi. Nálezy amfor a pithoi boli potvrdené na 131 lokalitách, pričom kilíkijské amfory boli identifikované na 66 a sýrske na 111 osídleniach. Pithoi, ktoré sa používali predovšetkým na skladovanie, plnili dôležitú úlohu nielen v suchozemskom, ale aj v námornom obchode, hoci menej často než amfory. Zriedkavé dôkazy o pithoi v námornom obchode pochádzajú z nálezov lodných vrakov, pričom sa niekedy prepravovali spolu s amforami alebo samostatne. Produkty ako olivový olej a víno sa pôvodne skladovali v pithoi, odkiaľ sa prelievali do obchodných amfor, čo zdôrazňuje dôležitosť oboch typov nádob v neskoriantickom hospodárstve. Identifikácia výrobných lokalít a distribučných vzorcov odhalila prepojenie medzi poľnohospodárskou produkciou, výrobou keramických nádob a obchodnými aktivitami. Umiestnenie dielní v blízkosti pobrežia umožňovalo efektívne zapojenie amfor do obchodných sietí, zatiaľ čo pithoi sa vyrábali v menších dielňach vo vidieckych oblastiach, čo odrážalo špecifické potreby miestnych komunít. Tieto procesy boli podporené priaznivými geografickými a klimatickými podmienkami, ktoré umožnili Kilíkii a Sýrii stať sa významnými producentmi olivového oleja a vína, čím sa stali kľúčovými aktérmi v stredomorskom obchode.

Obr. 1. Mapa východného Stredomoria. Nálezy pecí na výrobu amfor v Kilíkii, Sýrii a na Cypre. Kresba autor.

Obr. 2. Typológia kilíkijských amfor. Podľa Akkaş 2020, 373, obr. 3.5.6; Alkaç 2013, 114, obr. 8; Söğüt 2023, 25, obr. 3.6; Tekoçak/Zoroğlu 2013, 138, obr. 9.

Obr. 3. Distribučná mapa kilíkijských amfor v Stredomorí. Legenda: a – Agora M 239; b – LR 1; c – Zemer 40; d – Zemer 41. Kresba autor.

Obr. 4. Typológia amfor zo Sýrie a Levanty. Podľa Akkaş 2020, 411, 427, obr. 3.6.2; 3.6.4; De Vingo 2005, 353, obr. 3.

Obr. 5. Distribučná mapa amfor zo Sýrie a Levanty. Legenda: a – LR 4; b – LR 5/6; c – Agora M 334. Kresba autor.

Obr. 6. Rôzne druhy pithoi podľa tvaru tela. Kresba autor.

Obr. 7. Distribúcia pithoi z neskorej antiky v Kilíkii a Sýrii. Kresba autor.

Obr. 8. Distribúcia kilíkijských a sýrskych amfor podľa osídlení a regiónov. Legenda: a – Čierne more; b – Afrika; c – Európa; d – Sýria; e – Anatólia. Vyhotoval autor.

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