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TRADE IN THE EASTERN MEDITERRANEAN, 100-700 AD: 
THE CERAMIC EVIDENCE

DISSERTATION

Presented in Partial Fulfillment of the Requirements for 
The Degree Doctor of Philosophy in the Graduate 
School of The Ohio State University

By

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2000

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Since the beginning of time, exchange and trade have played an important role in the development of civilizations. They function as a mechanism that allows individuals, cities and empires the opportunity to grow beyond the natural resources available to them. The intention of my study was to determine the scale and nature of trade in the eastern Mediterranean, as well as its importance to the economy of that area. To answer this question my study focused on the nature of trade, its direction, its volume, the goods or commodities being traded, the relationship of this trade to local and global economies, and its role in the metamorphosis of Late Antiquity.

The importance of trade is a dominant consideration in modern discussions of the development and well-being of society. Many prevailing ideas about the significance of trade come, in fact, from historical models, most of them developed in the course of the nineteenth century and based on information from the ancient world. My research represents a fundamental reassessment of the scale and nature of trade in the eastern Mediterranean in Late Antiquity and provides an important new foundation for those interested in the way our own complex economy functions in an era that has many similarities with those of the *Pax Romana*. 
My research is based on both the written and archaeological records, the latter providing evidence not available to earlier historians and which is amenable to statistical analysis, model-building, and testing. My work utilized literary evidence to form a general picture of the period’s trading activity and then integrated first hand archaeological information from various sites to provide direct evidence for the “realities” of trade in the period. This was necessarily selective and included sites in Greece, Cyprus, Turkey, Palestine, Egypt, Libya, and Carthage. This combination of literary and archaeological evidence illustrated: a) the nature of exchange (gift exchange, tied trade, redistributed trade, market exchange), b) the size or volume of trade, c) trade’s importance to the economy and society of the time, d) and the role of trade in the transformation and/or collapse of the Ancient World.
Dedicated to Debra, Joel, Bob, Joyce, Christopher, and Cassie
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LIST OF ABBREVIATIONS

Amm. Marc. = Ammianus Marcellinus

Ann. = Tacitus, Annales

App. Syr. = Appian, War against the Syrians

BJ = Flavius Josephus, Bellum Judaicae

BV = Procopius, De Bello Vandalico

Carm. = Horace, Carmina

Cass. Dio = Cassius Dio

Cat. Min = Plutarch, Cato Minor

Cic. Dom = Cicero, De Domo Sua

Cic. Fam. = Cicero, Epistulae ad Familiarum

Cic. Off. = Cicero, De Officiis

Cic. Sest = Cicero, Pro Sestio

Cic. Verr. = Cicero, In Verrem

CIS = Corpus Inscriptionum Semiticarum

Claud. = Suetonius, Divus Claudius

Clem. Al. Protr. = Clemens Alexandria, Protrepticus

Cod. Just. = Codex Justianus
Cod. Theod. = Codex Theodosianus

De Temp. = Galen, De Temperamentis

Demetr. = Plutarch, Demetrius

Diod. Sic. = Diodorus Siculus

Epist. = Sidonius Apollinaris, Epistulae

Epit. = Justinus, Epitome

Hist. Eccl. = Libanius, Historia Ecclesiastica

Hom. = Homer

Ody = Homer, Odyssey

Hor. = Horace

Isoc. = Isocrates, Niocles

Josh. Styl. = Joshua the Stylite

Just. = Justinus

NH = Naturalis Historia

NotDig. = Notitia dignitatum in partibus occidentis orientalis

Or = Libanius, Oration

Paus. = Pausanius

Philostr. = Philostratus

Plut. = Plutarch

Poxy. = Oxyrhynchus Papyrus

Procop. = Procopius

Ptol. Geog. = Ptolemy, Geographica
SEG = Supplementum Epigraphicum Graecum

Sid. Apoll. = Sidonius Apollinaris

Strab. = Strabo

Strat. = Polyaeus, Strategemata

Suet. = Suetonius

Tac. = Tacitus

Theol. Graec. = Comntus, Summary of the Traditions Concerning Greek Mythology

VA = Vita Apollonii

VS = Vitae Sophistarum

Zon. = Zonaras

Zosim. = Zosimus
CHAPTER 1

INTRODUCTION

The important thing is not to discover in the texts a few references to commerce and exchange; for exchange and commerce have existed in all ages. What does matter is the importance and the character of this commerce and this exchange.

Henri Pirenne, *Mohammed and Charlemagne*

From the period of the five good emperors (96–180 AD) to the end of the reign of Justinian II (711 AD), the Mediterranean world underwent a series of political, cultural, religious and social changes that affected the lives of everyone, both within the empire and on its borders.1 As scholars have attempted to understand better the transformations that occurred during this period, they have focused on specific elements of Late Antique society, such as the army, the church, the political structure, and the economy. Concerning economic developments, there have been broad, general studies of the Late Roman economy2 and specific studies focused on the Roman economy in the western Mediterranean,3 typically little attention has been paid to economic history of the eastern

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1 Peter Brown, *Late Antiquity* (Cambridge, Massachusetts 1987), 1.


Mediterranean, except for the Byzantine period. My research represents a fundamental reassessment of the scale and nature of trade in the eastern Mediterranean in Late Antiquity and will, additionally, provide an important new foundation for those interested in the way our own complex economy functions in an era that has many similarities to those of the earlier Pax Romana. By using a combination of literary and archaeological evidence I will illustrate a) the nature of exchange (gift exchange, tied trade, redistributed trade, market exchange), b) the size or volume of trade, c) trade's importance to the economy and society of the time, d) and the role of trade in the transformation and/or collapse of the Ancient World.

Background

Wandering through the countryside in Greece or Cyprus, one cannot help but be struck by the incredible number of broken pieces of pottery lying on the surface. An examination of several different pieces reveals that they represent a wide variety of uses (dinner plates, pitchers, roof tiles, etc.), historical periods (Hellenistic, Roman, Byzantine, Modern, etc.) and even places of origin (Greece, Africa, Italy, Cilicia, etc.). This naturally leads to speculation as to the reasons and mechanisms that brought these different pieces of pottery from their places of origin to their final, common destination.

Scholarship on this question has come full circle in the last century. Prior to the work of Karl Marx little attention was devoted to the workings of the ancient economy; rather scholars viewed it in the most simple terms, influenced by Biblical imagery of

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simple farmers and ideas drawn from the literary works of Hesiod and Virgil, while largely assuming that the ancient economy was based on principles similar to those of the present. Marx, however, brought the ancient economy to the forefront, partly by highlighting economic structure as the underlying foundation of human history, and by seeing slavery as the primary characteristic of that economy. After Marx the early discussion was continued by Karl Bücher and Max Weber and was it was further developed by Michael Rostovtzeff. In his work, *The Social and Economic History of the Roman Empire*, Rostovtzeff hypothesized that the ancient economy functioned in a manner similar to modern economic structures. This position was challenged by A.H.M. Jones and Moses I. Finley's views that agriculture was the basis of the ancient economy and that trade played only a very limited role. Benefiting from the ever-increasing amount of available archaeological data, modern scholars, such as Paul Reynolds and Klavs Randsborg, have moved beyond the basic question of whether there was trade in the ancient economy to address more sophisticated questions about the mechanisms at work in society that supported this commerce. For example, in the western

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8 Reynolds, *Trade in the Western Mediterranean*.


Mediterranean, research has focused on the effect that trade had on the barbarian kingdoms, such as the Vandals, and on Byzantine efforts at reconquest.\(^{11}\)

Since the beginning of time, exchange and trade at some level have played an important role in the development of civilizations. They function as a mechanism that allows individuals, cities and empires the opportunity to grow beyond the limited natural resources available to them. While exchange can refer to the transfer of numerous items such as goods, services, ideas, or even customs, sometimes without immediate economic recompense, trade is usually defined as the exchange of material goods or commodities, normally for money or something of equal value. In order to make my study of trade manageable, I will be focusing on commercial exchange during the period 100 to 700 AD, a time frame that has generally been viewed by scholars as a period of diminished trade activity.\(^{12}\) The intention of my study will be to examine the trade that moved into and out of one specific area as a case study. I will be focusing first on patterns of distribution within each particular region of the area and how this changed over time due to local and global historical events and influences. Once these patterns are established, they can be used to examine the major and minor trading routes, trading partners, and the goods traded in the eastern Mediterranean. This, in turn, should address several questions about the nature of trade, for both local and global markets: 1) Who controlled this trade - was it the elites, such as the merchants, government, or church? 2) What was the impact

\(^{11}\) Reynolds, *Trade in the Western Mediterranean*, 106.

of trade on people living away from established trading centers, and on society in
general? 3) Who or what mechanism determined the goods that were traded between
sites? 4) To what degree did the local economy depend on trade for stability or growth?
5) What was the relationship between coastal cities and the hinterland? 6) What can the
goods being traded tell us about the local economies and markets? While one can
investigate many different kinds of questions regarding trade, I will be examining these
issues, as they are more important to understanding the fundamentals of trade in Late
Antiquity. To address these questions on the way trade functioned and to understand the
mechanisms that powered these trading networks, it will be necessary to examine trade
and commerce in both the written and archaeological records.

Anthropologists have identified three differing modes of exchange: reciprocity,
market exchange, and redistribution. Reciprocity is the exchange of goods between
individuals for mutually acceptable terms. This was usually based on a mutual sense of
identity and obligation. The most common type of reciprocity in Late Antiquity was gift
exchange between members of the upper classes. They would exchange gifts with others
to gain either mutual benefit for both parties or to secure an advantage for the primary
gift giver, a “client patron” relationship. Some scholars feel that the long-distance
movement of most goods during this period was due to this gift exchange between the

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upper classes. While it is clear that this caused a steady movement of luxury goods, these typically small items would have constituted a small percentage of the overall trade volume in a ship. Market exchange is a trade between buyer and seller based on the financial value of the item or items exchanged. This can occur when an individual sells or buys goods from someone at a central selling point, such as a market or fair, or from a traveling peddler. In one scenario a farmer would harvest his crops and then transport them to a central location where he would sell his goods for the best possible price from whomever showed up, similar to the flea market, old village market or farmers' market in the United States or the *laiki* (λαίκη αγορά) in Greece. Redistribution occurs when an organization gathers the goods at a central point and then redistributes these materials as needed to outlying areas. This was usually done under the authority of a priest, king, or strong central government. Perhaps the most famous example of this system was the Mycenaeans. In Late Antiquity, the state practiced a form of redistribution by collecting taxes in kind (grain, oil, etc.) at Rome or in the provinces and then shipping it to the armies on the frontiers. Typically all three means of exchange work together in society on different levels. Basically, a good, simple working definition of trade for this study is that trade is the exchange of goods for other goods, monetary remuneration,
services, or for intangibles such as obligation (legal, societal, or cultural) or obtaining a personal good will and can be performed on a local, intermediate, or long distance level.

Evidence

Written, particularly literary, evidence was the mainstay of scholarship on the ancient economy until the early part of the twentieth century. Recent scholarship has attempted to use new approaches in determining the extent and importance of trade. As the amount of archaeological information increases, particularly ceramic evidence from excavations and surveys, more scholars are attempting to use these data to supplement other evidence, particularly for questions that lack straightforward answers. While efforts have been made in the past to utilize archaeological evidence, new methods, most notably the quantification of data, have helped the modern researcher to interpret the large amounts of available cultural material. Quantification of data allows many different items to be analyzed together in the study of trade, permitting the scholar to compare more accurately the presence and omission of specific trade goods.

This quantitative analysis allows patterns and trends to be noted over periods of time, both for general as well as specific regions. This analysis provides scholars with a reflection of trade that is unaffected by the biases of the literary sources. This is particularly important since it provides a significant counterweight to perception of trade contained in the ancient literature. While an archaeologist cannot derive a precise numerical relationship between the ceramic evidence and what was actually in

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circulation, the available ceramic data can be used as a generalized index. In order to be able to do this it is first necessary to demonstrate that the ceramic sample from a particular place is in some way representative of the pottery actually in circulation and this can be accomplished if consistent patterns are obtained for other areas. Then a scholar can use ceramics as a relative guide to changing economic patterns in the region allowing important certain factors, such as competition, to be investigated. This, however, serves as only a reflection of trade; it does not allow a one to one comparison between ceramics at different sites. A site with ten sherds of African Red Slip ware does not necessarily have twice the imports as a site with only five, or ten times the imports of a site with only one sherd.  

Several factors contribute to the usefulness of examining the remains of pottery (both utilitarian and fine wares) and amphorae. First, they are extremely durable, last for thousands of years, and were common objects of their time. Every household would have possessed numerous pieces of pottery and different sites would have had different collections of pottery depending upon the wealth or social status of the inhabitants and the pottery’s intended use. Second, ceramic vessels were common everyday items owned by most people, from all different levels of society. Third, the design or decoration of the

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pottery can sometimes allow the origin of manufacture to be ascertained, which is useful in determining trading routes, extent of trade, and lines of communication and contact.\textsuperscript{21}

This is particularly true for finewares, which have been extensively studied throughout the last century and will play an important role in my analysis of trade in the eastern Mediterranean for this period. In my analysis, I am going to use both "first-hand" (material from The Ohio State University Excavations at Isthmia and the Sydney Cyprus Survey Project) and second-hand (published) material.

In an ideal situation, my first-hand material from Isthmia and SCSP could be compared to a database that included the complete ceramic evidence from every archaeological site ever discovered. Unfortunately, in the real world, many sites have never been excavated or only partially excavated for one reason or another. This means that direct comparison of ceramics from Isthmia and SCSP to other sites was usually impossible. Instead of using absolute numbers, relative percentages provide a more accurate scale for comparison between sites, since establishing the total volume of trade that passed through or from a site is impossible.

The other problem with the available ceramic evidence is the current ceramic dating available. Many ceramic forms were in circulation for many years and are dated to a span of years, such as 375 to 475 AD or 500 to 750 AD instead of exactly 402 AD. This means that historical changes, such as the Vandal capture of Carthage, are not as

suddenly evident in the ceramic record as they are in the written record. The other problem is that if the chronology of the ceramic forms is skewed in one direction it can leave large gaps in the archaeological record. If for some reason (misidentification, lack of proper processing, etc.) a ceramic form was mistakenly given a date of 200 to 250 AD instead of 200 to 400 AD, other ceramicists who used that as an established date to help with the chronology of their work would then have their data misdated. This could result in their analysis being flawed and means that inconsistencies in the ceramic chronology must be carefully compared to the local, regional, and global ceramic records.

**Shipwrecks**

Another source of ceramic information for the study was from nautical archaeology. Shipwrecks often provide data both from their cargo and from the ship itself. Shipwrecks can serve as time capsules, preserving the moment when they sank. An excavated shipwreck often provides a complete collection of the commercial items on board. The pottery recovered from a shipwreck can reveal the ship's stops on its voyage. This can help demonstrate trading routes, commercial links between certain cities, and the type of goods traded. Quantifying the number and location of wreck sites can also lead to conclusions concerning importance of shipping during specific periods.

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23 For an example of this type of analysis see George Bass and Frederick H. van Doormick, Jr., *Yassi Ada: A Seventh-Century Byzantine Shipwreck* (College Station, Texas 1982).
and in specific regions. The risk that must be kept in mind when doing this type of analysis is that the shipwrecks found might not be representative of the shipping during their time, or that underwater work in certain areas might be proceeding faster than other areas that might reveal far different results. Shipwrecks, however, still provide invaluable data for this study.

**Documentary Sources**

In addition to archaeological evidence, written sources are also invaluable to this study. Since few ancient sources directly discuss trade, most of the evidence concerning trade is incidental information — facts mentioned briefly in the texts. The variety of available literary sources help to create a more complete picture of the various aspects of trade as they not only provide information that corroborates the archaeological evidence, but in many cases shed light on topics where the archaeological record remains silent. Fortunately, many ancient historians and chroniclers, such as Procopius and Theophanes, while not examining trade directly, provide many important details in their writings.

These works provide two main types of information on trade. First, governmental involvement with trade and perhaps even the volume of commercial activity is sometimes evident in the historical accounts. In addition to the better-known Price Edict of

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Diocletian, the Alexandrian Tariff records fifty-four different items (spices, precious stones, and fabrics) and the duty imposed on their importation to Rome.\textsuperscript{26} Secondly, trading routes between specific areas can sometimes be discerned simply by examining the descriptive prose of ancient writers. Many provide lists of goods owned or bought by people and often these goods originated from distinct areas. When Pliny wrote about Ethiopia, he referred to its exports of slaves, tortoise shells, ivory and rhino horns.\textsuperscript{27} Another type of source that can provide information about trade is legal documents. Legal sources, such as the Codex Theodosianus and Codex Justinianus, also show how the government tried to control and use commercial activities for its own purposes.\textsuperscript{28}

Saints' lives, such as that of Saint John the Almsgiver, on the other hand, can often provide first-hand accounts of trading on a local level, as well as information concerning regional trade. They also help us to understand better the way religion and trade interconnected.

**Settling on an Approach**

The first step in my study was the definition of the chronological and geographical parameters of the study. The period 100-717 AD was chosen for several reasons. It was an era of vast change, as the Roman Empire, and its borders in particular, ebbed and flowed (see figure 1.1). Many scholars see this era as beginning with unmatched prosperity, followed by a decline, in all aspects of society, as the Roman

\textsuperscript{26} Elton, *Frontiers of the Roman Empire*, 84-85.

\textsuperscript{27} Pliny *NH* 5.34, 6.173.

\textsuperscript{28} Other legal documents include *Farmer's Law, Rhodian Sea Law, Digest*, and *Institutes*. 

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Empire suffered political setbacks and outside invasions. Geographically, my survey was limited to the eastern half of the Mediterranean, focusing on the areas bordering the Mediterranean Sea, starting with Italy and running clockwise around to Carthage, even though only Carthage’s relations with the eastern half of the Mediterranean will be examined (See figure 1.2). I chose to restrict my study to the eastern half of the Mediterranean for several reasons. First, the examination of the entire Mediterranean would have been too large of a task, logistically, for this study and the selected area needed to be smaller and easier to manage. Fortunately, during this period the eastern and western halves of the Roman Empire evolved into two areas with distinct identities and cultural differences, making it reasonable to study one of these halves in distinction from the other. Second, I have detailed first-hand information from two sites located in the eastern half, on the island of Cyprus and in Greece. Third, the study of trade in the western half of the Mediterranean has been closely studied by several scholars, such as Paul Reynolds, while the eastern half has not been examined in such detail.29

In particular, I focused on detailed evidence from two specific areas, The Ohio State University Excavations at Isthmia, Greece, and the Sydney Cyprus Survey (SCSP) area in Cyprus near the Troodos Mountains (see figures 1.3 and 1.4). Both Greece, particularly the Isthmus of Corinth, and Cyprus appear to have served as intermediaries or focal points for established trading routes in antiquity. Perhaps more importantly, I had access to unpublished, first hand archaeological evidence from these sites, accumulated over several field seasons. Second, these areas seem likely to illustrate two

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29 Reynolds, Trade in the Western Mediterranean.
different types of trading activity. Isthmia, having access to a port, served as a primary stop on major trading routes. The SCSP area in Cyprus is however, located in the interior of the island, and it would presumably have relied on trading connections to coastal cities to receive trade goods. This contrast provided an important means for me to use the evidence to form tentative conclusions about the different patterns of trading activity.

I also examined other archaeological evidence from different sites in Asia Minor, Palestine, Egypt, Libya, Rome and Carthage to see how the trading activity functioned in these areas. This allowed me to establish a basis of comparison for the examination of evidence from the two primary sites of Isthmia and Cyprus. The main difficulty in this approach was the comparison of data from the different projects, since there is no standard method used by archaeologists for recording site data. Since the areas were excavated and investigated by various archaeologists using different methods over many years, it was not always possible to make comparisons on a straight one-to-one basis. Another limiting factor was that many projects are poorly published, and their publications fail to contain the raw data needed for quantitative analysis. The sites where I have direct access to first-hand material, Isthmia and the project on Cyprus, will balance this, and these sites will be examined in much closer detail. The archaeological evidence, when combined with other types of data, produced a solid pattern of commercial activity that illustrated the mechanisms at work in the trading cities and in the surrounding countryside.

While the sites revealed information pertinent to the trading activity at that particular site, the combination of multiple sites allowed a more regional view to be
created. This picture illustrated the directional flow of trade, its commodities, and their volume. Based upon this evidence it was possible to demonstrate both the importance and nature of trade in the eastern Mediterranean as well as its effect on certain elements of society.
CHAPTER 2

METHODS IN THE RECORDING OF FIRST-HAND CERAMIC DATA

Archaeology is the search for fact, not truth.
Dr. Henry Jones, Jr., Raiders of the Lost Ark

When working with the ceramic data provided by other projects in their publications, I cannot get back “behind” the methods originally used. In other words, I can really only use data from those projects in a secondary way, and the most I can do is to note the differing methods the projects report having used.1 Since a major part of this study, however, is based on information that I helped to gather and process myself, I should provide a description of the methods used in those projects for the gathering and recording of first-hand ceramic data.

When working with archaeological evidence, it is imperative that total control be exercised over the data from start to finish. Any breakdown in the processing of the information can result in incomplete or faulty data that could unfavorably influence future analysis. When a scholar uses published reports for data, he or she must rely on the

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original archaeologists' precision and attention to detail. Having the opportunity and responsibility to work with original archaeological evidence in this study meant that my first step in working with the data was in establishing a clearly laid out plan for processing the information before beginning the actual collection of data.

Perhaps one of the more important aspects in dealing with archaeological material is the development of a carefully planned method that includes both the initial archaeological processing of the material and its later study. This process starts when an excavator uncovers an artifact or a survey team member picks up a sherd of pottery and continues as the archaeologists further process, identify, inventory, and record the item. Establishing a clearly laid out process is critical when dealing with ceramic remains, since in many cases the excavator or surveyor is dealing with many, many pieces (in some cases hundreds of thousands of pieces). Without a carefully constructed archaeological plan that covers all the steps from discovery through cleaning, identification, and conservation to permanent storage, it is impossible for the archaeologists to perform their work in an ethical manner or to present their final data without future questions or controversy. This is especially important for the study of people, items, or processes for which there are few or no written records, such as trade in Late Antiquity.

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Field Methods Utilized by The Ohio State University Excavations at Isthmia and the Sydney Cyprus Survey Project

The first step in the collection of ceramic data after the items are uncovered or discovered is the physical processing of the ceramics. This step varies slightly between excavated material and survey material. For excavated material, as is the case with that from the Ohio State University Excavations at Isthmia, Greece, the pottery is kept distinct by stratigraphic units (called “baskets”). When the collection units are brought in from the field they are removed from their field container (zembelia [rubber baskets], bags, etc.) and placed into an individual tub for processing (see figures 2.1 and 2.2). The field tag that contains the site information (location, unit, and date) is then attached to the tub. It is important that the field tag stays with the collection unit and remains legible. This tag contains the information about the artifact's context, which contains its relationship to the other artifacts and the broader archaeological site. If the tag were to be lost then the collection unit would lose its contextual information and create gaps in the final analysis of the archaeological unit.

The items in the tub are then examined and any delicate aceramic material such as bone or glass is removed for special treatment. Such materials are usually removed in the field and kept in special containers, although on occasion the field team fails to recognize them in their dirty condition. The unit is then soaked in fresh water and gently cleansed with brushes to remove dirt and other accumulated substances.

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3 For a good introduction to the logistics of physically setting up a base of operations for the processing of finds see Clive Orton, Paul Tyers, and Alan Vince, *Pottery in Archaeology* (Cambridge 1993), 44-86.

4 Knudson, *Culture in Retrospect*, 7-8; Renfrew, *Archaeology*, 42-43.
from the archaeological item without removing decoration or damaging the material in any way. The items are then set aside and allowed to dry.

The survey items, like those collected by the Sydney Cyprus Survey Project, go through a similar treatment. In the field, the sherds are collected in a large plastic bag that has locational information written physically on the bag, and on a tag that is then placed inside the bag. Since the survey teams typically cover several units in a field day and have to carry all collected material physically with them as they cover other units, the lightweight of the plastic sealable bags is preferred to the heavier zembelia. Once the material is carried to the processing lab, it undergoes the same fresh water soaking and cleaning as the excavated material. The cleaning, however, is easier since the survey material is not usually encased in dirt and typically cleans up very easily.

Once the material is cleaned, the ceramics are removed from the other archaeological items in the unit for identification. The pottery, along with the field tag mentioned above, is then placed on a table to dry (see figure 2.3). The pottery is left to dry completely, since when wet many small details can be hard to distinguish and colors look different. Next in the process is a general sort or classification of the sherds, placing them into groups based upon gross characteristics such as color and decoration. The final preliminary step is a second, intensive sort of the pottery, separating the sherds into categories based upon standard typologies. This step includes comparing unknown sherds with pieces and profiles in articles and monographs to find an exact match or the one closest to an exact match. It is often useful to establish a "study collection" for use by
the team's ceramicists (see figures 2.4 and 2.5). A study collection is a group of sherds from the area being studied, and sometimes the surrounding area, that have been positively identified and are available for the ceramicists to use for comparison.

After the physical processing of the ceramics (collection, washing, drying, and sorting), the next step is the recording of the information gathered from the pottery's examination in both written and computer format (see figure 2.6). The ceramicist first records the information on standardized forms. The forms are designed in such a way as to be quickly, but efficiently filled out following a specific format. This data recording is accomplished by using computer-generated forms that have standard fields in a logical order. This allows different ceramicists to work on the material while ensuring that they are recording the data in an identical fashion without leaving out critical information that might be hard or impossible to reconstruct later. The top half of the sheet has fields for the archaeological context information. The ceramicist transfers this information from the field tag to the form, recording the archaeological project (survey or excavation), the location (both a general and specific reference), unit identification (basket number or survey transect/unit number), the date recovered, the current date, and the ceramicist's name. The ceramicist then carefully describes each batch using terminology that has been standardized over the years. A batch is a discrete category based both on vessel type (coarse ware, cooking ware, or fine ware) and body part (rim, handle, body sherd, etc.). Thus, for example, a batch would be all African Red Slip rims or Late Roman Amphora 1 handles.
The first category to be determined when examining the sherd is the type or class of vessel. This refers to a vessel's function, what it was used for and how it was used. Typically, most pieces of pottery were used for storage containers. These domestic uses can be broken into several categories such as storage, transformation or processing (cooking), serving (finewares) and transport. At the Ohio State University Excavations and SCSP, these categories were called finewares, cooking wares, and coarse wares. Finewares are the ceramic vessels used at the table for dining, similar to modern china. Cooking wares are vessels used in the kitchen for preparing the food, like cook pots and casserole dishes. Coarse wares such as amphora, pithoi or basins are vessels that are heavier and less finely made than finewares and cooking wares and are typically used for storage purposes. Each of these general vessel types is then broken down into more specific individual wares, subfields of the class that denote specific identification. For example, cooking ware can be broken down into casserole dishes, pitchers, stewpots, and frying pans (see figure 2.7).

The sherds are divided into categories based on their shape and fabric. The vessel's shape can be indicative of its function, for example a shallow plate would be used for serving food or a vessel with a spout would be used for pouring liquids. The body clay of the vessel is usually referred to as its fabric, or paste. The fabric is composed of two parts, a matrix of clay minerals that are smaller than 0.002mm in length.

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5 Joukowsky, A Complete Manual of Field Archaeology, 44.
and other particles, or inclusions that are larger than the clay minerals. The ceramicist will examine the many different qualities of the sherd's fabric to help identify its ware. He or she first examines the fabric's color using a Munsell chart. The color of the core of the sherd is determined; next the margins (the areas between the core and the surface), and finally the surface. These colors and the differences between the zones help determine the firing conditions that created the vessel. Next, he or she examines the sherds' hardness based on the Mohs' scale. This helps ascertain the approximate firing temperature for the vessel and is useful when examining stonewares and porcelains. Then the ceramicist studies the break, or fracture. If a ceramic vessel has few inclusions, when it breaks it has a smooth or slightly rippled look. If the vessel, however, had many inclusions, then the break is rough and uneven. Finally, the ceramic specialist examines the inclusions, both those that are visible to the naked eye and those that can only be seen under a microscope or magnifying glass. The size, number, and type of inclusions (mica, quartz, lime, etc.) are often indicative of certain types of wares.

Each ware is then identified as one of four components or body parts: rim, body, handle, and base. The orifice or opening to the vessel is usually described in specific detail based upon its function, such as rim, spout, neck, or collar. The body is the part of

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9 Orton, *Pottery in Archaeology*, 67-75.
the vessel that typically has the maximum diameter and is basically the part of vessel that is left when the other parts (handles, rim, feet) are removed. Most sherds naturally tend to come from this region of the vessel since it had the greatest surface. Many vessels had extensions extending from the wall of the vessel used for transportation or decoration called handles. Handles are identified by their design, such as strap, rolled, or double. The base is the part of the vessel on which the vessel originally rested.\(^\text{10}\) The ceramicist records this information on the form, describing and identifying the sherds in batches.

While each batch or grouping can be as general as late Roman coarse ware body sherds, the goal is to be as specific as possible, such as African Red Slip form 50A handle. The batches for each unit are numbered sequentially within the unit starting with 1. First, each batch’s physical characteristics are recorded. The ceramicist records quantity (number of pieces in the batch), weight of the batch in kilograms, body part, decoration (glazed, slipped, rouletted, incised, etc.), and anything special or unusual noted by the ceramicist, such as a body sherd being cut for use as a stopper or a weight, is then recorded. The final field to be filled is the identification, African Red Slip, Phocaean Ware, or Late Roman 1 Amphora. The recording of this information is critical for future analysis. Detailed studies of particular wares, especially finewares and amphorae, have been created that allow specific dates and areas of manufacture to be assigned with

\(^{10}\) Rice, *Pottery Analysis*, 212-214.
relative certainty. For example, it is believed that Late Roman 1 amphorae were manufactured, among other places, on the island of Cyprus during the fifth to seventh centuries AD.

The goal is to organize the data in such a way that it is accessible to researchers both present and future and a researcher looking for answers to any number of questions can easily analyze it. This is not a problem when the ceramicist is looking at whole vessels or diagnostic pieces, but the ceramic data from a survey and, in many cases, from an excavation tends to be numerous and composed of small body sherds. The solution to the problem of how to organize large ceramic data was the creation of a “ChronoType” system. A ChronoType is an easily recognizable piece of pottery that has a distinct chronology and includes specific information about its form, fabric, and function. One advantage to this system is that it allows the ceramicist to construct a hierarchical tree that shows the relationships among different ChronoTypes by becoming more specific and sophisticated in its clarification as the tree branches from top to bottom. To illustrate this point, African Red Slip will be used (see figure 2.8). African Red Slip was a late Roman

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12 Lund, “Pottery of the Classical, Hellenistic, and Roman Periods,” 130-131; Peacock and Williams, Amphorae and the Roman Economy, 185.
red slipped fineware. Therefore, it would be found under finewares, and specifically under Roman Red Slips. Due to its long history of production African Red Slip has had over 200 different forms identified on the basis of shape, and each shape or form has a specific chronology assigned to it. So the ChronoType African Red Slip is below the ChronoType Roman Red Slip and above its various forms, such as African Red Slip form 50. As an example, suppose the ceramicist is looking at a piece of pottery that he or she knows is a late Roman red slipped fineware. If he or she knows nothing else about the piece, then the ceramicist puts it into that general ChronoType. If, however, he or she is able to look at the piece and determine that it is African Red Slip, but unable to determine the specific African Red Slip form, then he or she puts it into the African Red Slip ChronoType. If, however, he or she is able to look at the fragment and see that its shape matches form 50, then it will be placed into that ChronoType.

A second advantage to this system is it allows the ceramicist to place the pottery into the ChronoType system based upon his or her level of expertise and on the information that can be determined from the sherd. It must be kept in mind, however, that many sherds provide very limited information since they lack decoration or an identifying shape. Since the system allows the ceramic pieces to be sorted as specifically as possible by the ceramicist, and still include information about general categories. The system also permits the researcher using the ceramicist’s information to look at large, general categories as well as specific or individual categories. Another benefit is that when a researcher who has more specific knowledge of a particular style of pottery than the
ceramicist who originally sorted the pottery arrives at the site, he or she can examine the sherds and perhaps place them in more specific categories.

The final step is entering the data included on the forms into a computer program that will allow the data to be easily accessed and studied. Typically, the data is entered into a relational database (such as Microsoft® Access™) and cross-linked with a geographical information system program, or GIS, (such as MapInfo™, Arc/Info™, or ArcView™) to provide a geographical representation of the ceramic data. This computer coding allows the data to be manipulated in a number of ways while still retaining the important relationships between categories that the ChronoType system established. Researchers can then work with the data by adding or removing types of data in an effort to see patterns in the entire landscape or just for specific areas or regions. It allows researchers the opportunity to look for relationships between various periods or between a specific period and topographical features. It also allows multiple researchers to work with the data at the same time on different questions. If any information about dates, descriptions, identifications, and even hierarchical relationships about a

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ChronoType ever changes, the changes can be made in the master record that is then automatically updated in the database. This allows the database to be a work in progress that is constantly being improved.
CHAPTER 3

SCHOLARSHIP ON TRADE

History is a pack of lies about events that never happened told by people who weren't there.

George Santayana

In order to arrive at a reasonable, modern view of Roman trade in the Empire, it is first necessary to go back and examine scholarship on the subject and understand fully the basis for the positions held by modern scholars.¹ One of the first scholars to examine the workings of the Roman economy was Adam Smith. In his 1776 Wealth of Nations, he argued for a fundamental difference between systems based on barter and those based on payment with currency. He used evidence from Pliny the Elder and other ancient authors for the positives and negatives for paying with currency.² In the following century, Karl Marx, working with Friedrich Engels, developed a theory concerning human social motivation that was to have a great impact on politics, philosophy, and history. When

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¹ For general studies of trade throughout the Roman Empire see Martin Charlesworth Trade-routes and Commerce of the Roman Empire (Cambridge 1926); John H. D’Arms and E.C. Kopff, ed. The Seaborne Commerce of Ancient Rome (Rome 1980); Jean Rougé, Recherches sur L’Organisation du Commerce Maritime en Méditerranée sous L’Empire Romain (Paris 1966); and Manfred G. Raschke, “New Studies in Roman Commerce with the East,” Aufstieg und Niedergang der römischen Welt 2.9.2 (1978), 604-1363.

applied to history, this is typically referred to as “historical materialism” or the “materialist conception of history.” Marx felt that a society’s material conditions, especially its economy, was the basis of all development and other institutions, and in this he disagreed fundamentally with the theories of other researchers. Marx’s views and theories had an enormous impact on historians of the nineteenth and twentieth century and they had to address Marx’s ideas whether they agreed with him or not, in all periods of history.³

Scholarship on the ancient economy in the nineteenth century tended to focus on the role of the city and the economic implications for its inhabitants and region controlled by each city. These early contributors are usually divided into two main classes, primitivists and modernists based upon their interpretation of the ancient economy.⁴

Karl Bücher & Eduard Meyer

The question of how to understand the functioning of the ancient economy began to receive serious attention following the debate between Bücher and Meyer. Karl Bücher was an economist writing in the late nineteenth century, whose work Die Enstehung der Volkswirtschaft attempted to illustrate how the ancient economy developed into the modern economy that we are familiar with today.⁵ He believed that it


⁴ Peter Ørsted, Roman Imperial Economy and Romanization (Copenhagen 1985), 45-46.

⁵ Karl Bücher, Die Enstehung der Volkswirtschaft (Tübingen 1901).
had progressed through time, slowly advancing in complexity until the modern economy was developed, essentially a linear view of history. Eduard Meyer quickly rejected Bücher's hypothesis. Meyer felt that the economy did not evolve in a linear fashion from ancient times to modern. He believed that in antiquity it had already achieved a high degree of complexity, similar to that of the modern economy, but that it had collapsed at the end of antiquity. Succeeding cultures had to start over without help from the ancient world, essentially a cyclical theory of history. Meyer did not offer evidence to contradict Bücher, but questioned Bücher's ability to create historical models since he was an economist, not an ancient historian — a view held by other historians at that time.\(^6\)

**Max Weber**

The next historian to tackle the subject was Max Weber. Weber's knowledge of Greek philosophy combined with his sociological approach resulted in a series of operational ideal types. His 1906 work, *Agrarverhältnisse*, while mainly based upon his earlier work the *Die römische Agrargeschichte in ihrer Bedeutung für das Staats- und Privatrecht*, focused on the land, more than the city. The city needed the land to survive, while the land could function without the city. Weber further divided cities into two classes, consumer cities and producer cities.

A close examination of Weber's writings shows how his definition of capitalism slowly evolved over time. His first work, *Die römische Agrargeschichte*, clearly demonstrates that Weber started his investigation of the ancient economy based upon

Theodor Mommsen's ideas, which in turn had been based on Meyer's theories, namely that the ancient economy resembles the modern economy. He began his study by focusing on the various agricultural developments in Roman history, such as the latifundia and the Roman colonate. Weber examined the ager publicus and its exploitation by a few select wealthy individuals. It was the use of this land that led him to see the development of what he termed "agrarian capitalism."^7

It is with his next publication, "The social causes of the decay of ancient civilization," that Weber began to change his visualization of the ancient economy. In this essay he sees capitalism as a smaller influence and the economic function of the oikos as the primary factor influencing the economy. Weber, in what some modern scholars have termed a "Marxist" approach, sees the transition of the communally shared plot to individually owned land in conjunction with an agrarian emphasis shifting to an urban focus because of overseas conquest and expansion as the reasons for Rome's eventual downfall. While markets did develop, they were not true markets, but government-sponsored places of exchange for the provisioning of the masses and trafficking in luxury goods for the upper class. Coastal cities with a primary reliance on trade for economic support did arise, but in Weber's view there was no significant long-distance or international trade. The reliance on slave labor helped to prevent the creation of true

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markets, since most of the landowners were interested in the production of goods for a small upper class, instead of the broader mass market. This in turn created a vicious cycle that caused cities to falter and force estates into self-sufficiency.9

The important turning point for Weber came in his next work, "Agrarverhält nisse im Altertum".10 It is apparent in this work that Weber put considerable thought into the interaction between ancient civilizations and the economy. This work begins with a section devoted to the problems with the ancient economy, particularly anachronization (placing items or ideas developed in later periods into earlier ones) and the attempt to apply modern thoughts and views to the people of the ancient world. He then developed the concepts of rational capitalism (that dealt with rational calculation, technology, and division of labor) and irrational capitalism (speculators, slave traders, pirates, tax farmers, and money dealers). He also offered a definition for capitalism - the use of wealth to gain profit in commerce and for capitalistic economy or more simply put, the production of goods for trade.11 His main focus was on the relationships between the town and country and the way the wealthy aristocrats used their political power to increase their financial well being at the expense of others, notably the lower classes.12


12 C.R. Whittaker, Land, City and Trade in the Roman Empire (Brookfield, Vermont 1993), IX: 2-4.
Michael Rostovtzeff

In 1926, Michael Rostovtzeff's *The Social and Economic History of the Roman Empire* appeared, and had an immediate impact on Roman studies in both its social and economic interpretations of the period. Rostovtzeff saw many parallels between modern economies and the ancient economy. He hypothesized that the early empire was composed of many extremely wealthy individuals who amassed their wealth from various means, including commerce, and that they were dependent upon the agricultural production of the rural classes. He stated that “the exchange of manufactured goods, articles not of luxury but everyday use, was exceedingly common.” Rostovtzeff's work, while certainly an important step for historians attempting to understand better the interaction between commerce and society, has been sharply criticized by recent scholars for its simplistic approach in drawing parallels between our modern economies and the ancient economy.

Henri Pirenne

In 1935 the Belgian scholar Henri Pirenne was completing his latest economic work when he died. This work, *Mohammed and Charlemagne*, was posthumously edited and published by his son. Since its release, this work has had an enormous impact on

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14 Ibid., 69.

15 M.I. Finly in his work, *The Ancient Economy* goes so far as to call it “imaginative fiction” (194 n57) and a “false conception of the Roman economy and value-system, taken over from Rostovtzeff,” 209 n11.

the way economic history in the ancient world is viewed and treated by scholars.

Whether Pirenne was correct in his conclusions or not has not been agreed upon, but it is evident that the work has been successful in encouraging discussion and scholarship on the subject.

Pirenne divided his work into two main sections. In the first section he focused on western Europe before the Islamic Invasion of Europe. He believed that the center and lifeblood of the Roman Empire was the Mediterranean Sea and interaction on it. The Mediterranean was a major factor in the way Roman culture was formed. It had effects on all parts of society, economic, political, and social. Contrary to other scholars, Pirenne did not believe that the Germanic invasions had a great impact on this “Mediterranean culture.” In fact, the Germanic invaders eagerly embraced and adopted this new culture. Pirenne supported this view with different types of evidence, archaeological, literary, and cultural.

Pirenne believed that there was little change in lifestyle in western Europe following the invasions. Latin survived and remained the dominant language for many years. Germanic law did not replace Roman law. More importantly, the entire administrative and financial systems in place before the invasions were simply taken over by the conquerors rather than being replaced with new systems. Pirenne did not see any difference in the rule of the “barbarian kings” when compared to that of the Roman or

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17 Henri Pirenne, Mohammed and Charlemagne, translated by Bernard Miall (New York, 1957), 17-20; This is a view echoed in Peter Brown, The World of Late Antiquity AD 150-750 (New York 1971).

18 Pirenne, Mohammed and Charlemagne, 140-144.
Byzantine emperors. The typical peasant would not have seen any difference in his life because of the change in rule. Many Germanic kings tried to stay connected politically with the Byzantine emperor and be seen as his representative, and later his equal. In Pirenne's view there was no cultural break.¹⁹ Recent scholars such as Patrick Geary, on the other hand, believe that Roman society and German society had an equal impact on each other and this caused each society to resemble the other more than it did its own original culture. The militarization of the Germans and the barbarization of the Romans brought about this transformation.²⁰

Pirenne did see a decline in the intellectual life in western Europe, but he maintained that this decline was present prior to the invasions and merely continued. The Church was also unaffected by the invasions. The bishoprics remained intact and the papacy retained its relationship with Constantinople. Pirenne criticized scholars who suggested that the rise of Arianism in the West demonstrated change. He concluded that the role of Arianism in changing the culture of the West was exaggerated.²¹

Economically there was little change. The invaders did not bring with them new methods of agriculture and there was no change in land ownership. Large landholders, such as the Church, still retained their lands. Farmers still paid taxes on their lands, only now it was paid to a German lord instead of a Roman one. These taxes were still paid

¹⁹ Ibid., 75-137, 284-285.


²¹ Pirenne, Mohhamed and Charlemagne, 39.
based upon the Roman system and were still collected in the Roman manner. Cities continued to grow and attract urban dwellers. Many of these cities developed into important commercial centers.

Commerce also still existed in this society. Pirenne believed that there was no stoppage in trade between the eastern and the western Mediterranean. He based this on the large number of foreign traders, such as Greeks and Syrians, who were active in cities in the West, and the large influx of gold. Pirenne failed to believe that this gold came to the West as subsidies or tribute from the East and must therefore reflect trade and commerce.\(^2\) George Duby disagreed with Pirenne and saw the gold coming totally from Constantinople as subsidies and tribute payments. To Duby, the presence of gold did not indicate trade, but political policies.\(^3\) According to Pirenne, this long distance trade was not just in luxury items, but included everyday items such as papyrus and oil. Long distance trade supplemented internal trade carried on locally by a professional class of merchants.

Pirenne concluded, based upon his evidence, that the Mediterranean culture of Europe remained unchanged by the Germanic invasions. While the western half of the Roman Empire had fragmented into a number of smaller separate entities, the basic

\(^2\) Ibid., 100-117.
structures of society had remained constant. Instead of causing a break, the Germanic invasions had helped ensure continuity of Mediterranean culture until the seventh century AD.

In the second half of his work, Pirenne first examined the Islamic invasion and its effect on western Europe. He concluded that this had an extremely different impact on society. The Arabs brought their own language, political system, and religion to their newly conquered areas. Furthermore, they imposed these features upon the people and lands they conquered. The eastern Mediterranean came under Muslim control and this eliminated most trade between the East and West. This position was criticized by Sture Bolin who tried to show that by using numismatic evidence one could demonstrate that trade continued between the East and West and that Carolingian currency was based upon Islamic models.

This Islamic restriction in trade was combined with what Pirenne saw as a fundamental change in western Europe in 650-750 AD, the rise of the Carolingians. Agriculture became the mainstay of the economy, with land being the only source of wealth, while trade and commerce disappear. Local vernaculars replaced Latin while silver replaced gold as the standard unit of exchange. Politically there were also major changes. The Roman system of administration and taxation was eliminated and replaced by a new system that depended on a network of personal loyalties. The government took

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on a religious nature that is quite different from the previous Roman secular one. Pirenne believed that without the changes brought about by the Islamic invasions, the rise of the Carolingians would have occurred in a different fashion, if at all.26

An example of the interest brought about in the subject of the ancient economy by the Pirenne thesis is Hodges and Whitehouse's *Mohammed and Charlemagne: The Origins of Europe*. In this work, the two scholars examined Pirenne's thesis in light of the archaeological evidence that has been accumulated in the fifty some years since Pirenne's work. Relying mainly on archaeological evidence collected from North Africa and Etruria, they attempted to demonstrate that Pirenne was incorrect in both his method and conclusions. They saw a gradual transformation in the fourth to sixth centuries rather than the status quo until the collapse in the seventh century hypothesized by Pirenne. By examining new archaeological evidence from Asia Minor, Hodges and Whitehouse attempted to show that a similar change occurred there as well. To them, the Islamic invasions conquered a society that was already decaying socially and economically. They agree with Pirenne that the rise of Charlemagne was helped by the Islamic invasions, but they believed that it was because the Muslims established trading routes with the Vikings that allowed silver to pass from Asia to the Vikings and on to the Carolingians. It was this silver that allowed Charlemagne to finance the Carolingian Renaissance.27


Scholars such as M.I. Finley and A.H.M. Jones, who fail to see convincing evidence for this long-distance trade, have criticized Pirenne's position in recent years.\textsuperscript{28} Despite the passage of time and attacks by other scholars, however, certain elements of Henri Pirenne's thesis regarding Frankish Gaul holds true. There is no reason not to believe that a break did occur around 650 AD in the way society was structured. While this reconstruction of events cannot be applied to the entire ancient world, it does provide one economic model that can be used for initial exploration of other areas. Pirenne's thesis does need modification in several areas. Hodges and Whitehouse are correct in insisting that new archaeological evidence must be examined if a correct economic model is to be postulated. Pirenne's hypothesis that the lack of trade and commerce was due to disruption caused by the Islamic conquest must be reevaluated using archaeological evidence from the North Sea and from Arabic sources to determine if his thesis can be better modified to fit current evidence.

**Scholarship in the last half of the Twentieth Century**

Recent scholarship on the broader question of the extent and importance of trade usually takes place within the broader study of the Roman economy, and typically has been centered around the works of two main contributors, A.H.M. Jones and Moses Finley and their followers, such as Keith Hopkins.

\textsuperscript{28} Jones, *The Roman Economy*, 30; and Finley, *The Ancient Economy*, 58-60, 129-139.
M.I. Finley

Moses Finley, in his 1973 work *The Ancient Economy*, established a basic premise that he was to maintain throughout his scholarship that trade was not a large part of the Roman economic system. He felt that the typical inhabitant of the Roman Empire practiced subsistence farming, producing only enough food to keep his family alive. Other factors that Finley saw as discouraging to trade were the types of goods being produced, the high cost of transportation, and the lack of manufactured goods. Since the primary goods produced in the empire were agricultural products and not luxury goods, the potential for a quick and large profit was curtailed. Finley also saw the high cost of transportation as a deterrent to investing in trade. Land transport was extremely expensive and water transport, while less expensive, was not cheap. There was also the ever-present danger of shipwreck and the risk of losing the entire shipment if the goods were transported over water. The most lucrative items, for high returns on investment and ease of transportation, were manufactured goods, which Finley feels, with a few exceptions, were very scarce in this time.\(^{29}\)

A.H.M. Jones

Shortly after Finley began working on the ancient economy, A.H.M. Jones also began addressing the topic. He disagreed with Rostovtzeff’s view of trade that saw it as an important and integral part of the Roman economy, similar to the position trade

\(^{29}\) Finley, *The Ancient Economy*, 58-60, 129-139.
occupied during the late medieval to early modern times. Jones felt that since the majority of the residents of the Roman Empire were in the "peasant class," they would have neither the surplus nor the resources to engage in trading transactions. The main goal in life of the average citizen was to raise food for himself and his family. The local families who were wealthy lived off the revenue raised by their estates and the work of the populace. Both Jones and Finley based much of their economic theories on Weber's work. Jones summed up his view in these words:

> Trade and empire played a very minor part in the economy of the Roman empire. The basic industry was agriculture; the vast majority of the inhabitants of the empire were peasants, and the wealth of the upper classes was in the main derived from rent. Fortunes might be made in trade, but they were invested in land, the only form of stable capital..."32

Jones further supports this view by examining the *collatio lustralis*, the tax levied upon traders based upon their economic activities. He found evidence suggesting that the *collatio lustralis* collected in the cities of Edessa and Heracleopolis in the fifth and sixth centuries AD amounted to about one twentieth of the revenue generated by taxes on

30 See Rostovtzeff, *Social and Economic History of the Roman Empire*.


agriculture. Jones interprets this to mean that trade constituted a very small percentage, only about five percent, of the total Roman economy.\textsuperscript{33}

\textbf{Keith Hopkins}

Keith Hopkins has approached the question of trade in a slightly different fashion. He constructed a model that sees taxation acting as a stimulus for the promotion of trade throughout the empire for the years AD 200 - 400. He feels that the imposition of taxes forced provinces to trade, in order to raise the funds required by the governmental taxes. The heavily taxed areas would ship their goods to the frontiers where the troops were stationed, who would buy the goods with the money paid to them as wages by the government. The provinces would then send this money to the Roman government who would use the money to pay the troops (see figure 3.1).\textsuperscript{34} This created a mutually beneficial circular flow since each area could not meet its obligation to one another without mutual support. Hopkins suggests that the rise and fall of trade was linked directly to the degree of taxation and the success with which it was collected.\textsuperscript{35} He supports this hypothesis by arguing that the total agricultural production of the empire grew during this time, allowing it to support a larger population. As this population increased, the percentage of the population involved in producing non-agricultural products also grew larger. This increased production of manufactured goods motivated

\textsuperscript{33} A.H.M. Jones, \textit{The Later Roman Empire}, 284-602 (Oxford 1964), 871-872.

\textsuperscript{34} Keith Hopkins, "Taxes and Trade in the Roman Empire," \textit{Journal of Roman Studies} 70 (1980), 101-103.

\textsuperscript{35} Ibid., 120-121.
trading activity that was further spurred by taxation and the need for money. While his model disagrees to some degree with the picture presented by Finley and Jones, Hopkins feels that it fits within the framework presented by them. He does agree, however, with Finley and Jones in suggesting that trading activity suffered a serious decrease in the years following AD 400.

All three agree that trade played a less than significant role in the functioning of the Roman economy and feel this small role in the Roman economy is reflected by a corresponding small volume of trade in the Empire. The major evidence presented against the importance and extent of trade is based on the collection of a tax known as the collatio lustralis, which was imposed on people who sold goods or services. The magnitude of the tax can be seen in information collected about the town of Edessa, capital of the province of Osrhoene. Since Edessa was situated on a major trade route to Persia, it probably was a town that had a large commercial interest. It is known that at the end of the fifth century the city paid one hundred and forty pounds of gold every four years for its collatio lustralis. This is a payment of about 2,520 solidi each year. In comparison, in the sixth century the city of Heracleopolis in Egypt paid a land tax of


37 Ibid., xxi.


40 *JoshStyl*, 31.
57,500 solidi every year. The city of Oxyrhyncus with the small neighboring town of Cynopolis paid an annual land tax of 59,500 solidi. A comparison of the amounts derived from the *collatio lustralis* and the land tax would appear to indicate that agriculture provided twenty times the revenue that trade and commerce did. Jones then applies this figure to the rest of the Empire and concluded that trading, which only made up part of the *collatio lustralis*, was not practiced on a large scale in the Empire.

The questions are whether this is a fair comparison and whether the results can be applied globally. A problem with the logic applied to the collection of the *collatio lustralis* is that the cities compared to Edessa, Heracleopolis, Oxyrhyncus, and Cynopolis were from different regions of the empire and the accuracy of comparing fiscal output from different areas is doubtful at best. The geographical features of the land are going to have an effect on the agricultural production of the land. Additionally, Edessa was a city in the interior and did not have water access for transportation. It has already been shown that water transport was much less costly than overland transport. While Edessa was a commercial center, it probably would not have had the volume of exchange that port cities had since the cost of shipping in port cities would have been much lower. Also, one cannot establish an empire-wide maxim based upon the evidence from only one source for just one site.

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41 *Poxy*. 1909.

The main problem is the fact that there is actually quite little known about the *collatio lustralis*, or χρυσάργυρον. Created by Constantine the Great, the tax was originally collected every five years, but during the fifth century it was gathered every four years. The tax was levied on *negotiatores*, anyone whose profession involved buying, selling, or charging fees for transactions. The tax covered merchants, moneylenders, prostitutes, and city craftsmen. Teachers, doctors, painters, rural craftsmen, and farmers (both rich and poor) selling their own produce were totally exempt, with veterans and clergy receiving a limited immunity. A list, *matricula*, was created in each city containing the names of the people obligated to pay the tax. From the list a *manceps* was elected, and his task was the collection of the tax. The tax was based on the total worldly assets of the *negotiatores*. This included the *negotiatores*’ wares, tools, animals, slaves, and family. The amount of the tax is unclear, but Zonaras records that a silver *nummus* was collected for each animal and man, a fairly small cost. The actual amount charged based on net worth is unknown. The numerous professions collected under the umbrella of the tax show that this was not a tax on traders, but that traders were supposed to be included in the tax. The success the government had in

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43 Zosim. 2.38; Evagrius 3.39; Josh. Styl 31; *Codex Justinianus* 9.1.1.


46 Zon. 14.3.
collecting the *collatio lustralis* is unknown. It must have been hard to access properly the tax on traders whose fiscal worth was so fluid since they had most of their capital invested in goods that were constantly in transit to other regions for sale. This tax would have only been assessed on traders involved in declared or legal trade and would not have taken into account anyone who evaded customs duties by smuggling goods from place to place.

**Current Scholarship**

Scholarship on trade in recent years has benefited greatly from the ever-increasing amount of archaeological data related to trade in antiquity. The current focus is not on whether there was trade: most scholars now accept that trade was present in Late Antiquity in some form or another, rather the focus is now on the nature of trade, what were its mechanisms and how did they function in Late Antique society. Scholars such as Duncan-Jones, Hodges and Whitehouse, Paul Reynolds, and Randsborg to name few, have focused on questions of interaction. They examine trade to see how historical and geopolitical forces influenced trading patterns in local, regional, and global markets. Modern scholars are also interested in examining the interaction between major trading cities and their hinterland. How advanced were these secondary, tertiary, and even

47 Duncan-Jones, *Economy of the Roman Empire.*


49 Reynolds, *Trade in the Western Mediterranean.*

50 Randsborg, *The First Millennium A.D.*
quaternary trading routes and how much did local conditions affect the goods traded?\textsuperscript{51} Also, how were imbalances of trade, so common in the modern world, prevented from occurring?\textsuperscript{52}


CHAPTER 4

CERAMICS IMPORTANT TO THIS STUDY

Pottery tends to arouse strong emotions in archaeologists: they either love it or hate it.

Clive Orton, *Pottery in Archaeology*

Scholarship on trade and commerce has benefited from an increase in the amount of archaeological work conducted around the world in recent years. Perhaps the most frequently used archaeological artifact for the study of trade is pottery. Ceramic vessels, by their durability and stylistic differences, lend themselves well to archaeological study. The biggest problem in dealing with these ceramic remains that faces most classical archaeologists is the sheer number of pieces found at an archaeological excavation. Huge numbers, running into the hundreds of thousands, are commonly found at sites that were continuously inhabited for many years. Fortunately, the numerous pottery sherds accumulated by excavations lend themselves well to quantification.

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Ceramic Overview

Over the last century numerous ceramic typologies and studies have been created for Late Roman material. These studies have tended to focus on specific ceramics, such as amphorae or late Roman finewares, or specific sites, such as the Athenian Agora, or Carthage. For many years, archaeologists studied only the finewares since their decorative patterns allowed researchers to create datable typologies. In recent years, with the increased amount of archaeological data available to researchers, archaeologists have been creating typologies for the less well-known, but more common everyday wares. The section that follows serves as a brief introduction to the ceramics most commonly found at the sites examined in this study. Works that provide more comprehensive studies of specific types of ceramics or individual forms are listed in the notes.

Ceramic comes from the Greek word, κέραμος meaning potter's earth, potter's clay, earthen vessel or jar, or tile. Today, the term ceramic generally means anything related to the construction of a product made from clay fired at high temperatures. Pottery, which has been around since prehistoric times, is wet clay that is shaped into

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3 e.g. Hayes, Late Roman Pottery; Peacock and Williams, Amphorae and the Roman Economy.

4 e.g. Slane, The Sanctuary of Demeter and Kore; Sørensen, The Land of the Paphian Aphrodite.

5 Biers, Art, Artefacts, and Chronology in Classical Archaeology, 51-54; Orton, Pottery in Archaeology, 5-13.

6 Liddell & Scott's Greek-English Lexicon, s.v. "ἐπαυτίος."

7 Webster's Ninth New Collegiate Dictionary, s.v. "Ceramic."
desired forms (bowl, jug, pitcher, etc.) and then baked at high temperature. This produces an extremely hard substance that can hold liquids without leaking and lasts for many, many years, but has the disadvantage of breaking easily. To an archaeologist, ceramic data serves as evidence in three ways: 1) for dating (when was the ceramic vessel used); 2) evidence for distribution (contact and trade between different people); and 3) indication of status or function (how was it used - utility or decoration).

The most common use for pottery is utilitarian, as a container or storage item. Pottery used domestically can be broken into three categories, storage, transformation or processing, and transport. In classical archaeology, these categories are divided into processing (vessels used in food preparation such as stewpots or casserole dishes), storage (storage vessels such as amphorae or basins), and transfer (vessels used in dining such as painted or slipped dishes or shallow bowls).

**Cooking Ware**

In this survey, I will use “cooking ware” as a term to classify those wares that are used for the preparation and short-term storage of food in the kitchen. Their thin walls that aid in the even heating of its contents and allow for the vessel’s wall expansion during the cooking process can identify the vessels used for the thermal preparation of

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food. They can also be identified by their stony fabric that is more heat resistant, or by scorch marks or soot on the containers from the fire. Due to their thin walls and daily use, the vessels tended to break into numerous small sherds. Identification of cooking wares is more difficult than that of finewares and amphora for several reasons. First, while work has been done on form identification in recent years, for the most part cooking wares have been overlooked in favor of other types of pottery. Second, most cooking wares are locally produced and purchased, preventing ceramicists from creating a typology that is useful outside of a local region. Third, cooking wares usually do not have decoration that aids in creating typologies. Finally, unlike finewares, cooking wares did not undergo the same degree of shape and decorative transition that allows for easy dating or identification. For the most part, cooking ware forms remained consistent over time as would be expected for utilitarian pottery.

**Coarse Ware**

Coarse ware is the most common find at the majority of archaeological sites, with the exception of burials and religious sites. This, however, is one of the hardest categories to define precisely. Many people define it on the basis of the size of the...
inclusion in the fabric. Coarse ware, thus, tends to be determined on the basis of its coarse fabric, not its function -- hence the name. This study will use this as a working definition for coarse wares -- ceramics made from coarse fabrics with little or no decoration. It is usually undecorated and typically thick walled. This ceramic class ranges greatly in size from small storage containers or food preparation vessels to large transport amphorae. Unfortunately, the lack of a precise definition sometimes allows this category to be used as a catch-all for thick undistinguished body sherds. As with cooking wares, little has been done to create typologies for most of the coarse wares since there is little variation in form over time, little or no decoration, and typically locally produced.\(^{16}\) One of the most common categories of coarse ware is amphora. Fortunately there are extensive typologies for this category.\(^{17}\)

**Amphora**

Amphorae are ceramic transport and storage vessels. They are used for the storage and transport of goods, usually liquids, but also for other kinds of materials. Amphorae were the predominant container used in seaborne trade.\(^{18}\) They tend to be

\(^{16}\) Greene, *Roman Pottery*, 31-32.

\(^{17}\) e.g. M.H. Callender, *Roman Amphorae* (London 1965); Peacock and Williams, *Amphorae and the Roman Economy*, and Whitbread, *Greek Transport Amphorae*.

large vessels, both in height and diameter, with thick walls. They typically had two handles and a pointed base, or toe.¹⁹ Their use as commercial transport vessels, particularly for wine and olive oil, has allowed ceramicists to create typologies that aid in the identification and dating of amphora forms. Many amphorae have impressed stamps or painted inscriptions (tituli picti) added to the vessel after it was fired, and often these markings record information about the amphora’s content, creation date, and place of origin.

Heinrich Dressel created one of the first typologies for amphorae in the late nineteenth century.²⁰ Unfortunately, the study of amphorae received little attention for the next half century. It was not until the increased interest in nautical archaeology in the middle of the twentieth century that amphorae, being the main type of pottery recovered from shipwrecks, started receiving renewed attention from scholars such as Benoit and Lamboglia.²¹ The resurgence in interest was followed in the 1950/60’s by the work of Grace,²² Callender,²³ Tchernia,²⁴ and Zevi.²⁵

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¹⁹ Greene, Roman Pottery, 11.
²⁰ Heinrich Dressel, Corpus Inscriptionum Latinorum, XV, Pars I (Berlin 1899).
²³ Callender, Roman Amphorae.
It was in the 1970's, however, when amphora study became more widely accepted and with the interest in quantitative history and analysis, historians began to expand their scope of study and move away from only creating typologies to include examinations of amphora distributions across the Mediterranean and at specific sites. New, more scientific methods were applied to amphora sherds in an attempt to pinpoint place of origin and contents. Petrographic analysis, where thin sections are cut from the wall of a vessel and examined under a polarizing microscope to identify the rock and mineral inclusions present and compared to known clay beds, allows a place of origin to be determined when standard methodologies have failed. The other scientific approach that has been applied to amphorae is that of residue analysis. This is an attempt to use chemical analysis to ascertain the vessel's former contents.

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While there are many different amphora classes, fortunately there is a limited number of types that were discovered in the survey areas in Cyprus and Greece dating to the fourth to seventh centuries AD. A brief description of these types of amphorae follows:

**Late Roman I Amphora**

Late Roman I amphora (see figure 4.1), which goes by many names, was a common amphora of the early fifth to mid seventh centuries AD and has been found in Egypt, Cyrenaica, throughout the Aegean, Tunisia, Italy, the Black Sea region, ^29^ Ballana 6, Benghazi LR amphora, British Bii, Carthage LR amphora I, Hayes Type 5, Keay LIII, Keay Type 27, Kuzmanov XVIII, Peacock and Williams Class 44, Riley Amphora Type 5 and Late Roman Amphora I, and Scoppan 8B. Peacock and Williams, *Amphorae and the Roman Economy*, 185; Lund, "Pottery of the Classical, Hellenistic, and Roman Periods," 130.


Riley, "The coarse pottery from Benghazi," 91-497.

Hayes, "Pottery: stratified groups," 47-123.


Frova, *Scavi di Luni II*.

Cyprus, Palestine, Spain, and even as far away as Britain (see figure 4.2). Its origin was unclear until the 1980’s when kiln sites were found in the region between Rhodes and the Gulf of Antalya and on Cyprus at Amathous, Kourion, and Neo Paphos. Its primary contents are still uncertain, but based upon known kiln sites, was probably olive oil. The relatively thin walls, with widely spaced ridging near the middle of the vessel that narrows towards the base and neck, distinguishes the amphora.

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40 Peacock and Williams, Amphorae and the Roman Economy, 185-186.
Late Roman 2 Amphora

Similar to the Late Roman 1 amphora is the vessel known as Late Roman 2 amphora (see figure 4.3). This amphora is a common find from Tunisia to Britain, Greece, Istanbul, and the Black Sea region (see figure 4.4). It has been dated to the fourth to early eight centuries AD and was probably manufactured in the Aegean and Black Sea region. The vessel has a short neck with two curved handles and a globular body that has close set horizontal grooves, either straight or curved, on the upper half of the body. Its contents are still uncertain.42

Aegean Amphora

The Aegean amphora, also known as Peacock and Williams Class 47, Neiderbeiber 77, or "Hollow Foot Amphora," is distinguished by thick broad handles that are sharply curved above the vessel's narrow rim, a heavy conical neck with a body that tapers to a grooved, hollow base (see figure 4.5).43 The fabric is typically an orange or orangish-red, sometimes with a gray core. The precise origin for this class of vessel is uncertain, but an Aegean origin is generally accepted. Archaeologists have found Aegean amphora at a wide range of sites from Britain to southern Russia, being most frequently

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41 Also known as Benghazi LR amphora 2, British Bi, Carthage LR amphora 2, Keay LXV, Kuzmanov XIX, Peacock and Williams class 43, and Scorpan 7A. Peacock and Williams, Amphora and the Roman Economy, 182.

42 Peacock and Williams, Amphora and the Roman Economy, 182-185.

43 Also known as Benghazi MR amphora 7, Kapitan II, Kuzmanov VII, Niederbieber 77, Ostia VI, and Zeest 79. Peacock and Williams, Amphorae and the Roman Economy, 193-195.
discovered in the eastern Mediterranean (see figure 4.6). Its typical content, which some scholars believe to have been wine, has not been positively identified.\textsuperscript{44}

**Finewares**

The pottery that tends to attract the most attention from archaeologists is fineware.\textsuperscript{45} Fineware is the pottery typically used for the consumption of food and drink at the table, sometimes referred to as tableware. It is usually of higher quality than other pottery classes. There are a limited number of vessel types for finewares: plate, dish, bowl, mug, cup, etc. Finewares had fewer production centers than other types of pottery. These manufacturing sites stayed in existence for several centuries producing wares that had distinctive forms and decoration and were traded widely. These features have allowed ceramicists to create useful typologies for the identification and dating of forms for several different finewares, especially for the Early and Late Roman periods.\textsuperscript{46} This raises an important issue, since the dating of many sites relies heavily on the identification of known fineware forms, if the dating or identification of these forms is incorrect it can skew the analysis. Also, as more archaeological data becomes available, the dating of forms becomes more refined and hopefully more accurate.


\textsuperscript{45} Serensen and Rupp, *The Land of the Paphian Aphrodite*.

\textsuperscript{46} Hayes, *Late Roman Pottery*.  

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Cypriot Sigillata

While the place of origin for this ware has not been conclusively identified, it is generally accepted that it was manufactured on the island of Cyprus, perhaps near Nea Paphos (see figure 4.7). Cypriot Sigillata appears occasionally at sites dated to the first century BC, but becomes a common find for the first century AD to the middle of the second century AD. Distributed throughout the eastern Mediterranean, it is found in large numbers in Cyprus, Turkey, Israel, and Libya (see figure 4.8). The fabric is fine grained with dark inclusions or small lime particles. The gloss was typically red, but could also be reddish brown or yellowish red in color.

Eastern Sigillata A

While many scholars now believe that Eastern Sigillata A was probably produced in the interior of Syria, some authorities still argue that it was produced in the Syro-Palestinian coastal region. This fineware was manufactured from a well-levigated clay that had small dark inclusions and a reddish tinted gloss. The ware had both open and closed forms, even though open forms are more common finds at settlement locations and closed forms are usually found in tombs (see figure 4.9). The ware was first

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manufactured in the second century BC and continued its production into the second century AD, tapering off after the middle of the century. It is a common find in the eastern Mediterranean and has been found at numerous sites on Cyprus and in Greece (see figure 4.10).^1

**Eastern Sigillata B II**

Eastern Sigillata B II was manufactured in western Asia Minor, perhaps at the site of Tralles, which is located on the Meander River. This ware is characterized by its large quantity of silver mica and its thick orange or brownish gloss that can have a soapy or waxy appearance (see figure 4.11). Produced from the first half of the first century AD until the end of the second century AD, Eastern Sigillata B II has been found throughout the eastern Mediterranean, but its main distribution area seems to have been concentrated in the Aegean area at sites like Athens, Mytilene, Priene, Ephesus, and Samos (see figure 4.12).^3

**African Red Slip**

This style of pottery (formerly called Late Roman A and B, Late Roman Red Ware, and Terra Sigillata Chiara A, C, and D) was produced in North Africa from the

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first to seventh centuries AD. The fabric is made from coarse clay that ranges in color from a reddish orange to brick red and has a granular appearance (see figure 4.13). The clay sometimes has lime, quartz, or mica impurities in it. Its slip, while not as glossy as some other finewares, is still of good quality. This slip is usually the same color as the body or slightly deeper in tone. African Red Slip (ARS) had little decoration applied to it other than stamps, was never painted, and was manufactured as plates, dishes, and bowls. ARS was one of the most widely exported ceramics of the period, having over two hundred forms, and found all around the Mediterranean (see figure 4.14).

Çandarli Ware

Çandarli ware (CW) was produced in the Pergamon region of Asia Minor from the second to fourth centuries AD. The fabric was a finely grained orange early in its production and then a reddish brown or purple color later in its development (see figure 4.15). One of the distinctive marks of this ware is large, gold mica flakes. The slip on the interior is a thick gloss that is the same color as its fabric. The exterior slip is much thinner and is usually scratched or nicked. There are five forms and seldom does this ware

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56 Lund, “Pottery of the Classical, Hellenistic, and Roman Periods,” 105-106.

57 Hayes, Late Roman Pottery, 13-18.
have any decoration. The vessels are typically dishes and bowls. Çandarli is a common find in the Aegean and South Russia areas (see figure 4.16).

Phocaean Red Slip Ware

Phocaean Red Slip Ware (PHW) or Late Roman C was produced in western Asia Minor from the fourth to the seventh centuries AD, and was the strongest competitor of the African finewares. Probably produced in Asia Minor, it was related to Çandarli Ware, having similar forms (compare CW form 4 with PHW 1A), fabrics (early PHW has gold mica flakes as does CW), and area of distribution (see figure 4.17). PHW’s area of distribution was larger than Çandarli Ware due to its greater popularity. It has been found throughout the eastern Mediterranean (see figure 4.18). The ware is amazingly consistent throughout its production with very little variation in form or fabric, having only ten main forms. The fabric is similar to ARS with fine-grained red clay but with a large number of lime impurities and only rare flecks of mica. Firing gives the ware a maroon, purplish-red, or brownish-red color. The dull red slip is thin on both the exterior and interior, though typically slightly thicker on the interior. The thickness of the walls

58 Ibid., 316-318.


60 Lund, “Pottery of the Classical, Hellenistic, and Roman Periods,” 107-108; Reynolds, Trade in the Western Mediterranean, 34-36.

on many pieces is smallest half way between the rim and the base indicating that the rim was added to a mold thrown body. The two main types of decoration are stamps and rouletting. It was predominantly manufactured as a dish or bowl.  

Cypriot Red Slip

Cypriot Red Slip (CRS), also known as Late Roman D, was produced on Cyprus from the fourth century to the end of the seventh century AD (see figure 4.19). It is found in the eastern Mediterranean, mainly on Cyprus, in Egypt, and the Syro-Palestinian coast (see figure 4.20). The fabric's color ranges from a light orange to purple and has a thin slip that is slightly darker in color than the fabric. The clay has few impurities with

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62 Hayes, Late Roman Pottery, 323-324.


the exception of lime particles, which can be quite large. The vessels are usually rouletted and come in twelve forms mainly medium sized dishes, small bowls, and large basins.\textsuperscript{66}

**Egyptian Red Slip**

Egyptian Red Slip (ERS) is a group of three wares (Egyptian Red Slips A, B, and C) that were local imitations of African Red Slip. Egyptian Red Slip A is the only of the three that was exported in significant numbers. Egyptian Red Slip A was produced in the Luxor region, near the city of Thebes, from the end of the fourth century until the end of the seventh century AD. The fabric is usually pinkish in color with a slightly darker, thin slip applied over the whole vessel (see figure 4.21). The clay is of a lower quality than the African Red Slip and often has gold mica flakes, black, red, and quartz particles. There are nearly fifty forms, mainly bowls and dishes. Examples have been found mainly in Egypt, but also in Cyprus and Cyrenaica (see figure 4.22).\textsuperscript{67}

\begin{footnotesize}
\textsuperscript{66} Hayes, Late Roman Pottery, 371-372.
\textsuperscript{67} Ibid., 387-397.
\end{footnotesize}
CHAPTER 5

WRITTEN SOURCES ON TRADE

It is impossible to write ancient history because we lack source materials, and impossible to write modern history because we have far too many.

Charles Péguy, Clio

There are many references in ancient literature that deal with trade and commerce. Unfortunately, these sources offer little direct evidence. There are few passages that deal specifically with trade, and none that provide the specific numbers needed to indicate trade volume, trade imbalances, or even the amount trade may have contributed to a region's total economy. Instead, the historian must look carefully to uncover information about specific goods or trading connections. There are many such references throughout the written record and most support the supposition that trade was healthy and vibrant throughout antiquity. When some of these references are examined more closely, other pertinent information about trade emerges.¹

¹ Fik Meijer and Onno van Nijf, Trade, Transport and Society in the Ancient World: A Sourcebook (London 1992); Greene, The Archaeology of the Roman Economy; D'Arms, Commerce and Social Standing in Ancient Rome.
Legal Documents

There are several important legal documents or edicts that further our understanding of trade and commerce in Late Antiquity. One of the more famous is the Price Edict of Diocletian issued in 301 AD. The Edict was divided into two basic sections, a preamble and a listing of maximum prices for commodities and services. Little is known concerning the historical background of the Price Edict. Numerous fragments have been found at various sites in the East, but none have been found in the West. This would indicate that Diocletian's colleagues, Constantius Chlorus and Maximian, failed to promulgate the Edict in their areas of the Roman Empire.

The preamble provides us with Diocletian's reasons for the Edict. After enumerating the various titles of Diocletian (the trib. pot. XVIII dates it to 301), it explains the conditions facing the empire at that time. Diocletian complains about unscrupulous people who are making money from the rise and fall of prices. He accuses these merchants of taking advantage of other inhabitants of the Empire during times of famine, and of actively hoping for crops to fail so that they could increase their wealth.

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2 See Siegfried Lauffer, *Diokletians Preisedikt (Texte und Kommentare Bd. 5)* (Berlin 1971) for the most complete text of the edict.


4 Lauffer, *Diokletians Preisedikt*, 5-12; For the argument that the Edict was only promulgated in the eastern parts of the empire see J. Lafaurie, "Remarques sur les dates de quelques inscriptions du début du IVe siècle," *Comptes-Rendus de l'Académie des Inscriptions et Belles-Lettres* (1965), 192-210; J. Robert and L. Robert, *Revue de études grecques* 77 (1964), 140-141.
even more. He further states that since nothing has stopped these greedy merchants yet, he is forced to intervene. To accomplish this goal, there will be maximum prices for goods that cannot be exceeded at the risk of capital punishment. This penalty also applies to those who try to manipulate prices by controlling the supply. While this punishment is harsh, Diocletian reminds them that obeying it is very easy and he hopes that the price list will not be a guideline but a maximum ceiling that is never reached. If the charging of exorbitant prices was happening on a small scale, then the emperor would not have needed to involve himself. His actions indicate that this was a widespread problem affecting many people.

Economic historians have analyzed the Edict and arrived at several conclusions. The first is that inflation was excessive at this time. The price for wheat listed as the maximum in the edict is more than sixty times higher than a century earlier. The Price Edict was also not very successful, since wheat prices fifty years after the edict were fifty times higher than the edict’s maximum prices. The Price Edict apparently failed to control prices since people ignored it or pulled the products off the market, further driving up the good’s price. The government was unable to enforce the Edict with any

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5 *Diocletian Price Edict, preamble.*


7 Duncan-Jones, *Economy of the Roman Empire*, 8.

8 Duncan-Jones, *Economy of the Roman Empire*, 367; Jones, “Inflation under the Roman Empire,” 308.
regularity. The lack of success on the part of the Edict also demonstrates the degree of
difficulty in understanding and controlling economic factors in Late Antiquity.9

Although the need for the Edict shows that in the East, and perhaps in the West,
there was rampant inflation, what many scholars have missed is that it also shows the
prevalence and importance of trading activity.10 Many of the goods listed are clearly
imports from other parts of the empire, such as eight different wines (Maeonian,
Falernian, Surrentine, Setine, Aminean, Sabine, Tiburtine, and Picene),11 Egyptian beer,12
Phoenician (date) honey,13 African onions,14 Carian figs,15 and olives from Tarsus.16 It is
also clear from the Price Edict that imported items are more expensive than local ones,
such as ordinary wine for 8 denarii per pint versus 30 denarii for imports.17

Along with other economic, political and administrative information, the Price
Edict allows us to formulate standard costs of transportation. Transporting wheat by sea
would cost only about 1.3 percent of the wheat’s value per one hundred Roman miles.

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12 Ibid., 2.12.

13 Ibid., 3.12.

14 Ibid., 5.41.

15 Ibid., 6.84.

16 Ibid., 6.89.

17 Ibid., 2.1-7 versus 2.10.
The cost of transporting the same amount of wheat across land would fall between 36 and 74 percent of the wheat’s value per one hundred Roman miles. A first century AD Egyptian papyrus in a Berlin museum gives the cost of transporting the wheat by river as 6.38 percent of the wheat’s value per one hundred Roman miles. This allows a ratio to be formulated for transportation costs, one by sea, four by rivers and waterways, and twenty-two to fifty-six by land. Transportation by water was clearly less expensive and the preferred choice for traders hoping to make a profit. With the Roman Empire encircling the Mediterranean, it was easy and inexpensive to transport goods to any place within the Empire that was in reach of the sea.

Another important legal document is the Alexandrian Tariff in Justinian’s Digesta (see figure 5.1). This document lists the customs duty applied to 54 various items, such as spices, jewelry, and fabrics that were being imported into Italy from Alexandria during the sixth century AD. Alexandria served as an entry point into the Roman Empire for many Far Eastern goods. The issuance of a government document to list these goods and their duty amounts suggests that these items were imported into Rome frequently. It also means that independent merchants were bringing these items into Rome, since duty would not have been charged on governmental imports. Most of the goods are luxury

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19 *Ägyptische Urkunden aus den Staatlichen Museen zu Berlin* (Berlin 1895-), 802.


21 *Digesta* 39.4.16.

items, like diamonds and emeralds, and tell us little about the average person's involvement with trade, but it does indicate that there was a significant trade in luxury items. This is corroborated by a remark made by Pliny the Elder that purchases from India made by the citizens of Roman Empire annually drained fifty million sesterces from the Empire.\(^{23}\)

Another tax document that sheds light on commercial activity is the tax law of Palmyra, published in 137 AD in both Greek and Aramaic.\(^{24}\) The city of Palmyra, located in Syria, was an important commercial city along the trade route to Mesopotamia, India and the Far East. This tax law, which superceded an earlier one, was created in an effort to prevent arguments between the tax collectors and the people paying the taxes, merchants and trades people.\(^{25}\) The tax was levied on assorted items that that entered the city, such as slaves, dried fruit, purple-dyed fleece, unguent, and olive oil.\(^{26}\) This tax was assessed based on volume and was divided into what could be carried on a donkey, on a camel, or in a wagon.\(^{27}\) This indicates that a substantial amount of goods was being imported into or carried through the city, and not just eastern luxury goods. The majority

\(^{23}\) Pliny NH 6.101.


\(^{26}\) CIS 2.3, no. 3913, 1-40.

\(^{27}\) Ibid., 1-52.
of the items that are listed in the tax law are not expensive goods like spices or precious stones, but everyday items like olive oil, animal fat, or fish.\textsuperscript{28}

Another official document, the \textit{Notitia Dignitatum}, is a list of all the offices, both military and civil, in the entire empire — both in the East and in the West. The document also lists the state-owned and operated manufacturing centers that produced cloth\textsuperscript{29} and weapons.\textsuperscript{30} During Late Antiquity, the number of these state-operated factories, or centers of production slowly increased but their increased output did not have a significant impact on trade or trading patterns.\textsuperscript{31}

\textbf{Saints’ Lives and Church Records}

One class of source material that is not typically examined in regard to trading activities is that of Church writings, such as saints’ lives and church records. The most notable exception to this is the life of St. John the Almsgiver.\textsuperscript{32} In the first half of the seventh century AD, Leontius, bishop of Neapolis (Cyprus), wrote a biography of St. John the Almsgiver, former patriarch of Alexandria. In 610 AD, while Heraclius marched on Constantinople, his cousin Nicetas subdued Egypt. After conquering Egypt,
Nicetas chose his adopted brother, John, as the new patriarch of Alexandria. Once John was convinced to take the position, he became beloved by the people of Egypt for his extreme charity and devotion to the needy, earning him the title of Almsgiver.

In his biography there is the story of a destitute foreign ship captain who came to see the Patriarch and John gave him five pounds of gold to use to purchase a cargo to recoup his fortune. The ship that the cargo was on sank immediately upon leaving Alexandria. John loaned the man ten pounds of gold to buy another cargo that also was lost at sea. This time John gave the captain one of the Church’s ships loaded with 20,000 bushels of wheat. When the man returned he told John that he had sailed to Britain where he traded the wheat for tin, which turned out to be silver.

This story tells us several important facts about trade during the early part of the seventh century AD. First, trading activity in the Mediterranean was not monopolized by the government but included individual merchants, like the foreign ship captain. Second, the Church, at least in Alexandria, was involved in trading ventures to the point that it needed to have its own ships to acquire the goods needed for charity work or the profit of the Church. Another part of the biography mentions two of the Church’s ships returning from Sicily with wheat. It is quite clear from these passages that the Church maintained

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34 Leontius *St. John the Almsgiver* 10.

fleets of vessels in certain areas that it could use to purchase goods for charity purposes. such as wheat in time of famine, and to transport these goods to Alexandria.

It is hard to determine the Church’s involvement with trading activity since there are no other financial records available. In the biography of St. John, there is another passage that relates how all of the Church ships under John’s control ran into a violent storm. In an effort to save the ships, the fleet of more than thirteen was forced to jettison their entire cargo of silver, clothing (perhaps waterproof garments) and other valuable goods. This shows that John was involved in trading on the Church’s behalf on a significant scale, since thirteen ships represented a substantial investment. The author estimated that the ships were each carrying 10,000 *artabas* of goods. Even though the fleet this time was carrying dry goods like silver and clothing, this statement allows the liquid carrying capacity of the fleet to be determined. An *artaba* (*αρτάβα*) is a Persian measurement roughly equivalent to 6 Roman *modii*, each of which is equal to approximately 13 liters if you use the monastic (*monasteriakos*) *modios*. This means that the total cargo for the fleet would have been about 10,140,000 liters or about 2,600,000 gallons if it had been carrying liquids, like wine or olive oil. Even if the author was exaggerating and inflating the numbers, it is quite clear that the Church was responsible for a large amount of trading activity that took place in the Middle and Late Roman periods.

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In the *Liber Pontificalis* there are numerous entries that support the theory of large-scale Church involvement in trading activity. This document records Constantine’s donation to the Church in Rome of a number of estates scattered throughout the empire. Each year these estates were required to send money or goods to the Church in Rome. Some estates would annually send hundreds of pounds of spices or linens to Rome. These would then be traded to acquire other goods or money that could be used by the Church. In addition to its charity work, the Church also used the markets to sell its goods to raise revenues to pay its expenses, like rent and salaries.\(^\text{38}\) It is quite clear from these sources that the Church, which conducted trade both for charity and revenue, played an important role in the movement of trade goods around the Mediterranean and in supporting commercial markets.\(^\text{39}\)

**Histories, Treatises, Letters, and Inscriptions**

In the works of ancient writers there are numerous references to trade, traders, and trading activity.\(^\text{40}\) I have selected only a small sampling of these to be discussed below, but they are especially illustrative of the ongoing commercial activity in the Mediterranean in Late Antiquity.

Merchants and traders seem to have had the opportunity to become quite wealthy. In his *Navigium*, Lucian, writing in the middle of the second century AD, reports that a

\(^{38}\) Whittaker, “Late Roman Trade and Traders,” 168.

\(^{39}\) *Liber Pontificalis* 34, Zos. 5.41.4; Pliny *NH* 6.155; Elton, *Frontiers of the Roman Empire*, 85.

\(^{40}\) For a collection of these see Meijer, *Trade, Transport and Society in the Ancient World*. 74
corn freighter brought its owner an annual income of at least twelve Attic talents.\footnote{Lucian \textit{Navigium} 13.} Each talent equals 6,000 drachmae, 6,000 sesterces, or 1,500 denarii.\footnote{Jones, \textit{Later Roman Empire}, 440.} This annual income would have been enough to purchase a small farm each year.\footnote{Peter Garnsey and Richard Saller, \textit{The Roman Empire: Economy, Society, and Culture} Berkeley, California 1987), 68-70.} There is no doubt that during the Early, Middle, and into the Late Roman periods there was opportunities to became wealthy through trade and commerce, but this was available only to those that had the available capital needed to invest in commercial traffic--those who were already wealthy.\footnote{D'Arms, \textit{Commerce and Social Standing in Ancient Rome}, 8-9.}

The opportunity to become wealthy through trade seems to have diminished throughout Late Antiquity, perhaps due to the inflationary problems of the period. While some merchants accumulated fabulous wealth -- primarily eastern merchants like Odenath of Palmyra and Firmus of Alexandria -- many more merchants lived on a much more modest income.\footnote{Palladius \textit{Lausiac History} 14; Rufinus \textit{History of Monks} 16; Jones, \textit{Roman Economy}, 150.} Two brothers, Elias and Theodore, who worked for a Mesopotamian merchant, brought in an annual income equivalent only to that of the lowest soldier in the Roman army.\footnote{John of Ephesus \textit{Vitae Sanctorum Orientalium} 31.} Another example would Antoninus, a merchant from Mesopotamia who entered governmental service as a financial clerk and eventually
became a protector. For a merchant to view governmental service in a low-paying position as a better opportunity to make a living than conducting trade indicates that the opportunity for quick wealth had decreased, while the chances for financial misfortune had probably increased.

Traders often grouped themselves together in collegia in efforts to acquire financial and communal support. A group of salt merchants in Egypt who had cornered the gypsum market formed a cartel to regulate their economic activities with outside merchants and traders. In the second century AD, the emperor Hadrian granted the association of shipowners exemption from public service as long as their ships were involved with bringing grain to Rome. Since Rome lacked a merchant marine, it relied on private ship owners to collect the supplies for both the military and civilian population. This made the collegia an important element that the government wanted to control and throughout Late Antiquity efforts, particularly in the West, were made to tighten control over them. One way was that the government attempted to control the collegia, was through the imposition of taxes, such as the collatio lustralis, or χρησάργυρον—which was examined earlier. While some scholars have seen this both as

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47 Amm. Marc. 18.5.1.
48 Papyri Michigan 5.245.
49 Digest 50.6.5.3-6
50 Jones, Later Roman Empire, 858-861.
51 Chapter 4, 42-45.
a detriment to trade and an indication of trade’s lack of importance.\textsuperscript{52} since we have seen that trade was widespread and prevalent during this period, the tax must have been difficult to collect or not widely enforceable.

It is clear that the Roman government was not overly successful in controlling trading activity.\textsuperscript{53} Its primary concern was that the grain supply arrived in Rome and later in Constantinople and that ships were available if troops needed to be transported. Since the government relied on, and to a degree forced, private merchants to conduct the government’s commerce, this had the effect of creating and supporting trade. The government was successful in raising revenue from the collection of customs or duty on imported goods. We have already examined the Alexandrian Tariff, but we also have customs tax lists from Oxyrhynchus,\textsuperscript{54} Ephesus,\textsuperscript{55} and in the Theodosian Code.\textsuperscript{56}

In addition to custom lists, the collection of laws in the Theodosian Code provides information about trade. For example, in 320 AD, clergy were given exemptions from taxes that resulted from participating in long distance trade.\textsuperscript{57} Only ten years later in 330 AD, this exemption was modified so that it only applied to charitable work, \textit{alimoniae}

\textsuperscript{52} Jones, \textit{Roman Economy}, 36 cites Zosim. 2.38, Libanius, \textit{Or.} 46.22, Evagrius \textit{Hist. Eccl.} 3.39 as evidence for its overwhelming burden and maintains that it was a minor tax that produced little revenue for the government.

\textsuperscript{53} Jones, \textit{Later Roman Empire}, 827; Jones, \textit{Roman Economy}, 35-41.

\textsuperscript{54} \textit{Greek Papyri in the British Museum}, ed. F.G. Kenyon and H.I. Bell, 1562.


\textsuperscript{56} \textit{Cod.Theod.} 13.1.4.

\textsuperscript{57} Ibid., 16.2.10.
causa. This would seem to indicate that many clergy members were involved in long distance trade, or perhaps the volume was significantly great, that the government felt that this exemption was being abused. This modification obviously failed to curtail the commercial activity of the clergy, because in 379 AD, the exemption was limited to ten to fifteen solidi worth of trade goods. The Theodosian Code addresses many different issues regarding trade, such as the collegia, size of loads, and merchant sailors' pay. The number of laws concerning commerce in the Theodosian Code has led some scholars to speculate that the economy was completely state-controlled in all aspects and not based upon commercial exchange. While the state obviously made many attempts to limit or control various aspects of trade, these were—first of all—for political or military reasons, and not for primarily economic ones. In addition, as the failure of the Price Edict demonstrates, these efforts largely failed. Furthermore, there is considerable evidence that suggest that attempts to control the collegia were apparently directed primarily at the West, and had little or no effect in the East.

58 Ibid., 16.2.8.
59 Ibid., 13.1.16.
60 Ibid., 1.12.6, 6.30.16-17, 7.20.12, 7.21.3, 12.1.146, 12.1.156, 12.19.1-3, 14.7.1-2.
61 Ibid., 8.5.17.
62 Ibid., 13.9.3.
64 Jones, Later Roman Empire, 861; Whittaker, Land, City, and Trade in the Roman Empire, 7.14.
While we have seen in the Alexandrian Tariff that numerous luxury goods were imported from various parts of the Empire, particularly the East, the majority of the trade activity around the Mediterranean centered on basic items, such as foodstuffs and living necessities. The items most commonly mentioned in the literatures are grain,\textsuperscript{65} wine and olive oil,\textsuperscript{66} textiles,\textsuperscript{67} building materials,\textsuperscript{68} and slaves.\textsuperscript{69}

The final bit of information to be gained from these written accounts is the cities best known for engaging in trade. The \textit{Expositio Totius Mundi}, written by an anonymous merchant in the fourth century AD, describes the important commercial ports in the eastern Mediterranean and the products associated with them (see figure 5.2).\textsuperscript{70} In his list he records: Antioch, Tyre, Berytus, Caesarea, Laodicea, Seleucia, Ascalon, Gaza, Neapolis, Tripolis, Scythopolis, Byblos, Heliopolis, Sidon, Sarepta, Ptolemais, and Eleutheropolis. The implication by the author is that these were the towns that were important to traders in the eastern Mediterranean and specialized in certain commodities. To have this list of towns linked with specific products indicates that numerous individuals conducted trade throughout the eastern Mediterranean and that demand for specific items helped support and sustain the markets.


\textsuperscript{66} \textit{SEG} 15.108.

\textsuperscript{67} Pliny \textit{NH} 8.190-193; Strab. 5.1.7,12; \textit{Corpus Inscriptionum Latinarum} 5.5929, 13.2003; \textit{Expositio Totius Mundi} 42.

\textsuperscript{68} Strab. 4.6.2, 12.8.14.

\textsuperscript{69} Strab. 14.5.2; E. Kalinka and R. Herberdey, \textit{Tituli Asiae Minoris} (Vienna 1901-), 5.2932.
The *Periplus Maris Erythraei* provides information similar to that found in the *Expositio Totius Mundi*. The anonymous author of this short document provides a detailed account of how to sail along the coast of east Africa to India, similar to the portolani charts or rutters of the Byzantine and medieval periods. He mentions that along the eastern coast of Africa traders acquired tortoise shell, ivory, frankincense, and myrrh in exchange for wine, clothes, tools, and tableware. When the ship reached India the merchant would trade the few western luxury goods that the Indian traders were interested in (fine wine, expensive clothing, etc.) along with an amount of gold and/or silver for silks, spices, and precious gems.

An examination of the literature suggests that trade was prevalent during the Middle and Late Roman periods and that many elements of society (merchants, clergy, the government) participated in commercial activity for various reasons. Merchants attempted to make a profit, either for themselves or for their employers (other merchants, the Church, or the government). The Church relied on trade to provide it with the goods needed to support its charity programs and to exchange its far-flung and varied estates’ income into currency or other items. The government depended on trade to acquire food

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70 *Expositio Totius Mundi et Gentum*, edited by Giacomo Lumbroso (Rome, 1898).

71 The date of the *Periplus Maris Erythraei* has been moved back and forth from the first century AD to around 350 AD, for a discussion see Lionel Casson, "Rome's Trade with the East," *Transactions of the American Philological Association* 110 (1980), 21-36; for the text with discussion see Lionel Casson, *The Periplus maris Erythraei: text with introduction, translation, and commentary* (Princeton, New Jersey 1989).

72 *Periplus* 1-18.

73 Ibid., 19-81.
for the Empire's population, supplies for the military, and revenue collection from taxes and customs. While the government had a vested interest in the trade that was conducted within the empire, attempts at control or regulation were few, and for the most part – like the Price Edict – futile. The very scope of the trading activity that was conducted within the Empire prevented any overarching control or regulation that could be reasonably enforced. The fact that the government did at various times attempt to control certain parts or elements of this trading activity indicates its value or importance to the Roman Empire and its economy.
CHAPTER 6
SELECT CASE STUDIES

Man is dominated by the making of money, by acquisition as the ultimate purpose of his life.
Max Weber, *The Protestant Ethic and the Spirit of Capitalism*

As the amount of archaeological information available to researchers increases, more scholars are attempting to use this new data to supplement written evidence, particularly to address questions that are not answered by other sources. In an effort to extract the greatest possible information from the archaeological data, scholars have used new and different techniques, and one of the more successful has been the quantification of the archaeological data, particularly ceramics.¹ This allows many typically disparate items to be studied together, allowing new and differing conclusions to be drawn. This quantitative analysis makes it possible to note patterns and trends over time, both for general as well as specific regions. An examination of several sites from around the Mediterranean will help illustrate the value of this statistical technique. It will also allow creation of a large overview of trade in the eastern Mediterranean, focusing on the

¹ See especially Randsborg, *The First Millennium AD*; Duncan-Jones, *Economy of the Roman Empire*; and Greene, *Archaeology of the Roman Empire*. 
historical influences on trade (politics, religion, technological, weather, etc.), the
directional flow of the goods, and scale on which the trade was conducted.

In this chapter, many different types of sites will be examined: excavation of
public buildings, excavation of refuse and garbage heaps in cities, excavation of dumps at
ports and harbors, surveys of agricultural regions, and shipwrecks. When the data from
these sites are examined, it must be kept in mind that each of these different types of sites
will present a different kind of archaeological evidence. One would expect to find more
commercial goods at ports and harbors, where they would have been unloaded and stored
before disbursement or onward shipment. Naturally, there will be a difference between a
city and a rural site, and religious sanctuaries (like Isthmia) are a class of their own.
Sanctuaries are not always thought of in terms of their economic significance, and they
normally will not have played a large role in trading systems. Nonetheless, they were
always places of assembly, and some exchange would certainly have gone on there.
Furthermore, sanctuaries were important places of consumption, and material from them
is likely to reflect the broader trading patterns current in the surrounding territory.

Archaeological surveys are also a special class of archaeological projects.
Surveys, for example, will turn up very different material from excavated archaeological
sites since excavations necessarily focus on a limited area that had specific uses and may
have been limited in chronological extent, while surveys cover much larger areas and
normally deal with all eras. The information from the combination of these different sites
and surveys, however, will allow the construction of a more complete picture since they can complement each other and provide insights into different aspects of the past economy.

**Italy**

Italy has been the focus of much archaeological work and economic speculation, primarily because of Rome and its relationship to the rest of the empire. The classic view is that during the first century AD Italian agriculture declined for various reasons, forcing an increase in imported goods from provincial rivals. Recent archaeological work, particularly on Italian wine production, has demonstrated, however, that a decrease in agricultural production did not take place in the first century AD, but towards the end of the second and beginning of the third centuries AD. While Italian agricultural production did not decline in the first century, provincial imports did increase dramatically during this period in Italy, naturally inducing scholars to seek an explanation.

Some scholars feel that this increase in imports is totally due to the *annona*, the state food supply imported into Rome or to the provinces for the army. The purpose of the system was twofold: 1) to assure adequate supplied for the army and 2) to prevent public disturbances and riots by the ever-increasing urban population by providing grain


4 Reynolds, *Trade in the Western Mediterranean*, 106-112.
and sometimes oil for free to those on the “dole” or for sale below current market costs. Since Rome never developed a state-owned merchant marine, the government depended on hiring independent ship owners, navicularii, to provide transport for the annona. These navicularii were often the earliest organized collegia, guilds or clubs, in coastal cities—as would be expected from a profession that depended networking and making contacts. These ship owners often used their government-funded voyages for carrying the annona as an opportunity to import other trade goods without having to pay normal shipping costs. The area that supplied the majority of the annona for Rome was North Africa, especially Tunisia, which, based on ceramic studies at Ostia, seems to have developed an exceptionally strong trading connection with Rome. While North African imports grew steadily during the second and third centuries AD, by the fourth century AD eastern goods accounted for the majority of imports to Rome.

A clear example of this dominance of foreign imports after the second and third centuries AD can be seen at the site of the Schola Praeconum, located in Rome at the base of the Palatine close to the church of S. Anastasia. The excavation of the site was a joint undertaking by the Archaeological Superintendency of Rome and the British School at

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6 D'Arms, *Commerce and Social Standing in Ancient Rome*, 122.

Rome that began in 1978. The site received its name from the monochrome mosaic showing the praecones (public heralds). It has been suggested that the building was originally a warehouse or some other public structure. While some of the buildings in the complex date to the Severan period, the excavators discovered a large fifth century AD deposit in part of one building. The discovery of two large groups of coins (totaling sixty-one) helped to assign an approximate date of AD 430-440 for the site’s destruction and abandonment. The excavation found that part of the building had been deliberately filled in with dirt and rubble, which included a large amount of pottery – 22,315 sherds weighing 423 kilograms dating to the early fifth century AD, the period when the building was filled in. It appears that a nearby building had been used briefly in the early fifth century AD for a dump before it was used as fill for this site. The pottery, then, from this building was at least a secondary dump, and it cannot be necessarily associated with the use of the building itself. Nonetheless, this large collection of ceramic material does allow us to gain important information about the kinds of pottery being used or brought into Rome at this time (i.e., with a terminus ante quem of 430-440 AD).

During the second season the excavators sorted the pottery sherds by fabric or finish, and then by style. When the initial sort was complete, it was found that 44.6

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percent of the sherds by number, and 60 percent by weight were amphorae (see figure 6.1). The excavators next subdivided the amphorae sherds by individual ware (see figure 6.2). This showed that 42.5 percent by number and 63 percent by weight were manufactured in North Africa, 20.5 percent by number and 6.9 percent by weight were a type of amphorae identified as a “micaceous water jar” that came from Asia Minor, and 37 percent by number came from differing areas of the east and central Mediterranean. A further study has determined that of the 37 percent from the east and central Mediterranean, 19.2 percent by number and 14.7 percent by weight were probably from Antioch in Syria. An analysis of the amphorae from North Africa has shown that the lipid residues remaining on the sherds are olive oil. Only 10 percent of the sherds by number and 8.6 percent by weight found at the site were shown to be of local manufacture, indicating a reliance on outside areas for certain products.

The sherds indicate that the commercial items that reached the site were not just from the local area or even just from Italy, but from various parts of the empire, some located at great distances from Italy. If the building was a warehouse, as has been suggested, this would explain why so many commercial goods, particularly imports, were discovered at the site. Since Rome was a large population center, it depended on sources outside the immediate area to help provide enough foodstuffs to support the urban

11 Ibid., 78-80.

Especially interesting is the high level of imported amphorae compared to local ones. Local producers (i.e. from Italy) supplied only 10 percent of the large bulk amphorae (which transported wine, olive oil, and grain). The overwhelming majority of the foodstuffs was brought in from other parts of the empire, such as North Africa and Asia Minor. Since, as was seen in Chapter 5, Rome usually received most of its grain from North Africa you would expect to find African amphorae, but not the eastern Mediterranean amphorae.

This dependence on outside resources indicates several things about the trade reaching Rome. First, it was clearly important – even life-sustaining, since a breakdown in the trade reaching Rome would have resulted in famine and starvation for the area’s inhabitants. Second, this trade can be seen as vibrant and robust. To carry enough foodstuffs to be able to help support cities with large populations like Rome, Constantinople, and Carthage clearly illustrates that a significant amount of goods were moved around the Mediterranean during this period. When one considers the other cities throughout the Mediterranean that also must have relied on the outside importation of foodstuffs to help support their urban populations, it is clear that a tremendous amount of goods must have been transported from place to place. Even though the brief period of

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Vandal control of Carthage and the surrounding area disrupted the flow of North African grain towards Rome and Constantinople, the system corrected for this change. This will be seen in greater detail in the examination of Carthage that follows this section. North African grain could now be sold other places, such as Spain, while Italy turned to the eastern Mediterranean to supply its grain. Third, it appears that the eastern Mediterranean and Africa were more important trading partners, in terms of imports, to Italy than the western areas and supplied grain, wine, olive oil, and other luxuries. Western areas, such as Spain, Gaul, Britain, are noticeably lacking in the ceramic evidence at the Schola Praeconum. The unsettled nature of the northwestern parts of the empire and their ongoing political and military problems could have certainly curtailed exports from some of the less “Romanized” areas. The almost complete lack of certain western imports, however, such as olive oil or wine from Spain, is puzzling. Perhaps this site’s ceramic deposits are skewed due to some unknown factor that resulted in western or local imports being kept in a different area and that area has not been discovered or has been somehow destroyed. This begs the question of whether the ceramic evidence from the Schola Praeconum portrays an accurate picture of the trade reaching Italy and can only be answered by examining evidence from other sites.


17 Keay, Late Roman Amphorae in the Western Mediterranean, 423; Reynolds, Trade in the Western Mediterranean, 113-119.

When one compares the information from the Schola Praeconum to other sites around Italy, a similarity becomes apparent. In the city of Naples from AD 400 to 600 the number of imports from eastern areas, mainly from the Levant, grew from less than 20 percent to around 65 percent, with a decrease in North African imports. At Ravenna, this eastern dominance is also reflected by the fact that around 66 percent of the imported amphorae found are from the Levant and are dated to the fifth and sixth-centuries AD.\textsuperscript{19} It is clear from these sites that trade from the eastern Mediterranean grew steadily in importance in Italy throughout the fifth and sixth-centuries AD. While Italy lost its Roman overlordship during the fifth century AD, the "reconquests" of Justinian in the sixth century AD brought it back under Byzantine control and clearly into an eastern political and military orbit.\textsuperscript{20} This would have certainly affected the trading patterns to Italy in the sixth century AD to some degree. This change might also be due to the Vandal invasion of North Africa, which forced Italy to look elsewhere for its imports.

This apparent rise in eastern Mediterranean imports during the fourth to seventh centuries AD is contrary to what most scholars have posited about trade in this period, due to the Vandal capture of Carthage.\textsuperscript{21} Many scholars have felt that this event and the subsequent raiding actions of the Vandals throughout the Mediterranean resulted in a severe disruption of trade throughout the entire Mediterranean, particularly in the trade

\textsuperscript{19} Randsborg, \textit{The First Millennium AD}, 128-130.


\textsuperscript{21} Reynolds, \textit{Trade in the Western Mediterranean}, 112-118.
from Africa and the eastern Mediterranean. These scholars feel that the Vandals' military actions had a far-reaching impact on all commerce conducted on the Mediterranean. A closer examination of the archaeological information from the Carthage excavations will shed light on this question and provide a different interpretation for trade in this period.

**Carthage and the Arrival of the Vandals**

The Vandals were a Germanic people originally from the Scandinavian area who migrated south into Gaul and finally into Spain around 409 AD (see figure 6.3). In 429 AD the Vandal chieftain Gaiseric, with his followers, crossed from Spain into Africa, and soon captured the city of Carthage, which had been an important commercial city throughout its history. Once he had established a small kingdom based in Carthage, Gaiseric sailed forth with a Vandal fleet that one day would contribute to the fall of Rome. The Vandals appeared to have been uncontested at sea during his reign. Modern historians have played upon this notion and even styled the Vandals under the command of Gaiseric as "...masters of the Western waters." Describing the naval resources available to Gaiseric in such glowing terms is misleading and contributes to the misinterpretation of the Vandals' impact on trade and commerce. A closer examination of key events in the Vandal's sea movements under the reign of Gaiseric will help to show that their sea power was limited and mainly due to the Empire's inability to combat this new maritime force.

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As soon as they arrived in Africa, Gaiseric’s forces began to raid the surrounding areas, and the Empire’s inability to defeat the Vandals forced imperial officials to seek a treaty. In 435 AD Gaiseric concluded a treaty with the envoy of Valentinian, which gave the Vandals control over the provinces they were currently occupying as well as the Mauretanias and certain areas of Numidia. The Vandals, in return for the land concessions, were required to pay an annual tribute to Rome.24

Four years later, in October 439, Gaiseric broke the treaty by taking the city of Carthage.25 This was a valuable conquest that offered many new resources to the Vandals, naval vessels among them. Rome began to worry about the possibility of a Vandal fleet invading Italy. The capture of Carthage had given the Vandals an excellent harbor, functional shipyards, and probably an existing fleet.26 These types of resources could have provided the Vandals with the opportunity to develop a navy that could control the Mediterranean by governing the sea-lanes and restricting trade, particularly the exportation of grain from Africa. The Vandals, however, chose to attack Sicily instead of Italy and ignored the possibility of controlling the shipping lanes. While perhaps Sicily was viewed as an easier target, there must have been other reasons for attacking Sicily. The Vandals were not a noted maritime power prior to this time, just as most Germanic tribes were not. The Romans had made an effort, to the point of enacting laws, to keep

24 Prokopios De Bello Vandalico 1.4; Prosper Tiro 435.

25 Prosper Tiro 439.

26 Lewis, 10.
valuable maritime skills from the barbarian tribes.\textsuperscript{27} This would help to ensure the dominance of the imperial navy. In all likelihood the ships, as well as most of the personnel, used in this first fleet were Roman, prizes captured at Carthage.\textsuperscript{28}

In 441 an imperial fleet arrived in Sicily in preparation for an invasion of Africa to retake Carthage. Gaiseric opened negotiations with the fleet's commanders while the Imperial fleet was still at Sicily. An attack by the Huns on the European border compelled the emperor Theodosius II to recall this fleet, forcing him to agree to an unfavorable treaty with Gaiseric.\textsuperscript{29} This treaty of 442 reversed the treaty of 435, giving Tripolitana, Mauretania Sitifensis, Mauretania Caesariensis, and part of Numidia to the Empire while the Vandals received Zeugitania, Byzacena, and the rest of Numidia.\textsuperscript{30} While Gaiseric was able to gain concessions through the use of negotiations, his reluctance to commit his fleet to action against the Imperial fleet demonstrates the lack of confidence he placed in this force.

Following this new treaty, the Vandal fleet made no new large-scale attacks. They did, however, apparently build a number of small ships that were suited for coastal plundering and commerce raiding. Nestorius mentions the Vandals raiding in the Aegean as far east as Rhodes.\textsuperscript{31} Other sources record Vandal raids along the coastline of Greece

\textsuperscript{27} \textit{Cod. Theod.} 9.40.24.

\textsuperscript{28} Richard W. Unger, \textit{The Ship in the Medieval Economy 600-1600} (London 1980), 50.

\textsuperscript{29} Prosper 441.

\textsuperscript{30} Victor Vitensis \textit{Historia Persecutionis Africanae Provinciae} 1.4. See Kaegi, \textit{Byzantine Military Unrest} for more details concerning Byzantine military actions during this period.

\textsuperscript{31} Nestorius \textit{Heraclides} 331.

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and southern Italy.\textsuperscript{32} These raids were not confined to the Aegean, as there are records of raids in Galicia along the Atlantic coast.\textsuperscript{33} Why did Gaiseric apparently confine himself to pirate raids instead of fleet actions? The ships that appear to have been the mainstay of the Vandal fleet were small, light vessels constructed for speed not battle, similar to the ships constructed by the Goths in 256 during their brief attempt at raiding from the sea.\textsuperscript{34} If the Vandals lacked the knowledge to build heavy warships, and the transmission of such knowledge to the barbarians had been outlawed by earlier Roman law codes in 419 AD, these smaller vessels would still have been possible for them to design since these ships were quite common in the area.\textsuperscript{35} While the Empire had controlled piracy in the first two centuries, it seems to have lost that ability in the last half of the third century as Roman naval strength dwindled and this seems to have been a major feature in Vandal success at sea.\textsuperscript{36}

While the Vandal fleet was not a major naval power in the Mediterranean, the raiding expeditions apparently did influence trading patterns to some extent, particularly in Africa. A survey of African Red Slip Ware distribution patterns throughout the Mediterranean presents a mixed picture concerning trading routes.\textsuperscript{37} Just prior to 450, the

\textsuperscript{32} Procop \textit{B.V.} 1.5.22, 1.7.26, 1.22.16-18; Prisc. \textit{Fragment 52}; Victor 1.51.

\textsuperscript{33} Hydatius \textit{Chronicle} 131.

\textsuperscript{34} Zosim. 1.32-35.

\textsuperscript{35} \textit{Cod.Theod.} 9.40.24.

\textsuperscript{36} Chester Starr, \textit{The Roman Imperial Navy} (Ithaca, New York 1941), 192-194.

\textsuperscript{37} Hayes, Late Roman Pottery, 423.
exportation of African wares to the eastern sections of the Empire declined sharply. While this decline can be seen in the western areas as well, it was not as drastic there. It is only under the rule of Justinian that the frequency of African wares increased. This trend, however, did not include Egypt, which appears to have been stable throughout this period. While the occurrence of African wares decline in the fifth century, they were still reaching most markets, just in lesser numbers. Even though it was being seen in fewer numbers, the African wares still exerted influence over other wares in regard to motifs and vessel forms. Historians have generally taken this decline in numbers to reflect a direct correlation with the Vandal invasion of Africa.38

Does the decline in occurrences of African Red Slip truly reflect the new Vandal activity in North Africa? There is no doubt that the normal trading patterns of African cities were disrupted to some degree by the piracy of the Vandals. This piracy, however, clearly did not stop all or even a major portion of the trading being conducted with Africa, as evidenced by the continued presence of African wares throughout the Mediterranean. One factor that contributed to this decline in trade was the loss of the seaport of Carthage. Since the Vandals controlled Carthage, they could determine who was allowed into the city's harbors. Archaeological excavations of the city's two harbors indicate that they received little use in the early fifth century and slowly silted up.39 As pirates and raiders, the Vandals would have had little interest initially in trading and only

38 Hayes, *Late Roman Pottery*, 423; Reynolds, *Trade in the Western Mediterranean*, 112-118.

used the harbors as anchorages for their raiding vessels. These ships would have had a shallower draft than merchant vessels, meaning the harbors would not have needed as much maintenance as previously.

The fall of Carthage in the early fifth century brought about many changes for North Africa. The majority of the crops produced in North Africa had previously passed through the port of Carthage en route to Italy. The seizure of the city stopped this flow of goods and removed the Roman administrative system. The removal of Roman administration, which was not replaced by a Vandal system of equal sophistication, freed many of North Africa's wealthy individuals from their taxes. Surplus crops, instead of being used to pay taxes, were now available to be traded throughout the Mediterranean.40

This increased interest in trading and commerce can be seen in the buildings of the city. The port's circular and rectangular harbors show evidence that they were maintained and used regularly. To strengthen the defenses and prevent surprise attacks by raiders, iron chains were strung across the harbor entrances to protect the ships moored within.41 Procopius mentioned that there were merchants in the city who lived alongside

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the sea. This ties in with the excavations of the domestic and commercial areas north of
the circular harbor that show these buildings were regularly used throughout the fourth
and fifth centuries.

Excavations by the Second Canadian Team alongside the Theodosian Wall in the
northern sector of Carthage in 1978 uncovered a pottery deposit of approximately 200
kilograms dated to 425-475. The deposit is believed to a garbage dump used by the city’s
inhabitants and contains coins, jewelry, animal bones, oyster shells, as well as numerous
pottery sherds. The quantification and qualification of the amphora sherds revealed an
interesting pattern (see figure 6.4). The majority of the sherds are imports, not locally
manufactured items. This clearly reflects trade and exchange conducted on a fairly
substantial level, and suggests that locally manufactured goods were either being sold
elsewhere or not used in this area for some reason.

This view is supported by finds made at the UNESCO (United Funded
Excavations) excavations at Carthage. Over 8,000 pounds of pottery were found and
classified, with the majority of the analyzed sherds drawn from dumps and urban
buildings within the city. Amphorae from the east Mediterranean that can be dated
prior to the Vandal capture of Carthage accounts for about ten percent of the total pottery.

42 Procop. BV 1.20.3, 15-16.
44 Lucinda Neuru, “Late Roman Pottery: A Fifth Century Deposit from Carthage,” Antiquités
Africaines 16 (1980), 205.
After the Vandal occupation, this number doubled by AD 475, and even reached twenty-five to thirty percent by the time of Belisarius' reconquest. Following the city's recapture by Belisarius in AD 534, the percentage of imported amphorae from the east Mediterranean dropped rapidly and was practically non-existent by AD 600. This increase in exports after the Vandal conquest and decrease following the Byzantine reconquest is also seen in the finewares found at the site. It is possible that Roman control limited North Africa's ability to trade freely. When Roman control was removed from North Africa, and Carthage in particular, the area participated more frequently in trading ventures with other regions. The presence of foreign wares indicates there were other areas that reciprocated in trading activities with the North Africans. This raises the question of whether Carthage was representative of North Africa during this period, or an anomaly because of the Vandal influence. It also raises the issue of whether eastern goods were traded for western goods, or if eastern goods were traded for gold and silver, and possibly certain western items. If eastern goods were being traded for gold or silver that would mean that the greater volume of trade was traveling east to west. This question may be partly answered by looking at parts of North Africa further east.

Cyrene and Tripolitania

The presence of foreign wares can be seen in other areas of North Africa as well. Much work has been done in Cyrene and Tripolitania, two neighboring regions of North

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46 Ibid., 68-74.

Africa situated between Carthage and Egypt. The city of Cyrene is situated about eight kilometers inland from its coastal port of Apollonia. Other cities in the Cyrenaican area include Ptolemais and Berenice. Literary sources indicate that the area was involved in trading activity throughout its history, most noticeably in grain and the herb silphium. In the year 328/7 BC the city provided 805,000 *medimnoi* of grain for forty-one states and two individuals. This large amount of grain, forty-eight million kilograms, would have supported 240,000 people for one year and would have required 480 ships capable of carrying one hundred tons to transport it. In the fourth century AD references are still made to the area as a grain exporter to the Aegean. One future area for exploration that might help uncover more information concerning the merchandise that was coming in and out of the region is nautical archaeology. Recent surveys report that there is a strong likelihood that there are several late Roman/early Byzantine wrecks off the Cyrenaican coast.

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49 The evidence for grain exportation includes Herodotus reporting that the area was a source of grain for other areas, *History* 4.198-199; *Digest* (19.2.61) mentions that in the second century AD the area exported 3,000 measures of olive oil and 6,000 bales of corn. The evidence for the exportation of the herb silphium, believed to have been used for birth control, can be found in Pliny *NH* 19.38-40, but the peak for this trade was in the first century BC and declined steadily after that, C.H. Coster, “The Economic Position of Cyrenaica in Classical Times,” in *Studies in Roman Economic and Social History in Honor of Allan Chester Johnson*, ed. P.R. Coleman-Norton (Princeton 1951), 11-14.

50 SEG 9.2.


52 *Expositio totius mundi* 62; Fulford, “To East and West,” 169-191.

A study of the amphorae found at Berenice reveals that most of the contact was from the northeast Mediterranean and the Aegean, and in the fourth to seventh centuries over 50 percent of the discovered amphora sherds originated from that area. This is at odds with the fineware found at the site, of which the majority, while not local, is from Africa. As would be expected, the majority of the fineware sherds are African Red Slip from Carthage. The breakdown of the fineware pottery is as follows: African Red Slip 73 percent, Phocaean Ware 18 percent, Tripolitanian Red Slip 8 percent, and Cypriot Red Slip less than 1 percent. The dominance of imported African Red Slip over the locally produced Tripolitanian Red Slip at a rate of nine to one is initially surprising since less than 2 percent of the discovered amphorae sherds came from the local area, one of the most important olive oil sources in the Roman world at this time. The lack of local amphorae, however, might be attributed to the fact that most of the locally produced amphorae were exported to other markets. While one might not expect olive oil purchased locally to be stored in amphorae, the lack of *pithoi* fragments is puzzling and has led some scholars to suggest that there was a reliance on outside sources for olive oil. It is clear that outside goods, like African Red Slip, were imported into the region and most likely traded for the local olive oil.

This pattern does not hold true only for coastal areas, but for inland areas as well. The *UNESCO Libyan Valleys Survey* examined settlements over a five-year period in the


Wadi Umm el-Kharab, a southern tributary of the Wadi Sofeggin. The team focused on the fortified farms in the region. These farms or settlements seem to reflect a general change in the area's economic outlook where expansion into region that had been marginal was now financially feasible. The outcome of the land survey agrees with the results from the excavations at Carthage concerning importation and exportation patterns. The farms at Umm el-Kharab were established in the first to third centuries AD, but in the third and fourth-centuries AD the settlements seem to vanish from the area. In the fifth to seventh-centuries AD the farms enjoy a resurgence and strong growth period. This growth period coincides with the Vandal conquest of Carthage. The ceramic evidence from this area indicates that a substantial amount of fineware was being imported from the coastal cities (mainly African Red Slip, Tripolitanian Red Slip, but also some eastern Mediterranean Roman wares) while olive oil was exported. This influx of fine ware remains strong through the seventh century AD. This commercial exchange between the inland farms and coastal towns appears to have been at its peak during the first to third centuries AD and disappeared by the end of the sixth century AD, as the cultivated land in the valleys once again became marginal.


Cilicia

The city of Eski Anamur, formerly the site of the ancient city of Anemurium, is located on the eastern side of Cape Anamur in Cilicia, to the north of the island of Cyprus (see figure 6.5). Sites in and around the city were carefully excavated over a fourteen-year span. The extensive ceramic data collected during this period allowed a detailed catalogue of the pottery found in the area, especially fineware, to be constructed. Focusing on the period 300 through 700 AD, four types of fineware dominate the finds from the sites, Cypriot Red Slip, African Red Slip, Phocaean Ware, and a ware known as Piecrust Rim Ware, believed by the excavators to be a local production, even though it has been subsequently found on Cyprus. At Anemurium, Piecrust Rim Ware has only been found in contexts dated to the seventh century.

In the corner of one of the bath complexes, a well was excavated and found to have been filled deliberately soon after 631 AD. During the excavation of the well, the archaeologists discovered several nearly intact ceramic pieces. Out of the five pieces of fineware recovered from the well, one is African Red Slip, three are Cypriot Red Slip, and one is imitation African Red Slip made locally. While Cypriot Red Slip, African Red Slip, and Phocaean Ware are all found in large numbers throughout the site, with

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60 Williams, *Anemurium*, 116-118.

61 Ibid., 27-60.

over 1,000 Late Roman fineware sherds discovered, Cypriot Red Slip outnumbers the African Red Slip and Phocaean Ware combined by nearly a two to one margin (see figure 6.6).63

These numbers paint an interesting picture of the importation pattern of fineware at Anemurium. The proximity to the factories on Cyprus can be seen in the large numbers of Cypriot Red Slip pottery found in the city. The other wares—African Red Slip and Phocaean Ware—are only found in their most standard forms indicating that trade was carried on in these manufacturing areas, and the abundance of Cypriot Red Slip filled much of the local populace’s need for fineware. The locally produced Piecrust Ware, while found in larger numbers than African Red Slip and Phocaean Ware, was still not as popular as Cypriot Red Slip. It appears that the local ware only increased in numbers when the distribution of African Red Slip and Phocaean Ware was disrupted, presumably due to the naval activity of Mu’awiya in the seventh century.64

The overwhelming majority of amphorae discovered at Anemurium belong to two locally produced types referred to as Amphora Type A (Late Roman 1), and Amphora Type B (Late Roman 2).65 There were very few sherds discovered at Anemurium that were identified as other common Late Antique amphorae, like the Gaza or Palestinian bag

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63 Williams, Anemurium, 27-28, 38, 46, 54.

64 Ibid., 117-118.

65 Ibid., 90-96.
amphorae. The abundance of locally produced amphorae and kiln sites leads scholars to believe that a local product was exported from the site, perhaps fortified wine.\textsuperscript{66}

This site seems to show that while wares from North Africa were reaching sites in the eastern Mediterranean, they were not being traded in the same quantities as the eastern wares reaching North Africa. African Red Slip was presumably more expensive in this area than its more closely produced competitors, and would perhaps have been more of a luxury item than an everyday piece. The nearby production centers of Cypriot Red Slip and Phocaean Ware had a strong hold on the area and prevented African Red Slip from being imported in large numbers.

\textbf{Yassi Ada Shipwreck}

The excavation of the shipwreck at Yassi Ada or Yassiada helps to complete the picture of trading activity along the coast of Asia Minor. Yassi Ada, which means “Flat Island,” is an island in the southeastern Aegean Sea that borders the Chuka Channel. It is located in the province of Mugla near Bodrum, Turkey (see figure 6.5).\textsuperscript{67} A seventh century AD shipwreck was discovered off the coast of the island in the late 1950s by Peter Throckmorton with the aid of Greek sponge divers and was fully excavated in the early 1960s over several seasons.\textsuperscript{68} The excavators discovered that the vessel, probably built on the coast of Asia Minor, was a small trading boat that had been wrecked around

\textsuperscript{66} Ibid., 91.

\textsuperscript{67} Bass, \textit{Yassi Ada}, 3-4.

\textsuperscript{68} P. Throckmorton, \textit{The Lost Ships} (Boston 1964), 1-71.
650 AD. The vessel, approximately twenty meters long, had been loaded with more than 850 amphorae. It is believed, based upon the grape seeds left in some of the containers, that most of the amphorae, if not all, carried wine. A bronze balance scale, a steelyard, used for weighing money was also found on the site. The numismatic evidence, along with the specific style of lamps aboard, indicates that the ship's homeport was probably in the north, in the Black Sea. The ship had been coasting south along the western coast of Asia Minor, probably towards the island of Cos or Rhodes, when it sank.69

The numerous items recovered from the shipwreck substantiate this theory. The copper coins found on the site were from Constantinople, Cyzicus, Nicomedia, and Thessalonika. The only one not from the northern regions of the Byzantine Empire was from the Levantine coast of Turkey. The ceramics, such as lamps, from the ship's galley are from Bulgaria, Romania, Histria, Tomis, and the Hellespont. The food stores in the galley also included mussels from the Bosphorus, leading some to suggest that the vessel's home port was somewhere near Constantinople.70

A large quantity of pottery was found on the wreck, estimated to be between 850 and 900 amphorae, and approximately 100 were raised to the surface.71 The cargo amphorae were found to be composed of two types, both of whose origin are the eastern coast of the Black Sea. During the excavation of the wreck, of the 822 of the amphorae

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69 Bass, Yassi Ada, 311-319.


71 Bass, Yassi Ada, 155-188
examined, 103 were found to be cylindrical in shape (Late Roman 1 amphorae) while 719 were globular in shape (Late Roman 2 amphorae). The majority of the Late Roman 1 amphorae showed no obvious signs of reuse, such as repair marks, pry marks, or extreme wear and abrasion. Metrological work on the Late Roman amphorae 1 seems to indicate that certain subtypes were produced to hold specific capacities and thus were used for one specific commodity such as olive oil or a wine variety. The seven subtypes or variations of Late Roman 1 amphorae suggests that they represent seven different areas of ceramic production.\textsuperscript{72} An examination of the pottery used by passengers, crew, and kitchen staff indicates the origin of these wares to be the western coast of the Black Sea. The only pieces of pottery on board the vessel not from the Black Sea area were several plates of North African origin.\textsuperscript{73}

Based upon the physical evidence, the vessel appears to have been a small merchant ship that plied the coast of Asia Minor. The location of the shipwreck is in an area that, based upon geography and wind patterns, is best suited for north-south travel. It has been suggested that the ship was sailing southward on a strong wind from the north when it hit the reef off the island of Yassi Ada.\textsuperscript{74} The finds from the site (ceramics, coins, and mussel shells) support the theory that the boat probably worked its way south from the Black Sea towards a final destination somewhere near or past the island of Cos.


\textsuperscript{73} Bass, \textit{Yassi Ada}, 155-188.

\textsuperscript{74} Bass, "A Byzantine Trading Venture," 33.
Mediterranean continued up into the Black Sea region, but that is unfortunately outside the scope of this investigation and will not be examined further.

It has been recently suggested that the Yassi Ada vessel was connected in some fashion with church-assisted provisioning or the collecting of church revenue from its estates.\(^75\) The Church owned property and estates throughout the Empire that produced goods (clothing, agricultural produce, spices, currency) that needed to be collected at central points so they could be utilized for the benefit of the Church. This would have required small coastal trading vessels, like the Yassi Ada vessel, that could sail along the coast and make numerous stops, collecting the items for the Church.\(^76\)

The Yassi Ada shipwreck has also been invaluable in aiding traditional land excavations. The closed nature of the site makes the ceramic information invaluable since it reflects a specific moment in time—in effect a time capsule. All the ceramic vessels on board the vessel belonged to a single collection, not multiple ones like commonly seen at excavations. This helps in correcting ceramic typologies and chronologies used by excavations for identification and dating. The sudden destruction of the vessel also preserved several of the amphorae, allowing their contents to be analyzed.\(^77\)

**Other Mediterranean Shipwrecks**

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\(^75\) Alfen. "New Light on the 7\(^{th}\)-c. Yassi Adashipwreck." 212, bases this on the inscription on the largest steelyard that reading ΠΕΡΙΠΟΙΩΝ ΠΡΕΣΒΥΤΕΡΟΥ ΝΑΥΚΛΕΡΟΥ "[belonging to] George priest sea-captain."

\(^76\) Liber Pontificalis 34, Zos. 5.41.4; Pliny NH 6.155.

\(^77\) Alfen. "New Light on the 7\(^{th}\)-c. Yassi Adashipwreck." 189-213.
chronologies used by excavations for identification and dating. The sudden destruction of
the vessel also preserved several of the amphorae, allowing their contents to be
analyzed.77

Other Mediterranean Shipwrecks

Just as ceramic evidence can be quantified, shipwrecks can also be statistically
analyzed.78 With an increased reporting of known wreck sites in the last few years, some
scholars have begun to attempt quantitative analysis of the known shipwrecks. Two
important facts must be kept in mind when doing this. First, our knowledge of
shipwrecks is based on what has been discovered, or perhaps more accurately, what has
been reported to authorities. What has not been found yet could change the entire
analysis and interpretation. Certain areas, for a variety of reasons (such as available
funding, unrestrictive laws, and local or national interest) have been more extensively
surveyed than other areas and this can create gaps in our understanding. Second, just as
terrestrial archaeology chronically suffers from lack of funding, nautical or underwater
archaeology suffers from the same problem. This means that even though many of the
wrecks are reported to date to a certain period or have carried a certain type of cargo, this
identification is based on very preliminary work, brief survey, or even just an educated
guess. While these are points that need to be considered when relying on the statistical
analysis of shipwrecks, it is possible to glean important information from it as long as one

78 Parker, Ancient Shipwrecks.

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proceeds cautiously. For example, when the wrecks dated to the period of 200 BC to 400 AD are charted and compared to known historical events, it is easy to see correlations between a drop in the number of shipwrecks and catastrophic events such as the fall of Carthage or Corinth or to see an increase in shipwrecks related to peaceful events such as the establishment of Augustus' *Pax Romana*.\(^7^9\)

A statistical examination of the known shipwrecks in the eastern Mediterranean for the period 100 to 700 AD produces several interesting observations. The overwhelming majority (77 percent of the wrecks) dated prior to 1500 AD are from the Roman period and are in the western and northern areas of the Mediterranean. This can be explained by the fact that underwater archaeology developed first in Northern Europe and there are more amateur divers there than in the eastern Mediterranean.\(^8^0\) The number of shipwrecks also falls steadily from about 100 AD until the 1500s. When the cargoes of wrecks dated to between 400 BC and 400 AD are analyzed, the majority of the vessels, 90 percent, carried between one and five different types of cargo. This indicates that in this period there were few small coastal traders that traded numerous products along the coast, as is posited about the seventh century AD Yassi Ada wreck. In the later Roman period, the cargoes of shipwrecks near Italy seem to indicate a type of triangular trade involving

\(^{7^9}\) Ibid., 8.

\(^{8^0}\) Randsborg, *The First Millenium AD*, 124-125.
North Africa, Spain, and Italy. This is at odds with the information produced by the statistical analysis of ceramics from the land sites examined earlier.

Examining the known shipwrecks around Cyprus that date to the Roman period provides some interesting information. At the present time, there are 33 known shipwrecks off the coast of the island. Out of these 33, 11 or 33 percent date to the Roman period and 7 of these or 63 percent are dated to the sixth and seventh centuries. Unfortunately little is known about their cargoes as most are simply noted as Byzantine amphorae from the eastern Mediterranean. Only one carried ceramics that have been identified as from the western Mediterranean (Italy) and this dates to the first century AD. It would seem based on the wrecks, that in the Roman period Cyprus saw little commercial traffic until the fifth through seventh centuries AD. We know from other sources, however, that during the Roman period Cyprus' coastal cities and harbors participated in a vigorous maritime trade that had connections with various cities and towns throughout the Mediterranean. The lack of shipwrecks from certain periods of the Roman era can perhaps be blamed on the vagaries of the weather or ship construction advances. If, however, we use the cargo of these shipwrecks as a representative sample of cargoes, it is clear that the cargoes being transported in this area are from the eastern

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Mediterranean and that goods are not being brought from the West in any significant quantity, particularly in the fifth to seventh centuries, after the collapse of the western half of the Roman empire.

Overall Ceramic Distribution Pattern in the Mediterranean

On the basis of this brief overview of many different sites, a few tentative conclusions—or hypotheses—may be presented about the nature of trade in Late Antiquity. A study of the distribution pattern of most common Late Roman ceramics (African Red Slip, Phocaean Ware—also known as Late Roman C—Cypriot Red Slip, Egyptian Red Slip Ware, and transport amphorae) allows several observations to be drawn concerning trade in the Mediterranean. First, certain wares, especially African Red Slip (see figure 4.14), were transported throughout the entire Mediterranean basin and in many areas were able to compete successfully against the locally produced wares. Other wares, such as Cypriot Red Slip and Phocaean Ware (see figures 4.20 and 4.18), were distributed in a more limited fashion, with heavy concentrations in certain regions, most notably in the eastern Mediterranean. The different distribution patterns for the wares indicates that several trading networks had been established in the eastern Mediterranean and that some goods, such as African Red Slip, crossed from network to network while others remained permanently within one network. It also appears that the

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83 Data based on information in Hayes, *Late Roman Pottery*, 353-364.
overall movement of goods was east to west, with eastern Mediterranean goods slowly working their way west and north with few western goods able to move eastward against this flow.

Another significant question concerns the quantity of trade occurring at this time. Pottery sherds cannot answer that question directly. All they can do is indicate variations in the expected composition and quantity. The excavations at Carthage appear to indicate that following the Vandal invasion, the amount of trading increased significantly, a hypothesis corroborated by the archaeological work in Cyrene and Tripolitania. There was a wider range of styles and types of pottery imported into these areas and the numbers of imported pottery increased. This tends to favor the hypothesis that trading and commercial activity increased during this time and only subsided following the Byzantine reconquest, 533-534 AD. This can be compared to the situation in Italy, where following the Byzantine reconquest in the sixth century, eastern imports rose while North African imports fell. While some of this is due to the strong eastern influence of the Byzantines on Italy, some is also due to the Byzantine control of North Africa, which struggled after its brief period of freedom from the Romans under the Vandals. This presents a paradox: in North Africa “freedom” from Roman control brought greater trade and more involvement in Mediterranean trade. Nothing of the sort seems to have happened in Italy when it came under the control of the Ostrogoths, or at least there is no

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evidence of it. Likewise, in North Africa, the resumption of Byzantine control in the sixth century AD seems to have depressed trade, while in Italy there was an upsurge in eastern pottery.

The manner in which this trade was conducted is not totally certain. Evidence from Tripolitania and Cyrenaica seems to indicate that trading after the Byzantine reconquest was now carried out on a smaller scale, in terms of quantity and distance. Short-range trade replaced long-range trade. If the shipwreck from Yassi Ada is a typical example of a small merchant ship, then small merchants who traveled and traded along a short route next to the coast probably performed the trading. The coastal cities would then in turn trade with the cities in the interior, such as the interaction between Sabratha and Wadi Umm el-Kharab. Quantitative analysis of shipwrecked cargoes seems to indicate that most ships restricted themselves to only a few items during their trip. Hopefully, further excavations in nautical archaeology will uncover other wrecks similar to Yassi Ada that will help shed light on the composition and workings of this trade.
For the Corinthians, with their city situated on the isthmus, were always engaged in commerce from the earliest times…

Thucydides, *The Peloponnesian War*

Located on the Isthmus of Corinth, Isthmia was one of the more important cultural and religious sites of the ancient world. Due to its location at the junction of the main north-south land road and the east-west sea route, Isthmia attracted visitors from throughout the Mediterranean (see figure 1.3). The site’s religious and cultural importance for pilgrims and tourists benefited Corinth, its sponsoring city, by boosting its economy and increasing its prestige.

While originally settled in prehistoric times, Corinth became a dominant power in the seventh and sixth centuries BC, due to its economic successes in the marketplaces of the Mediterranean. Corinth was to be an important player in Greek politics throughout the Classical and Hellenistic periods until its destruction by the Romans in 146 B.C. In 243 BC Corinth became a member of the Achaean League, a union of Greek city-states formed to prevent further Macedonian expansion. The Achaean League’s relations with Rome slowly deteriorated because of conflicts with Rome’s ally Sparta. In 146 the

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Achaeans declared war on Rome for the fourth time and were defeated in battle. After the battle at Leucopetra on the Isthmus, most Corinthians fled the city. When the Roman general Mummius led his army into the city, all the men found were killed, the women and children sold into slavery, and the walls razed.\(^2\)

Nearly a century later, Julius Caesar developed plans to reestablish a colony upon the old site. While the site had been deserted for some time, the value of the isthmus had become increasingly apparent to the Romans. The elder Marc Antony in 102 BC used the diolkos (land ship passage across the Isthmus of Corinth) to transport his fleet into the Aegean to battle pirates. Octavian (Augustus) later used the diolkos in his battles against the younger Marc Antony.\(^3\) The reestablishment of Corinth had many immediate political and strategic advantages for Caesar. First, this old site provided land for a colony without taking away land from Italian landowners. Second, its placement near land and sea trading routes would help boost the economy of Greece, which had crumbled due to warfare and mismanagement. Third, the site would serve as a communications link between Rome and planned military expeditions into Dacia and Parthia.\(^4\) Even though Caesar was killed before this was carried out, the Roman Senate and Caesar’s heir Octavian carried the plan to fruition and Corinth was reestablished as a city.\(^5\)

In the first century AD, Corinth saw many important visitors arrive at its city. The apostle Paul preached in Corinth and even established a Christian church in Corinth and

\(^2\) Pausanius *Periegesis tes Hellados* 2.2.

\(^3\) Cassius Dio *The Roman History* 51.5.

\(^4\) Donald Engels, *Roman Corinth* (Chicago 1990), 16-17.

at the port of Cenchreae in AD 52. The emperor Nero decided to try to build a canal across the isthmus in the first century AD, as had many previous political rulers, such as Periander, Demetrios Poliorcetes, Julius Caesar, and Caligula (see figure 7.1). In AD 67 Nero had workers actually begin construction of a canal that was abandoned at his death three months later. In that same year while visiting the stadium at Isthmia, Nero proclaimed the freedom of the province of Achaea, of which Corinth was the capital. Corinth reached the height of its prosperity, probably, in the second century AD, but some decline may have set in during the second and third centuries. In the years 365 and 375 AD two powerful earthquakes struck the city. The destruction caused to the city and its sanctuaries by these natural catastrophes was further increased when the invader Alaric sacked the city in 395. Theodosius II fortified the Isthmus during his reign and Justinian later restored fortification in the sixth century AD.

Located near the site of ancient Corinth is the sanctuary of Isthmian Poseidon. More precisely, Isthmia is 12 kilometers east of Corinth, very close to the Saronic Gulf and near the narrowest point of the Isthmus of Corinth. Isthmia, then, geographically looks out to the east, toward Athens, the Aegean, and the eastern Mediterranean. It was on this site every two years that the Isthmian games, the second largest games behind those at Olympia, were held, attracting numerous visitors from around the ancient world. The games were held in honor of Palaemon, the son of Athamas and Ino, a young boy

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7 Pausanius 2.5.

8 Engels, Roman Corinth, 19-20.

9 Claudian Claudianus Maior 5.190.

who drowned and whose body was brought to shore on the back of a dolphin. During its Greek phase, the site consisted of a temple to Poseidon, a stadium, a theater, and a bath. The Romans rebuilt and enlarged the sanctuary when Corinth was reestablished as a city in 44 BC.

The Archaeological Site

Modern excavation of the site at Isthmia began in 1952 and is still continuing today. Oscar Broneer of the University of Chicago directed the first excavations at the site and in 1967 Paul Clement of UCLA began a new series of excavations that continued until 1980. The University of Chicago still continues to study the Theater, Stadium, and Temple of Poseidon, today under the guidance of Dr. Elizabeth Gebhard. The areas excavated by Paul Clement are today managed by the Ohio State University Excavations at Isthmia under the direction of Dr. Timothy E. Gregory, who was appointed to succeed Clement as director in 1987 and still continues in that capacity (see figure 7.2).

In July 1993 the Ohio State University project discovered a large collection of pottery sherds that had apparently been discarded sometime in the early 1970s. At that time, it was an accepted archaeological practice to discard items that had no apparent archaeological value (such as for dating purposes) or if they lacked aesthetic appeal and were deemed unsuitable for display purposes. Unfortunately, the excavators left no documentation explaining their reasons for and method used in discarding these particular pieces while other pieces were apparently kept. Since it is unclear what criteria the archaeologists used for determining why these pieces were discarded, the main question

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11 Pausanias 1.11.

12 Pausanias 2.2. Compare Elizabeth Gebhard, The Theater at Isthmia (Chicago 1973) 84-87 and Elizabeth R. Gebhard, Frederick P. Hemans and John W. Hayes, “University of Chicago Excavations at Isthmia, 1989: III,” Hesperia 67 (1998), 416-417 where Gebhard believes the sanctuary was not rebuilt until around the year 60 AD.
facing the current excavators was to determine if there was any value to this collection of artifacts that had no definite provenance. Provenance is very important for archaeological artifacts since without a secure context, an artifact or collection of artifacts loses most of its ability to relate to the site and to provide information about intra-site usage and structure. While this collection of sherds did not have an archaeological context, there are still links to the site. It is known that: 1) these sherds were initially excavated at Isthmia and thus are related to the site as a whole and several specific areas of the site, albeit unknown or uncertain areas and 2) that the early excavators, for one reason or another, did not consider these pieces worth saving. This raises the possibility that the recovery and sorting of all the pieces of the collection might restore a one-hundred-percent sample of pottery from certain areas since these are the pieces discarded by the initial excavators. The use of this collection in conjunction with other assemblages from the site hopefully will in turn reveal something new concerning trade between Isthmia and other sites in the Mediterranean, and the broader use of this particular site.

So far, it has been impossible to determine the precise provenance of the collection, or “69-72 pottery dump” as it is called, to a specific excavation area with complete assurance (see figure 7.3). It has been suggested that at least part, if not all of the discarded pottery, originated from the Loukos Area and East Field excavation areas since at least one piece was marked with a pen and identified with excavation in the Loukos Area in 1969. This late Roman pottery dump contains an enormous quantity of pottery that lends itself to the kind of investigation carried out here and it will form the first element of my exploration of pottery from the site of Isthmia.

Ceramic Evidence

The challenge in working with this pottery dump is in trying to wrest information from the collection, even though the context is lost or at best in doubt. One approach that
does not rely entirely on context is statistical analysis. This type of analysis allows a
catalog of the pottery sherds to be created. Once the pottery is categorized, further
analysis can determine the relationships, if any, between the various components.

The preliminary sorting of the material from this dump was completed during the
1995 field season. The analysis of the initial sort illustrates several interesting facts. The
sort included 29 basic categories consisting of 131,047 pieces weighing a total of
4,019.75 kilograms, about 8,862 pounds or over four tons. My intended focus is on the
two types of ceramic wares that are the best known and most studied: 1) the pottery
sherds that presumably represent the vessels used for transporting goods; and 2) the
finewares.

The pottery was first broken down into four gross categories based upon its fabric:
finewares (serving dishes and delicate cooking ware); cooking wares (vessels used for
food preparation); coarse wares (large, heavy wares); and miscellaneous (non-ceramic or
unusual pieces). The largest category, accounting for over two-thirds by number and
weight, was the coarse wares, followed by cooking wares (see figure 7.4). The smallest
category in both quantity and weight was the finewares. These numbers, particularly the
low number of fineware sherds, are consistent with an assemblage that has been already
selectively culled by the previous excavators. Finewares are typically kept out for study,
public display or museum collection since they are considered to be higher quality pieces
that are more aesthetically pleasing to visitors and more important for archaeological
analysis.

**Amphorae**

After the initial breakdown, the next step was the further division of the broad
categories into smaller, more precise groups. The first new category, transport class, was
created from the “coarseware” class and made up of pottery types such as amphora or
“micaceous water jars” usually employed in the transportation of cargo. The transport class from the dump consisted of the following three sub-categories: Aegean amphorae (see chapter 4), micaceous water jars, and unknown or unclassified amphorae. The large number of overall sherds from these vessels is striking. The initial number of sherds in this category was 9,095 pieces weighing 1,269 kilograms. These numbers reflect 7 percent by number and 34 percent by weight of the total pottery pieces discovered in the pottery dump (see figure 7.5). The prominence of this category illustrates that transported goods were being brought to the site and that these vessels, based upon the dump, were a large segment of the total pottery bought to the site. These numbers must be used with caution since amphorae are typically large vessels, the breakage of one amphora will create more sherds than that of a fineware or cooking pot. A further refinement of the initial sort will probably see a substantial increase in these numbers since it is believed that there are many amphora body sherds that are currently in other categories, in particular among the coarse body sherds, one of the largest categories both in number and weight. The initial sort did not differentiate between different types of large coarse body sherds, which means that all large, thick sherds (amphora, heavy cooking ware, and coarse ware) were sorted together into a single group.

The next step was to break the transport class down into its individual wares to determine if it was possible to learn what was being transported, when it was transported, and from where the goods were originating. The breakdown of the class into its three components showed that the largest category based upon number of sherds was the micaceous water jars, while the largest category based on weight was the Peacock and Williams Class 47 amphora, partly because this amphora was the easy to identify. The

13 Also known as Aegean amphora, Neider-Beiber 77, "Hollow Foot" amphora, Ostia VI, Kapitán II, Kuzmanov VII, Zeest 79, and Benghazi MR amphora 7.
second largest group was the micaceous water jar distinguished by the abundant flakes of mica in its fabric. Usually red or gray in color, this vessel’s origin was Asia Minor.\(^4\)

A further breakdown of the amphora class provides the following result. Aegean amphorae (Peacock and Williams class 47) dominated the amphora class, accounting for over 82 percent by number and 96 percent by weight. These numbers clearly indicate the dominance of the Aegean amphorae over the other classes of amphorae in this collection during this period.

The quantification of the transport class sherds at Isthmia by both weight and number failed to indicate the predominance of one type of vessel over another. In the transport class by weight, Aegean amphorae account for over ninety percent, while if the total number of sherds is examined, then micaceous water jars account for over two-thirds. The disparity in the two sets of numbers, however, can be reconciled. The different results are caused by the physical characteristics of the two types of vessels. Aegean amphorae have a thicker fabric and tend to break into large heavy pieces, while the thinner-walled micaceous water jar breaks into smaller, lighter pieces. Another factor to be considered is the life expectancy of the vessels. Thinner vessels break more often than larger ones, resulting in more sherds over time. Therefore, a large number of sherds does not always indicate that a large number of vessels was in use at one time.

It would also be helpful to know how many actual vessels the sherds represent. The aggregate weights of the different pottery types from the dump can be used in estimating the number of vessels. An amphora in the Aegean amphora class typically weighs between 7 to 9 kilograms.\(^5\)


\(^5\) Alpözen, *Commercial Amphoras of the Bodrum Museum*, 100.
Aegean amphora sherds recovered from the dump, a minimum of 134 to 172 vessels would be expected. This estimate is corroborated by the fact that there were 134 Aegean amphora toes in the collection. The micaceous water jars typically weighed between 2 to 4 kilograms. Since the dump yielded 60 kilograms of micaceous water jar sherds, based upon weight a minimum of 15 to 30 water jars is expected. Using these figures it can be estimated that the Aegean amphora vessels represented by the pottery dump greatly outnumbered the micaceous water jars. The cargo capacity of the Aegean amphora was 8.6 liters. This means that the estimated 134 to 172 vessels would have transported between 1152 and 1479 liters of liquid, or between 304 and 390 gallons.

What is clearly evident from the sherds is the dominance of vessels from the Aegean and eastern Mediterranean areas, such as Asia Minor. The Aegean amphora and micaceous water jars together constitute over 96 percent of the sherds by weight and over 94 percent by number of the transport class. This demonstrates the importance of the eastern Mediterranean trading routes to the site of Isthmia.

The other interesting result from the sorting of the dump is what did not appear in its collection. First, there were no amphora sherds from "western" amphorae such as Peacock and Williams Class 20. This would seem to indicate that trade was not with the West and places like Italy, Gaul or Spain, but primarily with eastern cities or merchants. This is perplexing since Isthmia is located on an east-west sea route and western pottery is found in large quantities at Corinth. There are several possible explanations for the lack of western amphora sherds in the pottery dump. One, the excavators just did not


17 Alpözen, Commercial Amphoras of the Bodrum Museum, 100.

18 Slane, The Sanctuary of Demeter and Kore, 43-46.
excavate in the areas that contain these remains. This is unlikely since, as we shall see, there is very little western ceramic evidence at the entire site for the Roman period. A more probable explanation is that there was just greater trade at Isthmia with the East. This is reasonable, given the location of the site—on the Saronic Gulf. This explanation does raise the question of trade imbalance. Were communities and people importing goods from the East and paying for them with currency, or were they trading with something other than ceramics? It also raises the question as to why Isthmia, a religious sanctuary, had pottery at the site.

Second, several very common eastern amphora types, such as the Palestinian amphora, North African amphora, or Late Roman 1 amphorae (from Cyprus and elsewhere), and Late Roman 2 (from the Aegean) are also missing from this collection. Since the majority of the trade is from the eastern Mediterranean, it is very surprising that these extremely common items are missing. Since the Aegean amphorae are dated to the third and fourth centuries AD while the “missing” amphorae are dated to the fifth to seventh centuries AD, this would seem to indicate that the chronology of the site affected its imports. Examination of the finewares (see section below) excavated at the site also failed to turn up any Roman finewares from Cyprus, such as Cypriot Sigillata or Cypriot Red Slip. This seems to indicate that while Isthmia was receiving eastern Mediterranean imports, they were obviously not arriving directly from the eastern Mediterranean but were brought in by intermediaries, perhaps from the northern Aegean area.

The next question is to see how representative the transport class of pottery from the pottery dump is when compared to the other areas of the site. To determine this, the transport class of pottery from the dump was compared to ceramic evidence from other excavation areas at Isthmia. The 1967 Tower 14 and 1969 Northeast Gate excavations, because of the abundance of late Roman pottery, were chosen to be compared against the
dump findings. The excavation lots showed that 129 sherds recorded from these two areas fell into the transport class. The breakdown for the Tower 14 and Northeast Gate transport class indicates that 60 or 47 percent were unknown or unclassified amphora sherds, 45 or 35 percent were micaceous water jar sherds, 10 or 8 percent were Palestinian amphora sherds, 8 or 6 percent were Aegean amphora sherds, and 6 or 5 percent were Koan amphora sherds (see figure 7.6).

On the surface, these numbers differ from the findings in the pottery dump (see figure 7.7). Aegean amphora dropped from 91 percent of the transport class sherds in the dump to 6 percent from Tower 14 and the Northeast Gate while unclassified amphora sherds rose from just over 5 percent in the dump to 47 percent from the Tower 14 and the Northeast Gate. Once again, this change is probably due to chronological differences between the amphorae indicating that these two areas (Tower 14 and the Northeast Gate) were in use during the fifth and sixth centuries AD while the dump is earlier, third and fourth centuries AD. There are, however, several important similarities. Over half of the sherds have eastern Mediterranean origins, such as from the Aegean, Asia Minor, or Palestine. While there are several types of eastern Mediterranean amphorae represented in this sample that were not present in the pottery dump, there are no Italian or western amphora sherds just as there were none from the pottery dump. This further strengthens the importance of the eastern Mediterranean trading connections at Isthmia.

**Late Roman Finewares**

The next major step in dealing with the pottery dump is a closer examination of the Late Roman finewares. The 2,176 fineware sherds, weighing 17.62 kilograms, were first divided into three broad chronological classes, Greek (1200-100 BC), Roman (100 BC-700 AD), and Byzantine (700-1400 AD). The 190 Greek sherds, weighing 0.74 kilograms, accounted for 8.73 percent by number and 4.2 percent by weight of the
finewares. The 1,926 Roman sherds, weighing 15.98 kilograms, constituted 88.51 percent by number and 90.69 percent by weight of the fineware class. The 60 Byzantine sherds, weighing 0.9 kilograms, made up 2.76 percent by number and 5.11 percent by weight of all the finewares. The clear majority of the finewares both by number and weight were in the Roman category. The lack of Greek and Byzantine sherds can perhaps be explained because of the unsettled nature of these periods in Greece, but more probably is due to the fact that the dump represents excavations in mainly Roman levels.

The Roman finewares were sorted by type (African Red Slip, Pompeiian Red Ware, etc.) and then by component (rim, handle, base, or neck). The initial results of this sort are shown in figure 7.8. A breakdown of the finewares into local and domestic wares reveals that a significant percentage of the pieces were imported from outside of Greece. Nearly 60 percent of the sherds by number, and 57 percent by weight were imported. This compares with the 40 percent by number and 42 percent by weight that are known to be of local manufacture. Another interesting point is that the percentages by weight and by number are remarkably similar, with very little variation.

The finewares echo the findings from the transport class, demonstrating that imported goods were more common than locally manufactured ones. The question is whether the breakdown of the finewares can help indicate the regions that were trading with Isthmia. Examining the sherds based upon their point of origin, we find that the imported finewares are from five different regions: North Africa, Asia Minor, Italy, Black Sea region, and Egypt (see figure 7.9). Unlike the transport class, the finewares do show both eastern and western origins, as would be expected from a site on an east-west sea route. The majority of the sherds, both by weight and number, are from North Africa and Asia Minor. As with the transport class, the majority of the ceramics are arriving from eastern areas.
The predominant imported Roman fineware was an unidentifiable red slip. It is believed that this was an imported ware since kiln sites for this ware have not been located in the surrounding area; however, an ongoing land survey of the Corinthia (Eastern Korinthia Archaeological Survey Project or EKAS) may change this view. This red slipped ware accounted for 48 percent by number and 46 percent by weight of the imported sherds. The next largest category was African Red Slip totaling 26 percent by number and 20 percent by weight. As with the transport class, it is interesting to note what is not present or present in only extremely small amounts. Egyptian Red Slip accounted for less than one percent of the sherds by number or weight, and there were no Cypriot Red Slip sherds.

Examining the chronological breakdown of the fineware sherds, both by quantity and weight, shows the sherds rising to a peak in the second century, falling to a low level in the third and fourth centuries, raising to its highest level in the fifth century, and then dropping off to zero in the sixth century (see figure 7.10). This would seem to indicate that the area where the pottery came from went through several stages in its development. This immediately raises the question, is this picture indicative of the whole site, and of the region?

When the places of manufacture for the transport sherds from the initial sort are marked on a map, it illustrates an eastern influence. It shows that the majority of the transport and finewares were from the eastern Mediterranean and comparatively few from areas west of Greece. This disparity in numbers illustrates that goods were mainly traveling east to west. These numbers demonstrate that more commercial goods from in Asia Minor were traveling westward to Isthmia than goods moving eastwards from Italy, Gaul, or Spain to Isthmia. What they do not show from this analysis is their manner of travel, and whether it was by land or by sea. It also does not illustrate the type of
commerce that is taking place, local, intermediate or long distance. It does show, however, that there were strong connections between eastern and western parts of the empire. It also lays the foundation for further studies building upon this fact. The next step will be to determine the type of trade and the manner in which it was conducted.

The findings from the sorting of the pottery dump did raise one puzzling question. There were no ceramics from the island of Cyprus, such as Cypriot Red Slip. When all the ceramic evidence was examined to see if this held true for the rest of the site, no pieces of Cypriot pottery from this period were found. Cypriot Red Slip was a common red slip ware that was popular in the East. It is generally dated from the end of the fourth century until the end of the seventh century AD. Excavators have uncovered Cypriot Red Slip in Syria, Palestine, Egypt, North Africa and Greece. Why was not there any in the dump or at the site? It has been suggested that between 200 and 350 AD for some reason the island was in a state of decline. This hypothesis is based on the declining numbers of ceramics discovered on the island dating to that period. Does this tie in somehow to the lack of Cypriot ceramics at Isthmia in this later period? It does seem to indicate that there was no direct contact with Cyprus and that would mean that Cypriot goods were probably traded with Asia Minor, Egypt, and eastern North Africa. This question will be addressed more fully in the next chapter on Cyprus and the Sydney Cyprus Survey Project.

Several facts emerge from the sort of the pottery dump at Isthmia. First, Aegean amphorae dominate the transport vessel class in large numbers. For some reason, this is not reflected in the findings from other excavation areas at Isthmia. Secondly, western transport vessels are not present in the pottery dump even in small amounts although they

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19 Hayes, *Late Roman Pottery*, 385.
20 Lund, "Centuries of darkness?," 193.
are present in other areas of the site. If the pottery dump is an accurate reflection of the transport vessels that passed through Isthmia, then the importance of eastern trading contacts needs to be emphasized, at least for bulk goods that were transported in amphora. The special nature of Isthmia as a religious sanctuary and not as a trading or consumption center means that the trade at Isthmia was probably different from other sites. The trade at Isthmia seems to have been focused on the immediate Aegean area. Traders in the Aegean brought their products and other eastern Mediterranean products to Isthmia. This hypothesis is reinforced by the study of the finewares. Just as with the amphorae, the majority of the finewares are from the eastern Mediterranean. This would seem to indicate that trading was being carried on at a short or intermediate distance. Another conclusion that can be drawn from the pottery dump is that trading and commerce movement was active during this time. Contrary to theories that suggest trading activity was sparse or non-existent during Late Antiquity, the abundant number of transport vessels at Isthmia and their large cargo capacity, as well as the numerous finewares, suggest that a thriving commercial exchange was taking during this period.

One criticism that has been leveled at using ceramics as economic or commercial indicators is the belief that each site’s ceramic assemblage is unique, thus preventing any type of consistent pattern, either locally or globally, from emerging.\(^\text{21}\) Sometimes this criticism is followed by the argument that even if ceramics are found at a site, it is impossible to determine how they arrived there and why they arrived there. One way to examine the validity of these arguments is to compare the ceramic evidence from Isthmia with that of another site outside of the Corinthia. For this example, the Schola

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Praeconum in Rome, which was analyzed in Chapter 6, provides an appropriate comparison for Isthmia. There are several similarities between the sites. First, both sites were located on the northern shore of the Mediterranean and in what was to become the western half of the Roman Empire under the emperor Diocletian; second, both sites were more urban than rural and relied more on visitors for support than in agricultural production.

As we have already seen in Chapter 6, the quantification of the amphora sherds from the Schola Praeconum showed that 42.5 percent by number and 63 percent by weight originated from North Africa, 20.5 percent by number and 6.9 percent by weight were micaceous water jar sherds and 37 percent by number came from differing areas of the east and central Mediterranean. Only 10 percent of the sherds by number and 8.6 percent by weight found at the site can be shown to be of local manufacture, indicating a heavy reliance on outside areas for certain products.

The ceramic evidence from both Isthmia pottery dump and the Schola Praeconum were analyzed in the same manner. The resulting percentages from the two sites are similar, indicating that comparable forces or patterns are prevalent at each site. Isthmia, due to its special nature as a religious sanctuary, was more of a conduit than a trading center or exchange node. A small number of items would be sold or traded in the area while the majority continued along the trading route. Isthmia as a sanctuary did not produce any large-scale goods (foodstuffs, ceramics, etc.) that were in demand in outside areas. This meant that the composition of trading goods that passed through Isthmia would remain mostly unchanged on the trade route. It also refutes the theory that each

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site’s ceramic evidence is so unique that nothing can be learned about economic or
commercial trends, both locally and globally. For each site’s ceramic record to be truly
unique, ceramic items would have had to remain near their production centers and not be
traded or even carried to other areas or regions, which we know was certainly not the
case. It would also mean that certain ceramics, such as African Red Slip or Phocaean
Ware, would not have been produced in the large numbers that they were.

Is this exchange of pottery a planned commercial exchange, or a random
encounter between two groups or individuals who exchanged gift items? Based upon the
variety of different forms of pottery at Isthmia and the numbers they appear in, it appears
that goods from the East worked their way slowly westward, first to the Aegean and then
on to Isthmia. It is easy to visualize a scenario similar to the example of the Yassi Ada
vessel from Chapter 6 with small coastal vessels working along the shores of the Aegean
making numerous stops along its route. This would have allowed goods from the East to
slowly work their way around the Aegean and possibly even towards Italy. New studies
using statistical models based upon linear regression, gravity model analysis, and distance
decay hold out the promise of being able to solve this question by presenting distribution
patterns and determining whether they appear to be totally random or ordered, and
whether the distances involved between the site of manufacture and distribution are in the
expected range for normal random transmission.24

24 For studies in this area see John R. Clark, “Measuring Changes in the Ease of Trade with
Archaeological Data: An Analysis of Coins Found at Dura Europus in Syria,” The Professional Geographer
Geography 55 (1979), 1-17; Peter J. Taylor, “Distance Transformation and Distance Decay Functions,”
Geographical Analysis (1971), 221-238; Ian Hodder, “Regression Analysis of Some Trade and Marketing
CHAPTER 8
THE ISLAND OF CYPRUS

Cyprus is so fertile and so abounds in products of every kind, that without the need of any help from without, by its native resources alone it builds cargo ships from the very keel to the topmast sails, and equipping them completely entrusts them to the deep.

Ammianus Marcellinus

While the analysis of pottery from various western sites has been very useful in helping modern scholars to understand trade in the western Mediterranean, the eastern Mediterranean has been relatively ignored, and the island of Cyprus can serve as a case in point. Both the Roman and Early Byzantine periods have generally been viewed by modern historians as very isolated eras in the history of Cyprus.\(^1\) Unlike earlier or later eras in its history, the first through seventh centuries AD on Cyprus tend to attract little scholarly attention except for work that has been done on early Christian churches.\(^2\) Due to its close proximity to the Syro-Palestinian coast and other eastern markets, as well as its availability to serve as a stopping point for goods headed toward Constantinople,

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\(^1\) Sir George Hill, *History of Cyprus*, I (Cambridge 1940), 244, 257.

Greece, and the West, Cyprus was, however, an ideal nexus for goods flowing both
eastward and westward. This is at odds with the standard portrayal of Cyprus as a quiet
backwater on the fringes of society. Fortunately, new archaeological evidence on the
island will help resolve this apparent paradox and shed light on how trade affected the
different societies on the island.

The Island’s History

Cyprus is an island in the northeastern corner of the Mediterranean Sea fifty miles
south of the coast of Cilicia, near the Levant (see figure 8.1). It is approximately 140
miles long by 60 miles wide. Inhabited since the Neolithic period, the island was first
settled by Anatolian immigrants in the Early Bronze Age, and then by Mycenaeans in the
Late Bronze Age. The Mycenaeans soon came to dominate the native inhabitants’
original culture with their own. During this period, the mining and smelting of copper
became widely practiced on the island and numerous commercial cities such as
Kalavassos and Maroni, developed on the southern and eastern coasts. Around the
thirteenth century BC the island suffered through the collapse of the Bronze Age
kingdoms that visited many parts of the eastern Mediterranean.

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3 T.B. Mitford, “Roman Cyprus,” 1295.

4 Ibid., 1287.

The island, because of its strategic location, was seen throughout history as an important possession and found itself involved in many conflicts. In 525 BC, during the reign of Cambyses, the Persians took control of the island. Cyprus oscillated between Persian rule and liberation by the Greeks numerous times during the fifth century BC. After Alexander the Great’s death in 323 BC, the island passed into the control of the Ptolemies until its annexation in 58 BC by Rome.\(^6\)

Already in the year 100 BC, the Roman Senate, concerned about the problem of piracy in the Mediterranean, passed a \textit{senatus consultum} that encouraged all friends and allies of Rome, including Cyprus, to give no assistance or aid to pirates.\(^7\) This was followed by the sudden annexation of Cyprus in 58 BC. A tribune for that year, P. Clodius Pulcher, was able to secure the passage of a law that reduced Cyprus to a province and confiscated the wealth of Cyprus' king, Ptolemy.\(^8\) From the next ten years until 48/7 BC, Cyprus was considered part of or an addition to the province of Cilicia. In 48/47 BC Caesar gave Cyprus to Egypt to be ruled by the two children of Auletes, Arsinoe and Ptolemy, but in actuality it was governed by Cleopatra VII.\(^9\) Marc Antony


\(^{7}\) SEG I 161; SEG II 378.


\(^{9}\) Cass. Dio 42.353-6.
confirmed Egypt's control over Cyprus and rough Cilicia in 36 BC.\(^\text{10}\) Augustus reclaimed the island for Rome when he assumed control over Egypt after his victory at Actium over Cleopatra and Antony in 31 BC. In 22 BC Augustus ceded the island to the Senate to become a senatorial province, but a minor one only governed by a praetor.\(^\text{11}\) To aid in its government, the island was divided into twelve or thirteen regions each controlled by a city.\(^\text{12}\)

Throughout the Roman period, the island was fairly quiet, with little political or military disruption. In 116 AD, the Jewish insurrection of Artemion devastated part of the island, including the cities of Paphos and Salamis.\(^\text{13}\) In 164 AD, a plague-like illness ravished the island. This was followed by an invasion of Goths in 269 AD.\(^\text{14}\) A series of plagues probably struck the island in 542, 558, 573, and 592.\(^\text{15}\) The island also

\(^{10}\) Ibid., 49.32.5.

\(^{11}\) Cass. Dio 54.4.1; Strab. 17.3.25 (840).

\(^{12}\) Mitford, “Roman Cyprus,” 1308.

\(^{13}\) Cass. Dio 68.32.1-3

\(^{14}\) Trebellius Pollio Vita Claudii 12.1.

supposedly suffered through forty droughts between 300 and 600 AD. After this, the island remained relatively peaceful until the 640s, when the Arab Empire began to mobilize for an attack upon the Byzantine Empire, and even Constantinople itself.

**Important Cities in Antiquity (see figure 8.2)**

**Paphos and Palaipaphos**

Paphos and Palaipaphos are located on the southwestern coast of Cyprus, near the modern village of Kouklia. According to legend, Agapenor of Tegea founded the original city of Paphos. At an early point in its history, the city became closely associated with the worship of Aphrodite (Roman Venus) and established a sanctuary for her worship. Paphos experienced a long and vigorous life through the Greek periods and into the Roman period. The original Paphos (Palaipaphos) became superseded by Nicocles' foundation of New Paphos in 312 BC, and in fact became the religious sanctuary for the new city. In the second century BC, Paphos became the capital of

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17 F.G. Maier and V. Karageorghis, Paphos: History and Archaeology (Nicosia 1984), 14-17.

18 Paus. 8.5.2-3.

19 Clem. Al. Protr. 2.12-13; Cornutus Theol. Graec. 24; Pausanius 1.14.7; Philostr. VA 3.58; Pomponius Mela 2.7.
Ptolemaic Cyprus, replacing Salamis. The city served as a port for the mines at Pefkos tis Peravasas (Πεύκος τις Περαβάσος) located thirty-five kilometers to the northeast of the city.\(^{20}\)

**Salamis**

According to tradition, Teucer, the exiled son of King Telamon of the Greek island Salamis, founded Cypriot Salamis.\(^{21}\) Archaeological evidence shows that there was settlement in the area as far back as the eleventh century BC. Following the death of Alexander, the city fell under the control of the Ptolemies and was destroyed by Demetrios Poliorcetes in 306 BC.\(^{22}\) The first city on Cyprus to mint its own coinage around the middle of the sixth century BC, Salamis became the capital of Cyprus and one of the most influential cities in the eastern Mediterranean under the reign of the Ptolemies due to its well-protected harbor.\(^{23}\) The city built a new south harbor under the reign of either the first or second Ptolemy to replace its silted up north harbor, and by the second century BC Paphos had replaced Salamis as the Ptolemaic capital of the island. While its standing as one of the most influential cities continued into the Roman period, Salamis

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\(^{20}\) Mitford, “Roman Cyprus,” 1331, fn. 204.

\(^{21}\) Hor. *Carm.* 1.7.21-29; Isoc. *Nicocles* 28; Paus. 8.15.5-7.


\(^{23}\) Scylax 103; Mitford, “Roman Cyprus,” 1321.
preferred its eastern contacts more than its new Roman rulers. In 346 AD, Salamis, renamed Constantia, became the capital of Cyprus once again.

Tamassus

Tamassus, along with Chytri, was one of the few cities not located along the Cypriot coast to continue through the Roman period. The site of Tamassus, partially covered by the modern city of Politiko controlled the Pediaeus valley, a rich agricultural area and the city also derived considerable mineral wealth from its copper mines, which according to a passage in the Odyssey were known in Homeric times, ἐς Τεμέσνη μετὰ χαλκόν. The city is first mentioned in the list of Delphic θεωροδόκοι around the beginning of the second century BC. The city is not frequently mentioned in the ancient literature during the Roman period. It is, however, included on the Peutinger Table, which shows a direct connection between Tamassus and the port city of Soli, only M.P. XXIX (29 Roman miles) in length.

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24 For example, the Egyptian calendar was used into the fourth century AD alongside the official Roman calendar, Epiphanius Adv. Haeres LI 24.

25 Strab. 4.6

26 Hom. Ody. 1.184.

27 Mitford, “Roman Cyprus,” 1331.

28 Pliny NH 5.130; Ptol. Geog. 5.13.6.

29 K. Miller, Die Peutingersche Tafel (Stuttgart 1916), 827-829; Mitford, “Roman Cyprus,” 1331-1337.
Soli

Soli, continuously inhabited from Geometric times until the Arab invasions, was one of the most important and wealthy cities in northwest Cyprus. Located on the Morphou plain, Soli amassed its wealth from flax crops raised on the Morphou plain and from the copper mines of Skouriotissa, supposedly the richest on the island. The city’s acropolis has the remains of an early temple to an unknown deity, a temple to Zeus, a gymnasium, and a theatre capable of seating around 3,500 spectators. The city seems to have flourished during the Antonine and Severan periods. A broad, paved and colonnaded street bisected the city from east to west. Other archaeological evidence from the period includes several dedications to Antoninus Pius and Commodus and a statue dedicated to Marcus Aurelius.

Sydney Cyprus Survey Project

From 1992 to 1997 the Sydney Cyprus Survey Project (SCSP) undertook a six-year intensive archaeological survey of a 65-square km area around the modern villages of Politiko and Mitsero (see figure 8.3), located in the north-central foothills of the Troodos Mountains (see figure 8.4). This area in the Troodos foothills was selected

30 René Ginouvès, Soloi: Dix campagnes de fouilles, volume 2 (Sainte-Foy, 1989); Alfred Westholm, The Temples of Soli: Studies on Cypriote Art during Hellenistic and Roman Periods (Stockholm 1936).

31 Galen De Antidotis 14, De Temp. 9.


33 IGR III 929 (Report of the Department of Antiquities, Cyprus 1969, 71 no. 1)
because it has always been an important region for both agricultural and mineral resources and includes the copper sulfide ore deposits located in Cyprus’ Lower Pillow Lavas (see figures 8.5 and 8.6). This selection was an important element in SCSP’s research design that sought to understand the connection between metallurgical resources, production, and trade, on one side, and the emergence, maturation, and evolution of complex social systems on the other. SCSP was designed, therefore, to examine site location and settlement patterns, and their relation to agricultural and metallurgical resources through all periods of time.

To accomplish this goal, a complex fieldwalking and collection strategy was created. Fieldwalking was undertaken in either fifty meter transects or in field plots easily identifiable on aerial photographs. Each transect was covered by a five-person field team walking each section in parallel lines spaced five meters apart (see figures 8.7 and 8.8). For every unit, the teams recorded environmental and location factors (geomorphology, topography, surface character, sediment cover, erosional pattern, land use, slope, and visibility). For each unit the teams collected ‘diagnostic’ cultural materials, including pottery, lithics, groundstone, metals, slag, ores and fluxes, glass, and tiles (see figure 8.9). All non-diagnostic material was counted and left in situ, and the information recorded in a relational database chosen for its cross platform abilities (File Maker Pro 3.0).

To deal with this large amount of cultural material, a survey collection strategy had to be devised that could adequately and accurately deal with the material. At the
outset it was agreed that a 100 percent collection of artifacts was neither feasible nor ethically responsible. It was also clear that our modest resources would only permit us to process a small percentage of the cultural material that would become available to us. To address these issues, it was decided that cultural material would be collected for the following three reasons: 1) to help date the individual components of the survey unit; 2) to aid in determining the different uses or functions of the survey unit; and 3) to help understand the role of trade and other interactions within the survey area, and between the survey area and the rest of the world.

To help address these three points, a specific collection strategy was created. The goal was to collect pottery from a survey unit in such a manner that the collection would reflect both the quantity and character of the visible artifacts in the survey unit. Thus, there should be a direct relationship between what is noted and counted in the field and what is gathered for detailed analysis. This allowed the pottery identified in the lab to have a secure link with the counted sherds left in situ in the survey unit. To achieve this, not only were 'diagnostic' pieces collected, but also sherds representative of the different fabrics and shapes noted in the unit. Each of the five fieldwalkers on the team collected an example of each piece of pottery that seemed to him/her to be different from whatever else had been seen in the field (i.e., one example of each fabric, decoration, shape, body fragment, etc.). At the end of the unit each fieldwalker's collection was processed by a more experienced team member who eliminated duplicate sherds from each individual's collection. In each team's collection, therefore, it would be possible to find as many as
five basically identical sherds having both the same fabric and from the same part of the vessel (e.g., five Cypriot Red Slip rims). This collection strategy was believed to have been a reasonable compromise between practicality and the need to have some qualitative and quantitative measure of the types of ceramics observed on the surface of a survey unit. The ceramic pieces were sorted and grouped by ware and then by the preserved part of the vessel, such as the handle, rim, base or body sherd. Every collection of like items was identified as a batch, numbered, and then described. While the pieces in the batch obviously varied slightly in weight and size, all the members of a batch were treated as identical pieces. The weighing of each batch provided some control for such variation. The batch was described using standardized terminology and wherever possible was assigned to any of the specific wares, shapes, and types that have been identified in Cyprus and elsewhere in the eastern Mediterranean. Such wares are designated as ChronoTypes. A ChronoType is an easily recognizable piece of pottery that has a distinct chronology associated with it. The ChronoType also encompasses information about its form, fabric, and function. Over 150 ChronoTypes were identified during the project.

Archaeological Data

Periods

During the SCSP survey the field walkers collected for identification 17,934 sherds totaling 297.5 kilograms. The first step I took in analyzing the data was to divide the sherds into smaller classes or groups. The first classification was based on chronology. I created twelve main categories based on general historical periods such as
late Roman, Hellenistic, or contemporary using the date ranges in Cypriot history
generally accepted for that era. Each period, if possible, was further subdivided into
smaller components encompassing fewer years. Totals were then calculated for each
period’s sherd quantity and weight in grams (see figure 8.10). A simple comparison of
the totals shows the fluctuation in the numbers from period to period and a line graph can
visually represent this data. The pattern demonstrated by this graphical (visual)
representation helps indicate changes in the area's activities, which if the pottery is
imported, can be significant for understanding the importation/exportation for the region.
The flatter the line, the more constant the area’s activities, while the more changes in the
slope of the line (whether peaks or valleys), the more varied the activity was over
different periods. In the changing slope example (see figure 8.11), V and X indicate
periods of higher activity while
U, W, and Z indicate periods of lower activity. Before the SCSP data was graphically
represented, there were two expectations. First, the largest category of sherds would be
the “unknown” classification. One of the difficulties in working with survey material is
that when ceramic material is left exposed on the surface it tends to become weathered
and broken into smaller fragments that are then battered by the land’s use, whether
plowed under for farm acreage or built upon during later habitation. These factors, and
others, create many small, nondescript sherds that lack identifying features such as
decoration or shape. Another expectation was that the older the period was
chronologically, the smaller the totals for quantity and weight would be for that era. The
older the sherd, the longer it has had to be weathered, covered up, picked up, moved, or broken. This means that while there may have been equal pottery amounts in each of the chronological periods, since the older sherds have had longer for outside factors to act upon them, fewer of them will still be on the surface. This expected attrition should, when the data is displayed graphically, create a line with a positive slope growing taller as it progressed older to younger, or from left to right.

When the SCSP data was plotted, both by quantity and weight, several points became readily apparent (see figure 8.12). First, as expected, the “unknown” class was the largest. Second, the slope of the line was not consistent. The numbers rise steadily from the Prehistoric period to a plateau spanning the Archaic to Classical periods. Then for some reason, during the Hellenistic Age, the numbers decline to an extremely low level, followed by a slight growth in the early Roman period. This small gain was followed by a steep increase during the Late Roman/ Early Byzantine period that continued on into the Medieval and early modern periods. This suggests that during the Hellenistic Age, the inhabitants in the Mitsero area experienced something that led to a decreased use of pottery, such as decreased commercial contact with other areas or a falling population. This low level remained consistent through the early Roman period. Then, in the late Roman era, the inhabitants in the area suddenly increased their pottery usage past its previous high points in the Classical period.
Early Roman (100 BC – 300 AD)

During the survey, there were few sherds found that dated to the early Roman period. The majority of the early Roman sherds were cooking ware (see figure 8.13), and most of these were from an early Roman cooking pot that was characterized by a flat rim with narrow grooves and manufactured locally (see figure 8.14). This cooking pot is similar to a series found at Aradhippou in 1991 at the excavations at Panayia Ematousa.\(^{34}\) It is also a common find at Paphos and Soli where it has been dated to the second century AD.\(^ {35}\)

The category of sherds next isolated for study was the transport class (amphorae, micaceous water jars, etc.). While amphorae are manufactured to be sturdy and to resist breaking during transport and storage, breakage did occur. If amphorae were shipped into the Mitsero area, there would be amphora sherds from amphora breaking. The field walkers actually found very few amphora sherds, only six diagnostic pieces that dated to the early Roman period, though this was probably due in part to the inability to distinguish Early Roman amphora body sherds from other coarse wares. This indicates that there were few amphorae transported into the Mitsero region in this period. It has been suggested, based upon amphora with secondary ownership stamps, that amphorae


\(^{35}\) Hayes, *Paphos III*., 82, fig. XXXVI: 5; and O. Vessberg and A. Westholm, *The Swedish Cyprus Excavation IV: The Hellenistic and Roman Periods in Cyprus* (Stockholm 1956), 3 fig. 31:15.
were reused. For example, a possible explanation might be that wine was shipped to Mitsero in amphorae, then transferred to other containers and the amphorae refilled with olive oil and then shipped to another area. This explanation, however, does not account for the almost complete lack of amphorae sherds in the Mitsero region, since even with amphorae being reused, there would be some that broke or were discarded. The best explanation is that few bulk goods (olive oil, wine, grain) were being shipped into or out of the area during this period.

Out of the six early Roman amphora sherds, the only distinctly identifiable one was a Pseudo-Koan handle. Pseudo-Koan is easily recognized due to its heavy bifid (double rounded) handles and sandy fabric that strive to duplicate the style of the Koan amphora, one of the most important wine transport vessels in the Mediterranean (see figure 8.15). The site of origin is uncertain, but Pseudo-Koan is a common find in the


37 Pseudo-Koan is also known as Peacock and Williams Class 11, and Benghazi Early Roman Amphora 2.

eastern Mediterranean, and has also been discovered in Italy and North Africa and dates to the first and second centuries AD. It has been suggested that its contents were probably wine since that was the principal content of the Koan amphora style upon which the Pseudo-Koan was modeled, but that has not been yet proven.\(^\text{39}\)

The lack of amphora sherds, both domestic and imported, presents a picture that shows little or no activity for the movement of large quantities of bulk goods, such as wine and olive oil. Since both wine and olive oil were important staples in antique diets, this lack of early Roman amphora sherds allows for two possibilities. One, the inhabitants of the Mitsero region depended on local sources for wine and olive oil and did not need to import these goods. These local suppliers only produced enough wine and olive oil for the local community and did not have excess to export to other areas. The community can therefore be seen to be practicing a form of subsistence economy, where the farmers in the area produced enough goods for the community so that it did not need any imports and had nothing to export. This would have restricted the contact between the Mitsero area and other regions. This subsistence agriculture would have still needed storage containers, amphorae or pithoi, to store the harvested or stored goods through the winter and few examples of either were found in the survey.

The other possibility is that there were few inhabitants in the Mitsero area during the Early Roman period. One needs to be careful, however, when attempting to use pottery remains to indicate population sizes. Many different factors influence the

\(^{39}\) Peacock and Williams, \textit{Amphorae and the Roman Economy}, 107-108.
discovery of archaeological material and it is uncertain to what degree the cultural material reflects population size, no matter how tempting it is to make such assumptions. This is particularly true with ceramic materials and the questions that remain unanswered about their use, as discussed previously in chapter four. How many ceramic vessels did a family use, or destroy in a given span of time? How many sherds does a vessel break into? If an archaeologist discovers ten sherds, does that indicate that there were ten vessels, or just five, or even maybe only one? Perhaps one way to help determine the meaning behind the lack of early Roman amphora sherds is to compare them to the early Roman finewares.

The categorization of the early Roman finewares shows that the largest class of sherds was Cypriot Sigillata, a locally produced tableware. The only other early Roman fineware in significant amounts was Eastern Sigillata A from Syria. Other finewares that were present in small numbers included Eastern Sigillata B from the western half of Turkey, African Red Slip from North Africa, Çandarli from Pergamon, and one piece of Pompeiian Red Slip from Italy (see figure 8.16). While it is clear that the majority of the early Roman finewares were locally manufactured on Cyprus, the complete absence of western finewares (with the exception of the one sherd of Pompeiian Red Slip) such as


Italian Sigillata or Arretine Ware indicates that western imports were not reaching the interior of island, but that the inhabitants in and around Mitsero were relying primarily on locally manufactured wares, or ones from eastern areas close to Cyprus such as Syria or Asia Minor. The presence of the Eastern Sigillatases A and B does show that some imports were traveling into the interior of the island, although in small numbers. While the lack of western wares perhaps could be due to gaps in the archaeological record, it seems to indicate that the area around Mitsero had trading connections that transferred goods towards the eastern most part of the Mediterranean.

The majority of the early Roman fine ware sherds were Cypriot Sigillata. Recent work on Cypriot Sigillata suggests that the main center of production was in the Nea Paphos region. The Nea Paphos area, in the southwestern corner of Cyprus, is approximately 125 kilometers (77 miles) from the Mitsero region as the bird flies or about 200 kilometers (125 miles) by modern roads. The Cypriot Sigillata sherds indicate that there was contact between the two regions. It does not, however, indicate whether the Mitsero region was trading directly with the Nea Paphos region or whether there was one or even several intermediate trading partners between the two areas.

This information gained from the analysis of the early Roman fine wares helps modify the data the analysis of the early Roman amphorae sherds. While there were more early Roman sherds than Hellenistic sherds, there were fewer early Roman sherds than

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Classical sherds, about fifty percent less in number and eight percent less in weight. This would seem to indicate that the Mitsero area was inhabited during the early Roman period, but relied primarily upon local production to meet most of its needs with little importation of bulk goods. When commercial activity, at least for finewares, was conducted during the early Roman period it was with other regions of Cyprus that had strong eastern and weak western connections.

Another interesting point is the larger number of imported fineware sherds when compared to the amphora sherds. This demonstrates that the early Roman trade in imported finewares coming into the Mitsero region was not what is called "piggyback trade." This is when items are shipped from a production center on a large scale and other items, typically smaller items such as finewares, are added to the shipment to fill up any free, available space in the ship or wagon. This allows the merchant to be more efficient and maximize his profits from the shipment while holding down shipping costs. This is most often seen with cargoes of amphorae that use the smaller finewares to fill in the free spaces around the large amphorae after they are loaded into a ship's hold. The imported finewares were certainly not arriving in the Mitsero area in conjunction with other imported pottery, especially imported amphorae. This seems to preclude the remote possibility that Mitsero was conducting direct long distance trade in bulk items with foreign merchants. Any trade in the early Roman period that Mitsero practiced was

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through local Cypriot intermediaries or traveling traders. A look at the late Roman wares should help illustrate whether a similar pattern existed then.

During the survey 1,323 sherds weighing 22.8 kilograms were positively identified as Late Roman/Early Byzantine or about 7 1/2 percent of the total, both in weight and number. Out of the sherds identified as Late Roman, the largest category both in weight and quantity was the coarse wares, followed by amphorae and then finewares with cooking ware being the smallest (see figure 8.17).

Out of the 298 late Roman amphorae sherds discovered by the SCSP fieldwalkers, there was very little variety in type. The largest category of identifiable amphorae sherds was Late Roman 1. As already seen in chapter 4, this amphora, which was manufactured on Cyprus at Amathous, Kourion, and Nea Paphos and on the southern coast of Asia Minor, typically carried olive oil. The only definitely imported amphorae sherds were two North African toes. It is also interesting that late Roman 2 amphorae sherds, which are widely found throughout the ancient world, but typically concentrated in the Aegean and Black Sea regions, were not found in the SCSP survey area.

There are considerably more Late Roman amphorae sherds than early Roman sherds suggesting that in this period bulk goods were moving into the Mitsero region from other areas in significant numbers. There were, however, few transport vessels from the west (Italy), south (Africa), and north (Black Sea and Aegean) reaching Mitsero. The

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44 For a more complete discussion of Late Roman 1 amphorae see chapter 4.
only possible non-Cypriot supplier of bulk goods reaching Mitsero is from the East, depending on the place of manufacture of the Late Roman 1 amphora. Amphorae commonly occurring in the eastern Mediterranean such as the Gaza amphora,45 and the Palestinian amphora46 were not discovered in the Mitsero region, strengthening the probability that the Late Roman 1 amphora was manufactured locally. A comparison of this data with the analysis of the late Roman finewares should help complete the picture.

From the Late Roman finewares that were identified, the overwhelming majority fell into five specific wares: African Red Slip (ARS), Çandarli Ware (CW), Cypriot Red Slip (CRS), Egyptian Red Slip (ERS), and Phocaean Red Slip Ware (PHW) sometimes known as Late Roman C (LRC) (see figure 8.18). As would be expected, Cypriot Red Slip, being locally manufactured, probably in the Nea Paphos region,47 was the most numerous Late Roman fineware found. In looking at the imported finewares, both Egyptian Red Slip and Çandarli Ware were discovered in very small amounts. Phocaean

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46 Known as Egloff type 187, Hayes types 7-8, Peacock and Williams Class 46, Riley Late Roman Amphoras Type 5,6. For information Lund, “Pottery of the Classical, Hellenistic and Roman Periods,” 133-134; Peacock and Williams, Amphorae and the Roman Economy, 191-192; J.A. Riley, “The pottery from the first session of excavation in the Caesarea Hippodrome.” 26-27; Riley, “The coarse pottery from Benghazi,” 223-4.

Ware and African Red Slip were the only two imported finewares found in any significant number, although not as large as the local Cypriot Red Slip.

In looking at the dates for the specific forms of the finewares, a definite pattern can be seen. Examining the wares by both quantity and weight over the time span from the first to seventh centuries illustrates that the finewares were scarce until about 350 AD, then they increase until about 400 and then drop-off until 450 and then rise to a peak around 550 before falling off towards 600 AD (see figure 8.19). This picture changes slightly when the imported finewares are compared to the local ones. The imported finewares are relatively few until the fifth century AD when there is a sudden increase to their highest level followed by a gradual decline towards the seventh century AD.

The local finewares follow the same pattern but peak in the sixth century AD and slowly decline towards the seventh century AD (see figure 8.20). It is interesting to see on the chart above how a rise in imported finewares corresponds to a decline in local finewares and a decline in imported finewares equals a rise in local finewares. It appears there was a finite level of pottery need that was met by either imported or local wares. This suggests two possibilities. One is that when one of the two was available, it was purchased in preference to the other. Most likely, this would have been the imported wares since the local finewares were produced continuously without major interruptions throughout this period. Therefore, the imported wares peaks would indicate periods that had strong trading connections, while the valleys would indicate periods when there was little foreign trade reaching Mitsero. The second possibility is that the peaks of imported
wares indicate periods of prosperity when the local inhabitants could afford the more expensive imported finewares and the valleys indicate periods when the inhabitants for some reason or another did not have the financial means to purchase the imported pieces.

Overall, this pattern suggests that the SCSP area was relatively isolated until the fifth century AD when the area developed strong trading and communication connections with other areas. These trade connections lasted for about two centuries before they deteriorated, perhaps due to the Arab invasion of 648/649 AD and the area's subsequent involvement in the conflict between the Arabs and the Byzantine Empire. During this time, the imported wares, such as African Red Slip and Phocaean ware, and were slowly replaced by the local fine ware, Cypriot Red Slip, which in turn disappeared after 600 AD.

It is illustrative to compare the Late Roman/Early Byzantine finewares from the SCSP survey with the published finds from other archaeological projects on Cyprus such as the Canadian Palaipaphos Project, Danish Akamas Project, and the Kalavasos-Kopetra Project, to determine how the SCSP data matches or differs from their data (see figure 8.21). This comparison will allow a broader perspective to be gained concerning the movement of goods on the island as well as the more focused regional view.

Akamas

The first project to compare to SCSP is the Danish Akamas Project, a collaboration of the University of Aarhus' Department of Greek and Latin and Institute of Classical Archaeology. The goal of the project was to conduct an interdisciplinary study
of the western Akamas region of Cyprus, with a focus on the Roman and early Byzantine periods. The project was conducted for three years, 1989-1991, and consisted of both survey and excavation.\textsuperscript{48}

The preliminary results found no pottery dated from the Early Bronze Age (2300-1900 BC) through the Cypro-Classical (475-325 BC), suggesting that there were few or no settlements in the Akamas region until the end of the Classical period. Then there was a sudden growth surge during the Hellenistic Age, followed by a slow decline during the early Roman period and another, larger growth during the late Roman/early Byzantine period. The decline in the early Roman period (50 BC-250 AD) is similar to the one seen at SCSP. The growth in the early Byzantine period was followed by an abrupt, steep decline in the late Byzantine period. A closer examination of the Roman and Byzantine red slip wares helps to refine this picture (see figure 8.22). It shows that a peak was reached around 450-550 AD, then the red slips began declining during the later half of the sixth century AD, and this decline was followed by a sudden absence after 650 AD.\textsuperscript{49}

**Kalavasos-Kopetra**

Another site to compare the SCSP data to is Kalavasos-Kopetra in the Vasilikos valley, near the southern coast. During the systematic archaeological survey of the Vasilikos valley, the site at Kopetra was discovered. Four field seasons were spent in the

\textsuperscript{48} Fejfer, *Ancient Akamas I*, 15.

survey and excavation of the site that turned out to be a late Roman settlement. Based on the ceramic finds, it is apparent that the site sustained its greatest activity during the sixth to seventh centuries AD, with 80 percent of the sherds being dated to 550-650 AD. The ceramic finds included imported wares from North Africa, the west coast of Asia Minor, Egypt, and the Levant. The majority of the finds were of local Cypriot manufacture.

The analysis of the finewares presents a picture that is similar to the other sites (see figure 8.23). Over half of the finewares were locally manufactured Cypriot Red Slip. The next large category was Phocaean Red Slip accounting for about a third by number. The only other late Roman fineware found was African Red Slip and it was only discovered in small amounts, less than five percent. This is similar to the SCSP data in that the locally manufactured ware (Cypriot Red Slip) accounts for over sixty percent of the late Roman finewares. The major difference is that in the SCSP area there was significantly more ARS with less Phocaean Red Slip than at Kalavasos-Kopetra. It appears that while both areas relied heavily on locally manufactured Cypriot Red Slip, the area around Mitsero imported more African Red Slip than Phocaean Red Slip (approximately twice as much), while Kalavasos-Kopetra imported mainly Phocaean Red

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Slip. This suggests that the imported goods were not flowing into Mitsero from the Kalavasos-Kopetra area, but that the two regions were connected to different trading routes, at least regarding the movement of finewares.

**Canadian Palaipaphos Project (CPSP)**

The final data to compare to the SCSP data is from another multi-period survey project, the Canadian Palaipaphos Project (CPSP). This data is the most fully published of the three projects to be compared to SCSP. The CPSP was a survey conducted in the southwestern corner of Cyprus near the archaic city of Paphos (Palaipaphos, modern village of Kouklia) from 1979 to 1986. This survey, covering 632 square kilometers, a much larger area than the SCSP survey, had about the same number of Late Roman finds as those collected in the smaller 65 square kilometer survey area of the SCSP (280 to 257). This suggests several points. First, this reflects very different collection strategies employed by the two research teams and caution needs to be exercised when making one to one comparisons. Taking the evidence on face value, however, seems to indicate that the settlement pattern during the Late Roman period was actually much denser in the SCSP survey region than the CPSP since the smaller SCSP region produced almost as many finewares. As pointed out earlier, however, pottery distribution does not necessarily equal population or settlement size. Since the finewares were scattered almost throughout the entire SCSP survey area it is unlikely that they only represent a few
concentrated finds by the fieldwalkers. The late Roman finewares are spread throughout the survey units with the only noticeably clumping near the site of Tamassos, modern Politiko.

Secondly, and much more importantly and less controversially, since the SCSP survey region is an interior area not a coastal region, it shows that commerce and communication had to conducted with other regions of the island. Since Paphos was a major coastal city, it would be expected that it would a) have contact with the broader outside world and in turn with the surrounding countryside. This would not be expected, however, of the Mitsero region. The ceramic evidence indicates that trade was reaching the Mitsero region in some fashion. It is unclear how this trade reached Mitsero. It is doubtful, but not impossible, that this trade was direct trade, African traders visiting Mitsero to sell their goods directly to the inhabitants. More likely the goods were reaching Mitsero via secondary or tertiary trading routes. It is easy to visualize African merchants visiting Paphos, then merchants from Paphos visiting Tamassos, and then the merchants from Tamassos visiting Mitsero. Hopefully, the final analysis of the data from the survey or future research will illuminate this mechanism.

When specific Late Roman/Early Byzantine finewares from the two projects are compared, several other points emerge (see figure 8.24). First, there are several similarities. Cypriot Red Slip, the local fineware, was the most common fineware found in both areas, each having 155 sherds. Each area also had little or no Egyptian Red Slip sherds, an African Red Slip imitation ware from the fourth to seventh centuries AD and
Çandarli ware sherds, the main competitor to African Red Slip in the first to third centuries AD sherds. On the surface this would seem to indicate that there was little direct contact with Egypt, where Egyptian Red Slip was produced, and Pergamon, where Çandarli was produced. This cannot be true since we know from other sources that there was contact with these regions, it is more likely the established trade routes and individual merchants determined what arrived at the Cypriot markets.52

The biggest difference between the two surveys is that the CPSP area had twice as many Phocaean Ware sherds found (95 to 46), while the SCSP area had almost twice as many African Red Slip sherds found as the CPSP area (52 to 29). Phocaean Ware was the main competitor to African Red Slip in the fifth to seventh centuries. While the larger numbers for Phocaean Ware found in the CPSP survey area might result from the CPSP having a larger area and from it being in the coastal zone and thus not reliant upon trade moving or trickling into the interior as the SCSP area was, it does not explain why there was twice as much African Red Slip in the SCSP area as compared to the CPSP. The large amounts of African Red Slip in the SCSP area might suggest that while the SCSP area might have been more heavily settled than the CPSP area, its inhabitants were more socially stratified with more available wealth and thus were able to bring luxury items into the interior of the island. The African Red Slip found in the survey area reached its peak in the first half of the fifth century AD, as it did in the CPSP region.

It has been suggested for the CPSP survey area that the apparent decline between 200 and 350 AD, which is based on the lack of datable finewares discovered by the survey teams, might not have occurred or have been less severe than previously thought. The lack of finewares for this period might be because none were produced during this time or because of errors in the established chronologies. This period of decline can be seen at several sites/surveys throughout Cyprus, including SCSP.

**Overall Comparison**

One of the difficulties in working with the material from the SCSP survey that must be kept in mind is the lack of excavated material from the region to use as a comparison for identifying forms and establishing chronology. Instead of comparing the SCSP finds with established local material, the ceramic evidence had to be compared to material from surveys and excavations from other regions of Cyprus and the broader Mediterranean and this might have influenced the chronology. In looking at the dates for the late Roman finewares from each of the four projects, a similar trend is seen in each (see figure 8.25). Examining the wares by quantity over the time from the third to seventh centuries AD illustrates that the finewares are scarce until about 350 AD, and then they rise to a peak around 550 before falling off after 650 AD (see figure 8.26). While this chronological trend is evident for all the projects, SCSP and Kalavasos-Kopetra peak slightly after CPSP and Akamas, about one century later (550-650 AD).

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53 Lund, "Centuries of darkness?", 200-201.
In examining the types of imported finewares found at each of the projects, several facts emerge (see figure 8.27). First, all of the areas relied mainly on locally produced Cypriot Red Slip as the primary fineware. It is significant that the SCSP survey had the highest percentage of African Red Slip, but was the farthest from the coast. Its percentage of Phocaean Red Slip was lower and while this would be expected due to the higher African Red Slip totals, the actual physical number of sherds discovered is smaller than the CPSP total for approximately the same size late Roman fineware collection. Since Mitsero is inland and harder to reach than Paphos, the smaller collection of Phocaean Red Slip sherds is understandable, but that makes the high number of African Red Slip sherds even more of an anomaly.

One possible explanation is that Mitsero’s main trade connection to the coast was not connected to the other three areas, but to another area - one that had a significant north Africa trading connection. The other areas (Akamas, CPSP, and Kalavasos-Kopetra) had stronger trading connections with Asia Minor than with North Africa. The one problem with this theory is the fact that the Mitsero region received Cypriot Sigillata and Cypriot Red Slip that was most probably manufactured in the Nea Paphos region, only about sixteen kilometers (ten miles) from the CPSP survey area. It does not seem likely that the Mitsero region would only trade with a particular region over a span of several centuries and not have contact and trade with others in the immediate vicinity. There are two more likely scenarios to explain the possible trading connections. The first hypothesis is that the Mitsero region traded with an intermediary trading partner that had
connections both with the Nea Paphos manufacturers of Cypriot Sigillata and Cypriot Red Slip and a distributor of African Red Slip. If this was the case though, why was not there more African Red Slip in the CPSP area? The second hypothesis is that the Mitsero region had several different trading partners. One, perhaps in the Nea Paphos area or an intermediary offered them a source for locally produced finewares, while another offered them a source for imported wares.

Based on the comparison of the SCSP data with archaeological information from other sites in Cyprus, the following hypothesis can be proposed. The other sites examined, the CPSP, Akamas, and the Kalavasos Kopetra areas are all located on the southeastern side of the island and goods brought to this side of the island probably passed through Paphos to other areas on the southerly side of the Troodos Mountains, which created a natural barrier between Paphos and the SCSP survey area. The SCSP area probably received its trade through the port of Soli, which was connected by road to Tamassus, located in the extreme north corner of the survey area. The natural geography of the area funneled traffic through the Morphou plain towards Soli and that is why the copper mined at the interior city of Tamassus was sent north to Soli. This would indicate that Soli had different trading partners from Paphos.

This naturally raises the question as to the nature of the inhabitants in the SCSP survey area. It has been theorized that the area was an organized, perhaps state run, agricultural support area for the miners working in the mines near Tamassus. The increased pottery density as one approaches Tamassus in the survey area does seem to
indicate increased activity around the city. As one of the few hinterland cities to survive into the Roman period, Tamassus would have needed the surrounding areas to provide agricultural support for the city's inhabitants and mine workers unless all needed supplies were shipped in, an expensive proposition. Does the pottery distribution support this though? Unfortunately, the pottery discovered during the survey presents a different picture.

The paucity of storage vessels would seem to weigh heavily against the theory of organized support centers or nodes dedicated to the cultivation of crops for the inhabitants of Tamassus. What it does seem to indicate are several small villages or estates that traded with Tamassus on a localized level. The individual farmers or estate owners in the SCSP area probably traded with Tamassus whenever they had a surplus and in return gained access to goods from outside of Cyprus, such as African Red Slip, via Tamassus' trading connection with Soli. This trade probably fluctuated as the agricultural yield of the area rose and fall, based upon changing weather patterns, social and political conditions.

The period of the most frequent droughts 550-600 AD, correlates with a rapid increase in local finewares and a decrease in imported finewares, indicating that the local inhabitants were being forced to rely on the less expensive, locally produced wares. During periods of prosperity (low drought periods), the inhabitants of the SCSP survey area would have been able to trade their surplus production at Tamassus and purchase outside goods, such as imported Roman finewares. This indicates that Tamassus had a
dual purpose. While it functioned as a source of copper for the outside markets, it also served as an intermediary or local market for smaller villages and estates in the interior.

The mining of copper at Tamassus allowed it to survive away from the coastal area and in turn provide a local market for the trading of locally produced agricultural products.
To be ignorant of what occurred before you were born is to remain always a child. For what is the worth of human life, unless it is woven into the life of our ancestors by the records of history?

Cicero, *Orator*

As the evidence has shown, trade was actively conducted during Late Antiquity. Scholarship on trade has moved beyond the simple question of whether there was trade during this period and has focused on the nature of trade and the mechanisms that allowed it to function. In the introduction of this work six questions were presented as the focus of the study. I would like to revisit those questions and briefly summarize what has been suggested as answers to inquiries.

**Who controlled trade — was it the elites, such as the merchants, government, or church?**

As the written record indicates, no single group of individuals exclusively controlled trade. Merchants, governments, church officials, and estate owners were all involved in trading activities to one degree or another. Governmental interest was in provisioning the army, providing low-cost or free grain to certain cities, and custom collections. The Roman and Byzantine Empires would have had little interest in
controlling or organizing trade in the manner of modern nations, which are constantly monitoring imports and exports. Pliny’s comment on the East’s annual drain on the Roman economy demonstrates that it was quite apparent that trade with India and other Far East countries resulted in a species drain on the Roman economy since these areas had little or no interest in Roman goods. While modern nations would take immediate steps to correct such an imbalance of trade, the Roman government took no action. The government’s primary interest in trade was in facilitating its movement, since that in turn benefited the State by creating and stabilizing trading routes, and establishing a supply of available merchants who could acquire and transport grain for the State.

The early Christian Church, as an organization, was interested in acquiring supplies that allowed it to administer charity and aid where needed. The early Church leaders attempted to balance the fact that while they needed money to support the Church and help the poor, they also viewed money, business, and dealing with the pagan community as evils to be avoided. Tertullian, writing about the vocations that he felt Christians should avoid, believed that a merchant was guided by greed and Saint Ambrose encouraged merchants to use the seas for food not commerce. While Church leaders felt that certain occupations, such as merchants and artisans, should be avoided,


2 Tertullianus *De idololatria* 11, 23.

3 Ambrose *De Elia*. 70.
many scholars believe that the early Christians were involved in trade and handicrafts. These views would seem to indicate that the Church, as an organization, was not interested in the possible financial profits from engaging in trading activities, but were more interested in collecting Church estate revenue and providing charity where needed. To accomplish these tasks they used the established trading routes to transport their goods, purchase needed supplies, and to exchange raw materials for money or other supplies for the Church and the poor. Individual clergy members, however, in light of the limits placed by the Codex Theodosianus on the amount of trade that a clergy member could conduct, probably used the Church’s connections and resources to conduct their own private trading ventures.

The only groups who depended financially on trade, were the merchants and those estate owners who were involved in what might be called capitalistic agriculture. A merchant would trade commodities that he felt would bring him, personally, the highest financial return. While some were totally independent, many merchants worked for the Church, State, or trading corporation but were allowed to conduct a certain amount of private transactions on the side. It was these groups, who through their numerous transactions determined which goods moved from place to place. Early work on these events was done by W.A. Meeks, The First Urban Christians. The Social World of the Apostle Paul (London 1983), 51-72; compare this with the view of G. Schollgen, “Was wissen wir über die Sozialstruktur der paulinischen Gemeinden?,” New Testament Studies 34 (1988), 71-82.

Cod. Theod. 13.1.4, 13.1.16, 16.2.8, 16.2.10.

Greene, Archaeology of the Roman Economy, 166-68.
merchants focused on their negative portrayal in the ancient literature.\textsuperscript{7} More recent work has focused on attempting to reconcile the apparent disdain of the Roman upper-class with the undeniable fact that the upper class acquired extraordinary amounts of wealth and that trade in the Mediterranean provided a quick and easy path to financial success.\textsuperscript{8} One hypothesis that has been put forth is that trade was structured somewhere between the two extremes of well established /organized commerce and little/no commerce.\textsuperscript{9} The ceramic evidence from Cyprus and Isthmia would seem to support this theory that there was no set policy or legislative body that oversaw trade, but rather the collective effort of numerous individuals helped establish, support, and determine trade in the Mediterranean.

**What was the impact of trade on people living away from established trading centers, and on society in general?**

The interior of Cyprus appears to show both periods of increase and decrease in commercial activity. The obvious question is whether these changes were due to trading activity or whether trading activity changed because the area was going through a period of growth or contraction (whether population, economic, or agricultural). Since trading activity was prevalent throughout Late Antiquity except for brief periods of political disruption (and as seen at Carthage this did not necessarily affect trade) trade could not


\textsuperscript{8} D'Arms, *Commerce and Social Standing in Rome*, 1-19.

\textsuperscript{9} D'Arms, *Commerce and Social Standing in Rome*, 168-171; Greene, *Archaeology of the Roman Economy*, 166-167.
by itself drive economic growth in areas living away from established trading centers. During periods of growth or affluence, even remote areas like the Mitsero region, became a market for imported goods. While few of the areas in the Mitsero region show a high degree of affluence (large estates, numerous decorations, abundant expensive ceramics), most areas still had some sherds of the more expensive, imported ceramic wares such as African Red Slip or Phocaean Ware. It is clear that trade reached into the hinterland and was not confined just to the upper class since in the Mitsero region some of the more expensive, imported wares were discovered at what may be small farms and not just at large estates. This pattern can also be seen at Anemurium which has been characterized as "a small and probably not particularly wealthy town in a less well favoured province of the Roman Empire."¹⁰

Who or what mechanism determined the goods that were traded between sites?

There seems to have been three levels or types of trade movement. On a basic level certain items would be in demand because they were standard, life-sustaining commodities, such as grain. Since grain was so important, it would have always been in demand and a frequently traded item. One example of this would be people in times of need who bought grain from other areas to help alleviate local famine, as seen in the life of Saint John the Almsgiver.¹¹ Another level would be areas that produced unusual items that could only be purchased from that region or city, such as spices, precious metals,

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jewelry, or wild animals. The most difficult part to understand is everything else. Goods that could be produced or bought locally were still imported, often from great distances, such as African Red Slip ware, wine, or olive oil. The reasons for the success of certain imports versus local products vary by socioeconomic class. Unlike more modern times, when advertising plays such a large role in shaping consumer desire and wants across all social classes, during Late Antiquity other forces had to drive markets. Certainly for the upper class, the purchase of expensive luxury items might be attributed to class pressure or the desire to mimic the lifestyles of others within or above their own social class. This does not explain, however, the success of imports across the other social classes.

One possible explanation for the success of imports within other social classes is simply availability. An overabundance of one item can help drive down prices making the item more accessible to other classes. Oversupply can also help drive competitors out of business. A sudden large influx of imported ceramics could have forced the local competitors out of business requiring lower classes to purchase the more expensive, imported wares.

Another possible explanation is a change within the labor force of the Roman Empire. It has been hypothesized that starting in the second century AD there began a slow decline of slavery caused by the Roman Empire’s lack of expansion coupled with an increase of foreigners settling within the Empire’s boundaries. These new settlers became tenant farmers and had an immediate impact upon the economy by boosting

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agricultural production. This in turn would have increased their available disposable income which could then be spent in the marketplace.\textsuperscript{13}

Perhaps the most important reason for the success of imports was the fact that an extensive trading network was in place that made it easy and economical to move items from one location to another allowing goods to circulate around the Mediterranean. This extensive trading network, which had been slowly established over many centuries, was a result of several factors. First, the geographical location of cities during Late Antiquity was conducive for communication and commercial exchange. The majority of cities were positioned close to the Mediterranean, which allowed for easy contact with other cities and regions via sea travel and water transportation was the least expensive of all methods for the transportation of goods. Second, the organizational skills of the Roman Empire facilitated extensive travel. The government used the military to suppress bandit activity on land and piracy at sea, and its engineers to design, establish and provide upkeep for roads, canals, and ports. The government was so successful in these endeavors that it has been suggested that people during this period traveled further, more often, and in easier fashion than in any previous period and any following period until the nineteenth century.\textsuperscript{14} Third, the creation of the Roman Empire transformed many different areas into a single economic market as well as reduced the differences between


\textsuperscript{14} Meeks, First Urban Christians, 17; based on Ludwig Friedlander, \textit{Darstellungen aus der Sittengeschichte Roms in der Zeit von August bis zum Ausgang der Antonine} (Leipzig 1901), 268-322.
those within and those outside the empire’s boundaries. Fourth, in antiquity broad economic changes reacted slowly to political changes, excluding military conflicts, and the economic peak of Late Antiquity occurred well after the Empire reached its political peak and had even begun to decline.

To what degree did the local economy depend on trade for stability or growth?

The degree to which the local economy depended on trade was related to its location and resources. Coastal cities depended on trade for economic and political stability. Any significant stoppage of trade would have damaged the city’s economic health and shaken the political structure as well as that of the surrounding area, though to a lesser degree the further from the city. This would also hold true for areas that produced or manufactured goods. One example would be the production centers for Phocaean Ware. This ceramic was produced in such numbers that it clearly served more than the local region. Any failure in trade would have financially hurt the region and those connected to the manufacturing process. This would suggest that ceramic centers that flourished for centuries never suffered a severe stoppage in merchants interested in obtaining their product. Another example of the importance of trade to a coastal city is Carthage. While Carthage flourished under the loose economic control of the Vandals, once Roman control was reestablished with strict regulations that limited trade because of governmental taxes and customs, the city and surrounding region suffered. Areas in the

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hinterland, like the Mitsero region, that did not produce many items for global consumption would not have been affected financially by a disruption in trade.

**What was the relationship between coastal cities and the hinterland?**

There were obviously close connections between hinterland areas and coastal cities that served as funnels or staging points for imports to reach the interior and for hinterland exports to reach the greater global market. In the case of the Mitsero region, it had a connection with Tamassos, which in turn was connected to the coastal city of Soli. Goods that moved in and out of the region obviously traveled along this established route between the cities/villages. The Mitsero region had ties to other regions, such as the Paphos area, but this connection was weaker and fewer items were exchanged between the two areas than between Mitsero and Tamassos. Any damage to Soli's ability to function as a port would have isolated the Mitsero region from most of the outside world.

Recent work on a number of small islands off the shores of Greece offers further support for the strength of trade in the Late Roman and Early Byzantine periods and the relationship between coastal zone and hinterland. While it had been suggested that these islands only served as "isles of refuge" for Greeks fleeing the Slavic invasions of the sixth and seventh centuries AD, recent archaeological exploration of these islands presents a different picture. A survey reveals that the despite the generally inhospitable

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terrain of these small islands, during Late Antiquity they served as ports in an extensive, long-distance commercial network that encompassed the Mediterranean. These islands were strategically located to serve as nodes of exchange for the larger commercial cities on the mainland in southern Boeotia, while the island’s population provided merchants and sailors for this system. This demonstrates that trade involved more than just large commercial cities and that involvement in trade allowed areas normally considered marginal to survive and even flourish.

**What can the goods being traded tell us about the local economies and markets?**

The goods traded and the ability to follow their movement around the Mediterranean illustrates that there were numerous trading networks and connections between various areas. While there were many different trading connections, some distinct patterns appear. Goods circulated from North Africa towards the Levant, north towards the Black Sea, then west towards Greece and Italy and eventually Europe. Along this network, the major nodes would be the coastal cities like Alexandria, Tyre, etc. Then radiating out from these cities into the surrounding hinterland would be smaller nodes of exchange, like the connection between Soli and Tamassos. As goods passed along the main route, some would be dispersed into the hinterlands, if there were available markets. If there was not an available market, then the goods would continue along the trade route. While most goods would be traded mainly in nearby regions, some (such as African Red

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18 Kardulias, “Bronze Age and Late Antique Exploitation of an Islet in the Saronic Gulf, Greece,” 3-5.
Slip or select wines) would be traded in all areas. This type of pattern would have required many different people to be involved at various levels, from the manufacturers or estate owners to the local traders/ship owners to the merchants in the city and finally the consumers.

Conclusions

To summarize the nature of trade in Late Antiquity, based upon the ceramic evidence in conjunction with written evidence, results in a fairly flexible economic model that varied slightly between regions and over time. While merchants helped to determine which goods moved where, not all of these merchants operated independently since some worked for the government or for the Church. This would have influenced their buying and selling patterns depending upon the needs of the Church or government. Even though there was a tremendous amount of goods moving throughout the Mediterranean during this period, not all of it was strictly commercial in nature as some was state regulated or related to the gift exchange system. This means that this trade would not follow the standard "rules" of profitability since specific items would be sought out for their value as a gift, not their ability to produce a profit when resold. This would increase the volume of trade without promoting further exchange. Gift exchange might also explain why expensive, imported items are found in areas of the countryside or city traditionally considered poor or low class. Instead of trying to understand how the poor were able to purchase these expensive items, perhaps they should be seen as gifts from the upper classes, Church, or even the government.
It is clear that all areas, even remote inland areas like the Mitsero region, were involved in trade to some degree and that the trading network of the eastern Mediterranean was vibrant and energetic. It is also clear that there was a strong westward movement of goods from the eastern parts of the Mediterranean towards Greece and Italy with little corresponding movement eastwards. This was due to the political problems that faced the western parts of the empire towards the latter part of Late Antiquity that resulted in their isolation as well as the agricultural productivity of Africa and the eastern provinces. While trading activity (volume) fluctuated over time, particularly for inland or remote regions, it remained an important part of the Roman economy for many cities or regions.
APPENDIX

Chronology of Important People, Events, Phenomena

98 to 117 - Trajan is emperor
115 to 117 - Jewish Revolt
161 to 180 - Marcus Aurelius is emperor
267 - Heruli invade Greece
284 - Diocletian begins rule.
286 - Maximian made co-ruler.
293 - Diocletian attempts decentralization of government, sets up tetrarchy.
297 - Organization of Empire into 12 dioceses and 101 provinces.
301 - Price controls attempted.
305 - Diocletian resigns.
312 - Battle of Milvian Bridge, Constantine wins under the sign of the Christian cross.
324 to 337 - Constantine the Great sole ruler of Empire.
324 - Constantinople founded by Constantine the Great on the site of Byzantium.
337 - Constantine dies soon after being baptized.
361 to 363 - Julian rules, attempts to restore paganism.
375 - Destruction of Ostrogoths in South Russia by Huns.
376 - Barbarians allowed to settle inside the borders of the Empire.
378 - Battle of Hadrianopolis, death of Valens (375-378).
379 - Visigoths move into Macedonia.
379 to 395 - Rule of Theodosius the Great.
386 - Theodosius signs treaty with Persia.
391 - Christianity adopted as official religion.
395 - Upon Theodosius the Great's death, his sons partition the Empire.
402 to 403 - Visigoths make attacks upon Rome.
402 to 403 - Stilicho (395-408), effective ruler of the West, defeats Alaric at Pollentia.
404 - Ravenna selected by Western Emperor Honorius (393-423) as imperial residence.
410 - Vandals under Alaric sack Rome.

continued on next page
Figure 1.1 (continued)

429 - Vandals under Gaiseric move into North Africa.
442 - Recognition of Vandal state.
451 - Huns move into Italy, Attila defeated at Catalaunian Fields.
455 - Vandals seize Rome.
475 to 476 - Romulus Augustulus rules as a child, deposed by Odoacer.
476 - Odoacer recognized as patricus in Italy.
486 - Clovis defeats Syagrius gaining lands between the Loire and the Somme.
493 to 526 - Rule of Theodoric the Great, an Ostrogoth.
522 - Justinian ends war with Persians.
527 to 565 - Rule of Justinian.
529 - Nika revolts nearly unseat Justinian.
529 - Justinian orders the Academy at Athens to close its doors.
534 to 535 - Destruction of Vandals by Belisarius, N. Africa regained.
535 to 553 - Gothic War instigated by Justinian.
537 - St. Sophia rebuilt in Constantinople.
539 - Theudebert defeats Ostrogoths and Byzantines.
553 - Italy regained by Byzantines.
554 - South Spain regained by Byzantines.
568 - Italy lost to Langobards.
590 - Peace established between Agilulf and the Franks and Byzantines.
610 to 641 - Heraclius rules.
628 - Defeat of Persians, Sassanid Empire collapses.
636 - Battle of Yarmuk in Syria is a defeat for the Byzantines.
655 - Arabs have now conquered Syria, Egypt, and the Sassanid Empire
Figure 1.2 Map showing area of concentration

Figure 1.3 Location of Isthmia, Greece
Figure 1.4 Location of Mitsero, Cyprus

Figure 2.1 An example of archaeological excavation
Figure 2.2 Stacked *zembelia*

Figure 2.3 Sherds drying on a table
Figure 2.4 An example of a study collection

Figure 2.5 Another example of a study collection
Figure 2.6 Ceramicists collecting and recording pottery data

Figure 2.7 How sherds are divided into different wares
Figure 2.8 Example of a chronotype tree
Figure 3.1 Circular system proposed by Hopkins
Figure 4.1 Late Roman 1 Amphora form

Figure 4.2 Late Roman 1 distribution area
Figure 4.3 Late Roman 2 Amphora

Figure 4.4 Late Roman 2 distribution area
Figure 4.5 Aegean Amphora

Figure 4.6 Aegean Amphora distribution area

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Figure 4.7 Examples of Cypriot Sigillata

Figure 4.8 Cypriot Sigillata distribution area
Figure 4.9 Examples of Eastern Sigillata A forms

Figure 4.10 Eastern Sigillata A distribution area
Figure 4.11 Examples of Eastern Sigillata B Forms

Figure 4.12 Eastern Sigillata B distribution areas
Figure 4.13 Examples of African Red Slip Forms

Figure 4.14 African Red Slip distribution area
Figure 4.15 Examples of Çandarlı forms

Figure 4.16 Çandarlı distribution area
Figure 4.17 Examples of Phocaean Ware forms

Figure 4.18 Phocaean ware distribution area
Figure 4.19 Examples of Cypriot Red Slip forms

Figure 4.20 Cypriot Red Slip distribution

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Figure 4.21 Examples of Egyptian Red Slip Forms

Figure 4.22 Egyptian Red Slip distribution
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<td>Long Pepper</td>
<td>White Pepper</td>
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<td>Barbary Leaf</td>
<td>Putchuk, Spikenard</td>
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<td>Silk Thread</td>
<td>Indian Eunuchs</td>
<td>Lions</td>
</tr>
<tr>
<td>Lionesses</td>
<td>Maneless Lions</td>
<td>Cheetahs</td>
</tr>
<tr>
<td>Purple Cloth</td>
<td>Moroccan Wool</td>
<td>Dye</td>
</tr>
<tr>
<td>Indian Hair</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Figure 5.1 Items listed in the Alexandrian Tariff

Figure 5.2 Cities listed in the *Expositio Totius Mundi*
<table>
<thead>
<tr>
<th>Pottery Type</th>
<th>Number of Sherds</th>
<th>Percent by number</th>
<th>Percent by weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fineware</td>
<td>2356</td>
<td>10.6</td>
<td>8.5</td>
</tr>
<tr>
<td>Amphorae</td>
<td>9960</td>
<td>44.6</td>
<td>60.0</td>
</tr>
<tr>
<td>Unclassified</td>
<td>10,017</td>
<td>44.8</td>
<td>31.5</td>
</tr>
</tbody>
</table>

Figure 6.1 Initial classification of sherds from the Schola Praeconum

<table>
<thead>
<tr>
<th>Amphora Type</th>
<th>Sherd Numbers</th>
<th>Number Percentage</th>
<th>Weight Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>North African</td>
<td>4,233</td>
<td>42.5</td>
<td>63.0</td>
</tr>
<tr>
<td>Biv (W. Turkey)</td>
<td>2,046</td>
<td>20.5</td>
<td>6.9</td>
</tr>
<tr>
<td>Bii (East Med.)</td>
<td>1,916</td>
<td>19.2</td>
<td>14.7</td>
</tr>
<tr>
<td>Gaza</td>
<td>275</td>
<td>2.8</td>
<td>1.0</td>
</tr>
<tr>
<td>Cen. &amp; E. Med.</td>
<td>1,490</td>
<td>15.0</td>
<td>14.4</td>
</tr>
</tbody>
</table>

Figure 6.2 Classification of the amphorae found at the Schola Praeconum
Figure 6.3 Vandal invasion and coastal cities of North Africa
<table>
<thead>
<tr>
<th>Pottery Types</th>
<th>Number of Sherds</th>
<th>Percentage of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bii (includes variants)</td>
<td>211</td>
<td>4.9</td>
</tr>
<tr>
<td>Late 7 - Egyptian</td>
<td>180</td>
<td>4.2</td>
</tr>
<tr>
<td>Late 4 - Gaza</td>
<td>1,279</td>
<td>29.6</td>
</tr>
<tr>
<td>Late 5 &amp; 6 - Palestinian</td>
<td>654</td>
<td>15.1</td>
</tr>
<tr>
<td>Biv (W. Turkey)</td>
<td>746</td>
<td>17.3</td>
</tr>
<tr>
<td>Type 15 (Local)</td>
<td>203</td>
<td>4.7</td>
</tr>
<tr>
<td>African Yellow Slip</td>
<td>106</td>
<td>2.5</td>
</tr>
</tbody>
</table>

Figure 6.4 Breakdown of sherds discovered by the Second Canadian team at Carthage

Figure 6.5 Anemurium and Yassi Ada
<table>
<thead>
<tr>
<th>Type of Pottery</th>
<th>Number of Sherds</th>
<th>Percentage of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>African Red Slip</td>
<td>150</td>
<td>11</td>
</tr>
<tr>
<td>Cypriot Red Slip</td>
<td>726</td>
<td>53.2</td>
</tr>
<tr>
<td>Phocaean Ware</td>
<td>191</td>
<td>14</td>
</tr>
<tr>
<td>Piecrust Rim Ware</td>
<td>298</td>
<td>21.8</td>
</tr>
</tbody>
</table>

Figure 6.6 Breakdown of sherds at Anemurium

Figure 7.1 Modern canal across the Isthmus
Figure 7.2 Bath complex at Isthmia

Figure 7.3 Sorting of the dump on the excavation house roof
### Isthmia Pottery Dump - Initial Sort

<table>
<thead>
<tr>
<th>Ware Type</th>
<th>Quantity</th>
<th>Weight (grams)</th>
<th>Percentage of Quantity</th>
<th>Percentage of Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coarse Ware</td>
<td>86,780</td>
<td>3,260,670</td>
<td>66.2</td>
<td>81.1</td>
</tr>
<tr>
<td>Cooking Ware</td>
<td>36,883</td>
<td>442,090</td>
<td>28.1</td>
<td>11</td>
</tr>
<tr>
<td>Fine Ware</td>
<td>2176</td>
<td>1,762</td>
<td>1.7</td>
<td>0.4</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>5,208</td>
<td>299,360</td>
<td>4</td>
<td>7.5</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>131,047</strong></td>
<td><strong>4,003,882</strong></td>
<td><strong>100%</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

Figure 7.4 Isthmia Pottery Dump - Initial Sort

### Isthmia Pottery Dump - Transport Class

<table>
<thead>
<tr>
<th>Class</th>
<th>Quantity</th>
<th>Weight (grams)</th>
<th>Percentage of Quantity</th>
<th>Percentage of Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aegean Amphorae</td>
<td>2,345</td>
<td>1,163,040</td>
<td>25.8</td>
<td>91.7</td>
</tr>
<tr>
<td>Other Amphorae</td>
<td>500</td>
<td>45,740</td>
<td>5.5</td>
<td>3.6</td>
</tr>
<tr>
<td>Micaceous Water Jars</td>
<td>6,250</td>
<td>60,000</td>
<td>68.7</td>
<td>4.7</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>9,095</strong></td>
<td><strong>1,268,780</strong></td>
<td><strong>100%</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

Figure 7.5 Isthmia Pottery Dump - Transport Class
<table>
<thead>
<tr>
<th>Amphora Type</th>
<th>Number of Sherds</th>
<th>Percentage of Amphora</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unknown amphorae</td>
<td>60</td>
<td>47</td>
</tr>
<tr>
<td>Micaceous water jar</td>
<td>45</td>
<td>35</td>
</tr>
<tr>
<td>Palestinian amphora</td>
<td>10</td>
<td>8</td>
</tr>
<tr>
<td>Aegean amphora</td>
<td>8</td>
<td>6</td>
</tr>
<tr>
<td>Koan amphora</td>
<td>6</td>
<td>5</td>
</tr>
</tbody>
</table>

Figure 7.6 Tower 14 and Northeast Gate amphora sherds
Comparison of Transport Sherds

<table>
<thead>
<tr>
<th>Type of Sherd</th>
<th>Pottery Dump</th>
<th>% by number</th>
<th>Number of Sherds</th>
<th>% by number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Domestic amphorae</td>
<td>500</td>
<td>5.50</td>
<td>60</td>
<td>46.52</td>
</tr>
<tr>
<td>Aegean amphorae</td>
<td>2345</td>
<td>25.78</td>
<td>8</td>
<td>6.20</td>
</tr>
<tr>
<td>Micaceous Water Jar</td>
<td>6250</td>
<td>68.72</td>
<td>45</td>
<td>34.88</td>
</tr>
<tr>
<td>Koan amphorae</td>
<td>0</td>
<td>0.00</td>
<td>6</td>
<td>4.65</td>
</tr>
<tr>
<td>Palestinian amphorae</td>
<td>0</td>
<td>0.00</td>
<td>10</td>
<td>7.75</td>
</tr>
<tr>
<td>Total</td>
<td>9095</td>
<td>100.00</td>
<td>1268.78</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Figure 7.7 Comparison between Pottery Dump and Tower 14/Northeast gate
<table>
<thead>
<tr>
<th>Ware</th>
<th>Form</th>
<th>Form ID</th>
<th>Quantity</th>
<th>Wgt (g.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>African Red Slip Base</td>
<td>---</td>
<td>18</td>
<td>207</td>
<td></td>
</tr>
<tr>
<td>African Red Slip BS</td>
<td>---</td>
<td>168</td>
<td>1010</td>
<td></td>
</tr>
<tr>
<td>African Red Slip Rim 59</td>
<td>59</td>
<td>1</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>African Red Slip Rim 67</td>
<td>67</td>
<td>1</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>African Red Slip Rim 96</td>
<td>96</td>
<td>1</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>African Red Slip Rim 50A</td>
<td>50A</td>
<td>26</td>
<td>118</td>
<td></td>
</tr>
<tr>
<td>African Red Slip Rim 50B</td>
<td>50B</td>
<td>3</td>
<td>21</td>
<td></td>
</tr>
<tr>
<td>African Red Slip Rim 61A</td>
<td>61A</td>
<td>1</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>African Red Slip Rim 99C</td>
<td>99C</td>
<td>4</td>
<td>47</td>
<td></td>
</tr>
<tr>
<td>Arrentine Rim</td>
<td>---</td>
<td>1</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Black Glazed, Import Rim</td>
<td>---</td>
<td>2</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Black Glazed, Local Rim</td>
<td>---</td>
<td>42</td>
<td>300</td>
<td></td>
</tr>
<tr>
<td>Çandarli Base</td>
<td>2</td>
<td>5</td>
<td>176</td>
<td></td>
</tr>
<tr>
<td>Çandarli Base</td>
<td>4</td>
<td>14</td>
<td>269</td>
<td></td>
</tr>
<tr>
<td>Çandarli Base</td>
<td>---</td>
<td>6</td>
<td>70</td>
<td></td>
</tr>
<tr>
<td>Çandarli BS</td>
<td>---</td>
<td>35</td>
<td>321</td>
<td></td>
</tr>
<tr>
<td>Çandarli Rim</td>
<td>2</td>
<td>1</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>Çandarli Rim</td>
<td>3</td>
<td>1</td>
<td>33</td>
<td></td>
</tr>
<tr>
<td>Çandarli Rim</td>
<td>4</td>
<td>1</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Çandarli Rim</td>
<td>---</td>
<td>3</td>
<td>103</td>
<td></td>
</tr>
<tr>
<td>Çandarli, Imitation Base</td>
<td>2</td>
<td>4</td>
<td>122</td>
<td></td>
</tr>
<tr>
<td>Çandarli, Imitation Base</td>
<td>4</td>
<td>1</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>Çandarli, Imitation Rim</td>
<td>---</td>
<td>9</td>
<td>140</td>
<td></td>
</tr>
<tr>
<td>Corinthian Molded Relief BS</td>
<td>---</td>
<td>1</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>Corinthian Molded Relief Rim</td>
<td>---</td>
<td>2</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Egyptian Red Slip Rim H</td>
<td>---</td>
<td>2</td>
<td>23</td>
<td></td>
</tr>
<tr>
<td>Egyptian Red Slip Rim</td>
<td>---</td>
<td>2</td>
<td>12</td>
<td></td>
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</tbody>
</table>

continued on next page

Figure 7.8 Breakdown of Roman finewares from dump at Isthmia
Figure 7.8 (continued)

<table>
<thead>
<tr>
<th>Type</th>
<th>Mark</th>
<th>Quantity</th>
<th>Category</th>
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</thead>
<tbody>
<tr>
<td>ESB I</td>
<td>BS</td>
<td>6</td>
<td>44</td>
</tr>
<tr>
<td>ESB I</td>
<td>Rim</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>ESB II</td>
<td>Base</td>
<td>7</td>
<td>57</td>
</tr>
<tr>
<td>ESB II</td>
<td>Base</td>
<td>16</td>
<td>151</td>
</tr>
<tr>
<td>ESB II</td>
<td>BS Convex Plate</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>ESB II</td>
<td>BS</td>
<td>31</td>
<td>253</td>
</tr>
<tr>
<td>ESB II</td>
<td>Rim Convex Plate</td>
<td>7</td>
<td>62</td>
</tr>
<tr>
<td>ESB II</td>
<td>Rim Inturned Rim</td>
<td>11</td>
<td>174</td>
</tr>
<tr>
<td>ESB II</td>
<td>Rim</td>
<td>6</td>
<td>30</td>
</tr>
<tr>
<td>ESB II, Imitation</td>
<td>BS Convex Plate</td>
<td>2</td>
<td>14</td>
</tr>
<tr>
<td>ESB II, Imitation</td>
<td>Rim Bowl</td>
<td>15</td>
<td>134</td>
</tr>
<tr>
<td>ESB II, Imitation</td>
<td>Rim Convex Plate</td>
<td>20</td>
<td>288</td>
</tr>
<tr>
<td>ESB II, Imitation</td>
<td>Rim Inturned Rim</td>
<td>5</td>
<td>83</td>
</tr>
<tr>
<td>Italian Sigilata</td>
<td>Base</td>
<td>1</td>
<td>15</td>
</tr>
<tr>
<td>Lamp Fragments</td>
<td>BS</td>
<td>7</td>
<td>16</td>
</tr>
<tr>
<td>Micaceous Interior Slipped</td>
<td>BS</td>
<td>5</td>
<td>55</td>
</tr>
<tr>
<td>Phocean Ware</td>
<td>Rim</td>
<td>32</td>
<td>1</td>
</tr>
<tr>
<td>Phocean Ware</td>
<td>Rim 3B</td>
<td>2</td>
<td>20</td>
</tr>
<tr>
<td>Phocean Ware</td>
<td>Rim 3C</td>
<td>2</td>
<td>20</td>
</tr>
<tr>
<td>Phocean Ware</td>
<td>Rim 3E</td>
<td>3</td>
<td>43</td>
</tr>
<tr>
<td>Phocean Ware</td>
<td>Rim 3F</td>
<td>1</td>
<td>17</td>
</tr>
<tr>
<td>Phocean Ware</td>
<td>Rim 3H</td>
<td>3</td>
<td>31</td>
</tr>
<tr>
<td>Phocean Ware, Imitation</td>
<td>Rim</td>
<td>1</td>
<td>18</td>
</tr>
<tr>
<td>Pompeiiian Red Ware</td>
<td>Base</td>
<td>7</td>
<td>162</td>
</tr>
<tr>
<td>Pompeiiian Red Ware</td>
<td>BS</td>
<td>10</td>
<td>106</td>
</tr>
<tr>
<td>Pompeiiian Red Ware</td>
<td>Rim</td>
<td>4</td>
<td>150</td>
</tr>
<tr>
<td>Pompeiiian Red Ware, Imitation</td>
<td>Rim</td>
<td>6</td>
<td>160</td>
</tr>
<tr>
<td>Pontic Ware</td>
<td>Base</td>
<td>2</td>
<td>23</td>
</tr>
<tr>
<td>Pontic Ware</td>
<td>BS</td>
<td>25</td>
<td>149</td>
</tr>
<tr>
<td>Pontic Ware</td>
<td>Rim</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

continued on next page
Red Slip Handle --- 6 80
Red Slip, Black Glazed Import Base RF 3 25
Red Slip, Black Glazed Import Base --- 3 27
Red Slip, Black Glazed Import BS --- 70 403
Red Slip, Black Glazed Local Base --- 23 325
Red Slip, Black Glazed Local Base --- 30 350
Red Slip, Black Glazed Local BS --- 125 530
Red Slip, Import Base RF 26 429
Red Slip, Import Base --- 53 752
Red Slip, Import BS --- 280 1923
Red Slip, Import Rim --- 64 417
Red Slip, Lid Lid --- 1 6
Red Slip, Local Base RF 20 201
Red Slip, Local Base --- 58 967
Red Slip, Local BS --- 204 1578
Red Slip, Local Rim --- 44 300
Red Slip, Matte Paint BS --- 1 8
Red Slip, Matte Paint Rim --- 1 8
Red Slip, Rouletted Bowl BS --- 4 32
Red Slip, Rouletted Bowl Rim --- 1 3
Red Slip, Splatter Base --- 2 77
Red Slip, Splatter BS --- 3 58
Red Slip, Splatter Rim --- 2 75

<table>
<thead>
<tr>
<th>Region</th>
<th>Count</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>North Africa</td>
<td>231</td>
<td>1545</td>
</tr>
<tr>
<td>Asia Minor</td>
<td>169</td>
<td>1970</td>
</tr>
<tr>
<td>Black Sea</td>
<td>28</td>
<td>174</td>
</tr>
<tr>
<td>Italy</td>
<td>23</td>
<td>438</td>
</tr>
<tr>
<td>Egypt</td>
<td>4</td>
<td>35</td>
</tr>
</tbody>
</table>

Figure 7.9 Points of origin for finewares

206
Figure 7.10 Isthmia imported sherds over time

Figure 8.1 Cyprus’ location in the Mediterranean
Figure 8.2 Important cities on Cyprus in Antiquity

Figure 8.3 Modern village of Mitsero
Figure 8.4 SCSP Survey area

Figure 8.5 SCSP landscape
Figure 8.6 SCSP landscape

Figure 8.7 SCSP fieldwalkers
Figure 8.8 SCSP fieldwalkers

Figure 8.9 Fieldwalker collecting diagnostic material
### SCSP Sherds by Periods

<table>
<thead>
<tr>
<th>Periods</th>
<th>Quantity</th>
<th>Weight (grams)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prehistoric - 2400 BC</td>
<td>57</td>
<td>381</td>
</tr>
<tr>
<td>Bronze Age 2400 - 1000 BC</td>
<td>119</td>
<td>3,562</td>
</tr>
<tr>
<td>Archaic 1000 – 500 BC</td>
<td>439</td>
<td>8,915</td>
</tr>
<tr>
<td>Classical 500 – 323 BC</td>
<td>482</td>
<td>6,032</td>
</tr>
<tr>
<td>Hellenistic 323 – 31 BC</td>
<td>178</td>
<td>336</td>
</tr>
<tr>
<td>Early Roman 31 BC – 200 AD</td>
<td>258</td>
<td>1,162</td>
</tr>
<tr>
<td>Late Roman 200 – 650 AD</td>
<td>1,337</td>
<td>22,741</td>
</tr>
<tr>
<td>Medieval 650 AD – 1571 AD</td>
<td>3,035</td>
<td>12,056</td>
</tr>
<tr>
<td>Medieval to Early Modern 1571 – 1960 AD</td>
<td>3,069</td>
<td>90,747</td>
</tr>
<tr>
<td>Contemporary 1960 AD - Present</td>
<td>850</td>
<td>23,068</td>
</tr>
<tr>
<td>Unknown</td>
<td>8,110</td>
<td>128,537</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td>17,934</td>
<td><strong>297,537</strong></td>
</tr>
</tbody>
</table>

Figure 8.10 SCSP Sherds by Period

---

### Changing Slope (Varied Activity)

![Chart showing changing slope of sherds over time periods](chart)

Figure 8.11 Examples of changing activity
### SCSP Early Roman Wares

<table>
<thead>
<tr>
<th></th>
<th>Quantity</th>
<th>Weight (grams)</th>
<th>Percentage of Quantity</th>
<th>Percentage of Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coarse Ware</td>
<td>43</td>
<td>517</td>
<td>16.7</td>
<td>34.9</td>
</tr>
<tr>
<td>Cooking Ware</td>
<td>118</td>
<td>615</td>
<td>45.9</td>
<td>41.5</td>
</tr>
<tr>
<td>Fine Ware</td>
<td>89</td>
<td>334</td>
<td>34.6</td>
<td>22.5</td>
</tr>
<tr>
<td>Lamp</td>
<td>4</td>
<td>10</td>
<td>1.6</td>
<td>0.7</td>
</tr>
<tr>
<td>Plain Ware</td>
<td>2</td>
<td>4</td>
<td>0.8</td>
<td>0.3</td>
</tr>
<tr>
<td>Tile</td>
<td>1</td>
<td>2</td>
<td>0.4</td>
<td>0.1</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>257</strong></td>
<td><strong>1,482</strong></td>
<td><strong>100 %</strong></td>
<td><strong>100 %</strong></td>
</tr>
</tbody>
</table>

Figure 8.13 SCSP Early Roman Wares

![SCSP Early Roman Wares](#)

Figure 8.14 Early Roman cooking pot rim

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Figure 8.15 Pseudo-Koan amphora form
<table>
<thead>
<tr>
<th>SCSP Early Roman Finewares</th>
<th>Quantity</th>
<th>Weight (grams)</th>
<th>Percentage of Quantity</th>
<th>Percentage of Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>African Red Slip</td>
<td>2</td>
<td>4</td>
<td>2.2</td>
<td>1.2</td>
</tr>
<tr>
<td>Çandarli</td>
<td>2</td>
<td>34</td>
<td>2.2</td>
<td>10.2</td>
</tr>
<tr>
<td>Cypriot Sigillata</td>
<td>50</td>
<td>142</td>
<td>56.2</td>
<td>42.5</td>
</tr>
<tr>
<td>Eastern Sigillata A</td>
<td>20</td>
<td>88</td>
<td>22.5</td>
<td>26.3</td>
</tr>
<tr>
<td>Eastern Sigillata B</td>
<td>4</td>
<td>8</td>
<td>4.5</td>
<td>2.4</td>
</tr>
<tr>
<td>Pompeiian Red Slip</td>
<td>1</td>
<td>2</td>
<td>1.1</td>
<td>.6</td>
</tr>
<tr>
<td>Unknown</td>
<td>10</td>
<td>56</td>
<td>11.3</td>
<td>16.8</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>89</strong></td>
<td><strong>334</strong></td>
<td><strong>100%</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

Figure 8.16 SCSP Early Roman Finewares

<table>
<thead>
<tr>
<th>SCSP Late Roman Wares</th>
<th>Quantity</th>
<th>Weight (grams)</th>
<th>Percentage of Quantity</th>
<th>Percentage of Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amphorae</td>
<td>298</td>
<td>3,585</td>
<td>22</td>
<td>16</td>
</tr>
<tr>
<td>Coarse Ware</td>
<td>631</td>
<td>8,201</td>
<td>48</td>
<td>36</td>
</tr>
<tr>
<td>Cooking Ware</td>
<td>51</td>
<td>1,081</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Fine Ware</td>
<td>246</td>
<td>2,189</td>
<td>20</td>
<td>10</td>
</tr>
<tr>
<td>Other</td>
<td>79</td>
<td>7,610</td>
<td>6</td>
<td>33</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>1,325</strong></td>
<td><strong>22,843</strong></td>
<td><strong>100%</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

Figure 8.17 SCSP Late Roman Wares

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### SCSP Late Roman Finewares

<table>
<thead>
<tr>
<th></th>
<th>Quantity</th>
<th>Weight (grams)</th>
<th>Percentage of Quantity</th>
<th>Percentage of Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>African Red Slip</td>
<td>52</td>
<td>223</td>
<td>21.9</td>
<td>10.3</td>
</tr>
<tr>
<td>Çandarli</td>
<td>3</td>
<td>42</td>
<td>1.3</td>
<td>1.9</td>
</tr>
<tr>
<td>Cypriot Red Slip</td>
<td>155</td>
<td>1,618</td>
<td>65.4</td>
<td>74.6</td>
</tr>
<tr>
<td>Egyptian Red Slip</td>
<td>1</td>
<td>8</td>
<td>.4</td>
<td>0.4</td>
</tr>
<tr>
<td>Phocaean Red Slip</td>
<td>26</td>
<td>278</td>
<td>11</td>
<td>12.8</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>237</strong></td>
<td><strong>2,169</strong></td>
<td><strong>100%</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

Figure 8.18 SCSP Late Roman Finewares

![SCSP Late Roman Finewares](image)

Figure 8.19 SCSP Late Roman finewares plotted over time
SCSP Late Roman Finewares

Figure 8.20 Local and imported Late Roman finewares over time

Figure 8.21 Map showing other projects on Cyprus
### Akamas Red Slip Wares

<table>
<thead>
<tr>
<th>Centuries</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>50BC-50AD</td>
<td>8</td>
</tr>
<tr>
<td>151-250</td>
<td>1</td>
</tr>
<tr>
<td>251-350</td>
<td>10</td>
</tr>
<tr>
<td>351-450</td>
<td>14</td>
</tr>
<tr>
<td>451-550</td>
<td>31</td>
</tr>
<tr>
<td>551-650</td>
<td>21</td>
</tr>
</tbody>
</table>

Figure 8.22 Akamas Red Slip Wares by Centuries

### Kalavasos-Kopetra Late Roman Finewares

<table>
<thead>
<tr>
<th></th>
<th>Quantity</th>
<th>Weight (grams)</th>
<th>Percentage of Quantity</th>
<th>Percentage of Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>African Red Slip</td>
<td>2</td>
<td>70</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>Cypriot Red Slip</td>
<td>34</td>
<td>805</td>
<td>68</td>
<td>80</td>
</tr>
<tr>
<td>Phocaean Red Slip</td>
<td>14</td>
<td>135</td>
<td>28</td>
<td>13</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>50</strong></td>
<td><strong>1010</strong></td>
<td><strong>100%</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

Figure 8.23 Kalavasos-Koptra Late Roman Finewares

219
### CPSP Late Roman Finewares

<table>
<thead>
<tr>
<th></th>
<th>Quantity</th>
<th>Percentage of Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>African Red Slip</td>
<td>29</td>
<td>10.3</td>
</tr>
<tr>
<td>Çandarli</td>
<td>1</td>
<td>0.4</td>
</tr>
<tr>
<td>Cypriot Red Slip</td>
<td>155</td>
<td>55.3</td>
</tr>
<tr>
<td>Phocaean Red Slip</td>
<td>95</td>
<td>34</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>280</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

Figure 8.24 CPSP Late Roman finewares

### Wares by Centuries by Project

<table>
<thead>
<tr>
<th></th>
<th>Akamas</th>
<th>CPSP</th>
<th>Kalavasos-Kopetra</th>
<th>SCSP</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>251-350</td>
<td>10</td>
<td>12</td>
<td>0</td>
<td>6</td>
<td>28</td>
</tr>
<tr>
<td>351-450</td>
<td>14</td>
<td>54</td>
<td>1</td>
<td>62</td>
<td>131</td>
</tr>
<tr>
<td>451-550</td>
<td>31</td>
<td>130</td>
<td>7</td>
<td>80</td>
<td>248</td>
</tr>
<tr>
<td>551-650</td>
<td>21</td>
<td>115</td>
<td>26</td>
<td>176</td>
<td>338</td>
</tr>
<tr>
<td>651-750</td>
<td>0</td>
<td>30</td>
<td>1</td>
<td>10</td>
<td>41</td>
</tr>
</tbody>
</table>

Figure 8.25 Wares by Centuries by Project

220
### Late Roman Wares by Project

<table>
<thead>
<tr>
<th></th>
<th>Akamas</th>
<th>CPSP</th>
<th>Kalavasos-Kopetra</th>
<th>SCSP</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>African Red Slip</td>
<td>*</td>
<td>29</td>
<td>2</td>
<td>52</td>
<td>83</td>
</tr>
<tr>
<td>Çandarli</td>
<td>*</td>
<td>1</td>
<td>0</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Cypriot Red Slip</td>
<td>*</td>
<td>155</td>
<td>34</td>
<td>155</td>
<td>344</td>
</tr>
<tr>
<td>Egyptian Red Slip</td>
<td>*</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Phocaean Red Slip</td>
<td>*</td>
<td>95</td>
<td>14</td>
<td>26</td>
<td>135</td>
</tr>
<tr>
<td>Totals</td>
<td>*</td>
<td>280</td>
<td>50</td>
<td>237</td>
<td>567</td>
</tr>
</tbody>
</table>

Figure 8.26 Late Roman Wares by Site

### Late Roman Finewares by Centuries

Figure 8.27 Late Roman finewares by century for each of the Cypriot projects
BIBLIOGRAPHY

Classical Bibliography


Ägyptische Urkunden aus den Staatlichen Museen zu Berlin. Berlin, 1895-.


*Corpus Inscriptionum Latinarum*. Berlin, 1862-.

*Corpus Inscriptionum Semiticarum*. Paris, 1881-.

*Digesta*. Edited by Theodor Mommsen. In *Corpus Iuris Civilis II*. Berlin, 1892.


*Expositio Totius Mundi et Gentum.* Edited by Giacomo Lumbroso. Rome, 1898.


George of Pisidia. *Panegyrics at the Court of Heraclius.*


*Michigan Papyri*. Ann Arbor, Michigan, 1931-.


226


*Supplementum Epigraphicum Graecum*. 1923-71, 1979-.


*Tituli Asiae Minoris*. Edited by E. Kalinka and R. Herberdey. Vienna, 1901-.


**Secondary Bibliography**


Badian, E. "M. Porcius Cato and the Annexation and Early Administration of Cyprus."  


229


D'Arms, John H. *Commerce and Social Standing in Ancient Rome*. Cambridge, Massachusetts, 1981.


233


________. “Notes on the Amphoras from the Koronoi Peninsula.” *Hesperia* 32 (1963), 319-334.


______. *Late Roman Pottery*. Athens, 1972.


_______. “Inflation under the Roman Empire.” Economic History Review 5 (1952), 293-318.

236


Piganiol, A. "L' économie dirigée dans l' Empire romain au 4e siecle av. J.C." *Scientia* 81 (1947), 95-100.


---

241


Taylor, Peter J. “Distance Transformation and Distance Decay Functions.” *Geographical Analysis* (1971), 221-238.


______. *Die protestantische Ethik und der Geist des Kapitalismus.* Stuttgart, 1904.

______. *Die römische Agrargeschichte in ihrer Bedeutung für das Staats-und Privatrecht.* Stuttgart, 1891.


________. Land, City and Trade in the Roman Empire. Brookfield, Vermont, 1993.


Zeest, I. B. Керамическая тара Боспора, МИА 83 (1960), 104-106.


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