Mountain and Sea: Settlement and Economy in Late Antique Lycia, Isauria and North Central Anatolia

Kristina Terpoy

Lincoln College

DPhil History

Mountain and Sea: Settlement and Economy in Late Antique Lycia, Isauria and North Central Anatolia

Kristina Terpoy

Lincoln College

DPhil History

Hilary Term 2018

Abstract

This thesis is an interdisciplinary comparative analysis of the socio-economic developments of three regions in Anatolia: Lycia, Isauria and north central Anatolia in the late antique period (*c.* AD 330-600s). I present the most up-to-date picture of late antique settlement in these regions by collating recent evidence, particularly amphorae and settlement remains, derived from research conducted in these regions over the past few decades. From this picture, I analyse what the location of settlement and archeological remains within sites may reveal concerning the ways in which settlements participated in local, region and interregional exchange networks.

As these three regions share the common geographic features of bordering major maritime areas and encompassing mountainous interiors, I examine how geography may have impacted the location of settlement and the movement of goods and people. By integrating areas located on opposite Anatolian coastlines, I examine how differing maritime networks may have impacted settlement development. This tripartite

comparison attempts to establish northern Anatolia alongside its southern counterpart in the discourse of late antique economy and settlement development.

Alongside this regional analysis, I discuss methodological considerations, such as the ways in which the current state of research and various research methods impact our analysis and interpretation of late antique settlement development. This study reveals that sub-regions within Lycia, Isauria and north central Anatolia developed in diverse ways and that the ways in which each region participated in wider exchange differed. I argue that overarching narratives of development, such as ‘prosperity’ and ‘decline’ do not accurately reflect the development of these regions. In sum, this thesis contributes an up-to-date analysis of the settlement development of Lycia, Isauria and north central Anatolia to the wider discourse of late antique regional development, which engages and challenges discourse surrounding the economic development of these regions in Late Antiquity.

Mountain and Sea: Settlement and Economy in Late Antique Lycia, Isauria and North Central Anatolia

Kristina Terpoy

Lincoln College

DPhil History

Hilary Term 2018

Abstract

This thesis is an interdisciplinary comparative study of the socio-economic development of three regions in Anatolia in the late antique period: Lycia, Isauria and north central Anatolia (*c.* AD 330-600s). I present an up-to-date picture of late antique settlement within these regions so as to analyse what the location of settlement and archaeological remains of sites may reveal concerning the economies of these regions in this period.

I examine the ways in which the settlements located within Lycia, Isauria and north central Anatolia may have participated in local, regional and interregional economic exchange by analysing evidence for the cultivation, production and distribution of natural resources within these regions. I analyse the archaeological evidence for late antique settlement in various sub-regions within Lycia, Isauria and north central Anatolia – coastal, interior, northern, southern, eastern and western geographic zones – in order to investigate similarities and differences in the location and development of settlement across these regions. In addition, I integrate an analysis of northern Anatolia in order to

expand scholarly attention to this understudied region and compare the ways in which geographically opposite regions of Anatolia developed in the late antique period.

As Lycia, Isauria and north central Anatolia encompass mountainous interiors and border major maritime zones, the eastern Mediterranean and Black Seas respectively, I consider how geography may have impacted the production of goods, the movement of commodities and the economic relationship between interior and coastal settlement. I examine how differing maritime networks may have played a role in the development of settlement in these regions and the exchange of goods. As the foundation of Constantinople has been cited as a major factor in the development of the eastern Mediterranean and maritime exchange in this period, I investigate if and how the foundation of the capital may have impacted the economies of Lycia and Isauria. Similarly, I examine if and how the presence of Constantinople impacted the economy of the Black Sea zone and by extension, north central Anatolian settlement.

Alongside this analysis, I engage with and challenge discourse surrounding 'prosperity' and 'decline' that has shaped modern conceptions of the late antique economy and the regional development of the Mediterranean in this period. Over the course of the past few decades, research has revealed evidence for growing rural settlement in particular areas of the Mediterranean, such as the Near East, the Aegean and areas of Anatolia in the late antique period. This evidence has been interpreted as demonstrating an economic complex and prosperous eastern Mediterranean, a narrative that has become well-established and normalised in current scholarship. Recent research, particularly the work of Peregrine Horden and Nicholas Purcell (2006), has drawn attention to the need to consider micro-regions in regional study. As a result, the application of over-arching narratives to describe the economic development of regions should be approached with caution. Therefore, I ask how Lycia, Isauria and north central

Anatolia fit into this wider discourse of late antique development and whether or not we have the evidence to determine economic 'prosperity' or 'decline' in the available primary sources. I argue that previous research methodologies have impacted our conception of the economic development of the eastern Mediterranean and that generalising narratives of development do not accurately reflect the settlement and economic development of Lycia, Isauria and north central Anatolia. A micro and macro geographic analysis reveals that the development of sub-regions was diverse and that the ways in which settlements may have participated in different scales of exchange varied.

In sum, this thesis contributes a more nuanced analysis of the settlement development of Lycia, Isauria and north central Anatolia to the wider discourse of late antique settlement, and challenges previous conceptions of the economies of these regions. By integrating a northern and southern Anatolian tri-partite comparison, this thesis also expands attention to the north of Anatolia and aims to establish this region alongside its southern counterpart in the scholarly discourse of the late antique economy.

As literary sources concerning late antique Anatolia are minimal, archaeological evidence, particularly amphorae and settlement remains, forms the basis of evidence in this thesis. In order to analyse the settlement and economic development of Lycia, Isauria and north central Anatolia, I have collated and examined recent evidence for late antique settlement in these regions that has derived from the past few decades of research.

Amphorae, clay transport vessels, were utilised to transport staple goods such as oil, wine and fish sauce, and are therefore proxy indicators of the movement of goods across long-distances. The identification of a possible site of amphorae production suggests that surplus agricultural production was achieved, with surplus product packaged and shipped abroad. The identification of amphorae at a site suggests that there was a demand for the product carried within the amphorae (if content can be confidently

determined), which illuminate the potential supply and demand of areas across the empire. As a result, examining amphorae production and consumption in Lycia, Isauria and north central Anatolia may shed light on the supply and demand of goods of settlements within these regions and the ways in which settlements within these regions were directly or indirectly connected to exchange. As products travelled on local and regional levels as well and not necessarily in clay vessels, other natural resources that may have provided an economic resource of settlements, such as forest resources (timber), marine products and grain are considered also.

Archaeological evidence of late antique settlement remains in Lycia, Isauria and north central Anatolia form the second type of evidence considered in this thesis. Evidence of settlement activity and buildings works (construction of buildings, repairs, renovation) is examined in order to discern the potential economic capabilities of inhabitants in the late antique period. In order to place the development of a settlement in its relative context, I examine evidence for settlement activity chronologically – comparing evidence of building works (construction, renovation, repair) across centuries – and geographically when possible – comparing evidence of settlement development micro-regionally. This way, the development of a settlement and the potential economic activity of its inhabitants may be elucidated in context.

Archaeological research has increased in Lycia, Isauria and north central Anatolia in the past few decades thus making a regional comparison viable. However, there are challenges when collating, synthesising and interpreting archaeological evidence that derives from these unique regions. Archaeological research has tended to focus on western and southern Anatolia, resulting in a discrepancy in information available for the three regions under study. Differences in research method (survey versus excavation), location of research, variation in the information available (quantified versus qualified

data), issues of chronology and publication methods impact the way in which primary sources are interpreted. Therefore, methodological considerations are discussed in-depth throughout this thesis. Nevertheless, from the combination of amphorae evidence and settlement remains, a picture of the late antique settlement development of Lycia, Isauria and north central Anatolia begins to appear.

In Section I, the evidence of late antique amphorae and settlement remains of Lycia and Isauria are examined. In this section, I first investigate what differences in the consumption and production of amphorae between the two regions may reveal concerning their participation in wider economic exchange. I argue that while Isauria contributed staple products to the wider eastern Mediterranean economy, Lycia's economy may have been based principally in facilitating maritime traffic and less so on agricultural export of staple goods. Following on from this analysis, I examine the available evidence of late antique settlement in each region, which bring the diversity of development within these regions to the fore.

In the case of Lycia, my analysis demonstrates that previous theories of coastal prosperity do not accurately reflect the development of the entire Lycian coastline and that only restricted areas of coastal settlement were loci of substantial investment in Late Antiquity. Moreover, changes in the building activity of inland settlement suggests that there is greater discrepancy in the development of various sub-regions of the region than previously recognised. That is, Roman period urban centres, particularly those in the area of the Xanthus valley, do not appear to invest in substantial building works in this period. Whether or not a lack of investment in urban centres is due to a dispersal of settlement to rural areas in this period or a possible migration of inhabitants to particular coastal areas remains an open question. Nevertheless, differences in the evidence of the density of settlement and construction works within Lycia demonstrates that one overarching

narrative of development does not encompass the nuances of development in the region in this period. In addition, a reassessment of primary sources suggests that very little information is currently available for us to draw secure conclusions regarding the economy of Lycia and the potential export of staple agricultural products from the region.

In the case of Isauria, my analysis reveals that similar to the Lycian case, the location and development of settlement in sub-regions is diverse. Analysis of the available archaeological evidence of late antique settlement suggests that settlement was predominately concentrated in the eastern coastal/near-coastal area of the region - the area where amphorae production has been discovered. Notably, there is a lack of recognisable settlement in western and southern coastal/near-coastal areas of the region and these sub-regions do not appear to be home to settlement of substantial late antique investment. Interior settlement appears dispersed as well. Whether or not this picture of Isaurian settlement is a consequence of the geographical focus of research, is possible. When the evidence of amphorae and settlement remains of Lycia and Isauria are compared, the differences in the late antique economy of each region are elucidated. Although agricultural production likely played a fundamental role in the economy of each region, the utilisation of such goods in each region's economy may have been significantly different – Isauria principally contributed staple goods to wider economic networks, while Lyica's role may have been less so on export, and more so on facilitating maritime exchange.

In Section II, I turn attention to the area of north central Anatolia under investigation. As there is a discrepancy in the amount of information available for northern Anatolia, the amphorae and settlement remains of this region are treated separately. First, evidence of amphorae production and consumption in north central Anatolia is analysed, with particular focus on the recent discovery of the kiln site on the

Sinopean promontory. The distribution of Black Sea amphorae is investigated, as is the presence of Black Sea amphorae types in the Mediterranean and vice versa. Secondly, the evidence of late antique settlement remains in north central Anatolia is analysed in order to examine the available information concerning the late antique economy of this region and the connectivity between interior and coastal settlement. The evidence considered derives from archaeological projects that have taken place since the 1990s and include research of the Sinop promontory and the sites of Pompeiopolis (modern Taşköprü), Neoclaudiopolis (Vezirköprü), Euchaita (Avkat), Hadrianopolis, the Project Paphlagonia survey, and the Cide-Şenpazar area.

The different methodologies employed by the north central Anatolian research projects greatly impact the interpretation of evidence and our ability to discern economic relationships between settlements. Therefore, any conclusions must remain tentative until further research is conducted. Nevertheless, interesting developments in the economy of differing areas within north central Anatolia appear from the current evidence available. Although there are areas of coastal settlement, particularly along the surveyed coastal zone of the modern Cide area and the eastern Sinopean promontory, settlement varies along this coastline. Preliminary evidence suggests that an increase in small-sized settlement may have been a common settlement type in the late antique period in both coastal and interior territories of north central Anatolia, although this remains speculative.

When the evidence of late antique settlement in Lycia, Isauria and north central Anatolia is analysed through a broad geographic lens, the importance of considering micro-regions is highlighted as the location of settlement in all three regions emphasizes a common point: not all coastal areas of these region were settled similarly, despite a (modern?) presumed premium placed on maritime location of settlement and by extension proximity to maritime exchange. This comparison emphasises that generalising narratives

of settlement development does not accurately reflect the development of micro regions and mask nuances in the economic development of areas on smaller geographical scales. This tripartite analysis also reveals future research opportunities into northern and southern Anatolian comparisons. For example, evidence of settlement on the Sinopean promontory, located in proximity to the amphorae production identified here, may suggest avenues for future research into the coastal-valley relationships of eastern Isauria, where amphorae production has been identified as well. Study of small ports along the southcentral Lycian coast may suggest avenues for future research into the coastal connectivity of small ports along the north central Anatolian coastline.

By examining Lycia, Isauria and north central Anatolia on both micro and macro regional scales, I attempt to draw scholarly attention to interior regions as well as to areas of Anatolia that are not often considered in late antique economy analysis. I emphasise the importance of taking research methodologies into consideration when interpreting the archaeological evidence currently available and the ways in which research methods impact our interpretation of the settlement and economic development of various geographic regions. Despite the challenges that arise when comparing the development of these three regions, I demonstrate that northern and southern Anatolian comparisons are viable as well as valuable for future study into the settlement development of Anatolia and wider economic discourse of the late antique empire.

Acknowledgements

The contrast and balance of geography has always been a fascination of mine. It is not without the support of a number of people that this study of the ancient landscape - the relationship between people and places - would have been possible.

I had the honour and privilege of being supervised by Mark Whittow and Ine Jacobs, whose support, guidance and advice in all things Late Antique was invaluable. I thank them both for helping me navigate historical and archaeological waters. I found myself being supervised by two advisors who complemented each other in perspective – attention equally being paid to the small scale but continually asking after the bigger picture. It is with the deepest sadness that I complete this work knowing only one will see the finished product of these past few years of study. It is my hope that this thesis honours the memory of Mark Whittow and his contribution not only to Byzantine history, but also his enduring presence in historical studies at Oxford. The completed thesis is my own way of saying thank you for his guidance and kindness.

I would also like to thank scholars, colleagues and friends, near and far, who discussed all aspects of late antique Anatolia with me. James Howard-Johnston kindly offered to read over a draft version of this thesis. Grants from the Arnold, Bryce and Read fund of the History Faculty of the University of Oxford, Lincoln College, Oxford and The Oxford Centre for Byzantine Research contributed to my travels to Turkey and allowed me to experience the landscape of Anatolia first hand. Special thanks also go to the Springers, who have been there every step of the way.

Words fail to express my thanks and gratitude to my family. None of this would have been possible without their love and support. Their constant, never-ending

encouragement, felt from an ocean away, fuelled years of study and perseverance. Any written words could not convey my appreciation, but I will have to settle: thank you.

The landscape of Anatolia is captivating. I hope the next few pages convey my fascination and respect for the study of the places I discuss and have had the privilege of visiting.

Table of Contents

Chapter 1. Introduction 11

Section I: Southern Anatolia

Chapter 2. Introduction to Lycia and Isauria 27

Chapter 3. Amphorae evidence of Lycia and Isauria 43

Chapter 4. Evidence of late antique settlement in Lycia and Isauria 99

Chapter 5. Comparison and discussion of Lycia and Isauria 179

Section II: North central Anatolia

Chapter 6. Introduction to north central Anatolia 217

Chapter 7. Amphorae evidence of north central Anatolia and the Black Sea 229

Chapter 8. Settlement evidence of north central Anatolia 249

Chapter 9. Comparison and discussion of south Anatolia and north Anatolia 295

Chapter 10. Conclusion 309

Abbreviations

ADALYA	The annual of the Suna & İnan Kiraç Research Institute on Mediterranean Civilizations
ANMED	Anadolu Akdenizi Arkeoloji Haberleri
AST	Araştırma Sonuçları Toplantısı
KST	Kazı Sonuçları Toplantısı
Landscape dynamics	Winther-Jacobsen, K., Summerer, L., (eds), *Landscape dynamics and settlement patterns in northern Anatolia during the Roman and Byzantine Period* (Stuttgart, 2015)
Lukka to Lycia	İşkan, H., Dündar, E., (eds), *Lukka'dan Likya'ya Sarpedon ve Aziz Nikolaos'un Ülkesi- From Lukka to Lycia the land of Sarpedon and St. Nicholas* (Istanbul, 2016)
Pompeiopolis I	Summerer, L., (eds), *Pompeiopolis I. Eine zwischenbilanz aus der Metropole Paphlagoniens nach fünf Kampagnen (2006-2010)* (Langenweissbach, 2011)
TIB 5	Hild, F., Hellenkemper, H., (eds), *Kilikien und Isaurien, Tabula Imperii Byzantini 5* (2 vols, Wien, Verlag der Österreichischen Akademie der Wissenschaften, 1990)
TIB 8	Hellenkemper, H., Hild, F., (eds), *Lykien und Pamphylien, Tabula Imperii Byzantini 8* (3 vols, Wien, Verlag der Österreichischen Akademie der Wissenschaften, 2004)
TIB 9	Belke, K., (eds), *Paphlagonien und Honorias, Tabula Imperii Byzantini 9* (Wien, Verlag der Österreichischen Akademie der Wissenschaften, 1996)
Trebenna	Çevik, N., Varkıvanç, B., Akyürek, E., (eds), *Trebenna. Its history, archaeology and natural environment*, Adalya Supplementary Series 1 (Antalya, 2005)

Appendices

Appendix 1. Sites in the region of Lycia under consideration with pertinent remains according to the TIB 8

Appendix 2. Sites in the region of Isauria under consideration with pertinent remains according to the information in the TIB 5

Appendix 3. Churches identified in the area of Telmessus (Fethiye) and Ölüdeniz as published in Tsuji (1995) and Asano (2010)

Appendix 4. Eastern Isaurian sites documented in ANMED (2003-2016)

Maps

Map 1. Map of Lycian TIB 8 sites (as indicated in Appendix 1)

Map 2. Map of Isaurian TIB 5 sites (as indicated in Appendix 2)

Map 3. Southcentral coastal Lycia, TIB 8 sites indicated (as indicated in Appendix 1)

Map 4A. Eastern Lycian sites (TIB 8 and Bey Dağ survey information combined)

Map 4B. Eastern Lycian sites (TIB 8 and Bey Dağ survey information combined). Areas with early Byzantine churches indicated

Map 4C. Eastern Lycian sites (TIB 8 and Bey Dağ survey information combined) indicated on TIB 8 map

Map 5. TIB 8 Lycian sites indicated with the three areas of dense settlement highlighted 1) southcentral coast 2) Ölüdeniz/Fethiye 3) Olympus/Phaselis areas

Map 6. Map of east coast hinterland Isaurian sites according to the information in the TIB 5

Map 7. Approximate rendering of the location of pertinent sites identified in the east coast region of Isauria according to survey results published in the *ANMED* journal series (with inset of Yenibahçe valley)

Map 8A. Approximate distance of Lycia under consideration (*c*. 168km)

Map 8B. Approximate distance of Isauria under consideration (*c*. 217km)

Map 8C. Approximate distance of north central Anatolia under consideration (*c*. 282km)

Figures

Figure 1. Approximate geographic area of Lycia and Isauria under consideration

Figure 2. Approximate geographic area of north central Anatolia under consideration (with approximate Project Paphlagonia survey region indicated)

Figure 3. Lycia

Figure 4. Isauria

Figure 5. Late Roman amphorae of Riley's Carthage classification

Figure 6. Map indicating Lycian sites with amphorae evidence discussed in Chapter 3

Figure 7. Patara site plan

Figure 8. Xanthus site plan

Figure 9. Plan of the house on the Lycian acropolis, Xanthus

Figure 10. Find spots of the ceramics from Letoon

Figure 11. Andriake site plan

Figure 12. Limyra site plan

Figure 13. Balboura (*c*. late 3rd to 6th century)

Figure 14. Map indicating main coastal Isaurian sites discussed regarding amphorae evidence in Chapter 3

Figure 15. Map of western Isauria (western Rough Cilicia)

Figure 16. Rough Cilicia Survey Project survey areas demarcated

Figure 17. Section of Elaiussa-Sebaste site plan

Figure 18. Ölüdenz/Fethiye area

Figure 19. Olympus site plan

Figure 20. Eastern Lycia. The Bey Dağ area

Figure 21. Trebenna site plan

Figure 22. Pinara site plan

Figure 23. Tlos site plan

Figure 24. Oinoanda site plan

Figure 25. Arykanda site plan

Figure 26. Anemurium site plan

Figure 27. Boğsak Island area

Figure 28. Elaiussa Sebaste second season report - identified Byzantine churches

Figure 29. View of the Yenibahçe Valley

Figure 30. Settlements and sites of southeastern Isauria examined and discussed by Varinlioğlu in her survey work

Figure 31. The Göksu Valley indicating the location of Kilise Tepe

Figure 32. The Lower Göksu valley with the Lower Göksu Archaeological Salvage Survey Project sites demarcated from the third season (2016)

Figure 33. Göksu Archaeological Project survey area

Figure 34. Map of north central Anatolia (see Figure 2, Figure 38 for the location of Project Paphlagonia)

Figure 35. Map of areas described by Bryer and Winfield

Figure 36. Sinop promontory

Figure 37 Sinop promontory (detail)

Figure 38. Project Paphlagonia survey area

Figure 39. Hadrianopolis site plan

Figure 40. Locations discussed by the CAP

Figure 41. Map of the southern Black Sea coast with modern port information indicated

Tables

Table 1. Rough Cilicia Survey Project sherd information with chronological periods explained (2012)

Table 2. Lower Göksu Archaeological Salvage Survey Project second season (2014) site distribution table

Table 3. Types of settlement identified by the SRAP (Hellenistic period)

Table 4. Types of settlement identified by the SRAP (Roman and late Roman period)

Table 5. Types and evidence of settlement identified by Project Paphlagonia by period

Table 6. Categories of site identified by Project Paphlagonia by period

Table 7. Settlement continuity identified by Project Paphlagonia by period

Table 8. Categories of site defined by Project Paphlagonia

Table 9. Categories of site characteristics defined by Project Paphlagonia

Chapter 1. Introduction

Over the past few decades our understanding of the late antique economy has been transformed. Largely due to the integration of archaeological research and especially ceramic analysis in historical study, we are now in a better position to understand how various geographic regions developed economically in Late Antiquity. For the eastern Mediterranean, evidence of expanding settlement in the Near East, the Aegean and areas of Anatolia demonstrate the vitality of the countryside and the economic capabilities of rural inhabitants in the late antique period, in terms of building high-quality structures or the consumption of goods, for example. Evidence of growing rural settlement, in density and/or size, alongside what appears to be an intensification in agricultural production in particular geographic regions, in the form of a large number of agricultural pressing facilities often in tandem with the manufacture of transport vessels, has encouraged scholars to investigate the economic development of settlements and their relationship to local and wider exchange. As a result, our understanding of the ways in which settlements across the empire participated in local, regional and interregional economic networks in both state fiscal and commercial markets is continually developing. As evidence of expanding settlement has appeared from across the eastern empire, the notion of a 'prosperous' late antique eastern Mediterranean is increasingly becoming well-established and normalised in scholarship. This study analyzes if and how three regions in Anatolia - Lycia, Isauria and north central Anatolia, and the micro-regions within them - fit into this historical discourse.

Lycia, Isauria and north central Anatolia. Aims and methodology

This thesis is an interdisciplinary comparative study of the socio-economic development of Lycia, Isauria and north central Anatolia in the late antique period (*c*. 330-600s).[1] I present the most up-to-date and comprehensive picture of late antique settlement in Lycia, Isauria and north central Anatolia so as to analyse what the location of settlement and the archaeological remains identified at sites may reveal regarding the late antique economy of these regions.

I analyse Lycia, Isauria and north central Anatolia on both micro and macro geographical scales in order to explore nuances in the settlement development of sub-regions and what developmental trends may reveal concerning the economies of settlements. This study examines the economic resources of these regions to investigate the ways in which settlements may have participated in local, regional and interregional exchange networks.[2] A number of factors, including but not limited to geography, climate, location and the exploitation of natural resources, played a role in the ways in which settlements engaged in economic networks, which in turn impacted their development. Therefore, I consider the role geography may have played in the production and movement of goods, and the economic relationship between coastal and inland settlement. In addition, I integrate an analysis of the north coast of Anatolia so as to compare areas of Anatolia that are seldom considered together in the study of the late antique economy, and to analyse how the economic and settlement development of regions located on opposite Anatolian coasts may have been impacted by differing

[1] All dates are AD unless otherwise stated. I use the terms Late Antiquity and late Roman interchangeably to refer to this chronological period. Otherwise, I adopt the chronological terminology used by scholars when discussing the dating of evidence.

[2] Exchange is used to refer to both non-commercial and commercial economy. Generally, I use the following terms to refer to differing geographic scales: local, being within a micro-region; regional, on a 'provincial' scale; interregional/international, beyond a 'provincial' scale.

maritime networks. As the foundation of Constantinople has been cited as a central factor in impacting the late antique economy and maritime networks of the eastern Mediterranean in this period, I too examine whether evidence suggests the foundation of the capital played a role in the economic development of Lycia and Isauria. Similarly, I ask whether evidence suggests the foundation of the capital may have influenced the economy of the Black Sea region and if and how this impacted the late antique settlement development of north central Anatolia.

Alongside this analysis, I engage with and challenge discourse surrounding notions of 'prosperity' and 'decline' that have shaped much of the modern concepts of the late antique economy. Although evidence of expanding settlement and intensification of production cannot be denied in various areas of the eastern Mediterranean, recent research, particularly the work of Peregrine Horden and Nicholas Purcell (2000), has drawn attention to the importance of considering variation and micro-regions in regional analysis.[3] As a result, there is a need for caution when applying overarching narratives of development such as 'prosperity' or 'decline' to a vast and varied geographic area, one that is gradually becoming acknowledged in scholarship.[4]

While it may be useful to speak of general trends when describing regional development, and while it may not always be possible to analyse development on a micro or settlement level due to a lack of research or the nature of primary sources, it is important various geographic scales be examined when possible. Recognising nuances in development across geographic areas helps to refine our understanding of the complex and variegated nature of the eastern Mediterranean and Black Sea regions, and

[3] On the concept of micro-regions, P. Horden, N. Purcell, *The corrupting sea: a study of Mediterranean history* (Oxford, 2000).
[4] For a critical analysis of the 'prosperity' of the Near East, Z. T. Fiema, 'City and countryside in Byzantine Palestine. Prosperity in question', in A. S. Lewin, P. Pellegrini (eds), *Settlements and demography in the Near East in Late Antiquity. Proceedings of the colloquium, Matera 27-29 October 2005* (Pisa, Rome, 2006), pp. 67-88.

encourages us to examine the factors (particularly the possible economic factors) that may lie behind differences in development. In the following chapters, the development of sub-regions – coastal, interior, northern, southern, western, and eastern areas - within Lycia, Isauria and north central Anatolia will be examined. Analysis of these sub-areas within these broader regions reveals that settlement was diverse, demonstrating that the development of settlement needs to be examined in its own unique geographic context. Therefore, I question how we define 'prosperity' and how we might detect it in primary sources. Does growing rural settlement equate to 'prosperity'? Can we speak in terms of settlements 'flourishing' or 'declining' based on the types of evidence currently available for historical study?

In sum, this thesis contributes a more nuanced analysis of the late antique development of Lycia, Isauria and north central Anatolia to the wider discourse of late antique settlement development, which reassesses and challenges conceptions of the economic development of these regions. I also present an in-depth examination of the implications the current state of research and research methodology has on analysing and interpreting evidence of settlement development of these three regions as well as broader southern and northern Anatolian late antique comparisons.

Framework and evidence

Given the vast geographical scope and the integration of various categories of evidence in this study, only a brief introduction will be presented here, while more detailed discussion of the geography of each region, the evidence examined and methodological considerations of my analysis are presented in the following chapters. Figure 1 and Figure 2 demarcate the approximate geographical boundaries of Lycia, Isauria, and north central Anatolia under analysis. The geographic territories considered

comparatively align to the ancient provinces of Lycia and Isauria in southern Anatolia, while the area termed 'north central Anatolia' roughly corresponds to the provinces of Paphlagonia and the Helenopontus (*c*. the 6th century) in the north.[5] The areas selected for study are drawn to take geographical coherency as precedence over ancient administrative boundaries because such borders remained fluid over time. The geographic scope of this thesis and the areas selected for study have been determined equally by geographical factors as well as, particularly in the case of northern Anatolia, the locations of sites where archaeological evidence is available and accessible for study.

Lycia, Isauria and north central Anatolia have been selected as they share the geographic commonalities of bordering a major maritime region, the eastern Mediterranean and Black Seas respectively, and encompass mountainous hinterlands. As alluded to above, a comparison of three regions located on the extremities of Anatolia allows for an analysis of how differing maritime networks may have impacted the economic development of settlements. As mountainous interiors characterise the three regions, it is possible to investigate how geographic factors may have impacted economic relationships between settlements, particularly between those of the coast and interior. Therefore, the role of geography, the relationship between mountain and sea, is central throughout this study as is the significance of regional variation. Importantly, a comparative study of unique geographical areas may help to guide future research and begin to fill gaps in our knowledge of late antique settlement, as questions concerning the development of one area may suggest possible avenues for the study of others.

As the number of literary texts concerning late antique Anatolia is limited, we are largely dependent on archaeological evidence for an analysis of the economic development of Lycia, Isauria and north central Anatolia. Thanks to an increase in

[5] R. J. A. Talbert, (eds), *Barrington atlas of the Greek and Roman world* (Princeton, 2000), map 102.

archaeological research conducted in these regions over the past few decades, the corpus of evidence has grown exponentially, thus making a regional and comparative study of these areas viable. In order to compare the development of these regions, I have attempted to collate and synthesize the available evidence concerning the late antique remains of Lycia, Isauria and north central Anatolia that has derived from research conducted over the past few decades. Methodological considerations concerning the collation of publications, utilising various categories of evidence and the implications this has on the interpretation of primary sources are described in detail in the following chapters.

Amphorae evidence and settlement remains are the main categories of archaeological evidence analysed. Firstly, amphorae evidence, particularly the production and consumption of amphorae of Lycian, Isaurian and north central Anatolian settlements, is analysed so as to examine the possible supply and demand of agricultural goods of these regions and the economic networks with which they participated (see below). As not all agricultural goods travelled in amphorae, other possible goods that may have formed part of the economic resources of settlements, such as forest resources (timber), grain and marine resources are also considered.

Secondly, settlement remains and the late antique building activity of settlements will be analysed in order to examine the potential investment capabilities of inhabitants. By analysing the building activity of a settlement chronologically and geographically on a micro regional scale, we may be able to determine the relative development of settlements in context (see below). In addition, the reliability of analysing settlement remains in the pursuit of identifying ‘wealth’ and ‘prosperity’ is questioned and I examine if and where evidence for ‘prosperity’ may be identified in Lycia, Isauria and north central Anatolia. As we shall see, previous research methods have influenced our conceptions of the development of Anatolia and I argue, based on more recent archaeological information

and a micro and macro geographic analysis, does not accurately reflect the late antique development of these regions.

From a combination of amphorae and settlement evidence, a picture of the late antique settlement and economic networks of Lycia, Isauria and north central Anatolia begins to appear. Perhaps one of the most significant outcomes of undertaking such a synthesis of information is recognising the state of research of late antique settlement in Turkey. The need for further archaeological research within Lycia, Isauria and especially northern Anatolia is highlighted. If we are to gain a more refined understanding of the economic and settlement development of these regions, archaeological research must incorporate rural and inland territories in order to balance previous attention paid to coastal and urban areas. Due to the current state of research, differences in the length of chapters is reflective of the amount of research and evidence available across the three different regions. As a result, the discussion of Lycian settlement slightly outweighs that of Isauria (Section I), and discussion of these two southern regions significantly outweigh that of north central Anatolia (Section II). However, as will become apparent in the following chapters, although more research has been conducted in the south of Turkey, this does not necessarily mean that the evidence available is more accessible or offers richer information when compared to other areas. Hopefully lacunae in our evidence may be filled by future research.

Settlement development: discourse, debate and methodological challenges

Discussion of settlement and regional development is inherently linked with discourse and debate surrounding ‘prosperity’ and ‘decline’ (which is related to concepts

surrounding the development of the empire more generally).[6] The term 'prosperity', and synonyms such as 'flourishing', are often used to describe an expansion of settlement. Yet, such terms do not necessarily convey what they are referring to and are essentially left to be interpreted by the reader. Moreover, a nucleation or expansion of settlement does not necessarily equate to a higher standard of living for inhabitants. Evidence that may indicate changes in the living standards of inhabitants (changes in mortality rates or nutrition) or the perception of the standard of living by inhabitants (was someone happier using a ceramic bowl instead of a wooden one?)[7] is largely out of reach. This raises the question of how we define 'prosperity' or 'decline' and how we detect it in primary sources. Contrarily, the term 'ruralisation' which is used to describe a move away from monumental public building and ordered site planning may be interpreted as evidence of the economic decline of a settlement - although, a change in methods of investment does not necessarily reflect economic decline.

Difficulties in terminology have been recognised in scholarship and terms such as 'intensification' or 'abatement' have been introduced as alternatives to describe changes in settlement or production. Likewise, the concept of interpreting development as a 'transformation' rather than an implicit positive or negative dichotomy of change has gained favour as well. It is difficult to settle on terms to describe development that do not carry value-based connotations. Nevertheless, in order to analyse the development of a settlement, a comparison of building activities chronologically across centuries - in the form of the construction of buildings, repairs, or renovations - and micro-regionally - by

[6] For example, see contributions in L. Lavan, (eds), *Recent research in late-antique urbanism* (Portsmouth, 2001). For a detailed overview of this discourse, A. R. Commito, 'Southern Asia Minor and northwest Syria at the end of antiquity: a view from the countryside' (PhD thesis, University of Michigan, 2014), pp. 16-43 whose work predominately focuses on the later centuries of Late Antiquity and the transition to the so-called Dark Age. My thesis focuses on the development of settlement in the late antique period and does not discuss the impact of the Persian and Arab invasions of the 7th century nor the 'Dark Age'.
[7] I would like to thank John Blair for raising this point.

comparing the development of nearby settlements when possible - may offer a better understanding of the economic development of settlements in their relative contexts.

Different types of evidence are available that may shed light on the late antique activity and occupation of a site. These include datable house remains, ceramic scatter and the construction, renovation or repairs of structures. Churches hold a central place in late antique archaeological and historical discourse, yet the interpretation of churches in the analysis of settlement economy and development is a point of contention in scholarship.[8] On the one hand, the presence of a church in urban or rural landscapes has been interpreted as evidence for prosperity as the structure may be interpreted as indicating the investment of accrued wealth of inhabitants into the construction of a building. On the other hand, churches are inherently new in the landscape in the late antique period and it has been argued that rather than evidence for economic prosperity, such structures only represent the spread of Christianity.[9]

Particular types of evidence, such as marble or liturgical vessels, may indicate levels of investment in the construction and maintenance of churches but they do not survive often in their original context in the archaeological record. When information concerning the date or context of a church is not available, it is difficult to interpret a church in a meaningful way. Moreover, the dating of churches is not always secure as the buildings are often dated on the basis of comparative architectural features and decoration. Yet, given the attention paid to religious buildings in past research, we are somewhat dependent and forced to focus on churches when analysing late antique settlement remains, as the presence of a church is sometimes the only evidence given as

[8] A vast debate with many voices. For a recent example on interpreting churches, G. Deligiannakis, *The Dodecanese and the eastern Aegean islands in Late Antiquity, AD 300*-700 (Oxford, 2016), pp. 51-3.
[9] C. Foss, 'The Lycian coast in the Byzantine Age', *Dumbarton Oaks Papers*, 48 (1994), p. 45; concerning Isauria in particular, H. Elton, 'Late Roman churches in the Upper Göksu Valley, Isauria', in M. C. Hoff, R. F. Townsend (eds), *Rough Cilicia. New historical and archaeological approaches* (Oxford, Oakville, 2013), pp. 233-46.

indicating occupation of a site, if information concerning other evidence (ceramics, domestic buildings) is lacking or is not the interest of researchers. Nevertheless, the construction of a church would have required some sort of organisation, investment, workforce and likely funds for maintenance, and so the presence of a church ought to be considered in the building activity of a settlement, to some degree.[10]

In terms of analysing economic networks, various categories of evidence may give some indication of the ways in which settlements were connected to local or wider exchange. Of those that are most archaeologically visible, ceramics are indispensable in economic analysis as we may be able to reconstruct the consumption and distribution of wares, particularly well-known international table wares, to determine the direct or indirect participation of settlements in various economic networks. As our knowledge of locally produced coarse wares develops, we may be able to fill-out the picture of local and regional networks as research continues. This evidence can also be used to hypothesize about the movement of perishable materials.[11]

Transport vessels, amphorae, are critical for the examination of economic networks as the production, distribution and consumption of these vessels offer crucial proxy information concerning the late antique supply and demand of natural resources and agricultural goods.[12] Through the identification of amphorae production at a site we can confidently theorize that surplus agricultural production was achieved and surplus goods were packaged and exported abroad. By analysing the various amphorae finds at sites, we might gain insight into the agricultural demands of settlements (if content can be

[10] W. Bowden, 'A new urban élite? Church builders and church building in late-antique Epirus', in L. Lavan (eds), *Recent research in late-antique urbanism* (Portsmouth, 2001), pp. 57-68.
[11] S. Kingsley, M. Decker, 'New Rome, new theories on inter-regional exchange. An introduction to the east Mediterranean economy in Late Antiquity', in S. Kingsley, M. Decker (eds), *Economy and exchange in the east Mediterranean during Late Antiquity: proceedings of a conference at Somerville College, Oxford - 29th May, 1999* (Oxford, 2001), p. 3.
[12] For an overview, D. P. S. Peacock, D. F. Williams, *Amphorae and the Roman economy: an introductory guide* (London, New York, 1986).

confidently determined) and the exchange networks with which they were directly or indirectly involved. There is the possibility that surplus production may have circulated on various economic scales and not in clay vessels, so we may be able to detect only a part of the picture of the exchange of a settlement. Nevertheless, amphorae evidence is invaluable for an analysis of the potential connectivity of regions in terms of agricultural exploitation and distribution networks.

The late antique economy

Research of the development of rural settlement in areas of the Near East, the Aegean and Anatolia has revealed an economically complex countryside, one where regions were involved with producing and distributing goods across the Mediterranean and beyond.[13] The trend of regional economic analysis in scholarship continues steadfastly, as demonstrated by the recent publication of Georgios Deligiannakis' study of the Peloponnese and eastern Aegean islands in relation to wider late antique Mediterranean exchange (2016).[14] What generated the intensification of production and movement of commodities across the empire? The debate surrounding whether a state

[13] For an overview of the development of the Near East and the Aegean, B. Ward-Perkins, 'Specialized production and exchange', in A. Cameron, B. Ward-Perkins, M. Whitby (eds), *The Cambridge Ancient History Volume 14. Late Antiquity: Empire and Successors, A. D. 425-600* (Cambridge, 2000), pp. 352-4, 358-61. On North Syria and oil/wine production see M. Decker, 'Food for an empire: wine and oil production in North Syria', in S. Kingsley, M. Decker (eds), *Economy and exchange in the east Mediterranean during Late Antiquity: proceedings of a conference at Somerville College, Oxford - 29th May, 1999* (Oxford, 2001), pp. 69-86. On agricultural production in Palestine, S. A. Kingsley, 'The economic impact of the Palestinian wine trade in Late Antiquity', in S. Kingsley, M. Decker (eds), *Economy and exchange in the east Mediterranean during Late Antiquity: proceedings of a conference at Somerville College, Oxford - 29th May, 1999* (Oxford, 2001), pp. 44-68. Anatolian settlement will be discussed in detail throughout this study, but for now see for example, D. Baird, 'Settlement expansion on the Konya plain, Anatolia: 5th-7th centuries AD', in W. Bowden, L. Lavan, C. Machado (eds), *Recent research on the late antique countryside* (Leiden, Boston, 2004), pp. 219-46; G. Varinlioğlu, 'Rural habitat in the hinterland of Seleucia ad Calycadnum during Late Antiquity', in M. C. Hoff, R. F. Townsend (eds), *Rough Cilicia. New historical and archaeological approaches* (Oxford, Oakville, 2013), pp. 199-209; A. Izdebski, 'The economic expansion of the Anatolian countryside in late antiquity: the coast versus inland regions', in L. Lavan (eds), *Local economies? Production and exchange of inland regions in late antiquity* (Leiden, Boston, 2013, 2015), pp. 343-76.

[14] Deligiannakis, *Dodecanese*, especially pp. 41-97.

fiscal apparatus (non-commercial) or commercial markets generated the late antique economy is one that is vast and ongoing.[15] Thus, only a brief overview of the main debates concerning the late antique economy will be presented here.[16]

The introduction of ceramic evidence to the analysis of the late antique economy has convincingly demonstrated that the state was not the sole facilitator in the distribution of goods in this period. The diminished yet continued distribution of African Red Slip Ware after the Vandal conquest, or the presence of Late Roman Amphorae 1 across the Mediterranean and beyond are but two examples that suggest the commercial trade of products.[17] As a result, it is now widely recognised that both non-commercial and commercial mechanisms functioned alongside one another and facilitated the movement of goods, but the degree to which the state and commercial markets account for the distribution of commodities is still debated due in part to the fact that details of commercial exchange and the workings of the state apparatus remain ambiguous.

The foundation of Constantinople would have had a substantial impact on the eastern Mediterranean economy. The movement of goods from various regions of the eastern Mediterranean to supply the substantial needs of the capital (via the *anonna*), as well as the collection and redistribution of tax, would have likely opened up market

[15] A large corpus of literature is available. For example, B. Ward-Perkins, 'Land, labour and settlement', in A. Cameron, B. Ward-Perkins, M. Whitby (eds), *The Cambridge Ancient History Volume 14. Late Antiquity: Empire and Successors, A. D. 425-600* (Cambridge, 2000), pp. 315-45; B. Ward-Perkins, 'Specialized production and exchange', pp. 346-91; C. Morrisson, (eds), *Trade and markets in Byzantium* (Washington, 2012); C. Wickham, *Framing the early Middle Ages: Europe and the Mediterranean 400-800* (Oxford, 2005). On the integration of archaeology to the discourse of the late antique economy see contributions in S. Kingsley, M. Decker, (eds), *Economy and exchange in the east Mediterranean during Late Antiquity: proceedings of a conference at Somerville College, Oxford - 29th May, 1999* (Oxford, 2001); W. Bowden, L. Lavan, C. Machado, (eds), *Recent research on the late antique countryside* (Leiden, Boston, 2004); L. Lavan, (eds), *Local economies? Production and exchange of inland regions in late antiquity* (Leiden, Boston, 2015); M. M. Mango, (eds), *Byzantine trade, 4th-12th centuries: the archaeology of local, regional and international exchange: papers of the thirty-eighth spring symposium of Byzantine studies, St John's College, University of Oxford, March 2004* (Farnham, Burlington, 2009).
[16] For the following, Wickham, *Framing*, pp. 72-76, 713-18; Kingsley, Decker, 'New Rome', pp. 1-27; Ward-Perkins, 'Specialized production and exchange', pp. 369-81.
[17] Ward-Perkins, 'Specialized production and exchange', p. 371; Wickham, *Framing*, pp. 715-6.

opportunities.[18] Therefore, state redistribution and commercial markets likely facilitated one another.[19] For instance, it is probable that goods 'piggy-backed' on *annona* shipments across the empire, likely accounting for their initial distribution outside of, but making use of, the state fiscal system.[20] As a result, the evidence of rural prosperity and economic intensification identified in areas of the eastern Mediterranean has been linked with the foundation of the capital and the *annona* maritime route connecting Constantinople and the Near East.[21]

The movement of goods seems to have been most efficiently achieved via maritime transport (as opposed to more expensive land transport).[22] This situation may have afforded those inhabitants living in closer proximity to coastal areas economic opportunities over those in more inland regions, although there are exceptions.[23] Alongside the distribution of goods on the major routes of the sea, an equally important method of transport, that of cabotage (coastal sailing), facilitated economic transactions on a smaller, yet possibly more frequent scale.[24] The following chapters will explore how the coastal and inland settlements of Lycia, Isauria and north central Anatolia may have been connected to and impacted by this economic framework.

[18] Wickham, *Framing*, p. 76.
[19] Ward-Perkins, 'Specialized production and exchange', p. 375.
[20] Ward-Perkins, 'Specialized production and exchange', p. 371.
[21] Deligiannakis, *Dodecanese*, pp. 87-90, at 89. On the maritime movement of goods, *annona* and otherwise, M. McCormick, *Origins of the European economy. Communications and commerce, A.D. 300-900* (Cambridge, 2001), pp. 85-98.
[22] McCormick, *Origins*, p. 83.
[23] Ward-Perkins, 'Specialized production and exchange', pp. 371-3.
[24] Horden, Purcell, *Corrupting sea*, pp. 137-43; R. L. Hohlfelder, R. L. Vann, 'Cabotage at Aperlae in ancient Lycia', *The International Journal of Nautical Archaeology*, 29.1 (2000), pp. 126-7. See also, A. Wilson, 'Developments in Mediterranean shipping and maritime trade from the Hellenistic period to 1000', in D. Robinson, A. Wilson (eds), *Maritime archaeology and ancient trade in the Mediterranean* (Oxford, 2011), pp. 53-4; P. Arnaud, 'Ancient sailing-routes and trade patterns: the impact of human factors', in D. Robinson, A. Wilson (eds), *Maritime archaeology and ancient trade in the Mediterranean* (Oxford, 2011), pp. 61-2.

Geography and scales of analysis

Research of Anatolia tends to focus on western and southern coastal areas, which is largely a symptom of where archaeological research has taken place. Northern Anatolia rarely features in discussion of the late antique economy. The Black Sea region is often conceptualised as being on the periphery of the empire, yet geographically is adjacent to the capital. What is the place of northern Anatolia in scholarly discourse concerning the late antique economy? In what ways is the late antique development of this northern region similar or different to elsewhere in Anatolia? What do we know of the settlement development of this understudied region in this period and how does it compare with the southern Anatolian coast? The northern and southern Anatolian comparison drawn in this study, although preliminary, is an important first step in expanding attention to the north of Anatolia. Importantly, such a comparison aims to establish the region alongside its southern counterpart in discourse concerning the empire-wide late antique economy. A north-south comparison is an important first step in bringing to light the benefits, challenges and future research opportunities of comparing the settlement development and maritime exchange networks of different yet similar Anatolian regions.

Outline

This thesis is divided into two sections. Section I focuses on the regions of southern Anatolia under investigation, Lycia and Isauria. Chapter 2 offers an introduction to the geography and past research of these regions. The amphorae evidence of Lycia and Isauria is presented in Chapter 3. The chapter begins with a detailed discussion of the methodological considerations for utilising this type of evidence for the study of the late

antique economy and presents the available amphorae evidence of Lycia and Isauria. The chapter concludes with a comparison of the amphorae evidence of these regions and what the similarities and differences in terms of amphorae production and consumptions may tell us regarding the role the two regions played in wider Mediterranean exchange.

The archaeological evidence of late antique settlement in Lycia and Isauria is presented and analysed in Chapter 4. The chapter begins with a detailed discussion of my analytical method for examining the archaeological evidence of these regions and the methodological considerations involved in collating and analysing settlement remains. The evidence of late antique settlement remains in the various sub-regions of Lycia and Isauria is then presented and discussed in turn. Chapter 5 compares and analyzes what the combination of evidence presented in previous chapters may reveal concerning the settlement development of Lycia and Isauria and the economic development of each region.

Section II turns attention to north central Anatolia. As there is a discrepancy in the quantity of evidence for northern and southern Anatolia, the amphorae and settlement evidence for north central Anatolia is treated separately. The area of north central Anatolia under investigation is described at the start of Chapter 6 and is followed by a discussion of the past research conducted in the area. In a similar manner to the preceding chapters, Chapter 7 introduces and discusses Black Sea amphorae production, consumption and distribution, with a focus on the amphorae evidence of north central Anatolia. Chapter 8 then analyses and discusses the settlement remains of the region. Chapter 9 offers a comparison of the settlement evidence of northern and southern Anatolia with the aim of exploring similarities and differences in the late antique economic and settlement development of these opposite regions. By drawing attention to an understudied region, the need for further research in the north of Turkey is also

highlighted. Chapter 10 offers a summary of the main findings of this study and final concluding remarks.

Chapter 2. Introduction to Lycia and Isauria

The region referred to as Lycia in this study roughly coincides with the provincial borders of the province of the 6th century. The territory under consideration includes the area located between the Fethiye gulf in the west, to the area south of Antalya in the east (Figure 3). The land of the southeastern corner of Anatolia bordering the Mediterranean Sea has been referred to by various names (including Isauria and the different renderings of Cilicia due to administrative changes over time). Although the provincial boundaries of the ancient provinces of Isauria and Cilicia I meet on the eastern coast of this region, I will refer to the territory lying between modern Gazipaşa and the area to the south of Mersin as Isauria for sake of convenience (Figure 4).[25] In some instances, in order to avoid confusion, I will adopt the name of the area used in secondary literature to refer to this region. For example, the archaeological study of the western coastal area of this territory was incorporated in the Rough Cilicia Archaeological Survey Project, which refers to this region as Rough Cilicia in project publications (Chapter 4). Therefore, I will use Isauria and Rough Cilicia interchangeably when discussing this western territory and survey project.

Both Lycia and Isauria border the Mediterranean Sea and encompass a mountainous interior. Their geographical location and the cultivation and production of agricultural goods, particularly the so-called Mediterranean triad of olive oil, wine and grain, would have greatly influenced the economy of the regions and the degree to which they participated in wider Mediterranean exchange. The following chapter provides a foundational overview of the discourse and debates concerning the economy of these

[25] *Barrington atlas*, map 102.

regions and their natural resources. The cultivation and production of agricultural goods, the levels to which such goods were produced (self-sufficiency or surplus), and the movement of goods (local, regional, interregional exchange) will be discussed in detail in subsequent chapters when the archaeological evidence pertaining to the economic production of each regions is presented.

Lycia: geography and natural resources

Lycia's geographic location on the southwestern corner of Turkey has been cited as an important factor in the economy of the region because of its proximity to major maritime routes connecting the Aegean and eastern Mediterranean.[26] Thus, maritime traffic has been considered one of the main factors that influenced Lycian coastal development. The presence of maritime exchange is attested by evidence of anchors dating across a broad chronological span uncovered on the western shoreline of the province through underwater research.[27] On land, the growing significance of maritime exchange in the Roman period may be seen in the construction of the Hadrianic warehouses at the two major harbours of the province, Andriake and Patara.[28] Unfortunately, the area of Patara has developed into marshland and the Myra-Andriake plain is now covered in a layer of silt rendering the study of the ancient remains of these sites difficult.[29] It is possible gradual silting and erosion was an issue these harbours had to contend with in Late Antiquity as well. But how exactly was Lycia involved in

[26] Foss, 'Lycian coast', pp. 1-2; R. M. Harrison, 'Churches and chapels of central Lycia', *Anatolian Studies*, 13 (1963), pp. 120-1; C. Foss, 'Lycia in history', in J. Morganstern (eds), *The fort at Dereağzı and other material remains in its vicinity: from antiquity to the Middle Ages* (Tübingen, 1993), p. 17.
[27] In the Gulf of Fethiye, H. Özdaş, N. Kızıldağ, 'Archaeological underwater surveys along the Mediterranean coastline 2013', *ANMED*, 12 (2014), p. 133.
[28] TIB 8, 'Andriake', pp. 435-9; 'Patara', pp. 780-8. Page numbers run sequentially across the TIB volumes.
[29] Foss, 'Lycian coast', pp. 14, 24; N. Çevik, '"The city breathing Myrrh": Myra', in *Lukka to Lycia*, p. 229. For a brief overview of Patara, H. İşkan, 'Capital of Lycian League and province: Patara', in *Lukka to Lycia*, pp. 142-65; see annual reports of work in the journal series *ANMED*.

maritime exchange? Did Lycian goods enter exchange networks via the maritime traffic that passed along its shores and if so, to what degree? What types of agricultural goods were produced in the region and on what scale were they exchanged?

The hagiographic text the *Life of Saint Nicholas of Sion* is a useful starting point to address such questions as the literary source narrates the goings-on of the southcentral region of the province in the late antique period.[30] The source narrates the life and exploits of one Nicholas, known as Saint Nicholas of Sion, who is thought to be active in the time of Justinian, but should not to be confused with another Saint Nicholas of Myra of earlier times.[31] The *Life* provides evidence that the Lycian harbours were ports of call along the Mediterranean Sea route. In one episode, when Nicholas wishes to make a pilgrimage, a sailor from Ascalon happens to be in Myra at the time and offers Nicholas voyage (they depart via Andriake).[32] When Nicholas ventures on a second journey to Jerusalem, yet another ship, this time an Egyptian ship, is found at Tristomon (Teimiussa) (they initially arrive in Egypt but eventually make their way to Ascalon and then to the Holy City).[33] On his return trip to Lycia, Nicholas boards a Rhodian ship at Ascalon, departing for Constantinople.[34] When they approach Lycian shores, Nicholas asks to disembark at Phoinix, but the captain refuses to stop (neither at Andriake or Tristomon, harbours known to the captain) wanting to sail directly to Rhodes. Eventually, Nicholas arrives in Andriake.[35] The presence and availability of ships from the Near East at the different ports of Lycia and the implied knowledge of Lycian harbours to the Rhodian ship captain, suggest that the Lycian coast was frequented and known by passing

[30] I. Ševčenko, N. P. Ševčenko, (trans.), *The Life of Saint Nicholas of Sion* (Brookline, Massachusetts, 1984).
[31] I. Ševčenko, N. P. Ševčenko, 'Introduction', in trans. I. Ševčenko, N. P. Ševčenko, *The Life of Saint Nicholas of Sion* (Brookline, Massachusetts, 1984), pp. 11, 13.
[32] *Nicholas of Sion*, chapters 8, 9.
[33] *Nicholas of Sion*, chapters 27, 32, 35.
[34] *Nicholas of Sion*, chapter 36.
[35] *Nicholas of Sion*, chapters 37, 38.

maritime traffic, and importantly, could be a stopping point along the route between the east and Constantinople.[36] Nicholas was not the only holy man to have boarded a ship from Andriake, as Saint Paul (AD 60/61) is attested as having boarded an Alexandrian grain ship destined for Rome at Andriake as well.[37]

Closer to home, the *Life* also offers a glimpse into the late antique world surrounding Nicholas' church of Holy Sion, located in the region behind Myra, the capital of the province. By reading the text through an economic lens we learn of some of the agricultural resources of the countryside. In one episode, a breakdown of rural and city relations is described when Myra is hit with the plague and inhabitants of the countryside refuse to take goods into the city - grain, flour, wine and wood are specifically mentioned.[38] These goods are alluded to again in the *Life* when someone seeking healing from the saint finds Nicholas in vine fields, planting with others, perhaps alluding to ecclesiastically owned land.[39] In another instance, inhabitants from Arneai ask Nicholas for his help with their grain yields.[40] Nicholas is also described as going on travels to the countryside, feasting on oxen, wine, bread and olive oil at the places he visits.[41] From these examples, a general impression of the agriculture and livestock of the area can be gathered.

What evidence beyond this literary source is there for the cultivation and exchange of these and other goods? The cultivation and transportation of grain is difficult to detect archaeologically due to its perishability. It has been suggested in past scholarship that the aforementioned warehouses at Patara and Andriake are indicative of the storage and transportation of agricultural goods from the interior of the province for

[36] Wickham, *Framing*, p. 783.
[37] Çevik, 'Myra', p. 227.
[38] *Nicholas of Sion*, chapter 52.
[39] *Nicholas of Sion*, chapter 63.
[40] *Nicholas of Sion*, chapters 59, 60.
[41] For example, *Nicholas of Sion*, chapters 54, 55, 56, 57.

export abroad, particularly of grain.[42] Evidence of a water mill at Andriake may also be indicative of the processing of grain at this location.[43] The combination of these factors has led to the suggestion that Lycia may have played a role in contributing grain and other goods to the grain shipments between Egypt and Constantinople.[44] However, Laurence Cavalier has demonstrated that the warehouses on Lycia's shores may have held commodities other than grain.[45] It is possible that the function and purpose of these buildings could have simply changed over time with the content of the buildings changing depending on the needs of the province and its role in wider economic networks.

Although grain may have been grown and consumed within the region of Lycia itself, convincing evidence for the export of grain is currently lacking. Lycia's geographic location on Mediterranean maritime routes and the evidence of coastal warehouses alone does not provide tangible evidence that grain was produced at levels for export abroad. Instead, it is equally plausible that grain may have been travelling inland - that is, imported from grain shipments passing by the coast. Recent data of wheat growing regions in modern Turkey show that the region of ancient Lycia is not a major wheat producing region.[46] There are limits to using modern agricultural production as a proxy for ancient cultivation, but this data ought to be considered especially in analysing Lycia's economic role in a Mediterranean context and the large warehouses on its shores. The modern data might suggest that the warehouses at Patara and Andriake were not storing Lycian grain for export, but possibly, storing imported grain for Lycian

[42] Foss, 'Lycian coast', pp. 14, 25; Foss, 'Lycia in history', p. 17.
[43] Foss, 'Lycian coast', p. 25.
[44] Foss, 'Lycian coast', pp. 1, 25.
[45] L. Cavalier, '*Horrea* d'Andriakè et Patara: un nouveau type d'édifice fonctionnel en Lycie à l'époque impériale', *Revue des études anciennes*, 109.1 (2007), pp. 51-65.
[46] Data from 2015, 'Turkey: wheat Production. Foreign Agricultural Service, Office of Global Analysis, International Production Assessment Division', https://ipad.fas.usda.gov/rssiws/al/crop_production_maps/metu/Turkey_wheat.jpg (9 January 2018).

consumption. Therefore, the use and function of these warehouses remains an open question.

What of the other products of the Mediterranean triad, olive oil and wine? The question of the production of olive oil and wine will be discussed in greater detail in subsequent chapters in tandem with archaeological evidence, as evidence of amphorae and press facilities is central in analysing the production of these goods in the region. In general, the identification of agricultural press facilities during survey across Lycia suggests that oil and wine were produced. However, from the limited evidence provided in archaeological reports, it is more difficult to ascertain what may have been produced at a press installation (oil or wine) and the level of production. That is, it is often stated that press facilities or elements of presses have been identified in the landscape without further contextualization (it is difficult to date these stone elements). Information concerning the size of collection basins or evidence of ancient terracing in the area of a press is not often given.

Apart from the Mediterranean triad, timber resources may have played a significant role in the economy of Lycia. As Clive Foss has suggested, timber may have been an important factor in Lycia's interregional exchange, particularly with 'treeless' Egypt.[47] Given the region's harbours and port facilities, timber may have played an important role in servicing maritime traffic in terms of shipbuilding or repairs, but the degree to which forest resources were transported cannot be determined. The intention of an Arab fleet to cut down Lycian timber in the 8th century suggests the forests of Lycia continued to be a significant resource over centuries.[48] Like grain, it is difficult to ascertain the degree forest resources were exploited and exported from Lycia in Late

[47] Repeatedly mentioned by Foss, 'Lycian coast'. R. Meiggs, *Trees and timber in the ancient Mediterranean world* (Oxford, 1982), p. 40.
[48] Foss, 'Lycian coast', p. 4. Much later, trade in wood may account for 19th century economy of the island of Megiste, for example TIB 8, p. 723.

Antiquity specifically (hopefully scientific analysis can shed light on this issue in the future).[49]

Evidence suggests fishing resources may have played a significant role in the region's economy as well. Fish processing may have taken place in settlements on the Lycian coast.[50] Possible late Roman basins, although not securely dated, for fish sauce production or salt fishing have been identified off the coast on the island of Megiste as well.[51] Valuable dye production may have contributed greatly to the economies of Aperlae and Andriake where murex shells have been identified in abundance.[52] Recent evidence suggests dye production may have also occurred on the eastern coastline.[53]

The cultivation and production of various resources suggests that the Lycian economy was diverse and seems to have incorporated the production of staple goods and luxury items.[54] The degree to which these goods were produced and their distribution is more difficult to discern, however. Despite the challenges of tracing the exploitation and transporting of certain goods archaeologically, a combination of evidence, including pressing installations, ceramics and the development of settlement patterns analysed in the following chapters, may shed light on the ways in which this strategically located province participated in wider Mediterranean exchange.

---

[49] On Lycian forests in earlier and later times, Meiggs, *Trees*, pp. 46, 394.
[50] A. Marzano, *Harvesting the sea: the exploitation of marine resources in the Roman Mediterranean* (Oxford, 2013), p. 108.
[51] TIB 8, p. 724.
[52] Marzano, *Harvesting*, pp. 108, 147, 154, footnote 75, on the connection between the development of Aperlae and dye production. She argues that Aperlae was exporting dyed textiles, not the dye product. She too suggests grain would have needed to have been imported here on account of a lack of cultivatable land.
[53] M. Arslan, N. T. Önen, 'The surface exploration of Phaselis and its territorium 2013', *ANMED*, 12 (2014), pp. 192-3. There is also the possibility of murex production at Patara based on the finds of murex shells, but information is limited and seems to come from a much earlier (Archaic) chronological context, H. Işık, Ş. Aktaş, E. Dündar, M. Koçak, B. Ceylan, 'Excavations and conservation work at Patara in 2015', *ANMED*, 14 (2016), p. 100.
[54] Also, Foss, 'Lycian coast', p. 4 on a 12th century account of incense growing on the western and southern Lycian coast.

Isauria: geography and natural resources

Both archaeological and epigraphic evidence contribute to our knowledge of the late antique economy and natural resources of Isauria.[55] In terms of the production of the Mediterranean triad, similar to Lycia, modern data suggests that Isauria was not a major wheat producing area. The lack of suitable land for grain cultivation in the southeastern limestone area of the region, which was one of the most densely settled areas of the province in Late Antiquity as we shall see, would have likely made it necessary for grain to be imported to satisfy the needs of inhabitants in this sub-region.[56]

Evidence for olive oil and wine production comes from various areas of Isauria. In the western part of the province, preliminary results of paleo-environmental and survey research suggest the substantial presence of grape vines and press elements (thought to be for wine production) in this region.[57] Survey work conducted on the eastern coastal/near-coastal areas of the province has identified numerous pressing facilities also.[58] Although difficult to date, it has been argued that presses in the region likely functioned in the late Roman period, although they may have been in use in earlier times as well.[59] These

[55] For an overview of Cilicia as a whole, for example E. Özbayoğlu, 'Notes on natural resources of Cilicia: a contribution to local history', *Olba*, 8 (2003), pp. 159-71; V. Iacomi, 'Some notes in Late-antique oil and wine production in Rough Cilicia (Isauria) on the light of epigraphic sources: funerary inscriptions from Korykos, LR 1 amphorae production in Elaiussa Sebaste and the Abydos Tariff', in Ü. Aydınoğlu, A. K. Şenol (eds), *Olive oil and wine production in Anatolia during antiquity. Symposium proceedings 06-08 November 2008, Mersin, Turkey* (Istanbul, 2010), pp. 19-32.
[56] G. Varinlioğlu, 'Rural landscape and built environment at the end of antiquity: limestone villages of southeastern Isauria' (PhD thesis, University of Pennsylvania, 2008), p. 134.
[57] N. K. Rauh, R. F. Townsend, M. C. Hoff, M. Dillon, M. W. Doyle, C. A. Ward, R. M. Rothaus, H. Caner, Ü. Akkemik, L. Wandsnider, F. S. Ozaner, C. D. Dore, 'Life in the Truck Lane: urban development in western Rough Cilicia', *Jahreschefte des Österreichischen Archäologischen Institutes in Wien*, 78 (2009), p. 267, footnote, 33.
[58] Ü. Aydınoğlu, 'Olive oil production in Rough Cilicia: production installations - settlement pattern - dating', in Ü. Aydınoğlu, A. K. Şenol (eds), *Olive oil and wine production in Anatolia during antiquity. Symposium proceedings 06-08 November 2008, Mersin, Turkey* (Istanbul, 2010), pp. 1-17; E. Aşkın, 'Archaeological traces of olive oil and wine production in Korykos in antiquity and their relationship to the settlement pattern', in Ü. Aydınoğlu, A. K. Şenol (eds), *Olive oil and wine production in Anatolia during antiquity. Symposium proceedings 06-08 November 2008, Mersin, Turkey* (Istanbul, 2010), pp. 33-52 (Turkish article, English abstract).
[59] Aydınoğlu, 'Olive oil production', pp. 7-11.

presses have been identified in various areas: near or within settlements, along routes connecting the interior with the coast, and in what appears to be independent positions in the landscape - that is, workshops that are not associated with other structures, but are still in the vicinity of settlement.[60] In addition, it has also been recently argued that the growth of late antique settlement identified in the southeastern area of the province may be attributed to the production of oil in this area.[61]

Like Lycia, Isauria's timber resources likely played an important role in the region's economy.[62] Given its coastal location, it may be postulated that marine resources were also an important economic resource of coastal settlements, although evidence for the exploitation of such resources is rather piecemeal. For example, from the settlement Korykos (see below), a fisherman, net and sail makers, a sailor, shipmasters and shipwrights, and interestingly, a murex fisher and murex workers are mentioned in funerary inscriptions.[63] From Anemurium, finds of fish hooks, fishing net weights and netting needles were identified from a *c*. late 6th century domestic context.[64] As it has been pointed out, while such evidence does not necessarily convey fishing practices - whether fishing was a full-time occupation or seasonal work - the demonstrate that exploitation of marine resources occurred.[65]

The interpretation and context of the *c*. 5th century inscription of Abydus (of the Dardanelles) is unclear.[66] This epigraphic source, which appears to give the fees to be

[60] Aydınoğlu, 'Olive oil production', pp. 4-6.
[61] Varinlioğlu, 'Landscape', pp. 148-51, 158-9.
[62] For western Isauria, Rauh, *et al*., 'Western Rough Cilicia', pp. 264-7. On Cilician timber, Meiggs, *Trees*, p. 117.
[63] F. R. Trombley, 'Korykos in Cilicia Trachis: the economy of a small coastal city in Late Antiquity- A Précis', *The Ancient History Bulletin*, 1.1 (1987), pp. 18-19.
[64] J. Russell, 'Anemourion', in A. E. Laiou (eds), *The economic history of Byzantium from the seventh through the fifteenth century* (3 vols, Washington, 2002), i, pp. 222-3.
[65] Russell, 'Anemourion', p. 223.
[66] For the following, S. Mitchell, *A history of the Later Roman Empire, AD 284-641*, 2nd ed (Malden, Oxford, West Sussex, 2015), pp. 128, 366; S. Mitchell, 'Olive cultivation in the economy of Roman Asia Minor', in S. Mitchell, C. Katsari (eds), *Patterns in the economy of Roman Asia Minor* (Swansea, 2005), p. 102; Iacomi, 'Some notes', pp. 27-8.

paid by those bringing goods to Constantinople, names 'Cilicians' specifically, alongside other types of merchants who are distinguished by product (not geographic association). It has been argued that the products mentioned in the inscription are those of the *annona* for Constantinople. Veronica Iacomi implies that the Cilicians mentioned ought to be associated with wine in particular. Although the singling out of Cilicians is interesting, the direct involvement with Cilicians (whatever this term my mean) and the *annona* is inconclusive, as we cannot be sure if the inscription is referring to *annona* shipments or not.[67] Nevertheless, the association of 'Cilicians' in the transport of goods near the capital attests to their involvement in wider economic exchange in the late antique period.

An alternative source that offers a more secure glimpse into the types of professions held by the inhabitants of the region comes from epigraphic attestations in funerary inscriptions.[68] Analysing the epigraphic evidence from Seleucia, Saint Thecla, Korasion, Diokaisareia and Olba and comparing these with western Cilicia, Günder Varinlioğlu has demonstrated the diversity and distribution of professions attested in these inscriptions.[69] These include jobs related to manufacturing crafts of various types of goods, ecclesiastical related posts, public service roles, food-related professions, retail jobs, finance related roles, and military, maritime and health related professions (and the various subcategories within these groups).[70] Although this source must be approached with caution, as it only provides a limited sample of information and is likely not representative of the region or professions held in general, it nonetheless offers valuable

[67] Perhaps 'Cilicians' refers to a person associated with that geographic area or a merchant more generally, in a similar way that 'Syrus' may have been understood as referring to a merchant (derived from the association of Syrians as merchants) in 5th or 6th century western sources, Ward-Perkins, 'Specialized production and exchange', p. 374.
[68] For a useful overview and analysis Varinlioğlu, 'Landscape', pp. 126-37.
[69] Those published up to 1998, Varinlioğlu, 'Landscape', p. 127, footnote, 181.
[70] Varinlioğlu, 'Landscape', table 3, graph 1, pp. 129-30.

insight into the livelihoods of inhabitants and the diversity of professions and trades that contributed to the Isaurian economy.

Evidence and past research of Lycia and Isauria

There are a limited number of literary sources concerning late antique southern Anatolia. References to the names of places can be found in lists such as the *Synekdemos* of Hierocles, for example.[71] These sources are useful as they may attest to the names of settlements, but they do not convey the historical reality of the occupation of a settlement at the listed location. Such lists do not offer detailed information about the size or population of a settlement, nor any information concerning the economic functioning of a site and so contribute little to an economic analysis. Hagiographic texts such as the aforementioned *Life of Saint Nicholas of Sion* and the *Miracles of Saint Thecla* offer glimpses into the activities in the vicinity of the monastery of Sion in the Alacadağ area behind Myra in Lycia and around the cult site of Thecla at Meryemlik in Isauria.[72] Literary sources note that Myra and Meryemlik may have received imperial benefaction in the late antique period, suggesting Lycia and Isauria were on the imperial radar.[73] In addition to the aforementioned funerary inscriptions of Isauria, another epigraphic source of note is the 'Road Monument' in Patara, Lycia. This monument, which was dedicated to Emperor Claudius, is inscribed with a road list of Lycia, therefore offering important information into the location of settlements and the distances between them, presumably around the time of its construction. It is therefore possible to determine the potential

[71] E. Honigmann, *Le Synekdèmos d'Hiéroklès et l'opuscule géographique de Georges de Chypre* (Bruxelles, 1939). See also W. M. Ramsay, *The historical geography of Asia Minor* (London, 1890).
[72] S. Fitzgerald Johnson, (trans.), 'Miracles of Saint Thekla', in *Miracle tales from Byzantium*, ed. A-M. Talbot, S. Fitzgerald Johnson (Cambridge, London, 2012), pp. 2-201.
[73] Justinian aided in the rebuilding of Myra, E. Jeffreys, M. Jeffreys, R. Scott, (trans.), *The chronicle of John Malalas. A translation* (Melbourne, 1986), p. 262; Zeno donated to 'Thecla at Seleucia', M. Whitby, (trans.), *The ecclesiastical history of Evagrius Scholasticus* (Liverpool, 2000), p. 142.

connectivity of certain identifiable settlements from such proxy material, but there is debate over how the monument ought to be interpreted.[74]

Given the limited nature of literary sources for Lycia and Isauria, archaeological evidence is the main source of information regarding the development of the economy and settlements of these regions. Early information concerning the ancient remains of Lycia and Isauria come from the observations of travellers across southern Turkey.[75] More recent systematic research of southern Anatolia has increased exponentially over the past few decades.[76] Yet, for both Lycia and Isauria, archaeological interest has tended to focus on coastal areas and the major cities of these regions. Fortunately, in more recent years, attention has expanded to inland and rural areas, as has interest in late antique remains, and is beginning to address geographical and chronological imbalances in previous research. However, despite the increasing attention paid to the material evidence of southern Anatolia, little has been done to synthesize the information for late antique settlement derived from the past 30 years of study, resulting in a disjointed picture of settlement in Lycia and Isauria. Thus, it is one of the main aims of this study to consolidate the archaeological information available for late antique Lycia and Isauria as far as possible.

A useful reference source for archaeological and historical information concerning Lycia and Isauria is the *Tabula Imperii Byzantini* series (hereafter TIB). Lycia features in

[74] F. Onur, '"The monument of the Roads" at Patara', in *Lukka to Lycia*, pp. 570-7.
[75] Such as C. Fellows, *Travels and researches in Asia Minor, more particularly in the province of Lycia* (London, 1852); A. C. Headlam, *Ecclesiastical sites in Isauria (Cilicia Trachea)* (London, 1892); G. E. Bean, *Turkey's southern shore: an archaeological guide* (London, 1968); G. E. Bean, *Lycian Turkey. An archaeological guide* (London, 1978). For a succinct summary of the history of research in Lycia, M. Zimmermann, 'The discovery of Lycian civilization', in *Lukka to Lycia*, pp. 4-9.
[76] This includes recent doctoral theses such as Commito, 'Southern Asia Minor'; Varinlioğlu, 'Landscape' which is a study of the settlement development of the southeastern corner of Isauria; C. M. Rice, 'Port economies and maritime trade in the Roman Mediterranean: 166 BC to AD 300' (DPhil thesis, University of Oxford, 2013); a current thesis is being completed by Audrey Scardina at the University of Edinburgh on the churches of Lycia.

the TIB volume 8 (2004) and Isauria in volume 5 (1990).[77] The TIB volumes are not without their faults, which are largely due to the variegated nature of the information they draw upon (for more on the TIB, see Chapter 4). Approached with caution, however, the TIB volumes are a significant source that allow for a regional study of Lycia and Isauria to be possible.

The information in the TIB can be supplemented by more recent archaeological research conducted in these regions.[78] An account of the projects and locations where archaeological work has been undertaken in Lycia would essentially equate to a list of the major cities of the province, so only a few of the most recent and relevant will be mentioned here. Long-term research projects have been undertaken at the settlements of Xanthus and Patara. Notable survey projects include those of the northeastern area of the province (the Bey Dağ area) and at Balboura in the northwest. Work in the Elmalı basin is also important as it investigates the development of a northcentral territory of Lycia that has lacked attention in the past. General interest in the history of Lycia is demonstrated in the recent publication *Lukka'dan Likya'ya Sarpedon ve Aziz Nikolaos'un Ülkesi- From Lukka to Lycia the land of Sarpedon and St. Nicholas* (2016), a useful bilingual but general source that sketches a broad outline of the developmental history of some of the major sites of Lycia over the *long durée*.[79]

For Isauria too, recent research adds to the information in the TIB 5. This information derives from the research conducted in the western coastal area of the region and at its southern extremity at Anemurium. Recent survey work has taken place in the southeast and eastern coastal areas of the province. Knowledge of inland Isauria comes from earlier archaeological investigation at Alahan and more recent survey of the upper

[77] TIB 5; TIB 8.
[78] For example, archaeological reports are often published in journals *KST*, *AST*, *ANMED*, *ADALYA*.
[79] Chapters are written by the scholars who also publish annual reports, *Lukka to Lycia.*

and lower Göksu Valley. This survey information is supplemented by the excavation of the mound Kilise Tepe, which is significant as it is one of the only excavated rural sites in southern Anatolia. These and other individual projects will be discussed in greater detail when the late antique settlement evidence of Lycia and Isauria is analysed and discussed (Chapter 4).

Methodological considerations related to the study of Lycia and Isauria

From these sources, I attempt to present the most up-to-date and comprehensive picture of the late antique settlement of Lycia and Isauria.[80] Despite best efforts to collate all available evidence concerning the late antique settlement of Lycia and Isauria that has derived from the past few decades of research, there are difficulties in accessing and synthesizing this information. A few points concerning the collection of information are critical to note. Discrepancies in the type of archaeological study conducted across Turkey, the locations where research has been conducted, differing levels of detail in archaeological publications and method/language of publication impact the arguments and conclusions I present.[81] In tandem with archaeological project publications, I have consulted preliminary annual research reports in order to attempt to analyse the most up-to-date information. Due to the repetitive nature of seasonal archaeological reports across publications, I have prioritised journals that are most accessible to me in order to strive for consistency of information.[82]

[80] Generally, I have focused on collecting information dating from the publication of the Tabula Imperii Byzantini series volumes on Lycia, Isauria and in the case of north central Anatolia, the TIB volume on Paphlagonia, to 2016; TIB 5, TIB 8, TIB 9.
[81] English, French and German publications have been considered. Turkish texts with summaries in these languages are also considered.
[82] Although summaries of archaeological research conducted in Turkey are available in journals such as *AST* and *KST*, the majority are published in Turkish. Therefore, the bilingual journal *ANMED* is an important resource although it is focused on research in Mediterranean areas of Turkey and not the Black Sea region.

I am also reliant on the identification and dating of ceramics and archaeological evidence made by scholars within the publications available. Chronological terms such as late antique, late Roman, and early Byzantine are variously used to refer to the period *c.* 3rd to 7th century in Anatolia. But it is not always clear as to what date ranges these terms are assigned. These terms are frequently used interchangeably which further muddles an attempt to interpret development over time. It is often the case that remains are simply referred to as Roman or Byzantine without any further chronological specification. It is also not uncommon for remains, such as a church or building, to be recorded without any indication of a date or contextualisation. On a similar note, although knowledge of eastern Mediterranean pottery has developed over the past few decades, our understanding and precise dating of certain ceramic categories, especially coarse ware, is still developing and are often roughly described as Roman or Byzantine and are only approximately dated (see Chapter 3, Chapter 7). These chronological issues make it difficult to determine the continuation of settlement or the exact period of time occupation of a site is thought to have occurred. When referring to dated remains, ceramic or architectural, I have no choice but to use the chronological terminology utilised to describe evidence in the publication in which it is referred.

Furthermore, there are challenges in consolidating and analysing evidence that derives from various archaeological methods (extensive or intensive survey versus excavation). The geographical areas covered by survey, the intensity of survey, visibility of remains (due to terrain, vegetation cover, or the perishability of ancient building materials), fieldwalking techniques and collection methods differ across archaeological projects. This poses difficulties when consolidating and interpreting evidence that is collected and analysed in various ways. For example, ceramics identified over the course

of a regional survey and those recovered in an excavation trench will differ, so find context is particularly important to consider when interpreting ceramic evidence.

There are also discrepancies in the analysis and presentation of data (quantified or qualified information) or methods of publication (preliminary report, project publication, language of publication), making it difficult to collate and synthesize information in a meaningful way. If remains are noted as being identified in the course of survey work, it is a challenge to determine their location on maps by description alone. Consequently, this too makes it difficult, particularly for churches, to cross-reference remains across publications. There is also the possibility that preliminary reports do not include all finds, so we may only be able to access a limited amount of valuable information. It is important to keep in mind that unfortunately, due to remains having been moved, disturbed, destroyed, or overlain by modern construction, evidence for ancient settlement is not always at hand.

Despite the challenges and limitations that accompany an attempt to consolidate ceramic and settlement evidence for Lycia and Isauria, a complex picture of the late antique settlement and economic networks of these regions may be gleaned. We may only be able to access a piece of the larger picture of late antique settlement of these regions, yet ongoing research helps to continually fill out the picture of settlement in these regions and offer insight into the economic networks of the late antique eastern Mediterranean world.

Chapter 3. Amphorae evidence of Lycia and Isauria

The study of late Roman transport amphorae has developed with increasing pace over the past decades. Understood as archaeological indicators of economic exchange networks, more attention has been paid to these vessels, their production, possible content, transport and consumption over time. Although our knowledge of amphorae has increased, we are still faced with lacunae in our understanding of certain aspects of these vessels, including detailed chronological development of amphorae types, pinpointing production sites and content, to name a few. Nevertheless, with the help of scientific analysis of ceramic fabrics, we now have to our advantage a growing corpus of information that allows preliminary conclusions to be drawn regarding the production and transport of amphorae. This growing corpus of data is helping to fill out the picture of the role amphorae played in the late antique period and the information they offer to the historical interpretation of economic exchange networks across the Mediterranean and beyond.

The evidence of amphorae identified at Lycian and Isaurian settlements is presented and analysed below. The purpose of this analysis is to investigate not only the exchange networks of coastal and inland settlements in these regions, but also to what degree inland settlements were connected to the trade of transport amphorae (in terms of supplying agricultural goods or receiving imports). What can amphora finds tell us about the involvement of Lycian and Isaurian settlements in exchange, and what did the settlements of these regions have to offer regional or Mediterranean economic networks?

Introduction and methodological considerations

Amphorae were used to transport a number of commodities, most notably oil, wine, and fish products, and are thus valuable proxy indicators of exchange patterns.[83] Just as the presence of amphorae may indicate the consumption of such goods at a settlement, the identification of possible kiln sites or amphorae production areas may indicate surplus agriculture cultivation, thus shedding light on how settlements may have contributed to and participated in interregional exchange. That is, a site of amphorae production suggests that surplus agricultural production was achieved, with surplus products being packaged in amphorae and exported for consumption elsewhere. Of course, it is also possible that surplus goods were transported on local and/or regional scales and did not travel in amphorae vessels. Thus, we may only be able to gain a glimpse of the production and exchange of goods, but it is a crucial glimpse nonetheless.

While utilising ceramic evidence has transformed our understanding of the late antique economy, there are a number of factors that need to be considered when analysing and interpreting amphorae evidence. Although well-represented international amphora types found in the Mediterranean are increasingly being better understood, study of more local or less well represented amphorae is still developing (see Section II). Our knowledge and identification of production sites is ongoing and there is a degree of ambiguity when amphorae types are assigned possible production locations based on visual markers alone such as clay characteristics or shape. While the integration of scientific analysis of clay is increasing, it is not widely applied.

The methodology of ceramic analysis employed in different studies is also important to consider. The way ceramics have been collected, analysed and published

[83] For a general overview, Peacock, Williams, *Amphorae.*

(whether this be by survey or excavation, or if assemblages are represented by sherd counts or percentage and if body sherds are included in counts) impacts the utilisation of this material for historical interpretation. Firstly, find context is important to consider, as finds from an expansive survey will differ from finds of an excavation in a residential or economic context (see below). Factors of visibility (such as vegetation growth and difficult terrain) may also impact the identification and collection methods of pottery in the field. Secondly, the degree of detail regarding ceramic assemblages in publications vary. Although the presence of certain amphorae types might be stated in archaeological publications, quantified data of the amphorae finds is not always given. This makes it difficult to discern chronological changes in assemblages or compare assemblages across wider areas. Thirdly, it is not uncommon that various typological schemes are employed by scholars when describing amphorae finds, again, making it difficult to interpret amphorae data and draw comparisons between assemblages. Thus, information regarding amphorae finds must be approached with caution and an awareness of the methods employed in the collection and analysis of ceramic evidence.

Knowledge of the proposed origin of amphorae types is particularly significant in the pursuit of investigating the economic networks of regions. By identifying the potential origin of an amphora encountered at a site, we may then begin to discern exchange links and the needs of settlements, if the content of the vessels may be confidently hypothesised. Yet, it is not such a straight forward task to determine the origin of a vessel (as one amphorae type may have been produced in a number of areas, and the origin of some amphorae types remain speculation) or its content (amphorae may have been re-used and so contained various goods and it is possible that one vessel type was used to contain different products). There may be a chronological difference between the production date of the vessel and the context in which it is found, particularly if a vessel

was re-used (see for example the discussion of amphorae finds at Myra, below). Issues with stratigraphy may affect the identification and dating of a vessel and cause confusion in its interpretation. Nevertheless, we may begin to piece together the economic networks of southern Anatolian regions from this evidence.

It is important to keep in mind when approaching the following discussion that for Lycia and Isauria, amphorae evidence from coastal areas predominate and a lack of quantitative data limits analysis. Moreover, classification schemes differ in publications, which in turn impacts our analysis of potential late antique economic networks of these regions. As a result, it is crucial to ask to what degree the conclusions drawn from this evidence reflect an accurate account of the historical reality of a settlement's participation in exchange and how research methodologies impact interpretation. It is also important to note that the discussion of the amphorae identified in Lycia and Isauria is dependent on the identification of the ceramic evidence by scholars working in these areas and the information available in publications.

Amphorae classification

For the late Roman Mediterranean, the most well-represented amphorae types are often classified as 'Late Roman amphora' (LR) followed by the number assigned to the type.[84] This classification was used by John Riley in his analysis and classification of amphorae at Carthage and Benghazi and is often employed in ceramic analysis (Figure 5).[85] Although this classification scheme predominates, there are many others and it is

[84] I have predominantly focused my research on identifying the well-known LR types at sites. Other amphorae are noted and discussed below.

[85] For a useful, succinct overview of late Roman amphorae studies, O. Karagiorgou, 'Mapping trade by the amphora', in M. M. Mango (eds), *Byzantine trade, 4th-12th centuries. The archaeology of local, regional and international exchange: papers of the thirty-eigth spring symposium of Byzantine studies, St John's College, University of Oxford, March 2004* (Farnham, Burlington, 2009), pp. 37-58.

also often the case that ceramicists employ their own unique categorisation for an assemblage, which makes it difficult to cross-reference various categorisation methods. In addition, the LR classification does not incorporate all known amphorae types. It is also the case that the LR classification is not uniform. The application of the LR classification by Riley differs between publications (see below). A more recent classification scheme utilised by D. P. S Peacock and D. F. Williams consolidates late Roman amphorae classifications as 'Classes'.

The LR and Class categorizations have been presented here so as to provide a foundation for the predominant terminology utilised in the archaeological reports that will be discussed below.[86] The following is a summary of classifications and general information concerning late Roman amphorae (there are many more amphora types than are presented here and only those that are referred to in the following discussion are included). The purpose of these charts is to illustrate the complexity of amphorae categorisation schemes and the differences between them (indicated below in bold). More recent research has added to our knowledge of these types and further information is given in accompanying footnotes. A summary of LR types and my use of amphorae terminology is presented below.

[86] Additional categorisation schemes will be described also. For a useful reference source, 'Roman Amphorae: a digital resource. University of Southampton, 2005 (updated 2014). Homepage', http://archaeologydataservice.ac.uk/archives/view/amphora_ahrb_2005/index.cfm.

Chart 1: The Amphorae Classification of Peacock and Williams (with additional notes)

Peacock and Williams	Possible production area (some areas not confirmed)	Possible primary content	Classification reference
Class 44 (variants, 'a' 'b')[87]	North Syria, Cyprus, southwest coastal Asia Minor, the Aegean (Cilicia)[88]	Oil and/or wine[89]	Carthage LR amphora 1; Benghazi LR amphora 1; British Bii
Class 43[90]	Uncertain. Aegean area (see below)	Unknown. Likely oil predominantly, possibly wine.[91]	Carthage LR amphora 2; Benghazi LR amphora 2
Class 45[92]	Uncertain. Eastern Mediterranean, likely Asia Minor	Unknown	Carthage LR amphora **3**; Benghazi LR amphora **10**
Class 49[93] (possibly preceded by Class 48, which is a bag-shaped amphora possibly Palestinian)	Gaza, Palestine	Most likely wine, possibly oil	Carthage LR amphora 4
Class 52[94]	Egypt	Wine?	Carthage LR amphora 7
Class 51[95]	Spain, North Africa, elsewhere?	Unknown	Benghazi LR amphora 8; 'Spatheion'
Class 54[96]	Initially unknown, but production has been identified (see below)[97]	Unknown	Benghazi LR amphora 13

[87] Peacock, Williams, *Amphorae*, pp. 185-7.
[88] LR1 kilns have been identified in Cilicia and Cyprus, 'Roman Amphorae: a digital resource. Late Roman Amphora 1', http://archaeologydataservice.ac.uk/archives/view/amphora_ahrb_2005/details.cfm?id=236&CFID=7469c890-edf0-49b5-bba7-0cfba4421d0d&CFTOKEN=0 (15 January 2018); S. Demesticha, 'Late Roman amphora typology in context', in N. Poulou-Papadimitriou, E. Nodarou, V. Kilikoglou (eds), *LRCW 4 Late Roman coarse wares, cooking wares and amphorae in the Mediterranean. Archaeology and archaeometry. The Mediterranean: a market without frontiers* (2 vols, Oxford, 2014), i, p. 601.
[89] See above note. Also, Decker, 'North Syria', pp. 78-80.
[90] Peacock, Williams, *Amphorae*, pp. 182-4.
[91] On LR2 and its content (wine and oil have been proposed, Karagiorgou favours the likelihood of oil as the principal content), O. Karagiorgou, 'LR2: a container for the military *annona* on the Danubian Border?', in S. Kingsley, M. Decker (eds), *Economy and exchange in the east Mediterranean during Late Antiquity: proceedings of a conference at Somerville College, Oxford - 29th May, 1999* (Oxford, 2001), pp. 146-9.
[92] Peacock, Williams, *Amphorae*, pp. 188-90.
[93] Peacock, Williams, *Amphorae*, pp. 196-9.
[94] Peacock, Williams, *Amphorae*, pp. 204-5.
[95] Peacock, Williams, *Amphorae*, pp. 202-3.
[96] Peacock, Williams, *Amphorae*, pp. 208-9.
[97] For general information see, 'Roman Amphorae: a digital resource. Late Roman Amphora 13', http://archaeologydataservice.ac.uk/archives/view/amphora_ahrb_2005/details.cfm?id=237&CFID=7469c890-edf0-49b5-bba7-0cfba4421d0d&CFTOKEN=0 (15 January 2018).

Chart 2: Carthage LR classification scheme (proposed production areas of amphorae types)[98]

Classification	Possible Origin
Carthage LR1	Northeast Mediterranean
Carthage LR2	Unknown, possibly Aegean
Carthage LR3	Asia Minor
Carthage LR4	Palestine
Carthage LR5 and LR6	'Bag shaped amphora', Palestine; LR6 is a variant
Carthage LR7	Nile area

Chart 3: Benghazi LR Classification scheme (description and potential production area of amphorae types)[99]

Classification	Possible Origin
Late Roman Amphora 1 (Carthage Late Amphora 1) variants	Southwest coastal Turkey, Antioch area, Cyprus (northeast Mediterranean)
Late Roman Amphora 2 (Carthage Late Amphora 2)	Unknown, possibly Aegean
Late Roman Amphora 3 (**Carthage Late Amphora 4**)	Possibly Gaza
Late Roman Amphora 4 (**Carthage Late Amphora 5**)	Bag-shaped, Palestine
Late Roman Amphora 5	Similar to LR Amphora 4, smaller. Uncertain, possibly Palestinian
Late Roman Amphora 6 (**Carthage Late Amphora 7**)	Nile, Egypt
Late Roman Amphora 7	Description only
Late Roman Amphora 8 (Spatheion)	LR8a- possibly different sources; LR8b- uncertain, possibly Africa
Late Roman Amphora 10 (**Carthage Late Amphora 3**)	The later version of Mid Roman Amphora 3 (same fabric. On Mid Roman Amphora 3, Riley, 'Coarse pottery', p. 184. Origin uncertain, possibly western Asia Minor)
Late Roman Amphora 13	Uncertain, possibly Turkey

[98] J. A. Riley, 'New light on relations between the eastern Mediterranean and Carthage in the Vandal and Byzantine periods: the evidence from the University of Michigan Excavations', in *Actes Colloque sur la Ceramique Antique Carthage 23-24 Juin 1980* (Carthage, 1982), pp. 111-22.
[99] J. A. Riley, 'The coarse pottery from Berenice', in J. A. Lloyd (eds), *Excavations at Sidi Khrebish Benghazi (Berenice)* (3 vols, Tripoli), ii, pp. 212-36.

The information presented above can be summarized as follows: LR1 are thought to have been produced in the regions of Cilicia, north Syria and Cyprus, and importantly, LR1 kilns have been identified in Isauria, eastern Cilicia and Cyprus (see below).[100] Recent archaeological research has identified LR1 and LR2 kilns on eastern Aegean islands.[101] These discoveries therefore expand the production area of LR1 from the northeastern Mediterranean to the Aegean and confirm a production area of LR2 in the Aegean. Depending on the classification scheme, LR3 may be amphora from Asia Minor or the Gaza region.[102] LR4, LR5,[103] LR6 are predominately associated with a Palestinian bag-shaped amphora tradition (the exception is the Benghazi LR amphora 6 classification that refers a type possibly from Egypt).[104] Carthage LR7 are assigned an Egyptian origin.[105] LR8 are assigned an African origin. Lastly, LR13 kilns have been identified on in the eastern Mediterranean (for more in LR13 see below).[106]

---

[100] S. Demesticha, D. Michaelides, 'The excavation of a Late Roman 1 amphora kiln in Paphos', in E. Villeneuve, P. M. Watson (eds), *La céramique byzantine et proto-islamique en Syrie-Jordanie (IV^e^-VIII^e^ siècles apr. J.-C.): actes du colloque tenu à Amman les 3, 4 et 5 décembre 1994* (Beyrouth, 2001), pp. 289-96.

[101] Deligiannakis, *Dodecanese*, p. 89; 'Roman Amphorae: a digital resource. Late Roman Amphora 2', http://archaeologydataservice.ac.uk/archives/view/amphora_ahrb_2005/details.cfm?id=239&CFID=7469c890-edf0-49b5-bba7-0cfba4421d0d&CFTOKEN=0 (16 January 2018).

[102] 'Roman Amphorae: a digital resource. Late Roman Amphora 3', http://archaeologydataservice.ac.uk/archives/view/amphora_ahrb_2005/details.cfm?id=240&CFID=7469c890-edf0-49b5-bba7-0cfba4421d0d&CFTOKEN=0 (24 November 2017).

[103] On Palestinian LR4 and LR5 and wine likely being the primary content see Kingsley, 'Palestinian wine', pp. 49-51.

[104] LR5 are also attributed to northern Egyptian production from the late-5th century on, 'Roman Amphorae: a digital resource. Late Roman Amphora 5', http://archaeologydataservice.ac.uk/archives/view/amphora_ahrb_2005/details.cfm?id=267&CFID=7469c890-edf0-49b5-bba7-0cfba4421d0d&CFTOKEN=0 (24 November 2017). LR6 is attributed to the Palestinian bag-shaped tradition at 'Roman Amphorae: a digital resource. Late Roman Amphora 6', http://archaeologydataservice.ac.uk/archives/view/amphora_ahrb_2005/details.cfm?id=351&CFID=7469c890-edf0-49b5-bba7-0cfba4421d0d&CFTOKEN=0 (24 November 2017).

[105] 'Roman Amphorae: a digital resource. Late Roman Amphora 7', http://archaeologydataservice.ac.uk/archives/view/amphora_ahrb_2005/details.cfm?id=243&CFID=7469c890-edf0-49b5-bba7-0cfba4421d0d&CFTOKEN=0 (24 November 2017).

[106] On Cyprus 'Roman Amphorae: a digital resource. Late Roman Amphora 13', http://archaeologydataservice.ac.uk/archives/view/amphora_ahrb_2005/details.cfm?id=237&CFID=7469c890-edf0-49b5-bba7-0cfba4421d0d&CFTOKEN=0 (16 January 2018); and apparently in the Aegean, S. Demesticha, 'Amphora production on Cyprus during the late Roman period', in Ch. Bakirtzis (eds), *VIIe Congrès international sur la céramique médiévale en Méditerranée, Thessaloniki, 11-16 Octobre 1999: actes* (Athens, 2003), pp. 469-70.

From the charts and summary presented above, the complexity of amphorae classifications become apparent. Due to differences in categorisation methods, it is not always clear what categorisation an author is using in publications if they do not explicitly state the origin from where they think a vessel is from. For the following, I will use the categorisation used by authors in publications when describing the vessels identified at a site and the suspected origin of a vessel as described by the author when possible. When I refer to LR amphorae, I will use the Carthage Late Roman Amphorae categorisation method.

Amphorae production: southern Turkey

As mentioned above, attempting to determine the location of possible late Roman amphorae production areas is of importance, as the manufacture of these vessels suggests that areas with which they are associated, achieved surplus production and that this surplus was then exported in amphorae. The identification of late Roman amphorae production sites and kiln structures is an ongoing process. Most relevant to this study is the question of LR1 production in southern Anatolia. Based on the clay features of LR1, production of this amphorae type is suspected to have taken place in northern Syria, the south coast of Turkey and Cyprus. Importantly for this study, the discovery of kiln sites in eastern Isauria (at Elaiussa-Sebaste and Soli-Pompeiopolis) confirms LR1 production along this coastline (the questions of whether or not LR1 production can be determined elsewhere in Isauria will be discussed below). But the question of how far west LR1 production occurred along the southern Anatolian coast remains open.

In a 1988 paper, Jean-Yves Empereur and Maurice Picon suggested 20 potential production areas/kiln sites of LR1, including two in Lycia, without providing detailed

evidence of kiln structures in the proposed Lycian locations.[107] Based on clay composition, certain areas of Lycia are considered to be contenders as sites of LR1 production.[108] In a paper published the following year, in which Empereur and Picon describe their survey of kiln sites along the southern Anatolian coast (evidence for kiln sites in eastern Cilicia, Cyprus, Rhodes and to the west of Lycia are described), they do not discuss LR1 production in Lycia as their travels did not extend past Elaiussa-Sebaste (modern Ayaş), therefore, the extent of production remains unknown.[109]

According to the current state of research, no tangible evidence of late Roman amphora kilns has been identified in Lycia to date. While there is the possibility that Lycia was an area of LR1 production, the fact that there has yet to be kiln structures or evidence of LR1 amphora production in Lycia means that LR1 production in Lycia is unlikely. Therefore, the following conclusions of Lycian trade and consumption of late Roman amphorae are based on the current evidence available.

Lycia

First, the evidence of amphorae finds at the Lycian harbour sites Patara and Andriake will be discussed, followed by the settlements of coastal/near-coastal sites including Xanthus, Letoon, Limyra, Myra, Rhodiapolis and Kyaneai. The last site from

[107] J-Y. Empereur, M. Picon, 'The production of Aegean amphorae: field and laboratory studies', in R. E. Jones, H. W. Catling (eds), *New aspects of archaeological science in Greece* (Athens, 1988), pp. 33-8 (for the locations see figure 21, p. 35).
[108] D. F. Williams, 'An integrated archaeometric approach to ceramic fabric recognition. A case study on Late Roman Amphora 1 from the eastern Mediterranean', in J. Mª. Gurt i Esparraguera, J. Buxeda i Garrigós, M. A. Cau Ontiveros (eds), *LRCW 1 Late Roman coarse wares, cooking wares and amphorae in the Mediterranean: archaeology and archaeometry* (Oxford, 2005), p. 617, but notes the 'geology of some of the more westernly kiln sites is different', casting doubt on the possible Lycian production; H. Elton, 'The economy of southern Asia Minor and LR 1 amphorae', in J.Mª. Gurt i Esparraguera, J. Buxeda i Garrigós, M. A. Cau Ontiveros (eds), *LRCW 1 Late Roman coarse wares, cooking wares and amphorae in the Mediterranean: archaeology and archaeometry* (Oxford, 2005), p. 691.
[109] J-Y. Empereur, M. Picon, 'Les régions de production d'amphores impériales en Méditerranée orientale', in *Amphores romaines et histoire économique: dix ans de recherche* (Rome, 1989), pp. 236-43.

which ceramic evidence will be discussed is from the northern reaches of Lycia, Balboura. Although the evidence of Balboura is not representative of Lycia's interior, information from the settlement illuminates the differences in amphorae evidence between coastal sites and inland settlement (Figure 6).

Patara

Archaeological work has been ongoing at this harbour site since 1988, yet information concerning the ceramics of Patara is unfortunately minimal (Figure 7). Systematic study of the ceramics only started recently in the late 1990s.[110] Based on the preliminary study of a sample of late antique and early Byzantine amphorae of Patara, a type described as a 'Gaza-type' is given as an example of imported ware.[111]

In terms of pottery production at Patara, a number of kilns have been identified across the city but the products and chronological period of use of these kilns remain ambiguous.[112] From the evidence currently available, kilns dated to the late antique period have been identified in the city but their products, such as amphorae, is unconfirmed. For example, a large share of the information derives from what has been preliminarily identified as a potter's quarter in an area that is known as Tepecik.[113] Unfortunately, information is rather piecemeal and detailed information concerning the products manufactured at these kilns is unavailable. There are kiln sites in different areas around Tepecik, at the necropolis and acropolis, which possibly functioned in different

[110] T. Korkut, 'Die spätantike und frühbyzantinische Keramik aus Patara', in B. Böhlendorf-Arslan, A. O. Uysal, J. Witte-Orr (eds), *Çanak. Late antique and medieval pottery and tiles in Mediterranean archaeological contexts. Proceedings of the first international symposium on Late Antique, Byzantine, Seljuk, Ottoman pottery and tiles in archaeological context (Çanakkale, 1-3 June 2005)* (Istanbul, 2007), p. 147.
[111] Korkut, 'Die spätantäke', pp. 150, 164-5. Examples included in the sample catalogue are dated *c*. 5th-7th century.
[112] E. Dündar, 'Ceramics in Lycia: an overview on production and trade', in *Lukka to Lycia*, pp. 514-15.
[113] F. Işık, 'Patara in 2004', *ANMED*, 3 (2005), p. 62.

periods.[114] It is thought that the Tepecik acropolis kiln, which had two functioning periods – the first phase, from the Hellenistic period to the 2nd century and the second phase, following minor alterations until the late Roman period- produced early Roman amphorae and lekanai, and a form of Red Slip Ware.[115] The supposed early Roman amphorae production of this kiln is not elaborated upon.

A structure in the area of the Tepecik necropolis was used as a ceramic atelier in its third phase of use (5th-6th centuries), but the products of the workshop are unknown.[116] In a different publication a kiln identified near the Tepecik necropolis is dated to the Hellenistic period to the 4th century, the production types of which could not be determined.[117] Roman pottery dating from the 2nd and 4th century is described as being found in a kiln in the Tepecik necropolis area (based on the description, likely the latter of the aforementioned two described above). It appears that among the finds were early Roman amphorae, but the find context of these ceramics is not specified.[118] They may be imported vessels or were utilised as storage containers in this artisanal area and are by-products of the commercial nature of the site.

In another location of the city by the so-called cemetery church and the Günlük tomb, a further five kilns have been discovered. They are dated to the 3rd to 6th centuries and produced pots, amphora (unspecified and undated), roof tiles and bricks.[119] Two

[114] Dündar, 'Ceramics in Lycia', pp. 514-15; E. Dündar, 'The ceramics from Patara: investigations, productions and trade. Past studies – future projections', in H. İşkan, F. Işık (eds), *From sand into a city. 25 years of Patara excavations. Proceedings of the international symposium of 11-13 November 2013 Antalya* (Istanbul, 2015), pp. 204-5.
[115] Dündar, 'The ceramics from Patara', pp. 204-5.
[116] B. Varkivanç, 'Patara'da bir Seramik İşliği- A ceramic atelier at Patara', *ADALYA*, 5 (2001-2002), pp. 144-5 (Turkish article, English summary).
[117] Dündar, 'The ceramics from Patara', p. 204.
[118] G. Işın, 'The Hellenistic and Roman pottery of Patara', in C. C. Mattusch, A. A. Donohue, A. Brauer (eds), *Proceedings of the XVIth International Congress of Classical Archaeology, Boston, August 23-26, 2003. Common ground: archaeology, art, science, and humanities* (Oxford, 2006), p. 100; Dündar, 'The ceramics from Patara', p. 204, footnote 54.
[119] Dündar, 'The ceramics from Patara', p. 204. For an English abstract of a Turkish text that discusses these finds see, Ş. Özüdoğru, E. Dökü, 'Patara Seramik Fırınları – Pottery kilns in Patara', *Seres 2007 IV. Uluslararası Katılımlı Seramik, Cam, Emaye, Sır ve Boya Semineri 26-28 Kasım 2007* (Eskişehir, 2007), pp. 399-400.

pictures that accompany a Turkish text describing this kiln show amphorae that are labelled as being from the area, but are not explicitly described as products and so may be imports to the site.[120] The toes of these pictured amphorae are pointed, which suggests that they are not to be identified with LR1 or LR2, which tend to have a round bottom. Some examples of LR2 have a small knob at their base, but such knobs appear to be smaller than the pictured examples from Patara.[121] Although LR3 amphorae may have similar pointed toes,[122] the Patara examples have more circular elongated bodies than LR3. I would suggest that the Patara examples shown in these pictures most resemble Agora G199 type amphorae (also known as Mid Roman Amphora 4, Pinched Handle amphora), the main date range of this type being the early Roman period.[123] Agora G199 were among the early Roman amphorae types discovered in the aforementioned Tepecik necropolis kiln as well.[124] Yet, the pictured Pataran examples, although perhaps having more circular bodies, may also resemble a variant of Peacock and Williams' Class 10 (Dressel 2-4, 'Koan Type' amphorae) dated to the early Roman period as well.[125] My observations are speculation based on picture evidence. In sum, like the Tepecik necropolis kiln, the potential amphorae products of this kiln cannot be determined and a lack of information does not aid in determining the origins of potential amphorae imports. Elsewhere, 'large ceramics' - amphorae (unspecified and undated), bricks and roof tiles are given as examples - are thought to have been produced at a kiln discovered in the

[120] Özüdoğru, Dökü, 'Patara Seramik Fırınları – Pottery kilns in Patara', figs. 13, 14, p. 411. In the part of the Turkish text where the products of the kiln seem to be described Rhodes and Kos are mentioned but the context is unclear, at p. 405.
[121] Karagiorgou, 'LR2', fig. 7.1, p. 130; 'Roman amphorae a digital resource. Late Roman Amphora 2', http://archaeologydataservice.ac.uk/archives/view/amphora_ahrb_2005/details.cfm?id=239&CFID=7469c890-edf0-49b5-bba7-0cfba4421d0d&CFTOKEN=0 (9 February 2018).
[122] Those pictured in Peacock, Williams, *Amphorae*, p. 188.
[123] It is difficult to tell if the toes of the amphorae pictured have been broken off, but they resemble an example of Agora G199 at 'Roman amphorae: a digital resource. Agora G199', http://archaeologydataservice.ac.uk/archives/view/amphora_ahrb_2005/details.cfm?id=369&CFID=7469c890-edf0-49b5-bba7-0cfba4421d0d&CFTOKEN=0 (8 February 2018).
[124] Dündar, 'The ceramics from Patara', p. 204, footnote 54.
[125] Peacock, Williams, *Amphorae*, pp. 105-6.

palaestra of the Harbour Bath of the city, which is dated to Late Antiquity.[126] Again, detail of the products of this kiln and confirmation of amphorae production is not explicit.

From such vague descriptions it is difficult be certain of the types of amphorae produced at Patara and during what chronological period.[127] Given the fact that there has been no reference to LR production in Patara in other publications, it is unlikely LR production is confirmed at this location. Hopefully further research can clarify this point in the future.[128] With such little detail, the only possible conclusion that can be drawn from the available information is that Patara possibly imported Gazan amphora(e?). Imported ware would be expected in the ceramic record, however the lack of quantitative data makes historical interpretation futile at this point in time. Nevertheless, this find is notable as it shows that Gaza-type amphorae reached the southwestern Lycian coast.

Xanthus and Letoon

Xanthus and Letoon lie five km apart as the crow flies.[129] As the two sites have been studied together and predominately by the same team, they are both discussed here. Information concerning the amphorae identified at Xanthus and Letoon is available but is sporadically discussed across publications. In order to gain an idea of the types of late Roman amphorae that reached these sites, I have collated information concerning late Roman ceramics presented in annual reports and articles discussed by those involved with the research conducted by the French team of scholars working here (up until 2011) in the journal series *Anatolia Antiqua*. Articles that discuss late Roman amphorae from Xanthus and Letoon beyond this journal series have been consulted as well and are cited below.

[126] Dündar, 'The ceramics from Patara', p. 205.
[127] Dündar, 'The ceramics from Patara', pp. 204-5.
[128] Evidence of Roman and late Roman (Byzantine) amphorae from the site is being prepared for a forthcoming publication, Dündar, 'The ceramics from Patara', p. 204, footnote 52.
[129] J. des Courtils, *A guide to Xanthos and Letoon* (Istanbul, 2003), p. 130.

As mentioned above, information concerning the late Roman amphorae identified at Xanthus and Letoon is not always easily accessible. For example, in some articles, although the technical name of the excavation section and stratigraphic unit of ceramic finds are given, there is a lack of contextualization for the reader as to where the excavation section is in the overall plan of the site.[130] In some cases, ceramic finds are quantified, in others, finds are only described. In addition, in the case of the research of the Lycian acropolis of Xanthus (see below), the ceramics are not published sequentially in the order of excavations seasons, which causes confusion when cross-referencing finds. In some reports, information regarding the ceramics of Xanthus is very detailed and quantified, but presented in a way that does not necessarily aid in an economic analysis as amphorae are counted together but not distinguished by type.[131] Generally, information predominately concerns earlier chronological periods, particularly Classical and Hellenistic finds, fine wares and Roman Imperial period amphorae. For Xanthus, while the Archaic and Classical period ceramics have been systematically studied and published, the late Roman ceramic assemblages from the site have yet to receive such attention.[132] Thus, data concerning late Roman amphorae is minimal.

Given the nature in which amphorae are discussed, the following provides only a general overview of the types of late Roman amphorae identified at Xanthus and Letoon. From the so-called 'la maison de l'acropole lycienne' in Xanthus, in section 24NE layers 56-64, among the ceramic finds were LR4b (Figure 8, Figure 9).[133] In a different report,

[130] For example, E. Pellegrino, 'Le matériel céramique issu des fouilles menées en 1995 et 2000 sur l'acropole lycienne de Xanthos', *Anatolia Antiqua*, 10 (2002), p. 245, footnote 1.
[131] For example, in J. des Courtils, D. Laroche, *et al*., 'Xanthos et le Létôon. Rapport sur la campagne de 1999', *Anatolia Antiqua*, 8 (2000), table 1, table 2, pp. 349, 352.
[132] H. Metzger, *Les céramiques archaïques et classiques de l'acropole lycienne*, Fouilles de Xanthos 4 (Paris, 1972).
[133] des Courtils, *et al*., 'Xanthos Létôon 1999', p. 350; Séverine Lemaître too mentions LR1 and LR4 from 24NE, S. Lemaître, 'La Lycie et les échanges commerciaux dans l'Antiquité: les données du mobilier amphorique. Etude préliminaire', in K. Dörtlük, B. Varkivanç, T. Kahya, J. des Courtils, M. D. Alparslan, R. Boyraz (eds), *The IIIrd symposium on Lycia 07-10 November 2005 Antalya* (2 vols, Antalya, 2006), i, p. 391.

from the same house, the identification of several Gazan amphorae and LR1 are noted.[134] A subsequent paper (2002) mentions that LR1, LR6 and LR7 were found on the Lycian acropolis from the same building (in sections 24NE and 28NE).[135] In addition, in a 2003 paper, which discusses the 1998-1999 finds from the Lycian acropolis, the amphorae discussed are quantified: two LR1, two LR4b, and three LR6 were identified in their respective find spots (24NE).[136] From the same house but a different section, 19NE, there is mention of a Sardis type LR3a amphora dated to the end of the 4th to the mid-5th century.[137]

In what appears to be a summary (2007) of the ceramic finds identified at the 'maison de l'acropole lycienne' it is noted that overall, amphorae are not well-represented. The amphorae discussed include: LR1 (a total of 11, comprised of four LR1a, and seven LR1b, thought to resemble Cypriot production); LR3 (three finds from the area of Sardis); LR4 (six from Gaza); and LR 5/6 (eight of Palestinian manufacture). Some African amphorae fragments were also discovered but could not be identified.[138] Note that in this paper the previous identification of LR7 is not mentioned, and it is possible that the classification of the find was changed.

Elsewhere in the city, over the course of research into a possible glass atelier, ceramics including Gaza type, LR4b, LR1 and LR3 (of Ephesus) amphorae were encountered.[139] Work conducted in the area of the 'Inscribed Pillar' and the west agora,

[134] J. des Courtils, *et al*., 'Xanthos. Rapport sur la campagne de 2000', *Anatolia Antiqua*, 9 (2001), p. 232.
[135] Pellegrino, '1995 et 2000', p. 246.
[136] E. Pellegrino, 'Présentation des céramiques issues des fouilles menées en 1998-1999 sur l'acropole Lycienne de Xanthos', *Anatolia Antiqua,* 11 (2003), pp. 219-20.
[137] E. Pellegrino, 'Notes sur un dépotoir de céramique du III^e^ s. ap. J.-C. et la datation de la résidence du Nord-Est de l'acropole lycienne de Xanthos', *Anatolia Antiqua*, 12 (2004), p. 129.
[138] E. Pellegrino, 'Les céramiques de la maison du nord-est de l'acropole lycienne de *Xanthos*: un ensemble original de la fin du VI^e^- début du VII^e^ s. apr. J.-C.', in M. Bonifay, J-C. Tréglia (eds), *LRCW 2 Late Roman coarse wares, cooking wares and amphorae in the Mediterranean: archaeology and archaeometry*, (2 vols, Oxford, 2007), ii, p. 660.
[139] D. Foy, 'Une production de verre à Xanthos au début de l'époque byzantine', *Anatolia Antiqua*, 15 (2007), pp. 233-46.

revealed further LR1.[140] LR4 is also noted as coming from tomb 64, located in the church on the agora.[141]

From the overview presented above, it becomes apparent that information concerning late Roman amphorae identified at Xanthus is far from ideal. Therefore, it must be kept in mind that only a small sample of information is available. Despite this, this sample demonstrates that, if not in large numbers, a diverse range of amphorae types - such as LR1, LR3, LR4, LR5/6, and LR7(?) – have been identified. How representative this sample of finds is for the city more generally, is an open question.

Similarly, information concerning the late Roman amphorae finds from Letoon too lacks detail. Séverine Lemaître has presented an overview of amphorae finds from Letoon, spanning from *c*. the 5th/4th century BC to the 7th century AD, which derive from three different find contexts – the west portico (NO/E1), area NE/D-E17 (where earlier finds derive) and the theatre (Figure 10). Over the course of research, late Roman amphorae types LR1 and LR2 were documented.[142] In a different publication LR1 and LR2 finds are corroborated and an African amphora type Keay LVA dated to the first half of the 6th century by the author, is also mentioned as coming from the theatre.[143] Otherwise, information concerning the amphorae of Letoon in annual reports focuses on Imperial period finds.[144]

Despite the challenges of consolidating this ceramic information, a general picture of the types of late Roman amphorae that reached Xanthus and Letoon can be grasped.

---

[140] J. des Courtils, 'Xanthos. Rapport sur la campagne 2010', *Anatolia Antiqua*, 19 (2011), p. 325.
[141] des Courtils, *et al*., 'Xanthos Létôon 1999', p. 359.
[142] The finds are presented in two similar articles, S. Lemaître, 'La Lycie et les échanges commerciaux dans l'antiquité les données du mobilier amphorique, premiers éléments de réflexion', *Revue Archéologique*, 1 (2007), pp. 174-80; Lemaître, 'Etude préliminaire', pp. 385-99.
[143] A. Badie, S. Lemaître, J-C. Moretti, 'Le théâtre du Létôon de Xanthos. Etat des recherches', *Anatolia Antiqua*, 12 (2004), pp. 174, 177.
[144] For example, J. des Courtils, D. Laroche, 'Xanthos et le Létôon: rapport sur la campagne de 2003', *Anatolia Antiqua*, 12 (2004), pp. 332-3; D. Laroche, *et al*., 'Rapport sur les travaux de la mission archéologique du Létôon en 2006', *Anatolia Antiqua*, 15 (2007), pp. 330-2.

The sample of information presented above demonstrates that eastern Mediterranean, Aegean, Palestinian and possibly Egyptian amphorae made their way to this Lycian area. Although the quantification of finds is questionable, the rather frequent find of Palestinian amphorae is notable, suggesting that there may have been a demand for Palestinian wine at Xanthus.[145] The presence of LR4 and LR5/6 at Xanthus complements the identification of Gaza-type amphorae identified at Patara, mentioned above.

Myra

Now overbuilt by modern Demre and covered by metres of silt, accessibility to the ancient remains of Myra is limited. Information concerning the late antique ceramics of the city itself is minimal. Limited information derives from the pottery of the Saint Nicholas church.[146] As this church has been the object of renovation and restoration over centuries and continues to be an important pilgrimage site, the ceramic assemblage ranges from various contexts and chronological periods.

415 fragments of amphorae, which yielded 35 complete vessels, have been identified.[147] Ayşe Ç. Türker, who presents the pottery finds, employs a unique typological scheme in categorising the amphorae, making a comparison between this and other classifications and assemblages difficult. Classified into seven 'Types' the sherds were found both in interior and exterior areas of the structures at Demre.[148] Of the seven Types, Type 6 concerns us here as it is dated to the 6th century. Only one example of a Type 6 amphora was identified in an unstratified context and is dated based on a parallel

[145] See footnote 103 (p. 50) above on wine being the likely content of LR4 and LR5.
[146] A. Ç. Türker, *Demre- Myra Aziz Nikolaos Kilisesi Bizans Dönemi Sırsız Seramikleri- Byzantine unglazed pottery of Saint Nicholas church at Demre- Myra*, Adalya Supplementary Series 8 (Antalya, Istanbul, 2009). Presented in Turkish and English.
[147] Türker, *Demre*, p. 171.
[148] Ibid.

example from the İçel Museum.[149] It is the solitary example of an amphora from this early period.[150] Otherwise, amphorae Type 1, Type 2, Type 3, Type 4 and Type 7 range in date between the 9th and 14th centuries based on the find contexts at Demre and comparanda elsewhere.[151]

Type 5 amphorae are of note as they form the largest group of the assemblage and are stratigraphically dated to the end of the 11th-12th centuries at Demre, although parallel examples are dated to the 6th and 7th centuries and 10th to 13th centuries.[152] Although there is a degree of ambiguity in the publication, Type 5 amphorae at Demre are described as being products of the 6th-7th century production identified on the southern Black Sea coast at Demirci, Sinop,[153] but the author later states that Type 5 'is claimed by scholars to have an eastern Mediterranean origin' leading to confusion as to where the possible origin of Type 5 amphorae from Demre ought to be attributed (the southern Black Sea coast or the eastern Mediterranean?).[154] If this vessel type can be attributed to a 6th-7th century production date, then this find highlights the potentially long lifespan of amphorae, as Type 5 were identified in a much later context at Demre. Therefore, the later chronological find context of Type 5 amphorae at the church may indicate vessel re-use or illustrate issues of stratigraphy.

This assemblage is difficult to interpret and is not necessarily representative of the historical consumption of amphorae at the Saint Nicholas church, nor Myra. The high proportion of amphorae assigned middle to late Byzantine dates attest to the impressive functional continuity of the church. Unfortunately, this limits the utilisation of this evidence for an examination of Myra's potential late antique economic networks.

[149] Türker, *Demre*, p. 176.
[150] Türker, *Demre*, pp. 176-7.
[151] Türker, *Demre*, pp. 172-7.
[152] Türker, *Demre*, pp. 171, 175-6.
[153] Seemingly drawing parallels to 'pâte claire'/'D Snp' amphorae, see Chapter 7.
[154] Türker, *Demre*, pp. 176, 189.

Nevertheless, more detailed information concerning the late Roman amphorae identified at Myra's harbour, Andriake, allows for some light to be shed on the economic networks of this southcentral Lycian area.

Andriake

Outfitted with a warehouse and major harbour facilities, Andriake appears to complement its southwestern coastal counterpart, Patara (Figure 11). Ideally, it would be of great value to compare the amphorae finds recovered at these two harbour settlements so as to investigate what similarities and differences the amphorae assemblages might reveal in regards to the dominant trading networks exploited by differing areas of the Lycian coast. However, such a comparison will have to wait as equally detailed quantitative data is lacking for these settlements.

Quantified information concerning the late Roman amphorae of Andriake are presented in survey reports.[155] In 2005, ceramic survey of Andriake was limited to three sections of grid area that were sampled for sherds.[156] The first, ZNO/1, is a $10m^2$ area that was located east of the 'plaza', also known as the Plakoma, and north of the large cistern. A total of 1481 pieces were collected for analysis (dated to between the 5^{th} and 8^{th} centuries). 97.5% of the sherds were identified as amphorae. Two other areas measuring $10m^2$ were surveyed for ceramic collection - GNO/1 located northeast of the 'granary', and GNW/1 located northwest of the 'granary'. In these two areas, less than 300 fragments were studied. 55-60% of the ceramic sherds collected from grids GNO/1 and GNW/1 were identified as roof tiles. Otherwise, 80% were identified as amphorae sherds (while the remainder were identified as red glaze vessels, cooking utensils and

[155] The following is based on the information available in *ANMED*.
[156] For the following, T. Marksteiner, 'Surveys in Andriake in 2005', *ANMED*, 4 (2006), pp. 71, 73-74.

unidentifiable finds). Interestingly, late antique fragments predominated at ZNO/1 (cistern area), while Roman double-handle amphorae predominated the sherds collected from grids GNO/1 and GNW/1 ('granary' area).

Study of the ceramics of Andriake continued in the 2008 survey campaign.[157] Complementing the work done in the previous archaeological survey seasons, a 390m^2 area was surveyed north of the cistern. It has been suggested that this zone was a functioning work area and also used as a dump on account of the murex shells identified here. 20,266 sherds were collected in total. Amphorae sherds made up the highest percentage of fragments (96% of the sample) and virtually all were dated to the 6th and 7th centuries. Of these sherds, LR1, LR2, LR5/6 and LR8 amphorae were the most represented. Some selective survey collection was completed in the same season in the north settlement where a total of about 275 fragments were considered and dated between the 3rd century BC and the 7th to 8th century. The majority of these sherds also belonged to the late antique and early Byzantine period. Again, in the 2011 season, 3472 amphorae sherds were identified in the harbour agora, some with graffiti and predominately late Roman and Byzantine in date.[158]

Although quantification is not yet available for the individual amphorae types identified in the sample surveys undertaken at Andriake, the presence of particular amphorae types is significant. The presence of LR1, LR2, LR5/6 and LR8 illustrate that Andriake was economically connected to areas of the eastern Mediterranean, the Aegean, Palestine and possibly north Africa. A link between the Near East and Andriake is reflected in the voyages of Saint Nicholas, and the amphorae evidence reinforce this maritime connectivity.[159] The fact that amphorae sherds make up the highest percentage

[157] For the following, B. Yener-Marksteiner, 'Surveys in Andriake in 2008', *ANMED*, 7 (2009), pp. 106-7.
[158] N. Çevik, S. Bulut, E. Akyürek, 'Excavations and surveys at Myra-Andriake in 2011', *ANMED*, 10 (2012), p. 71.
[159] Foss, 'Lycian coast', pp. 24-5.

of ceramic vessels encountered in the sample area surveyed is not surprising as the survey was conducted in areas in and around the harbour agora and warehouse, reflecting the commercial nature of their find spots.

Limyra[160]

The lower city of Limyra is parted by a stream, dividing the settlement into eastern and western sections, enclosed by walls (Figure 12).[161] Excavation of Limyra has been ongoing since 1969.[162] The late antique ceramics of the city have been the subject of study for many years and by many scholars.[163] The following section provides an overview of the late Roman amphorae identified in various excavated areas of the city.

From the eastern part of the city, excavation trenches SO 16-22 located near the columned street and the so-called Bishop's church and palace, were dug between 1993-1999. Starting in 1997, the post-Roman ceramics from these trenches were studied (classified as 5th/6th centuries and later).[164] Of the total number of fragments studied (2720 in total), amphorae formed 19%.[165] LR1 amphorae are the most common form

[160] The article L. Peloschek, M. Seyer, B. Yener-Marksteiner, P. Bes, 'Limestone, diorite and radiolarite: first petrographic data of fired clay objects from Limyra (southwest Turkey)', *ADALYA*, 20 (2017), pp. 241-66 discusses the preliminary results of the first scientific analysis of sampled clay objects from Limyra. One of the samples (LIM 14-006) is described as an amphora and assigned a chronology of the 6th-7th century AD. The clay of this sample is described as LIM-CALC/DIORITE_02, a group that finds common characteristics with clay located in the eastern area of the Bay of Finike. This amphora sample is not discussed in detail in the paper so it is unclear if it is of a known LR type. No detail is given about the sampled amphora example (such as characteristics, functionality etc.) except that it may represent a replicated Cretan prototype. The clay LIM-CALC/DIORITE_02 is characteristic of table wares sampled, so it is unclear if this amphora was a transport amphora or employed only in a domestic or a specific local context. As the authors remark, no kiln, potter's workshops or wasters have been identified within the city itself. Although the clay of this sample may be similar to local examples, as there is no detailed discussion of the possibility of local LR amphora production in the paper, LR production cannot be confirmed for Limyra.

[161] J. Vroom, 'New light on "Dark Age" pottery: a note on finds from south-western Turkey', *Rei Cretariae Romanae Fautorum Acta*, 39 (2005), p. 249.

[162] J. Vroom, 'Limyra in Lycia: Byzantine/Umayyad pottery finds from excavations in the eastern part of the city', in S. Lemaître (eds), *Céramiques antiques en Lycie (VII^e S. a.C.- VII^e S. p.C.) Les produits et les marchés. Actes de la table-ronde de Poitiers (21-22 mars 2003)* (Bordeaux, 2007), p. 261.

[163] Some brief reports of the ceramic studies of the city can be found in the annual *ANMED* reports also.

[164] Vroom, 'New light', p. 249.

[165] Vroom, 'New light', pp. 249, 251

(46%), with variant LR1a identified as well.[166] Aegean LR2 amphorae compose 10% of the total of amphorae fragments; LR3 from western Turkey compose 3%; LR4 (Palestinian) compose 1% of the total sherds; and LR5 (from Palestine) form 2% of the total amphorae fragments. LR7 from northern Egypt form 11% of the total sherds, and other amphorae types from other regions including North Africa make up the remaining 26%.[167] Therefore, LR1 is the most common late Roman amphora type in the eastern part of Limyra, and LR2 and LR7 types are the second and third most frequent forms present from this find context over all. In a detailed discussion of the finds of SO 21/1 and SO 21/2, Joanita Vroom notes on what appears to be an absence of 'LR2/13 variants' in these specific trenches, which differs from the combined assemblages across trenches SO16-22.[168] In other words, taken separately, SO 21/1 and SO 21/2 do not reveal the full representation of amphora types found in the combined assemblage from trenches 16-22. This discrepancy exemplifies the importance of find context and considering assemblages as a whole, when possible, in order to achieve the most accurate ceramic information available.

Elsewhere, in the western part of the city, we can get a further sense of the amphorae that arrived at Limyra from the sample of ceramics material studied from excavation trenches SO 30/1, 36 and 37.[169] Of the 3143 pottery fragments, amphorae made up 8%.[170] LR1 was the most frequent amphora type with a dominating presence of

[166] Vroom, 'New light', p. 251.
[167] Vroom, 'New light', p. 251. This information is also given in J. Vroom, 'Late antique pottery, settlement and trade in the east Mediterranean: a preliminary comparison of ceramics form Limyra (Lycia) and Boeotia', in W. Bowden, L. Lavan, C. Machado (eds), *Recent research on the late antique countryside* (Leiden, Boston, 2004), pp. 294-7, LR5 are categorised as LR5/6 in this publication. Some of the remaining 26% were identified as Agora G199.
[168] Vroom, 'Limyra', p. 288.
[169] T. Marksteiner, B. Yener-Marksteiner, 'Die Grabungen in Sondage 30/36/37 in der Weststadt von Limyra: Der archäologische Befund und die Keramik', *Jahreshefte des Österreichischen Archäologischen Institutes in Wien*, 78 (2009), p. 227.
[170] Marksteiner, Yener-Marksteiner, 'Sondage 30/36/37', p. 227.

the LR1b.[171] Interestingly, unlike the eastern city ceramic assemblage from SO 16-22 where LR4 represented only a small proportion of the sherds studied, LR4 appear as the second most common amphora type from SO 30/36/37.[172] There was also an example of a late variation of LR2, LR2c identified, and an additional fragment that might belong to the LR8 categorisation.[173] Can the discrepancy between LR4 finds of the eastern SO 16-22 and western SO 30/36/37 sector be attributed to differences in amphorae distribution and consumption between the two areas of the city?

A further sample of amphorae derive from excavations of the south gate of Limyra. From excavation area SO 3 around the wall M1, late Roman amphorae examples encountered in differing stratigraphic units included LR1, LR3, LR4 and their variants.[174] In addition, LR1, LR2, LR4, 'Bag-shaped' LR5/6, and LR8 ('Ces petits récipients vinaires, peut-être originaires de la côte occidentale de la Turquie et/ou de l'île de Samos, sont datés des VI^{e} et VII^{e} siècles ap. J.-C.') were also identified.[175] It is suggested that these amphorae contained wine.[176]

From section SO 5 in the western city of Limyra, late Roman amphorae types LR1, LR2, LR3 (possibly from the region of Ephesus), and LR4 were identified. There may also be examples of other late antique amphorae such as Ephesus Type 56 (an unpublished type dated by the author to between the late 6th-7th century), as well as some

[171] Marksteiner, Yener-Marksteiner, 'Sondage 30/36/37', pp. 235-6.
[172] Ibid.
[173] Marksteiner, Yener-Marksteiner, 'Sondage 30/36/37', p. 235.
[174] T. Marksteiner, S. Lemaître, B. Yener-Marksteiner, 'Die Grabungen am Südtor von Limyra', *Jahreshefte des Österreichischen Archäologischen Institutes in Wien*, 76 (2007), p. 221; on stratigraphic units for the following see pp. 197-8, 225.
[175] Marksteiner, Lemaître, Yener-Marksteiner, 'Südtor', pp. 232-4.
[176] 'Les amphores étudiées sont exclusivement des conteneurs à vin importés de l'ensemble du bassin oriental de la Méditerranée', Marksteiner, Lemaître, Yener-Marksteiner, 'Südtor', p. 235. On finds from Sondages 3A and 3B see also Lemaître, 'Premiers éléments de réflexion', pp. 174-80; Lemaître, 'Etude préliminaire', pp. 385-99.

African amphorae, possibly types Keay LVI/C[177] and Keay LXIII[178] and other miscellaneous examples.[179]

Elsewhere in the city, excavations from 1985-1992 at the Ptolemaion unearthed additional late Roman pottery, including fragments of Palestinian bag-shaped amphorae (referred to as Peacock and Williams' Class 46),[180] Cypriote and Syrian wine amphorae (referred to as Keay LIII, otherwise classified as British Bii, or LR1),[181] and what is described as olive-oil amphorae from Tunisia (Keay VIII B[182]).[183]

Alongside the aforementioned amphorae types from the eastern Mediterranean, Palestine, the Aegean and Africa, interestingly, examples of amphorae resembling Black Sea 'carrot' amphorae types were also recently identified.[184] Philip Bes notes how these Black Sea amphorae appear to form a relatively substantial proportion of finds.[185]

In her discussion of the ceramic evidence of the eastern part of the city, Vroom suggests that the context of the finds near buildings and shops, as opposed to a harbour, may account for the lack of amphorae frequency overall (again, amphorae making up only 19% of the total sherds considered from trenches 16-22).[186] She also notes that there is a complete absence of locally produced amphorae.[187] The lack of locally produced amphorae appears to be true for the other sites discussed in this chapter and Lycia as a whole.

---

[177] S. J. Keay, *Late Roman amphorae in the western Mediterranean* (2 vols, Oxford, 1984), i, p. 294 states this type may be of Tunisian origin.
[178] Keay, *Late Roman amphorae*, i, p. 350, possibly a Tunisian type.
[179] Marksteiner, Lemaître, Yener-Marksteiner, 'Südtor', pp. 259-63.
[180] Peacock, Williams, *Amphorae*, pp. 191-2 suggest a type of Palestinian origin dating from the 5th and 6th centuries.
[181] Keay, *Late Roman amphorae*, i, p. 268.
[182] Keay, *Late Roman amphorae*, i, pp. 126-9.
[183] U. Eisenmenger, 'Late Roman pottery in Limyra (Lycia)', in C. Abadie-Reynal (eds), *Les céramiques en Anatolie aux epoches hellenistique et Romaine: actes de la Table Ronde d'Istanbul 22-24 mai 1996* (Paris, Istanbul, 2003), p. 195.
[184] M. Seyer, 'Limyra 2013', *ANMED*, 12 (2014), fig. 6, pp. 78-9.
[185] M. Seyer, 'Limyra 2014', *ANMED*, 13 (2015), p. 79.
[186] Vroom, 'Late antique pottery', pp. 307-8.
[187] Vroom, 'Late antique pottery', p. 294; Vroom, 'New light', p. 251.

Considered altogether, the presence of LR1, LR2, LR3, LR4, LR5/6, LR7, as well as possible LR8 and African sherds in the sample of amphorae in the east and west parts of the city suggest that Limyra maintained economic connections, although to varying degrees, with the eastern Mediterranean, Levant, Aegean and Africa, from where these vessels are thought to have originated. Although the amphorae identified around wall M1 are thought to have contained wine, as discussed earlier, it is possible late Roman amphorae, such as LR1 and LR2, contained oil as well. As a result, although the amphorae finds may suggest a thirst for wine in Limyra, a need for oil cannot be excluded.

The recent identification of Black Sea carrot amphorae deserves special attention. The identification of Black Sea amphorae identified in the assemblages of Limyra (and possibly Myra) indicates that Black Sea and Mediterranean exchange networks overlapped to some degree. Yet, in light of the current evidence available, the degree to which Black Sea amphorae reached the Mediterranean remains an open question until further research is conducted and further quantified data becomes available (see Chapter 7). Future clay analysis may be able to shed further light on the production sites (perhaps from Sinop or elsewhere, see Section II) of the Black Sea types on the southern Lycian coast.

Kyaneai

Kyaneai has been extensively surveyed and has yielded many reports concerning the finds of this region.[188] Information concerning the ceramic evidence of surveyed areas derives from survey reports but the quality and quantity of information concerning late

[188] The archaeological work at Kyaneai has resulted in a comprehensive book, F. Kolb, *Burg - Polis - Bischofssitz. Geschichte der Siedlungskammer von Kyaneai in der Südwesttürkei* (Mainz am Rhein, 2008).

antique amphorae is fragmented and confusing at times.[189] The most detailed information regarding the late antique amphorae identified from the area of Kyaneai comes from the *Lykische Studien* series volumes 3, 4, and 8. Although ceramics are discussed in other *Lykische Studien* volumes, they either deal with ceramics of other periods (as in *Lykische Studien* 5), or are presented in such a way that does not necessarily contribute to an analysis of the economic networks of the region (as in *Lykische Studien* 6 where ceramics are presented in a descriptive catalogue format). Therefore, I will focus on the information provided in *Lykische Studien* volumes 3, 4 and 8.

Ingrid Mader, who discusses the ceramics in volumes 3 and 4 of *Lykische Studien*, presents the amphorae types identified using a unique categorisation scheme of 'Forms'. Amphorae finds pertinent to this study are categorised as 'Römische Amphoren' but span in date from the 2nd century BC to the Byzantine period. Assigned Forms often lack comparanda, which makes it difficult to interpret the possible origin of an amphora type encountered at the site. The classification scheme itself appears to lack uniformity between publications. Thus, the presentation of the ceramic evidence of Kyaneai only allows for superficial examination.

In the presentation of the sample of the identified ceramic finds from research spanning between 1989-1992 from Kyaneai and area, sherds that are thought to be Roman amphorae are categorised into twelve 'Forms'. Using comparisons of similar examples identified elsewhere and various amphorae designation schemes, a general picture of where imported amphorae may have originated is possible from this work, although quantification is not. Of the amphorae dating to the Roman period, Form 1 may correspond to the widely distributed Dressel 2-4 or 'Koan type' and its variants.[190] Form

[189] The following is based on the available information on ceramics in *Lykische Studien*.
[190] I. Mader, 'Keramik der Feldforschungen im Gebiet von Kyaneai aus den Jahren 1989-1992', in F. Kolb (eds), *Lykische Studien 3: Die Siedlungskammer von Kyaneai in Lykien. Bericht über Feldforschungen im Yavu-Bergland im Sommer 1992*, Asia Minor Studien 24 (Bonn, 1996), p. 96.

2 is described by the author as a 'Dresselvariante', but the meaning of this term is unclear.[191] Form 3 may be another early Roman example as it resembles a North African-Punic amphorae type dating to the second century BC.[192] Form 4 is only described in general terms, as is Form 5 that is suggested by the author as being a type possibly dating to the first half of the 2nd century.[193]

Form 6 appears to be a late amphora type that is not very well known but may find similarities to finds from Ephesus which are dated to the late 4th or the beginning of the 5th century.[194] Notably, Form 7 amphorae are described as being similar to LR1 (described as Peacock Class 44 and Keay 53C by the author) although again, quantities or frequency of finds are not explicitly given.[195] Regarding Form 8, we are told that it may be a 7th century amphorae type and Form 9 may be a late antique or a Byzantine type.[196] Form 10, is described as being similar to Keay XXVII.5, which according to Keay, type XXVII is a type thought to be of Tunisian origin dating from the early 4th to the mid-5th centuries and possibly later.[197] Likewise, Form 11, which is comparable to Keay XXVB, may also be of Tunisian origin and may date *c*. to the mid-4th to the first half of the 5th century according to Mader.[198] Lastly, Form 12 appears similar to Keay LXXXV and may also originate from Tunisia and is dated by Mader to the mid-5th to the late 6th century.[199]

The subsequent publication of the ceramic finds from the 1993/1994 archaeological seasons adds more information to the aforementioned categorisation

[191] Mader, 'Kyaneai', p. 97.
[192] Ibid.
[193] Ibid.
[194] Mader, 'Kyaneai', p. 97, footnote 74.
[195] Mader, 'Kyaneai' p. 97.
[196] Mader, 'Kyaneai', p. 98.
[197] Keay, *Late Roman amphorae*, i, pp. 219-24.
[198] Keay, *Late Roman amphorae*, i, pp. 184-94.
[199] Keay, *Late Roman amphorae*, i, pp. 376-9.

method.[200] It seems as though Mader adds Form 13 (of possible North African origin dating to the 3rd and 4th centuries) and Form 14[201] (again, possibly of North African origin) to the previous scheme.[202] Another sherd is singled out as a possible Knidian Roman amphora.[203] However, examples of so-called Form 12 are assigned a different description to the Form 12 of the previous publication, now being described as being similar to a Rhodian type amphora possibly dating to the 1st century BC to the 1st century AD.[204] Such a change in categorisation places doubt on the relationship between the information of the different reports.

In the *Lykische Studien* 8 publication (2008), Roman amphorae types are discussed once again this time by Zeynep Yılmaz, in a summary format alongside further observations of the ceramic sample as well.[205] For the first time, Palestinian examples are mentioned but their dating is unclear.[206] Yılmaz states, 'Es handelt sich dabei vor allem um Late Roman 1/2…, welche zwischen dem 4. und 7. n. Chr. an der Südküste Kleinasiens und im östlichen Mittelmeergebiet als Transportbehälter benutzt wurden.'[207] In the catalogue of finds, LR3 is noted as coming from 'ländliche Siedlungen III' and LR1 from 'ländliche Siedlungen XCI'.[208] Other examples of amphorae finds in the catalogue are categorised by date.

[200] I. Mader, 'Keramik der Feldforschungen auf dem Gebiet von Kyaneai. Teil II: Die Funde aus den Jahren 1993/94', in F. Kolb (eds), *Lykische Studien 4: Feldforschungen auf dem Gebiet von Kyaneai (Yavu-Bergland) Ergebnisse der Kampagnen 1993/94,* Asia Minor Studien 29 (Bonn, 1998), p. 96, footnote 44.
[201] Assigned by Mader to Peacock, Williams, *Amphorae*, 'Class 34', pp. 155-7; 'Keay VII', Keay, *Late Roman amphorae,* i, pp. 121-6.
[202] Mader, 'Teil II', p. 97.
[203] Ibid.
[204] Ibid.
[205] Z. Yılmaz, 'Die Keramik der späthellenistischen, kaiserzeitlichen, spätantiken und frühbyzantinishen Epochen (End 2. Jh. v.-7. Jh. n. Chr.)', in F. Kolb (eds), *Lykisch Studien 8: Keramik, Münzen, Kirchen und Wirtschaftskomplexe des zentrallykischen Yavu-Berglandes (Gebiet von Kyaneai)*, Tübinger Althistorische Studien 4 (Bonn, 2008), pp. 120-1.
[206] Yılmaz, 'Keramik', pp. 120-1.
[207] Yılmaz, 'Keramik', p. 121.
[208] Yılmaz, 'Keramik', pp. 125-6.

From the available information, a sense of the economic networks of the Kyaneai area can be gathered. However, the absence of a familiar typological scheme used to describe the sample amphora fragments and the absence of chronological and quantitative information makes it very difficult to interpret this information. In the late Roman period, as we have seen at other sites, the possible presence of LR1 and fragments of Palestinian origin suggest a connection with eastern Mediterranean economic networks. If identified correctly, vessels of possible African origin are noteworthy in this assemblage as well. Unfortunately, little else is known of other well-known LR types. Moreover, changes in the frequency of imports cannot be determined as the lack of quantitative data makes such observations difficult.

Rhodiapolis

Information of amphorae from the near-coastal site of Rhodiapolis derive from the excavation of the area around the episcopal church of the city (dated to the 5th or 6th century), located on the city's acropolis.[209] In and around this area, treasure-seekers have disturbed the ground, impacting the find spots and stratigraphy of the ceramics. According to Özgü Çömezoğlu, in general, amphorae feature minimally at the episcopal church excavation. LR1 are present in relatively small numbers and in a context that does not allow for accurate stratigraphic conclusions. Comparanda of the Rhodiapolis LR1 finds are dated between the 5th and 7th centuries.

Other amphorae finds considered are categorised into four other 'types' or 'groups'. Çömezoğlu seems particularly interested with how the various types of

[209] For the following, Ö. Çömezoğlu, 'Coarse wares from the early Byzantine (episcopal) church of Rhodiapolis: cooking wares and amphorae', in N. Poulou-Papadimitriou, E. Nodarou, V. Kilikoglou (eds), *LRCW 4 Late Roman coarse wares, cooking wares and amphorae in the Mediterranean: archaeology and archaeometry. The Mediterranean: a market without frontiers* (2 vols, Oxford, 2014), ii, pp. 665-9.

amphorae from the Rhodiapolis assemblage are similar to types of amphorae found in the Black Sea region. For example, in the description of Type Two amphorae, Çömezoğlu states 'the parallels of the second group among Sinop amphorae were produced between the Hellenistic period and the 6th century. This group is one of the amphora types used on the trade routes between north Africa and the Black Sea in the late Roman period'.[210] It is unclear from such a statement if Çömezoğlu is implying that Type Two amphorae are of Sinop manufacture or are similar to amphorae found at Sinop. Comparanda examples of this type are dated to the 7th century.[211] Type Three amphorae comparanda from around the Black Sea are dated from the 6th to 9th centuries, finding particular resemblance to 7th and 8th century examples. Parallel examples of Type Three from the east Mediterranean are dated to the 5th-7th centuries.[212] Interestingly, a connection is drawn between the Rhodiapolis assemblage and that of the Saint Nicholas church of Myra, as Type Three Rhodiapolis amphorae find parallels to the Type 5 amphorae identified at Demre (see above). The fourth group of amphorae encountered at the Rhodiapolis episcopal church parallel 3rd and 5th century examples from the Balkans and the Black Sea, with Mediterranean comparanda dating from the 6th to 10th and 11th centuries.[213] The last group, Group Five is the most common of the amphorae types and comparanda are dated to the middle and late Byzantine periods. It is also mentioned that other miscellaneous amphorae finds may be late Roman examples with comparanda in Africa and the east Mediterranean - a rather broad statement.[214]

Based on the information presented above, the amphorae identified at the church of Rhodiapolis find parallel to other known amphorae types identified in the

[210] Çömezoğlu, 'Rhodiapolis', ii, p. 667.
[211] Ibid.
[212] Ibid.
[213] Çömezoğlu, 'Rhodiapolis', ii, p. 668.
[214] Ibid.

Mediterranean and Black Sea regions. On the one hand, comparanda information is useful for dating the Rhodiapolis finds, but on the other hand, it is limited in its usefulness as there is little indication as to the potential origin of the amphorae identified at Rhodiapolis, with the exception of LR1. From this limited sample, it may be possible to tentatively conclude that eastern Mediterranean and/or Aegean produced LR1 amphorae were transported to this site.

Balboura

Perhaps it is not surprising that the ceramic assemblage of Balboura, the site located the furthest inland of those discussed here, reveals that there is a general lack of transport vessels at the settlement (Figure 13).[215] Instead of using amphorae to transport and store goods in and around the settlement, the use of other perishable materials, such as wooden storage barrels or bins (in practice today) along with animal skins and bags may have been utilised as an alternative packaging method.[216] In addition, it has been suggested that the minimal presence of amphorae identified at Balboura may indicate that the settlement was self-sufficient, not needing to import staple products.[217]

The lack of amphorae evidence from Balboura emphasises a significant unknown and that is whether or not goods were transported in perishable materials to inland settlements or if the lack of amphorae can be attributed to agricultural self-sufficiency. Goods from further abroad may have arrived to the Lycian coast in amphorae, but may have been repackaged in perishable materials and then transported inland. It is possible Balbourans may have imported 'international' agricultural goods from distant places as

[215] P. Armstrong, 'The survey pottery: Hellenistic and later', in J. J. Coulton (eds), *The Balboura Survey and settlement in highland southwest Anatolia* (2 vols, London, 2012), ii, p. 76.
[216] Armstrong, 'Pottery', ii, pp. 76-7.
[217] Armstrong, 'Pottery', ii, p. 76.

the presence of 'international' wares, such as African Red Slip and Late Roman D fine wares suggests.[218] Similarly, Gazan wine or Aegean oil may have reached the Lycian shore in amphorae, and hypothetically, could have been transported further inland to Balboura in different containers.

Is there a way to measure Balboura's agricultural cultivation in order to gauge if the settlement produced goods at subsistence levels or surplus? As suggested by the Balboura surveyors, the settlement may have maintained a level of agricultural self-sufficiency, although evidence for olive oil production is minimal, suggesting this staple needed to be imported to the settlement.[219] Interestingly, ceramic analysis suggests that from the late Hellenistic to early Roman period (c. 100 BC to AD 100) onwards, evidence demonstrates that there is a change in the number and distribution of pithoi. In the early period, there is very little evidence of storage vessels,[220] in the Middle Roman period (c. AD 100-400) pithoi are found more so in the city that rural areas,[221] and in the late Roman and early Byzantine period, pithoi are found in larger numbers in rural areas than the city.[222] The use of other materials for storage may account for the minimal evidence of storage vessels in earlier periods.[223] However, it has been suggested that pithoi may indicate permanent, long-term settlement as opposed to a transhumant lifestyle.[224] If this is correct, then the higher frequency of pithoi in rural areas in the late Roman and early Byzantine period may suggest permanent settlement and a higher degree of agricultural cultivation in the countryside in this later period.

[218] Armstrong, 'Pottery', ii, pp. 59-60.
[219] J. J. Coulton, 'Crops and climate during the city period', in J. J. Coulton (eds), *The Balboura Survey and settlement in highland southwest Anatolia* (2 vols, London, 2012), i, pp. 100, 106-7.
[220] Armstrong, 'Pottery', ii, p. 55.
[221] Armstrong, 'Pottery', ii, p. 57.
[222] Armstrong, 'Pottery', ii, p. 64.
[223] Armstrong, 'Pottery', ii, p. 55.
[224] Armstrong, 'Pottery', ii, p. 63.

Considered altogether, the pithoi evidence may indicate a possible intensification of Balboura's agricultural cultivation in the late Roman and early Byzantine period, which may have limited the need for agricultural imports, although this remains speculation. It is also possible that Balboura's agricultural production reached surplus levels, which may have been distributed in local or regional exchange. Exchange of surplus goods may have generated profit that sustained a demand for imported fine ware and account for building construction during this period (Chapter 4).

The case of Balboura is significant as it raises questions concerning the extent of inland amphorae transport for Lycia. Evidence is fragmentary at this stage, though it may be postulated that amphorae consumption in Lycia was largely a coastal phenomenon with the interior transporting goods in perishable materials. More ceramic evidence from the settlements of central Lycia is needed in order to determine the types and frequency amphorae reached inland.

Discussion

What may be discerned regarding the exchange networks of the coastal and inland Lycian settlements from the ceramic assemblages presented above? Before exploring this question, it must be kept in mind that the ceramic information is limited to eight Lycian sites, the majority near the coast, which is hardly representative of the historical situation for the region in Late Antiquity. Much of the bigger picture is missing. Although, particular LR types appear to be well-represented at sites and the diversity of amphorae finds suggests that Lycian settlements were directly and indirectly engaged with wider exchange - the types and amounts of amphorae sherds being representative of their find contexts.

The connections drawn between eastern Mediterranean and Black Sea assemblages highlights the importance of approaching amphorae studies with a broad geographic lens. It is possible that amphorae with Black Sea or northern Anatolian origins may have been previously overlooked in eastern Mediterranean assemblages. The lack of the identification of Black Sea products in the Mediterranean in past scholarship may be due in part to the preoccupancy of ceramic analysts with well-known Mediterranean amphorae types and a lack of awareness of Black Sea amphorae reaching the eastern Mediterranean. As a result, Black Sea amphorae may be underrepresented in eastern Mediterranean and Lycian ceramic assemblages due to a general unawareness of these amphorae. A reassessment of eastern Mediterranean amphorae assemblages with an eye for detecting Black Sea products may offer a better indication of the degree of the exchange of goods between the two maritime zones. In one case, over the course of a recent study which documented amphorae finds from various contexts (some maritime, but not further explained) from the Anamur Museum, scholars noted how Sinopean amphorae were rare finds in a Cilician maritime context, however, how representative this finding is to the wider Lycian/Cilician regions remains an open question.[225] Further information is needed in order to develop a more informed idea of the degree Black Sea products reached the eastern Mediterranean, but it is possible that while Lycians enjoyed their own agricultural products and imports from eastern Mediterranean sources, commodities may have been sought after from further afield and may be more common than currently thought.

Based on the information currently available, we may be able to gain a picture of the exchange networks of Lycia and the way in which this region was connected to wider

[225] C. Autret, A. Kızılarslanoğlu, N. Rauh, 'New developments with amphora research in western Cilicia', *ANMED*, 14 (2016), p. 334.

exchange. The presence of LR4 and LR5/6 type vessels appears to be a common feature in the amphorae assemblages from the majority of Lycian sites where information is currently available. If not explicitly named in the ceramic reports, the mention of Gaza-type or Palestinian-type amphorae (for example at Kyaneai) reinforces the fact that these amphorae may have been common imports for Lycian (particularly coastal) settlements. Wine has been proposed as the principal content of the Palestinian amphorae and it may be that there was a significant Lycian demand for this product. The presence of other late Roman amphorae such as the LR3 and LR8 types (at Xanthus, Andriake and Limyra) is rather exceptional on sites especially in comparison to the more common LR1, LR2, and Palestinian-types. It is difficult to assess the degree to which various LR types were imported to Lycia due to the lack of quantification. Nevertheless, LR4 and LR5/6 type vessels indicate the import of eastern Mediterranean amphorae, and LR2 and LR3 finds may shed light on Lycian exchange networks with the Aegean and west Asia Minor.

The role of Lycia in east Mediterranean commerce

A crucial point in the interpretation of Lycian exchange networks and Lycia's participation in Mediterranean commerce is that evidence of late Roman amphora production in Lycia is unconvincing. The lack of Lycian amphorae production reinforces a need to re-evaluate Lycia's role in maritime commerce, what Lycia offered this complex exchange network, and how far a coastal hinterland (that may have supplied goods for export abroad) may have reached inland. Consequently, as evidence stands to date, Lycia's role in Mediterranean trade networks seems to be principally one of receiving and consuming Mediterranean and Aegean staple goods transported in amphorae. Both Patara and Andriake encompass large harbour facilities and warehouses, yet do not seem to be late Roman amphorae production loci. This leads to the impression

that the role of these major coastal settlements may have been principally one of storage and redistribution and less so of exportation of goods contained in amphorae.

It would be inaccurate to argue, however, that since evidence of amphorae production in Lycia is lacking this means that the agricultural production of staple goods at inland settlements only met levels of self-sufficiency. This is much too simplistic. It is possible empty amphorae were brought to Lycia, filled with oil and wine, and then exported.[226] If this were the case, settlements on the coast would have acted principally as processing facilities for goods, where commodities were stored, repackaged and redistributed. It is possible Lycian oil and wine were exported in perishable materials, undetectable in the archaeological record. It is important to consider also, that other exported Lycian goods may not have been packaged in clay vessels, namely timber or dye products (yet, as this evidence is virtually undetectable archaeologically at the moment, we can only conjecture the level at which such goods were exported in the late antique period). An alternative explanation may be that surplus agricultural products such as oil and wine were simply produced in areas further inland and transported and consumed across Lycia, and not exported abroad.

Past scholarship has argued that Lycia's geographic position on the major maritime routes of Late Antiquity contributed to its wealth. Based on the evidence of amphorae presented above however, Lycian coastal economy may be better understood by analysing Lycia's role not primarily as an agricultural producer and exporter of Lycian oil and wine, but predominately in facilitating shipping activities at coastal centres (where surplus Lycian oil and wine may have been consumed). The difference is that the emphasis is not on export of oil and wine abroad, but on supplying maritime traffic with goods and services. Providing staple agricultural resources for export may not have been

[226] Peacock, Williams, *Amphorae*, pp. 17-18.

Lycia's principal role in eastern Mediterranean exchange but perhaps more so as mainly servicing the coastal crossroads of Mediterranean maritime routes. We will return to the economy of the region and Lycia's role in wider exchange in the following chapters.

Isauria

We now turn to the amphorae evidence of Isauria (Figure 14). The history of ceramic production and consumption in the region of Isauria is particularly interesting as settlements along both the west, south and east coasts of the province were sites of amphora production in the early Roman and late Roman periods. In contrast to the lack of evidence for amphora production in Lycia, the evidence of ceramic production in Isauria suggests that the region was involved to a great degree in agricultural cultivation and the transport of agricultural products abroad, although with regional variation. The wide dissemination of the amphora types manufactured in Isauria is testament to what may be understood as significant export and participation in maritime commerce. What makes the case of amphora production in Isauria so interesting is that evidence suggests that a major shift took place in the location of production in early Roman and later Roman times, which apparently coincided with a change in the types of amphora manufactured in each period (with one possible unconfirmed exception, see below). Furthermore, alongside the production of amphorae in the late Roman period, settlements of Isauria appear to have imported amphorae as well, demonstrating that settlements received goods from abroad, although in varying degrees. As the evidence of amphora production in Isauria stands markedly in contrast to the case of Lycia, a comparison of the ceramic assemblages of the

two regions may refine our understanding of the different ways each region participation in wider exchange.

Western Isauria

The Rough Cilicia Archaeological Survey Team (hereafter RCAST) has intensively studied not only the settlement and ecological development of western Rough Cilicia, but also the ceramic evidence and possible amphora production sites in the region (Figure 15, Figure 16). As a result, possible kiln sites located in the modern Gazipaşa area have been presented in a number of publications. Although no kiln structures have been unearthed, the combination of a number of factors point to amphora production in the area. The identification of a concentration of ceramic fragments that display only a limited number of forms and share common fabric found alongside misfires or wasters and pieces of kiln lining are highly suggestive criteria for the location of a production site. Two, possibly three production areas have been identified in western Rough Cilicia. These are the so-called Syedra kiln site, Biçkici, and a third possible site at Antiochia ad Cragum.[227] Another possible production site, Delice Çay, has been alluded to, located two kilometres north of Biçkici, to which we will return below.[228]

A summary of the amphorae types produced at each respective kiln site is described as follows:

> …the Koan styled (Dressel 4) and Pinched-handled amphoras (Riley MR4; Zemer 41) [were] produced at the Biçkici Kiln Site and the Pamphylian amphora and a fractional form of the Pinched-handled amphora (the Agora M 239), [were] produced at the Syedra Kiln Site. The Pinched-handled amphora, produced in the

[227] C. Autret, N. Rauh, 'Roman amphora production in western Rough Cilicia', in Ü. Aydınoğlu, A. K. Şenol (eds), *Olive oil and wine production in Anatolia during antiquity. Symposium Proceedings 06-08 November 2008, Mersin, Turkey* (Istanbul, 2010), pp. 109-22.
[228] N. K. Rauh, K. W. Slane, 'Possible amphora kiln sites in W Rough Cilicia', *Journal of Roman Archaeology*, 13 (2000), pp. 321-6.

> western part of Cilicia from the 1st to the 4th century A.D., represents the most widely distributed form; it was produced in Cyprus as well as Rough Cilicia.[229]

Along with Pamphylian amphorae and a form of the Pinched-handle amphora (a variation of Agora M 239), loom weights, a type of casserole and basins were possibly also produced at Syedra.[230] Notably, the Biçkici kiln site is well-situated near the Biçkici River (where the survey team also identified the remains of the Biçkici monastery). The production site is located near a Roman tower and is in close proximity to clay beds and springs - factors that make an argument for ceramic production at Biçkici all the more convincing.[231] Recent reports suggest another form, called 'Syedra Amphora' or 'Cilician amphora type 6', was produced at the Syedra kiln site and possibly at Biçkici based on the presence of sherds here. The production of this amphora type is not specifically dated.[232]

If identification of a possible kiln site at Antiochia ad Cragum is correct, Pinched-handle amphora and basins may have been products of the site based on the concentrated finds of these vessels.[233] Recently, a further two kilns have been discovered in the Great Bath of Antiochia, a large kiln possibly dating to the late Roman period, the second smaller kiln to a later period.[234] Preliminary analysis suggests that storage jars and basins were produced in the larger kiln.[235] Further excavation at the Great Bath revealed over 500 amphora bottoms and pottery sherds, possibly a dump for the kiln, which are

[229] C. Autret, M. Dillon, J. Lund, N. Rauh, L. Zoroğlu, 'The trading networks of ancient Rough Cilicia', in S. Ladstätter, F. Pirson, T. Schmidts (eds), *Harbors and harbor cities in the eastern Mediterranean* (2 vols, Istanbul, 2014), ii, p. 605.
[230] Autret, Rauh, 'Roman amphora', p. 113.
[231] Autret, Rauh, 'Roman amphora', pp. 113-14.
[232] Autret, Kızılarslanoğlu, Rauh, 'New developments', pp. 334-6.
[233] Autret, Rauh, 'Roman amphora', p. 112.
[234] Autret, Kızılarslanoğlu, Rauh, 'New developments', p. 337.
[235] Ibid.

interpreted as being late Roman-early Byzantine.[236] Therefore, it is unclear exactly what the products of this late antique kiln were – storage jars, basins, amphorae, or all three.

The more convincing evidence for amphora production at Syedra, Biçkici, and Antiochia occurred during the Roman period as the amphorae produced here, that is, 'the Koan styled jar, the Pinched-handle or Zemer 41 amphora, and the Pamphylian amphora all date to the Early Roman era'.[237] A more detailed account of the chronological development of the amphora types produced in western Rough Cilicia is noteworthy:

> The Koan styled amphora (that is, an imitation of the Koan amphora) was produced in numerous locations from the first century BC to the early second AD; the Pinched-handle amphora was used from the 1st to 4th centuries AD; and the Pamphylian form produced at Syedra appear to date from the 1st to 3rd centuries AD. A slightly later form of the Pinched-handle amphora, the vestigial form Agora M-239, was also produced at the Syedra Kiln Site.[238]

Based on this information, the main period of western Isaurian amphora production preceded the main period of LR production. The kiln sites may have continued functioning into the 4th century, but do not appear to continue to produce late Roman forms.[239] The only mention of a late Roman amphora type appearing in the western region in these publications is the identification of a variant of 'a C. Williams' Type B Late Roman amphora (= Benghazi LR1)' at Delice Çay, another tentative location of a kiln site.[240] Yet, it is not explicitly stated that the presence of this amphora type at this location is an indication of its manufacture at Delice Çay. The possibility of a kiln at Delice Çay is based on the discovery of structural remains, baked earth and an exposed

[236] M. Hoff, R. Townsend, E. Erdoğmuş, B. Can, T. Howe, 'The Antiochia ad Cragum Archaeological Research Project: 2015 season', *ANMED*, 14 (2016), pp. 4-6.
[237] N. K. Rauh, M. J. Dillon, C. Dore, R. Rothaus, M. Korsholm, 'Viticulture, oleoculture, and economic development in Roman Rough Cilicia', *Münstersche Beiträge zur Antiken handelsgeschichte*, 25.1 (2006), p. 55.
[238] Rauh, *et al*., 'Viticulture,', p. 55, footnote 21; similarly, Autret, Rauh, 'Roman amphora', pp. 114-15.
[239] Autret, Rauh, 'Roman amphora', p. 115.
[240] Rauh, Slane, 'Possible amphora kiln sites', p. 326; Elton, 'The economy of southern Asia Minor and LR1 amphorae', p. 691.

clay bed in the vicinity.[241] It has been postulated however, that this site may have been a 'late Roman maritime depot', presumably a regional entrepot of sorts, or may have been utilised for another unknown function, as the lack of uniformity of the sherds identified here (and at Biçkici) may suggest a coastal economic exchange locus.[242] Therefore, the presence of a possible variant of LR1 at Delice Çay, may be the remains of an imported vessel rather than a local product. The conspicuous absence of any mention of Delice Çay as a possible amphora production site in later publications strongly suggests that the evidence for amphorae production at this site remains inconclusive.

To summarize, western Rough Cilicia appears to have been a significant producer of amphorae in the early Roman period. The identification of a number of presses in the region suggests that the cultivation of agricultural goods was substantial and that these goods were distributed beyond western Isauria in the amphorae produced in the region.[243] Therefore, this evidence alongside textual evidence lauding Cilician *passum* raisin wine, may attest to the significant role western Rough Cilicia played in regional and international exchange networks in the Roman period.[244] This makes the apparent decline of production and the subsequent shift of production to the east coast all the more interesting.

The chronological life-span of amphorae production of western Rough Cilicia suggests that the amphorae production centres on the west coast no longer continue to produce amphorae after the 4th century, with the possible amphorae production at Antiochia being an exception, although this is a tentative observation. Yet, western Rough Cilicia may have still participated in regional exchange networks, receiving imported vessels as the ambiguous evidence of Delice Çay suggests. Reference has also

[241] Rauh, Slane, 'Possible amphora kiln sites', p. 326.
[242] Ibid.
[243] Autret, *et al*., 'Trading networks', ii, p. 605; Rauh, *et al*., 'Viticulture', pp. 49-98.
[244] Rauh, *et al*., 'Viticulture', p. 57.

been made elsewhere to LR1 and LR4 being identified in the Rough Cilicia survey, but not in a quantified way.[245] Why does amphorae production appear to decline dramatically, and even cease after the 4th century?

The possibility that empty amphorae were brought to western Rough Cilicia 'to bottle the local vintage for transhipment abroad', has been postulated in a Hellenistic context and one may suggest that this may have occurred in the late antique period as well.[246] It is also possible that changing tastes and a lack of demand for Isaurian product from the 4th century onwards may account for the change. The virtual cessation of amphora production has been acknowledged by the RCAST and seems to be predominantly attributed to the rise of Isaurian warlords and increased instability in western Rough Cilicia.[247] This implies that a change in political and social conditions on the western coast impacted the economic activity of the region. If this is correct, it would appear that the heyday of western Rough Cilicia's major contribution and participation in the wider Mediterranean exchange networks of the 1st to 4th centuries was due in part to Roman control and relative order and peace on this part of the Mediterranean coast.

Regarding late Roman settlement development in western Rough Cilicia, the RCAST states:

> This is not to say, however, that population in western Rough Cilicia declined in the Late Roman era. On the contrary, the pottery evidence would indicate that despite mounting violence, the decline of polis institutions, and the transition from polis-based to church-based social ordering, the level of settlement remained significant at least until the time of the Arab invasions that swept across the region in the 630s C.E…the count of processed ceramics for the Late Roman period drops considerably from those of the Early Roman era; however, their totals remain significantly higher than those of the pre-Roman era.[248]

[245] H. Elton, 'The economy of Cilicia in Late Antiquity', *Olba*, 8 (2003), plate 36, fig. 3.
[246] Rauh, *et al*., 'Viticulture', p. 53. See also Peacock, Williams, *Amphorae*, pp. 17-18.
[247] Autret, *et al*., 'Trading networks', ii, p. 611.
[248] Rauh, *et al*., 'Western Rough Cilicia', p. 304.

The pottery evidence to which this quote refers, shows that a preliminary sherd count from the 1996-2004 surveys (a total of 7313 sherds being 'processed') illustrates that beginning in the Roman period the number of sherds decrease over time (there are 391 pre-Roman sherds): 2038 fragments are dated to the early Roman period; 920 are Late Roman; and 75 are attributed to the Byzantine period.[249] Unfortunately, this ceramic data does not detail vessel types. Therefore, we cannot assess how the quantification of amphorae fragments vary in each historical period. The only information for amphorae offered is that amphora sherds amount to 536 fragments. Therefore, the critical information that offers insight into the degree to which western Rough Cilicia participated in trade networks during the late Roman period remains unclear. While the ceramic production of western Rough Cilicia appears to have experienced a major decline around the 4th century, production of LR1 has been discovered further east.

Elaiussa-Sebaste[250]

The archaeological study of Elaiussa-Sebaste has been ongoing since 1995 under the direction of Eugenia Equini Schneider (Figure 17).[251] Based on the evidence of conspicuous press remains in the city and rural areas of Elaiussa-Sebaste (and given that the term 'Elaiussa' itself means 'planted with olive trees') it seems as though the settlement achieved significant levels of agricultural production.[252] The discovery of four

[249] Rauh, *et al*., 'Western Rough Cilicia', table 2, p. 262.
[250] In addition to the following information, A. F. Ferrazzoli, M. Ricci, '*Elaiussa Sebaste*: produzioni e consumi di una città della Cilicia tra V e VII secolo', in M. Bonifay, J.-C. Tréglia (eds), *LRCW 2 Late Roman coarse wares, cooking wares and amphorae in the Mediterranean: archaeology and archaeometry* (2 vols, Oxford, 2007), ii, pp. 671-88. This paper is in Italian but I suspect it offers the same information as another paper published in English written in the same year. This English article is cited below.
[251] E. Equini Schneider, 'Excavations and research at Elaiussa Sebaste: 1995 first campaign', *KST*, 18.2 (1996), p. 367.
[252] Equini Schneider, 'Elaiussa Sebaste 1995', p. 368; A. F. Ferrazzoli, M. Ricci, 'Production and trade of a Cilician city from the Roman to Byzantine age: the case of Elaiussa Sebaste', in M. C. Hoff, R. F. Townsend (eds), *Rough Cilicia: new historical and archaeological approaches* (Oxford, Oakville, 2013),

LR1 amphora kilns to date located in the city and surrounding territory appears to confirm that this settlement functioned as a major export centre of agricultural goods in the late antique and early Byzantine periods.[253] Interestingly, some of the amphora kilns were converted oil press complexes that had ceased production.[254] It is believed that both wine and oil were transported in these containers.[255] The discovery of the LR1 kilns have confirmed previous suspicions of Cilician production of this vessel and Elaiussa-Sebaste's contribution to LR1 production.

The prosperity of the city may be closely linked with its connection to maritime exchange as the settlement encompasses two easily-accessible and well-protected ports.[256] Chronologically, the widespread distribution of LR1 throughout the empire corresponds to a time of prosperity at Elaiussa-Sebaste when the settlement experienced a period of heightened construction activity between the 5th and 7th centuries (see Chapters 4 and 5).[257]

Imported amphorae have also been identified in the settlement. Among these finds are amphorae thought to have been of Palestinian, Aegean, Egyptian and North African origin.[258] The most frequently imported amphorae appear to have reached Elaiussa-Sebaste from Palestine, including LR4.[259] Agora M334 type amphora (produced in the

pp. 212, 218; E. Equini Schneider, (eds), *Elaiussa Sebaste I, campagne di scavo 1995-1997* (Rome, 1999), pp. 384-5.
[253] Ferrazzoli, Ricci, 'Production', p. 217.
[254] Ibid.
[255] M. Ricci, 'Elaiussa Sebaste: context, production & commerce', in B. Böhlendorf-Arslan, A. Osman Uysal, J. Witte-Orr (eds), *Çanak. Late antique and medieval pottery and tiles in Mediterranean archaeological contexts. Proceedings of the first international symposium on Late Antique, Byzantine, Seljuk, Ottoman pottery and tiles in archaeological context (Çanakkale, 1-3 June 2005)* (Istanbul, 2007), p. 171; E. Equini Schneider, *Elaiussa Sebaste: an archaeological guide* (Istanbul, 2008), p. 161.
[256] Ricci, 'Elaiussa Sebaste', p. 170.
[257] Ricci, 'Elaiussa Sebaste', p. 171.
[258] For the following, Ricci, 'Elaiussa Sebaste', pp. 171-3; Equini Schneider, *Elaiussa Sebaste*, p. 162. See also, Rice, 'Port economies', figs. 10, 92, pp. 39-40, 195-6.
[259] Ferrazzoli, Ricci, 'Production', p. 215.

Levant) were also found.[260] Likewise, LR5/6 amphorae, again of Near Eastern origin, have been found, but in low amounts. From the Aegean LR3 type vessels and 'Samos amphorae' are noted.[261] LR2 type vessels are uncommon, but some LR7 from Egypt have been identified. Nubian type amphorae have been identified also. Imports from North Africa may have been 'occasional',[262] but there may have been an increase in African amphorae between the end of the 3rd to the end of the 4th century.[263] Overall, eastern Mediterranean amphorae types appear to dominate the ceramic assemblage.[264]

How does the amphora production at Elaiussa-Sebaste fit within the wider context of amphora production of the region? Is there evidence for earlier Roman amphora production at Elaiussa-Sebaste? Did Roman amphorae production at Elaiussa-Sebaste complement the amphorae production occurring on the western coast of Rough Cilicia, or was early Roman amphorae production a phenomenon exclusively of the west coast? To date, evidence demonstrates that, between the 1st and mid-3rd century, 'regionally produced amphoras are apparent' at Elaiussa-Sebaste.[265] While 'it is likely that during this period several types of amphoras were produced in Elaiussa itself…no tangible evidence has been unearthed to date.'[266] Although the possibility remains that Elaiussa-Sebaste may have produced amphorae in the Roman period, it seems as though major amphorae production did not occur until the late Roman period with the manufacture of LR1.

---

[260] 'Roman Amphorae: a digital resource. Agora M334', http://archaeologydataservice.ac.uk/archives/view/amphora_ahrb_2005/details.cfm?id=312&CFID=7469c890-edf0-49b5-bba7-0cfba4421d0d&CFTOKEN=0 (19 January 2018).
[261] Ricci, 'Elaiussa Sebaste', p. 173. See also, Ferrazzoli, Ricci, 'Production', p. 212.
[262] Ricci, 'Elaiussa Sebaste', p. 173.
[263] Ferrazzoli, Ricci, 'Production', pp. 213-5.
[264] See also, tables and figures presented in E. Equini Schneider, (eds), *Elaiussa Sebaste II, un porto tra Oriente e Occidente* (2 vols, Rome, 2003), ii, pp. 684-7; E. Equini Schneider, (eds), *Elaiussa Sebaste III, L'Agora Romana* (Istanbul, 2010), pp. 186-224.
[265] Ferrazzoli, Ricci, 'Production', p. 212.
[266] Ibid.

Soli-Pompeiopolis

During the course of excavations in the harbour area of Soli-Pompeiopolis, a kiln site that 'appears to have produced a version of the late Roman 1 (LRA 1) "Yassı Ada" amphora' was uncovered.[267] The kiln site, located approximately 100 metres west of the harbour mole, produced LR1a and LR1b variants, therefore encompassing a functional life-span from the early 5th century to early 7th century. Although the kiln structure itself has been destroyed by modern construction works, amphorae fragments, kiln lining and misfires all indicate a production locus. It is worth repeating, as the authors of the study state, that the kiln site at Soli-Pompeiopolis combined with the already identified four kilns at nearby Elaiussa-Sebaste, reaffirms the importance of amphorae production on the eastern coast of Isauria and initial suspicions of LR1 production in this area.

Anemurium

The development of Anemurium's amphora production appears to reflect that of western Rough Cilicia. That is, amphora production at Anemurium seems to be confined to the Roman period as the settlement does not appear to have produced LR1. However, Anemurium may have produced LR13, possibly a later variant of LR1. In terms of amphorae consumption, contrary to the situation of western Rough Cilicia where evidence of LR1 is minimal, LR1 is the most common amphora type at Anemurium in the late antique and early Byzantine periods. Therefore, if Anemurium was not producing LR1, the settlement appears to have been very much connected to the regional exchange networks, perhaps receiving LR1 from the LR1 production centres of the east coast (and

[267] For the following, C. Autret, R. Yağcı, N. K. Rauh, 'An LRA 1 amphora kiln site at Soli/Pompeiopolis', *ANMED*, 8 (2010), pp. 203-7.

Cyprus and eastern Cilicia) to a significantly higher degree than west coast settlements - although this picture may change as quantitative information becomes available from western Isauria.

The ceramic evidence of Anemurium first received scholarly attention when Caroline Williams published the ceramic assemblage of an early Byzantine deposit in 1977.[268] A subsequent publication presents further ceramic evidence.[269] In regards to amphorae finds, Anemurium is noteworthy in its dearth of variety.[270] That is, for Roman context finds, so-called Amphora Type A dominates. Only two imported forms are attested alongside the Type A form in two other fabrics. For late antique and early Byzantine layers, so-called Amphora Type B is by far the most common. Although the typology ascribed to the Anemurium amphorae is unique to the site, Type A finds its comparison with mid-Roman amphora 4 (also known as Agora G199, Zemer 41, Pinched handle amphora);[271] and Type B appears to be the equivalent of British series Bii, Ballance 6 (LR1).[272] Other common imported LR types such as Palestinian or Bag-shaped types are very rare. According to the catalogue of amphora finds, less than 10% of the total amphorae sherds recovered are Palestinian Bag-shaped types, but notably, this percentage also makes it the second most common of late antique and early Byzantine amphorae types.[273] Only one example of a Gaza-type amphora is thought to have been identified at Anemurium.[274]

---

[268] C. Williams, 'A Byzantine well-deposit from Anemurium (Rough Cilicia)', *Anatolian Studies*, 27 (1977), pp. 175-90.
[269] C. Williams, *Anemurium. The Roman and early Byzantine pottery* (Toronto, 1989).
[270] For the following, Williams, *Anemurium*, pp. 90-9.
[271] Williams, Anemurium, p. 92; 'Roman Amphorae: a digital resource. Agora G199', http://archaeologydataservice.ac.uk/archives/view/amphora_ahrb_2005/details.cfm?id=369&CFID=7469c890-edf0-49b5-bba7-0cfba4421d0d&CFTOKEN=0 (19 January 2018).
[272] Williams, *Anemurium*, p. 95; Peacock, Williams, *Amphorae*, p. 185; 'Roman Amphorae: a digital resource. Late Roman Amphora 1', http://archaeologydataservice.ac.uk/archives/view/amphora_ahrb_2005/details.cfm?id=236&CFID=7469c890-edf0-49b5-bba7-0cfba4421d0d&CFTOKEN=0 (19 January 2018).
[273] Williams, *Anemurium*, p. 98 (under catalogue 577).
[274] Williams, *Anemurium*, p. 99 (under catalogue 579).

The reason for Type A's dominance in the Roman amphorae assemblage is because this amphora type was produced locally. A kiln producing Anemurium Type A (a homogenous mound of sherd fragments, fire brick, and roof tiles) has been located in the north of the city, with production most likely dating between the 1st or early 2nd century to the 4th century.[275] In terms of distribution of this product, an example of this amphora type in Anemurium fabric has been identified in Alanya Archaeological Museum, indicating that regional shipment may have occurred to the west.[276] Examples of Type A have been identified in various locations in the eastern Mediterranean, in various fabrics.[277] One only need recall that western Rough Cilicia also produced this amphora type and its variants as well at the Biçkici and Syedra kiln sites. Therefore, Anemurium appears to have been a participant in a region-wide amphora production enterprise.

In the late antique and early Byzantine period, Type B or LR1 dominates the amphorae finds.[278] These sherds are found at Anemurium in different fabrics.[279] At the time of publication, the origin of LR1 was not yet confirmed and Williams, following hegemonic views, proposed southwestern Turkey, Cyprus, and northern Syria as the likely production regions for the finds of Anemurium.[280] Therefore, Williams does not necessarily ascribe any of these LR1 sherds to local production. In fact, in the catalogue discussion of a warped amphora neck piece she states, 'if it broke during firing or was otherwise not usable, it would be possible to speculate about local production for Amphora Type B. However, this warped neck is an isolated case and, unlike the evidence accumulated for local production of Amphora Type A, cannot be taken as conclusive

[275] Williams, *Anemurium*, p. 91-2, on the kiln, p. 94, at the time of excavation the kiln lay outside of the permit zone however magnometer readings showed anomalies that may be the kilns themselves.
[276] Williams, *Anemurium*, p. 92.
[277] Williams, *Anemurium*, pp. 92-3.
[278] Williams, *Anemurium*, p. 95.
[279] Ibid.
[280] Ibid.

proof for such production'.[281] I quote this in full because Anemurium has been considered a production centre of LR1 in secondary sources.[282] Based on Williams' evaluation of the Type B finds, I do not think LR1 was produced at Anemurium.[283]

The inconclusive nature of late Roman amphora production at Anemurium becomes more complex as a possible 'locally made medieval (or later) version of Amphora Type B' was uncovered at the find spot labelled as a 'service centre, kiln'.[284] In the discussion of the find and its context, Williams states that the find spot dates to after AD 580 at a time when the location was repurposed as a kiln. She states, 'it appears likely that the kiln and these sherds represent production after the early Byzantine period of a descendant of Amphora Type B, but no definite date can be assigned either on archaeological or stylistic grounds'.[285] This later variant of Type B may be the type LR13.[286] Production of LR13 appears to have been identified on Cyprus and in the Aegean.[287] It has been implied that LR1 was replaced by LR13 production at Anemurium, but as I have argued above, I am not convinced LR1 was produced at Anemurium.[288] If LR13 was indeed produced at Anemurium at a later period, this may be an interesting development in its own right and not necessarily a 'successor' type production to LR1 at this location. In a more recent article, LR1, LR3, LR4 and LR5 are all noted as being

[281] Williams, *Anemurium*, p. 96 (under catalogue 564).
[282] 'Roman Amphorae: a digital resource. Late Roman Amphora 1', http://archaeologydataservice.ac.uk/archives/view/amphora_ahrb_2005/details.cfm?id=236&CFID=7469c890-edf0-49b5-bba7-0cfba4421d0d&CFTOKEN=0 (5 December 2017); Rice, 'Port economies', p. 189; Commito, 'Southern Asia Minor', p. 124.
[283] See also, Russell, 'Anemourion', pp. 226-7 on the discovery of a kiln in one of the city's baths after the building had changed function. Amphorae fragments were found, although the products of the kiln are uncertain. Given the possible domestic/commercial context of the building at this stage, the amphorae may have been imports and not necessarily products.
[284] Williams, *Anemurium*, p. 96 (under catalogue 566 and 567).
[285] Williams, *Anemurium*, p. 97.
[286] 'Roman Amphorae: a digital resource. Late Roman Amphora 1', http://archaeologydataservice.ac.uk/archives/view/amphora_ahrb_2005/details.cfm?id=236&CFID=7469c890-edf0-49b5-bba7-0cfba4421d0d&CFTOKEN=0 (5 December 2017).
[287] Demesticha, 'Amphora production on Cyprus', pp. 469-70. See footnote 106 (p. 50).
[288] 'Roman Amphorae: a digital resource. Late Roman Amphora 1', http://archaeologydataservice.ac.uk/archives/view/amphora_ahrb_2005/details.cfm?id=236&CFID=7469c890-edf0-49b5-bba7-0cfba4421d0d&CFTOKEN=0 (5 December 2017).

imported to Anemurium.[289] The LR1, LR4 and LR5 finds coincide with the study done by Williams discussed above, however the addition of LR3 is notable.

In sum, until evidence suggests otherwise, it would appear that amphora production at Anemurium occurred in the early Roman period, but did not continue to produce LR1 amphorae, thus reflecting the functioning chronology of the neighbouring kilns on the west coast. Can a lack of LR1 production at Anemurium be due in part to the proximity of the settlement to other LR1 production centres at Elaiussa Sebaste, Soli-Pompeiopolis and Cyprus? Or was there simply no need for LR1 production at Anemurium because agricultural production did not reach surplus levels in the late Roman period? If Anemurium did not produce LR1, what factors may have contributed to the beginning of LR13 (if confirmed) production in the settlement?

Elsewhere in Isauria

At other coastal locations, LR1a fragments have been identified at the southern coastal site of Kelenderis.[290] Preliminary research on Boğsak Island (southeast Isaurian coast) revealed a predominance of LR1 amphorae.[291] Alongside LR1, LR2, fewer examples of Gaza/Palestinian amphorae were identified in underwater surveys around the island.[292]

Further inland, LR1 were identified at Alahan and at Kilise Tepe while both LR1 and LR4 are present in the amphorae collection of the Silifke Museum.[293] LR1 was also identified at Dağpazarı.[294] 16 examples of what has been identified as a variant or

[289] Elton, 'The economy of Cilicia in Late Antiquity', plate 36, fig. 3.
[290] L. Zoroğlu, 'Excavation and restoration work at Kelenderis in 2008', *ANMED*, 7 (2009), p. 31.
[291] G. Varinlioğlu, 'Boğsak Archaeological Survey (BOGA) 2015', *ANMED*, 14 (2016), p. 164.
[292] G. Varinlioğlu, 'Boğsak Archaeological Survey 2014', *ANMED*, 13 (2015), pp. 155-6.
[293] Elton, 'The economy of Cilicia in Late Antiquity', plate 36, fig. 3.
[294] H. Elton, 'Göksu Archaeological Project 2002-2004', *AST*, 23.1 (2005), p. 334.

imitation of early Byzantine British Bii amphora (LR1, see chart above) have been identified in the ceramic assemblage so far analysed from Diokaisareia.[295] At the same site an early Byzantine amphora (Form II 157) may be similar to Peacock and William's Class 52, which may correspond to LR7.[296] In addition, one example of so-called Form II 201, dated to the early Byzantine period, is described as being similar to Palestinian amphorae of the 5th to 6th century.[297] Although earlier, the relatively well-represented Form II 158 may be a variant of an amphora type produced at Antiocheia ad Cragum (Zemer 41), which illustrates the regional movement of amphorae across Isauria.[298] The international LR finds from Diokaisareia demonstrate that amphorae with more distant origins did travel inland to some degree, although only present in limited numbers.

Discussion

As a result of an analysis of the ceramics collected over the course of the Rough Cilicia Survey Project and amphorae of museum collections, the development of historic trading networks of the region has been surmised.[299] The scholars involved in RCAST have argued that the traditional trade networks of Cilicia (Isauria) can be understood as being formed by two regional areas. That is, eastern Rough Cilicia maintained trade networks with Syria, Phoenicia, and the Near East, while western Rough Cilicia predominantly participated in trade networks with Cyprus.[300] In the late antique period,

[295] N. Kramer, *Diokaisareia in Kilikien. Keramik und Kleinfunde aus Diokaisareia* (Berlin, Boston, 2012), pp. 29-31.
[296] Kramer, *Diokaisareia*, pp. 30-1.
[297] Kramer, *Diokaisareia*, pp. 30-1, Peacock, Williams, Class 46 is given as a reference. Peacock, Williams, *Amphorae*, p. 191, describes this class as Palestinian in origin with a date range between the 5th and 6th centuries.
[298] Kramer, *Diokaisareia*, pp. 30-1. As above, also known as Agora G199 dated to approximately the 1st to 4th centuries, 'Roman Amphorae: a digital resource. Agora G199', http://archaeologydataservice.ac.uk/archives/view/amphora_ahrb_2005/details.cfm?id=369&CFID=7469c890-edf0-49b5-bba7-0cfba4421d0d&CFTOKEN=0 (9 December 2017).
[299] Autret, *et al*., 'Trading networks', ii, p. 595.
[300] Autret, *et al*., 'Trading networks', ii, pp. 595, 609.

this postulation appears to be supported, at least for eastern Isauria, by the imported amphorae evidence. At Elaiussa-Sebaste, the most frequently imported vessels were of Palestinian origin. Likewise, although arriving in minimal amounts, amphorae of Palestinian origin are the second most frequent type in Anemurium for the late Roman period. However, evidence of LR4 or other LR types in western Isauria is not quantified, so it is difficult to ascertain the degree of exchange with the Levant for this western region.

It appears that after a decline of western Rough Cilician amphorae production from the 4th century onwards, an intensification of production took place on the east coast in the province. The change in amphora production from the west to east coast may be attributed to a number of factors including a period of political and social instability, a decline in population, changing social order, or environmental factors in western Isauria. What factors might account for the intensification of production on the east coast? Is the decline of production in the west and intensification of production in the east to be understood sequentially or as independent phenomenon with underlying factors in each region predating this apparent shift?

Seleucia was the site of a military garrison and a large religious pilgrimage centre, which may have increased imperial interests in the area. This in turn may have been incentive for imperial authorities to maintain security in the region and support cultivation in the east of the province. Perhaps a lack of substantial military, religious and political interests in western Isauria may have contributed to its decline.[301] When considered individually, the funerary epigraphic evidence from eastern Isauria, LR1 production and the Abydos Tariff, are difficult to interpret, but considered altogether, these various pieces of evidence suggest that eastern Isauria may have played a large role in the

[301] On the lack of an urban hub in western Rough Cilicia, Commito, 'Southern Asia Minor', pp. 228-30.

exchange of agricultural products in the maritime networks of the late antique eastern Mediterranean.[302]

Comparison of the amphorae evidence of Lycia and Isauria

While there are similarities in the amphorae of assemblages at Lycian and Isaurian settlements, which suggests that both provinces were directly or indirectly involved with wider exchange networks, the difference in evidence for amphora production between Isauria and Lycia is significant. While convincing evidence of late Roman amphorae production in Lycia is lacking, late Roman amphorae production has been confirmed in Isauria. Due to this difference in amphorae production between the two regions, it may be suggested that Lycian goods may not have entered into the exchange market to a significant degree (at least not those types of goods likely transported in amphorae). The economic base of the province should maybe be sought elsewhere, beyond agricultural cultivation. As will be explored in the following chapter, evidence of settlement patterns seems to reflect a growing dependency on particular coastal areas of the province, suggesting that the economy of the province was increasingly maritime-centric and was based more so on servicing maritime exchange. Again, other goods, such as timber, grain or marine resources may have been exported from Lycia, but as it is difficult to trace the exploitation and transportation of such commodities archaeologically, we can only speculate on the degree to which such Lycian goods entered into maritime exchange in Late Antiquity (discussed further in Chapter 5).

By contrast, based on the evidence of amphorae production in Isauria, we may confidently hypothesize that Isaurian oil and wine were exported from this region. A

[302] Iacomi, 'Some notes', pp. 19-32. See Chapter 2.

significant difference between the regions is the main commodities they supplied to exchange.[303] The substantial amphora production of Isaurian-manufactured LR1 highlights the agricultural differences between the two regions.

[303] 'As the evidence stands today, it would seem that Lycia focused on the exploitation of marine and forest resources for export while Rough Cilicia concentrated on the export of wine and oil', Rice, 'Port economies', p. 197.

Chapter 4. Evidence of late antique settlement in Lycia and Isauria

The current amphorae evidence of Lycia and Isauria presented in the previous chapter has started to reveal the different ways in which these two regions may have participated in wider Mediterranean economic networks. On the one hand, in the case of Lycia, a lack of evidence for amphorae production in the region suggests that staple goods such as Lycian oil and wine may have been exchanged on a local or regional level and consumed within the province, but evidence does not suggest such goods were exported abroad from the region. Consequently, provisioning maritime traffic - in terms of providing harbour facilities and services - and exchange in marine resources may have played an important role in Lycia's economy. On the other hand, as late Roman amphora production has been identified on the eastern coast of Isauria, we may confidently theorize that surplus goods were exported from the region in these vessels. Does the settlement evidence of Lycia and Isauria support and elucidate the differing economic roles of each region?

If agricultural production reached surplus levels in Lycia and export in goods such as oil or wine formed the base of Lycia's economy, then we might expect a high degree of settlement to be present along the Lycian coast - potential areas for the cultivation of vines and olives for processing and export. Yet, as will be discussed below, the current state of evidence for late antique settlement so far identified in Lycia does not seem to support this situation. Instead, late antique settlement appears to be predominately concentrated in select coastal areas therefore supporting the notion of an economy largely centred on important harbour areas and by extension servicing maritime traffic.

In the case of Isauria, evidence suggests that settlement was predominately located along the east coast of the region - the area where amphorae production has been identified. As a result, we are in a position to investigate how rural settlement in this territory may have been connected to amphorae production and wider maritime exchange. We may also explore the development of areas that appear geographically distant from the eastern amphorae production zone and what this may reveal about the connectivity between settlements.

Furthermore, as recent archaeological research has revealed expanding settlement in areas across Anatolia, an additional aim of this chapter is to grapple with a seemingly simple question: was Lycia or Isauria prosperous in Late Antiquity? Why or why not? In addition, I ask: how and where might prosperity be identified in these regions?

I will argue that an analysis of the settlement remains of Lycia and Isauria reveals that over-arching generalisations of settlement 'prosperity' or 'decline' do not accurately reflect the development of settlement in these provinces in the late antique period as not all settlements developed similarly across these regions. By examining various geographic sub-regions of Lycia and Isauria (southern, western, eastern coastal areas and inland territories) nuances in their development are revealed. Only when regional variation is considered can we then begin to better understand the relationship between sites, city and rural relations, and the development of the provinces as a whole in a wider economic context.

Previous theories of late antique settlement

In a series of papers, Martin Harrison discusses the archaeological remains of Lycia.[304] Writing circa 1960-80s, Harrison hypothesised a shift in the wealth and population of the province in the late antique period. He argued that the higher quality construction and architectural sculpture in the remains he observed in the mountainous region of the province, particularly in the Alacadağ region of central Lycia, was lacking at coastal settlements, with only a few exceptions. Harrison therefore theorised that the coastal areas declined in the late antique period with the result that the wealth and population migrated to the mountainous interior of the province.

In the seminal article 'The Lycian Coast in the Byzantine age' (1994) Clive Foss presented a very different picture of the Lycian coast from that which Harrison had described years earlier.[305] Instead of decline, Foss has argued, based on material evidence, that Late Antiquity was a period of prosperity for the coastal region of Lycia.[306] Foss argues that trade in agricultural goods and a system of interdependence underlay the economic prosperity of the area. That is, settlements on the coast, cities and settlements of the hinterland were mutually dependent on one another. Coastal settlements with limited water resources and arable land relied on the agricultural resources of the hinterland for their survival. In turn, coastal settlements offered the inhabitants of the interior markets and access to other goods. Thus, villages and cities of the coast were economically linked.

These two contrasting theories have greatly influenced our interpretation and understanding of the late antique development of Lycia. However, the difficulty in these

[304] R. M. Harrison, 'Aspects of late Roman and early Byzantine Lycia', in *VIII. Türk Tarih Kongresi. Ankara: 11-15 Ekim 1976* (Ankara, 1979), i, pp. 525-31; R. M. Harrison, 'Lycia in Late Antiquity', *Yayla*, 1 (1977), pp. 10-15; R. M. Harrison, 'Upland settlements in early Medieval Lycia', *Actes du colloque sur la Lycie Antique* (Paris, 1980), pp. 109-18.
[305] For the following, Foss, 'Lycian coast', pp. 1-52.
[306] Foss, 'Lycian coast', p. 46, footnote 185.

theories is their geographic scope of analysis, as they do not extend beyond the coast and near-coastal areas of Lycia. Consequently, although he makes clear that his focus is only on coastal areas, Foss' statement that 'Lycia prospered in late antiquity' gives an inaccurate impression of provincial prosperity.[307] Although Foss raises the possibility of a declining interior in an earlier publication (1993), attributing this development briefly to brigandage and possible economic change, he does not pursue the subject in detail and this observations does not seem to impact his general assessment of Lycian development in his subsequent publication.[308] As will be demonstrated below, a reassessment of the evidence and the location of late antique coastal settlement reveals that the entirety of the Lycian coast did not prosper in this period. Instead, only restricted pockets of limited coastal areas may have been the loci of substantial investment and encompass evidence that may be interpreted as 'prosperity'. Furthermore, an analysis of inland Lycian settlement suggests that settlements of the interior did not experience development but may have even declined in this period. If a system of interdependence underlay the supposed late antique prosperity of Lycia then we might expect the province to have 'prospered' in unity, which, it will be argued, according to the archaeological evidence it did not.

Although the theories of Harrison and Foss concern the Lycian coast and require revision, their hypotheses concerning population migration and coastal development may guide our analysis of the late antique settlement of Isauria. If particular areas of the Lycian coast were loci of substantial investment and building activity in Late Antiquity,

[307] Foss, 'Lycian coast', p. 2. At page 48 footnote 190, based on his interpretation of the development of Pinara (see below) Foss speculates on the possibility of inland decline and a reversal of Harrison's theory, but does not pursue this further. Pinara is interpreted as an exception to the general rule of prosperity.
[308] Foss, 'Lycia in history', pp. 17, 19, 20. The possibility of declining interior settlement is hinted at by Charlotte Roueché, but is attributed to brigandage, not directly with economic change C. Roueché, 'Asia Minor and Cyprus', in A. Cameron, B. Ward-Perkins, M. Whitby (eds), *The Cambridge Ancient History Volume 14. Late Antiquity: Empire and Successors, A. D. 425-600* (Cambridge, 2000), pp. 583-4. See footnote above.

we might ask if a parallel situation occurred further east in southern Anatolia, in Isauria. Can evidence of late antique prosperity be detected in the interior of Isauria, beyond the low-lying coastal fringe? As late antique amphorae production has been identified in the province, can a system of interdependence and the transportation of agricultural goods from inland regions be traced archaeologically? Where or how far inland were exported goods sourced? Perhaps most importantly, do we have the archaeological evidence to explore such questions? Decades have past since the work of Foss and Harrison. As archaeological research has progressed in both Lycia and Isauria, the time is right to reassess the picture of late antique settlement for Lycia and examine the settlement development of Isauria.

Sources and methodology: the backdrop

I have collated and mapped information concerning the late antique settlement remains identified in Lycia and Isauria in the TIB volumes 5 and 8. This information provides a general picture of the late antique settlement remains identified across these regions. The results of this examination are presented in Appendix 1 and Appendix 2. It is crucial to note at the outset that Appendix 1 and Appendix 2 should be viewed as offering only a general overview of possible late antique, late Roman and early Byzantine remains/settlement activity in Lycia and Isauria. It is critical to recognize that these tables essentially illustrate various levels of interpretation of the remains presented in the TIB volumes. I am reliant on the dating and identification of remains/activity that may be attributed to the late antique, late Roman and early Byzantine periods in the TIB, which derives from the compilers' interpretation of the research they draw upon. This is perhaps most obvious when differences in opinion (for example, concerning the dating or function of a site) are presented in the TIB itself.

In some cases, locations where evidence was once recorded may no longer be visible (due to geographical factors such as silting, or modern disturbances or overbuilding), or cannot be traced in more recent times. At times, more recent research further corroborates the information in the TIB, but it may also add to or differ from the remains discussed in the TIB volumes. Sites where more recent research provides additional or updated information, or different interpretations of remains that are discussed in the following sections are indicated in Appendices 1 and 2 and discussed below. For example, recent survey work at the settlement of Balboura in Lycia has identified a greater number of late antique churches than those mentioned in the TIB 8. Therefore, Appendices 1 and 2 should be approached with an awareness of the various levels on which the material culture of Lycia and Isauria has been interpreted and presented, and these tables ought to be viewed as only rough guides to the potential late antique remains of these regions.

It is also important to note differences between the TIB volumes for Lycia and Isauria. While the TIB 8 (Lycia), published 2004, is comprised of three volumes, the TIB 5 (Isauria), published 1990, is comprised of two volumes. The difference in the number of volumes may be attributed to a number of factors including the difference of publication dates and geographical area considered. But, it may also be a reflection of the difference in the level of settlement between the regions (although, of course, there are likely numerous ancient settlements that have yet to be discovered across southern Anatolia). These differences are also reflected in Appendices 1 and 2, as the table of Appendix 1 (Lycia) comprises 203 sites, and the table of Appendix 2 (Isauria) comprises 152 sites.

I have categorised the information presented in the TIB volumes 5 and 8 in the following way: Category 1) sites where remains may be late antique, late Roman or early Byzantine; sites that may show signs of activity/occupation that may be attributed to the

late antique, late Roman or early Byzantine periods in the TIB; settlements attributed to these periods in the TIB; Category 2) sites where remains may be less securely attributed to the late antique, late Roman or early Byzantine periods- that is, sites where remains may be probably/possibly of late antique, late Roman or early Byzantine date (here I have interpreted particular terms and indications as representing a greater degree of uncertainty in the dating of remains in TIB entries); Category 3) sites with a church or religious/Christian remains that may be dated to the late antique, late Roman or early Byzantine periods; Category 4) sites with a church or religious/Christian remains that may be less securely attributed to the late antique, late Roman or early Byzantine periods (I have interpreted particular terms and indications in TIB entries as signifying a greater degree of uncertainty in the dating of remains). This category also includes references to possible church remains that are undated or where remains attributed to a later (often middle Byzantine) period are uncertain. Religious remains here include Christian inscriptions, for example. If multiple churches are documented at a site, the number is given where possible.

Settlements that are attested only in literary sources have not been included. Further detail to explain or clarify the reason for a categorisation is also given ('Miscellany' in labelled category 'Misc.'). In the case of some site entries, evidence for Roman period or Byzantine activity and remains may be noted in the TIB, but as this does not indicate confirmed continuation of settlement throughout and between these periods (and as late antique occupation is not made reference to), I have chosen not to assume late antique occupation.

It is important to note when reading these tables that categorising the descriptive site entries provided in the TIB is not always straightforward (see examples below). I have striven to apply the categorisation scheme across the volumes as far as possible, but

it should be borne in mind that not every entry contains the same level of detail. While quantified information is sometimes given, such as the number of houses or the approximate size of a settlement in hectares, the extent of remains is not always described making an understanding of the size or potential population of a settlement difficult. Differences in the amount of information provided limits a comparison of different types of categories of evidence across sites (that is, not all entries will mention house remains, terracing, pottery finds etc.). If there is no mention of terracing, agricultural press installations or harbour facilities for example, it is difficult to determine the possible economic sources of a settlement. In some instances, the entries for sites are simply confusing.[309] These factors are largely a symptom of the disparate information on which the TIB draws upon, therefore highlighting difficulties in compiling evidence from research that differs in method and detail.

It is also important to note that the information in Appendices 1 and 2 is represented qualitatively but not quantitatively. As a result, Appendices 1 and 2 illustrate the types of remains having been attested, but do not convey the size of a settlement or extent of remains. For example, evidence that suggests wall repair or renovation have been indicated in Category 1 in the same way as evidence suggesting the construction of multiple buildings.

In terms of interpreting religious structures (Categories 3 and 4), it is sometimes the case that in a TIB entry, a site with a church may be generally attributed to the Roman-early Byzantine period, but the church itself is not assigned a date. In such cases, I have interpreted the date of the church as being implied by the general date of the settlement (and so included in Category 3).

[309] TIB 8, 'Dinek', p. 521. See Chapter 5 on this settlement.

The Lycian sites included in Appendix 1 have been indicated on Map 1 and the Isaurian sites included in Appendix 2 have been indicated on Map 2. These maps should also be viewed in the same manner as the Appendices - general guides to the locations of potential late antique, late Roman and early Byzantine material evidence in Lycia and Isauria. It is important to note that the locations of some sites are unknown and the location of others is sometimes only an approximation based on the descriptions offered in the TIB (indicated in Appendices 1 and 2). In some cases, the locations of remains are indicated on the base TIB maps with multiple points and I indicate sites correspondingly. Exceptions are noted in the Appendices (I do not indicate bridges). Nevertheless, the main purpose of these maps is to illustrate the distribution of settlement across these regions, which as we shall see sometimes varies greatly. It is the discrepancy in the location of settlement on micro-regional and macro-regional scales within these provinces that underlies the following discussion.

Before turning to an in-depth discussion of the late antique settlement evidence of Lycia and Isauria, there is one final note to be made. It is important to ask throughout the following discussion whether the picture of late antique settlement gleaned from the available evidence is an accurate picture of the historical reality of settlement or a reflection of where research has been conducted. As research of coastal areas and cities predominates archaeological interests in these regions, we are likely missing information concerning inland and rural settlement of these provinces. There is also the possibility that due to a conflation of the narrative of eastern Mediterranean prosperity and Foss' aforementioned theory, there may be an overidentification of churches and settlement remains attributed to Late Antiquity in these regions (particularly for Lycia and coastal areas).

Building from the backdrop of settlement presented in the TIB 5 and TIB 8, what follows is a more detailed discussion of the various sub-regions of the provinces and an analysis of more recent information that has become available over the course of further research. This discussion is fundamentally based on the archaeological research conducted by the archaeologists working in Lycia and Isauria. The arguments and conclusions I draw are dependant upon the information and dating presented in available publications.

Lycian settlement

The following section presents the late antique settlement evidence of Lycia. First, settlements of the southcentral coast will be presented, followed by those of the western and eastern coastal and near-coastal areas of the region. Moving inland, evidence of late antique settlement activity and occupation along the Xanthus Valley and the northcentral interior of Lycia is then presented. The section will conclude with an analysis and discussion of the settlement evidence of Lycia as a whole (also discussed in Chapter 5).

The southcentral coast

The southcentral coastal area of Lycia is remarkable because it is the area where the highest number of settlements have been located (Map 3). The number of settlements identified in this central coastal zone is unparalleled elsewhere in the geographic area under consideration. Due to this exceptional circumstance, it is worthwhile to present the remains of this area in detail, with the aim of analysing the economic variables that may have facilitated this density as well as the connectivity between coastal and near-coastal sites.

The TIB 8 offers important information concerning the various settlements in this coastal zone, although there are discrepancies in the descriptions of sites. This renders an analysis of remains and settlement connectivity difficult. Most issues concern chronology, as settlement remains and churches may be mentioned, but are not assigned a date. For example, the description of Derekuyu, located approximately eight km north of Myra, is given as 'Kapelle, Häuser, Zisternen' (no date), and references the work of Foss and Harrison, but does not offer any additional information.[310]

Often a description of a site does not give a sense of the settlement size or economic source as illustrated in the entry for the coastal site Ebi.[311] The site has a much longer description than Derekuyu, but does not necessarily contain more useful information. According to the TIB 8, Ebi is a harbour, nine km southwest of Myra. The description of the site gives the impression of a fairly substantial settlement that included houses that were possibly occupied into the early Byzantine period. The settlement appears to have been equipped with an early Byzantine basilica. However, the size of the settlement or nature of occupation remains rather ambiguous from such a description.

Another example is the description of the coastal site Hamadiye, located one km east of Simena.[312] It is described as having houses that were probably occupied in the early Byzantine period. There is also a large early Byzantine church, possibly dated to the 6th century in the settlement. The description of the church comprises the majority of the entry, and there is no information regarding Hamadiye's agricultural/economic basis (presses, agricultural terraces etc.).

[310] TIB 8, p. 516; C. Foss, 'Cities and villages of Lycia in the Life of Saint Nicholas of Holy Zion', *Greek Orthodox Theological Review*, 36.3-4 (1991), p. 329; M. Harrison, 'Nouvelles découvertes romaines tardives et paléobyzantines en Lycie, communication du 23 mars 1979', *Comptes rendus des séances de l'Académie des Inscriptions et Belles-Lettres*, 123.2 (1979), p. 232.
[311] TIB 8, pp. 524-5.
[312] TIB 8, p. 555.

Information concerning the dating of a site and its remains are sometimes confusing and difficult to categorise, such as in the example of the site Kilise Alanı.[313] The settlement is described as a possible Roman-Byzantine site, seemingly implying that the settlement does not date further back in time, but the statement is also accompanied by a question mark. It is unclear how the question mark impacts the uncertainty of dating as the settlement may have also encompassed an early Byzantine basilica. The remainder of the site entry describes the middle Byzantine phase of the church. Thus, it is difficult to discern the occupation phases of the settlement.

In some instances, settlement descriptions presented in the TIB 8 are detailed enough for some sort of understanding of their development to be grasped, as site size expressed in hectares or the number of houses is given. An example is the description of Karakuyu, located in the area of Bonda Tepesi, where 40-50 houses have been identified. In and around Karakuyu, 14 oil presses have been discovered. The settlement is thought to have expanded in the early Byzantine period. At that time a church appears to have been constructed.[314]

These aforementioned sites have been presented here to illustrate the discrepancies in the information in the TIB 8 (and so should be borne in mind when reading the entries of Appendices 1 and 2). Yet, these discrepancies ought not overshadow the value of the publication as, without it, it would be much more difficult to consolidate any information regarding this southcentral coastal area, let alone Lycia more generally. I will now turn to more comprehensively studied settlement in this area to examine their development in relation to Myra and the economic networks of the southcentral coastal region.

[313] TIB 8, p. 632.
[314] TIB 8, p. 603.

Within the southcentral coastal area lies the major harbour Andriake. Equipped with a Hadrianic warehouse (where a 4th century inscription was found describing weights and measures in relation to the settlement Arneai, presumably in connection to agricultural products) and five early Byzantine churches, Andriake was the port of Myra.[315] The church of Saint Nicholas and the theatre of Myra are well-known as their majesty has captured the interest of scholars, pilgrims and tourists over centuries. However, these monuments are very much observed in isolation, separated from their settlement context. Unfortunately, the deep layer of silt and modern construction that overlies ancient Myra hinders archaeological study in the city centre.

The hinterland of Myra, the area of the Alacadağ, and the early Byzantine churches located here have received a large share of scholarly attention.[316] As discussed in Chapter 2, the *Life of Saint Nicholas of Sion* narrates the activities of this countryside, giving the impression of a relatively densely settled area. Scholars have attempted to locate the churches and villages mentioned in the hagiography based on the archaeological remains identifiable in the area today. The discovery of high-quality church structures, such as at Alakilise, Muskar, Karabel and Alacahisar to name a few, some of which are accompanied by rural settlement, seems to support the notion of a densely settled and wealthy Lycian countryside.[317]

Results of recent archaeological survey of the area by Bülent İşler has revealed previously undocumented late antique and medieval settlement remains in the areas of modern Beymelek, Günağı, Alakisle, and Alakilise.[318] The settlement remains, including

[315] Foss, 'Lycian coast', pp. 23-6; Foss, 'Cities and villages', pp. 313-16, 319; TIB 8, 'Arneai', pp. 454-5, where four churches have been identified. Three are early Byzantine basilicas. Church 'D' is not well-preservation. See Appendix 1.
[316] For example, P. Grossmann, H-G. Severin, *Frühchristliche und Byzantinische Bauten im Südöstlichen Lykien. Ergebnisse zweier Surveys* (Tübingen, 2003); Foss, 'Lycian coast'; Foss, 'Cities and villages', pp. 303-39; Harrison, 'Churches and chapels', pp. 117-51.
[317] M. Harrison, *Mountain and plain*, ed. W. Young (Ann Arbor, 2001), pp. 8-47.
[318] B. İşler, 'Surveys on the Byzantine settlements around Alacadağ in Lycia', *ANMED*, 14 (2016), pp. 217-25.

religious structures, are attributed to the role of this area in pilgrimage (to Jerusalem and to the monastery of Sion), as well as trade in agricultural goods (Işler has identified work areas, some possibly for wine production).[319] However, it is not made explicit where the agricultural production of the region is thought to have been directed - to local, regional, or wider trade (that is, to Myra or to settlements located within Lycia, to coastal harbours for shipment abroad, or a combination of the above).

The survey conducted at the site of Kyaneai and its hinterland by Frank Kolb and his team has been significant in furthering our understanding of development of this coastal region.[320] Kyaneai experienced a period of growth in the late antique period when the city expanded, and three basilicas were built.[321] It is postulated that in the late antique period, the character of rural settlement changed in that single farms developed into small villages.[322]

Located west of Kyaneai, the settlement of Phellos seems to have been overshadowed in later times by the development of its harbour settlement Antiphellos where structures such as a theatre, agora, and two baths have been identified among other structures.[323] It has been argued that the secluded location of Phellos, that once afforded the site security, hindered its development from the Hellenistic period onwards.[324] Contrarily, Antiphellos seems to have benefited from its coastal position and developed at the expense of the inland Phellos. Antiphellos is thought to have played a role as a locus for the trade of agricultural products from the hinterland (but on what scale- local

[319] İşler, 'Alacadağ', pp. 224-5.
[320] TIB 8, pp. 671-5; for example, F. Kolb, B. Kupke, M. Miller, M. Zimmermann, 'Spätantike und byzantinische Besiedlung auf dem Gebiet der lykischen Polis Kyaneai', *Klio*, 73 (1991), pp. 563-85; F. Kolb, A. Thomsen, 'Forschungen zu Zentralorten und Chora auf dem Gebiet von Kyaneai (Zentrallykien): Methoden, Ergebnisse, Probleme', in F. Kolb (eds), *Chora und Polis* (München, 2004), pp. 1-42. See Chapter 3.
[321] W. Tietz, 'Central Lycia: Kyaneai, Phellos, Kekova', in *Lukka to Lycia*, p. 364.
[322] Tietz, 'Central', p. 366.
[323] Tietz, 'Central', pp. 366-7; M. Zimmermann, 'Survey in Phellos (central Lycia) 2003', *ANMED*, 2 (2004), pp. 101-4.
[324] Tietz, 'Central', pp. 366-7.

regional, interregional- is again, ambiguous).[325] Other economic sources for the coastal site may have been sponges, while fish salting may have taken place at Antiphellos as well, based on the identification of possible tanks for this purpose.[326]

Werner Tietz states that a basilica has not been identified at Phellos, but a chapel is recorded as having been built into a sanctuary (the dating of the chapel is unclear).[327] Contrary to Teitz, the TIB 8 documents a possible basilica at the site based on the identification of a possible apse (it is unclear if the chapel and possible basilica referred to in the separate publications are the same building).[328] Such contrasting remarks exemplify the challenges that permeate the consolidation of settlement information across publications. The TIB 8 states that two possible early Byzantine churches are attested at Antiphellos.[329]

Teimiussa, also known as Tristomon, located about 14km away from Myra, is thought to have been the harbour of the settlement Tyberissos.[330] A period of increased settlement density is thought to have occurred at Teimiussa in the early Byzantine period.[331] Similar to Antiphellos, the site is recognized as a place for the exchange (as a 'port of trade') of the agricultural goods from the hinterland, and salt fish processing may have taken place within the site itself as well.[332] It is approximated that 400 tonnes of salted fish was produced per annum based on the evidence of the Roman period salting vats identified.[333] Tietz conjectures that in the Roman period, settlement grew with the population in the area peaking in AD 500.[334] Two 'impressive and skillfully decorated'

[325] Tietz, 'Central', p. 367.
[326] Rice, 'Port economies', p. 141; Tietz, 'Central', p. 367.
[327] Tietz, 'Central', p. 367.
[328] TIB 8, p. 803.
[329] TIB 8, p. 442; Zimmerman, 'Phellos 2003', p. 104 states that there were two churches built in Late Antiquity.
[330] TIB 8, p. 895.
[331] TIB 8, p. 896; Tietz, 'Central', p. 370.
[332] Tietz, 'Central', p. 370; TIB 8, p. 896; Rice, 'Port economies', p. 146.
[333] Marzano, *Harvesting*, p. 108.
[334] Tietz, 'Central', p. 370.

churches have been identified, dated to the early Byzantine period in the TIB 8.[335] In the vicinity of Teimiussa, additional late Roman remains have been identified also.[336]

At the inland settlement of Tyberissos, early Byzantine occupation has been identified (houses and oil presses), as well as a possible church, although this identification is uncertain and the structure is not given a construction date by the TIB 8.[337] Although Tyberissos encompassed two agorai, a warehouse, and a temple, it has been suggested that the settlement may not have had a very large population.[338]

At Simena, public buildings have been identified, including a theatre/bouleuterion, stoa, and bath. The stoa underwent renovations and was converted to a basilica dated to the early Byzantine period.[339]

Underwater and land surveys undertaken at Aperlae have shed light on the development of this settlement, which is considered to be a small harbour site despite its noteworthy production of highly valued dye products.[340] The isolation of Aperlae from inland settlements has been emphasised in archaeological publication reports (one Roman road has been identified in the area), as well as the challenges that would have posed ancient seafarers when navigating the waters during times of hostile weather in the area.[341] Most of the attention concerning the settlement has centred on the vast amount of murex shells identified, that suggest some sort of involvement in purple dye production

[335] TIB 8, p. 896; Tietz, 'Central', p. 370.
[336] TIB 8, p. 897.
[337] TIB 8, pp. 899-900.
[338] Tietz, 'Central', p. 371.
[339] Tietz, 'Central', pp. 369-70; TIB 8, p. 849.
[340] Hohlfelder, Vann, 'Cabotage', p. 127. On murex, R. L. Hohlfelder, R. L. Vann, 'Uncovering the maritime secrets of Aperlae, a coastal settlement of ancient Lycia', *Near Eastern Archaeology*, 61.1 (1998), pp. 29-31. See also TIB 8, pp. 443-6.
[341] Hohlfelder, Vann, 'Cabotage', pp. 127, 129; Hohlfelder, Vann, 'Uncovering', pp. 26, 28; TIB 8, p. 443; R. L. Hohlfelder, R. L. Vann, 'A church beneath the sea at Aperlae, Lycia', *ADALYA*, 4 (1999-2000), p. 207. On this point and Aperlae's apparent disconnect with the hinterland, Foss' contrary opinion, Foss, 'Lycian coast', p. 16.

(whether only dye was produced at the site or if textiles were also dyed is debated).[342] Tanks, presumably for the snails, have been identified as well.[343]

A synthesis of the information provided in available archaeological reports suggests that the site had four churches.[344] These churches seem to have first phase construction dates in the late antique/early Byzantine periods. There may have been a fifth church (not further described).[345]

Based on the information available, Aperlae, despite its small size, stands out as a settlement with a high number of churches, and encompasses a comparable number of such buildings to few other coastal settlements (see Kekova Island, Andriake, Olympus). Can the high number of churches in this small yet potentially economically important settlement be an accurate tool to measure its 'prosperity'?

The archaeologists Robert L. Hohlfelder and Robert L. Vann state that 'Aperlae supported four churches even though its population seems far too small for such an extravagance', and argue that the archaeological evidence of the site suggests that the inhabitants of Aperlae chose not to build major harbour facilities because there was no use for them, not because they could not build substantial facilities.[346] Instead, 'the churches themselves are indisputable evidence in stone and mortar of the considerable communal wealth' of Aperlae and that 'the absence of permanent or sophisticated harbour installations…is not in itself an appropriate yardstick for assessing the prosperity of small

[342] Rice, 'Port economies', pp. 143-4, argues that the dying of cloth likely occurred on site. See Chapter 2.
[343] Hohlfelder, Vann, 'Cabotage', p. 132.
[344] Hohlfelder, Vann, 'Cabotage', p. 133; in an early publication, the same authors state that two churches had been identified, but this number is updated in the later publication, Hohlfelder, Vann, 'Uncovering', p. 26. Foss, 'Lycian coast', p. 17 mentions three churches, two within the city walls (dating to the 5th to/or the 6th centuries) and a third outside the walls near the necropolis, which he dates to the 6th century. This was before the discovery of a submerged church. Hohlfelder, Vann, 'A church beneath the sea at Aperlae, Lycia', p. 209 state that three churches were identified in the urban centre of Aperlae, while a further church had been identified underwater. E. Aslan, 'Harbour surveys in Kekova region in 2009: "Harbour of Aperlai"', *ANMED,* 8 (2010), p. 181 states that four churches (not explicitly dated in the text) have been identified within the city walls.
[345] B. Leadbetter, 'Diocletian and the purple mile of Aperlae', *Epigraphica Anatolica,* 36 (2003), p. 130.
[346] Hohlfelder, Vann, 'Cabotage', pp. 133-4.

coastal settlements or the extent of their maritime life or dependency on the sea'.[347] The high number of churches, it may be argued, might be expected, especially considering the settlement's its involvement in highly valued dye products.

Although sizeable, measuring approximately 7.5km long by 1.8km wide, the rugged topography of Kekova Island limited settlement on the island to three areas.[348] At the site of Tersane Koyu, remains include those of '122 buildings consisting of 254 rooms in total, 51 cisterns, 1 military tower, 2 churches, 2 chapels, 1 work area for fish sauce, 1 harbour and 1 monastery'.[349] No explicit date is given for the monastery, but the 'Big Church' was three-aisled with marble columns and measures 33x18m (external measurements). Based on structural characteristics and regional comparisons, the author implies the church ought to be dated to the 5th and 6th centuries.[350] The 'Harbour Church' is also three-aisled but not as well preserved and no date is assigned to it.[351] A small chapel is, again, not dated, and no detail is offered concerning the second chapel that is also alluded to in the report.[352]

At the second settlement site on the island ('North Settlement'), three churches along with 175 houses, three fish sauce work areas, 32 cisterns, and one harbour area have been documented thus far (the report does not go into much detail regarding the dating of these remains).[353] The third settlement area, located on the eastern part of the island, includes '…houses, work areas, cisterns and retaining walls of a possibly earlier

[347] Ibid.
[348] E. Aslan, 'Harbor surveys in Kekova region in 2010: Dolichiste (Kekova Adası) Harbor Areas', *ANMED*, 9 (2011), p. 231; E. Aslan, 'Archaeological land and underwater surveys at Kekova Island in 2015', *ANMED,* 14 (2016), p. 175.
[349] Aslan, 'Kekova 2015', p. 175.
[350] Aslan, 'Kekova 2015', p. 178.
[351] Aslan, 'Kekova 2015', pp. 178-9.
[352] Aslan, 'Kekova 2015', pp. 179-80.
[353] Aslan, 'Kekova 2015', p. 182.

period built with large blocks', and there is no mention of a religious building being identified.[354]

The number of churches in the settlement of Tersane Koyu and the North Settlement of Kekova Island reflects the number of the churches identified at Aperlae. However, unlike Aperlae, murex production is not mentioned in the reports of Kekova, and as the landscape of the island limits settlement, the economic foundation of the island would appear to have been servicing maritime traffic (likely by providing harbour facilities and fresh water), and possibly religious needs of the local community and visitors alike. While Aperlae's dye production and possible maritime service may have been the main source of funds for the construction of the churches, Kekova Island's strategic location may have been the most significant factor for the economy of the island, perhaps alongside the exploitation of marine resources, as agricultural production does not seem to have contributed greatly to the settlements' economic base. Based on the find of 600 LR1 amphorae discovered in clusters over the course of underwater surveys at Kekova (as of publication in 2013), it can be postulated that the island was along the route of maritime traffic in the southcentral coastal area in Late Antiquity.[355]

The south coast: summary

The role of the settlements of the southcentral area is significant when examining the maritime networks of Lycia. The geographical location of Aperlae raises a number of interesting aspects concerning the connectedness of small ports along the coast as well as the relationship between small ports and interior settlement. Interestingly, Hohlfelder and

[354] Aslan, 'Kekova 2015', p. 175.
[355] H. Özdaş, N. Kızıldağ, 'Underwater archaeological surveys along the Mediterranean coastline in 2012', *ANMED*, 11 (2013), pp. 149-50.

Vann emphasize Aperlae's virtual isolation and reliance on maritime communication. They suggest that a lack of accessible communication to the interior due to the landscape rendered Aperlae a 'small' settlement, thus emphasizing the importance of its maritime networks.[356] They also compare this geographical situation to other coastal sites like Teimiussa, Simena and Antiphellos (described above) whose accessibility may have been reliant on boat travel.[357]

For Aperlae, Hohlfelder and Vann have noted the challenges of the landscape of this coastal region, which may have lacked arable land and water resources.[358] Information is not yet available to determine how the land around Aperlae may have been exploited and the level of production achieved.[359] It has been argued that the role of Aperlae in Lycian maritime networks was one where Aperlae's product(s) (murex or dye products) would be transported via cabotage to larger maritime ports, Andriake (or Patara), for shipment abroad in the Mediterranean. On the return trip from these major harbours, goods needed by the inhabitants, likely necessary agricultural products, would be brought back to the small coastal port.[360]

The comparison of Aperlae to the settlements of Antiphellos, Teimiussa, and Simena is particularly interesting. That is, on the one hand, scholars have suggested that southern coastal settlement, such as Antiphellos and Teimiussa, were loci for markets or outlets for hinterland products. On the other hand, it has been suggested that Aperlae - and based on the comparison made above, Antiphellos, Teimiussa, and Simena too - were less connected to the interior and were more so dependent on maritime networks.[361] These

[356] Hohlfelder, Vann, 'Cabotage', p. 127. See above footnote 341.
[357] Hohlfelder, Vann, 'Cabotage', p. 129.
[358] Hohlfelder, Vann, 'Cabotage', pp. 127-8, 131-2; Hohlfelder, Vann, 'Uncovering', pp. 28-9.
[359] Hohlfelder, Vann, 'Cabotage', pp. 131-2.
[360] Hohlfelder, Vann, 'Cabotage', pp. 132-3.
[361] Rice, 'Port economies', p. 202.

contrasting opinions raise the question of whether or not evidence supports the theory that hinterland products were being transshipped to and from these southcentral small ports.

Can the archaeology of hinterland sites shed light on the level of interdependency between these coastal and hinterland settlements? According to the available archaeological information presented above, the impression one gets from the remains of Phellos and Tyberissos is that these sites did not undergo comparable development in the late antique period to the extent of their associated coastal settlement. It would seem as though this evidence would support Hohlfelder and Vann's proposal of the geographic isolation of minor ports on the southcentral coast and by extension, a possible reciprocated isolation for hinterland sites, or a greater dependency on land routes for hinterland inhabitants.

If small ports were more geographically isolated than previously thought, then the past theory of a system of interdependence of this coastal region would be called into question. It may be no longer a question of where agricultural goods of the hinterland were being distributed from small ports, but whether or not agricultural goods reached them from the hinterland in the first place (for more on this point, see Chapter 5). If there was a greater disconnect between ports and the interior, then the role small ports participated in maritime networks ought to be reassessed. Instead of an interdependent economic relationship characterising coastal and hinterland connectivity, the role of cabotage/coastal tramping and exchange of marine resources (such as very valuable dye products or fish products) may have underpinned the economic vitality of small coastal sites in this area.[362]

However, a potential disconnect between coast and hinterland ought not to be generalised across this entire coastline, as it is likely that some small ports had a degree of

[362] Rice, 'Port economies', pp. 202-5.

connection with inland sites. Beyond this area, the relationship between settlements may have been different. There may have been a greater degree of connectivity and movement of goods between near-coastal and coastal sites elsewhere, especially in areas where geography may have been more accessible such as along valleys. For example, there appears to have been a path between the coastal site Ebi and the site located further inland, Istlada.[363] Istlada is described as being located in a fertile area, measuring approximately one and a half hectares (200x60m) with approximately 30 houses probably occupied in the Roman-early Byzantine periods. Oil presses are reported at the site, as is an early Byzantine basilica. An additional hamlet has been identified 500m away, with early Byzantine houses, a cistern and an oil press. Although the path is described as a 'steep' one and a half km route to Ebi, goods and people likely travelled between the two settlements.[364] As the coastal and hinterland site seem to have been connected by a route, it can be postulated that Istlada may have supplied Ebi with agricultural resources, but determining the type of resources and the amount is speculative.

Nevertheless, the evidence encourages us to question the degree of interdependency between hinterland and coast, and these minor ports acting as a point of transshipment for the agricultural products cultivated in hinterland areas. Following this line of reasoning then, more significance is placed on the role of Patara and Andriake as regional redistribution centres for agricultural goods to small coastal sites which may not have been receiving a substantial amount of agricultural goods from settlements located inland behind them. While Aperlae may have produced murex for the exchange of agricultural goods at these major harbours, others such as Teimiussa and Antiphellos may have offered fish products to maritime exchange. Funds derived from servicing maritime

[363] Also, Foss, 'Lycian coast', pp. 26-7.
[364] TIB 8, p. 574.

traffic and exploiting marine resources may have been sufficient to import agriculture goods from Andriake or Patara (see Chapter 5).

To summarize, the number of settlements identified in this southcentral area of Lycia is notable. What is so striking is that the high degree of settlement is not replicated elsewhere along the Lycian coast. Notably, to the west of the southcentral coastal area, there is a drop off of settlement until one reaches the area of Fethiye/Ölüdeniz in the northwest of the province- the major harbour of Patara being the only significant settlement in this region. Moving eastward from the southcentral area along the coast, settlements with late antique remains have been identified, but to a lesser degree than the southcentral zone. The discrepancies in settlement along the Lycian coast are explored further below.

Western coastal Lycia

The majority of information concerning the settlement along the western coastal areas of Lycia comes from the northwest, where settlement appears to be concentrated in the area of ancient Telmessus, which is largely overbuilt by the modern city of Fethiye.[365] It is thought that the potential port suitability of this particular maritime zone accounted for the development around the gulf.[366] Remains in this area suggest a period of building development in the late antique period (Appendix 1, Map 1).[367]

'From the 4th century AD onwards…' it has been stated recently, Telmessus 'is attested to as a bishopric, and churches and monasteries emerged everywhere on its

[365] Foss, 'Lycian coast', pp. 4-5.
[366] Foss, 'Lycian coast', p. 4; W. Tietz, 'Western Lycia: Pinara, Telmessos, Kadyanda', in *Lukka to Lycia*, p. 344
[367] Foss, 'Lycian coast', pp. 4-6; for example, see sites on Appendix 1: 'Arymaxa', 'Choironesi', 'Lissa', 'Lydai', 'Melanoscope (Tersane Adası)'; Tietz, 'Western', p. 345.

territory, especially on the peninsula that extends south of the city as far as Ölüdeniz'.[368] The following section will examine whether such a statement is supported by recent archaeological research and whether an analysis of the settlement architecture of the Fethiye and Ölüdeniz areas suggest prosperity for the western Lycian coastal region.

The area of the Fethiye gulf and Öludeniz (the area to the south of Fethiye) have been the subject of recent archaeological survey and excavation work (Figure 18). Results from underwater surveys conducted in the area of modern Fethiye revealed that the quantity of architectural remains in the area of Göcek (western bay area of modern Fethiye) is substantial.[369] The gulf of Fethiye encompassed a large number of anchors on the coastline. However, they range from the 6th century BC-16th century.[370] Although the dating of underwater architecture and facilities is less than precise and are assigned broadly to the Byzantine period (what is considered Byzantine is not defined), the remains suggest that the coastline was suitable for fishing vessels, warships and trade ships.[371]

On land, Gemiler Island, the neighbouring island Karacaören, and the adjacent mainland have been studied by a Japanese team of archaeologists.[372] Four churches and a number of other buildings belonging to a settlement have been identified on Gemiler Island, while a church complex and a few other remains have been identified on Karacaören. Gemiler Island is thought to have been associated with Saint Nicholas based on a fresco decoration identified in Church II that names an 'Osios Nikolaos', and may have been a locus of pilgrimage. However, the dating and association of the island with

[368] Tietz, 'Western', p. 345.
[369] Location identified by Google Maps. Also, sites 'Kallimache' and 'H. Kyriake' as modern Göcek TIB 8, pp. 586, 677. Özdaş, Kızıldağ, 'Mediterranean 2012', p. 153.
[370] Özdaş, Kızıldağ, 'Mediterranean 2013', p. 133.
[371] Özdaş, Kızıldağ, 'Mediterranean 2012', p. 153.
[372] For the following, K. Asano, (eds), *The Island of St. Nicholas. Excavation and survey of the Gemiler Island area, Lycia, Turkey* (Osaka, 2010); S. Tsuji, (eds), *The survey of early Byzantine sites in Ölüdeniz area (Lycia, Turkey). The first preliminary report* (Osaka, 1995).

pilgrimage is debatable.[373] Nevertheless, it is thought that the substantial period of development in this area is dated to the late antique period.

At least eight churches have been identified on the mainland by the same team and a church has been studied on the nearby Sövalye Island (Appendix 3). There may have been other early Byzantine churches now covered or destroyed by modern construction.[374] Therefore, the number of churches in this area is an approximation. Although it seems to be implied that these buildings ought to be attributed to the early Byzantine period, it should not be assumed that they are. For example, in the mainland village of Kaya and at the 'Monastery called Afkule' are churches with reused material, which, it is argued by the archaeologists, point to the early Byzantine origin of these buildings. However, caution should be exercised when applying a date to the structures based on these features as reused materials may be displaced and not necessarily belong to the original construction of these buildings.[375] This situation would therefore impact our interpretation of the development of the area as the number of early Byzantine churches thought to have been constructed may be inflated.

With this dating caveat in mind, remains of churches that may be more securely attributed to the early Byzantine period have been identified in this area. The sizes of these religious structures vary, as do the architectural features and decoration so far uncovered in these mainland buildings. Finds of marble pieces indicate that the churches in the area may have been richly decorated. Unfortunately, the publications do not go into detail regarding potential settlement areas associated with these religious structures

[373] It is assumed by the archaeologists that Church II was dedicated to Saint Nicholas in the 6th century. Late medieval portulans call the island Saint Nicholas island, but possibly in reference to Church III. It is not clear if the island was associated with pilgrimage in Late Antiquity, but architectural feature of the churches and on the island suggest it might have been. Foss, 'Lycian coast', p. 7; *Preliminary report*, pp. 67-9, 76-77; *Island of St. Nicholas*, pp. 62, 95, 151, 226. For a contrasting view TIB 8, p. 797.
[374] Based on the descriptions alone it is difficult to cross reference these structures to those listed in the TIB 8 for example at 'Sipolo' (see Appendix 1).
[375] *Island of St. Nicholas*, on Kato Panagia, p. 231, footnote 11, on monastery, p. 217; *Preliminary report*, p. 131. See also TIB 8, 'Akkule', p. 428 also arguing against an early Byzantine use.

(understandably so, as many areas are overbuilt), therefore making it difficult to understand these structures in context regarding their function or the people they served (communal, funerary, to serve the mainland population, pilgrims, sailors, or all of the above).

Nevertheless, evidence of the Fethiye/Ölüdeniz area suggests a period of substantial building activity and, based on the architectural decorative remains identified in some of the structures, a degree of accrued wealth being invested in these buildings. Yet, it might be argued that evidence of substantial investment and building might be expected in a place of religious and economic importance. It may even be suggested that even more building activities would be expected in such an economic and religious significant area as that of Fethiye/Ölüdeniz.

What of the settlement beyond the Fethiye/Ölüdeniz area? According to the evidence currently available, it seems that there is a notable lack of settlement with evidence for substantial late antique activity/occupation in the southwestern coastal area of Lycia. According to the TIB 8, apart from a limited number of sites that appear to have been occupied in the late antique period - such as Kalabatia, Pydnai, and Karaca Burun - Sidyma is the only settlement with what might be interpreted as substantial late antique remains or evidence for late antique activity, and is the only settlement with convincing evidence of multiple late antique churches (Appendix 1). Therefore, it does not seem that the substantial investment in building activity evidenced in the northwest of Lycia's coast continued to more southern areas.

Instead, the west coast of Lycia might be better described as encompassing a restricted zone of concentrated occupation and investment activities around Fethiye/Ölüdeniz. Otherwise, settlement located further away from the gulf is scattered and does not appear to invest in major building works in the late antique period. This is

not to say that the coast was not home to small ports and villages, where cabotage may have played an important role in trade and communication. It is possible that additional sites in the area have not yet been identified because comprehensive survey work has not been conducted to the south of Fethiye. But minimal church construction and scattered evidence of late Roman and early Byzantine material may only show signs of continued occupation from earlier periods in certain places, and not necessarily one of a peak in prosperity or substantial development. The discrepancy of settlement across the western coast is even more pronounced when compared to the high density of settlement of the southcentral coast discussed above.

Differences in the remains and density of settlement in this coastal area begins to reveal that generalising this entire coastal area of Lycia as prosperous is misleading and highlights the necessity that regional variation be taken into account when analysing settlement development. Can a similar situation be detected on the eastern coastal/near-coastal zone of Lycia?

Eastern coastal and near-coastal Lycia

As illustrated on Map 1, the southeastern and eastern coastal/near-coastal areas of Lycia are dotted with settlement that were occupied in Late Antiquity such as at Rhodiapolis and Gagai (where recent archaeological research has been conducted), but two major settlements of Phaselis and Olympus are located on the eastern coastline.[376] Evidence suggests that a number of repairs and renovations were conducted in the city of Phaselis in the late antique period.[377] It may be argued that the benefit of encompassing

[376] TIB 8, 'Rodiapolis', pp. 825-6; İ. Kızgut, 'The city of Opramoas the Benefactor: Rhodiapolis', in *Lukka to Lycia*, pp. 288-99; TIB 8, 'Gagai', pp. 540-1; N. Çevik, S. Bulut, 'The rediscovery of GAGAE/ 'GAXE' in the south-east corner of Lycia. New finds from the total surface surveys', *ADALYA*, 11 (2008), pp. 63-98. See also annual reports on Rhodiapolis in *ANMED*.
[377] Foss, 'Lycian coast', pp. 42-4; TIB 8, pp. 798-802.

multiple harbours and participating in maritime exchange underlay the economic base of the city. Recently, discovery of hexaplex trunculus shells and possible work areas suggests that dye production may have also taken place within the city. Processed fish may have also been produced at Phaselis in Classical times but modern remarks on Roman and late Roman archaeological evidence for fish processing at the site are brief. [378] Thus, production of marine resources may have also contributed to the city's late antique economy and investment in construction activities. Based on the current state of evidence, four churches that may be attributed to the early Byzantine period have been identified at Phaselis (according to the TIB 8).[379] Apparently, two additional early Byzantine churches may be located in the area of İnce Burun.[380] To this tally, more recent survey has revealed additional churches located on the acropolis and in the territory of the city, but this information is only available in preliminary reports rendering the degree of detail minimal for these finds.[381]

Olympus, the second major coastal settlement on this eastern coast, has also been the subject of more recent study (the development of Olympus will be discussed in more detail in the following chapter).[382] To date, six early Byzantine churches have been identified in the city, making it one of the settlements with the highest number of such churches so far recorded in Lycia (Figure 19).[383] Recent work conducted in the city has revealed that the settlement may have expanded beyond and surpassed the size and

[378] Arslan, Önen, 'Phaselis 2013', pp. 192-3; Marzano, *Harvesting*, p. 108.
[379] TIB 8, pp. 800-2, Hellenkemper and Hild base their information on J. Schäfer, (eds), *Phaselis. Beiträge zur Topographie und Geschichte der Stadt und ihrer Häfen* (Tübingen, 1981), but increase the number presumably from their own observations.
[380] TIB 8, p. 801. Hellenkemper and Hild reference oral communication with M. Adak for information concerning these structures. Therefore, it is difficult to cross-reference these buildings with other publications.
[381] M. Arslan, N. T. Önen, 'The surface exploration of Phaselis and its territorium in 2014', *ANMED*, 13 (2015), pp. 202, 204 (at Inciryalısı); M. Arslan, N. T. Önen, 'The surface exploration of Phaselis and its territorium in 2015', *ANMED*, 14 (2016), pp. 237, 239-40, 245.
[382] See individual reports in *ANMED*.
[383] TIB 8, p. 761; B. Y. O. Uçkan, G. K. Öztaşkın, 'Olympos: the city sanctified with water and fire', in *Lukka to Lycia*, pp. 283-7.

population of the city in the Roman period.[384] It has been hypothesised that visitors to the city (seeking healing from what may be identified as a healing centre) and maritime exchange underlay the economy of Olympus.[385]

Elsewhere in eastern Lycia, evidence for late antique settlement comes from the survey work undertaken by the 'Bey Dağları Archaeological Survey Project', the Bey Dağları being the mountain range in the east of the province (Figure 20).[386] This survey project is significant as it is the first time many sites have been identified, recorded, studied and published. In terms of the identification of archaeological remains, the scholars involved in the Bey Mountain survey state that '…the Hellenistic period presented more evidence than was expected and indeed in the Roman period the quality and number of settlements increased and continued into the Byzantine period',[387] and seem to imply that a system of interdependence underpinned the development of the settlements in eastern Lycia.[388] As a result, we are able to further test the theory of an interdependence between settlements elsewhere in Lycia with the late antique settlement development of the Bey Dağ.

Small- and medium-sized settlements, garrisons, villages and numerous farmsteads have been identified over the course of the project, as have various churches that have been roughly dated to the early Byzantine period.[389] The finds identified over the course of survey work are presented in selective preliminary form, so it is possible additional pertinent remains were identified but are not included in publications currently

[384] Uçkan, Öztaşkın, 'Olympos', p. 283.
[385] Uçkan, Öztaşkın, 'Olympos', pp. 286-7.
[386] N. Çevik, 'Northeast Lycia. The new evidence - results from the past ten years from the Bey Mountains Surface Surveys', *ADALYA*, 11 (2008), pp. 189-233; E. Akyürek, 'Palamutdüzü: a medieval Byzantine village settlement in the Bey Mountains', *ADALYA*, 11 (2008), pp. 297-318; E. Akyürek, 'The Bey Dağları in the Byzantine period: Trebenna, Neapolis and their territories', in K. Dörtlük, B. Varkivanç, T. Kahya, J. des Courtils, M. D. Alparslan, R. Boyraz (eds), *The IIIrd Symposium on Lycia 07-10 November 2005 Antalya* (2 vols, Antalya, 2006), i, pp. 1-18.
[387] Çevik, 'Northeast', p. 192.
[388] Çevik, 'Northeast', p. 192, # 9.
[389] Çevik, 'Northeast', pp.189-216, at p. 192, #10; Akyürek, 'Bey Dağları', i, pp. 3-5.

available. Not all finds presented in the project's reports have been dated, therefore making it difficult to discern the periods of occupation and function of certain sites, as some sites appear to continue into the early Byzantine period while others may not have. Unfortunately, only the presence of numerous presses, rural work-areas and terraces are noted without much quantified data making it difficult to discern the extent of agricultural production (and possible product, oil or wine) in the surveyed region.[390]

According to the combined information presented in various publications that have derived from the Bey Dağ survey and the TIB 8, settlement remains in the near-coastal area of modern Kemer include: three churches at the settlement identified as Idebessos (two of which are likely early Byzantine, the third may be of later date); five churches in total have been identified at Kitanaura (the dates of which are not explicitly given in the more recent survey publication, but the TIB 8 states that two churches may be early Byzantine);[391] and according to a recent publication, a church has been discovered at a site that has been identified as Idyros (not dated), but the TIB 8 records that two churches may be identified in the area.[392] Although the remains at the site of Gedelma/Kedrama are attributed to the medieval period by Nevzat Çevik, the TIB 8 appears to date them to the early Byzantine period.[393]

Additional sites have been identified in the northeastern zone of this region. It is important to note here that the development of settlements further north may have been influenced by the presence of the major coastal site Attaleia, as suggested by the survey

[390] Akyürek, 'Bey Dağları', i, pp. 5, 10; Çevik, 'Northeast', pp. 192-4, 216.
[391] The number of churches and their dates are not clearly stated in annual *ANMED* reports either.
[392] For 'Idebessos', İ. Kızgut, S. Bulut, N. Çevik, 'An east Lycian City: Idebessos', *ADALYA,* 12 (2009), pp. 145-72; TIB 8, pp. 563-4 (mentions only one church). For 'Kitinaura' Çevik, 'Northeast', pp. 201, 203 ('a Roman basilica'); TIB 8, 'Dikitanaura', pp. 518-20. For 'Idyros' TIB 8, pp. 564-5; Çevik, 'Northeast', p. 208.
[393] Çevik, 'Northeast', p. 207 mentions the 9th century dating of R. Jacobek, 'Anhang: Das mittelalterliche Kastell bei Gedelme', in J. Borchhardt, G. Dobesch (eds), *Akten des II. Internationalen Lykien-Symposions Wien, 6-12. Mai 1990* (2 vols, Wien 1993), ii, pp. 68-70; TIB 8, p. 543.

team particularly for the middle Byzantine period developments of the area but may be equally applicable in earlier periods.[394]

The settlement of Trebenna has been comprehensively studied by the Bey Dağ project (Figure 21).[395] The city is located approximately 32km west of Attaleia. The acropolis of Trebenna rises 680 metres above sea level.[396] Apparently, a road ran from Typallia to Trebenna, and from Trebenna to Attaleia. Trebenna may have been connected to the sea by a road via Onobara as well.[397] Archaeological evidence suggests that it was in the Roman period that Trebenna obtained monumental architecture.[398] It may have been in this period or later that the scholars working at the site seem to think that Trebenna harnessed nearby agricultural resources of neighbouring valleys.[399] However, detailed evidence to support this claim and discussion of this development is currently lacking, perhaps omitted for inclusion in a forthcoming publication.[400]

Archaeological evidence pertaining to the late antique period presents challenges for interpretation, but an early Byzantine church on the acropolis is given a tentative construction date of the 5th or 6th century by the archaeologists. Only parts of the structure survive, which likely hinders a precise dating for the building. There may have been a contemporaneous civic settlement around this church, although this remains unclear. At some point, this church was apparently abandoned and was partly overbuilt by houses.[401] A set of fortification walls that encircle the acropolis have been dated to approximately

[394] Akyürek, 'Bey Dağları', i, pp. 6-7, 10.
[395] *Trebenna* (extended summary in English).
[396] N. Çevik, B. Varkıvanç, S. Bulut, İ. Kızgut, 'The topography', in *Trebenna*, p. 172.
[397] F. Onur, 'The history', in *Trebenna*, pp. 161-2.
[398] Çevik, 'Northeast', p. 196; N. Çevik, B. Varkıvanç, S. Bulut, İ. Kızgut, 'The remains from the Roman period', in *Trebenna*, pp. 179-85; N. Çevik, B. Varkıvanç, E. Akyürek, (eds), 'Appendix. The discussion on the dating problems presented by the acropolis', in *Trebenna*, pp. 200, 203.
[399] Çevik, *et al*., 'The topography', p. 172.
[400] N. Çevik, 'Introduction', in *Trebenna*, p. 157.
[401] N., Çevik, B. Varkıvanç, E. Akyürek, (eds), 'Remains from the Byzantine period', in *Trebenna*, pp. 205, 208; Akyürek, 'Bey Dağları', i, p. 3.

the 7th or 8th century.[402] A church tentatively dated to the early Byzantine period has been identified at Hurma in Trebenna's territory as well.[403]

Beyond Trebenna, further remains have been identified. One basilica church is recorded in the city centre of Neapolis. Two additional churches thought to date to the early Byzantine period have been documented in Neapolis' territory, one at a site called Boncuklu Kilise and the second near the Doyran dam.[404] The history of Neapolis is particularly interesting as the survey team has argued that, unlike Trebenna, the city did not continue into the so-called 'Dark Age' of the 7th and 8th centuries based on the lack of ceramic material dating after the early Byzantine period.[405] As a result, they hypothesize that the settlement may have been abandoned at a time pre-dating the Arab invasions for unknown reasons although issues with the water supply, natural disaster and the impact of the plague have been put forth.[406] Contrarily, the territory of Neapolis continued to be occupied with settlement in the medieval period.[407]

Three km northeast of Neapolis is the site Palamutdüzü.[408] The settlement consists of a church, a monastic complex and a conglomeration of 30-35 houses built adjacent to the complex.[409] It has been postulated that the inhabitants of Neapolis may have moved to this settlement, the foundation of which is conjectured as the 7th-8th centuries, but the sequential chronological development of the settlement is not yet confirmed. The archaeologists propose that the decline of Neapolis and occupation of Palamutdüzü coincide and therefore reflects the ruralisation of urban centres and a shift of population

[402] 'Remains from the Byzantine period', p. 205.
[403] Akyürek, 'Bey Dağları', i, p. 3.
[404] Akyürek, 'Bey Dağları', i, pp. 3-5.
[405] Akyürek, 'Bey Dağları', i, pp. 5-6.
[406] Akyürek, 'Bey Dağları', i, pp. 6, 11; Akyürek, 'Palamutdüzü', pp. 309-10.
[407] Akyürek, 'Bey Dağları', i, p. 8.
[408] Akyürek, 'Bey Dağları', i, p. 9.
[409] Akyürek, 'Bey Dağları', i, pp. 9-10.

to rural areas.[410] The first phase of the church of Palamutdüzü is speculated as belonging to the early Byzantine period (5th-6th century).[411]

Additional settlements have been identified in this northern area, but the confirmed presence of late antique remains/occupation at sites is uncertain. At the settlement called İn Önü, late Roman pottery has been identified but a reference to 'religious buildings' is not elaborated upon (it is not clear if there are temples, churches, or other cult sites).[412] There is reference to a church being found at the settlement in brief survey reports.[413] Remains dating from the Hellenistic to late Roman period have been identified at the site Kelbessos. A small chapel is described as Byzantine but it is not clear to which centuries the chapel ought to be attributed.[414] It is implied that the population declined at Kelbessos in the late Roman-early Byzantine period.[415] An undated church is documented at the site of Güzle/Kapıkaya alongside evidence of a defensive wall and houses among other remains.[416] The remains identified at the site of Onobara are described as Roman and Byzantine making it difficult to interpret whether occupation was continual at this settlement across these periods. A small church at the settlement is dated to the Byzantine period. Thus, no remains at Onobara are explicitly dated to the late antique period in the report.[417]

From the evidence presented above, a picture of the late antique settlement of this eastern region may be ascertained. What is interesting is that it seems that there is a hint that eastern Lycia may have been home to a greater number of settlement than western

[410] Akyürek, 'Bey Dağları', i, p. 11; Akyürek, 'Palamutdüzü', pp. 309-10.
[411] Akyürek, 'Palamutdüzü', p. 309.
[412] Çevik, 'Northeast', pp. 210-11.
[413] For example, N. Çevik, 'Surveys in the Bey Mountains in 2004', *ANMED*, 3 (2005), p. 114; N. Çevik, İ. Kizgut, S. Bulut, 'Surveys in the Bey Dağları in 2006', *ANMED*, 5 (2007), p. 106.
[414] Çevik, 'Northeast', pp. 208-10.
[415] N. Çevik, S. Bulut, 'The Belen and Kelbessos farmsteads with towers on the border of Pisidia-Lycia and some thoughts on security in the countryside', *ADALYA*, 10 (2007), p. 111.
[416] Çevik, 'Northeast', p. 214. Also undated in *ANMED* reports.
[417] Çevik, 'Northeast', pp. 197-8.

Lycia. This may be due to the presence of Phaselis/Olympos on the east coast (and perhaps networks connecting the near-coastal settlement of eastern Lycia with Attaleia) whereas there appears to be a lack of notable ports between Patara and the Fethiye/Ölüdeniz area in the west. Therefore, late antique settlement currently identified in eastern and western Lycia illustrates the discrepancy of settlement across the province.

Although there may have been a higher number of settlements in the east than the west, evidence suggests that settlements of both regions so far identified encompassed a similar number of churches. That is, besides the major coastal areas of Fethiye/Öludeniz and Phaselis/Olympus, with few exceptions (perhaps Sidyma or Kitanaura, though the dates of the churches are ambiguous), one to two churches seems to be the average number of churches identified at settlements across eastern and western regions (but this does not necessarily mean that every settlement had a church).

For the east, when the information concerning the late antique settlement of the area is indicated on a map, an interesting picture of settlement is revealed (Map 4A, Map 4B). Plotted on Map 4A and 4B is the consolidated information from the TIB 8 and the Bey Dağ surveys discussed above. The locations of sites on these maps is approximate (refer to Map 4C for locations). I have considered Kel Tepe as representing Palamutdüzü and have added Boncuklu, the Doyran Dam and Hurma churches in addition to TIB 8 sites based on their location in the Bey Dağ survey literature. I have not inputted information for sites where their location is not indicated on TIB 8 maps. I have considered the remains at Gedelma as early Byzantine, although this is uncertain.

When this information is plotted, for the northeastern corner of this area, it appears that the more distance between a settlement and the major coastal centre Attaleia, less evidence for late antique settlement with churches dated to the early Byzantine period has been identified, supporting the theory of connectedness between near-coastal/interior

settlement in this particular coastal area. But there may be a geographic limit to the system of interdependence as, interestingly, the same phenomenon may be identified in the southeastern zone as evidence for late antique settlement and churches declines as the distance from the major coastal cities of Phaselis/Olympus and inland settlement grows. Of course, there are additional churches in the area that have not been assigned more specific dates, so this ought to be taken into consideration as well. Nevertheless, on a broader geographic scale, evidence for late antique remains slightly diminish in the middle region of the coastal eastern area of Lycia. This picture of settlement suggests that the development and economy of Lycian settlements may have been largely influenced (dependant?) on their proximity to major coastal sites. A parallel situation is reflected in the west of the province where settlement and investment activities are concentrated in the area around Fethiye/Ölüdeniz, again, suggesting that maritime exchange and harbour suitability may have played a role in shaping the location of settlement in the late antique period.

Lycian coastal and near-coastal areas

To summarize, based on the location of settlement and evidence of late antique construction activity, three restricted areas of Lycia standout: the southcentral coast, Fethiye/Ölüdeniz in the west, and Phaselis/Olympus in the east (Map 5). Beyond these three particular areas, other coastal settlements do not seem to be loci of major investment or construction works. Thus, it would be inaccurate to describe the late antique settlement development of the Lycian coast by one overarching narrative. What evidence is there of late antique settlement in the interior of Lycia? Are there concentrated areas of settlement further inland? Can evidence of ‘prosperity’ be identified in the Lycian interior?

Western Inland Lycia (the Xanthus Valley)

When the late antique building activities of the major inland cities that lie in the area of the Xanthus Valley are compared, a striking discrepancy becomes apparent. In the Hellenistic and Roman periods, the cities of the Xanthus Valley area constructed monumental public buildings and were furnished with theatres, agorai, and baths. For the late antique period, however, with the exception of Xanthus (the city nearest the coast), settlements located further inland, Pinara, Tlos, Oinoanda and Kadyanda, were not (or are not able to) undertake such construction activities.

Evidence at Xanthus suggests the city underwent significant change and development in the 3rd or 4th century, when construction activities took place, which included the construction of a city grid with *decumanus*, *dipylon* and piazzas (Figure 8).[418] Building activities continued in later centuries. Early Byzantine construction works included richly decorated aristocratic houses, adorned with marble and mosaics.[419] A late antique residential district, possibly overlying an earlier grid, has been identified also.[420] Out of the churches so far identified, the 'eastern basilica' is the most impressive measuring 74x29m which had marble, *opus sectile* and mosaic features.[421] In addition to three further churches in the city, a destroyed chapel and a basilica have been identified on the Upper Hill.[422] Overall, the impression of the development of Xanthus from the Roman period onwards is substantial building activity which continued in Late Antiquity.[423] It is possible that the location of Xanthus, lying near the Xanthus river and

[418] J. des Courtils, L. Cavalier, 'The city of Xanthos from Archaic to Byzantine times', in D. Parrish (eds), *Urbanism in western Asia Minor* (Portsmouth, 2001), pp. 162-4.
[419] des Courtils, Cavalier, 'Xanthos', pp. 164-6.
[420] des Courtils, Cavalier, 'Xanthos', p. 169.
[421] des Courtils, Cavalier, 'Xanthos', pp. 166-8.
[422] des Courtils, Cavalier, 'Xanthos', pp. 168-9 the reason for the destruction of the chapel and its relationship to the basilica is unclear.
[423] Foss, 'Lycian coast', pp. 9-11.

near a well-watered fertile valley where agricultural production was possible, may account for the investment and building capabilities of this city.[424] Further inland, evidence for late antique investment in construction activities is less substantial.

Moving northward, one reaches Pinara (Figure 22).[425] Roman remains of the settlement include various public monumental buildings including a theatre, odeion or bouleuterion, and temples, alongside other buildings.[426] We are told that Saint Nicholas of Sion was ordained bishop of the city and sent here, possibly by the scheming of the ecclesiastical leaders of Myra to get Nicholas away from the religious centre of the province, or possibly in hope that someone of Nicholas' repute might aid the city.[427]

Interestingly, a lack of late antique remains at this inland settlement was noted by Foss, but does not seem to impact his general assessment of Lycian prosperity.[428] Foss remarks on one church at the time of his writing, but two additional churches have been identified in a necropolis of the city.[429] Other late antique settlement activities include the construction of a defensive wall and early Byzantine houses.[430] Although evidence for late antique activity and occupation has been identified at Pinara, when compared to the late antique evidence at Xanthus, investment and construction works so far identified were less substantial at the more inland settlement than at its coastal counterpart. Although the discrepancy in evidence may be due to differences in the amount of research conducted at each site, changing economic dynamics may account for the difference in the late antique investment between the two settlements - the latter being the more

[424] des Courtils, *Xanthos and Letoon*, pp. 13-14. Implied by Foss, 'Lycian coast', p. 48, footnote 190.
[425] TIB 8, pp. 811-13.
[426] TIB 8, p. 811; Tietz, 'Western', p. 340.
[427] Foss, 'Cities and villages', pp. 320-1.
[428] Foss, 'Cities and villages', pp. 320-1 who also proposes that inhabitants may have left the city for more favourable locations. Foss, 'Lycian coast', p. 48, footnote 190 interprets Pinara as an exception to the general rule of prosperity.
[429] Tietz, 'Western', p. 340; TIB 8, p. 812.
[430] TIB 8, pp. 811-12.

convincing explanation as we shall see, the development of Pinara fits into the wider trend of declining investment in urban centres further along the valley.

In its early history, Pinara was part of the Lycian League (association of settlements). However, Pinara was later superseded by Telmessus.[431] Tietz attributes this shift in dynamics to the locations of these settlements. He states, 'Telmessos flo[u]rished under Roman rule because of its near ideal harbour, whereas Pinara's was chiefly an agricultural economy, and had but a modest and less well protected harbour Artymnessos on the western coast and thus could not partake as much in interregional trade'.[432] Whether or not the decline of Pinara at the expense of the coastal Telmessus suggests a growing importance of maritime exchange, one that may have continued in later centuries, remains open. Information concerning the city's early Roman economic base is lacking. Therefore, we cannot yet determine the economic relationship between the city and coastal settlement. Nevertheless, when compared to Xanthus and the building activities of previous centuries, late antique construction works at Pinara are less substantial, suggesting less investment in public architecture at this time. Travelling further inland, this development is paralleled elsewhere.

Tlos, northeast of Pinara, lay near the junction of seven roadways (Figure 23). Equipped with a theatre, agora, a temple, and two baths, the city is thought to have undergone settlement expansion by the early Roman period.[433] Some of these structures show signs of renovation in the late Roman period. Presumably, servicing inland traffic that passed along the inland routes contributed to the economy and investment in monumental public structures in the city. Like Pinara, there is evidence of wall construction and building renewal in the late Roman and early Byzantine period. There is

[431] Tietz, 'Western', p. 340; TIB 8, p. 811.
[432] Tietz, 'Western', at p. 340. TIB 8, pp. 457, 811 gives Artymnesos as the possible harbour of Pinara, but Foss, 'Cities and villages', p. 320 mentions Perdikiai as a port of Pinara.
[433] For the following, TIB 8, pp. 885-8.

evidence for dense early Byzantine housing and possibly a multi-storey early Byzantine palace-like structure. In terms of religious buildings in the city, it is striking that within Tlos only one early Byzantine church has been uncovered to date. Similar to Pinara, such activity suggests that buildings and settlement were maintained in this inland city in Late Antiquity, yet whether or not they suggest 'prosperity' is questionable. Instead, the difference in construction works from earlier to later centuries suggests that investment in monumental public buildings declined.

Travelling further to the interior, Oinoanda was also well-equipped with traditional public buildings (Figure 24). Alongside evidence for late antique settlement activity, a total of three churches have been identified, one of which is described as early Byzantine, while the dating of the other two is less clear.[434] Based on the available evidence, the early Byzantine period is described as one of a development 'standstill' for the settlement in the TIB 8.[435]

Nearby, an early Christian church has been identified in the area of Oinoanda at Kemer Arası.[436] This discovery may suggest a shift or dispersal of settlement away from the urban centre to rural areas in the late antique period, drawing a possible comparison to a shift in settlement at Neapolis. However, only limited information is available for the territory around Oinoanda. A 2nd century festival inscription lists villages thought to have comprised what was its *chora*.[437] Unfortunately, the location of the majority of these settlements is unknown so a continuation of settlement at these sites ought not to be assumed for the late antique period.

[434] TIB 8, pp. 750-4; J. J. Coulton, 'The buildings of Oinoanda', *The Cambridge Classical Journal,* 29 (1983), pp. 1-20; A. Hall, 'The Oenoanda Survey: 1974-76', *Anatolian Studies,* 26 (1976), pp. 191-7; M. Bachmann, 'Northern Lycia: Oinoanda, Balboura, Elmalı', in *Lukka to Lycia,* p. 358.
[435] 'Dieser Zustand weist auf einen Entwicklungsstillstand der Polis in frühbyz. Zeit', TIB 8, p. 753; Bachmann, 'Northern', p. 358. Evidence of late antique settlement activity is rather ambiguous.
[436] M. Bachmann, 'Report on campaign at Oinoanda in 2011', *ANMED,* 10 (2012), pp. 201-2; TIB 8, p. 625 mentions a large basilica at 'Kemerarası' but no date is given.
[437] TIB 8, p. 751, see entries of the individual sites in the TIB 8.

The evidence for late antique settlement remains of Oinoanda are similar to that of Tlos and Pinara in that the construction works and activity in the settlement datable to the late antique period is markedly different from coastal Xanthus. Although occupation of the city may have been maintained, based on the evidence currently available, the city of Oinoanda, like other inland cities, is not a locus of major investment in construction works in Late Antiquity, especially when compared to the construction works of previous centuries.

Located approximately 20km away from Fethiye, the site of Kadyanda was furnished with a theatre and was equipped with an agora, a 'boulevard', and temples in the Hellenistic period.[438] A bath is thought to have been constructed in the Roman period.[439] While evidence suggests the settlement continued to be occupied in the late antique period, in the opinion of Tietz, 'early in Byzantine times, though, the place seems to have been abandoned'.[440] Most strikingly, a church has not been identified in the site.[441] Therefore, the economic projection of Kadyanda seems to be one of decline. By the early Byzantine period, perhaps even earlier, the inhabitants of Kadyanda did not (could not?) invest in construction works, not even a church. Tietz suggests that inhabitants moved away from the settlement (late antique remains have been identified to the south) and it is possible the draw of coastal areas may have led inhabitants to migrate to Telmessus (or other coastal sites), or other rural locations.[442]

The last city to be considered is Balboura (Figure 13), located furthest inland in the northern Lycian highlands. Due to recent survey work in the city and areas of its

[438] Tietz, 'Western', pp. 345, 348; 16km according to the TIB 8, pp. 578-9.
[439] Tietz, 'Western', pp. 348-9.
[440] TIB 8, p. 579; Tietz, 'Western', p. 349.
[441] Ibid.
[442] Tietz, 'Western', p. 349.

territory, the development of the settlement may be reconstructed.[443] Interestingly, it has been argued that between the 4th and 8th centuries, the urban and rural settlement of Balboura continued much as it had as preceding centuries.[444] Apart from evidence of minor construction works, the city constructed walls on two occasions, the first instance dating to approximately to the late 3rd or 4th century and the second, possibly in the 5th or 6th century.[445] A total of five churches have been identified in and around the urban centre, three in the city and two in the necropolis.[446] Due to the difficulties of dating religious structures, they are attributed generally to an early Christian period.[447] Remains identified in rural areas surveyed suggest that churches were also present in the countryside.[448]

Interestingly, ceramic trends of the city increase in the 6th and 7th centuries. This has been attributed to a possible movement of inhabitants from coastal areas to the interior, presumably in the wake of the 7th century Persian and Arab invasions, but this explanation does not account for the 6th century change in the assemblage.[449] As the archaeologists point out, it is possible that factors of visibility account for the higher number of ceramics attributed to later centuries.[450] Although a higher ceramic count may be interpreted as evidence for an expansion of the settlement in this period, a higher population density does not necessarily equate to a higher standard of living for inhabitants.

---

[443] J. J. Coulton, (eds), *The Balboura Survey and settlement in highland southwest Anatolia* (2 vols, London, 2012); supplementing the TIB 8, pp. 477-9.
[444] J. J. Coulton, 'Late Roman and Byzantine Balboura', in J. J. Coulton (eds), *The Balboura Survey and settlement in highland southwest Anatolia* (2 vols, London, 2012), i, pp. 163-4, 169.
[445] Coulton, 'Balboura', i, pp. 164, 166.
[446] Coulton, 'Balboura', i, fig. 7.1, pp. 165, 168.
[447] J. J. Coulton, 'Churches and other early Christian remains', in J. J. Coulton (eds), *The Balboura Survey and settlement in highland southwest Anatolia* (2 vols, London, 2012), ii, p. 199.
[448] Coulton, 'Churches', ii, pp. 196-8; Coulton, 'Balboura', i, pp. 174.
[449] Coulton, 'Balboura', i, p. 169; Armstrong, 'Pottery', ii, p. 79. For the following, J. J. Coulton, 'Intensive survey: methodology, primary results and problems', in J. J. Coulton (eds), *The Balboura Survey and settlement in highland southwest Anatolia* (2 vols, London, 2012), ii, table, 19.7, p. 239; fig. 19.14, p. 240.
[450] Coulton, 'Balboura', i, p. 169.

Perhaps even more interesting is that ceramic sherds of rural areas outnumber those of the urban centre in the 6th and 7th centuries, which has been hypothesised as indicating a possible shift in population from urban to rural areas due to the importance of the countryside and production at this time.[451] In addition, food preparation vessels increase in both urban and rural areas, but predominately at rural sites.[452] Altogether, the evidence of these developments in the ceramic assemblage as well as the quality of carving identified, has been interpreted by the survey director as indicating 'perhaps more of continuity than positive prosperity' for late antique and early Byzantine Balboura.[453]

Summary

It is important to note that the information concerning the settlements in the area of the Xanthus valley presented above predominately derives from urban centres. As alluded to, a lack of study of rural areas impacts our interpretation of settlement development as a movement of population from city to rural areas may not yet be detected through archaeological study (as suggested for Balboura and may be the case for Oinoanda, Neapolis and elsewhere). Nevertheless, if we compare the evidence available for the inland cities, a discrepancy in the late antique settlement activities across these settlements is revealed. There is a striking difference in the settlement activity identified at Xanthus and the evidence currently available for the remains of cities located further inland. The construction works identified in the near-coastal city is unparalleled as one travels to the interior of the province, highlighting the difference in the investment in and building of monumental public buildings from earlier centuries.

[451] Coulton, 'Balboura', i, p. 171; Bachmann, 'Northern', p. 360.
[452] Coulton, 'Balboura', i, p. 171.
[453] Coulton, 'Balboura', i, pp. 174-5.

Moving to the interior

Elsewhere inland, the settlements of Arykanda and the adjacent site Arif occupy an interesting geographical location between the southern and northcentral territories of the province and thus, represent a transitional zone between coast and interior. These two settlements have received a substantial amount of scholarly attention, yet detailed information concerning their late antique development and relationship remains somewhat ambiguous. Arykanda is located *c.* 35km inland by (modern) road from the coastal settlement Finike (Figure 25).[454] The settlement appears to have undergone substantial development in the Roman period.[455] Based on the information available, there may be two churches that can be attributed to the early Byzantine period, although there may be additional churches. Information regarding ecclesiastical structures at the site is unclear.[456]

The relationship between Arykanda and the neighbouring site Arif, located approximately two km away, is debated. Information regarding Arif is limited. The settlement was enclosed and encompassed two buildings identified as possible public baths, a so-called 'palace', seven churches or chapels, and houses, among other features.[457] A 5th or 6th century date has been suggested for the site, but it is unclear if substantial occupation predated this period and how long occupation continued.[458] Arif, boasting seven churches or chapels encompasses one of the highest number of late

[454] C. Bayburtluoğlu, *Arykanda: an archaeological guide. The place near the high rocks*, trans. D. Y. Erdem-Georgescu (Istanbul, 2005), p. 17. TIB 8, p. 457, 26km from the Phoinix coast.
[455] Bayburtluoğlu, *Arykanda*, pp. 13, 42-3; TIB 8, p. 485; Harrison, *Mountain and plain*, p. 39.
[456] For example, see TIB 8, p. 459; Bayburtluoğlu, *Arykanda*, pp. 38 (an early Byzantine chapel near a watch tower), 77-82 (Grand Basilica, church of the necropolis), 180, 186-7 (Nal Tepesi). The buildings are not specifically dated. It is difficult to identify churches on site plans.
[457] Harrison, *Mountain and plain*, pp. 42-6; TIB 8, pp. 451-3.
[458] Harrison, *Mountain and plain*, p. 46, footnote 55; TIB 8, p. 452.

antique religious buildings in Lycia (if they can all be attributed to this period), paralleling or eclipsing the number of such churches identified elsewhere in the region. Yet, information concerning the churches in this fortified site of approximately two and a half hectares is lacking.[459] The TIB 8 dates at least three churches to the early Byzantine period, but it seems a lack of information prevents further detail on the other churches.[460] Other identified religious structures may only be private family chapels of small size, but this is speculation. Although the number of churches in this settlement may be impressive, the state of information makes it difficult to interpret such evidence as 'wealth' or 'prosperity' at this location.

Interestingly, Harrison notes that '…so far at least, no other very significant traces of settlement have been found to exist between the head of this long valley and the coastal plain (the territory of Limyra)',[461] which gives the impression that it was a rather long stretch of barren road from Arykanda/Arif to substantial coastal settlement (see also, Map 1 for the location of settlement between Limyra and Arykanda).[462] Again, this impression may be due to a lack of study along this route so that settlements dotting this coastal road have simply not yet been identified. The location of Arykanda, along with its cedar forests, has been noted as a likely source of income for the city, so its geographical situation may have been important for travellers journeying to and from the coast and the interior, and may account for an accelerated period of construction activity at Arif.[463] Beyond these sites, differences in interior and coastal settlement patterns is more pronounced.

[459] Harrison, *Mountain and plain*, p. 39.
[460] TIB 8, p. 452.
[461] Harrison, *Mountain and plain*, p. 46.
[462] See annual reports in *ANMED* regarding survey work around Limyra and the identification of settlement from different chronological periods (including a small basilica), for example, M. Seyer, H. Lotz, P. Brandstätter, 'Survey on Toçak Dağı (Limyra) 2015', *ANMED*, 14 (2016), pp. 275-81.
[463] Bayburtluoğlu, *Arykanda*, p. 30.

Northcentral Lycia

Information concerning the archaeology of the interior of Lycia, particularly the region of Elmalı, derives from a combination of the work of Harrison, the TIB 8 (which principally draws on the work of Harrison), and recent work conducted at the site Hacımusalar Höyük/Choma and survey of the Elmalı basin. Before turning to the settlement of northcentral Lycia, it is important to note that wood may have been used as a building material in this region, a tradition that survives to modern times.[464] As this material does not survive well in the archaeological record and is not easily identifiable in archaeological survey, it is difficult to ascertain the extent of late antique occupation in this region.

Current archaeological information suggests that there is a lack of substantial late antique settlement in this region of Lycia. Late antique and early Byzantine material culture located in the area of the Elmalı plateau is scattered with only some pieces of architectural sculpture that may have once belonged to religious structures. In fact, Roman period settlement in the Elmalı region appears minimal as well, with little to no monumental public buildings such as theatres, agorai, baths, or temples mentioned in the scholarly literature.[465]

A summary of pertinent finds presented by Harrison and supplemented by information provided in the TIB 8 is as follows (see Appendix 1 and Map 1. Note that

[464] Lycia had important timber resources, Foss, 'Lycian coast', p. 1. The possibility of parts of houses being built of wood is noted by Harrison and it seems likely this is applicable to the construction works in the region in general Harrison, *Mountain and plain,* pp. 20, 45, also 57 on modern construction techniques. On the modern use of wood, Bachmann, 'Northern', pp. 360-1; Ş. Aktaş, 'Wooden granaries in Lycia and Milyas regions', in *Lukka to Lycia,* pp. 578-83. See M. Jackson on the use of mud brick and stone as building components for structures at Kilise Tepe (Isauria).

[465] Not yet confirmed, İ. Özgen, E. Baughan, 'Hacımusalar Höyük/ Choma a regional center in northern Lycia, from the Early Bronze Age to the Byzantine era', in *Lukka to Lycia*, p. 331.

some of the remains recorded at these sites and details differ between the TIB 8 and Harrison): at Armutlu there is a fortified site with traces of late Roman occupation;[466] at Müğren, a capital and a *c*. late 6th or early 7th century limestone ambo parapet is said to have come from the site (held in the Antalya Museum);[467] in the area of Ovacık (approximately 45km east of Elmalı), pertinent finds include a single-phase late Roman settlement with two churches, as well as an additional fortification site that may be contemporaneous or later in date, the function of which is unknown;[468] an ancient site has also been identified at Serkiz Alanı, possibly Roman-early Byzantine in date according to the TIB 8[469] from where an ambo base and capital (6th century) may have originated;[470] Soklai is an ancient site, possibly occupied to the early-mid Byzantine period with a possible church;[471] and at Tekkeköy, a limestone capital dated to the 6th century and a Roman milestone have been found.[472]

From Harrison's overview survey of the Elmalı district, only a few sites seem to have evidence of substantial settlement inhabited in the late Roman period, and others seemed to have been forts and defensive sites. Otherwise, Harrison briefly notes scattered finds of sarcophagi, funerary decoration, limestone blocks, capitals, and cisterns without invoking a picture of noteworthy settlement. The TIB 8 also describes finds at additional sites in the northern interior - Komba,[473] Macun,[474] Yaka Çiftlik,[475] Kastabara,[476] Orpenna and Yapraklar[477]- which encompass possible late antique and early Byzantine settlement

[466] Harrison, *Mountain and plain*, p. 54; TIB 8, pp. 453-4.
[467] Harrison, *Mountain and plain*, pp. 52-4; TIB 8, p. 737.
[468] Harrison, *Mountain and plain*, pp. 57-60; TIB 8, p. 771.
[469] TIB 8, p. 840.
[470] Harrison, *Mountain and plain*, p. 56; TIB 8, p. 840,
[471] TIB 8, pp. 860-1.
[472] Harrison, *Mountain and plain*, pp. 50, 52; TIB 8, pp. 874-5.
[473] TIB 8, p. 651 (late Roman-early Byzantine wall traces, early Byzantine church remains).
[474] TIB 8, p. 700 (architectural fragments suggest a possible early Byzantine church).
[475] TIB 8, p. 917 (fragment from possible early Byzantine church, with inscription).
[476] TIB 8, pp. 612-13 (settlement place with three aisled early Byzantine basilica).
[477] TIB 8, pp. 768-9 (possible early Byzantine remains; late Roman site in the area of Yapraklar and an undated church, perhaps implied to be late Roman).

and religious buildings, while early Byzantine/Christian inscriptions have been found in a few other locations (Appendix 1, Map 1).

From this evidence, the late antique settlement of the Elmalı plateau contrasts with the archaeological evidence identified in coastal areas. This should not suggest that the plateau was not home to small villages, scattered farmsteads or perhaps the destination of upland pasture that have not survived in the archaeological record. Further archaeological study might uncover more evidence of late antique settlement in this region. Nevertheless, the impression from this overview is an area lacking in urban character, where settlement was comprised of minor scattered sites. As it stands, this interior region was not home to settlement that were loci of intense late antique building activity.

More recent survey and excavation work in the Elmalı basin, although preliminary at this stage, supplement the information presented above and further supports the picture of a region lacking in major settlement in the late antique period (with the exception of Choma, Chapter 5).[478] The results of the Hacımusalar Project Regional Survey carried out in the Elmalı basin between 1992-2005 are available in the unpublished paper 'The Hacımusalar Project Regional Survey: landscape and settlement investigations in the Elmalı Basin'.[479] Preliminary survey results suggest that following substantial Hellenistic settlement activity, there appears to be a slight yet noticeable decrease in the ceramic evidence in the Roman period, but settlement was maintained for the most part (with variation). For the late Roman period, there is yet a further decrease in evidence and settlement appears to be concentrated around the Choma mound. Prior to or during the

[478] Information concerning the work carried out by Pedar W. Foss of DePauw University has not been published but is available on his personal website https://quemdixerechaos.com/lycia/. I would like to thank H. Elton for referring me to this work. For published material on Choma see Özgen, Baughan, 'Hacımusalar Höyük/ Choma'.

[479] P. W. Foss, 'The Hacımusalar Project Regional Survey: landscape and settlement investigations in the Elmalı Basin', https://quemdixerechaos.files.wordpress.com/2012/11/3lykiatext_foss.pdf (16 May 2017). On P. W. Foss' website, https://quemdixerechaos.com/lycia/, it states that this report was presented at the *IIIrd International Symposium on Lycia*, Antalya, Turkey, 7-10 November 2005. The 'document date' is 9 January 2006.

late Roman period, fortifications around the basin were renewed.[480] A church may have been located in the area of Sarılar Cemetery, there are traces of a possible religious structure at Avşar Kalesi and one other site (Site 806).[481] At the Choma mound itself, two churches have been identified, but there may have been a shift of settlement to the east of the mound between the 7th and 9th centuries.[482]

Although the study of the development of the Elmalı basin is preliminary, tentative interpretations concerning the late antique evidence in this inland area are possible. It is notable that beginning in the Roman period, evidence for settlement activity decreases slightly, and this trend continues into the late Roman period (which the survey defines as the 5th and 6th centuries). The reason(s) for a decrease in late Roman evidence remains an open question. Whether a decrease in identifiable late Roman evidence is due to limited visibility of perishable building materials or a shift from ceramic wares to wood in the late Roman period, is a possibility.

Discussion

An analysis of the late antique settlement of geographic sub-areas of Lycia highlights the importance of considering regional variation when examining the economic development of the region. Such an analysis allows us to elucidate the relationship between settlement patterns and the economy of the region. Evidence suggests that for the Lycian coast, settlement is concentrated in select areas, these being the southcentral zone, Fethiye/Ölüdeniz and the area around Phaselis and Olympus, where there is recognisable

[480] P. W. Foss, 'Hacımusalar', table 2, pp. 4-6, 8-9, 13-18.
[481] P. W. Foss, 'Hacımusalar', pp. 12, 14-15, 17.
[482] P. W. Foss, 'Hacımusalar', pp. 9-10, 12. For more on the churches, Özgen, Baughan, 'Hacımusalar Höyük/ Choma', pp. 331-3.

evidence of investment in building activities. Importantly, the density of settlement in these three areas is unparalleled elsewhere in the province.

Differences in the density and number of settlement along coastal/near-coastal territories of Lycia illustrates that the entire Lycian coast did not experience a period of prosperity in the late antique period. If, as has been argued in the past, the geographic location of Lycia on the major Mediterranean maritime route accounted for its economic wealth, then we might expect to detect a higher degree of settlement and building activity across coastal areas, particularly at minor ports and near-coastal settlement. That is, we might expect the density of the southcentral coast to be paralleled along the Lycian coast line - but this does not appear to be the case. Thus, generalising coastal prosperity would be an inaccurate description of the coastal fringe in all areas of the province. Moreover, focus on the development of coastal settlement and coastal 'prosperity' is ignoring signs of divergent development trends inland and draws attention away from exploring the relationship between the three areas of concentrated coastal settlement and the Lycian interior.

Settlement activity and construction works in the Lycian interior are either maintained or diminish in this period. Evidence suggests that the urban centres of the interior do not invest in major construction works at this time. Building activity that may be attributed to the late antique period is of a lower degree than preceding centuries. Preliminary results of the research conducted in the Elmalı region reveal a similar development in this inland territory as well. Of course, this is not to say that inland Lycia was abandoned in Late Antiquity, but the interior may have no longer had the same investment capabilities as previous centuries.

What do these settlement patterns and changes in construction activities reveal about settlement connectivity and the economy of Lycia in the late antique period? What

implications does the location of settlement have on our understanding of the regions' participation in wider economic networks? The concentration of settlement and evidence for substantial investment around important maritime areas may be significant. These changes in the settlement of Lycia will be explored in greater detail in the following chapter in relation to the economy of the province.

Isaurian Settlement

The analysis of Lycian settlement presented above reveals that only when regional variation is considered can we begin to discern nuances in settlement development and investigate the factors that may account for settlement variation. In the same way as Lycian settlement has been analysed, the evidence of late antique settlement remains in Isauria will be examined in the following section in order to investigate the relationship between settlement and the economic networks of the region. As amphorae production has been identified in the east of the province, particular focus will be paid to the relationship between settlement location and the amphorae production centres, and what this may reveal concerning agricultural production in the region. Yet it is equally important to identify where late antique settlement appears to be absent and ask how the presence or absence of settlement may elucidate the economic networks of Isauria as well.

The TIB 5 provides the backdrop of information concerning late antique remains in the region. Following the categorisation scheme detailed above, Appendix 2 presents sites where late antique, late Roman or early Byzantine archaeological evidence, activity or occupation may be identified in the region, as well as religious structures. The sites included in Appendix 2 have been indicated on Map 2. Appendix 2 and Map 2 should be

considered as general overviews of the late antique remains of the region for the various reasons discussed above.

The information presented in the TIB 5 is supplemented by research derived from more recent archaeological study of this region. Although archaeological investigation of Isauria has progressed since the publication of the TIB 5, it must be borne in mind that analysing and interpreting the archaeological evidence presented in excavation or survey reports has its challenges. Discrepancies in the use of chronological terminology across publications, differences in the archaeological focus or methods of projects and archaeologists and quality of publication impact the interpretation of the archaeological evidence available presented below. Nevertheless, the combination of the information of the TIB 5 and more recent research helps to fill out the picture of the late antique settlement of Isauria and allows for an economic analysis of the region to be possible.

The west coast

The archaeological survey work conducted by the Rough Cilicia Survey Project (RCSP) on the west coast of Isauria (referred to as western Rough Cilicia by the RCSP) has already been discussed in regards to the amphorae evidence of this region (Chapter 3). The question of urban development and coastal and hinterland relations of western Isauria has also been an interest of the RCSP, making this survey project a valuable source of information (Figure 15, Figure 16).[483]

As discussed in Chapter 3, archaeological evidence suggests that settlements of this western region developed substantially in the Roman Period (1st-3rd century AD).[484] The highest number of ceramics and architectural evidence identified in the survey region

[483] For further discussion of the RCSP, Commito, 'Southern Asia Minor', pp. 218-28.
[484] Rauh, *et al*., 'Western Rough Cilicia', p. 285.

is attributed to this period.[485] According to the RCSP, following this 'high water mark of cultural development', the construction of churches and fortresses and defensive structures in both coastal and highland areas characterised the late antique period (although instability in the region may account for earlier defensive measures as well).[486] The authors of the RCSP interpret the archaeological evidence of a change in urban character as a break down of social order in the region due to the increase of Isaurian threat and instability that plagued the area in the 3rd, 4th, and 5th centuries and the rise of the Church as an institution.[487]

At the time of publication of these project results (2009), a total of at least 13 sites encompassed church remains.[488] The sites where churches have been identified are given: Iotape,[489] Halil Limanı,[490] Bıçkıcı Monastery,[491] Selinus,[492] Kestros,[493] Güzelce Harman Tepe, Nephelion,[494] Antiochia,[495] Ilıca Kale, Sivaste,[496] Lamos,[497] Gökçebelen, Frengez Kale.[498] Importantly, the dates of church construction are not stated, making it difficult to discern if they should be attributed to the late antique/early Byzantine period or later. Moreover, as details of architecture and decoration are not presented, it is difficult to understand the churches in the region as loci of investment. For further information on the

[485] Rauh, *et al*., 'Western Rough Cilicia', p. 285.
[486] Rauh, *et al*., 'Western Rough Cilicia', pp. 285, 299-305.
[487] Rauh, *et al*., 'Western Rough Cilicia', pp. 301-4.
[488] Rauh, *et al*., 'Western Rough Cilicia', p. 303.
[489] TIB 5, pp. 275-6.
[490] TIB 5, p. 268 documents one church possibly dating to the late 5th or early 6th century; S. Hill, *The Early Byzantine Churches of Cilicia and Isauria* (Birmingham, 1996), p. 172 cites Hild and Hellenkemper.
[491] Hill, *Churches*, p. 103 states Alföldi-Rosenbaum thought the monastery was medieval, contrarily however, Hild and Hellenkemper date the church earlier, TIB 5, p. 215.
[492] See Appendix 2.
[493] For the church, R. F. Townsend, M. C. Hoff, 'The Rough Cilicia Survey Project: architectural work 2004', *ANMED*, 3 (2005), pp. 130-1.
[494] Not mentioned in the TIB 5, p. 366.
[495] Likely meaning Antiocheia ad Cragum here. According to the TIB 5, p. 192, there are two early Byzantine churches and an early Byzantine triconch building. On a recent discovery of a possible early Byzantine church on the acropolis, B. Can, M. Hoff, R. Townsend, E. Erdoğmuş, T. Howe, 'The Antiochia ad Cragum Archaeological Research Project: 2014 Season', *ANMED*, 13 (2015), pp. 13-14; Hoff, *et al*., 'Antiochia 2015', p. 8.
[496] TIB 5, 'Sivastı', pp. 416-17, mentions a church.
[497] TIB 5, p. 331, no mention of a church.
[498] Rauh, *et al.*, 'Western Rough Cilicia', p. 304.

churches in the area we turn to Stephen Hill, who mentions a possible church at the site of ancient Syedra (Demirtaş), although no explicit date is given for its construction.[499] According to the TIB 8 (this eastern coastline is the geographical limit of this volume), a church at Syedra is assigned an early Byzantine date.[500] Hill also mentions three possible churches at Gazipaşa (Selinus) that had been previously documented, but only describes two churches, one attributed possibly to the 4th or 5th centuries, the other to the 5th or 6th centuries.[501] The third church may be medieval in date, which corresponds to the information presented in the TIB 5.[502]

The RCSP insists that population numbers did not decline in the late Roman period and that, 'the level of settlement remained significant at least until the time of the Arab invasions', regardless of 'the mounting violence, the decline of polis institutions, and the transition from polis-based to church-based social ordering…'.[503] Acknowledging the dramatic decrease in late Roman period ceramics from the early Roman period, the RCSP argues that settlement was maintained since the processed pottery counts for the late Roman period are higher than those of the pre-Roman period.[504] It is also possible the higher visibility of ceramics from later centuries impact the proportion of sherds attributed to later periods in the assemblage.

Considering the archaeological evidence presented by the RCSP, it is difficult to be persuaded, especially on the basis of ceramics, that it can be suggested that settlement remained significant from the early Roman to the late Roman period. More recent ceramic data appears to challenge the notion that settlement continued as it had from

[499] Hill, *Churches*, p. 163 citing Bean and Mitford. The first season report of the survey at Syedra states 'Syedra also stands out with its high number of religious buildings from the Byzantine period' without any sense of quantity or dating. There are mentions of churches, B. Can, 'Surveys at Syedra (First Season) 2015', *ANMED*, 14 (2016), pp. 264-6.
[500] TIB 8, p. 868.
[501] Hill, *Churches*, pp. 167-9.
[502] TIB 5, pp. 407-8.
[503] Rauh, *et al*., 'Western Rough Cilicia', p. 304.
[504] Rauh, *et al*., 'Western Rough Cilicia', p. 262, table 2, p. 304.

earlier centuries. In an article concerning the RCSP published in 2012, what seems to be a revised version of the ceramic count table is presented (Table 1).[505] A comparison of the two tables shows that some of the pottery counts have been adjusted, which is understandable as research and processing of sherds may have continued over time. The 2012 table also explains that the sherds attributed to the early Roman period represented in the figure date from 50 BC- AD 250 (a period of 300 years), while those dated to the late Roman period are attributed to AD 250-650 (a period of 400 years). Therefore, as an additional 100 years of ceramics are included in the late Roman count, the drop in datable sherds for this period, potentially reflecting population decline, would be even more dramatic than previously suggested.

Further interpretation of the ceramic totals is hindered because the ceramic count totals do not show the distribution of ceramic types over chronological periods. That is, the high number of ceramics dated to the early Roman period as opposed to the lower numbers of late Roman sherds, could also be skewed by the fact that western Rough Cilicia was producing amphorae in the earlier period, but was apparently no longer producing amphorae in the late Roman period (Chapter 3). This change in production might impact the number of ceramic finds in the earlier period, simply because the region was producing ceramics at that time. Instead, if it were possible to discern whether the number of coarse wares (excluding transport vessels) remained consistent from the early Roman to the late Roman period, for example, then it would be more convincing to suggest that settlement remained significant.

Paleo-environmental evidence has also been a focus of the RCSP in the investigation of the impact of human activity on the environment of western Rough

[505] Ü. Akkemik, H. Caner, G. A. Conyers, M. J. Dillon, N. Karlioğlu, N. K. Rauh, L. O. Theller, 'The archaeology of deforestation in south coastal Turkey', *International Journal of Sustainable Development & World Ecology*, 19.5 (2012), fig. 2, p. 396.

Cilicia. Only preliminary results have been published up to this point, but research continually progresses.[506] Preliminary results suggest that the demand on forest resources over the course of the Roman period likely culminated in a subsequent 'phase of deforestation' occurring approximately AD 600.[507] While interpreting the evidence for deforestation is complex, demand for Isaurian timber for shipbuilding, along with other fuel based activities such as ceramic and lime mortar production, as well as bath heating and metallurgy practices have been posited as contributing factors to the exhaustion of forest resources.[508] The sharp increase in the exploitation of natural resources thought to have begun in the Roman period (coinciding with the period of urban development), and lasting at least two centuries may have therefore put a strain on forest resources during Late Antiquity - an interesting aspect to consider in regards to thinking about how deforestation on this coast may have facilitate a heightened demand or strain on forest resources in other nearby places such as Lycia, also renowned for its timber. Stress on the region's natural resources, that may have contributed to rates of erosion and sedimentation, may have facilitated a decline in settlement in this period, culminating to 'site abandonment'[509] from AD 600 onwards, thus corresponding to the decrease of late Roman ceramics in the survey area.

Interestingly, the RCSP suggests that during the early Roman period for western Isauria, urban development and architecture was possibly impacted by native cultural and political influences.[510] This is an interesting point in terms of identifying or measuring

[506] Rauh, *et al*., 'Western Rough Cilicia', pp. 264-8. Reports are available in *ANMED*. For example, Ü. Akkemik, H. Caner, G. Conyers, N. Karlıoğlu, M. J. Dillon, N. K. Rauh, L. Theller, 'Rough Cilicia Highland Archaeological Survey: deforestation research in 2011', *ANMED*, 10 (2012), pp. 183-7; N. Karlıoğlu, Ü. Akkemik, H. Caner, N. K. Rauh, L. O. Theller, M. J. Dillon, G. A. Conyers, 'The Rough Cilicia Archaeological Survey Project: palaeo-environmental research in 2012', *ANMED*, 11 (2013), pp. 199-203.
[507] Akkemik, *et al*., 'Deforestation research 2011', p. 183.
[508] Akkemik, *et al*., 'The archaeology of deforestation', pp. 401-3.
[509] Akkemik, *et al*., 'Deforestation research 2011', p. 183.
[510] Rauh, *et al*., 'Western Rough Cilicia', pp. 295-6.

levels of 'wealth' during Late Antiquity for this area. That is, if urban development in the Roman period was influenced by cultural tradition and not necessarily economic factors, then how are we to interpret 'wealth' of late Roman settlements if urban monuments and later churches were purposefully being built a particular way in accordance with certain social and political practices? This would therefore impact or even negate the model of interpreting churches as indicators of settlement 'wealth' in this region of Isauria as the true level of potential investment capabilities of a settlement may not be fully expressed in their religious architecture.

The south coast

As illustrated on Map 2, the south coast is dotted with dispersed sites that contain material remains or show signs of activity/occupation that may be attributed to the late antique, late Roman or early Byzantine periods according to the information provided in the TIB 5. As discussed in regards to amphorae evidence in previous chapters, Anemurium has been the subject of scholarly attention on this southern coastline (Figure 26). Based on archaeological information, evidence of church and bath construction, has led to the opinion that the city experienced a time of prosperity in the 5th and early 6th centuries when the construction activities date (four churches have been identified in the site and an additional five churches are thought to lie in the city's countryside).[511]

Located further east along this coastline, Kelenderis has been subject of Turkish excavation.[512] Results of the archaeological work are largely published in Turkish,

[511] J. Russell, *The mosaic inscriptions of Anemurium* (Wien, 1987), pp. 19-21; Russell, 'Anemourion', p. 221; TIB 5, p. 190; Hill states that other structures at the site may be churches as well, Hill, *Churches*, p. 91. See TIB 5 for nearby settlements remains.

[512] Another site on the south coast that has been studied recently is Nagidos. There is no mention of late antique or early Byzantine material at the site in the TIB 5 nor in the results of the excavation undertaken at the site, which were published in 2007. TIB 5, pp. 363-4. An English summary of the excavation results is

although some excavation reports are accessible in English, thus providing only an incomplete picture of the archaeological finds from this site.[513] According to the TIB 5, Kelenderis encompasses remains of early Byzantine buildings that may belong to one or several churches, as well as a mosaic floor possibly belonging to a 5th century church.[514] Hill, citing both the TIB 5 and the excavation director Levent Zoroğlu, mentions the likelihood of a church having been found at Kelenderis, based on the find of an *opus sectile* floor from the 5th century.[515] There appears to have been a mix-up or change in the dating of the floor however, as Zoroğlu reported that the mosaic had been found on the site's acropolis and may belong to a 4th century church in 1988.[516]

From these different reports, the case seems to be the discovery of mosaic belonging to a 4th or 5th century church on the city's acropolis. More recent archaeological reports state that excavation work revealed a basilica in 2002, located near what is thought to be the city's agora.[517] Over the years, the agora basilica has been dated to the early Byzantine period, but the precise date fluctuates between reports.[518] As excavations have progressed, other structures around the basilica have been unearthed. These include the so-called 'Bishop's House',[519] another apsed building (possibly the basilica's baptistry),[520] and a series of structures, some of which are thought to have been work areas functioning at the same time the church was in use (but the dating is unclear).[521]

provided, S. Durugönül, (eds), *Nagidos. Results of an excavation in an ancient city in Rough Cilicia* (Antalya, 2007), pp. 405, 446.
[513] These reports are in the series *ANMED*.
[514] TIB 5, p. 298.
[515] Hill, *Churches*, p. 99.
[516] L. Zoroğlu, *et al*., 'Recent Archaeological Research in Turkey', *Anatolian Studies*, 38 (1988), p. 200.
[517] L. Zoroğlu, 'Kelenderis 2002', *ANMED*, 1 (2003), p. 15.
[518] Zoroğlu, 'Kelenderis 2008', p. 28; K. L. Zoroğlu, 'Excavations at Kelenderis in 2010', *ANMED*, 9 (2011), p. 32.
[519] Zoroğlu, 'Kelenderis 2010', p. 31.
[520] K. L. Zoroğlu, 'Excavations at Kelenderis in 2011', *ANMED*, 10 (2012), pp. 42-3; K. L. Zoroğlu, 'Excavations at Kelenderis in 2012', *ANMED*, 11 (2013), pp. 41-2.
[521] Zoroğlu, 'Kelenderis 2008', pp. 30-1, L. Zoroğlu, 'Excavations at Kelenderis in 2009', *ANMED*, 8 (2010), pp. 32-3; K. L. Zoroğlu, 'Excavations at Kelenderis in 2014', *ANMED*, 13 (2015), p. 41.

From these publications alone, it is not possible to say whether other churches have been identified at the site in addition to the agora basilica and the (possible) acropolis church, or if other notable late antique and early Byzantine construction works have been identified.

Moving along the coast, the southeastern coastal area of Isauria has recently been surveyed for the first time (Figure 27). Boğsak Island (ancient Nesulion) and neighbouring areas have been the subject of surveys since 2010.[522] This strategically placed area encompassed what was apparently the landing point for pilgrimage to Seleucia and ships from Cyprus, at Holmoi.[523] In the opinion of the survey director, Günder Varinlioğlu, this area experienced substantial settlement development in Late Antiquity, when the majority of finds and remains date.[524] To date, at least six, possibly seven churches have been identified on Boğsak Island.[525]

On the nearby mainland coastal site, Gölcük Mevkii, two churches and what is described as 'industrial' level olive oil producing facilities have been identified and are attributed to the late antique expansion of this area.[526] A chapel and other structures have been recorded at the site of Temirini, and a church has been documented at the sites Liman Kalesi and Ağa Limanı.[527] On Güvercin Island, a 'wealthy' late antique house complex has been discovered (a possible church is also mentioned at this site in the TIB 5 and mentioned by Hill, citing the authors of the TIB 5).[528] Archaeological finds on the larger Dana Island included several structures and one church (of three identified) being

[522] G. Varinlioğlu, 'Survey on the Boğsak Island in 2010', *ANMED*, 9 (2011), p. 153.
[523] TIB 5, p. 272; Varinlioğlu, 'Boğsak Island 2010', p. 154.
[524] Varinlioğlu, 'Boğsak Island 2010', pp. 156-7; G. Varinlioğlu, 'Survey on the Boğsak Island 2011', *ANMED*, 10 (2012), pp. 137, 141; G. Varinlioğlu, 'Boğsak Archaeological Survey 2013', *ANMED*, 12 (2014), p. 137.
[525] G. Varinlioğlu, 'Survey on Boğsak Island 2012', *ANMED*, 11 (2013), pp. 172-3; Varinlioğlu, 'Boğsak 2013', pp. 136, 139. A small basilica has also been identified labelled Church VII, implying there are a total of seven churches.
[526] Varinlioğlu, 'Boğsak 2011', pp. 138-9.
[527] Varinlioğlu, 'Boğsak 2011', pp. 139-40.
[528] Varinlioğlu, 'Boğsak 2011', p. 140; TIB 5, p. 264; Hill, *Churches*, p. 172.

assigned a late 5th century date.[529] At the nearby mainland site of Aphrodisias (Ovacık), two early Byzantine churches have been documented.[530] Survey of nearby Kösrelik Island yielded the remains of structures and a possible late antique church (corroborated in the TIB 5 based on mosaic and a capital).[531] No churches had been identified at the site of Karabucak.[532] A later revisit to Karabucak only yielded structural remains as did a survey of the nearby Kavurkaklık Hill (undated).[533] The site of ancient Palaiai encompassed remains of a possible basilica as well as an olive oil facility, and a late antique church was identified at Kargıcak Strait.[534]

These remains are attributed to a period of late antique prosperity by the survey author. The case of this southeastern island and coastal prosperity draws a parallel to Gemiler Island and surrounding area located on the west coast of Lycia, which too seems to have undergone a period of intense occupation and construction activity in this period. However, it is not clear, I would argue, if the activity seen in this southeastern Isaurian coastal area represents a period of prosperity, or simply a period of heightened activity due to increased maritime and possible pilgrimage traffic. Furthermore, the fact that only one of the three churches identified on Dana Island is assigned a late antique date (no explicit dates are given for the other two churches), and other remains of structures in this area are not explicitly dated (or perhaps cannot be dated at this time by archaeological survey), attributing these remains to the late antique period should be approached with caution. Challenges in dating may be rectified with further study. Nevertheless,

[529] Varinlioğlu, 'Boğsak 2011', pp. 140-1; Varinlioğlu, 'Boğsak 2015', pp. 164-5 (updating the information in the TIB 5, p. 380).
[530] TIB 5, p. 195; Hill, *Churches*, p. 237.
[531] Varinlioğlu, 'Boğsak 2015', p. 166; TIB 5, p. 195.
[532] Varinlioğlu, 'Boğsak 2011', p. 139.
[533] Varinlioğlu, 'Boğsak 2015', pp. 166-7.
[534] Varinlioğlu, 'Boğsak 2015', p. 167; updating the TIB 5, 'Palaiai', p. 372.

considering the evidence uncovered so far, it seems the southeastern coast of Isauria saw a period of substantial settlement and building activity in this period.

From the discussion of the evidence presented above, traces of late antique settlement have been identified on south coast sites and islands, but there is little evidence for settlements behind this coastline. As illustrated in Map 2, there is an archaeological 'black hole' so to speak, in the coastal hinterland of this southern area. Exceptions may be Karakilise, located 21km northwest of Anemurium, or Meydancık Kalesi, located 14km northeast of Kelenderis, although substantial late antique or early Byzantine remains have not been confirmed at these sites (see Chapter 5).[535] Whether this blank space on the map is a true representation of a lack of settlement in the south coastal hinterland, or due to a lack of archaeological inquiry in this area, cannot be determined. There is also the possibility that both factors have played a role in the lack of information for southcentral Isauria.

The east coast: major coastal settlements

The area between modern Silifke (Seleucia) and modern Mersin (Zephyrion) has received the most scholarly attention of all the sub-areas of Isauria. Within this eastern coastal area, a substantial amount of archaeological work has taken place over the past few decades. The following section will first discuss the well-known major sites that punctuate this stretch of eastern coastline, namely Korasion, Korykos, Elaiussa-Sebaste, and Soli-Pompeiopolis. This discussion will be followed by an analysis of the more recent archaeological investigation that has looked at sites beyond these major coastal cities to the rural settlements located in this coastal hinterland.

[535] TIB 5, pp. 290-1, 349.

The major settlements of this eastern coastline have already been discussed in regards to the amphorae evidence identified in this area. The Italian team working at Elaiussa-Sebaste has largely improved our knowledge of this important coastal site since excavation began in 1995 (Chapter 3, Figure 17). The general narrative history of Elaiussa-Sebaste, painted in broad strokes, is that as a result to the silting up of the harbour, the city fell into a decline only to be superseded by the neighbouring city of Korykos, possibly in the 4th century although the date seems uncertain.[536]

In the late antique period, it appears as though areas of the city underwent rather drastic changes. The southeast promontory, which housed domestic and artisanal quarters, underwent major renovation in the 5th and 6th centuries.[537] A richly decorated large palatial complex, with several annex buildings, was erected over earlier buildings at a prominent location overlooking the harbour area in the 5th century.[538] The so-called agora church was built over the commercial area of the city in the mid-5th or second half of the 5th century.[539] A church, along with other rooms belonging to a possible monastic complex, was installed on the remains of a temple platform in the 5th century, where evidence suggests agricultural production took place that time or later, also.[540] Finally, a large church, with marble remains, was installed in the bath complex near the old agora in the 5th century, which is thought to have been the episcopal church of the city.[541]

[536] Equini Schneider, 'Elaiussa Sebaste 1995', p. 370; Hill, *Churches*, pp. 96-7.
[537] E. Equini Schneider, 'Elaiussa Sebaste - Report of 2006 excavation season', *KST*, 29.2 (2007), p. 301; E. Equini Schneider, 'Elaiussa Sebaste – the 2007 excavation and conservation season', *KST*, 30.4 (2008), pp. 179-80; Equini Schneider, *Elaiussa Sebaste*, pp. 116-17.
[538] E. Equini Schneider, 'Excavation and research at Elaiussa Sebaste: the 2003 campaign', *KST*, 26.2 (2004), pp. 183-4; E. Equini Schneider, 'Elaiussa Sebaste - Report of 2005 excavation season', *KST*, 28.2 (2006), pp. 563-4; Equini Schneider, *Elaiussa Sebaste*, pp. 96, 104-13.
[539] *Elaiussa Sebaste III*, p. 391; Equini Schneider, *Elaiussa Sebate*, p. 61.
[540] E. Equini Schneider, 'Elaiussa Sebaste - The 2010 excavation and conservation campaign', *KST*, 33.4 (2011), p. 200; Equini Schneider, *Elaiussa Sebaste*, pp. 133-8.
[541] E. Equini Schneider, 'Elaiussa Sebaste: 2011-2012 excavation and conservation works', *KST*, 35.3 (2013), pp. 415-16.

In addition to the churches mentioned above that have been more closely studied, the publication of the second archaeological season at Elaiussa-Sebaste was accompanied by an (admittedly difficult to read) figure of the identified Byzantine churches at the site, which shows several numbered structures and others that are less certainly identified as churches (Figure 28).[542] However, what is meant by 'Byzantine' is unclear, so some of these structures could be later in date. Although this list is not exhaustive of the renovation and construction activities in the city in Late Antiquity, it would appear Elaiussa-Sebaste underwent major construction activity in this period.

Unfortunately, much of the remains of the ancient city of Soli-Pompeiopolis were reused in the building of modern Mersin.[543] Apparently, an early Byzantine church that was once documented, was no long visible by the time of the publication of the TIB 5.[544] Recent excavations have revealed further information about this coastal site.[545] Research on the colonnaded street of the city has revealed the development of the area from Roman to early Byzantine times.[546] Embedded within the colonnaded street, 'a small, early Christian period, church' was identified in 2010. The discovery of this church has led the authors to conclude that the period of Roman monumentality was 'followed by more modest Byzantine architecture', possibly a hasty conclusion based on the finds of one early Byzantine church (especially considering the authors draw parallels with this church to the small temple church of Elauissa-Sebaste, a site where other grander churches and structures have been uncovered).[547]

[542] E. Equini Schneider, '1996 Excavations and research at Elaiussa Sebaste', *KST*, 19.2 (1997), fig. 1, p. 398.
[543] TIB 5, p. 381.
[544] TIB 5, p. 382.
[545] English reports in *ANMED* have been consulted.
[546] For example, R. Yağcı, 'Soli-Pompeiopolis 2002', *ANMED*, 1 (2003), pp. 34-5; R. Yağcı, 'Excavations at the ancient port city of Soli/Pompeiopolis in 2003', *ANMED*, 2 (2004), pp. 55-6; R. Yağcı, 'Excavations at Soli/Pomeiopolis in 2005', *ANMED*, 4 (2006), pp. 57-8.
[547] R. Yağcı, F. H. Kaya, 'Excavations at Soli/Pompeiopolis in 2010', *ANMED*, 9 (2011), p. 114

As excavation continued, a structure, possibly a late Roman villa, has been identified at the site's mound.[548] The discovery of an LR1 kiln site at Soli-Pompeiopolis, raises the question of whether or not, as excavations continue, we can expect to uncover the types and quality of finds at Soli-Pompeiopolis parallel to those found at Elaiussa-Sebaste. That is, as can be discerned from the archaeology of Elaiussa-Sebaste, an increase in economic activity that may have been generated from agricultural production and amphorae manufacture, may have facilitated investment in the urban landscape of the city, which may result in the future discovery of further churches and construction activities at Soli-Pompeiopolis.

The well-known and often-cited funerary inscriptions of Korykos have been mentioned in Chapter 2. However, despite the renown for its epigraphy, detailed study and publication of Korykos is lacking.[549] After the construction of a new city wall in the 4th century, Korykos appears to have flourished as a trade node with the hinterland (see Korasion below).[550] This period of prosperity is reflected in the religious architecture of the city, which as Hill stated in 1996, boasts 'more important early Byzantine basilicas than any other site in Cilicia', a statement which is true even today.[551] At least twelve churches have been documented at Korykos.[552] Insufficient study of these religious buildings had prompted Hill to re-examine these churches.[553] Unfortunately, detailed information for some of the structures is lacking, making it difficult to be sure which buildings ought to be attributed to the late antique period.[554] Nevertheless, the combination of the quantity of churches identified and the epigraphy of the necropolis

[548] R. Yağcı, D. Yiğitpaşa, 'Excavations at Soli Pompeiopolis 2015', *ANMED*, 14 (2016), pp. 153-4.
[549] A sentiment echoed by Hill, *Churches*, p. 115.
[550] TIB 5, p. 317.
[551] Hill, *Churches*, p. 115.
[552] Hill, *Churches*, pp. 115-43; TIB 5, p. 318.
[553] Hill, *Churches*, pp. 115-16.
[554] For example, no date is offered for Church L, Hill, *Churches*, p. 143.

attests to the vibrant late antique economy of Korykos that presumably benefited from its coastal location.

The importance of the coastal settlement of Korasion, previously noted by others, has recently been echoed by Ina Eichner in her study of the domestic structures of this eastern coastal area.[555] Thought to provide the link between the coast and the agricultural lands of the Yenibahçe Valley, the strategic location of the site apparently facilitated an economic upswing from the second half of the 4th century, much reflecting the narrative of prosperity put forth for nearby Korykos.[556] The coastal site encompassed a storehouse, a bath, an aqueduct, necropoleis, a large building with a peristyle structure, and two early Byzantine churches.[557] Eichner and others have argued for the significance of the connectivity between Korasion and coastal hinterland settlements, in terms of providing a location for the exchange of goods, although Eichner also recognizes that oil production may have been significant as well.[558]

Yenibahçe Valley

The work of Eichner is one of a few notable examples of the recent attention paid to the settlements of this eastern region, updating our knowledge of this coastal hinterland (Figure 29). This area was also the subject of the doctoral work and subsequent publications of Günder Varinlioğlu, discussed below. As these studies have focused on sites located in the Yanibahçe canyon, this valley will be discussed in more detail before moving on to look at the eastern coastal hinterland as a whole.

[555] I. Eichner, *Frühbyzantinische Wohnhäuser in Kilikien. Baugeschichtliche Untersuchung zu den Wohnformen in der Region um Seleukeia am Kalykadnos* (Tübingen, 2011), pp. 285-6.
[556] TIB 5, p. 312; Eichner, *Wohnhäuser*, pp. 285-6.
[557] TIB 5, pp. 311-12; Eichner, *Wohnhäuser*, p. 285; Hill, *Churches*, pp. 241-3.
[558] Eichner, *Wohnhäuser*, p. 286; Varinlioğlu, 'Landscape', pp. 30-1, 64.

In her 2008 PhD dissertation, Varinlioğlu explores landscape use and the development of rural settlements in southeastern Isauria, arguing that this limestone region was successfully economically exploited in Late Antiquity.[559] Through a focussed analysis of the settlement architecture of two villages, Karakabaklı and Işıkkale, each measuring approximately five hectares and located approximately 800 metres a part, she explores how these rural sites developed in the late antique and early Byzantine periods.[560] She argues that these settlements grew and developed in these periods which led to dense settlement and the construction of substantial basilicas in the villages.[561] Notably, both villages also had tetrapylons, which may be interpreted as demarcating their place as important nodes on the route between the coast and interior and reflecting their economic vitality.[562] The tetrapylons were converted into chapels in the first half of the 6th century.[563] Noting differences in settlement architecture, she argues that Karakabaklı appears to have been 'wealthier' than the neighbouring Işıkkale, positing the possibility that the former settlement housed the land owners, the latter the workers.[564] Describing the basilicas in each settlement, Varinlioğlu concludes that the 'ecclesiastical building programs in these two villages, despite the apparent modesty of the decoration and construction, can and should be interpreted as proof for the rise of prosperity for the rural countryside' but notes that large villages within her study's survey area encompassed churches while other smaller sites did not.[565] She then seems to contradict herself slightly by later stating:

> The settlements of southeastern Isauria give the misleading impression of wealth due to their extremely well preserved architecture. However, the archaeological

[559] Varinlioğlu, 'Landscape', pp. 126-61.
[560] Varinlioğlu, 'Landscape', pp. 53, 57-67.
[561] Varinlioğlu, 'Landscape', pp. 52-3, 61-2, 66-7, 70-3.
[562] Varinlioğlu, 'Landscape', pp. 55-6; also discussed in her subsequent publication, Varinlioğlu, 'Habitat', pp. 203-4.
[563] Varinlioğlu, 'Habitat', p. 204.
[564] Varinlioğlu, 'Landscape', p. 67.
[565] Varinlioğlu, 'Landscape', p. 73.

> evidence from Işıkkale points to a different socio-economic and cultural make-up. This village has several well-built houses, perhaps inhabited by wealthy landowners and a monumental basilica with fine architectural decoration. Yet its pottery assemblage is almost entirely local, coarse, and utilitarian. Moreover, the village has unusually large number of threshing floors in its periphery. Therefore, despite the appearance of monumentality, this is a settlement involved in intensive agro-pastoral production and probably inhabited primarily by the working class… But, as we have seen, this represents only a tiny fragment of the rural community.[566]

Based on these statements, it is clear that the rural development of this area is complex and highlights the importance of each site needing to be understood in its own context. From what can be gathered, Varinlioğlu seems to be stressing that rural villages had the potential of reaching levels of substantial prosperity from an agricultural basis, based on her analysis of the agricultural presses, threshing floors and epigraphic evidence in her study area.

Two arguments stand out in Varinlioğlu's 2008 thesis. Firstly, it would appear that the rural communities under study exploited the landscape with the result that site density increased and settlements accrued wealth. In some instances, surplus may have been invested in the construction of religious structures. Second, the last sentence of the above quote is particularly important to consider, as rural sites in the Yenibahçe valley differed in size and function, thus illustrating, as described below, that dense occupation does not necessarily equate to settlement 'prosperity'.

More recently, Varinlioğlu has published further information about the settlements of the Yenibahçe area, illustrating the differences of settlement type in the valley (Figure 30).[567] She notes that 'the formation of villages, which were the main forms of settlement in the Isaurian countryside during late antiquity, stemmed from the densification and expansion of hamlets'.[568] Thus, Varinlioğlu seems to suggest that greater nucleation of

[566] Varinlioğlu, 'Landscape', p. 160.
[567] Varinlioğlu, 'Habitat', pp. 199-209.
[568] Varinlioğlu, 'Habitat', p. 208.

farmsteads and hamlets around villages occurred in the late antique period than in earlier times (perhaps paralleling the settlement development in the area of Kyaneai, noted above?). While hamlets and farmsteads were located in areas of exploitable agricultural land, villages were in areas accessible to significant routes running between coastal and rural areas.[569]

The progressive study of the Yenibahçe valley is crucial to our understanding of settlement development and notions of rural prosperity. Predominant notions of rural prosperity are largely based from the evidence of settlements like Karakabaklı and Işıkkale, where indeed it would appear that these rural sites invested in the construction of religious structures. However, stepping back from the few large villages that have been cited as examples of rural prosperity, the rural landscape is better characterised as a patch-work of various types of rural settlements, some of which could afford to invest in construction, and others that could not. The late antique settlement development within the Yenibahçe valley is exceptional to the entirety of Isauria under investigation in this study, even to other coastal areas, particularly to the south coast where settlement seems to be minimal, and even the hinterland of Seleucia and the Göksu Valley, discussed below.

While village formation and the relation between different types of rural sites requires further study, we also have to examine what variable facilitated the growth of villages along the Yenibahçe Valley. As Korasion has been recognised as a strategically located coastal site, this raises the question of its role as an outlet in providing, perhaps via cabotage and land routes, agricultural products of the seemingly densely settled Yenibahçe valley to other settlements that required agricultural products, like Meryemlik (to serve pilgrims) or Elaiussa Sebaste (to fill LR1 vessels). Could the settlement

[569] Varinlioğlu, 'Habitat', p. 203.

expansion in the Yenibahçe valley have reached the level that it did without the maritime traffic generated in part by the demand for goods from Constantinople?

The eastern coastal hinterland: archaeological evidence from the TIB 5

Moving on from the Yenibahçe Valley, behind the major coastal settlements of the east coast, various types of sites have been identified. Hinterland sites that encompass evidence of possible late antique remains/activity documented in the TIB 5 are illustrated in Map 6. Some of these sites appear to have encompassed substantial remains, such as Canbazlı (a settlement with at least three early Byzantine churches attested)[570], Kanytella (with five attested early Byzantine churches)[571], and Üçtepe (a village with oil presses, a possible bath and at least two early Byzantine churches),[572] to name a few. Considering the information presented in the TIB 5, there appears to be a cluster of sites northeast of Korasion in the area of the Yenibahçe valley, thus supporting the argument of the importance of the connectivity between this valley and the coast. On the other hand, this raises the question of whether lower settlement density elsewhere along the east coast is an accurate representation of late antique site occupation or is a result of survey methods that have not yet sufficiently studied other areas. What is also noticeable is that at the time of the TIB 5, an area of dense settlement may be identified between Seleucia and Kalanthia on the coast but does not extend further northeast to the area around Soli-Pompeiopolis (Map 2).

It is also noticeable that beyond the site cluster along Yenibahçe valley, there may be a relationship between the location of sites and river valleys. It has been argued by

[570] TIB 5, p. 223; Hill, *Churches*, pp. 106-11.
[571] TIB 5, pp. 285-6; Hill, *Churches*, pp. 179-93.
[572] TIB 5, pp. 452-3; Hill, *Churches*, pp. 249-50.

Varinlioğlu that villages seem to develop around important routes, so access to waterways or routes that may have followed these river valleys may be an underlying reason behind the placement of sites. Whether this is a true reflection of the location of settlement or a result of survey methods is, again, uncertain.

The eastern coastal hinterland: recent archaeological survey

Archaeological surveys have continued to explore this area and have documented structures spanning different archaeological periods, therefore bringing our knowledge of the sites in this coastal hinterland up-to-date.[573] I have collated information concerning the recent identification of late antique and early Byzantine remains from archaeological reports conducted between the years 2002 and 2015 from the *ANMED* journal series (published 2003-2016).[574] An example of the information provided in these surveys is presented in Appendix 4. I have tried to collect information concerning sites that have not been documented in the TIB 5, however, as the locations of sites are not detailed in the reports, it is possible some sites are duplicates or are referred to by different names across different sources. I have intentionally not included sites listed in the TIB 5 so as to avoid duplication of sites and to present updated information as much as possible. Instances where updated information or accounts of remains at sites differ significantly from that which is presented in the TIB 5 have been indicated. Possible duplicates have been indicated also. What is represented in this table are sites of interest, where late antique or early Byzantine remains, and churches (dated and undated) have been explicitly stated in the *ANMED* reports accessible to me.

[573] See also, Ü. Aydınoğlu, 'The farms in Rough Cilicia in the Roman and early Byzantine periods', *ADALYA*, 13 (2010), pp. 243-82.
[574] The principal authors are H. Şahin and Ü. Aydınoğlu, who have provided reports to the *ANMED* series published from 2003-2016. Individual references are cited on Appendix 4.

It is important to keep in mind that many other sites were documented over the course of these surveys, but if there was no mention of late antique or early Byzantine archaeology, they were not included in my data set. Furthermore, the information provided in these reports is often far from ideal. That is, late antique or early Byzantine remains may be reported, but no description of the remains or basis of dating is explained in the reports. Therefore, I rely on the identification of remains as late antique or early Byzantine by the surveyors and the quality of publication. Within the reports, there is also the challenge of language and terminology especially in regards to what constitutes a 'work area' and whether or not this refers to a press. For example, in one instance, what seems to be an olive press is described as a winery, leading to confusion (see Appendix 4 entry #15).[575] It is also not certain whether all structures identified in a survey season are included in the reports submitted to *ANMED*, or if only a sample of sites and remains are actually published (for example, a report states that 33 new settlements had been identified in the course of a survey campaign but no further detailed information is given for these sites, see Appendix 4).[576] This leaves the possibility that further remains have been identified but have not been made accessible for inclusion in this study. It is also important to note that different scholars may have surveyed the same sites but have reported different remains. In this case, I have included the different entries in Appendix 4.

Map 7 illustrates where the sites catalogued in Appendix 4 are located. As high-resolution detailed maps of this region are not easily accessible, it must be borne in mind that the plotting of sites on the current map is approximate.[577] Sites that I could not localise have been indicated on Appendix 4. Nevertheless, it is clear to see from

[575] H. Şahin, 'Surveys in Rough Cilicia in 2006', *ANMED*, 5 (2007), p. 119, 'Baklaların Yıkığı'.
[576] H. Şahin, 'Rough Cilicia 2009: settlement history and epigraphy surveys', *ANMED*, 8 (2010), p. 149.
[577] The approximate locations of sites have been determined by referring to a number of sources including TIB maps of ancient and modern settlement, the description of the location of a site and Google Maps.

Appendix 4 and Map 7 that several sites beyond what had been documented in the TIB 5 have been reported to contain late antique or early Byzantine settlement architecture in the survey reports published over the course of 13 years. Although the plotting of sites is approximate, it is interesting to note that there appears to be a high-density concentration of sites described as being identified in the area around Karakabaklı and Karadedeli, which are located near the Yenibahçe valley, reflecting the same cluster of sites first identified with the information of the TIB 5. The full extent of this concentration is not well-represented on this map, as sites artificially overlap one another. Expressed in a different way, of the 74 sites presented in Appendix 4, approximately 41 are described as being located in areas near/of Karadedeli, Karakabaklı or in the area between Seleucia and Korykos.[578] Again, whether this has to do with archaeologists focusing on this area in recent study is a possibility and so other regions beyond the Yenibahçe valley territory may not be so closely surveyed, therefore leading to a discrepancy in site distribution. It is also interesting to note that although survey has added greatly to our knowledge of the number of sites with late antique and early Byzantine settlement architecture in this area, not very many sites with churches have been identified over the course of 13 years of survey.

Apart from the aforementioned major coastal sites discussed above, Olba and Diokaisareia are two historically significant sites that are worthy of mention. Olba, located 24km north of Seleukia, and Diokaisareia, located 22km north of Seleucia, and only 4km away from each other, I would argue, demarcate the boundary of the eastern coastal hinterland.[579] Concerning late antique and early Byzantine remains, the TIB 5 reports various structures being identified at Olba that may have been used or renovated

[578] Table 4: # 1, 3, 4, 12, 16-32, 36-39, 43, 45-47, 49, 51-53, 64, 65, 68-70, 72-74.
[579] TIB 5, pp. 239, 369.

in Late Antiquity.[580] Furthermore, one early Byzantine basilica was identified in a central location in the site, a necropolis church once reported is no longer visible, and two churches possibly belong to an early Byzantine monastery.[581] More recent archaeological work at the site has focussed on various other structures, as well as the monastery.[582] It appears that other churches have also been identified but it is unclear if these churches have been previously documented or are new finds.[583] At neighbouring Diokaisareia, four early Byzantine churches have been documented.[584]

It is interesting that not very many settlements have been identified around Seleucia or Meryemlik, the main political and religious centres of the province. This may be due to the fact that this area is largely overbuilt by modern Silifke and it is also possible that sites may be identified in the course of further studies. A comparison between the proximity of sites around Seleucia and Myra of Lycia will be presented in Chapter 5.

Inland Isauria

As the coastal areas of Isauria have been discussed, it is time to turn attention to the interior of Isauria. Importantly, the need to look beyond major coastal sites to inland settlements is being realised by scholars working in this province. Although research into the interior of Isauria is still developing, some notable archaeological work has begun to shed light on the settlement development of this area, therefore allowing a more comprehensive picture to unfold. The archaeological work at Kilise Tepe, the Lower

[580] TIB 5, pp. 369-70.
[581] TIB 5, p. 370; Hill, *Churches*, pp. 250-2.
[582] For example, E. Erten, 'Archaeological surveys at Mersin-Olba (Uğuralanı) in 2004', *ANMED*, 3 (2005), pp. 143-7; E. Erten, 'Surveys in Mersin-Silifke-Olba in 2006', *ANMED*, 5 (2007), pp. 133-6; E. Erten, 'Excavations at Olba (Silifke, Mersin) in 2011', *ANMED*, 10 (2012), pp. 73-7.
[583] E. Erten, 'Archaeological surveys in Mersin-Olba (Uğuralanı) in 2005', *ANMED*, 4 (2006), pp. 123-4.
[584] TIB 5, p. 240; Hill, *Churches*, pp. 252-6.

Göksu Archaeological Salvage Survey Project (LGASSP), and the Göksu Archaeological Project (GAP) will be discussed. Not only do the results of these archaeological projects allow for a more comprehensive picture of inland settlement development in its own right, but these studies also allow for an investigation into the connectedness or interdependency of coastal and interior settlements. As archaeological work in the interior of Isauria has largely centred along the Göksu Valley, this allows for a comparison with the eastern coastal valley, Yenibahçe, discussed above, as well.

Kilise Tepe is an exceptional site as it is one of the first rural sites in southern Anatolia on the Mediterranean to be excavated, if not the first (Figure 31).[585] The results of the excavation of the mound between 1994-1998 were published in 2007.[586] Mark Jackson has largely been responsible for the work and publication of the early Byzantine layers of the site and has recently published further results of work conducted at Kilise Tepe from 2007-2011.[587] As these reports offer a large amount of data, only a discussion of significant finds pertinent to this study will be presented here.

This 150x100m mound had an early Byzantine church that stands out in its architectural decoration as the identification of marble pieces at the site is exceptional when compared to other inland churches (discussed below).[588] In terms of secular structures, domestic buildings at Kilise Tepe differ from their coastal comparanda as coastal sites were built from local limestone, while the domestic structures of Kilise Tepe likely had foundations of stones and mud brick walls.[589] This is significant to consider in terms of the visibility of other inland sites for archaeological surveys. As inland

[585] M. Jackson, '2007-2011 Excavations at Kilise Tepe. A Byzantine rural settlement in Isauria', *Dumbarton Oaks Papers*, 69 (2015), p. 355.
[586] N. Postgate, D. Thomas, (eds), *Excavations at Kilise Tepe, 1994-98. From Bronze Age to Byzantine in western Cilicia* (2 vols, Cambridge, 2007).
[587] Jackson, 'Excavations', pp. 355-80. Also, M. Jackson, 'Byzantine settlement at Kilise Tepe in the Göksu Valley', in M. C. Hoff, R. F. Townsend (eds), *Rough Cilicia. New historical and archaeological approaches* (Oxford, Oakville, 2013), pp. 219-32.
[588] Jackson, 'Byzantine settlement', pp. 221-4; Jackson, 'Excavations', pp. 355-6.
[589] Jackson, 'Byzantine settlement', pp. 224-6; Jackson, 'Excavations', p. 356.

settlements likely utilised similar construction techniques, the perishability of mud brick would render the identification of structures difficult for surveyors. Therefore, a higher number of inland sites may exist, but due to the construction material utilised, they have not yet been recognized (as mentioned in the case of identifying settlement in northcentral Lycia).

Although excavation work has been contained to Kilise Tepe itself, information concerning this mound, its connection to the valley, and the landscape around it, is coming into focus as the LGASSP has been surveying this part of the lower Göksu Valley. Over the course of extensive and intensive surveys, a pattern of settlement intensification and abatement has been identified by the LGASSP (Figure 32). From the archaeological information collected, preliminary results suggest that there is a peak in settlement in the Bronze Age in the valley, with a subsequent decline from the Iron Age to Roman period, followed by another peak in settlement in the late Roman and Byzantine periods. The LGASSP acknowledges, however, that this preliminary observation must be approached with caution, as further identification of sites as surveys continue may change this settlement picture.[590]

Results from the first season explain that of the 11 late Roman-Byzantine sites that had been identified, four sites had been settled in the Bronze Age, while five were new foundations (no information is offered on the two unaccounted sites).[591] Results from the second season, increased the number of tentative Byzantine sites to 16.[592] An analysis of the table accompanying the second season report, shows that there is indeed a dramatic

[590] T. E. Şerifoğlu, N. MacSweeney, C. Colantoni, 'The Lower Göksu Archaeological Salvage Survey Project: preliminary results of the first season', *Anatolica*, 40 (2014), table 1, pp. 79-81, 84; T. E. Şerifoğlu, N. MacSweeney, C. Colantoni, 'Lower Göksu Archaeological Salvage Survey Project, the second season', *Anatolica*, 41 (2015), table 1, p. 187.
[591] Şerifoğlu, *et al*., 'First season', p. 80.
[592] Şerifoğlu, *et al*., 'Second season', table 1, p. 187.

rise in site numbers in the Byzantine period, although there is no indication of what chronological period 'Byzantine' forms (Table 2).[593]

The importance of geography has been highlighted by the archaeologists of Kilise Tepe and the LGASSP. This area of Isauria and the Göksu Valley has long been recognized as the natural 'communication link' between the central Anatolian plateau with the Mediterranean, therefore connecting the interior with the coast.[594] However, if the Göksu Valley was part of such an important route of natural communication, it might be argued that one would expect more late antique and early Byzantine settlements identified in this area, perhaps reflecting the site density that has been identified in the Yenibahçe valley discussed above. But perhaps geography played more of a role in the settlement and agricultural exploitation of this valley. That is, in their intensive survey of the area around Kilise Tepe and Çingentepe (Kilise Tepe's neighbouring mound), the LGASSP noted how the land between and around these sites was not very accessible and would have restricted locations for settlement.[595] It is not clear how far geographically this statement ought to be applied to the valley, but difficult landscape may indeed be another factor to consider in understanding the development of settlement along the valley.

The currently low number of sites in such a potentially important valley is recognized by the LGASSP, who argue that if not a major link it would have served important regional communication.[596] Even if the Göksu Valley only served regional networks, one might expect a higher concentration of settlement especially if the interior was supplying major settlements of the coast with agricultural products to be put in the

[593] Ibid.
[594] Şerifoğlu, *et al*., 'First season', p. 71; Jackson, 'Byzantine settlement', p. 220.
[595] T. E. Şerifoğlu, N. MacSweeney, A. Collar, C. Colantoni, S. Eve, 'Lower Göksu Archaeological Salvage Survey Project, the third season', *Anatolica*, 42 (2016), p. 14.
[596] Şerifoğlu, *et al*., 'First season', p. 81.

LR1 vessels manufactured on the coast.[597] On the other hand, as mentioned above, a combination of perishable construction material and survey methods may be limiting our ability to recognize what was once a densely settled valley.

Following the course of the Göksu Valley further inland, the Göksu Archaeological Project (GAP) has surveyed the area northwest of Mut, updating our knowledge of the settlement in this inland area (Figure 33).[598] The sites of Alahan and Dağpazarı are well-known as their church structures have been the subject of scholarly interest for many decades.[599] The GAP survey has helped bring to light new information about the other settlements in this interior region, such as the village at Alahan (see Chapter 5).

Agricultural pressing facilities have been identified by the GAP in the Upper Göksu region.[600] According to a 2007 publication, the total number of presses identified is 16 olive presses and 71 wine presses,[601] although there is the possibility that additional pressing facilities may have existed.[602] There is a lack of amphorae finds at the sites investigated by GAP.[603] As mentioned in Chapter 3, it is reported that LR1 amphorae were among the ceramics identified at Dağpazarı, rather exceptionally.[604] The presses identified have been interpreted as producing for subsistence and not for export,

[597] Şerifoğlu, *et al*., 'First season', pp. 81-2. On the routes of the valley, N. Postgate, 'The site of Kilise Tepe', in N. Postgate, D. Thomas (eds), *Excavations at Kilise Tepe, 1994-98. From Bronze Age to Byzantine in western Cilicia* (2 vols, Cambridge, 2007), i, p. 9.
[598] The GAP is also discussed by Committo, 'Southern Asia Minor', pp. 231-2.
[599] M. Gough, (eds), *Alahan. An early Christian monastery in southern Turkey* (Toronto, 1985); on Dağ Pazarı Hill, *Churches*, pp. 149-62.
[600] Between 2002-2005, 14 oil presses and 32 wine presses were identified, H. Elton, 'The Roman countryside at Alahan, Turkey', in A. S. Lewin, P. Pellegrini (eds), *Settlements and demography in the Near East in Late Antiquity. Proceedings of the colloquium, Matera 27-29 October 2005* (Pisa, Rome, 2006), p. 62; other presses identified include those at Topkaya; a wine press by the road to the Alahan complex;18 wine presses identified around Aloda; an olive press weight and three wine presses near Karabucak; and those at Karacaağaç, Burun, Geçimli and Karabağ (12 wine presses at Karabağ) for example, H. Elton, 'Göksu Archaeological Project 2005-2006', *AST*, 25.2 (2007), pp. 239-42.
[601] Elton, 'Göksu 2005-2006', p. 242. See footnote above.
[602] Elton, 'Alahan', pp. 62-3.
[603] Elton, 'Alahan', p. 64.
[604] Elton, 'Göksu 2002-2004', p. 334.

suggesting the pressing facilities of this inland region served the needs of inland inhabitants and may not have been transported to the coast to amphorae production centres.[605] Instead, the densely settled eastern coastal area of Isauria was likely the main contributor to cultivating agricultural products for export. Thus, the area of Alahan and the upper Göksu valley was not highly integrated in the movement of agricultural products to coastal settlement, although it seems goods from the coast did find their way inland on occasion as imported ceramics, building materials and basalt cereal mills indicate.[606]

Hugh Elton has questioned evidence of settlement prosperity in this region.[607] By analysing the archaeological evidence in the area, Elton argues that, although the GAP surveys identified the highest number of sites attributed to the late Roman period, the churches of the Upper Göksu are 'not indicative of the prosperity of inland Isauria' in the late Roman period.[608]

Arguing that a large number of churches ought to be expected in this period (a total of 38 are attested), Elton argues that the appearance of so many churches is not indicative of an increase in prosperity but the proliferation of Christianity in the region.[609] Noting that there is a lack of monumentality in the interior (there is a lack of theatres, baths or monumental tombs, nor significant evidence of lavishly decorated elite residences), he implies that scattered evidence of architectural elements of churches (mostly capitals with some marble or *opus sectile* finds) are ultimately unimpressive.[610] Elton argues that the Isaurian interior remained less prosperous than the Isaurian coast

[605] Elton, 'Göksu 2005-2006', p. 245; Elton, 'Alahan', p. 64.
[606] Elton, 'Alahan', p. 61.
[607] Elton, 'Churches', pp. 233-46
[608] Elton, 'Churches', p. 233.
[609] Elton, 'Churches', pp. 233-4, 238-46.
[610] Elton, 'Churches', pp. 234-46.

essentially in all periods, and that even the coastal cities of Isauria pale in comparison to other coastal cities on the southern Anatolian coastline.[611]

Elton's conclusions certainly need to be considered as the question of rural prosperity and the indicators of what we consider as evidence of prosperity ought to be examined. The fulcrum of Elton's arguments seems to be a comparison between the Isaurian interior with the coast and other southern Anatolian settlements that therefore test notions of prosperity. Does this mean that Elton is correct in saying that inland Isauria remained a less developed region? Or, as has been discussed for the western coast of Isauria, can the unimpressive remains of the interior be explained by unique traditions of monumentality as had been suggested for the Roman period by the RCSP?[612] Perhaps inland Isauria is not a meagre region, only cultural and political traditions influenced representations of wealth. Or perhaps inland Isauria remained less developed and did not experience a period of prosperity in the late antique period, and only maintained a level of settlement over time.

If we return to the lower Göksu Valley results and the increase in site numbers for the late Roman and Byzantine periods, with the arguments of Elton and the evidence of GAP in mind, I would argue that the archaeological evidence available for the inland region suggests that an increase of settlement may not be indicative of prosperity, only an increase in site density, an argument that may apply to rural sites on the eastern and southeastern coastal region of the province, also.

[611] Elton, 'Churches', pp. 245-6.
[612] Elton considers this argument in the context of elite residences of Dacia but dismisses it for Isauria, Elton, 'Churches', p. 236.

Discussion

The presentation of the archaeological evidence of settlement architecture of Isauria illustrates that, as argued in the case of Lycia, not one overarching narrative of late antique prosperity is applicable to this region. Areas within Isauria developed differently, therefore highlighting the importance of regional variation. Indeed, not even micro-regions within larger geographic areas developed similarly. On the question of coastal and inland relations, it may be argued that if we are to expect to identify evidence of prosperity and economic vitality in coastal regions - those areas that may have been impacted the most by maritime exchange - it would appear that the western and southern coasts of Isauria are not the places to look.

If inhabitants were really tapping into the opportunities maritime connectivity was providing them, why did settlement not occur to a greater degree along the lower Göksu Valley, or beyond the hinterland of Anemurium? If a system of interdependency characterised the supply of agricultural products from the interior of south Anatolian provinces to the coast for participation in the broader eastern Mediterranean maritime supply routes, why do we not see greater settlement in inland areas or the south coast? Is a lack of evidence on the southern coastal hinterland a consequence of scholarly disinterest in areas outside of Seleucia or the east coast? Or is it possible that the archaeological evidence reflects the attitudes of the inhabitants of Isauria being drawn to the east coast and not elsewhere? By comparing the settlement evidence of Isauria and Lycia, the following chapter will attempt to address such questions.

Chapter 5. Comparison and discussion of Lycia and Isauria

As demonstrated in the preceding chapter, virtually every year previously unrecognized archaeological sites are being identified in surveys in Lycia and Isauria. Although methodological challenges arise when consolidating the recent influx of information, the previous chapter has attempted to bring the information concerning late antique sites within these regions as up-to-date as possible. This places us in a position to analyse what the settlement evidence of the two regions may reveal regarding similarities and differences in their development in this period, which in turn may refine our understanding of the ways they participated in wider economic networks.

Although evidence suggests areas of the Lycian coast experienced a period of construction activity in the late antique period, it would be incorrect to apply such a generalised statement to the entire coastline of this province. Apart from settlement development in particular pockets of coastal areas, there are striking differences in identifiable investment and building activity in settlements located in coastal and near-coastal locations. Further east, nuances in regional development are also demonstrated in the varying location of settlement along the Isaurian coast. Apart from east coast Isauria, the archaeological evidence of western and southern coastal settlement suggests that these regions did not experience 'prosperity' and in fact are areas where little observable investment occurred in this period. Thus, it would be incorrect to simply state that evidence of church and settlement construction on the southern Anatolian coastline meant that coastal areas of Lycia and Isauria experienced a period of prosperity between the 4th and 7th centuries. Furthermore, based on the current state of evidence, when compared to coastal areas, the interior territories of both regions appear to have been home to only

minimal settlement where again, evidence does not suggest substantial investment in building activity, with few possible exceptions.

The following chapter will compare and discuss particular areas and settlements in Isauria and Lycia so as to examine how similarities and differences in settlement remains and settlement location may add to our understanding of the economy of each region. By comparing the development of various settlments through a series of case studies, similarities and differences in the development and economic exchange networks of the regions are illuminated. Firstly, the development and remains of Olympus and Elaiussa-Sebaste, two coastal settlements that appear to have undergone substantial development and building works in Late Antiquity, will be compared so as to analyse the economic stimulus that may have facilitated the development of each settlement. Attention then turns to the capitals of each province and their hinterlands in order to analyse the development of settlement around these major sites and their relation with rural and coastal settlement. At this point, I will also present an in-depth examination of evidence concerning Lycia's economy and its participation in wider Mediterranean exchange. Moving inland, I will examine select settlements of the interior of each region. Bringing the importance of geography to the fore, the settlements located in the area of the Xanthus Valley of Lycia and the Göksu Valley of Isauria will be compared and discussed. Lastly, I will propose a theory concerning what the combination of settlement location and agricultural production of Lycia and Isauria may reveal concerning late antique settlement trends in these provinces.

Coastal settlements of Lycia and Isauria

Olympus and Elaiussa-Sebaste

Elaiussa-Sebaste and Olympus can be compared because both coastal settlements have been subject to in-depth archaeological study and underwent major developmental changes in Late Antiquity. A comparison of these two sites will be taken as a case study in order to explore the factors that may have facilitated their remarkable development. This analysis reveals that the economic base of each city differed and highlights the importance of considering various economic factors (not just agricultural) that may contribute to a settlement's development.

A description of the construction activities at Elaiussa-Sebaste has been presented in the preceding chapter. Along with the construction activities of the city (religious and civic), finds of *opus sectile*, glass *tesserae*, and marble pieces/slabs within the agora church, and *opus sectile* and finds of Proconessian marble in the baptistery of the episcopal church of the city, suggests that the religious buildings of Elaiussa-Sebaste received high quality decoration.[613] Marble finds were also uncovered in the palatial complex. These include the marble *opus sectile* wall panels identified in the complex's north apsed hall, the marble of the eastern apsed hall, as well as the *opus sectile* walls, marble floors and Proconnesian marble columns in the round portico area of the complex.[614] Although the building was destroyed in the mid-6th century, parts of it were converted to workshops.[615] Two pottery kilns have been identified in the palatial complex itself, one LR1 kiln functioned from AD 530 to the early 7th century, the other in *c*. the

[613] Equini Schneider, *Elaiussa Sebaste*, pp. 54-8; E. Equini Schneider, '1998 Excavations and research at Elaiussa Sebaste', *KST*, 21.2 (1999), pp. 239-40; Equini Schneider, 'Elaiussa Sebaste 2011-2012', pp. 415-16.
[614] Equini Schneider, *Elaiussa Sebaste*, pp. 106-11.
[615] Equini Schneider, *Elaiussa Sebaste,* p. 113.

second half of the 6th century. Two other kilns have been identified, one in the domestic/artisanal quarter of the city and the other in the southwestern necropolis.[616] Therefore, the rich décor suggests the accumulation of substantial wealth and investment was directed to this central structure in Elaiussa-Sebaste when functioning as an administrative centre, and that the building remained in use for a time after as well.[617]

The archaeologists working at Elaiussa-Sebaste also identified what they call 'silos' or pits within the palatial complex, and suspect that the palatial complex overlies what may have been Roman period *horrea*.[618] The discovery of storage structures pre-dating the early Byzantine palatial renovations reinforces the importance of Elaiussa-Sebaste's harbour in the earlier Roman period and the continued use of this area for economic purposes in later periods as well.

Evidence of agricultural and artisanal activity within and around the city further demonstrates the economic vitality of Elaiussa-Sebaste from the Roman to late antique period. For example, the port baths were renovated and used as artisanal workshops from the late 3rd to 4th centuries with use possibly continuing into later periods. The identification of a millstone may indicate olive oil production at some point in part of the structure.[619] Part of the southwest necropolis was also brought under use for agricultural activities from the 3rd century onwards. Evidence from a pressing facility in the necropolis, thought to have been used for oil production, suggests that it functioned from the 3rd to the second half of the 4th and the beginning of the 5th century. In the area pottery

[616] E. Equini Schneider, E. Borgia, 'Elaiussa Sebaste: 2008-2009 excavation and conservation works', *KST*, 32.3 (2010), pp. 314-15.
[617] Equini Schneider, *Elaiussa Sebaste*, p. 113. The archaeologists also postulate that small finds brought to light in the south eastern quarter of the promontory indicate 'a good quality if not luxurious way of life', perhaps further illustrating accrued wealth enjoyed by inhabitants that economic developments generated, although the chronological context of the statement is not clear, but seems to apply to the 5th and 6th centuries, Equini Schneider, 'Elaiussa Sebaste 2007', p. 180.
[618] Equini Schneider, Borgia, 'Elaiussa Sebaste 2008-2009', pp. 314-15; Equini Schneider, 'Elaiussa Sebaste 2010', p. 196.
[619] E. Equini Schneider, 'Excavations and research at Elaiussa Sebaste: the 2000 campaign', *KST*, 23.1 (2001), p. 224.

kilns have been identified.[620] Workshops and installations for oil and wine production have been identified around the Roman temple following its conversion to an early Byzantine church (late 5th century) and possible monastic complex (although the date of the artisanal use is unclear).[621]

It is interesting to note that when referring to amphorae finds within a cistern in the southeastern side of the promontory, the excavation director states 'these data confirm that from the beginning of the Vth century A.D. Elaiussa became a specialized centre in the wine trade and in the production of amphoras LR1…'. [622] This statement appears to place emphasis on the production and packaging of wine and not olive oil at Elaiussa-Sebaste, contrary to the implication of the city's name. Nonetheless, these various pieces of evidence combined, particularly that of amphorae production discovered at Elaiussa-Sebaste, suggests that agricultural activities achieved a level of surplus production that may have been subsequently exported from the city in locally manufactured LR1. Thus, it may be postulated that funds accrued from the export of agricultural goods contributed to the economic basis for the city's construction activity in this period, which enabled the high-quality decoration that adorned important buildings.

Contrarily, to date, there has been no evidence supporting the manufacture of late Roman transport amphorae in Lycia. This situation would suggest that the principal economic source for the apparent development of Olympus, which also appears to have undergone major construction works like Elaiussa-Sebaste, was not the exportation of oil or wine, but should to be sought in other economic sources. The development of Olympus, it has been argued, may have been more dependent on the comings and goings of visitors to the city particularly to what has been identified as a healing shrine in the

[620] Equini Schneider, 'Elaiussa Sebaste 2006', pp. 302-3.
[621] Equini Schneider, 'Elaiussa Sebaste 2003', p. 185; Equini Schneider, 'Elaiussa Sebaste 2010', pp. 199-200.
[622] Equini Schneider, 'Elaiussa Sebaste 2007', p. 179.

city, as well as its role in exchange.[623] This hypothesis is based on the discovery of the so-called 'episkopeion' (episcopal palace) measuring approximately 128x62m.[624] The construction of the complex is dated to the late 5th century. Enclosed in the complex is a church with annex buildings of different functions, a peristyle, baptistery, triclinium, and bishop's house, among other structures. There are also water features within the complex, therefore leading the scholars working at the site to conclude its possible function as a place of healing centred around water.

The second reason for the city's development, its harbour facilities, is more ambiguous than its supposed religious function as it is not clear how the city directly participated in maritime trade. References to the identification of 'storehouses' and 'harbour buildings' do appear in survey reports and maps of Olympus without further detail as to their use and chronological development in association with maritime exchange.[625]

The combined factors that are thought to have contributed to Olympus' notable late antique development differ from those proposed for Elaiussa-Sebaste. On the one hand, Elaiussa-Sebaste appears to have been participating in exchange predominantly based on the exportation of surplus agricultural goods, as the amphorae manufacture identified in the city would suggest. On the other hand, Olympus appears to have been a centre that serviced maritime traffic (providing food and fresh water, possibly ship service and repair with the region's renown timber), not necessarily supplying goods for shipment abroad like its Isaurian counterpart. In addition, it may have served a potentially important religious function that drew visitors, a characteristic that does not appear to be

[623] Uçkan, Öztaşkın, 'Olympos', pp. 286-7.
[624] Various descriptions of the complex can be found in *ANMED* reports as its study continued over time. Most recently and for the following, B. Y. O. Uçkan, G. K. Öztaşkın, 'Excavations at Olympos 2014', *ANMED*, 13 (2015), pp. 87-90; Uçkan, Öztaşkın, 'Olympos', pp. 286-7.
[625] See site plan, B. Y. O. Uçkan, Y. Mergen, E. Uğurlu, 'Surveys at ancient Olympos in 2005', *ANMED*, 4 (2006), pp. 126, 130-1.

a major factor in the economy of Elaiussa-Sebaste. The agora church at Elaiussa-Sebaste may have been associated with relics or a martyr and so may have drawn visitors to the site, but the degree to which this possibility played in the economy of the city remains speculation.[626]

A lack of evidence for the manufacture of transport vessels at Olympus would suggest that the agricultural production only sustained local consumption, possibly feeding and supplying the local population as well as visitors (pilgrims?) to the city. In fact, it is possible that the warehouses or storage facilities in Olympus' harbour area stored incoming agricultural goods that were imported to aid in supplying inhabitants and visitors. Although speculation, we might also ask if maritime traffic may have increased on the eastern coastline at Olympus (and Phaselis) in this period due to the gradual silting of the harbours of Patara and Andriake, which may have redirected maritime traffic to these eastern harbour cities.

Capitals and their hinterlands

Ancient Myra and Seleucia are overbuilt by modern cities. As a result, the archaeological record of these two ancient settlements is obscured, thus hindering our interpretation of their development. While the capitals themselves can only be explored to a certain extent, we can look to settlements that have been identified in their vicinity in order to examine the economic development of these major cities in relation to their hinterlands in the late antique period.

[626] Equini Schneider, *Elaiussa Sebaste*, p. 61.

Myra and the southcentral coast of Lycia

As discussed in Chapter 4, the density of settlement with evidence of activity/occupation that may be attributed to the late antique period located in southcentral Lycia is striking and unparalleled elsewhere in the province (Map 1). The archaeological evidence of this coast suggests that a number of sites were located in the hinterland of Myra, some of which appear to be loci of notable building activities in the late antique period. Interestingly, in some cases, perhaps best exemplified in the case of Phellos and Antiphellos, development appears to have occurred at coastal sites instead of inland settlement.

The question of the economic role and connectivity between small ports of the southcentral coastline has been raised in Chapter 4. To re-cap, the ports along this coastline are frequently thought to have acted as outlets or markets for the agricultural goods cultivated inland. However, it not very clear in scholarship which types of goods are thought to have been transported to coastal sites (staples such as wine or oil, or other goods such as timber or other raw materials?), nor is it clear where exactly hinterland products were shipped once they reached coastal ports (other coastal settlement, major ports like Andriake or Patara, or elsewhere?). Recent research on coastal sites of this area suggests that small ports may have been more disconnected from hinterland settlements than previously thought, thus raising the need for us to be cautious when considering the degree of an interdependent relationship between coastal and hinterland settlements. If we are to understand Lycia's role in the wider Mediterranean economy, it is worthwhile to look at the possibility of the export of Lycian staple goods such as oil and wine more closely, as well as the role of small ports along the southcentral coastline. That is, we can attempt to analyse whether evidence for agricultural production in the hinterland may elucidate if small ports acted as outlets for interior goods. What evidence is there for

surplus oil and wine production in the region and is there convincing evidence that it was exported abroad?

The economy of Lycia: the question of oil and wine production

Lycia is conceptualised as an agriculturally productive region. The *Life of Saint Nicholas* paints a picture of a wealthy Lycian countryside, one where the saint has agricultural goods and oxen at his disposal for feasting when he travels through the Lycian countryside. This impression is reinforced by the archaeology of the southcentral region, where evidence of expanding rural settlement has been identified. Secondary literature too implies the agricultural vitality of the region. As we have seen, the previous theory of coastal, city and hinterland village interdependence is fundamentally based on the principal that settlements were connected and exchanged goods- agricultural and probably marine. Another example can be seen when, in his overview of olive cultivation in Asia Minor, Stephen Mitchell, despite offering little evidence of oil production in Lycia, implies that it was trade in olive oil and wine in the wider Mediterranean economy that led to the prosperity of Lycian cities among others on the southern Anatolian coast between the 4th-6th centuries.[627] Was Lycia as agriculturally productive as it is implied to be?

When the primary sources for agricultural production is assessed, it becomes apparent that a lack of evidence renders attempts at discerning the agricultural production of Lycia inconclusive, even futile. As a result, I think that there is too little information

[627] Mitchell notes how previously olive cultivation appears to have occurred in the area of Sidyma as well as Kekova and the island of Megiste in Lycia, Mitchell, 'Olive cultivation', pp. 86, 103. Given the lack of quantified information concerning work areas identified on Kekova island in recent surveys, which are mostly described as areas for fish sauce, I do not think sufficient evidence is available to confidently conclude oil/wine surplus production was achieved here in Late Antiquity until further research is conducted.

available in order to make conclusions regarding the agricultural production of Lycia, let alone making conclusions regarding the possible export of wine or oil from the province. The following section will present, analyse and discuss the evidence of oil and wine production in the region in order to demonstrate that we do not have the evidence to speak confidently about the production of these goods in the region, which in turn impacts our interpretation for the way in which Lycia participated in the wider eastern Mediterranean economy.

Reference to oil in Lycia is found in the so-called *Lex Portorii Provinciae Lyciae*, but a lack of contextualisation of this text makes interpreting its content difficult. The *lex* is a customs law discussing the organisation of duties to be paid in the province discovered in Andriake dated to the Neronian period.[628] Only fragments of the text are currently available. Based on the preliminary publication of the *lex*, Burak Takmer has interpreted the text as presenting the unique customs situation of Lycia, where Rome left the collection of taxes to the province, in return for an annual lump sum. Of the published material, particular goods that incurred duty fees are mentioned: murex, pitch, saffron, olive oil, figs and fish. However, it is not clear in what context we are to understand the customs attached to these items. Based on an excerpt concerning saffron, Takmer suggests that duties may have also had to have been paid within the province. Therefore, the mention of specific goods does not necessarily mean that these goods were imported or exported from the province, but their specific mention may be concerning the fees incurred with the movement of these goods within the province itself. Also, the *lex* is centuries earlier than the period with which we are concerned which places uncertainty on the applicability of the *lex* to the late antique period.

[628] For the following, B. Takmer, 'Lex Portorii Provinciae Lyciae. Ein Vorbericht über die Zollinschrift aus Andriake aus neronischer Zeit', *Gephyra*, 4 (2007), pp. 165-88; Rice, 'Port economies', pp. 150, 167-71, 197.

In terms of archaeological evidence, information concerning agricultural presses is ambiguous and does not aid in an analysis of the possible oil or wine production of Lycia. Although press facilities are a feature in the Lycian landscape, rarely are descriptions of presses accompanied by quantitative information concerning the number of presses identified over the course of survey or potential production capacities. We cannot be certain all facilities produced oil or wine, we cannot be certain if they were used contemporaneously, and we also need to factor in the possibility of poor harvests and differences in olive or grape cultivation from year to year, which may impact surplus estimates. Furthermore, calculations for attempting to discern the potential capacity of pressing vats and their product are rather subjective.[629] As it is difficult to discern whether a press was used for wine or oil production, it ought not be assumed that micro-areas within a single region were producing similar products to the same extent as others. Considering these factors, the challenges of determining production levels become apparent.

With these factors in mind, we can turn to analysing potential levels of agricultural production for the region. In a recent DPhil dissertation which focuses on maritime networks of the Roman period, Candace Rice argues that for the south coast of Lycia, based on an analysis of press facilities in the area of Bonda Tepesi located in the region of Phoinix/Limyra,[630] and the identification of numerous press facilitates in the region of Kyaneai including those identified around Tiemiussa, production levels of olive oil in these two regions surpassed local needs and reached levels of 'supra-local export', but she acknowledges that the question of whether oil was exported outside of Lycia remains open as we lack evidence of amphorae kilns in the region.[631] Yet, Rice seems to

[629] Varinlioğlu, 'Landscape', pp. 148-9.
[630] Rice, 'Port economies', pp. 148-9.
[631] Rice, 'Port economies', pp. 147 at 163.

lean in favour of the possibility that oil was exported outside of the region when stating 'it is highly probable that olive oil was produced for export across Lycia…tracing the export of Lycian oil will, however, remain impossible until the amphorae in which it was traded are identified' and later, 'from Lycia, major exports certainly include purple-dyed wool, cloth and perhaps finished products, oil, salted-fish products (at least from the third-century onwards), timber and pitch'.[632] Although coming from an analytical viewpoint of the Roman period, this evidence is important to consider in terms of attempting to discern the possibility of Lycian oil/wine export in Late Antiquity.

The fulcrum of Rice's remarks is that based on the evidence of presses identified, conservative estimations of oil production capacities would have sufficiently supplied local populations. The argument is based on the following summary of calculations:[633] for the Kyaneai and Bonda Tepesi regions, a combined amount of 244,000 litres of oil/annum is estimated to have possibly been produced. Based on a 20 litre per person per annum oil consumption, the oil produced in the two regions would supply roughly 12,200 people. The combined population of Kyaneai (6,200 people) and Bonda Tepesi (800-1,000 people)[634] can be estimated as between 7,000-7,200 people, thus leaving us with surplus product. Moreover, Rice argues that this evidence only offers a fractional view of the olive oil production potential of the region, as areas other than Bonda Tepesi or Kyaneai

[632] Rice, 'Port economies', pp. 162-4, at 164, 197.
[633] For the following, Rice, 'Port economies', pp. 147-8, 162-3, (using the figure of 44 presses for Bonda Tepesi and Istlada), bases her calculations on the research conducted in these areas including that of: T. Marksteiner, 'Der Bonda-Survey: Archäologische Feldforschungen auf dem Territorium der ostlykischen Polis Limyra', in F. Kolb (eds), *Chora und Polis* (München, 2004), pp. 271-90; Kolb, Thomsen, 'Forschungen', pp. 1-42; F. Kolb, 'Terrassenkomplexe, Pressanlagen, Zisternen und Wirtschaftsgebäude: zur agrargeographie des Yavu-Berglandes/Terassenkomplexe, Pressanlagen und Wirtschaftsgebäude im Yavu-Bergland', in F. Kolb (eds), *Lykische Studien 8: Keramik, Münzen, Kirchen und Wirtschaftskomplexe des zentrallyischen Yavu-Berglandes (Gebeit von Kyaneai)*, Tübinger Althistorische Studien 4 (Bonn, 2008), pp. 195-245; A. Konecny, 'Lykische Ölpressen', *Jahreshefte des Österreichischen Archäologischen Institutes in Wien*, 67 (1998), pp. 120-94; A. Konecny, 'Lykische Ölpressen II', *Jahreshefte des Österreichischen Archäologischen Institutes in Wien*, 68 (1999), pp. 142-70.
[634] Rice, 'Port economies', pp. 162-3.

likely cultivated olives and produced oil as well.[635] While there is no denying that self-sufficiency may have been achieved based on these conservative calculations, calculations of surplus production would only serve less than half of the estimated population totals.

Although Rice considers the caveats of calculating potential production and uses minimum numbers in her calculations (even basing calculations on half the number of presses identified in the Kyaneai area as they date broadly), as discussed above, estimating production capacity is fraught with difficulty.[636] Given the exceptionality of the density and settlement located in the southcentral coastal areas of Lycia, the potentially high number of presses and possible product yields of Kyaneai and Bonda Tepesi is not necessarily a representative cross-section of the potential production capabilities elsewhere in the province where settlement appears less concentrated in the late antique period. Moreover, two settlements in the Bonda Tepesi area do not show signs of substantial building activity in the late antique and early Byzantine periods (no church building has been identified at Ortasarı or Dinek) raising the possibility that population and production would have been less substantial in the later period in these areas.[637] This highlights the need to be cautious when generalising the development of micro-regions and the potential production capacity to other areas of the province or inferring the same production capacities across centuries.

Moreover, based on the settlement development of inland areas, identifying other areas of the province that would be viable candidates for substantial surplus oil production is a challenge. Based on aerial imagery, Rice suggests Sidyma as a potential

[635] Ibid.
[636] Rice, 'Port economies', p. 162.
[637] Marksteiner, 'Bonda-Survey', pp. 278, 281.

area of oil production, but attempting to determine possible production in this area remains hypothetical until further research becomes available.[638]

The evidence so far presented illustrates that the ambiguous data for olive/grape cultivation and production in what appears to be limited areas of Lycia is not secure enough to conclude that export of olive oil/wine played a major role in the Lycian export economy. To illustrate this point further, the following paragraphs present a hypothetical calculation of the potential agricultural production of Lycia. The aim of this exercise is to demonstrate the poor quality of the Lycian evidence and emphasize that we lack the information to determine the production of the region and that we are far from being able to conclude, even preliminarily, whether the Lycian oil or wine was exported beyond the province. From this exercise, it becomes clear that attempting to interpret these hypothetical calculations in any meaningful way is ultimately unsuccessful.

The main issue that hinders an assessment of the wine/oil production of Lycia is that we lack the ability to approximate the number of presses per village based on the limited quantified data for presses in the province (the village of Karakuyu is reported as having 14 in its vicinity, but there is no way of knowing the exceptionality of this case).[639] Perhaps looking at another oil producing region can guide further estimations.

Looking further east, evidence of oil production in North Syria may offer comparative material. Across 45 villages in the Jebels (hills) Siman, Halaqa, Bariša and il A'la, 245 presses have been identified, which equates to roughly five presses per settlement.[640] There is no way of knowing the average number of presses across Lycian settlements (five presses per settlement may be a liberal or conservative number for Lycia), but let us apply this formula for the sake of argument. The next challenge is to

[638] Rice, 'Port economies', p. 163.
[639] TIB 8, p. 603.
[640] Decker, 'North Syria', pp. 73, 81.

determine the number of settlements in Lycia so that we can arrive to an approximate total number of presses in the region. Hierocles lists 34 cities in Lycia, earlier, Pliny had listed 36 (although there may have been more).[641] For the purpose of this conjectural scenario, let us settle on 35 cities in the province. The 2nd century Oinoanda festival list names just over 30 villages in the area of Oinoanda and to account for potential changes of demography and settlement from the 2nd century to the late antique period, let us assign 30 villages to each of these 35 cities. Thus, we arrive at 1,050 settlements for Lycia in this hypothetical scenario (approximately five times the number of sites listed in Appendix 1). By applying the North Syrian formula of five presses per settlement, we would arrive at 5,250 presses for the province. If each press produced the conservative estimation of 1,000 litres a season, then the hypothetical presses of Lycia may have produced a total of 5,250,000 litres.[642] This may be an optimistic estimation however, as we have to take into account variation in press size and capacity, the likelihood that not all presses were used exclusively for one good and the likelihood that not all presses were working contemporaneously. Can we interpret these numbers in a meaningful way?

Michael Decker has estimated that *c*. 8,000 presses can be calculated for the Antiochene and Apamean hinterlands of North Syria (this derives from the application of the formula: 1.5 presses/km^2 in the case of Antioch, being 4,000km^{2,} and 0.5 presses/km^2 for Apamea, being 4,000 km^2, also).[643] When compared to the totals arrived for Lycia, then the estimated number of presses of Lycia would correlate to approximately two-thirds of the 8,000 presses estimated for the North Syrian case. What this means in terms of comparing the likelihood of export for Lycia is unclear, as we have no way of

[641] Foss, 'Lycian coast', p. 2; A. H. M. Jones, *The cities of the eastern Roman provinces*, 2nd edn (Oxford, 1971), pp. 106-9.
[642] Based on the capacity estimates used by Marksteiner, 'Bonda-Survey', p. 283, referencing Konecny, 'Lykische Ölpressen', p. 143.
[643] Decker, 'North Syria', pp. 81-2.

estimating the population of the province and by extension any surplus production estimates. This comparison highlights the poor data set for Lycian presses, and underlines the current inability to confidently discern the level of wine or oil production in Lycia. In the end, due to the lack of quantified information for Lycian agricultural press facilities and the various caveats that need to be considered when attempting to discern potential production capacities, I do not think there is enough evidence at this time to determine the potential levels of agricultural production reached in Lycia in the late antique period.

Importantly, by highlighting the little evidence available and the difficulties of theorising about production, I believe that we are not able to speak confidently on whether or not surplus oil or wine was exported from Lycia in Late Antiquity. What tilts the scales in the favour of speculating that surplus production remained in the province, perhaps circulating on local or regional scales, is that no amphorae production has so far been identified in the province, suggesting that oil and wine remained within Lycia.

To summarize, the archaeological evidence does not appear to support the export of oil/wine outside of Lycia in the late antique period. There are too many caveats to consider to suggest such goods were substantially exported from Lycia until amphorae kilns have been confirmed (for either Roman or the late antique period). Even then, we cannot be sure if oil or wine was exported until in-depth study of the transport containers and presses is conducted.

That being said, I do not wish to dismiss the possibility that coastal hinterland settlements may have produced oil or wine beyond the needs of the settlement. As settlement appears to be concentrated around three major coastal centres, it may be theorised that surplus agricultural goods produced by the settlements in proximity to these major coastal zones (besides being consumed within the settlements themselves) were transported to major coastal centres in order to serve the needs of inhabitants there as well

as maritime traffic and passers-by.[644] Taking the area around Myra as an example, the city and its harbour, Andriake, likely had a sizable population and the needs of visitors to serve. Thus, it can be postulated that agricultural surplus produced in settlements in the southcentral area may have been consumed locally, with Myra and Andriake being the other large market for surplus goods. Such a situation may be applicable for the areas around ancient Telmessus and Olympus/Phaselis. Furthermore, amphorae were likely not needed for the regional movement of goods, because products could be transported in skins and barrels, thus potentially explaining the lack of amphorae production in the province.

Coastal connectivity

Based on the ambiguous evidence for Lycian oil and wine production, the notion that ports acted as outlets for agricultural goods ought to be approached with caution, and the possibility that the economy of these small ports was principally derived from other economic sources be considered. The location of settlement along this coast may allow us to explore factors that account for their late antique development, while highlighting the significance of geography in shaping settlement patterns in this period.

Rice has adapted theories of modern port development to the ancient Roman context for the ports of Lycia and Rough Cilicia.[645] Based on harbour size and facilities, the ports of the southern coast of Turkey are assigned to categories (in the order of ascendency) 'small local port', 'large local port', 'large regional port/emporion' and 'large redistribution port/emporion'.[646] To the first category she assigns the Lycian ports

[644] Rice, 'Port economies', p. 163.
[645] Rice, 'Port economies', pp. 101-5.
[646] Rice, 'Port economies', table 2, p. 104.

Antiphellos, Aperlae, Teimiussa, and Gagai. To the second category she assigns Telmessus, Olympus, and Phoinix (with a question mark). To the third, Patara, Andriake, and Phaselis are assigned. And finally, only the major harbours of Portus, Alexandria and Ephesos are designated large port/emporions, with no ports on the southern coast proper being assigned to this category.[647] It is important to keep in mind that Rice has looked in-depth at ports for the Roman period from 166 BC to AD 300, which is earlier than the focus of this study. Nevertheless, I would tend to agree with the assignment of Lycian ports to the divisions assigned by Rice based on their role in the maritime networks of Lycia, even for the later period. The different hierarchies and roles the various ports may have played in the maritime networks of Lycia illuminate the complexity of the economic relationships of these various coastal areas.

The location of Aperlae is significant and it can be considered an important node on the coast because of its involvement in dye production (for the following, see Map 1, Map 3). Between Aperlae and Andriake lie Tristomon (Teimiussa), Simena, Kekova Island, and Ebi. It is possible that the economy of these minor ports was created by servicing the cabotage traffic generated in part by the exploitation of marine resources such as the dye products coming out of Aperlae, or processed fish of Tiemiusa. From Aperlae looking westward, one comes across Antiphellos and then reaches Patara (information for other coastal sites along this westward path is lacking). Antiphellos likely played a similar role as the other minor ports, serving this local maritime traffic while possibly contributing fish products to maritime exchange as well (Chapter 4). Yet there is a notable discrepancy between the number of minor port sites between Aperlae and Andriake, and Aperlae and Patara, with many more being located eastward than westward (which highlights the importance of being cautious not to overstate that the

[647] Rice, 'Port economies', table 4, p. 202.

entire coast saw the same type of late antique/early Byzantine settlement as some specific parts saw higher concentration of settlement than others). It is also important to keep in mind that the main area of settlement on this southcentral coastline is not extensive in the late antique period, essentially limited between Phoinix and Aperlae, so we may be able to imagine highly-concentrated and frequent maritime traffic in this confined geographic area, likely generated by the maritime activities at Andriake.

It can be argued that local cabotage principally underlay the economic basis of these small ports. As dye products came out of Aperlae and fish products from Teimiussa and Antiphellos and made their way to Patara or Andriake (based on settlement concentration, perhaps more frequently to the latter?), other small ports along the route could service coasters. From Andriake and Patara, necessary goods coming from over the Mediterranean could be accessed. In exchange for these goods, the minor ports could use the funds generated from maritime service (by providing fresh water, ship repair service, or provisions) or exchange of their own perishable products. This exchange could take place anywhere along the coast, between the minor ports themselves as coasters went about their business, or at Patara and Andriake.[648]

What of the major harbours Patara and Andriake? If Patara and Andriake were participating in exchange by exporting goods, then it would appear that the products they were inputting to these networks were perishable. While it is possible perishable materials were exported from these major harbours, I would argue that Patara and Andriake may have been involved to a greater extent in servicing maritime traffic (providing harbour facilities, ship service, fresh water, etc.) and received agricultural imports (wine, oil and grain) for redistribution to Lycian settlements, to serve the needs of the capital and other nearby coastal settlements.

[648] On small ports see Rice, 'Port economies', pp. 202-5.

I do not wish to generalize or over-simplify the system of maritime exchange for the entire coast of Lycia. For the late antique period, I would suggest that there may have been a greater emphasis on servicing maritime networks than previous centuries (although this remains speculation as we lack evidence for the early Roman economy of the region in general) and that the demands of intraregional agricultural products may have possibly changed from earlier periods (see below, Discussion). This is not to suggest, however, that all agricultural production ceased. On the contrary, production surely continued as local demands needed to be met, but surplus may have been aimed at different places as political and administrative developments took place thus resulting in changing dynamics of demand (the increasing importance of Myra and Andriake).

To summarize, the development of the southcentral coast of Lycia appears to be dependent to a substantial degree on the development of Myra and Andriake. The southcentral settlements behind and neighbouring the capital may have produced agricultural products like oil and wine for their own needs, with surplus being directed to neighbouring settlements and the capital and its harbour in particular. The lack of amphora manufacture suggests that oil and wine were not exported out of Lycia, but remained within the region, likely being transported on a local/regional scale in perishable containers. What we cannot discern from the archaeological record are the perishable items that might have been exported, such as timber or marine products that would have generated funds to purchase necessary goods like additional wine and oil and the all-important grain.[649] To raise one possibility, in exchange for necessary agricultural products, Lycian timber and valuable dye products might have been exchanged for Egyptian grain and other commodities such as oil and wine that could have been picked up along the maritime route via the coast of the Near East, Cyprus, Cilicia, or the Aegean.

[649] Rice, 'Port economies', pp. 197, 200

Seleucia

Two significant aspects must be considered in an attempt to understand the development of Seleucia and its relationship to other settlements in this area of Isauria. The first is the scholarly work conducted concerning the area of the Yenebahçe Valley, and the second is the confirmed discovery of amphora kilns at Elaiussa-Sebaste and Soli-Pompeiopolis.

As the Yenebahçe valley to the east of Seleucia has received a substantial amount of scholarly attention, we first turn to the possible relationship between this valley and the capital. It has been convincingly illustrated that an increase in settlement density occurred in the Yenebahçe Valley the late antique period (Chapter 4). Varinlioğlu's discussion of the epigraphy of the region and evidence of press facilities and threshing floors identified in the area would seem to indicate that substantial agricultural production was taking place as well.[650] Varinlioğlu has argued that an increased focus on olive oil production in this southeast Isaurian region is closely linked with the settlement development in the 5th and 6th centuries (although she recognizes that mixed agricultural production was taking place), concluding that the agricultural production of this area exceeded local needs.[651] The question of whether or to what degree the increased settlement density in this area in the late antique period was a consequence of Seleucia's influence on the area as a capital and religious centre or the development of Meryemlik as a cult centre, is a matter of speculation.

We can attempt to examine the agricultural production of the east coast from two perspectives: first, by asking where goods of the Yenibahçe may have been consumed or

[650] Varinlioğlu, 'Landscape', pp. 126-61.
[651] Ibid.

transported beyond the canyon; second, by asking where the amphorae production centres may have been sourcing goods to be placed in LR1. Both Varinlioğlu and Eichner have reiterated the significance of Korasion and the possible economic relationship between the settlements of the Yenebahçe area and the coastal site. Varinlioğlu has argued that in general, goods were likely transported to the coast in perishable containers to be then transferred into amphorae.[652] Until amphora production is identified at Korasion, we can only speculate as to where the goods of the Yenebahçe Valley were consumed or transported: goods would have naturally been consumed locally within the settlements in the valley, while surplus products may have been transported over land or water to Seleucia to serve the needs to local inhabitants and pilgrims, or to Elaiussa-Sebaste or Soli-Pompeiopolis to be placed in LR1 vessels.

How far might have Elaiussa-Sebaste and Soli-Pompeiopolis sourced the agricultural products for filling LR1? As the map of site distribution illustrates, the distribution of sites along this eastern coastline appears disparate, that is, while late antique settlement has been identified in the vicinity of Elaiussa-Sebaste, a lower number of settlements have been identified in the area inland from Soli-Pompeiopolis. Whether this is an accurate reflection of settlement in this area, and by extension the source of agricultural production that filled LR1, or a result of a lack of study in the region, is uncertain. More recent research on the settlement development of the region between Silifke and Erdemli in Mersin province has uncovered various rural settlements, many equipped with (sometimes multiple) work areas and pressing facilities which may date back to Hellenistic times, but appear to also have function in the late antique period (Appendix 4).[653] Although information concerning potential production capacities is not

[652] Varinlioğlu, 'Landscape', pp. 151-8.
[653] See Appendix 4 for individual references. Note the several presses and work areas attested in categories presses and miscellany. Aydınoğlu, 'Olive oil production', pp. 1-17.

available, the number of potential work areas and pressing facilities is noteworthy. Will similar extensive research reveal such production in the rural areas of Lycia in the future?

We are also left to consider if and how potential agricultural surplus produced in the eastern coastal area reached amphorae production centres and other sites. The Kalykadnos river was navigable to Seleucia (up to Mut, then impeded by the Çoğla Canyon), meaning theoretically, goods from the Yenebahçe valley and elsewhere (even from further inland) may have been taken to the capital via river.[654] Although there has not been comprehensive study of the rural roads of the eastern coastline, Varinlioğlu has drawn attention to the importance of studying the network of communication between settlements in this area of Isauria.[655] As discussed in Chapter 4, her study of the locations of rural sites in relation to arable land, and major villages to natural communication routes is pioneering this aspect of regional communication.[656] The tetrapylons of Işıkkale and Karakabaklı may indicate the importance of land routes.[657] The potential importance of land routes is highlighted when considering modern observations that the bay of Korasion (modern Susanoğlu) is 'unsuitable for anything but a temporary anchorage in the morning', due to breezes.[658] Although based on modern boating remarks and speculation at this point, there may have been greater dependency on land routes from the Yenebahçe area to the capital and elsewhere along the coast, although greater study of the port facilities is needed.

As discussed above in the context of the port hierarchy of Roman period Lycia, Rice has categorised the coastal harbours of Rough Cilicia for the Roman period. The port of Antiochia ad Cragum along with Iotape and Syedra are categorised as 'small local

[654] TIB 5, p. 284; Elton, 'Alahan', p. 64.
[655] Varinlioğlu, 'Landscape', pp. 44-5.
[656] Varinlioğlu, 'Habitat', p. 203.
[657] Varinlioğlu, 'Habitat', pp. 203-4.
[658] R. Heikell, L. Heikell, *Turkish waters & Cyprus pilot*, 9th edn (St. Ives, 2013), p. 331.

ports'; Selinus and Kelenderis as 'large local ports'; Anemurium, Elaiussa-Sebaste and Korykos as 'local regional ports/emporion'. Neither Soli-Pompeiopolis nor Korasion are categorised.[659] However, for the late antique period, the role of Anemurium may have changed. As discussed in Chapter 3, I am unconvinced that LR1 was produced at Anemurium. This supposition is supported by the striking lack of evidence for settlement in the coastal hinterland of Anemurium. Evidence of oil presses have been identified in the remains of early Byzantine villages around the plain of Anemur, but determining production yields and the chronological use of these elements is not elaborated upon.[660] Furthermore, little evidence for agricultural pursuits were identified in domestic contexts at Anemurium in contrast to evidence of marine-related activities.[661] The combination of a lack of secure LR1 manufacture at Anemurium and a lack of evidence to suggest a source of agricultural goods that may have been directed to Anemurium, I would argue, suggests that the role of the settlement was less significant in regional exchange in Late Antiquity. While bath and church construction did occur at Anemurium in the late antique period, the economic source for investment does not seem to have stemmed from the export of goods as in earlier Roman times. It can be postulated that Anemurium's role in maritime networks changed to one of servicing maritime traffic (possibly from Cyprus?) or participating in regional exchange on a lesser scale in the late antique period. It can also be postulated that the late antique changes in Anemurium's development and the west coast of the province (see Chapter 3, Chapter 4) indicate a concentration of an export orientated maritime exchange network on the eastern coast of the province, instead of a possibly more dispersed export orientation across the western and southern coastal areas as in Roman times.

[659] Rice, 'Port economies', table 4, p. 202.
[660] Russell, 'Anemourion', p. 223.
[661] Ibid.

Comparison: Myra, Seleucia and their hinterlands

In the first part of this section I have argued that drawing conclusion regarding the agricultural production of Lycia is difficult due to the lack of primary evidence, which renders any attempt at postulating about whether oil or wine was exported from Lycia unsuccessful. Based on a lack of amphorae production in Lycia, we may be on surer ground to suggest the region was not exporting oil or wine and that surplus of these staple agricultural goods was distributed within Lycia itself, but again, this remains speculation. Goods imported to the region may have been exchanged for perishable items that do not leave an archaeological trace. I have raised the point that, based on the work of Hohlfelder and Vann at Aperlae, we ought to approach the theory of interdependency between minor coastal ports and hinterland settlements more critically - an aspect that seems to be supported by the archaeological evidence of hinterland sites.[662] Instead of transshipping hinterland agricultural products, I argue that based on their geographical location, the economic basis and function of small southcentral ports was principally as servicing maritime traffic, with minor product exchange. Evidence suggests that the economies of settlements in this southcentral region may have been particularly influenced by the growing significance and population of Myra and Andriake.

The interpretation of the economic relationship between Seleucia and the settlements of the eastern coastline of Isauria is largely influenced by the evidence of settlement development in the Yenebahçe valley area and the identification of LR1 amphora kilns. A comparison of the location of settlement in proximity to the capitals of each province reveals that settlement in Lycia was centred around Myra/Andriake, while

[662] Rice, 'Port economies', p. 202.

in the case of Isauria, settlement distribution is more dispersed across the eastern coast line, although there is a concentration in the Yenebahçe valley. In other words, in the case of Isauria, settlement was less dependent on the capital of the province and one particular harbour, in comparison to the Lycian case. While both regions likely would have needed to import goods, such as grain, the participation of each region in wider economic networks which financially enabled these regions to import goods differed and may be reflected in the settlement patterns along their coastlines.

Interior settlement of Lycia and Isauria

As illustrated in Map 1 and Map 2 evidence for possible late antique remains and settlement activity in the interior of both Lycia and Isauria appears relatively dispersed, especially when compared to the density of settlement in particular coastal and near-coastal sub-regions. Accounts of the remains of northcentral Lycia do not invoke an impression of substantial settlement activity or construction of monumental building works in either the Roman or late Roman/early Byzantine periods. This developmental trend appears to be reflected in the results of more recent survey work, where evidence for settlement activity appears to slightly diminish from the Roman period onwards (Chapter 4).

This state of evidence seems to parallel the situation of inland Isauria. Very little evidence of public monuments in the interior of Isauria has led Elton and others to argue that the development of the interior lagged behind coastal Isauria.[663] The sentiment can be summed up as follows:

> Inland Isauria was poor, and many of the standard features of classical cities further west are absent: there are very few theatres, stoas, temples, or agorai. Although there is no doubt that sites near Alahan at Ermenek, Mut, Sinapiç,

[663] Elton, 'Churches', pp. 245-6.

> Dağpazarı, and Adrassus were urban centres, almost all the public buildings recorded are town walls and churches. This is perhaps related to the late development of urbanisation in the region (there are no literary mentions of the interior before the late Hellenistic era).[664]

While Roman monumentality has been identified in the settlements of the Xanthus valley in Lycia (discussed below), they do not appear in northcentral Lycia in the Elmalı region, between the Xanthus and the Bey Dağ area of the province. Thus, the settlement development of inland Isauria and inland northcentral Lycia in the Roman to late Roman period may be quite similar. The lack of attention paid to the interior regions of Lycia and Isauria raises the question: to what degree does the current state of archaeological information offer an accurate depiction of inland late antique settlement?

Choma, Lycia

The settlement of Hacımusalar Höyük, believed to be the site of ancient Choma, is noteworthy as it is the only site to have been the subject of archaeological excavation in the northcentral area of Lycia (carried out by Bilkent Univeristy since 1993).[665] The mound measures approximately 300x350m.[666] At the time of the publication of the TIB 8, a short descriptions mentions possible Roman, late Roman, early Byzantine and middle Byzantine evidence in the vicinity.[667] Recent investigation into the Roman period settlement of Choma has uncovered re-used Roman material in later structures, Roman period walls, building, and radar and aerial imaging may indicate a possible public area

[664] H. Elton, M. Jackson, G. Mietke, J. Newhard, L. Özgenel, E. Twigger, 'A new Late-Roman urban centre in Isauria', *Journal of Roman Archaeology*, 19 (2006), p. 301.
[665] Özgen, Baughan, 'Hacımusalar Höyük/ Choma', p. 318.
[666] TIB 8, p. 506; Özgen, Baughan, 'Hacımusalar Höyük/ Choma', p. 320.
[667] TIB 8, p. 506; also, Harrison, *Mountain and plain*, p. 50.

and a possible bath.[668] However, these identifications remain tentative until excavation confirms their existence.

Byzantine period levels, broadly dated between the 5th and 12th centuries, have revealed two churches and burials.[669] The so-called 'central church' is dated initially to the 5th century. The mosaic floors of the structure have been uncovered, as has a wine press located northeast of the church. The wine press has been associated with a possible monastic complex as a building with many rooms has also been identified nearby.[670] The 'west church' (not explicitly dated in the publication, but perhaps implied as being early Byzantine) had elements of mosaic decoration as well.[671] The archaeologists of the site state that the area 'may have become more a religious centre than a habitation site at this time, while a prosperous new settlement grew a few kilometers toward the east near the modern village called Beyler, as survey finds suggest'.[672] That being said, evidence for two churches does not necessarily indicate a change in the function or character of the site, meaning that Choma may still have been inhabited by a non-ecclesiastical population.

The settlement of Choma may parallel the settlement situation of another inland site, Alahan monastery and Alahan village in Isauria. Unfortunately, information is limited in the Lycian case, so only a preliminary comparison is possible. Nevertheless, a comparison of these two settlements is the first step in attempting to examine similarities and differences between Lycian and Isaurian late antique inland settlement.

[668] Özgen, Baughan, 'Hacımusalar Höyük/ Choma', pp. 330-1.
[669] Özgen, Baughan, 'Hacımusalar Höyük/ Choma', p. 331.
[670] Özgen, Baughan, 'Hacımusalar Höyük/ Choma', pp. 331-3.
[671] Özgen, Baughan, 'Hacımusalar Höyük/ Choma', p. 333.
[672] Özgen, Baughan, 'Hacımusalar Höyük/ Choma', p. 331.

Alahan, Isauria

Finds at Alahan village include a late antique defensive wall and tower, and possibly a second tower, that is thought to have encompassed a *c*. 300x300m area, which is a comparable size to the Choma mound.[673] A curved area in the landscape once interpreted as a possible theatre is no longer thought to be so.[674] Ceramic finds encompassed few imports and predominately date to the late Roman period.[675] All stone elements identified in the area were made of local limestone, some of which may have belonged to churches. Based on comparative material they are dated to the second half of the 5th to 6th centuries.[676] Based on stone and architectural fragments, the total number of churches in Alahan village has now reached four.[677] Fragments of *opus sectile* and a piece of a marble altar table were found as well.[678]

Alahan monastery complex is located one km from Alahan village and encompasses three churches and a baptistery.[679] Marble was only minimally integrated in the churches and local material predominates, leading to the arguement that the churches were a result of local investment as opposed to imperial auspices.[680] The significance of this recent study is that Alahan monastery was not isolated, but associated with other settlement, namely Alahan village.[681] Moreover, settlements in the surveyed territory of the GAP, such as Aloda and Gözenek which may be 'suburbs' or outlying sites associated with Alahan (although evidence from Göznek is predominantly later in date), further

[673] Elton, *et al*., 'New', p. 304. The results of the many survey seasons of GAP have been published in journals *AST* and *Anatolian Archaeology*.
[674] Elton, 'Göksu 2002-2004', p. 333; Elton, 'Churches, p. 235.
[675] Elton, *et al*., 'New', p. 306.
[676] Elton, *et al*., 'New', pp. 305-6.
[677] Elton, 'Churches', p. 233.
[678] Elton, *et al*., 'New', p. 308.
[679] Elton, *et al*., 'New', p. 310; Elton, 'Churches', p. 233.
[680] Elton, *et al*., 'New', pp. 310-11.
[681] Elton, *et al*., 'New', p. 311.

demonstrate that the area around Alahan was settled.[682] Again, as in the case of the Lycian example, we wait to learn whether evidence of additional settlement is identified around Choma, but the similarities between the character of settlement, a (possible in the case of Choma) religious centre with accompanying civic settlement is interesting to note.

Comparison

The difficulty in comparing the evidence of the area of Alahan and Choma is that the work at Alahan and the upper Göksu valley is more extensive, while only parts of the Choma mound have been excavated, excluding the section where Roman settlement is suspected.[683] Nevertheless, preliminary comparative observations may be made. The church decoration of Choma appears to be modest as there is no mention of marble finds or imported materials, thus reflecting the use of local material in the religious buildings in the Alahan area. One notable find at the Choma mound is a bronze sundial, which is inscribed with Egyptian names of the months, possibly to be used in Alexandria on account of the city being mentioned on its back (it is not dated in the publication).[684] Some evidence of imported goods has also been identified in the area of Alahan (see Chapter 4). Therefore, like the Alahan area, although the religious architecture so far described at the site suggest modest means, Choma may still have been connected to some degree to the wider Mediterranean.

In sum, the settlement character of inland Lycia and Isauria appear to be similar in that the interior of these regions may have been punctuated by some substantial

[682] Other sites with signs of late Roman or early Byzantine occupation or remains have been identified, see Elton, 'Göksu 2002-2004', p. 332; Elton, 'Göksu 2005-2006', pp. 239-40, 243-45.
[683] Özgen, Baughan, 'Hacımusalar Höyük/ Choma', pp. 330-1.
[684] Özgen, Baughan, 'Hacımusalar Höyük/ Choma', p. 334.

settlement, but neither the interior of Lycia nor Isauria appear to encompass numerous major or urban sites or high-density settlement.

Valleys

While little information is available for the settlement development of the northcentral area of Lycia, the opposite is the case for the settlements of the Xanthus Valley. The following section will compare the late antique settlement development of the Lycian Xanthus Valley with what is known regarding settlement of the lower Göksu Valley of Isauria. Although archaeological research of the lower Göksu Valley has only begun recently, preliminary observations in regards to comparing general settlement trends can be made. The aim of this section is to explore how geography impacted settlement patterns in these valleys, and to discern how developments in inland valley settlement relate to the evidence already discussed above regarding coastal settlement and economic networks.

Xanthus Valley settlement

In terms of the late antique and early Byzantine settlement character of the cities of the Xanthus Valley, the remarks of scholars focus on their ruralisation in the later period. For example, Oinoanda has been described as having 'stagnated' in the third century;[685] a mid-3rd century decline is thought to have characterised Balboura with a

[685] Bachmann, 'Northern', p. 358; also, Coulton, 'Buildings', pp. 14, 17. The late antique development of the site is difficult to discern.

shift of settlement from the urban centre to rural areas,[686] and it has been stated that 'urban characteristics of Pinara gradually disappeared' in Late Antiquity.[687]

Thus, if it can be said that the major settlements of the Xanthus Valley (Tlos, Oinoanda, Pinara and Balboura) experienced a heyday of urban development in the Hellenistic and Roman periods, it can also be said that they experienced a heyday of ruralisation in the late antique period. The question is whether or not we apply value judgements to such statements.

Importantly, the term 'ruralisation' need not imply a negative concept of settlement stagnation or decline. As church construction is a common factor in these settlements, we may be able to use church construction as a basic method of comparison to gauge the investment capabilities of these settlements. Analysing churches as investment loci is not an easy task as we lack detailed information regarding these structures. Nevertheless, church building, however large or small, or grand or lacklustre, required investment and resources and so may be a useful tool for a cross-settlement comparison.

Marble is mentioned as being incorporated in the church at Tlos, but it is not clear if it is re-used material.[688] Little information is available concerning the churches of Oinoanda, but the basilica church has been described as 'an unremarkable structure'.[689] Lastly, the three city churches in Balboura are described as 'unadorned'.[690] These descriptive remarks are subjective statements that do not necessarily aid in interpreting the wealth of settlements. Yet their descriptions do not evoke a sense of opulence as the furnishings of the eastern basilica of Xanthus, for example. A combination of the overall

[686] Bachmann, 'Northern', p. 360.
[687] Tietz, 'Western', p. 340
[688] TIB 8, p. 887.
[689] Coulton, 'Buildings', p. 14.
[690] Bachmann, 'Northern', p. 360.

low number of church buildings across these settlements, combined with a lack of evidence of other major construction works is striking and suggests that these settlements were not places of increased wealth in the late antique period when compared to the construction works of previous centuries. Moreover, the late antique construction activity of these inland sites is much less substantial than the activity at some coastal settlements in the 5th and 6th centuries such as at Olympus.

Interestingly, on the west coast, the changing economic dynamics between Kadyanda and Pinara and the coastal site of Telmessus is reminiscent of the development of Phellos and Antiphellos and possibly Teimiussa and Tyberissos on the southcentral coast. That is, it may be that the once secure location of the inland site was no longer advantageous for economic reasons, resulting in the development of the coastal settlement. Thus, a degree of disconnect may have grown between these settlements overtime. Such a development seems to have occurred, but on a larger geographical scale, across the Xanthus Valley, especially in the late antique period. Regardless of the potential communication route the Xanthus Valley may have provided settlements in earlier times, inland Lycia may have become no longer feasible or desirable to live between the 4th and 7th centuries (see, Discussion).

The Göksu Valley

As research of the lower Göksu Valley is still in its prime, not very much can be said in regards to the development of late antique settlement located along its route. Despite this, preliminary results of the LGASSP study suggest a high number of Byzantine sites.[691] The caveats of interpreting this preliminary observation have been

[691] Şerifoğlu, *et al*., 'Second season', table 1, p. 187.

discussed in the previous chapter but a tentative comparison between this valley and the settlements of the Xanthus valley discussed above, raises interesting points for future research.

It may be possible to theorise that the different role each region played in wider Mediterranean exchange impacted the way in which settlements along the Göksu and Xanthus valleys developed the way they did in Late Antiquity. Intensification of agricultural production along the lower Göksu valley may account for the rise in settlement numbers tentatively dated to the Byzantine period, as opposed to the low number of settlements so far identified in the Roman period. Perhaps inhabitants realised the developing market for agricultural products in the area of the capital, Seleucia, and for the transport of goods to eastern coastal sites for distribution abroad, subsequently leading to increased cultivation of the lower valley area. Contrarily, there may have been a dispersal of settlement or a change in the focus of investment outside the urban centres of the Xanthus valley in Late Antiquity, accounting for the lower levels of construction works identified in these settlements. This remains speculative, however.

Discussion

A comparison of the late antique settlement of Lycia and Isauria elucidates the different ways in which each region participated in wider Mediterranean exchange networks. As discussed above and in Chapter 4, the amphorae production and potential economic vitality of the east coast in Late Antiquity is a likely reason accounting for the high number of settlements located on this Isaurian coastline. The concentration of settlement in three particular coastal areas of Lycia is a striking feature of the settlement of the region and raises a number of questions regarding the potential economic factors that may have contributed to this interesting trend and the notable changes in the

investment of construction activities in inland regions. Although strictly hypothetical, I propose that the coastal settlement activity in Lycia might be related to the changes in settlement observed inland.

Firstly, it is critical to note that the change in construction works of the inland urban centres in the late antique period may be due to a number of factors, but unfortunately, as we lack information concerning the earlier Roman economies of these cities it is difficult to discern when investment in public architecture begins to decline and why. As alluded to above, it is possible that settlement had dispersed from urban centres to rural areas with funds no longer being directed to city building works. As rural inland areas have not been the subject of archaeological study, our knowledge of the settlement of rural inland Lycia is minimal and this remains speculation.[692]

When looking at the location and development of settlement in Lycia as a whole, it may be possible to theorize that the concentration of settlement in three coastal areas reflects a growing significance of the major harbour areas of the province. The concentration of settlement suggests that the economic development of near-coastal settlements was strongly connected to, if not dependent on, their proximity to maritime traffic. The settlement patterns of Lycia may reveal that servicing maritime traffic, and perhaps the exploitation of marine resources, as the possible fish tanks/work areas and dye production facilities identified within the three major coastal zones suggests, underlay the economy of settlements.[693] Thus, this may suggest that facilitating maritime traffic may have played an important role in the economy of these three particular areas.

---

[692] In this regard, pollen analysis from Lycia does not elucidate changes in the landscape either. Pollen samples taken from lakes in the study region (Lakes Ova, Avlan and Elmalı) have very poor dating resolution and are difficult to interpret A. Izdebski, *Rural economy in transition. Asia Minor from Late Antiquity into the early Middle* Ages (Warsaw, 2013), pp. 168-72, 177-9.

[693] It is also interesting to note that when the *quaestor exercitus* was established by Justinian, Lycia was not included. The provinces of the *quaestor exercitus*, including the Greek islands, Cyprus and Caria, is thought to have been established for the supply of armies in Thrace, and so reflect the important productivity of these regions. The reason for Lycia not to be included is very much speculation, but it is interesting nonetheless that if supplying troops was the reason behind the formation of the *quaestor exercitus* then the

Consequently, this may have adversely impacted the economy of inland settlements in two ways. Firstly, the pull factor of the economic vitality of particular coastal areas may have made living inland in what became isolated locations, impractical or undesirable. The growing importance of maritime exchange and the subsequent concentration of economic influence of particular coastal areas may have meant that settlements that once serviced interior traffic or the movement of goods and people in inland zones lost an important economic base, which impacted their investment capabilities. Geography may have been paramount importance in facilitating this development. For example, in the case of Tlos, we can never be certain of the number of visitors that passed through the city or whether traffic was ever very substantial in the Roman period or later centuries.[694] Yet, if only one church was sufficient to serve the needs to the inhabitants as well as passers-by in the late antique period, we may postulate that altogether, this was not a very large number of people. Might this reflect a decrease in travellers on inland routes in Late Antiquity?

Secondly, the growing importance of maritime exchange may have resulted in a migration of inhabitants to particular coastal centres as inland regions were no longer desirable to live. This argument is supported by the low levels of evidence for building activity (a limited number of churches, repair, renovation or construction of defensive walls and housing) identified in interior cities and diminishing evidence of late Roman activity in the northcentral area of Lycia. By extension, if the theory of a migration of inland inhabitants to coastal areas is correct, then the appearance of new settlement (that is, not previously inhabited) in coastal areas may be a result of the relocation of the

omission of Lycia from this administrative change may suggest that the production in the area was not substantial enough to be included. Deligiannakis, *Dodecanese*, pp. 7, 87-9; Roueché, 'Asia Minor and Cyprus', p. 574.

[694] F. Işık, 'The powerful city of the "Land of Lukka": Tlos', in *Lukka to Lycia*, p. 214 implies that two baths must have been sufficient for the site.

Lycian population and not necessarily one of the expansion of pre-existing coastal settlement. Although I have argued against Foss' narratives of development for Lycia and disagree with points on his theories concerning the region's agricultural economy, he briefly postulated about the contrasting development of inland and coastal settlements in his earlier works, and more recent archaeological evidence since his writings may lend further support to such observable changes.[695]

Such a theory of migration is more difficult to determine in the case of Isauria. I believe this is due to a more discernable ruralisation process occurring in inland Lycian cities in the late antique period, particularly of those located in the Xanthus Valley. Thus, a possible shift of population to coastal centres is more pronounced in the evidence. As a level of monumental urban development was not reached in inland Isauria in earlier periods, changes in inland settlement are more difficult to detect. According to the current state of evidence, there is no doubt that the eastern coast of the province of Isauria was densely settled, as opposed to the interior. Moreover, study along the Göksu Valley does suggest a rise in Byzantine settlement numbers. Can this increase be attributed to a migration from the interior or even western and southern coastal areas to the Göksu Valley and the east coast of the province, thus reflecting a possible population migration as in the case of Lycia? This theory remains conjectural until further research of inland rural settlement becomes available.

Conclusion

An important point that derives from a comparison of Lycian and Isaurian settlement and the different ways the two regions participated in wider Mediterranean

[695] Not just Pinara as Foss had initially speculated, Foss, 'Lycian coast', p. 48, footnote 190.

exchange is to encourage an open-mindedness in considering various potential economic sources that generated the economy of micro-regions. That is, although agricultural production of staple goods certainly underlay the economy and livelihoods of the majority of the rural population of the empire in Late Antiquity, the ways in which agricultural goods were utilised differed. Agricultural production would have played a large role in the economy of areas, but it may have been only one factor that generated the economic base of settlements. This point is illustrated in the comparison of Elaiussa-Sebaste and Olympus above. Both cities appear to have undergone development and been loci of substantial investment in the late antique period, but the ways in which funds may have been generated for investment and the ways agricultural products were utilised may have differed greatly. A comparison of the settlement and small ports on the southcentral Lycian coast and those of the eastern Isaurian coastline too demonstrate that although coastal/near-coastal settlements were involved in agricultural production, surplus may not have been utilised in the same way.[696] In the case of Lycia, we have seen that the role of local and maritime exchange may have played a larger part in the economies of small ports, but less so the transshipment of agricultural goods with the intention of export as in the Isaurian case. Through the Lycian and Isaurian comparison, the diversity of the economy of micro-regions is highlighted and encourages us to ask how the utilisation of agricultural goods may have differed in various regions and consider other means on which the economy of settlements may have been based.

[696] Although speaking in a Palestinian context, the thoughts of Kingsley are applicable here, 'Although polyculture…has long been acknowledged as the primary source of prosperity, more complex issues concerning the structure of crop production and trade, and how both were affected by the wider macro-economic Mediterranean exchange systems, remain unexplained', Kingsley, 'Palestinian wine', p. 44.

Chapter 6. Introduction to north central Anatolia

The regions of Isauria and Lycia, located on the south coast of Anatolia, have been the focus of analysis and discussion in the previous section of this thesis. The economic connectivity between coastal and inland settlements and the impact of geography on settlement networks and the transportation of goods and people within these regions has been analysed. Moreover, the nuances of Mediterranean maritime exchange and the impact this had on the development of settlement in Isauria and Lycia have been addressed also. This discussion raises questions concerning the economic relationships and connectivity of settlement elsewhere in Anatolia in Late Antiquity: what were the economic relationships between coastal and interior settlements in other regions? Did other areas of Anatolia participate in interregional economic exchange similarly or differently to Isauria and Lycia? How might different maritime networks impact the participation of regions in interregional exchange and how did this influence settlement development? Might an analysis of settlement elsewhere in Anatolia help refine our understanding of the development of Isauria and Lycia?

In order to attempt to address such questions, the following section will analyse the late antique settlement development of north central Anatolia. This section is divided into three chapters. Firstly, a discussion of the geography and natural resources of the area under investigation will be presented, followed by an overview of past research in the region (Chapter 6). As has been done in the previous section for southern Anatolia, in order to examine the exchange networks of north central Anatolia, the evidence concerning the late Roman production and distribution of amphorae of the Black Sea will be discussed as will the presence of Mediterranean amphorae types on the southern Black

Sea littoral (Chapter 7). Chapter 8 will then analyse the evidence of late antique settlement remains of north central Anatolia in order to examine the connectivity between coastal and inland areas as well as the development of settlement patterns in the late antique period.

The geographic area of north central Anatolia under consideration roughly coincides with the provinces of Helenopontus and Paphlagonia, *c*. the 6th century (Figure 2).[697] This region has been selected for analysis for a number of reasons. Firstly, north central Anatolia borders the Black Sea and encompasses a mountainous interior thus making it a viable candidate for a tripartite comparison in terms of geographic characteristics with Isauria and Lycia. By analysing a region that borders a sea other than the Mediterranean, we may examine if and how different coastal areas of Anatolia participated in wider maritime exchange and how Black Sea economic networks may have shaped settlement on this northern coastline. Moreover, it may be possible to investigate whether the foundation of Constantinople impacted exchange in the southern Black Sea maritime region and played a role in shaping settlement in north central Anatolia.

Just as important as geographic considerations, is the availability of evidence that makes a comparison of northern and southern Anatolian settlements possible, if only preliminarily. Northern Anatolia is much less studied than its southern or western counterparts and archaeological research is scattered across the region, the state of research being described recently as 'a hodgepodge of methodologies and practices that eliminate any chance to make meaningful comparisons between regions and even within

[697] *Barrington atlas*, map 102; D. P. Drakoulis, 'Regional transformations and the settlement network of the coastal Pontic provinces in the early Byzantine Period', in G. R. Tsetskhladze (eds), *The Black Sea, Paphlagonia, Pontus and Phrygia in Antiquity. Aspects of archaeology and ancient history* (Oxford, 2012), pp. 79-95.

regions'.[698] Such a remark is perhaps an accurate but pessimistic view of the state of research, and it should not deter an attempt at a regional study. Therefore, it is necessary that an area with a large enough corpus of evidence from recent survey and excavation work be analysed. As a result, the area selected reflects the locations where recent archaeological works with publications have taken place since the 1990s (for more detail see Chapter 8). Thus, information derives from the Sinop promontory and the sites of Pompeiopolis (modern Taşköprü), Neoclaudiopolis-Andrapa (Vezirköprü) and Euchaita (Avkat), the Project Paphlagonia survey, the excavations at Hadrianopolis, as well as the Cide Archaeological Project (Figure 34). Moreover, the region selected is determined by practicalities in terms of size. Due to the state of research in the region, the area of north central Anatolia under consideration is larger than Lycia and Isauria, but was demarcated so as to be somewhat comparable in size to the regions of the south and to fit the parameters of this study. To illustrate this point, Maps 8A, 8B, 8C show the approximate measurements of the distances across the three regions under investigation.

The geographic area selected for analysis was also largely determined by the location of Sinop. The Sinopean promontory was used as a central node in determining the geographic area for analysis due to the recent research that has been conducted here as well as its suitability for an economic comparison to the south coast regions. That is, we are better informed of the economy of Sinop as evidence of late antique amphorae production has been discovered on the promontory. This evidence provides important information for an element of exchange in the central coastal area that is otherwise more challenging to detect elsewhere in the broader northern region. As a result, the location of Sinop allows for a comparison between settlement of an amphora producing region in the

[698] O. Doonan, 'The corrupting sea and the hospitable sea: some early thoughts toward a regional history of the Black Sea', in D. B. Counts, A. S. Tuck (eds), *Koine. Mediterranean studies in honor of R. Ross Holloway* (Oxford, Oakville, 2009), p. 73.

north with that of one in the south, Isauria. Such a comparison may shed further light on the significance and impact the ability of a region to export products played in coastal/inland connectivity and the exploitation of agricultural land and settlement patterns, versus a region (Lycia) that may have been economically connected to maritime networks in predominantly a different way. Areas to the west of Cide and to the east of Samsun have been excluded so as to keep the size of the region practical for analysis and to direct focus on the central Sinopean area.

Landscape, climate and natural resources

The geologic feature that characterizes the landscape of northern Anatolia is the Pontic mountain range, which essentially marks a division between the Black Sea coast and the central Anatolian plateau. This geographic feature, its adjacent north-south projecting ranges, and intertwining river valleys, impacts the climate and vegetation of northern Anatolia. The diversity of the various patches of micro-regions that form the wider territory is significant with temperatures, rainfall, and the cultivation and production of natural resources differing across this northern zone.[699] Generally, the coastal region of the southern Black Sea is characterised by a high level of rainfall (although the level of precipitation varies across the vast coastal stretch), moderate temperatures, and a humid climate.[700] To the south of the mountains, more arid continental conditions prevail, which characterise the plateau.[701]

[699] For an overview, A. Bryer, D. Winfield, *The Byzantine monuments and topography of the Pontos* (2 vols, Washington, 1985), i, pp. 2-7.
[700] Bryer, Winfield, M*onuments*, i, pp. 3-4; O. Doonan, *Sinop landscapes. Exploring connection in a Black Sea hinterland* (Philadelphia, 2004), pp. 17-18.
[701] Bryer, Winfield, M*onuments*, p. 4.

As a result of this landscape and climate, the coastal area is home to dense forest, the trees of which provide a diverse range of timber, fruits and nuts.[702] Ancient authors refer to the suitability of wood from Heraclea, Sinop and Amisus for shipbuilding, that of Sinop being particularly lauded.[703] Strabo (*Geography*, 12.3.12) a native of the northern coast relays that 'both Sinopitis and all the mountainous country extending as far as Bithynia and lying above the aforesaid seaboard have shipbuilding timber that is excellent and easy to transport. Sinopitis produces also the maple and the mountain-nut, the trees from which they cut the wood used for tables. And the whole of the tilled country situated a little above the sea is planted with olive trees'.[704] The exploitation of the forest resources may have been great, with timber being used for various purposes. Naturally, the sea provided inhabitants of the coastal areas with a variety of fish.[705] Early writers such as Aelian describe fishing trends along the southern Black Sea coast which offer a glimpse into Roman period fishing resources and catching practices.[706]

Production of the Mediterranean 'triad' in the Black Sea region?

As the cultivation of the so-called Mediterranean triad has been explored in the previous section in terms of the production and exchange of southern Anatolia, it is worthwhile to explore whether or not and to what degree this triad of goods (grain, olives,

[702] Bryer, Winfield, *Monuments*, pp. 4-6; For the Sinop area in particular, Doonan, *Sinop*, pp. 19-20; O. Doonan, 'Production in a Pontic landscape: the hinterland of Greek and Roman Sinope', in M. Faudot, A. Fraysse, É. Geny (eds), *Pont-Euxin et commerce. La Genèse de la "Route de la Soie". Actes du IX^e Symposium de Vani (Colchide)- 1999* (Paris, 2002), pp. 190-1. On Black Sea timber across chronological periods see L. Hannestad, 'Timber as a trade resource of the Black Sea', in V. Gabrielsen, J. Lund (eds), *The Black Sea in antiquity: regional and interregional economic exchanges* (Aarhus, 2007), pp. 85-99.
[703] Doonan, 'Production', p. 190; Meiggs, *Trees*, p. 393.
[704] Strabo, *Geography*, tr. H. L. Jones (8 vols, Cambridge, London, 1928),12.3.12. On the utilisation of Strabo as a source for the Black Sea region, D. Braund, 'Across the Black Sea. Patterns of maritime exchange on the northern periphery of Roman Asia Minor', in S. Mitchell, C. Katsari (eds), *Patterns in the economy of Roman Asia Minor* (Swansea, 2005), pp. 118-19.
[705] Bryer, Winfield, *Monuments*, pp. 6-7.
[706] Doonan, 'Production', pp. 187-8.

vine) may have been cultivated, produced and exchanged in northern Anatolia. Scepticism of the production of these goods have been aired recently in a passing remark concerning the evidence of agricultural activities around Avkat (Euchaita), where the production of the Mediterranean triad is dismissed on the basis of geography (little evidence for vine cultivation was identified and there was no evidence for oil production. Agricultural installations were interpreted as being used for cereal processing, see Chapter 8).[707] Does such a statement reflect the agricultural cultivation of the southern Black Sea region and is such a statement applicable to the entirety of northern Anatolia? Were these goods as significant in the production and exchange of the southern Black Sea zone as they were in the Mediterranean and did this impact exchange between the two maritime regions?

A combination of ancient and modern references seems to suggest that the lands of northern Anatolia were suitable for agricultural cultivation and pastoral activities although the exact location of the cultivation of certain crops is not always clear and is often described in general terms. For example, Strabo (*Geography*, 12.3.15) describes the fertility of the region inland from Amisus where his hometown Amasya is located.[708] Although his claims that the area virtually never suffered from drought nor famine may be due to the prideful boasting of one's hometown, it would appear this inland area supported plentiful livestock and agricultural activities (its suitability for the grazing of animals and hunting, the sowing of millet and sorghum seeds and the growing of fruit and

[707] 'This was not a Mediterranean zone and the triadic model of vines, olives and cereals does thus not apply', J. Haldon, H. Elton, J. Newhard, 'The Avkat Archaeological project 2009', https://drive.google.com/file/d/0B94lc52VVv8Cd1JvU0Y4VWtEYUE/view (10 July 2017), p. 7; J. Haldon, H. Elton, J. Newhard, 'The Avkat Archaeological Project 2009', *Anatolian Archaeology*, 15 (2009), p. 18.
[708] Strabo, Geography, 12.3.15. Strabo is writing earlier than the period of interest here and so should be approached with caution for the later period. Nevertheless, it may be postulated that his knowledge of the area may be accurate given his connection to the north, although he may not be the most reliable source for other regions as noted by Varinlioğlu in his description of Isauria, Varinlioğlu,'Landscape', p. 126.

nuts are mentioned).[709] In their overview of the geography of the northern Anatolia, Anthony Bryer and David Winfield state:

> The basins and valleys of the Domanites (Kastamonu, Boyabat), the Phazimonites (Merzifon, Havza, Ladik), the Phaneroia (Taşova), Amaseia (Amasya, Suluova), and the Dazimonites (Tokat), are mostly under 600 m in height and relatively well watered. The are eminently suited to agriculture in all its forms; cereal crops, fruit, and vines grow there in abundance, and no doubt always have done since the important towns can trace a continuous pedigree back to the classical world, while prehistoric habitation mounds suggest an even earlier occupation and cultivation.[710]

The fertility of the locations noted above is significant as this suggests that the individual sites that will be explored in detail below were located in or near areas suitable for agricultural pursuits: the city of Pompeiopolis is located in the area of the Domanites, while Neoclaudiopolis is located in the region of the Phazimonites and the city of Euchaita is located to the west of Amasya (Figure 35).

On the one hand, evidence of wine production can be detected archaeologically by way of press and amphorae evidence, although liquids were likely transported between the coast and interior in perishable materials rendering a measure of production and transport of this product difficult. The question of whether or not the production of wine reached surplus levels and was transported within north central Anatolia or abroad will be explored below. On the other hand, the cultivation and transportation of grain is more difficult to detect.[711] Due to climatic conditions it my have been difficult to grow cereal.[712] As the environmental conditions of the northern Black Sea were suitable for grain cultivation, the crux of north-south trade within the Black Sea region may have been centred on the exchange of grain grown in the north, for products cultivated in the

[709] See Braund, 'Across the Black Sea', pp. 120-2.
[710] Bryer, Winfield, M*onuments*, pp. 6-7. They also mention wine being produced in the region since ancient times but are not specific as to where.
[711] Doonan, *Sinop*, p. 20 notes the area inland around Boyabat as being suitable for growing grain.
[712] Bryer, Winfield, *Monuments*, pp. 5-6.

south.[713] Thus, it appears then that grain may have been accessible in northern Anatolia from local or regional sources.

What of the third product of the Mediterranean triad, oil?[714] Strabo (*Geography*, 2.1.15) states that olive trees were grown in the region of Sinop and Amisus.[715] It has been argued that with the exception of areas in the southeastern coastal region of Crimea, Sinop and the area located to its west were the main producers of oil in the Black Sea region.[716] However, Strabo states that olives were grown around Amisus, which lies east of Sinop, so it is not clear where exactly olive growing lands and the extent of cultivation in the late antique period should be delineated.[717]

Exploring the topic of oil production in Asia Minor, Mitchell argues that the cultivation of olives was strongly linked with the spread and development of 'classical city-state communities' and in the late Roman period by the *annona* and the foundation of Constantinople.[718] This would imply that with the process of 'Hellenization' and with the integration of the northern Anatolian region into the Roman sphere of influence, the demand for oil across the north may have been considerable.[719] As will be discussed below, albeit limited, evidence of amphorae imports that may have contained oil which are thought to have originated from the Mediterranean have been identified on the northwestern Anatolian coast suggesting a demand for the product and/or a need to supplement Black Sea oil supplies (Chapter 8, Cide-Şenpazar).[720] Yet, the level of urbanisation in northern Anatolia varied so the demand for oil may have been less

[713] Doonan, 'The corrupting sea and the hospitable sea', p. 70; Doonan, *Sinop*, p. 11.
[714] See Mitchell, 'Olive cultivation', pp. 91-2.
[715] 'the suburbs of Sinope and Amisus and the greater part of Phanaroea are planted with olive-trees' Strabo, *Geography*, tr. H. L. Jones (8 vols, Cambridge, London, 1917), 2.1.15; Strabo, *Geography*, 12.3.12.
[716] Braund, 'Across the Black Sea', p. 122.
[717] 'Sidenê and Themiscyra are contiguous to Pharnacia. And above these lies Phanaroea, which has the best portion of Pontus, for it is planted with olive trees, abounds in wine, and has all the other goodly attributes a country can have', Strabo, *Geography*, 12.3.30.
[718] Mitchell, 'Olive cultivation', pp. 83-103.
[719] Mitchell, 'Olive cultivation', p. 93; Braund, 'Across the Black Sea', p. 122.
[720] P. Bes, 'Roman-period finds from the Cide region', in *Landscape dynamics*, p. 26.

substantial.[721] It is therefore possible that the demand for oil in northern Anatolia was generally satisfied by local production and occasionally supplemented by Mediterranean stock (more on oil production and Sinop below).

In sum, it seems that the goods that made up the Mediterranean triad were also cultivated and produced or (in the case of grain) relatively accessible in the southern Black Sea region. Evidence for the level of cultivation and production of these goods (self-sufficiency versus surplus) will be explored further below. In addition to olives, vines and grain, forest resources (timber, fruits, nuts) and fish products likely made up the main resources available for consumption and exchange in north central Anatolia.

Previous research

Archaeological research in the north of Turkey lags behind that of the south, is dispersed across the region and varies in terms of chronological scope. It is often the case that the period of Late Antiquity is not necessarily the focus of archaeological research but forms a part of a larger study (the case of Hadrianopolis being an exception). The results of archaeological research are often published in preliminary reports scattered across publications or in edited volumes.[722] As a result, only a limited corpus of information is available for study of the late antique development of the northern Anatolian region.

In terms of recent archaeological work in northern Turkey, rescue excavations have been conducted by local museums, but the results of these works do not necessarily aid in a synthesis of the late antique settlement development of the region. More recent

[721] R. Matthews, M. Metcalfe, D. Cottica, 'Landscapes with figures: Paphlagonia through the Hellenistic, Roman and Byzantine periods, 330 BC-AD 1453', in R. Matthews, C. Glatz (eds), *At Empires' edge: Project Paphlagonia. Regional Survey in north-central Turkey* (London, 2009), p. 179.
[722] As in the series *KST* and *AST*.

large-scale systematic study is still in its early stages. Previous study in the north central area include the survey of Sinop,[723] Kastamonu,[724] Samsun and Amasya-Tokat[725] with a focus on earlier periods.[726] Outside of the north central region, archaeological research has been conducted in northwestern and northeastern Anatolia with many studies having an earlier chronological focus as well.[727]

Although there has been an upturn in interest and research of the southern Black Sea region in the past couple of decades, macro-regional studies of northern Turkey are limited. For the Byzantine period, Anthony Bryer and David Winfield's *The Byzantine Monuments and Topography of the Pontos* (1985) is a foundational reference source that offers an overview of the climate, topography, and routes of the region as well as historical references to and the remains of northern Anatolia from Cape Karambis eastwards to Bathys (Batumi).[728] As important as this work is for the Byzantine history of the area, information pertaining to the late antique archaeology of the central region between Cape Karambis and Samsun is limited. The TIB volume 9 *Paphlagonien und Honorias* (1996), as the title suggests, covers northwest Turkey but does not extend past

[723] M. A. Işın, 'Sinop region field survey', *Anatolia Antiqua*, 6 (1998), pp. 95-139.
[724] C. Marro, A. Özdoğan, A. Tibet, 'Prospection archéologique franco-turque dans la région de Kastamonu (Mer Noire). Premier rapport préliminaire', *Anatolia Antiqua*, 4 (1996), pp. 273-90; C. Kuzucuoğlu, C. Marro, A. Özdoğan, A. Tibet, 'Prospection archéologique franco-turque dans la région de Kastamonu (mer Noire). Deuxième rapport préliminaire', *Anatolia Antiqua*, 5 (1997), pp. 275-306; C. Marro, A. Özdoğan, A. Tibet, 'Prospection archéologique franco-turque dans la région de Kastamonu (mer Noire). Troisième rapport préliminaire', *Anatolia Antiqua*, 6 (1998), pp. 317-35.
[725] According to R. Matthews, 'Project Paphlagonia: research issues, approaches and methods', in R. Matthews, C. Glatz (eds), *At Empires' edge: Project Paphlagonia. Regional Survey in north-central Turkey* (London, 2009), p. 12 the research conducted at Amasya, Tokat and Samsun are apparently concerned with much earlier periods. The same applies for recent work in Çankırı and Çorum province. These reports are published in Turkish and so are inaccessible to me.
[726] For overviews of previous research, W. Anderson, 'Paphlagonia in Late Antiquity: landscape and material culture in north-central Anatolia' (PhD thesis, University of Melbourne, 2011), pp. 24-30.
[727] Information on research conducted in northern Turkey but located in areas beyond or on the periphery of the region of interest here appear in the *AST* and *KST* journal series (there is geographic overlap between the two series), but are predominantly published in Turkish. For example, see reports concerning areas/sites of İkiztepe, Büyüktepe Höyuk (near Bayburt, in English), Ordu/Fatsa, Erzincan, Erzurum, Samsun, Sivas, Çorum, Sebastopolis to name a few.
[728] Bryer, Winfield, *Monuments*, p. 2. See also C. Marek, *Pontus et Bithynia. Die römischen Provinzen im Norden Kleinasiens* (Mainz am Rehin, 2003).

Sinop.[729] There are a few notable unpublished studies that look at the settlement architecture and development of various areas of northern Turkey, such as the 1960s B. Litt dissertation by D. R. Wilson,[730] and more recently, William Anderson's unpublished PhD thesis 'Paphlagonia in Late Antiquity: landscape and material culture in north-central Anatolia' completed at the University of Melbourne (2011), the latter offering an important contribution that focuses on the inland region of Paphlagonia and the site of Avkat, but not coastal locations.[731] Recently published edited volumes, one of the most recent being *Landscape dynamics and settlement patterns in northern Anatolia during the Roman and Byzantine Period* edited by Kristina Winther-Jacobsen and Lâtife Summerer (2015) for example, compile papers that discuss various northern Anatolian sites, but the various works tend to differ in chronological focus and the types of material culture presented and so do not necessarily aid in macro-regional analysis of settlement development.[732]

As archaeological work has only recently increased in northern Anatolia, the same is true for the study of pottery from this region. Comprehensive study of southern Black Sea pottery has only begun and lags behind the study of Mediterranean ceramics.[733] An exception is the recently published important work of Ergün Laflı and Gülseren Kan Şahin on the pottery from their research at Hadrianopolis which is one of the first

[729] TIB 9.
[730] D. R. Wilson, 'The historical geography of Bithynia, Paphlagonia and Pontus in the Greek and Roman Periods: a new survey with particular reference to surface remains still visible' (B.Litt thesis, University of Oxford, 1960).
[731] Anderson, 'Paphlagonia'.
[732] *Landscape dynamics*. Also, G. R. Tsetskhladze, (eds), *The Black Sea, Paphlagonia, Pontus and Phrygia in Antiquity. Aspects of archaeology and ancient history* (Oxford, 2012); D. B. Erciyas, E. Kaparal, (eds), *Black Sea Studies Symposium Proceedings 16-17 April 2004, Ankara. Karadeniz Araştırmaları Sempozyum Bildirileri (Yayına Hazırlayanlar) 16-17 Nisan 2004, Ankara* (Istanbul, 2006).
[733] For an overview of southern Black Sea pottery studies, E. Laflı, G. K. Şahin, *Hadrianopolis III. Ceramic finds from southwestern Paphlagonia* (Oxford, 2016), p. 1-2; E. Laflı, 'Hellenistic and Roman ceramic archaeology on the southern Black Sea coast: an overview of the Turkish archaeological literature related to ceramic archaeology of Paphlagonia and Pontus', in D. B. Erciyas, E. Kaparal (eds), *Black Sea Studies Symposium Proceedings 16-17 April 2004, Ankara. Karadeniz Araştırmaları Sempozyum Bildirileri (Yayına Hazırlayanlar) 16-17 Nisan 2004, Ankara* (Istanbul, 2006), pp. 189-202.

publications to present an in-depth analysis of southern Black Sea pottery.[734] As study of northern Anatolian ceramics is under development, knowledge of coarse wares and amphorae of the region are particularly limited. As a result, when discussing the ceramic assemblages of the settlements located in north central Anatolia, brief mention will also be made to other categories of ceramic alongside amphorae when necessary to help fill out what we know of the economic networks of this region (Chapter 8).

Despite the variegated nature of research across northern Anatolia, an analysis of both late antique amphorae evidence and settlement remains allows for a preliminary picture of the late antique settlement of north central Anatolia to be gleaned. Consolidating and analysing these different categories of evidence is the first step in expanding attention to the north central area that is not often considered in discourse concerning the late antique economy. Moreover, although preliminary, a comparison of north and south Anatolian settlement reveals the value of a broad geographic analysis that allows for the potential opportunities for further research to be brought to light.

[734] Laflı, Şahin, *Hadrianopolis III*.

Chapter 7. Amphorae evidence of north central Anatolia and the Black Sea

Introduction

Sinop, particularly the area of Demirci on the Sinopean promontory, holds a central place in the discussion of Black Sea amphora studies as a kiln site on this coastline has been the subject of recent archaeological research. Given its geographic location, the production of Sinopean-type amphorae (that is, products of Sinop and possibly elsewhere) and the distribution of this vessel type form the foundation of the following chapter. In addition, the evidence of Mediterranean-origin amphorae identified in northern Anatolia will also be briefly discussed as will the possible distribution of Sinopean and Sinopean-type amphorae within the Mediterranean zone. Therefore, the aim of the following chapter is to examine the possible economic networks within the Black Sea region itself as well as exchange between the Mediterranean and northern Anatolian regions. As this chapter aims to look at the production and distribution of Black Sea amphorae on a wide geographic scale, the ceramics and amphorae finds identified in the assemblages of particular north central Anatolian settlements will be presented and analysed in the following chapter.

Black Sea amphorae studies and methodological consideration

Evidence suggests that amphora production occurred in various areas on the Black Sea littoral. A variety of clay fabrics and amphora typologies thought to have origins in the Black Sea area suggests an extensive region-wide enterprise of amphora production. While examples of Mediterranean-produced late Roman amphorae (LR) types are also

present in the Black Sea region, various other amphorae types appear to be characteristic to this geographic area. Therefore, ceramic assemblages encountered in the Black Sea region comprise different amphorae types than those encountered in the eastern Mediterranean. While the locations of possible production sites have been identified on the Black Sea littoral, the locations of many amphora workshops remain unknown.

Methodological considerations of synthesising and interpreting the late antique amphorae evidence of the Mediterranean have been discussed in Chapter 3. Although similar methodological issues apply when examining the amphorae identified in the Black Sea region - in terms of an awareness of differences in the collection, processing and publication of amphorae evidence across vast geographic regions and how this impacts our interpretation of such evidence - there are additional variables to consider in Black Sea amphorae studies. Analysis of ceramic assemblages of sites around the Black Sea littoral in Romania, Bulgaria, Georgia, Crimea, north Anatolia, along the Danube, and in ancient Colchis have yielded a largely fragmented corpus of amphora information and a disjointed utilisation of amphora classification schemes, the use of which vary across publications. Notable in the discussion of Black Sea amphorae is the utilisation of clay colour to designate an amphorae group.[735] In regards to clay descriptions, another variable that appears often in the discussion of Black Sea amphorae is reference to the presence of pyroxene (black inclusions) in the clay fabric of vessels. The appearance of pyroxene has been largely attributed to clay of the south coast and particularly Sinopean production, however, the appearance of black inclusions can vary and does not necessarily secure a

[735] For example, the clays of the Sinop workshop are described as pinkish, reddish and whitish, H. N. Erten, D. Kassab Tezgör, I. R. Türkmen, A. Zararsız, 'The typology and trade of the amphorae of Sinope. Archaeological study and scientific analyses', in J. Eiring, J. Lund (eds), *Transport amphorae and trade in the eastern Mediterranean. Acts of the international colloquium at the Danish Institute at Athens, September 26-29, 2002* (Aarhus, 2004), pp. 103-4.

production location.[736] The term 'carrot amphora' is sometimes used to describe amphora of Black Sea origin, particularly those of Sinop, but it is an ambiguous term that is used to describe different types of amphorae and so may lead to confusion as to the origin, date and production location of a vessel.[737]

Studies of amphorae identified across the Black Sea region have been published in an array of languages adding further difficulty to consolidate information. It is important to note that the following discussion is based on the analysis of ceramic assemblages encountered at various archaeological sites conducted in past scholarship. Therefore, conclusions are preliminary and rely on the identification of amphorae types, production and distribution by scholars and ceramic specialists of the Black Sea region.

Amphorae production of the south Black Sea coast

Various amphora types were produced at workshops across the southern Black Sea coast in the Roman period. The production areas of these amphorae are thought to be located at Heraclea Pontica, Sinop and other unknown sites (although some attributions remain theoretical), suggesting an established tradition of amphorae manufacture in the region.[738] Sergey Yu Vnukov attributes the production of standardized Roman amphora types at south coast workshops to the incorporation of this region in the Roman empire

[736] Erten, *et al*., 'Amphorae', p. 105; D. Kassab Tezgör, *Les fouilles et le materiel de l'atelier amphorique de Demirci près de Sinope* (Paris, 2010), p. 123.
[737] Although attributed to an earlier period (finds date from the 1st century AD, possibly earlier) the term 'carrot amphora' is also classified as Peacock and Williams Class 12, a type of uncertain origin, Peacock, Williams, *Amphorae*, pp. 109-10.
[738] S. Yu Vnukov, 'Pan-Roman amphora types produced in the Black Sea region', in J. Eiring, J. Lund (eds), *Transport amphorae and trade in the eastern Mediterranean. Acts of the international colloquium at the Danish Institute at Athens, September 26-29, 2002* (Aarhus, 2004), pp. 407-15 (at p. 411, footnote 18, there is a confusing remark regarding a vessel, referenced as Peacock and Williams Class 43 (parallel to LR2) and Heraclean production); D. Kassab Tezgör, 'Les ateliers implantés sur la rive sud de la mer Noire: un état de la question', in L. Buzoianu, P. Dupont, V. Lungu (eds), *PATABS III Production and trade of amphorae in the Black Sea. Actes de la Table Ronde international de Constanţa, 6-10 octobre 2009* (Constanţa, 2013), pp. 149-63; Erten, *et al*., 'Amphorae', p. 105.

and the establishment of colonies at Heraclea and Sinop.[739] As discussed in Chapter 3, a similar phenomenon is attributed to the intensification of amphorae production in Rough Cilicia during the Roman period also, as Roman influence and the subsequent relative peace and control of the coastal areas may have facilitated surplus agricultural cultivation that resulted in significant amphora production on the western coast of Rough Cilicia.

Particularly important to this study is that amphorae production has been identified in Boztepe, Sinop from the 3rd century BC.[740] As late antique amphorae production has been localised on the eastern coastline of Sinop, it would seem as though the exploitation and exportation of agricultural and perhaps marine resources underlay the economy of this promontory for many centuries.[741]

Sinop

For the late antique period, a seminal discovery of an extensive amphorae production centre at Demirci, located approximately 15km south of Sinop, has significantly contributed to our understanding of late Roman amphora production of the Black Sea as well as the morphological developments of Black Sea amphora typologies.[742] The following discussion of the amphorae types manufactured at Sinop is based on the recent work conducted at Demirci by Dominique Kassab Tezgör and others. There is also the possibility that other workshops were producing similar forms as those produced at Demirci (see below).[743] This is important to keep in mind as there is a

[739] Vnukov, 'Pan-Roman', p. 415.
[740] Doonan, *Sinop*, p. 79; Laflı, 'Ceramic archaeology', p. 195.
[741] Y. Garlan, D. Kassab Tezgör, 'Prospection d'ateliers d'amphores et de céramiques de Sinope', *Anatolia Antiqua*, 4 (1996), pp. 325-34.
[742] Kassab Tezgör, *Les fouilles*.
[743] Erten, *et al*., 'Amphorae', p. 105; D. Kassab Tezgör, 'Types amphoriques romains tardifs produits simultanément à Demirci près de Sinope et dans d'autres centres', in C. Tzochev, T. Stoyanov, A. Bozkova (eds), *PATABS II Production and trade of amphorae in the Black Sea. Acts of the international round table held in Kiten, Nessebar and Sredetz, September 26-30, 2007* (Sofia, 2011), pp. 259-64.

difference between categorizing an amphorae type as Sinopean, and attributing a vessel to a Sinopean workshop, a difference not always made clear in scholarship.

Demirci

Amphorae types produced at Demirci appear to have been well-distributed and are well-represented around the Black Sea littoral. The kilns of Demirci seem to have been producing amphorae from approximately the 4th to 6th centuries. Earlier finds suggest the site was occupied in the 2nd or 3rd centuries, with production being more securely attributed to the 4th-5th centuries onward (Owen Doonan gives the date as approximately the 2nd-6th century).[744] A comprehensive classification scheme has been developed for the vessels produced at this site. Production of amphorae at Demirci appears to have developed in a succession that can be traced chronologically by the colour of clay fabric of each 'group' of amphorae produced (pink, red, and white, respectively). The amphorae are divided into four groups (A, B, C and D). Amphorae belonging to groups A and B are present at Demirci in relatively few numbers and production of these types at this kiln site remains uncertain. The production of Groups C and D amphora types is virtually confirmed at Demirci.[745]

The production of Group C type amphorae (classification C Snp) 'les amphores à pâte dite "colorée"' can be confidently concluded and has a complex typology (production *c*. 4th to 5th, possibly the 6th centuries).[746] The 'reddish clay' of this amphorae

[744] Erten, *et al*., 'Amphorae', pp. 103-4; Kassab Tezgör, *Les fouilles*, pp. 11, 121, 125-37; D. Kassab Tezgör, 'Le réseau commercial des amphores sinopéennes entre les II^e^-III^e^ s. et le VI^e^ s. de notre ère', in D. Kassab Tezgör, N. Inaishvili (eds), *PATABS I Production and trade of amphorae in the Black Sea. Actes de la table ronde international de Batoumi et Trabzon, 27-29 avril 2006* (Paris, Istanbul, 2010), p. 167. Doonan, *Sinop*, pp. 100, 103.

[745] Erten, *et al*., 'Amphorae', pp. 103-4; Kassab Tezgör, *Les fouilles*, pp. 121-37; Kassab Tezgör, 'Le réseau', p. 167; Kassab Tezgör, 'D'autres centres', pp. 259-62.

[746] Kassab Tezgör, *Les fouilles*, pp. 11, 127-134; Erten *et al*., 'Amphorae', p. 104; Kassab Tezgör, 'D'autres centres', p. 259; Kassab Tezgör, 'Les ateliers implantes', p. 154.

type is a distinguishing feature.[747] A variant of Group C is also known as the so-called 'carrot' amphorae.[748] It has been recently argued that this amphorae type may have been produced in other areas of the Black Sea, the northern Pontic area being put forth as a possibility.[749]

Group D, 'pâte claire' (classification D Snp), is also subdivided into variants.[750] These amphorae are manufactured in a characteristic 'whitish clay' that succeeded the 'reddish clay' of Group C. The change in production from Group C to Group D amphorae appears to have been a progressive development therefore making it challenging to assign a start date to the production for Group D type amphorae. At Demirci, the beginning of production of D Snp amphorae is dated to *c*. the 6th century.[751] Interestingly, Kassab Tezgör considers variants of Group D to be associated with LR1, but details of this connection are obscure.[752]

In sum, the production of C Snp and D Snp type amphorae at Demirci over several centuries attests to the longevity of the Demirci workshop. The amphora production at Sinop may offer an important indication into the city's role in the export and trade of the Black Sea region and beyond. The study of Demirci stands alone in its in-depth comprehensive analysis of a north Anatolian amphorae production centre, yet various pieces of evidence are beginning to help fill-out the picture of late Roman amphorae production of coastal northern Anatolia.

---

[747] See above note.
[748] Kassab Tezgör, 'D'autres centres', pp. 260-1; Erten, *et al*., 'Amphorae', p. 104. Also, A. Opaiţ, 'Sinopean, Heraklean and Chersonesan "carrot" amphorae', *Ancient civilizations from Scythia to Siberia*, 16 (2010), pp. 373-8.
[749] Opaiţ, 'Carrot', pp. 372-3, 393-9; Kassab Tezgör, 'D'autres centres', pp. 260-2.
[750] Kassab Tezgör, *Les fouilles*, pp. 134-6; Erten *et al*., 'Amphorae', p. 104.
[751] Kassab Tezgör, *Les fouilles*, pp. 136-7; Kassab Tezgör, 'D'autres centres', pp. 262-3; Kassab Tezgör, 'Les ateliers implantes', p. 154.
[752] 'Nous voyons avec les amphores des types D Snp I et II une conception de la forme qui est dans la lignée des LRA1, et qui diffère des amphores qui ont précédé' Kassab Tezgör, *Les fouilles*, pp. 135, 137; 'et est dérivé de la forme "universelle" de la LRA1…', Kassab Tezgör, 'Le réseau', p. 171; Kassab Tezgör, 'D'autres centres', pp. 262-4.

Possible amphorae production elsewhere in northern Anatolia

Elsewhere along the southern Black Sea coast, production of amphorae at ancient Heraclea Pontica, modern Alaplı, has been confirmed, thanks to the discovery of a workshop. The atelier is located 12km south of the modern town of Ereğli. The production site is thought to have produced amphorae of 'pâte claire'.[753] This discovery is significant as it confirms production of 'pâte claire' amphorae beyond Sinop.[754] The chronological production of this amphorae type at Heraclea appears to be Roman, but is not further specified.[755]

Although we can now confirm the manufacture of late Roman amphorae at Demirci, other amphorae types that have been identified in ceramic assemblages in the Black Sea region are sometimes assigned a south coast Black Sea origin, but any further localisation of its production cannot be specified. For example, in the discussion of amphorae in southwestern Georgia, vessels described as 'thin-wall amphorae' (chiefly dated to the 4th and 7th centuries) appear to have been in circulation in the late Roman period and their production is tentatively proposed as the southern Black Sea littoral. [756] A vessel called the 'orange-clay' amphorae (generally dated to the 4th-6th centuries) is also given a possible production origin of the southern Black Sea littoral and does not seem comparable to C Snp amphorae.[757] Production of these amphorae types (and possibly

[753] T. Arsen'eva, D. Kassab Tezgör, S. Naumenko, 'Un dépotoir d'atelier d'amphores à pâte claire. Commerce entre Héraclée du Pont et Tanaïs à l'époque romaine', *Anatolia Antiqua*, 5 (1997), pp. 187-98; Kassab Tezgör, *Les fouilles*, p. 134; Kassab Tezgör, 'Les ateliers implantes', pp. 152-3; Erten, *et al*., 'Amphorae', p. 105.
[754] Arsen'eva, *et al*., 'Un dépotoir', p. 187.
[755] Vnukov, 'Pan-Roman', p. 410; Kassab Tezgör, 'Les ateliers implantes', pp. 152-3.
[756] N. Inaishvili, M. Khalvashi, 'Byzantine amphorae from southwestern Georgia', in C. Tzochev, T. Stoyanov, A. Bozkova (eds), *PATABS II Production and trade of amphorae in the Black Sea. Acts of the international round table held in Kiten, Nessebar and Sredetz, September 26-30, 2007* (Sofia, 2011), pp. 266-7.
[757] Inaishvili, Khalvashi, 'Byzantine amphorae from southwestern Georgia', p. 267.

others) on the south coast are hypothetical until further study can localise production origin, but such proposals suggests that amphorae manufacture in northern Anatolia may have been diverse and potentially expansive (see also Chapter 8, Cide-Şenpazar for another example of possible local amphorae production in north central Anatolia).

Content

What did the amphorae of the Black Sea region, and more specifically, those of Sinopean manufacture, contain? As discussed in Chapter 3, it is difficult to be certain of the contents of amphorae. Furthermore, it is possible amphorae have been re-used so that original contents may not be reflected in the remains used for historical analysis. There is also the possibility that one amphorae type was used to transport a variety of commodities, so associating content with a particular amphorae shape may not be accurate.

Andrei Opaiţ refers to carrot amphorae as wine amphorae and in so doing, implies that this was the main commodity transported in these vessels and that the carrot shape may have been recognised and associated with a wine product (he draws a parallel between the spread of Koan vine and the production of Koan-type amphorae in the Roman period).[758] If we are to believe that Koan-type amphorae were principally associated with wine, then it is possible that 'pseudo Koan' type amphorae production on the south coast of the Black Sea, thought to have occurred at Sinop, Heraclea and one other unknown location, may indicate surplus viticulture and wine production in these areas during the Roman period.[759] By extension, grape cultivation and wine production may have continued into the late Roman period and filled late Roman Sinopean amphorae

[758] Opaiţ, 'Carrot', pp. 371, 398-9.
[759] Vnukov, 'Pan-Roman', p. 407.

as well. On the other hand, the association between a vessel type and a particular commodity is debated and the potential manufacture of the well-known carrot amphorae type in different workshops across the Black Sea region need not be associated with wine production and trade in wine alone, as different regions may have cultivated different products to various degrees.

Kassab Tezgör makes hypothetical suggestions as to the possible contents of amphorae based on vessel morphology, without offering any convincing conclusions.[760] This includes an examination of vessel volume, dimensions, and the shape of a vessel's neck, mouth and body, as an analysis of such morphological variables may offer some indication of its functionality and utilisation to carry various commodities. On vessel content Kassab Tezgör states:

> Il faut toutefois reconnaître qu'il est bien difficile d'établir un lien entre les produits contenus et les conteneurs eux-mêmes. La forme de l'amphore, en particulier du col, peut offrir un indice, par exemple un col large semble plus approprié à du poisson salé ou à du *garum*, un col long et étroit à un produit liquide et fluide comme du vin ou de l'huile; la présence de résine peut aider à éliminer l'huile et favoriser l'hypothèse du vin ou du *garum*…Par ailleurs, il est surprenant de constater que l'on peut clairement observer aussi bien la présence que l'absence de résine sur les parois internes de conteneurs d'un même type: c'est le cas des amphores de types C Snp III et D Snp I, II et III. La question peut donc être posée si les formes d'amphores étaient conçues pour un produit déterminé: vin ou huile par exemple, ou bien plutôt pour une catégorie de denrée: liquide, épaisse, solide, etc.[761]

Following on a similar line of reasoning, Opaiţ argues that amphorae of particular shape may have been suitable for the transportation of fish products, a postulation that may give some indication to the possible content of some amphorae, although hypothetical.[762] Other various pieces of evidence might also add to our understanding of the functionality and utilisation of Black Sea amphorae types. A shipwreck cargo near Sinop included

[760] Kassab Tezgör, *Les fouilles*, pp. 133, 137; Kassab Tezgör, 'Le réseau', pp. 172-3.
[761] Kassab Tezgör, 'Le réseau', p. 173.
[762] A. Opaiţ, 'A weighty matter: Pontic fish amphorae', in V. Gabrielsen, J. Lund (eds), *The Black Sea in antiquity: regional and interregional economic exchanges* (Aarhus, 2007), pp. 101-21.

examples of 'pâte claire' type amphorae in which olive pits were found suggesting olives or olive oil was a part of the content of the load.[763] Based on the evidence of weight presses and olive pits identified in what look like Demirci manufactured amphorae, it has been suggested oil production occurred at Demirci in the 6th-7th centuries.[764]

At another archaeological site, although dating to a 2nd to 3rd century context, in a storehouse in Pityus (northwestern Caucasus), remains were comprised in part of Sinopean amphorae. Excavations revealed large Sinopean pink vessels (perhaps similar to Kassab Tezgör's Group B Snp type) in which grain, specifically rice and millet, were kept. On the import of goods, it is suggested that olive oil, wine, and grain were imported to Pityus, but the origin of the products is unclear (as the origin of the pinkish amphorae is not explicit).[765] The mention of grain in Sinopean vessels seems exceptional in this case, as grain is not often mentioned as a major export product from Sinop. Therefore, this case illustrates the need to consider the use of amphorae as storage containers as a secondary function.

To conclude, an attempt at consolidating the suggestions of scholars and differing pieces of evidence reveals the difficulties to formulate convincing conclusions concerning what these various Black Sea amphorae may have transported. Various pieces of evidence suggest that different products – wine, oil, fish products, fruits or nuts of Black Sea forests - may have been transported in the amphorae of the Black Sea and those produced at Sinop.[766]

[763] D. Kassab Tezgör, İ. Tatlıcan, H. Özdaş, 'Prospection sous-marine près de la côte sinopéenne: transport d'amphores depuis l'atelier et navigation en mer Noire', *Anatolia Antiqua*, 6 (1998), p. 445.
[764] Doonan, *Sinop*, p. 103.
[765] G. Lordkipanidze, 'Sinopian amphorae and Trapezuntine coins from Pityus', in D. Kassab Tezgör, N. Inaishvili (eds), *PATABS I Production and trade of amphorae in the Black Sea. Actes de la table ronde internationale de Batoumi et Trabzon, 27-29 avril 2006* (Paris, Istanbul, 2010), pp. 149-50.
[766] Kassab Tezgör, 'Le réseau', pp. 172-3; Doonan, 'Production', p. 193, footnote 3.

LR amphorae types in the Black Sea zone[767]

Did Mediterranean-produced amphorae make their way to northern Anatolia and if so, are we able to discern the degree of imports in a quantified way? The relationship between LR1 and the south coast of the Black Sea is a complex and ambiguous matter that is not helped by the lack of archaeological study of the south littoral. For northern Anatolia in general, due to a lack of archaeological study, information regarding the presence of LR1 is lacking (see Chapter 8 for information concerning the LR finds at individual north central sites). For the consumption of Mediterranean-produced LR in northern Anatolia, we do have recourse to distribution maps (although they are quickly outdated and should be approached with caution) to get an idea of LR possibly reaching this Black Sea zone. Notably, from such maps, for the southern Black Sea littoral in particular, there appears to be a conspicuous lack of LR finds.[768] It is striking that scholarship scarcely mentions the south coast of the Black Sea as being an area with substantial LR1 finds. Although some LR amphorae types have been encountered in the ceramic assemblages of north central Anatolia (see Chapter 8), due to the lack of archaeological and ceramic analysis at sites and little quantitative data for the region, we lack the information to formulate conclusions regarding the degree to which eastern Mediterranean LR types may have been consumed by the settlements of northern Anatolia more generally.

In terms of imported amphorae at Demirci, some fragments of types Dressel 2-4, LR1 and LR2 were encountered during the excavation of the site. However, on the appearance of these sherds at Demirci, Kassab Tezgör states, 'Ils appartenaient sans doute

[767] LR finds beyond northern Anatolia will not be discussed.
[768] For example, see LR distribution maps in Peacock, Williams, *Amphorae*, pp. 183, 186, 189; A. Sazanov, 'Les amphores "LA 1 Carthage" dans la région de la mer Noire (typologie et chronologie: V^{e}-VII^{e} s. apr. J.-C.)', in Y. Garlan (eds), *Production et commerce des amphores anciennes en mer noire* (Aix-en-Provence, 1999), fig. 1, p. 273.

à des amphores destinées à la consommation de l'atelier, car bien que certains paraissent être de production sinopéenne, leur très petit nombre, ainsi que l'absence totale de surcuits, ne permettent pas d'affirmer qu'ils ont été produits sur place'.[769] The notable presence of LR types identified at the Demirci workshop, suggests that LR might be identified in larger numbers on the promontory or the wider Sinop territory. Interestingly, a footnote of the same report states, 'Une amphore LRA 1 conservée dans le musée de Sinope semble être une production locale'.[770] Whether or not local production refers to the south coast in general or an unidentified workshop on Sinop's coast is not explicit. Nevertheless, it would appear that Demirci did not produce LR1 or LR2 type amphorae, but may have imported these vessels in minimal numbers. However, the lack of LR1, LR2, and Dressel 2-4 finds at Demirci does not necessarily mean that LR1 or LR2 were not consumed in Sinop or its hinterland at all. Study of the kiln site at Demirci was limited to a restricted geographical zone of Sinop's eastern coastline. Thus, it seems as though one can only conclude that Demirci was not a producer or significant consumer of these specific vessel types, but other areas of Sinop (or the northern Anatolian coast) may have been.

The late Roman amphorae production at Sinop (and possibly at other workshops of the south littoral) may have rendered significant import of eastern Mediterranean LR type vessels unnecessary for northern Anatolian settlements. Perhaps small numbers of imported amphorae arrived to the shores of the southern Black Sea carrying luxury products or commodities to supplement low agricultural yields. The conspicuous absence of LR finds on the south coast of the Black Sea may indeed be due to the lack of archaeological study of sites on this littoral and that distribution maps are rather outdated.

[769] Kassab Tezgör, *Les fouilles*, p. 121.
[770] Kassab Tezgör, *Les fouilles*, p. 121, footnote 2.

We await further archaeological study of northern Anatolia to shed light on this ambiguous issue of amphorae evidence.

Amphorae distribution: C Snp and D Snp type amphorae beyond the Black Sea zone

An interesting piece of evidence concerning the consumption and distribution of amphorae in Black Sea zone is the valuable analysis of the cargo of four shipwrecks that have been discovered off the coast of Sinop. All four wrecks have been dated to between the 4th and 6th centuries.[771] Three shipwrecks are located west of Sinop and the fourth is located north of Sinop (labelled Sites A-D).[772] Carrot amphorae, those similar to Sinopean manufacture, were a component in all four cargoes.[773] Interestingly, the cargo of Site B included variants of carrot amphorae and LR1, and the cargo of Site D included 'pâte claire' amphorae, lined with pitch.[774] Wood samples extracted from Site D were dated to AD 410-520.[775] As vessels had pitch lining, wine might be suggested as their content, although the presence of pitch is not a secure indication of content.[776]

Kassab Tezgör also addresses the well-represented presence of Group C amphorae in shipwreck cargoes and states 'elles s'apprêtaient peut-être à caboter vers la côte ouest, ou bien à descendre vers la mer Egée et la Méditerranée. En effet, c'est avec les amphores du type C Snp III que l'on rencontre les premiers témoignages d'un transport de marchandises en quantité notoire depuis Sinope vers la Méditerranée orientale à l'époque impériale'.[777] On cabotage, it would seem plausible that amphorae manufactured at

[771] C. Ward, 'Four ships of Late Antiquity in the Black Sea', *Ancient civilizations from Scythia to Siberia,* 16 (2010), p. 190.
[772] Ward, 'Ships', p. 191.
[773] Ibid.
[774] Ward, 'Ships', pp. 192, 195.
[775] Ward, 'Ships', p. 192.
[776] Ward, 'Ships', p. 194.
[777] Kassab Tezgör, 'Le réseau', p. 170. Also, Kassab Tezgör, *et al*., 'Prospection sous-marine', p. 448.

various workshops on the south coast were transported to the major port at Sinop for export abroad, possibly to the northern Black Sea, and likewise to settlements on the east and west littorals as well. A similar scenario may be put forth with imported LR type amphorae from the Mediterranean, with these goods being shipped to Sinop and then re-distributed across the Black Sea from this point (if LR did not reach other Black Sea sites directly). It is notable that C Snp/carrot amphora and LR1 appear together in the cargoes of shipwreck B. This evidence suggests that local and Mediterranean amphorae travelled along side one another in the Black Sea zone.

C Snp and D Snp type amphorae have been found in various regions around the Black Sea littoral. A survey of the distribution of Group C and Group D amphorae vessels has been succinctly summarized by Kasab Tezgör in the paper, 'Le réseau commercial des amphores sinopéennes entre les II^{e}-III^{e} s. et le VI^{e} s. de notre ère' (2010).[778] As it is not possible to determine precisely from which workshops the various amphorae finds originate, recounting these finds would not necessarily aid in examining the economic networks of Sinop in particular. As stated above, it is likely that the various types of Black Sea amphorae were produced in various workshops, many of which remain unknown, making it difficult to determine exactly where products of particular south coast workshops were distributed. Likewise, quantitative data of ceramic assemblages in the region are lacking so that it is difficult to discern the degree of exchange between production and consumption loci. Instead, I will briefly discuss the finds of C Snp and D Snp type amphorae outside of the Black Sea zone as these discoveries are particularly interesting when examining the overlap of Black Sea and Mediterranean economic networks and the interconnected nature of the supply and demand of the empire on a broader geographic scale.

[778] Kassab Tezgör, 'Le réseau'.

A brief overview of some of the locations where Black Sea amphorae have been identified offers a preliminary glimpse of the expansive geographic range these amphorae types travelled. Beyond the Black Sea, variants of type C Snp and carrot amphorae can be found in museum collections, such as at Adana and Bodrum. Variants of this type of amphorae can be found even further south in the eastern Mediterranean, on the Syrian coast and examples are attested at Ephesus, Tarsus, Lebanon and Ras el-Bassit, for example.[779] As mentioned in Chapter 3, a recent discovery of Black Sea carrot amphora at Limyra on the eastern coast of Lycia has been noted. This is particularly significant as finds of carrot amphorae seem to be not uncommon at this site.

In regards to Group D Snp/'pâte claire' amphorae, although documented in some ceramic assemblages in the Black Sea region, examples appear to be less-frequent at sites in this area, although, as Kassab Tezgör notes, this may be due in part to a lack of archaeological study and documentation of this amphora type in the region (variants of D Snp types are found in museum collections on the northern Anatolian coast).[780] Elsewhere, a number of D Snp type amphorae have been identified at Mediterranean sites. Over 70 examples were found off the port of Seleucia Pieria and preserved in the Antakya museum.[781] Further finds are present at Dibsi Faraj, Ibn Hani, in Palestine, Jordan and near Alexandria, for example.[782] Although we do not know from where all of the Black Sea amphorae finds in these eastern Mediterranean locations originated nor the degree to which Black Sea amphorae reached the Mediterranean due to a lack of

[779] For these and further examples, Erten *et al*., 'Amphorae', p. 106; Opaiţ, 'Carrot', pp. 378, 398; Kassab Tezgör, 'Le réseau', pp. 170-1.
[780] Kassab Tezgör, 'Le réseau', p. 171; Kassab Tezgör, *Les fouilles*, pp. 135-6.
[781] Kassab Tezgör, 'Le réseau', pp. 171-2; Erten, *et al*., 'Amphorae', p. 106; D. Kassab Tezgör, M. Touma, 'Amphores exportées de mer Noire en Syrie du Nord', *Anatolia Antiqua*, 9 (2001), p. 111.
[782] For these and further locations, Kassab Tezgör, 'Le réseau', p. 172; Erten, *et al*., 'Amphorae', pp. 106, 112; Kassab Tezgör, Touma, 'Exportées', pp. 107-11.

quantified data, preliminary fabric analysis has enabled us to determine the production areas of some of these finds with greater confidence.

Linking products to workshops: petrological analysis

As mentioned above, an attempt at assigning a product to a workshop is hindered by the fact that not all workshops producing C Snp, 'carrot', and D Snp/'pâte claire' amphorae types are known. That being said, scientific analysis is beginning to shed light on this issue. Preliminary results of clay analysis have demonstrated that amphorae samples from the Mediterranean and Black Sea regions may indeed be traced back to either a Sinopean or Heraclean origin.

Preliminary results suggest that samples of white clay from Sinop are similar to the clay of Antioch and Ibn Hani examples.[783] A white clay amphora sample from Tanais in the northern region of the Black Sea is similar to Heraclean examples, although there seems to be some inconsistencies.[784] Carrot type amphorae of Tanais could be Sinopean.[785] These preliminary results reveal the tentative link between the export of south coast Sinopean and Heraclean products to the north littoral of the Black Sea, and significantly, Sinopean products reaching the eastern Mediterranean. That is not to say however, that Heraclean products only circulated within the Black Sea region. While scientific analysis of the clay composition may begin to shed light on the similarities between amphorae clay samples, further testing on a much larger corpus of clay samples is required before any conclusive connections between product and origin can be made.

[783] Erten, *et al*., 'Amphorae', pp. 111-12.
[784] Erten, *et al*., 'Amphorae', p. 113.
[785] Erten, *et al*., 'Amphorae', p. 112.

Production of Black Sea amphorae types in the Mediterranean?

The connection between Sinopean clay to the eastern Mediterranean reveals the distances Black Sea products travelled, a point often overlooked in Mediterranean-centric studies. This evidence is particularly significant as there appears to be an outstanding issue concerning the possibility of Mediterranean production of a variant of carrot amphorae at Seleucia Pieria.[786]

The discovery of carrot type amphorae at Seleucia Pieria had led to speculation that 'carrot' amphorae may have been produced here,[787] although this has not been confirmed and the potential production location may be a deposit/dump of fragments.[788] Still, after carrot amphorae production at Seleucia had been suggested, subsequent studies seem to have accepted Seleucia Pieria as a manufacturer of this vessel type.[789] For example, in his study of 4th to 6th century ceramics in Roman Scythia, Opaiţ had categorised a 'Conical amphora of Seleucia in Pieria type' (a carrot-shape vessel) separately from amphorae vessels of Pontic origin.[790] However, Opaiţ has revised his initial conclusion and now attributes this variant to Pontic production.[791]

While Mediterranean production of Black Sea type carrot amphorae remains a possibility, the preliminary findings presented above suggest that Black Sea goods were transported to the eastern Mediterranean. Perhaps the most important point to take away from this discussion is how the interpretation of amphorae influences our perspective and

[786] Erten, *et al*., 'Amphorae', p. 105.
[787] Empereur, Picon, 'Les régions', p. 232; Kassab Tezgör, 'D'autres centres', p. 262.
[788] P. Reynolds, 'Levantine amphorae from Cilicia to Gaza: a typology and analysis of regional production trends from the 1st to 7th centuries', in J. Mª Gurt i Esparraguera, J. Buxeda i Garrigós, M. A. Cau Ontiveros (eds), *LRCW 1 Late Roman coarse wares, cooking wares and amphorae in the Mediterranean: archaeology and archaeometry* (Oxford, 2005), p. 566.
[789] For example, A. K. Şenol, G. Cankardeş-Şenol, 'Commercial ties of Cilicia by means of Hellenistic and Roman amphorae', *Olba*, 7 (2003), pp. 129-30; Mitchell, 'Olive cultivation', p. 101.
[790] A. Opaiţ, *Local and imported ceramics in the Roman province of Scythia (4th-6th centuries AD)* (Oxford, 2004), p. 23.
[791] Opaiţ, 'Carrot', p. 397, footnote 71.

understanding of Black Sea exchange with the eastern Mediterranean. The presence of Black Sea amphora types in the eastern Mediterranean suggests an established network between the Black Sea-Mediterranean regions and not necessarily exceptional circumstances. Presumably, the diminishing influence and circulation of western Mediterranean amphorae and production of so-called 'pan-Roman' amphorae types resulted in the intensification of Black Sea and eastern Mediterranean exchange. As a result, an intensification of trade would have meant a more pronounced presence of Black Sea products in the Mediterranean and vice versa. Instead of assuming carrot-shape amphorae finds in the eastern Mediterranean may be due to production of such types in the Mediterranean itself, amphorae finds of Black Sea origins in Mediterranean ceramic assemblages forces us to widen our geographical scope of exchange. The recent identification of Black Sea carrot amphorae in Limyra is an exemplary case demonstrating that there is a necessity to reanalyse past ceramic assemblages now that a greater knowledge of Black Sea amphorae typologies is available, so as to better determine the intensity of Black Sea-Mediterranean exchange.

Discussion and conclusion

The subject of Black Sea amphorae production is a complicated matter that is made more difficult since the locations of amphorae manufacturing workshops are not known. This is particularly important as the discovery of amphorae production at Sinop dominates our evidence and therefore influences our understanding of the transport of commodities from the northcentral region. Although amphorae were likely produced across the Black Sea littoral in the late antique period, our ability to discern the geographic scope of production is limited. Evidence from shipwrecks may offer additional information regarding the role Sinop played as not only an exporter of

Sinopean goods in Sinopean locally-produced amphorae, but also the shipment of international amphorae types, namely the eastern Mediterranean LR. Evidence that amphorae production occurred on the Sinop promontory over centuries suggests that the area successfully exploited agricultural and/or marine resources at sustained surplus levels. The relationship between late antique amphorae production and settlement on the Sinopean promontory will be examined in greater detail in the following chapter.

Based on the evidence presented above and thanks to recent archaeological study, it would seem as though Black Sea amphorae are present in the eastern Mediterranean region. What is significant is that this exchange appears to have been reciprocal but the degree to which Black Sea goods were transported to the Mediterranean and vice versa, remains ambiguous largely due to a lack of quantified data and the discrepancies of archaeological study in both regions.

Given the current state of evidence, only tentative preliminary remarks can be made when comparing the pottery of either region as a lack of information hinders in-depth analysis. Nevertheless, asking questions of the evidence poses avenues for future research that may further refine our understanding of the place of the Black Sea, and north central Anatolia in particular, in the discourse of the late antique economy alongside other more well-studied areas.

From approximately the 4th century onwards, it appears that the so-called LR amphorae types dominate Mediterranean ceramic assemblages, LR1 and LR2 are seemingly omnipresent. Will future research reveal C Snp, variants of carrot amphorae and D Snp/'pâte claire' begin to dominate assemblages of the Black Sea in a similar way, or is the variety in the number of types produced in this geographic region greater than the eastern Mediterranean? Or does the LR classification scheme mask the vast variants of amphorae production in the Mediterranean? Can Black Sea amphorae be

conceptualised as ‘regional’ products (that is to say, similar to the tradition of LR4, LR5/6 bag-shaped amphorae), or might production of particular types be more dispersed across the entire Black Sea littoral? If so, how might this impact our understanding of the economic networks in the region? Besides market exchange, we might ask if Black Sea amphorae reached the Mediterranean as redistributed products.[792] Of course, any attempt to address these questions remain speculative as the production of various amphorae types on the northern Anatolian coast and elsewhere, largely remains hypothetical.

[792] Perhaps as tentatively proposed by Karagiorgou concerning LR2, Karagiorgou, ‘LR2’.

Chapter 8. Settlement evidence of north central Anatolia

Introduction

The previous section of this thesis has presented, analysed and discussed the available archaeological evidence concerning the settlement development of two regions located on the south coast of Anatolia. I have argued that Lycian and Isaurian patterns of settlement were shaped in Late Antiquity largely by the distinct economic roles each region had in eastern Mediterranean exchange and that these roles differed- Isauria contributed staple products (oil and/or wine), while Lycia primarily facilitated maritime traffic, its importance being less dependent on agricultural production. An analysis of the location of settlement in Lycia and Isauria has also revealed that areas located within these regions developed differently and not all coastal areas 'prospered' from this economic situation, contrary to what one might expect and has been argued in the past.

How does the late antique settlement development of north central Anatolia compare to the regions already explored on the opposite Anatolian coastline and what might this reveal concerning similarities and differences in the ways in which differing maritime networks and economies impacted settlement? The following chapter will analyse the evidence of late antique settlement of north central Anatolia with the aim of investigating the relationship between inland and coastal settlement and the economic networks of the settlements of the region. Of particular interest is the discovery of late Roman period amphorae kilns at Sinop and how production and exportation of Sinopean goods may have impacted settlement in this particular area.

As mentioned in Chapter 6, the area of north central Anatolia selected for study was largely determined by the locations where recent archaeological information is

available and accessible for analysis. The following discussion is therefore based on information derived from the following areas and archaeological projects (from west to east): the Cide-Şenpazar area where the Cide Archaeological Project (CAP) was conducted between 2009-2011; inner Paphlagonia where the Project Paphlagonia survey took place between 1997-2001; at Hadrianopolis (near modern Eskipazar) where research was conducted by Dokuz-Eylül University beginning in 2005; the Sinop promontory, where research is conducted by the Sinop Regional Archaeological Project (SRAP); Pompeiopolis (modern Taşköprü) where information from five years of excavations (2006-2010) has been published; Neoclaudiopolis-Andrapa (Vezirköprü) where some research has recently taken place although limited in scale; and Euchaita where the first phase of the Avkat Archaeological Project (AAP) has recently concluded. Each location and the archaeological projects conducted in the various areas will be discussed in detail below.

Unlike the southern Anatolian regions discussed in Section I, where the information regarding late antique, late Roman and early Byzantine settlement evidence documented in the TIB provided the backdrop for discussion, there is yet to be a TIB volume that encompasses the area of north central Anatolia of interest here. The TIB 9 (1996) volume on Honorias and Paphlagonia presents information concerning northwestern Anatolia but does not cover the geographic area to the east of Sinop. Therefore, this source is not utilised in the same way as it was for Lycia and Isauria. Moreover, for the sites located in the area of interest indicated on the TIB 9 map, information in the TIB 9 is minimal with only a few sites containing convincing evidence of substantial late antique occupation or remains. Therefore, the following discussion prioritizes the more recent archaeological research in the area at the seven aforementioned locations that have been conducted since the publication of the TIB 9.

Methodological considerations

Research methodologies employed across north central Anatolia vary, impacting an attempt to synthesize and analyse the evidence currently available. Numerous factors, including various research techniques, as well as differences in landscape and terrain and publication methods impact the amount of qualitative and quantitative data available for analysis. The methodologies employed for the study of the Cide-Şenpazar area, inner Paphlagonia, Hadrianopolis, Pompeiopolis, the Sinop promontory, Neoclaudiopolis and Euchaita will be described in detail below, but it is important to recognise at the outset that the evidence analysed in the following discussion derives from various research methods including excavation, survey and subsurface research (georesistivity/remote sensing analysis). For example, extensive and intensive survey was conducted in inner Paphlagonia, whereas some survey and excavation were carried out at Hadrianopolis, while subsurface analysis was central in the work at Pompeiopolis. Therefore, archaeological evidence in north central Anatolia has been collected and is published in different ways.

It must also be kept in mind that even though fieldwalking may have been carried out in various locations, methods and the amount of area covered by intensive or extensive investigation differs. Information concerning the surrounding rural area of urban centres is sometimes more limited in geographic scale when compared to the broader survey projects that look at a larger area, but on a more superficial, extensive level. All of these factors are important to keep in mind when considering the presentation of evidence and the analysis below.

As I focus my analysis on the most recent research conducted in north central Anatolia, I will discuss the method and context of each research project in detail. Each

project is introduced and the techniques of research described because the differing methods employed by each project greatly impact interpretation. As a result, and as we shall see, information from certain projects are more informative for an economic analysis of the region and this is reflected in the length of the discussion of each project area. For example, the ceramic study of certain projects, Hadrianopolis being the most notable, are much more extensive than others. Although preliminary study has been conducted on the pottery of Pompeiopolis, information concerning amphorae from the site is minimal. While a general picture of the Roman and late Roman development of the Sinop promontory can be discerned, less information is available for the rural areas of other sites, such as Neoclaudiopolis, for example.

Although archaeological research in northern Anatolia is dispersed and varies in methodology and chronological focus, the recent research in the locations mentioned above allows for a preliminary synthesis and analysis of evidence concerning changes in settlement and pottery in coastal and interior north central areas to be possible. Thus, a cursory picture of the late antique settlement development of the north central Anatolia may be ascertained.

Sinop

The Sinop Regional Archaeological project (SRAP) incorporates extensive and intensive survey methods to explore the Sinop promontory (Figure 36, Figure 37).[793] The forest cover and dense vegetation of the promontory dictates areas for viable survey.[794] In order to explore this territory, the promontory was divided into different geographical

[793] Doonan, *Sinop*, pp. 35-49.
[794] O. Doonan, 'Settlement and economic intensification in the late Roman/early Byzantine hinterland of Sinop' in *Landscape dynamics*, pp. 43-4.

zones based on geologic and landscape features for sampling.[795] Extensive survey was conducted in lower-visibility areas. Systematic surveys have been undertaken in the Demirci valley, Karasu valley and southern Boztepe (the headland of the promontory).[796] Systematic survey was conducted through quadrat-based survey via fieldwalking.[797] The interpretation of the function or meaning of 'loci' in the landscape (the terms used instead of 'site' by the project to describe places of human activity that had been identified) was based on surface finds, such as ceramics, and sub-surface data derived from geomagnetic and remote sensing analysis.[798] The team also conducted sample-transect surveys which were comprised of surveying long sections of land that consist of the various landscape zones of the promontory in order to complement the other survey methods employed.[799] As of publication in 2015, the SRAP has covered approximately 1,000 survey tracts (an agricultural field approximately 200-1000m^2) of 40 sample quadrats (*c.* 1-2km^2).[800]

Findings derived from research so far conducted have revealed two significant periods of development in the hinterland of the Sinop promontory: the Hellenistic and late Roman and early Byzantine.[801] It is thought that the economic infrastructure established on the promontory in Hellenistic times, including the amphorae manufacture on Boztepe, facilitated the significant settlement expansion in the later period.[802] It was likely the production and exchange of natural resources that underlay this development- timber, fish products and oil.[803]

[795] Doonan, *Sinop*, pp. 35-7.
[796] Doonan, *Sinop*, pp. 37-40.
[797] For detailed information on how fieldwalking was conducted over time, Doonan, *Sinop*, pp. 41-4.
[798] Doonan, *Sinop*, pp. 35-7, 47-8.
[799] Doonan, *Sinop*, p. 49.
[800] Doonan, 'Settlement', pp. 43-4.
[801] O. Doonan, 'Sinop landscapes: towards an archaeology of community in the hinterland of a Black Sea port', *Ancient civilizations from Scythia to Siberia*, 16 (2010), pp. 181-2, 185.
[802] Doonan, *Sinop*, pp. 93-7.
[803] Doonan, *Sinop*, pp. 93-7; Doonan, 'Production', pp. 187-97.

There are variations in the extent of settlement in certain places on the promontory. Due to the size of the promontory only a fraction of land has been surveyed, but the various parcels of land that have been explored illuminate the development of settlement in and around Sinop. Roman and early Byzantine literary and archaeological evidence (for the broad period *c*. mid-1st century BC-7th century) suggests that the city of Sinop and settlement on Boztepe grew in these periods from earlier Hellenistic times.[804] At the monumental complex 'Balatlar', excavations since 2010 have elucidated the development of the structure which was converted to a church and cemetery in Byzantine and Ottoman times.[805] Its use as a church is dated to the late Roman period, a period well-represented in the ceramic assemblage so far uncovered, demonstrating its continued use.[806]

The Demirci valley, approximately 15km south of Sinop, experienced significant development in the Roman period.[807] The development of the Demirci valley is directly related to the aforementioned industrial area and amphorae manufacture identified on the Demirci coast (Chapter 7).[808] Notably, the type of settlement identified in the coastal area of the valley and farther inland differ. That is, the predominance of late Roman/early Byzantine pithoi and amphorae finds in the interior of the valley (in the area of Uzungüren) suggests that inland regions of the valley were predominantly involved in agricultural production. The exception to this general trend is Karapınar, which, due to the presence of fine ware, has been identified as an inland villa (the site is dated to the 4th

[804] Doonan, *Sinop*, pp. 97-101.
[805] E. G. Alper, 'Hellenistic and Roman period ceramic finds from the Balatlar Church excavations in Sinop between 2010-2012', *Anatolia Antiqua*, 22 (2014), p. 35; Doonan, *Sinop*, pp. 98-9.
[806] Alper, 'Balatlar', p. 46.
[807] Doonan, *Sinop*, pp. 101-8; Doonan, 'Settlement', pp. 45-51.
[808] Doonan, *Sinop*, pp. 102-3, 156-7.

century).[809] The industrial character of material finds continue into the central area of the valley (for example at sites 97-090, 97-096) where late Roman loci predominate.[810]

To the south of the Demirci valley is Kırkgeçit çayı valley. The majority of loci identified in this valley were late Roman/early Byzantine as well.[811] In the coastal zone of the surveyed portion of land, a probable late Roman town was identified at Çakıroğlu.[812] Further inland are additional settlement traces as well as structures that may have been churches.[813] Continuing into the valley, settlement is more dispersed, but expansion dated to the late Roman/early Byzantine period is discernable.[814] Settlement expansion in this area is attributed to the consolidation of transport routes.[815]

There is evidence for the presence of Roman-late Roman coastal villas on the promontory as well. One example comes from excavations at Çiftlik, *c*. ten km to the south of Sinop, where evidence of a multi-phase late Roman/early Byzantine church, precinct, and nearby structures have been identified. The church appears to have been richly decorated with marble as well as mosaics. The church is thought to have belonged to a villa or estate and may have had a monastic function.[816] At Kiraztepe, approximately three kilometres south of Sinop, the SRAP team identified a 5th century building, a marble column fragment and mosaics, which have been interpreted as the location of a church or villa.[817] Similar material finds were also identified one km north of Kiraztepe suggesting

[809] Doonan, 'Settlement', pp. 47, 51.
[810] Doonan, 'Settlement', pp. 47-9.
[811] Doonan, 'Settlement', p. 52.
[812] Doonan, 'Settlement', p. 53.
[813] Doonan, 'Settlement', p. 55.
[814] Doonan, 'Settlement', pp. 55-6.
[815] Doonan, 'Settlement', pp. 52, 56.
[816] Yearly reports on the work carried out at Çiftlik are available in *Anatolian Archaeology*. S. Hill, 'Rescue excavations at Çiftlik (Sinop)', in R. Matthews (eds), *Ancient Anatolia. Fifty years' work by the British Institute of Archaeology at Ankara* (London, 1998), pp. 285-300; S. Hill, 'The first season of rescue excavation at Çiftlik (Sinop)', *Anatolian Studies*, 45 (1995), pp. 219-31.
[817] Doonan, *Sinop*, p. 101.

a comparative structure of similar date.[818] These finds suggest inhabitants invested in the construction of high quality structures in parts of the promontory.

In contrast to the intense settlement seen in the Demirci valley and the east coast of the promontory, settlement in the west is characterised by dispersed sites.[819] It is likely topography (poor soil) and location (vulnerable to poor weather) played a role in the lack of settlement in the western coastal stretch.[820] Two 6th century sites, Sarsı and Gerna dere, may be exceptions.[821] The site of Gerna dere, where a large building has been uncovered, has been interpreted as a possible church or villa, similar to what has been suggested for the finds from Çiftlik. Ceramics from the site are predominately late Roman/early Byzantine.[822] The presence of other potential ecclesiastical structures has been recorded as well. A church (not dated) has been surveyed in Hacioğlu,[823] and remains of a mosaic at Gelincik (to the west of Sinop) led to the identification of an early Byzantine church.[824] In addition, Doonan of the SRAP team alludes to a 5th/6th century church excavated at Bostancili (which I have not been able to localise on a map).[825] These examples suggest accrued wealth of the inhabitants in the region was directed in part to facilitate the building of churches where evidence of some high-quality material has been identified.

The changes of settlement observed from Hellenistic to Roman and late Roman times for the three major areas surveyed (Boztepe; Demirci valley, coastal, central, inner; and Karasu valley, coast, delta, inner) are illustrated by the SRAP in Table 3 and Table 4 (as of publication in 2004).[826] Site sizes are categorised as follows: small (less than

[818] Ibid.
[819] Doonan, 'Settlement', pp. 56-7; Doonan, *Sinop*, pp. 108-11.
[820] Doonan, *Sinop*, p. 111.
[821] Doonan, 'Settlement', p. 57.
[822] Doonan, *Sinop*, pp. 108-11; O. Doonan, D. Smart, 'Gerna dere, Roman and Byzantine settlement in Sinop province, Turkey', *Talanta*, 32-33 (2000-2001), pp. 17-26.
[823] S. Hill, 'Rescue excavations at Çiftlik', *Anatolian Archaeology*, 1 (1995), p. 3.
[824] S. Hill, 'Çiftlik', *Anatolian Archaeology*, 4 (1998), p. 6.
[825] Doonan, *Sinop*, p. 96.
[826] Doonan, *Sinop*, figs. 7-2, 7-3, pp. 156-7.

0.3ha), medium (0.3-1.0ha), large (1.0-5.0ha), and major (over 5.0ha).[827] According to the SRAP team, cemeteries were analysed separately, but industrial loci were counted along with other sites when considering loci size because of an overlap of material - that is, sites may have had various functions along with production such as domestic or residential use.[828]

As illustrated in Table 3 and Table 4, small and medium size loci appear on the headland of Boztepe in the Roman and late Roman period. The significant increase in settlement in the Demirci valley is striking (the industrial area on the coast was not considered in the compilation of the results).[829] There is an increase in the settlement frequency of all three categories of site in the inner Demirci valley, but the predominance of small loci in the inner valley is the most noticeable, suggesting an increase in agricultural exploitation of previously unsettled land. The increase of settlement in the inner valley may be attributed to the expansion of agricultural production in connection with the industrial zone identified on the coast.[830] SRAP suggest that the inner valley seems to have cultivated natural resources for processing at the coast.[831] Although not as drastic an increase as the evidence for settlement in the inner Demirci in the Roman and late Roman periods, another increase in small-size loci also appears in the inner Karasu valley.

[827] Doonan, *Sinop*, p. 146.
[828] Doonan, *Sinop*, p. 146.
[829] Doonan, *Sinop*, p. 150.
[830] Doonan, *Sinop*, pp. 150-1, 156-7.
[831] Doonan, *Sinop*, pp. 105-8; Doonan, 'Settlement', p. 51.

Sinope: summary

The intensification of settlement in the hinterland of Sinop is directly attributed to the foundation of Constantinople by Doonan.[832] In particular, the development of the interior of the Demirci valley seems to be directly connected with the industrial activity on the coast. The evidence of weights and amphorae production, along with literary references to the virtual exclusivity of olive cultivation around Sinop, seem to corroborate the significance of olive oil production in this area, although the extent of this production remains uncertain (Chapter 6).[833] Amphorae had been produced on Boztepe in the Hellenistic period and have been documented across the Black Sea, but according to survey results as represented in Table 3, the exploitation of agricultural land of the promontory in this period is of a much smaller scale than the subsequent period and is primarily limited to Boztepe and the central Demirci valley.[834] The foundation of Constantinople may be attributed as facilitating the significant increase in the agricultural exploitation on the promontory. An increase in the demand of goods and the establishment of new and/or an intensification of already existing exchange opportunities within the Black Sea area and Mediterranean may have resulted following the foundation of the capital.

Pompeiopolis

In contrast to the wide-reaching surveys conducted at Sinop, the archaeological work at Pompeiopolis was focused on the urban centre of Pompeiopolis itself.[835]

[832] Doonan, 'Settlement', p. 43.
[833] Doonan, *Sinop*, pp. 95, 103, 150-1; Doonan, 'Settlement', pp. 57-8.
[834] Doonan, *Sinop*, pp. 79-81.
[835] For the following, *Pompeiopolis I*. L. Summerer, A. von Kienlin, G. Herdt, 'Frühe Forschungen in Paphlagonien - Neue Grabungen in Pompeiopolis', in Ü. Yalçın (eds), *Anatolian Metal VI* (Bochum, 2013), pp. 257-66; L. Summerer, A. von Kienlin, 'Pompeiopolis. The metropolis of Paphlagonia', in H. Bru, G.

Geophysical prospection was the fundamental research method employed to study the sub-surface landscape of the city. Targeted excavation was subsequently conducted at particular locations in order to shed further light on the results of the sub-surface readings to determine the potential functions of structures. In addition, there was some exploration of the region surrounding Pompeiopolis, which has also brought to light scattered architectural remains and loci of potential ancient occupation/activity.

Results of five years archaeological work carried out at Pompeiopolis so far suggest that Pompeiopolis underwent a period of urbanisation that reached a peak in the 2nd century.[836] The archaeologists postulate that this period of notable building activity may have been partly facilitated by one Claudius Geneus Severus, who was son-in law to Marcus Aurelius and honoured many times in the city.[837]

Pompeiopolis was furnished with buildings including a public area, macellum, a monumental building of basilical plan (of uncertain function although it has been suggested it may have been a cult building later used as a church), baths, a possible gymnasium, a villa, and two semi-circular shaped structures (presumably meeting places).[838] According to Lâtife Summerer, Pompeiopolis also experienced a second building phase around AD 400 as evidence for renovations in some structures suggest, for example, at the macellum and the excavated urban villa, which is thought to have been in use until the 7th century.[839] It has been argued that the relatively high-quality building activity of the Imperial period continued in Late Antiquity with buildings with marble and well-decorated residential structures.[840]

Labarre (eds), *L'Anatolie des peuples, des cités et des cultures (II^e millénaire av. J.-C.-V^e siècle ap. J.-C.)* (2 vols, Besançon, 2013), ii, pp. 115-26.

[836] L. Summerer, 'Pompeiopolis. Eine Zwischenbilanz aus der Metropole Paphlagoniens nach fünf Kampagnen (2006-2010)', in *Pompeiopolis I,* p. 3; Summerer, *et al*., 'Forschungen', p. 263.

[837] Summerer, *et al*., 'Forschungen', p. 263; Summerer, von Keinlin, 'Metropolis', ii, p. 122.

[838] Summerer, von Keinlin, 'Metropolis', ii, pp. 117-22. See individual contributions in *Pompeiopolis I*.

[839] Summerer, 'Zwischenbilanz', p. 11; Summerer, von Keinlin, 'Metropolis', ii, p. 122.

[840] A. von Kienlin, 'Topographie und bauliche Entwicklung in Pompeiopolis', in *Pompeiopolis I,* pp. 217, 223-4.

Some of the buildings that have been more closely examined show continued use and maintenance into the early Byzantine period. These include the aforementioned monumental structure where a hanging candelabra (sondage B5) was recovered, indicating use of the building into the 6th/7th century.[841] The macellum of the city, equipped with an octagonal tholos, is thought to have been erected in the 2nd or 3rd century, renovated in the 6th and used until the 7th century.[842] There are also indications of building phases dated to the late Roman to early Byzantine period at the bath on the western foot of the hill when the building is thought to have been repurposed for residential use.[843] The city was possibly fortified in the late antique period as well.[844]

Based on the research so far conducted, there are no confirmed churches identified in the city of Pompeiopolis, although some architectural pieces of evidence may point to their presence, but these elements may not derive from religious structures.[845] A more recent paper authored by Summerer and others mentions an additional building oriented to the east as being interpreted as a possible church, but the function and date of the structure remains uncertain.[846] Reference has also been made elsewhere to two 6th-century churches in Pompeiopolis, but it is unclear to which structures the author is referring.[847]

Information concerning settlement in the territory of Pompeiopolis is unfortunately rather haphazard and ambiguities in dating plague an attempt at discerning a detailed interpretation of settlement development between the 4th and 7th centuries. The results of surveys suggest that although there are variations in settlement trends in the landscape, the Roman period was a time of notable activity in the landscape of

[841] K. Müller, 'Der Grossbau auf dem Stadthügel von Pompeiopolis', in *Pompeiopolis I*, p. 33.
[842] Summerer, von Keinlin, 'Metropolis', ii, p. 122.
[843] Ibid.
[844] von Kienlin, 'Topographie', pp. 217-18; M. Ritter, 'The end of late antiquity in Paphlagonia: disurbanisation from a comparative perspective', in *Landscape dynamics*, p. 123.
[845] von Kienlin, 'Topographie', pp. 217, 221; Summerer, von Keinlin, 'Metropolis', ii, p. 120.
[846] Summerer, *et al*., 'Forschungen', pp. 262, 264.
[847] Ritter, 'The end', p. 123.

Pompeiopolis.[848] It is interesting to note that the highest density of Roman settlement was located near Pompeiopolis.[849] Some sites display late Roman evidence or occupation, such as at Harmanyeri/Sivritepe, Aşıra and along the Aşağıçayı.[850] The site of Saraycık Dağı is described as 'a probable Roman and late Roman site'.[851] Additional sites have remains dated to or may have been occupied in medieval or Byzantine times, but a lack of further chronological detail makes it difficult to ascertain the exact centuries of occupation at these locations.[852] The date of the abandonment of the rural site of Yeniköy, where a possible church has been identified, was initially thought to be medieval but has been revised to the 7th century.[853] The largest Roman site near Kese in the Alisaray area encompassed a late Roman church, remains of a bath building and nearby burials.[854] Beyond this information, additional surveys in the territory around Pompeiopolis have revealed scattered architectural remains which are described broadly as Roman Imperial or Byzantine without greater dating resolution.[855]

Pompeiopolis: ceramics

Ceramics so far identified across Pompeiopolis range in date from the late 1st century BC to the early 7th century, and are dominated by early and late Roman finds.[856] Unfortunately, little information on the coarse wares so far recovered at Pompeiopolis is available, but fine and semi-fine wares have been preliminarily analysed. Of the late

[848] P. Johnson, 'How did the landscape of Pompeiopolis become Roman?', in *Landscape dynamics*, pp. 70-6.
[849] Johnson, 'Landscape', p. 74.
[850] Johnson, 'Landscape', pp. 78-80.
[851] P. Johnson, 'Topographies of urbanization: survey in and around Pompeiopolis', in *Pompeiopolis I*, p. 198.
[852] Johnson, 'Topographies', pp. 197-8, 200.
[853] Johnson, 'Landscape', p. 74; Johnson, 'Topographies', pp. 199-200.
[854] Johnson, 'Landscape', p. 78.
[855] U. Kunnert, 'Archäologische Funde und Befunde in den Territorien von Pompeiopolis und Abonuteichos-Ionopolis', in *Pompeiopolis I*, pp. 207-14.
[856] K. Domzalski, 'Late Roman pottery from Pompeiopolis', in *Pompeiopolis I*, p. 164.

Roman fine and semi-fine wares considered for study, Krzysztof Domzalski states that only 270 sherds were imported (belonging to Pontic Red Slip, African Red Slip and Late Roman C/Phocaean Red Slip wares), while the majority of finds (1050 fragments) can be divided into two locally or regionally manufactured groups.[857] There seems to be an even lower presence of imported late Roman fine and semi-fine wares in comparison to the earlier Roman period, when Pontic Sigillata (production centre unknown) dominate the assemblage (sigillata from the Aegean are few).[858] According to Max Ritter's account of Pompeiopolitan table wares, there is a slight increase in imported ware in the 6th century.[859]

Finds of late Roman amphorae are only described as 'rather moderate'.[860] Domzalski only refers to a Sinopean pinkish clay amphora (6th century).[861] Yet pinkish clay amphorae are thought to have been in circulation in the Hellenistic period, and the pinkish clay amphorae that are associated with Sinopean clay are attributed to the 3rd century AD.[862] Therefore, the dating of such an amphora to the 6th century by Domzalski may reflect long term use of a particular vessel. As there is little information given regarding this find, however, this remains speculation. Adding to the discussion of Pompeiopolis' pottery, Ritter states that 'there are amphorae, but, surprisingly, almost none from Heraclea and Sinope; instead Levantine types make up the lion's share.'[863] A lack of information precludes conclusive remarks concerning the amphorae assemblage of Pompeiopolis and by extension, the city's potential exchange connections, but an apparent dearth of northern Anatolian amphorae at Pompeiopolis is certainly remarkable.

[857] Domzalski, 'Pottery', p. 164.
[858] Domzalski considers Pontic wares as imports, Domzalski, 'Pottery', p. 164; D. Zhuravlev, 'Early Roman fine ware from Pompeiopolis', in *Pompeiopolis I*, pp. 149, 153-4.
[859] Ritter, 'The end', p. 123.
[860] Domzalski, 'Pottery', p. 168.
[861] Ibid.
[862] Erten, *et al*., 'Amphorae', pp. 103-4.
[863] Ritter, 'The end', p. 123.

This then raises the question of whether or not coastal goods, such as oil, wine or fish products arrived to Pompeiopolis in perishable containers, such as barrels and skins, and that this supply may have been supplemented by Levantine imports detectable in the archaeological record. There is too little information to remark on the amphorae of Pompeiopolis, but the apparent presence of Levantine vessels suggests the city received imported goods from distant sources, and by extension, connectivity to the Black Sea coast from where these vessels likely travelled inland. However, the degree to which this exchange took place remains uncertain due to a lack of quantified evidence.

Pompeiopolis: summary

Evidence suggests that Pompeiopolis underwent a period of significant development in the Imperial period, resulting in the city obtaining an urban character. Excavation conducted so far at the site indicates that some of buildings were maintained and remained in use in the late Roman period. However, as excavation has been limited to a select number of structures it is difficult to quantify late Roman building activity in the urban centre. A lack of detailed dating hinders our ability to discern whether or not and in what capacity settlements in the territory of Pompeiopolis were inhabited between the 4th and 7th centuries. Nevertheless, we may be able to gain some insight into rural settlement in the late Roman period, keeping in mind evidence comes from a limited sample.

In his discussion of the site of Yeniköy, Peri Johnson states ‘the late Roman period remains a period of prosperity in the rural landscape, and settlement density continues to be high, but, considering the surface artefacts at Yeniköy, we can propose a movement away from investment in mortar and rubble domestic architecture in rural settlements’, implying a dominance of wood and mud-brick building material at this

time.[864] It is not clear how far reaching such a statement applies to the general territory of Pompeiopolis. A church was identified at Yeniköy, presumably built before the 7th century when the site is now thought to have been abandoned (but it is not explicitly dated), which suggests that there was investment in church building in the countryside. From the limited evidence available, it would seem that the development of the city centre may have facilitated a reciprocal increase in settlement in the surrounding territory from the Roman period onwards, but more detailed information of Pompeiopolis and its territory from the 4th to 7th centuries remains ambiguous.

Neoclaudiopolis

The city of Neoclaudiopolis is located approximately 100km inland from the Black Sea coast.[865] Research of Neoclaudiopolis is still in its preliminary stages. Debate over the identification of Vezirköprü with Neapolis-Neoklaudiopolis-Andrapa (the attested different names of the city) has been resolved only recently.[866] Archaeological remains of Neoclaudiopolis are limited to scattered finds identified in the modern city and surrounding area.[867] Research has largely focused on the epigraphy and road systems of the region and any attempt to gain insight on the development of the city and its buildings are largely determined by attestations in the epigraphic record. Tønnes Bekker-Nielsen argues that Neoclaudiopolis may have been furnished with buildings associated with the imperial cult, temples, a possible guest-house referred to in a 4th century (?) inscription,

[864] Johnson, 'Landscape', p. 74.
[865] K. Winther-Jacobsen, 'Contextualising Neoklaudiopolis: a glimpse at settlement dynamics in the city's hinterland', in *Landscape dynamics*, p. 83.
[866] For extensive discussion on the debate, T. Bekker-Nielson, '350 years of research on Neoklaudiopolis (Vezirköprü)', *Orbis terrarum*, 11 (2012-2013), pp. 3-31.
[867] T. Bekker-Nielsen, 'Neapolis-Neoklaudiopolis: a Roman city in northern Anatolia', in Ü. Yalçın (eds), *Anatolian Metal VI* (Bochum, 2013), pp. 207-11.

and less securely, a theatre or meeting place, gymnasium and baths, although the locations of these buildings are unknown.[868]

Various pieces of evidence point to rural settlement and churches having been located around Neoclaudiopolis.[869] Georesistivity readings conducted to the north of Neoclaudiopolis revealed an east-west oriented cruciform building alongside a square building with a hexagonal structure located within it. To the northeast of this complex, two further structures were identified. Based on these finds and associated pottery, this site known as 'Papaz Tarlası' has been interpreted as a late Roman martyrium church.[870] Another site lying approximately six km to the south of Neoclaudiopolis has been preliminary identified as a 'small rural church associated with habitation'.[871] Finally, a boundary stone dated to AD 491-518 describes the area of the church of the Virgin Mary, which may be interpreted as indicating another church in the surrounding area of Neoclaudiopolis, thus bringing the total of possible churches to three.[872] Over the course of limited survey, two further settlement sites have also been identified in the area: the 'Tepeören settlement system' is comprised of a cluster of loci which is thought to have had various phases of occupation over a long chronological range (some Roman pottery has been identified as Pontic Red Slip and Pontic Sigillata), and the 'Tepeören-Merzifon Road settlement' is an unfortified village of uncertain date.[873] Although limited, evidence suggests rural settlement equipped with churches and possibly occupied in the late Roman period, was a feature in Neoclaudiopolis' territory.

[868] Bekker-Nielsen, 'Neapolis-Neoklaudiopolis', pp. 210-11.
[869] For the most recent discussion of the following, K. Winther-Jacobsen, 'Contextualising', pp. 83-99.
[870] Bekker-Nielsen, 'Neapolis-Neoklaudiopolis', p. 211; Winther-Jacobsen, 'Contextualising', pp. 85-9.
[871] Winther-Jacobsen, 'Contextualising', pp. 92-4.
[872] S. Lund Sørensen, *Between kingdom and* koinon. *Neapolis/Neoklaudiopolis and the Pontic cities* (Stuttgart, 2016), pp. 99, 101. A cathedral located within the city is alluded to by Bekker-Nielson, but it appears this is conjecture based on architectural remains in the city and the presumed presence of a church here, Bekker-Nielsen, 'Neapolis-Neoklaudiopolis', p. 212.
[873] Winther-Jacobsen, 'Contextualising', pp. 94-6.

Euchaita[874]

A minor settlement, Euchaita/Avkat, modern Beyözü village was reputed to be a cult site of Saint Theodore the Recruit in the 4th century. Anastasius elevated Euchaita to a city at which point the settlement was walled and endowed with a bishop. The site functioned as a military base in the 7th century and continued to be occupied in later centuries.[875]

The results of the first phase of research at Avkat show that the majority of architectural elements and epigraphic material date to the Late Roman period, but the greater density of ceramics belongs to subsequent centuries.[876] Some of the remains identified in the village include defensive structures at Kale Tepe, the circuit of the 6th century wall, what may be the city's main gate, and the location of a possible church.[877] Scattered architectural features identified (including impost capitals, chancel screen posts, and Proconnesian marble pieces) point to a church located to the south of the village.[878] It is suspected that the results of remote sensing analysis indicate a later church overlying a late Roman church building.[879] There may be a second church as well - there are two historically attested churches in the area, one being the church and martyrium of Saint

[874] The various unpublished archaeological reports can be found at the project's website: 'The Euchaita/Avkat Project. An interdisciplinary and international co-operative project', https://history.princeton.edu/centers-programs/center-collaborative-history/special-projects/avkat (10 July 2017). Reports of the individual survey seasons can be found in *Anatolian Archaeology*.
[875] H. Elton, J. Haldon, J. Newhard, S. Lockwood, 'Avkat Archaeological Project, 2007-2008', *AST*, 27.3 (2009), pp. 29-30; J. Haldon, H. Elton, J. Newhard, 'The Avkat Archaeological Project', *Anatolian Archaeology*, 14 (2008), p. 18.
[876] J. Haldon, H. Elton, J. Newhard, 'The Avkat Archaeological Project 2010', *Anatolian Archaeology*, 16 (2010), p. 17.
[877] Elton, *et al*., 'Avkat 2007-2008', pp. 34-6; Haldon, *et al*., 'Avkat 2010', p. 16.
[878] Elton, *et al*., 'Avkat 2007-2008', pp. 34-5; P. Bikoulis, H. Elton, J. Haldon, J. Newhard, 'Above as below: the application of multiple survey techniques at a Byzantine church at Avkat', in *Landscape dynamics*, pp. 101-4.
[879] Elton, *et al*., 'Avkat 2007-2008', p. 34; Bikoulis, *et al*., 'Above as below', pp. 106-8.

Theodore, the second being the church of Saint Stephen suspected to be at the spot of the village mosque.[880]

Over the course of the surveys conducted, a picture of the settlement surrounding Beyözü has emerged revealing several loci of potential occupation and a hinterland characterised by nucleated settlements and distributed farmsteads.[881] In terms of the agricultural production in this territory, it has been argued by the archaeological team that the area may have been involved predominately in cereal production and to a lesser degree vine cultivation, and there does not appear to be evidence that suggests olive cultivation.[882]

The marked change in the settlement character of Euchaita in the late Roman period from the 6th century onward can be attributed to imperial intervention likely subsequently sustained by military and cultic activity.[883] Before this time, however, Euchaita was an average rural settlement perhaps dependent on cultic activity and local networks for its economic base. Only after *c*. the 5th and 6th century does Euchaita display characteristics of a central regional settlement in comparison to those around it.[884]

Interestingly, in terms of transport vessels, LR amphorae were identified.[885] The presence of what seem to be examples of small amphorae that resemble LR3 were discovered. One example had fabric reminiscent of the Ephesus region, a second displayed a different fabric with origins possibly from Pergamon or the Black Sea (not further localised).[886] Overall, some vessels were from western Asia Minor, the Black Sea zone or even of local manufacture.[887] As these amphorae have a low capacity

[880] Elton, *et al*., 'Avkat 2007-2008', p. 34; Haldon, *et al*., 'Avkat', p. 19; Haldon, *et al*., 'Avkat 2009', p. 17.
[881] Haldon, *et al*., 'Avkat', p. 20; Anderson, 'Paphlagonia', pp. 52-62; Elton, *et al*., 'Avkat 2007-2008', pp. 37-8; Haldon, *et al*., 'Avkat 2009', p. 18.
[882] Elton, *et al*., 'Avkat 2007-2008', p. 43-4; Haldon, *et al*., 'Avkat 2009', p. 18.
[883] Haldon, *et al*., 'Avkat 2010', p. 17; Anderson, 'Paphlagonia', p. 61.
[884] Elton, *et al*., 'Avkat 2007-2008', p. 44; Haldon, *et al*., 'Avkat 2010', p. 16.
[885] Elton, *et al*., 'Avkat 2007-2008', p. 40.
[886] Elton, *et al*., 'Avkat 2007-2008', pp. 40-1.
[887] Haldon, *et al*., 'Avkat 2009', p. 18; Anderson, 'Paphlagonia', pp. 117-18.

(approximately one litre), they have been interpreted as possibly containing specialised products or being indicative of small-scale redistribution.[888] The small capacity of these vessels is remarkable and their presence at Euchaita is likewise notable as they do not feature in the assemblages of other north central Anatolian sites based on the information currently available. This raises the question of whether these vessels had a particular importance at the site, perhaps their content was associated with a religious/cultic function. If the area was predominantly involved in cereal production, imports of wine and oil would likely have been necessary and needed in order to meet the demands for such products for cultic practice. Larger quantities of staple goods may have been imported in larger capacity perishable containers as well.[889]

Project Paphlagonia

The Project Paphlagonia survey (Figure 38) was conducted between 1997 and 2001 in the province of modern Çankırı and two additional sub-provinces, Eskipazar and Ovacık (which have been annexed to the new province of Karabük).[890] The total area of the Project Paphlagonia survey incorporated 8,454km^2 and employed both extensive and intensive survey techniques.[891] The project area encompassed a variety of landscapes, including the North Anatolian Fault Zone that runs east-west in the survey zone, which essentially divides the survey area (the North Anatolia Fault Zone is south of the Pontic mountains).[892]

[888] Haldon, *et al*., 'Avkat 2009', p. 18; Anderson, 'Paphlagonia', pp. 115, 118; Elton, *et al*., 'Avkat 2007-2008', p. 41.
[889] Anderson, 'Paphlagonia', p. 117.
[890] Matthews, 'Methods,', p. 13.
[891] Matthews, 'Methods', pp. 12-25.
[892] B. Marsh, N. Roberts, V. Toprak, R. Matthews, W. Eastwood, J. Carolan, A. Arcasoy, M. L. Süzen, 'Contexts of human interaction: geology, geography, geomorphology and environment', in R. Matthews, C. Glatz (eds), *At Empires' edge: Project Paphlagonia. Regional Survey in north-central Turkey* (London, 2009), p. 27; Matthews, 'Methods', p. 3.

After gathering information concerning possible locations of interest for survey from local inhabitants, the team visited the loci and recorded any remains.[893] Over the course of extensive survey, 261 archaeological sites were recorded, although given the vast size of the project area, this number represents only a small sample of possible sites in the territory.[894] Following extensive survey seasons, intensive survey was conducted in ten selected areas.[895] The selection of areas to be intensively surveyed was based on geographic features (areas with diverse landscapes were preferred), the results of extensive survey, and practical reasons (viable terrain).[896] In addition to the 261 sites identified in the course of extensive survey seasons, 76 additional sites were identified through intensive survey.[897] It is important to note that given the extensive size of the project area and the extensive nature of the survey, the project ought to be understood as providing only a cursory sample of the development of this inland territory. Nevertheless, a preliminary understanding of the late antique settlement of the area may be discerned. The results of this survey project are also the focus of Anderson's 2011 unpublished PhD thesis, which I have also consulted.[898] Utilising published and unpublished material from the survey database, Anderson analyzes the late Roman development of the project area as well.[899]

According to the results of the Project Paphlagonia survey work, Roman period (6/5 BC-AD 285) settlement of inner Paphlagonia is characterised by an increase in site density and distribution across the survey region alongside the expansion of rural settlement and the exploitation of arable land. These developments are attributed to the

[893] Matthews, 'Methods', pp. 13-14.
[894] Matthews, 'Methods', p. 16.
[895] Ibid.
[896] Matthews, 'Methods', pp. 16-18.
[897] Matthews, 'Methods', p. 21.
[898] He also analyzes the results of the Avkat Archaeological Project, which he was involved with and studied the ceramics in 2008 and 2009, Anderson, 'Paphlagonia', p. xv.
[899] Anderson, 'Paphlagonia', pp. xv, 40.

impact of the *pax Romana*, thought to have brought a time of peace and security to the region leading to the development of a settlement hierarchy.[900] Unfortunately, for the late Roman and Byzantine periods (defined as the very broad period AD 285-1453) difficulties distinguishing between Roman and Byzantine evidence renders an interpretation of developments in rural settlement very difficult and are described in only vague terms based on the comparative development of other regions of Anatolia.[901] According to literary sources, Roman cities/towns in Paphlagonia apparently continued from the 2nd to the 6th century.[902] For rural settlement, based on evidence from elsewhere in Anatolia, the project team suggests a 'rural resilience' until AD 700, but 'there does appear to be a fall in settlement spread and hierarchy occurring at some stage during the Byzantine era'.[903] When this development occurs is not clear, although fortified sites in the survey area are dated between AD 700-1200 and are thought to be a response to regional insecurities, beginning with the Arab invasions.[904]

Architectural fragments that may have once belonged to church buildings have been identified in many villages that had been explored over the course of survey according to a preliminary publication of survey results (1998).[905] Other sites with possible religious remains are also included in the project's published site catalogue (2009), but again dating of these remains is vague. Examples include: (PS010)- rock-cut chapel and tombs BYZ; (PS118)- church? ROM/BYZ; (PS165)- church? BYZ; (PS196)- monastery? BYZ; (PS233)- church BYZ; (Bülükören 01S01)- church LROM, BYZ;

[900] Matthews, *et al*., 'Landscapes with figures', pp. 178-9, 189; R. Matthews, C. Glatz, 'People and place in Paphlagonia: trends and patterns in settlement through time', in R. Matthews, C. Glatz (eds), *At Empires' edge: Project Paphlagonia. Regional Survey in north-central Turkey* (London, 2009), p. 247; R. Matthews, T. Pollard, M. Ramage, 'Project Paphlagonia: regional survey in northern Anatolia', in R. Matthews (eds), *Ancient Anatolia. Fifty years' work by the British Institute of Archaeology at Ankara* (London, 1998), p. 203.
[901] Matthews, *et al*., 'Landscapes with figures', pp. 191-3.
[902] Matthews, *et al*., 'Landscapes with figures', p. 191.
[903] Matthews, *et al*., 'Landscapes with figures', p. 193.
[904] Matthews, *et al*., 'Landscapes with figures', pp. 190, 196; Matthews, Glatz, 'People and place', p. 248.
[905] Matthews, *et al*., 'Project Paphlagonia', p. 205. Also, Matthews, *et al*., 'Landscapes with figures', p. 194.

(Salur 03 S01)- rock-cut tombs, chapel BYZ.[906] To this list Anderson includes possible churches and Christian remains such as: at Kilise Mevkii (PS079);[907] Beymelik (PS070); Eldivan (PS186); Bölükören (PS087);[908] Sakalın or Sakaeli village (PS042);[909] Eldivan (01 S01);[910] site (PS049); site (PS117);[911] and Çerkeş (PS070),[912] for example. If these features belong to the late Roman period, then it may be tentatively concluded that inhabitants funded potentially high-quality buildings as the architectural features found display good-quality carving.[913] As evidence for churches is piecemeal and scattered throughout the region, it is difficult to discern their relationship to urban/rural settlements.

The survey results summarised by the archaeological team are presented in Table 5, Table 6 and Table 7.[914] Table 8 and Table 9 explain the categorization of sites.[915] Table 6 illustrates an increase in virtually all categories of site in the Roman-Byzantine period from the preceding period. It is important to note that there is no distinction between Roman and Byzantine sites, so the resolution of late Roman settlement is blurred. On interpreting the evidence of the Roman to Byzantine periods the Project Paphlagonia team state:

> Similarly, the large number of settlements (58 in total) dated to the Roman/Byzantine period has to be viewed in the light of the chronological span of this phase. With the exception of nine, for the most part, very large sites, the vast majority (84%) of late Roman/Byzantine settlements did not yield evidence for Roman occupation. During the late Roman/Byzantine periods the aggregate settlement area is mainly constituted by small sites measuring less than 1ha, rather than the large towns that were typical for the Hellenistic and Roman periods. Thus, although more settlement sites have been dated to the late Roman/Byzantine

[906] R. Matthews, C. Glatz, (eds), 'Project Paphlagonia: site catalogue', in *At Empires' edge: Project Paphlagonia. Regional Survey in north-central Turkey* (London, 2009), pp. 251-60. Chronological terms: ROM- Roman; LROM- Late Roman; BYZ, Byzantine.
[907] Anderson, 'Paphlagonia', p. 85.
[908] Anderson, 'Paphlagonia', p. 87, see entry for Bülükören above.
[909] Anderson, 'Paphlagonia', p. 173.
[910] It is not clear how this site relates to Eldivan (PS 186), Anderson, 'Paphlagonia', p. 178.
[911] Anderson, 'Paphlagonia', p. 202.
[912] Anderson, 'Paphlagonia', p. 206.
[913] Matthews, *et al*., 'Project Paphlagonia', p. 205.
[914] Matthews, Glatz, 'People and place', figs. 8.1, 8.2, 8.3, pp. 240-1.
[915] Matthews, 'Methods', tables 1.2, 1.3, pp. 24-5.

> phase than to any other, aggregate site area drops below that of the Roman period, which again points to a rather different mode of settlement.[916]

It would seem that settlements of smaller size characterise the late Roman/Byzantine period rather than the larger settlement in earlier centuries.[917]

Changes in settlement from the early to late Roman period are further elucidated by Anderson. From a sample of 63 sites comprised of 42 with Roman remains and 21 with Byzantine or later, Anderson found that the largest percentage of sites (62%) measured less than 1ha, followed by sites measuring 1-4ha (small villages/hamlets, 22% of the total), then by sites that are larger than 4ha (large villages or towns, 16% of the sample).[918] He also found that in contrast to the early Roman period when site numbers are more evenly distributed across the hierarchy of small, medium and large sizes, the hierarchy of settlement size changes in the later Roman period. That is, there is an increase in sites of smaller size (farmsteads) and larger sites (large villages).[919] These two phenomena suggest nucleation and growth of large villages and an increase in agricultural exploitation and expansion to newly settled land in the late Roman period.[920]

Project Paphlagonia: ceramics

Just as there are changes in the composition of settlement patterns from the early to later Roman period, the same appears to be true concerning the datable pottery assemblage recovered.[921] Late Roman table ware are more dispersed than in earlier centuries, but amount to lower numbers in the overall assemblage and are predominately

[916] Matthews, Glatz, 'People and place', p. 242.
[917] Anderson, 'Paphlagonia', p. 49; Matthews, *et al*., 'Project Paphlagonia', p. 203.
[918] Anderson, 'Paphlagonia', pp. 167-8.
[919] Anderson, 'Paphlagonia', pp. 168-9.
[920] Anderson, 'Paphlagonia', pp. 168-72.
[921] On ceramics, Anderson, 'Paphlagonia', pp. 97-127.

found in local fabric.[922] African Red Slip Ware and Cypriot Red Slip Ware (LRD) are found in only small quantities and there may be examples of Pontic Red Slip Ware but categorising this form, in terms of whether or not it is a local product is ambiguous.[923] Imports have been identified mostly at urban locations.[924]

To analyse further changes in the assemblage, Anderson selected a sample of 399 sherds from 25 villages and farmsteads.[925] The sample was composed of sherds that could be identified relatively securely, and did not include tiles or non-pottery fragments.[926] Although a small sample of sherds were considered, he found that table ware are found in greater quantities at early Roman sites, whereas the presence of table ware decreases at late Roman sites, when closed/cooking vessels are the dominant type.[927] When storage vessels and closed/cooking vessels are combined, they account for 69% of the late Roman sample assemblage.[928] These results have led Anderson to argue for a shift from a more connected and consumptive trend in the pottery of the early Roman period, to one that was dominated by agricultural cultivation, storage and self-sufficient local/regional production in later centuries (see below).[929]

From what can be discerned in terms of amphorae finds from inner Paphlagonia, some imported types have been identified including Black Sea types and notably, LR1 and LR3 (origins from Ephesus) sherds although they are rare finds.[930] Of course, goods may have travelled from abroad to inner Paphlagonia in perishable containers.[931] Anderson argues that amphorae may have arrived to the region indirectly and not

[922] Anderson, 'Paphlagonia', p. 107.
[923] Anderson, 'Paphlagonia', pp. 108-9.
[924] Anderson, 'Paphlagonia', p. 109.
[925] Anderson, 'Paphlagonia', p. 174.
[926] Ibid.
[927] Anderson, 'Paphlagonia', p. 175.
[928] Ibid.
[929] Anderson, 'Paphlagonia', pp. 175-7.
[930] Anderson, 'Paphlagonia', p. 115.
[931] Anderson, 'Paphlagonia', p. 117.

necessarily through direct economic exchange.[932] On the one hand, the apparent rarity of Mediterranean amphorae finds in inner Paphlagonia might suggest that connectivity to the coast, from where such vessels would have likely come, was minimal. Anderson has interpreted this evidence as indicating a disconnect between Paphlagonia and wider Black Sea/Mediterranean exchange links (see below).[933] On the other hand, goods may have been transferred out of amphorae and into more perishable materials at coastal sites in order to ease the transport of commodities inland, which may account for the low figures of amphorae finds. It is also possible that goods were sourced from further inland, again, via perishable materials. Therefore, the amphora finds in the assemblage of inner Paphlagonia may be providing only a small glimpse of coastal/inland exchange. The bigger picture of exchange may not be easily detectable in the archaeological record thus skewing our interpretation of the degree of connectivity between inland and coastal sub-regions.

Project Paphlagonia: summary

Based on the evidence of changes in settlement and pottery types to more local/regional table wares and closed/cooking and storage vessels in the late Roman period, Anderson has argued that this may indicate an increase in agriculturally-oriented production, one he interprets as revealing self-sufficient production aimed at local/regional networks as opposed to outward market demands and influences.[934] This hypothesis appears to be strengthened by the predominance of local/regional table wares and few imports in the late Roman period, which might suggest a greater disconnect

[932] Ibid.
[933] Anderson, 'Paphlagonia', pp. 115-19.
[934] Anderson, 'Paphlagonia', pp. 175-7, 189-92.

between inner Paphlagonia and the Black Sea coast, and by extension wider Black Sea or Mediterranean exchange systems.[935] Interpreted in this way, the combination of this evidence suggests a greater regionalisation of inner Paphlagonia in the late Roman period. However, as stated above, the degree of exchange between inland and coastal areas is difficult to quantify based on the types of archaeological evidence available. If the economy of inner Paphlagonia was characterised by a closed system, one that was limited to local exchange, can the increase in small loci in the Roman-late antique period be explained by local stimulus alone? The results of additional study within the region of inner Paphlagonia at Hadrianopolis may shed further light on the economy of this inland territory.

Hadrianopolis

Within the area of the Project Paphlagonia survey, further concentrated archaeological work has been undertaken at Hadrianopolis (located three km west of modern Eskipazar) and surrounding territory under the direction of Ergün Laflı beginning with survey in 2005 (Figure 39).[936] Subsequent excavations have shed further light on the development of the city. As stated above, the scholars working at Hadrianopolis have compiled and published what is one of the first comprehensive ceramic catalogues for a northern Anatolian settlement.[937] An analysis of both the ceramic study and architectural remains of the city may help to refine our understanding of the development of an inland region and may shed further light on the economic networks of interior north central Anatolian settlement.

[935] Anderson, 'Paphlagonia', pp. 87-8, 115-19.
[936] Matthews, *et al*., 'Landscapes with figures', p. 182; E. Laflı, A. Zäh, 'Archäologische Forschungen im byzantinischen Hadrianupolis in Paphlagonien', *Byzantinische Zeitschrift*, 101.2 (2008), p. 681.
[937] Laflı, Kan Şahin, *Hadrianopolis III*.

It is important to note that, at times, the ceramics presented in the publication are described as coming from Hadrianopolis and from southwestern Paphlagonia interchangeably sometimes causing confusion as to whether the authors are making a statement about pottery for the region in general or Hadrianopolis and its *chora* specifically.[938] The chronological categorisation of inner Paphlagonian pottery are given as: Roman, 1st- mid-3rd century; and late Roman-early Byzantine, late 5th- mid-8th century (there is a gap in the ceramic record from the mid-3rd-5th century at Hadrianopolis and elsewhere for unknown reasons).[939]

Only approximately 2% of the total of Roman fine wares were identified as imports (including Eastern Sigillata A, African Red Slip and Pontic Red Slip Ware).[940] There seems to have been local manufacture of fine wares in the early Roman period, but the exact location of this production is not yet known.[941] Fewer examples of Red Slip Ware dated to the 5th and 6th centuries were identified than sigillata of earlier centuries. Red Slip Ware was less well-represented in Hadrianopolis, but was identified more often in the city's vicinity.[942]

Late Roman-early Byzantine (late 4th/early 5th to the mid-8th century) coarse wares were well-represented at Hadrianopolis and findings suggest unsurprisingly that locally manufactured products predominate.[943] Finds of transport vessels were scarce and difficult to identify.[944] It has been suggested that some amphorae were possibly local, although clarification of what is meant by local amphorae and how it was identified is not

[938] The main finds spots for late Roman and early Byzantine pottery were bath 'A' and the domus (villa), but pottery was also collected elsewhere in the city and its territory, Laflı, Kan Şahin, *Hadrianopolis III*, pp. 11-17.
[939] Laflı, Kan Şahin, *Hadrianopolis III*, pp. 17, 434.
[940] Laflı, Kan Şahin, *Hadrianopolis III*, p. 143.
[941] Laflı, Kan Şahin, *Hadrianopolis III*, pp. 143-4, 433-4.
[942] Laflı, Kan Şahin, *Hadrianopolis III*, pp. 143, 434.
[943] Laflı, Kan Şahin, *Hadrianopolis III*, pp. 223-4, 434.
[944] Laflı, Kan Şahin, *Hadrianopolis III*, p. 294.

given.[945] Other examples may be a variation of LR2 type vessels.[946] The ceramic assemblage discussed by Laflı and Kan Şahin therefore reflects the discussion of the ceramics derived from the Project Paphlagonia survey, where imported amphorae (and fine wares) appear to be represented in minimal quantities. Laflı and Kan Şahin too postulate that the transportation of staple goods was done in perishable containers and that the amphorae finds may represent indirect exchange.[947] Thus, Hadrianopolis may not have received amphorae in large quantities from the coast, but may have exchanged goods with coastal centres in perishable materials.

Interestingly, according to preliminary reports concerning the recent research at the site, evidence suggests that Hadrianopolis experienced its most intense period of construction activity in Late Antiquity between the 5th and 7th centuries when the majority of the visible remains date.[948] For the Roman period, evidence is currently limited to 'sepulchral or cultic' type evidence and graves.[949] There is an apparent lack of 2nd, 3rd and 4th century archaeological evidence, the reasons for which remain unknown, although the difficulty in identifying early Roman settlement phases may be due in part to structures being built in wood in this period (perhaps paralleling the rural character of Euchaita in this early period?).[950]

Remains so far identified include: the so-called bath 'A', which is dated to the 5th century (in its last phase the building no longer functioned as a bath, but may have served some sort of industrial or agricultural function);[951] and bath 'B' (function still not

[945] Laflı, Kan Şahin, *Hadrianopolis III*, pp. 223, 435.
[946] Laflı, Kan Şahin, *Hadrianopolis III*, p. 295.
[947] Laflı, Kan Şahin, *Hadrianopolis III*, pp. 295, 435.
[948] Laflı, Zäh, 'Archäologische Forschungen', pp. 681-713; E. Laflı, A. Zäh, 'Beiträge zur frühbyzantinischen profanarchitektur aus Hadrianupolis- Blütezeit unter Kaiser Iustinian I.', *Byzantinische Zeitschrift*, 102.2 (2009), pp. 639-59; E. Laflı, E. Christof, *Hadrianopolis I. Inschriften aus Paphlagonia* (Oxford, 2012), p. 7; Anderson, 'Paphlagonia', pp. 144-50.
[949] Laflı, Kan Şahin, *Hadrianopolis III*, pp. 9, 12.
[950] Laflı, Kan Şahin, *Hadrianopolis III*, p. 9; Laflı, Christof, *Hadrianopolis I*, p. 7.
[951] Laflı, Zäh, 'Archäologische Forschungen', pp. 699-703; Laflı, Zäh, 'Beiträge', pp. 641-5.

confirmed);[952] a 'Bogen-Bau',[953] possibly a theatre (which may be the only Roman period building tentatively suspected to be in the city centre);[954] and early Byzantine residences.[955] An early Byzantine villa is thought to have been built in the first half of the 6th century and used through the 7th century. Apparently, re-used material that is thought to have been from the so-called 'church B' (see below) was incorporated into the last phase of use of the building, but how that impacts the chronology of the church is unclear.[956]

In terms of religious buildings, the aforementioned church 'B', a three-aisled basilica which underwent a series of modifications, is located within the city walls. It is thought to have been in use from the 5th century to *c*. the 8th century, but the dating method for the use of the church is not clear as the different building phases are not explicitly dated in the preliminary report.[957] Another early Byzantine church, the so-called church 'A', lies *extra muros*. Church 'A' is a three-aisled basilica that may have had an associated monastic complex and is thought to have been in use as late as the 8th century based on numismatic evidence.[958] In addition to these buildings there may be a third church, so-called church 'C', based on the find of a building with an eastward oriented apse.[959]

The area surrounding Hadrianopolis may have been rather densely settled.[960] Based on the finds of architectural remains, evidence points to rural churches being present in the countryside of Hadrianopolis as well (for example at Haslı, and possibly at

[952] Laflı, Zäh, 'Beiträge', pp. 653-4; Laflı, Kan Şahin, *Hadrianopolis III*, p. 13.
[953] Laflı, Zäh, 'Beiträge', p. 654.
[954] Ibid.
[955] Laflı, Kan Şahin, *Hadrianopolis III*, pp. 11-12.
[956] Laflı, Zäh, 'Beiträge', pp. 646-52; Anderson, 'Paphlagonia', pp. 154-8.
[957] Laflı, Zäh, 'Archäologische Forschungen', pp. 694-9.
[958] Laflı, Zäh, 'Archäologische Forschungen', pp. 685-90.
[959] Laflı, Zäh, 'Beiträge', p. 654.
[960] Laflı, Zäh, 'Archäologische Forschungen', pp. 706-7; Laflı, Christof, *Hadrianopolis I*, pp. 25-7; Anderson, 'Paphlagonia', pp. 185-9.

Hacıahmetler). Although, the list of rural remains so far published is not extensive and there appears to be a lack of monumental architecture in rural areas.[961]

Why did substantial building activity take shape (or is at least identifiable in the archaeological record) only beginning in the late 5th century and not earlier at Hadrianopolis? How does the evidence of Hadrianopolis fit in with the rest of inner Paphlagonia? How were funds generated for the construction works of the period? Is there evidence that Hadrianopolis may have been connected to wider Black Sea exchange, or only local/regional networks? On this point, two differing opinions prevail. As presented above, the changes in the categories of settlement and pottery finds from early to late Roman times in inner Paphlagonia has led Anderson to argue for a degree of disconnect between this area of the interior and the coast, and by extension wider economic exchange links. On the other hand, Laflı presents a different view of the connectivity between Hadrianopolis and coastal centres, and the role the settlement and its *chora* may have played in local and regional late Roman economies.

It has been argued that, following Hadrianopolis becoming a diocese in the second half of the 5th century, a period of urbanism followed, paralleling the development of settlement expansion in southern Paphlagonia more generally as demonstrated in the finds of the Project Paphlagonia survey.[962] This may be due in part, Laflı argues, to Hadrianopolis' economic connectivity to coastal centres (Sinop, Heraclea Pontica, Amastris, Tieion) on the basis of wine production and exchange.[963] That is, based on the evidence of wine production in the *chora* of Hadrianopolis and possibly in the city centre itself, Laflı argues that wine produced in the area of Hadrianopolis may have filled the

[961] Laflı, Zäh, 'Archäologische Forschungen', pp. 706-11; Laflı, Christof, *Hadrianopolis I*, p. 28.
[962] Laflı, Kan Şahin, *Hadrianopolis III*, p. 9; Laflı, Christof, *Hadrianopolis I*, p. 25
[963] E. Laflı, 'Archäologische Evidenzen zum Weinanbau im südwestlichen Paphlagonien in römischer und frühbyzantinischer Zeit', in E. Olshausen, V. Sauer (eds), *Die Schätze der Erde - Natürliche Ressourcen in der antiken Welt. Stuttgarter Kolloquium zur Historischen Geographie des Altertums 10, 2008* (Stuttgart, 2012), p. 263; Laflı, Kan Şahin, *Hadrianopolis III*, p. 295.

amphorae of coastal centres.[964] The wine produced inland may have been transported to the coast in perishable containers, possibly leather sacks.[965] Within an approximately 20km radius of Hadrianopolis, evidence for vine cultivation and wine production has been identified.[966] The catalogue of press weights amounts to 23 examples found *in situ* and *ex situ*, in and around Hadrianopolis and two examples from further afield.[967] As discussed in Chapter 7, coastal centres of northern Anatolia had been involved in amphorae production over centuries. This raises the question of whether or not an intensification of wine production and exchange can be detected for the late Roman period in particular. The challenges of dating pressing installations is acknowledged, but Laflı argues that based on the evidence of the weights, an increase in production may be dated to the early Byzantine period.[968]

If the transportation of wine produced in the vicinity of Hadrianopolis and other inland regions was taking place in perishable materials then we simply do not have the archaeological evidence to detect this exchange. Therefore, possible scenarios of the transportation of Paphlagonia products to the coast and vice versa can only be conjectural. It does not seem likely that Hadrianopolitan wine was making its way to more eastern coastal centres like Sinop due to issues of distance (*c*. 250km distance between Eskipazar and Sinop direct).[969] Other alternatives would be that the wine was travelling to other coastal centres for transport, but this remains speculative until more archaeological research has been conducted at such locations (see below, Cide-Şenpazar). At this point, any hint of discerning the potential levels of wine production (self-sufficiency or surplus)

[964] Laflı, 'Weinanbau', pp. 263-5.
[965] Laflı, 'Weinanbau', p. 263.
[966] Ibid.
[967] Laflı, 'Weinanbau', pp. 265-9.
[968] Laflı, 'Weinanbau', pp. 270-1. For the opposite opinion, Anderson, 'Paphlagonia', pp. 88, 114.
[969] Google Maps measurement.

is limited to the evidence of presses in the region, which, as the current state of publication stands, is not quantified nor published in detail.

Another factor that may have played a role in Hadrianopolis' late Roman building activity that may be more precisely dated is the potential religious importance the settlement gained in the early Byzantine period. The figure of Saint Alypius the Stylite was apparently active outside of Hadrianopolis (*c.* 522-640).[970] A monastery, convent, and a basilica associated with the saint are attested as having being built.[971] This has led to the conclusion that Hadrianopolis may have gained religious importance in the 6th and 7th centuries.[972] If so, it is possible that a developing cult centre demanding oil/wine facilitated an increase in local production and consumption of the product and may account for an influx of wealth generated from the cult site into the construction activities of the city. However, Laflı and Kan Şahin note that neither *oenochoe* nor *ampullae* were identified in the ceramic assemblage of Hadrianopolis (although there were some early Byzantine unguentaria) and therefore argue that the ceramic assemblage does not reflect the city as being a pilgrimage centre.[973] Nevertheless, a lack of 'pilgrimage' related ceramics does not necessarily preclude cultic activity in the city and surrounding area.

In sum, evidence suggests that substantial construction works occurred in Hadrianopolis in the late antique period. The factors that facilitated this building activity are challenging to discern. Connectivity and the exchange of goods to coastal centres, local exchange and a possible cult site may have played some role in the generation of funds and subsequent building that took place in the city. Although, based on the current

[970] Laflı, Kan Şahin, *Hadrianopolis III*, p. 10; H. Delehaye, *Les Saints Stylites* (Brussels, Paris, 1923), pp. LXXIII-LXXXIV.
[971] Laflı, Kan Şahin, *Hadrianopolis III*, p. 10
[972] Ibid.
[973] Laflı, Kan Şahin, *Hadrianopolis III*, pp. 435-6.

state of evidence, it is difficult to determine the possible impact of each variable in the economy of the city and conclusions must remain tentative.

Cide-Şenpazar

The last location to be discussed is the coastal region, Cide-Şenpazar (Figure 40).[974] The Cide Archaeological Project (CAP) was conducted between 2009-2011 on the northwestern Black Sea coast.[975] Originally meant to explore the pre-and proto-historic periods of the coast and foothills of the Cide region, the survey project subsequently expanded in chronological scope and grew to include the uplands further inland, thus incorporating the region of modern Şenpazar.[976]

The main factor that shaped the methodological approach of the CAP was the landscape and terrain of the survey region. In this area of the Black Sea coast, the Pontic mountains begin to rise not far from the coast, thus limiting the area of coastal plains.[977] The Cide-Şenpazar region (together forming an area of approximately 930km^2) is characterised by rugged terrain and dense vegetation and forest cover, consequently impacting the visibility of remains.[978] Erosion of the land also impacted the survival and accessibility to ancient remains.[979] As modern agricultural practices have subsided in recent years, there are few ploughed fields, which therefore impacted the number of

[974] B. S. Düring, C. Glatz, (eds), *Kinetic landscapes: the Cide Archaeological Project: surveying the Turkish western Black Sea region* (Warsaw, Berlin, 2015).
[975] B. S. Düring, C. Glatz, 'The origins and development of the Cide Archaeological Project', in B. S. Düring, C. Glatz (eds), *Kinetic landscapes: the Cide Archaeological Project: surveying the Turkish western Black Sea region* (Warsaw, Berlin, 2015), pp. 4-6.
[976] Ibid.
[977] B. S. Düring, C. Glatz, 'Remote landscapes in flux- the Cide and Şenpazar region', in B. S. Düring, C. Glatz (eds), *Kinetic landscapes: the Cide Archaeological Project: surveying the Turkish western Black Sea region* (Warsaw, Berlin, 2015), p. 9.
[978] Düring, Glatz, 'Remote landscapes', pp. 9-10; C. Glatz, B. S. Düring, T. C. Wilkinson, B. Gratuze, R. Jones, E. Photos-Jones, V. Klinkenberg, 'Developing an adaptive field methodology for challenging landscapes', in B. S. Düring, C. Glatz (eds), *Kinetic landscapes: the Cide Archaeological Project: surveying the Turkish western Black Sea region* (Warsaw, Berlin, 2015), p. 53.
[979] Düring, Glatz, 'Remote landscapes', pp. 26-31.

suitable areas for survey and the efficacy of fieldwalking.[980] In order to account for these challenges, the methodological approach of the CAP was flexible and altered over time.[981] The field methods employed for the CAP was comprised of four main variables: 'desk-based' analysis that examined source material, maps and data of the area; 'extensive' survey which was comprised of forays into the area by car to discern archaeological features in the landscape; intensive survey of particular areas; and a 're-investigation of concentrations' of evidence which were initially identified during fieldwalking and were revisited for more intensive collection.[982]

The selection of areas chosen for intensive survey was based on accessibility and visibility of material culture as well as the likely location of ancient human occupation and practical reasons (travel time).[983] Interpretation of the finds was predominately based on comparisons to assemblages and examples from elsewhere in Turkey.[984] In many ways, the CAP was conducted in an area that has not been previously investigated in detail and had little reference material for interpreting finds.

Overall, within the approximately 929km^2 project area, a total of 83 recorded sites (sites defined as being clusters or features) were identified - the CAP calculated that on average there was one site per 11km^2 documented. The CAP recognise that this is a lower distribution figure than other Mediterranean projects, but is higher than other extensive survey projects and note that this is in line with other Turkish projects such as at Gordion and Alişar.[985] It is important to note that due to the challenges faced in terms of landscape and practicalities that dictated where survey was possible, the area covered by intensive survey was low as only 3.44km^2 was surveyed intensively, which is 0.4% of the surveyed

[980] Düring, Glatz, 'The origins', p. 4; Glatz, *et al*., 'Developing', p. 60.
[981] Glatz, *et al*., 'Developing', pp. 57-9.
[982] Glatz, *et al*., 'Developing', pp. 68-73, 76-7.
[983] Glatz, *et al*., 'Developing', pp. 60-3.
[984] Glatz, *et al*., 'Developing', pp. 89-92.
[985] Glatz, *et al*., 'Developing', p. 97.

area.[986] When compared to other Mediterranean surveys, the extent of intensive survey by the CAP is much less (the CAP team compare this figure with the Kythera survey, for example, which intensively surveyed 40% of its research territory).[987] Given the challenges and difficulties faced by the CAP team, only a general picture of the development of the Cide-Şenpazar region may be discerned from this project.

Results from the study of the Roman period material suggests that the survey area was 'fairly urbanised and relatively densely occupied during the (Late) Roman period'.[988] The vast majority of find clusters that were identified were located at coastal and near-coastal locations spaced at rather regular intervals (only two examples were found inland approximately 14km and 15km from the coast).[989] The CAP team closely analysed three different survey areas in detail in order to provide a diachronic developmental overview, which illuminates Roman-Byzantine changes in settlement in the Cide landscape.[990]

Evidence from the Okçular valley suggest that settlement expanded in the Roman period. This may have resulted in the increased exploitation of the agricultural land in the valley, which may have been occupied by farmsteads. If the architectural fragments near the modern village of Okçular (*ex situ*) identified indeed come from what was once a church, this evidence alongside Roman and Byzantine pottery may indicate the presence of a village.[991]

---

[986] Ibid.
[987] Ibid.
[988] P. Bes, 'The Cide-Şenpazar region in the Roman period', in B. S. Düring, C. Glatz (eds), *Kinetic landscapes: the Cide Archaeological Project: surveying the Turkish western Black Sea region* (Warsaw, Berlin, 2015), p. 260. See also, Bes, 'Roman-period finds', pp. 23-42.
[989] Bes, 'Roman-period finds', pp. 29-30.
[990] C. Glatz, B. S. Düring, M. Cassis, 'A tale of three Landscapes: Okçular, Abdulkadir, and Çamdibi in long-term perspective', in B. S. Düring, C. Glatz (eds), *Kinetic landscapes: the Cide Archaeological Project: surveying the Turkish western Black Sea region* (Warsaw, Berlin, 2015), pp. 392-433.
[991] Glatz, Düring, Cassis, 'Three Landscapes', pp. 406-11; M. Cassis, 'The Cide-Şenpazar region in the Byzantine period', in B. S. Düring, C. Glatz (eds), *Kinetic landscapes: the Cide Archaeological Project: surveying the Turkish western Black Sea region* (Warsaw, Berlin, 2015), p. 312.

The bay of Gideros and adjacent Abdulkadir valley are interpreted as functioning and developing together. As the importance of Gideros bay grew (the bay is one of the limited number of natural harbours on this coastline), presumably, the need for food and goods increased, which seems to have led to the exploitation of Abdulkadir valley, the nearest potential agricultural source. Traces of early evidence for fortifications on the two promontories that encircle the bay may date to the Roman period. Finds predominately date to the Byzantine period. Potential religious sites have been identified in the vicinity of the valley as well.[992]

Lastly, finds from Çamdibi illustrate the development and intense occupation of an inland area in the late Roman/early Byzantine periods. Based on the evidence of substantial tile scatter, the area was occupied by farmsteads and villages, and architectural fragments suggest the existence of large buildings of late Roman/early Byzantine date. It is also interesting to note that it was in Çamdibi that imported amphorae were identified (see below).[993] These three areas illustrate how, beginning in the Roman period, settlement seems to have expanded in the Cide region.

In terms of religious architecture in the CAP survey area, in addition to the remains that may be indicative of a church at Okçular, further evidence for possible churches or religious remains have been identified.[994] Caves may have been inhabited in the area as well, although their religious use is difficult to determine.[995]

[992] Glatz, Düring, Cassis, 'Three Landscapes', pp. 412-13, 418-24.
[993] Glatz, Düring, Cassis, 'Three Landscapes', p. 431.
[994] Tentatively identified at Kalafat Mezarlık, dated to the early Byzantine period; another possible church at Gökçekale (of uncertain date); from Çayyakka, based on the presence of Byzantine columns; and a possible monastic complex at Çadır Ini Kilise (early Byzantine here understood as *c.* 7th-9th centuries) Cassis, 'Byzantine period', pp. 295, 343-56; also discussed by Bes, 'Cide-Şenpazar', p. 275.
[995] Cassis, 'Byzantine period', pp. 343-56.

Cide-Şenpazar: ceramics

A total of 211 datable pottery fragments (approximately five percent of the 4,125 total sherds, a strikingly low number) were studied, belonging to the Hellenistic, Roman and late Roman periods -the latter two chronological periods being the most represented.[996] What is striking about this assemblage is that certain pottery types appear to be completely absent. In terms of table wares, there was a notable lack of late Hellenistic and early Roman terra sigillata, and no African Red Slip nor Pontic Wares (neither Sigillata nor Red Slip) were identified either. This result is all the more interesting as these pottery types have been identified at other northern Anatolian sites as Philip Bes points out, such as at Hadrianopolis, Sinop, Neoclaudiopolis and Pompeiopolis – some of which are located inland.[997] Only late Roman Phocaean Red Slip ware/Late Roman C was identified.[998] Products from a suspected fine ware producer in the area of Hadrianopolis alluded to above were not amongst the finds either.[999] The presence of Phocaean Red Slip ware/Late Roman C and a lack of other detectable wares is attributed to the region's proximity to Constantinople, but this reason alone does not likely account for the fine ware assemblage.[1000] Given the small sample size, we must ask how representative this analysis is of the wider coastal region also.

In terms of amphorae vessels, notably, LR1 type amphorae was not identified.[1001] But as discussed in Chapter 7, the absence of LR1 on the southern Black Sea coast is a striking phenomenon and the apparent dearth of LR1 finds from Cide is not necessarily exceptional. Interestingly, 13 sherds of LR2 were recorded, which have been interpreted

[996] Bes, 'Cide-Şenpazar', p. 261; Bes, 'Roman-period finds', p. 23.
[997] Bes, 'Cide-Şenpazar', pp. 265-6, 271; Bes, 'Roman-period finds', pp. 24-5.
[998] Bes, 'Cide-Şenpazar', pp. 265-6; Bes, 'Roman-period finds', pp. 24-5.
[999] Bes, 'Cide-Şenpazar', pp. 270-1.
[1000] Bes, 'Cide-Şenpazar', pp. 270-1; Bes, 'Roman-period finds', p. 28.
[1001] Bes, 'Cide-Şenpazar', p. 271; Bes, 'Roman-period finds', p. 27.

as possibly indicating a demand for oil.[1002] Fragments of North African production were present as well (*c*. middle to late Roman date).[1003] Sinopean type amphorae were well-represented. Some sherds appear to be products of Sinop, others may have been produced elsewhere.[1004] These results suggest that the Cide region did receive some categories of pottery from long distances. Furthermore, the presence of Black Sea amphorae suggest that the littoral was well connected and may indicate a movement of goods via cabotage.[1005]

Notably, approximately 95 amphorae sherds may be of a local production of a narrow-neck form (a tentative observation. The production dates are not explicitly stated).[1006] Whether or not these amphorae contained local Cide goods or even products from further inland (such as those from Hadrianopolis, as discussed above) is a point for future research. As pottery from various origins have been identified along this coast, Bes has argued that the region participated in wider exchange, but indirectly.[1007]

A combination of the location of settlement loci in the Cide-Şenpazar region and the ceramic assemblage so far analysed suggests that from the Roman period onwards, near-coastal areas were settled and likely exploited for agricultural products for local consumption. Given Cide's coastal location, the settlements identified may have participated in local and regional exchange, possibly servicing maritime traffic, but the amount of maritime traffic travelling across these shores is ambiguous. It is also possible that, if amphorae finds are indeed local products, minor export or exchange of goods may have occurred on some level as well.

[1002] Bes, 'Cide-Şenpazar', p. 267; Bes, 'Roman-period finds', p. 26.
[1003] Bes, 'Cide-Şenpazar', pp. 267-9; Bes, 'Roman-period finds', p. 26.
[1004] Bes, 'Cide-Şenpazar', p. 269; Bes, 'Roman-period finds', pp. 26-7.
[1005] Bes, 'Cide-Şenpazar', p. 286.
[1006] Bes, 'Cide-Şenpazar' pp. 287-8; Bes, 'Roman-period finds', pp. 32-3.
[1007] Bes, 'Roman-period finds', p. 31.

Discussion: north central Anatolian settlement development

What does the combination of ceramic and settlement evidence presented above reveal about the late antique development of north central Anatolia? Is it possible to determine the relationship between inland and coastal regions and the exchange networks in which these sub-regions participated? How did maritime traffic influence the economy and settlement development of the coast? Due to the current state of evidence, any attempt to approach such questions remains tentative. Further information concerning rural and inland areas is greatly needed if we are to refine our understanding of the economic networks of the north central Anatolian region. Nevertheless, the information from the seven archaeological sites and project allows us to begin to analyse the development of this area, which will be compared to the development of the south coast in the following chapter.

The coast: Cide and Sinop areas

The results of the surveys from the coastal territories of Cide and Sinop show a correlation of an increase in settlement and an intensification in agricultural exploitation in the late Roman period. Evidence from the SRAP suggest that the already established industrial activity on the promontory expanded to its highest levels in the Roman-late Roman period. The reason for this development and the subsequent expansion of agricultural exploitation and the increase of settlement in inner valleys may be due in part to the foundation of the capital, which may have opened greater exchange opportunities for Sinopean or northern Anatolian goods within and beyond the Black Sea (the capital itself would have provided new market opportunities).

An increase in settlement in the Cide area from the Roman period onwards may be attributed to this coast's proximity to Constantinople and Black Sea cabotage. The coastal area of Cide likely benefited from the increased maritime opportunities provided by the foundation of the capital as Sinop did, but on a smaller scale (given the prominence of Sinop's harbour). The foundation of the capital likely intensified trade along the coast and exchange opportunities for this coastline. Cide area coastal settlement may have benefitted from an increase in maritime traffic, perhaps playing a role in facilitating trade. Although the results of the Cide survey show that loci were predominately located on the coast, evidence from Çamdibi (where imported amphorae finds have been recorded) and the very tentative identification of locally produced amphorae may indicate that the Cide area contributed agricultural products to maritime exchange as well. Therefore, it may be theorised that some areas of the northern Anatolian coast experienced an increase in settlement in the late antique period, the foundation of the capital perhaps playing a role in facilitating the economic development of this area.

Moving inland

Geography is an important factor to consider when analysing the late antique evidence of the various locations presented above. The Sinop promontory is the major port on the northern Anatolian coastline, but it was not necessarily the primary Black Sea coastal area that the inland settlements of Pompeiopolis, Neoclaudiopolis or Euchaita were in contact with, if these settlements were connected to coastal centres at all. Ionopolis or Amisus may have played important roles in coastal/inland connectivity, but evidence is limited for these places.[1008]

[1008] TIB 9, pp. 219-21; Bryer, Winfield, *Byzantine monuments*, pp. 92-5.

The degree to which inland settlement was connected to coastal settlement and by extension, wider exchange networks is difficult to discern based on the current state of evidence and the likelihood that exchange of goods was conducted in perishable materials. As discussed above, survey results of the SRAP illustrate a significant increase in the presence of small-size loci in the inner valleys of the promontory in the Roman-late Roman period, suggesting an increase of farmsteads and agricultural exploitation of newly settled land. A parallel development has been illustrated for late Roman inner Paphlagonia. The trend of a change in settlement hierarchy dominated by farmsteads (and to a lesser degree large villages) detected in inner Paphlagonia may too have parallels in the development seen in the Cide region at the Okçular and Çamdibi case studies. The similarity of an increase in small-size sites in coastal and inland areas of north central Anatolia raises the question of whether or not the two phenomena occurred simultaneously but distinct from each other, or if an intensification of maritime economy, which may have contributed to an increase in settlement and production on the coast, filtered inland.

Both Pompeiopolis and Neoclaudiopolis appear to have undergone a period of building activity in the Roman period. On the one hand, archaeological evidence attests to the urbanisation of Pompeiopolis in the Roman period. On the other hand, the Roman period cityscape of Neoclaudiopolis needs to be reconstructed from indirect evidence but it may have been equipped with monumental public buildings. Contrarily, Euchaita was a minor settlement in Roman and late antique times until its elevation by Anastasius. Previous to this development, the only notable factor of Euchaita was its place as a cult centre. Without the direct intervention of Anastasius, it seems as though Euchaita would have continued to be only a minor settlement perhaps if not for its subsequent use as a military base. In this way, the development of Euchaita parallels that of Hadrianopolis, as

the majority of the monumental buildings so far uncovered at Hadrianopolis date predominately to the late antique period. The difference between the two sites being that in one case, imperial intervention can be confidently concluded as facilitating the development of one site, while the variables that contributed to the development of Hadrianopolis are not as easily detectable.

The question of what generated the late Roman building activity of Hadrianopolis is problematic. Can the late Roman building boom of Hadrianopolis and the increase in small loci in inner Paphlagonia be explained beyond coastal exchange networks? Or is there sufficient evidence to suggest that Hadrianopolis and the broader regions of inner Paphlagonia were connected to coastal centres and by extension, possibly impacted directly or indirectly by the founding of the capital? What would the implications of either scenario be for the inland settlements of north central Anatolia? Again, evidence is slight and hypotheses must remain tentative until further research has been conducted. While both Hadrianopolis and Euchaita may have a common feature of a holy figure associated with each settlement it is difficult to discern what impact this had for the economic development of each site.

If preliminary studies of Hadrianopolis are correct and Roman period settlement was minimal and not just difficult to detect archaeologically, then the late antique construction works of the settlement are remarkable. It is difficult to conceptualize Hadrianopolis' building activity and an increase in small-size settlement evidenced in the broader survey region in a restricted regionalised economic network as Anderson envisions. On the other hand, if agricultural elements have not been identified in high quantities, then it is difficult to discern production levels of the inner Paphlagonian region more generally and by extension the likelihood of the participation of this interior area with coastal economic networks. Although beyond the geographic scope of this study, it

is possible that economic connections between Hadrianopolis and settlements located further inland account in part for the late antique development of the settlement.

Ceramic evidence may shed light on the degree of connectivity between inland and coastal sub-regions. Pottery analysis from the CAP demonstrates that a variety of amphorae reached the southwestern Black Sea shore. Notably, LR1 was not found by the CAP, but other types such as LR2 and vessels from the Aegean and North Africa were. Perhaps locally-produced amphora and amphorae supply from Black Sea centres may have decreased the need for LR imports in north central Anatolia, but this is not very likely since local manufacture of amphorae does not necessarily preclude additional imports.

Based on the information available, it can only be tentatively suggested that the low quantities of imported pottery so far identified at Pompeiopolis, Neoclaudiopolis and Euchaita may reflect the trends of pottery identified in inner Paphlagonia, where the majority of fine ware/table ware and coarse ware appear to be local or regional products in the late Roman period. However, the differences in the sample size of the ceramic assemblages across the region may impact our ability to determine the quantity in which imported pottery made its way to the north central Anatolian interior. In terms of transport vessels, it can only be stated that there is the possibility that imported transport vessels reached Pompeiopolis and Euchaita, suggesting some degree of connectivity to the Black Sea coast from where such vessels were likely transported inland. Amphorae that resemble a small version of LR3 identified at Euchaita may be of imported or local origin and do not necessarily shed light on the production or movement of goods to or from the site. The possibility of a locally manufactured amphora is raised by the Hadrianopolis archaeological team, but is not elaborated upon. In sum, although amphorae do not seem to have reached inland settlement in large amounts, different

amphorae types have been identified, but their origins remain largely unknown. Importantly, as stated above, as exchange in goods may have been conducted in perishable materials (or the goods themselves were perishable), we may be missing the bigger picture of exchange between the interior and the coast of north central Anatolia.

Chapter 9. Comparison and discussion of south Anatolia and north Anatolia

Introduction

The regions of Lycia, Isauria and north central Anatolia are unique. Northern and southern Anatolia are comprised of micro-regions that vary in topography, climate, and vegetation - variables that impact the cultivation and production of natural resources and the movement of goods and people. Despite their differences, evidence suggests that these regions shared similar resources which were likely at their disposal for exchange. For north central Anatolia, Lycia and Isauria, forest resources may have been important export items, while Sinop and eastern Isauria share the feature of exporting goods in amphorae, for example. A comparison of Lycia, Isauria and north central Anatolia provides an opportunity to explore how diverse areas with commonalities engaged with wider economic networks and compare factors that shaped settlement across these regions, such as maritime exchange or the export of natural resources. Therefore, the aim of this chapter is to examine the settlement and economic developments of Lycia, Isauria and north central Anatolia discussed in previous chapters in a wider geographic context in order to make preliminary observations concerning similarities and differences in the late antique development of these Mediterranean and Black Sea regions.

Doonan has raised the question of whether or not and in what way the Black Sea might be studied as a region, based on his interpretation of the theories Horden and Purcell had proposed for the Mediterranean. That is, in order to test Horden and Purcell's theories of Mediterranean connectivity and interdependency between micro-regions, Doonan asks if such a model might be applied to the Black Sea. Although similar in some respects to the Mediterranean, in that the Black Sea zone too is composed of diverse sub-regions, he argues that the Black Sea littoral was essentially a stable environment where

self-sufficiency and agriculture could be achieved. Therefore, the driving force behind Black Sea connectivity may not have been the pursuit of minimizing risk to such a degree as Horden and Purcell had proposed for the Mediterranean. Instead, Doonan tentatively proposes, using the Sinop promontory as a case study, that interaction in the Black Sea may have been different from the Mediterranean, and other factors, such as political disruption and episodes of 'climatic stress', may account for cycles or episodes of increased interaction or 'isolation' in regional economies.[1009] Although this study is not concerned with studying the Black Sea as a regional unit, as I focus on the central region of northern Anatolia and not all littorals, Doonan's remarks concerning differences between environmental and climatic factors between the Black Sea and Mediterranean are certainly pertinent to consider and highlight methodological considerations when attempting to analyse Anatolia as a unit and the northern and southern extremities of the region.

A comparison of northern and southern Anatolia also raises questions that provide avenues for future research and highlights lacunae in our knowledge -geographical and archaeological- that require further attention. It is important to keep in mind that due to the discrepancy in the amount of information available, a comparison of the late antique settlement and economic development of Lycia, Isauria and north central Anatolia can only be preliminary. Any conclusions presented here must be considered tentative until further research betters our knowledge of these regions.

[1009] Doonan, 'The corrupting sea and the hospitable sea', pp. 68-74.

Amphorae production and settlement

As late Roman amphorae production has been identified on the Isaurian coast and on the Sinop promontory, we are able to compare how the export of natural resources may have impacted agricultural exploitation and settlement in the vicinity of amphorae production centres in the north and south of Anatolia. The main body of evidence for amphorae production derives from the Demirci area of the eastern Sinop promontory and from Elaiussa-Sebaste located in eastern Isauria. While excavation has been conducted at Elaiussa-Sebaste, the evidence for settlement around Sinop derives mostly from survey. It is likely that olive oil and fish products filled Sinopean amphorae. Although the contents of LR1 are debated, both olive oil and wine may have filled the amphorae of eastern Isauria.

Evidence suggests that construction activity was carried out in Elaiussa-Sebaste in the late Roman period, possibly with funds generated from the export of goods as the amphorae evidence would suggest. Unfortunately, Sinop is overlain by the modern city which hinders access to the ancient cityscape, but through literary references and the archaeological work that has been conducted, it appears that the city was built up in the Roman period and likely continued to benefit from funds accrued from the export of goods as amphorae production continued into the late Roman period. Therefore, it can be reasoned that the export of products from these areas played a role in allowing these two respective cities to invest funds in building activities (but as we have seen in Chapter 5, the development of coastal sites may not have been dependent on their ability to export goods, see the comparison and discussion of Olympus and Elaiussa-Sebaste).

How did the export of agricultural products impact rural settlement and agricultural exploitation in the vicinity of these amphorae production centres? In the case of the Sinop promontory, evidence suggests that from the Roman period onwards, small-

sized settlement in inner valleys, particularly of the Demirci and less so the Karasu, increased drastically. This development suggests that the valleys were cultivated so as to provide products for export (as argued by Doonan, Chapter 6). Therefore, the late Roman amphorae production of Demirci was strategically placed near these valleys (as opposed to earlier amphorae production on Boztepe). Perhaps this was the case in eastern Isauria too.

We might suspect the agricultural lands around Elaiussa-Sebaste (or Soli-Pompeiopolis another location where LR1 production has been identified, but where information is more limited) were exploited for agricultural production. It is also possible that crops may have been sourced from elsewhere, such as from fertile lands along the eastern coastline. According to the evidence documented in the TIB 5 and more recent survey work between Silifke and Erdemli, settlements seem to be located in the valleys along the eastern Isaurian coastline. Moreover, the work of Varinlioğlu has demonstrated increasing settlement in the Yenibahçe Valley. It may be that olives and/or grapes were transported from more outlying areas to the amphorae producing centres like Elaiussa-Sebaste (unless other kilns were located nearer these valleys that have not yet been identified). Whether or not the goods of the Yenibahçe or other valleys were being transported to Elaiussa-Sebaste for export or elsewhere (Seleucia?) cannot be determined, but we may speculate a connection between amphorae production and agricultural exploitation of nearby valleys for both north central and southeast Anatolia. We await to see whether further research in the area of the eastern Isaurian coastline confirms a connection between the settlement and agricultural exploitation of valleys and amphorae production as seems to be the case for the Sinop promontory.

Yet, importantly, the location of settlement on the Sinop promontory reminds us that we cannot assume that areas in the vicinity of amphorae production were settled,

cultivated or developed similarly. Based on the current state of evidence, while the eastern Sinopean promontory was extensively settled from the Roman period onwards, this was not the case on the west side of the promontory, probably due to unfavourable environmental conditions (Chapter 7). The importance of considering suitable environmental factors for agricultural exploitation is worthy of note, especially for future research concerning the agricultural production and potential export capabilities of oil and/or wine from elsewhere in Anatolia.

Economy and the location of settlement

For southern Anatolia, I have argued that Lycia and Isauria chiefly participated in Mediterranean exchange in different ways in Late Antiquity. Consequently, the economic situation of each region played a role in the development of settlement patterns. In the case of Lycia, I have argued that settlement was concentrated around three coastal areas and I have suggested that, along with economic factors and the importance of maritime exchange, topography likely played a role in changes to the location of settlement. Although speculation, this may have resulted in inhabitants preferring to live at particular coastal areas in this period. In the case of Isauria, based on the current state of evidence, late antique settlement is most represented on the eastern coastline. Areas of dense settlement appear to be located near important economic nodes of the region such as Seleucia, Korasion, Korykos and Elaiussa-Sebaste. How does the economic situation compare with north central Anatolia? Might we suspect a similar concentration of settlement on the north central coast, or a movement of inhabitants to coastal areas in north central Anatolia in Late Antiquity? Any attempt to address this question remains speculative, but it is an important line of inquiry nonetheless given the significance of

Sinop in Black Sea maritime exchange and the potential importance of cabotage along southern Black Sea shores.

As discussed in the previous chapter, a lack of information from north central Anatolia hinders an attempt to determine the movement of goods and people between coastal and interior settlements. Nonetheless, a cursory overview of coastal and inland north central Anatolian zones provides important information concerning factors that may have influenced occupation of these areas. For the north central coast, as mentioned earlier, evidence of expanding settlement on the Sinop promontory has been detected, particularly in inner valleys, yet settlement on the eastern side of the promontory is much more pronounced than the west. Information in the TIB 9 is limited for the area to the west of Sinop as this area marks the geographic border of the volume, but from the information available, there is a notable drop-off of identified late Roman remains as one travels westward from Sinop along the coast. For example, of the coastal settlements indicated on the TIB 9 map between Aigialos (near Cide) and Potamoi, only two settlements, Stephane and Zephyrion, may encompass late Roman evidence.[1010] Elsewhere, the majority of remains noted in the TIB 9 in this area are either undated or are attributed to much earlier or later periods. Whether this is an accurate reflection of ancient settlement remains to be seen. The difficult terrain and vegetation cover of the north central coast may decrease the visibility of late antique evidence, possibly contributing to the picture of low levels of settlement on this coastline.

In the area of Cide-Şenpazar, coastal settlement predominates in the Roman period, suggesting a correlation between the location of settlement and maritime activities in this period. However, the evidence from the Cide and Sinop areas does not provide a sufficient sample to say whether or not there was a migration of inhabitants to north

[1010] TIB 9, 'Stephane', pp. 273-4, 'Zephyrion', p. 284.

central coastal Anatolia from inland areas in Late Antiquity. At this point, evidence only indicates that the north central Anatolian coastline was settled to varying degrees. Moreover, although based on a very limited corpus of information, there does not appear to be an indication of a decrease in construction activities or a depopulation of inland north central Anatolian urban settlements as seems to be the case for inland Lycia. Although only a cursory overview is available for late antique Pompeiopolis, the archaeologists working at the site argue for continued building activity into this period. Late Roman evidence is among the most represented in the archaeological record of Hadrianopolis, possibly pointing to a population increase in this inland settlement.

Compared to the Lycian coast which was home to natural harbours and minor ports (in the Ölüdeniz/Fethiye area, the south coast between Antiphellos and Phoinix, Phaselis, for example) or the eastern Isaurian coast where important coastal settlements were located (Korasion, Korykos, Elaiussa-Sebaste), there may be a lack of suitable harbours in the north central Anatolian coastal area under consideration, which may account for low levels of settlement on this coastline. Maritime exchange such as cabotage may have occurred between Cide and Sinop, but on a lower level in this particular stretch of coast. It may be the case that evidence of more substantial late antique coastal activity is located beyond the north central area considered here.

Modern observations regarding the harbours of the southern Black Sea coast remark on the lack of natural harbours, but the presence of several man-made harbours.[1011] Whether or not this was the case in antiquity remains to be seen. According to modern observations, between Cide and Sinop, only the harbours of Cide and Inebolu are described as large, others such as Doganyurt, Ozluce (both silting), Gemıcıler, Yakaoren, and Ayancık are described as small, and others are briefly remarked upon but

[1011] Heikell, Heikell, *Turkish Waters & Cyprus Pilot*, p. 363.

seem to provide good shelter in modern times (Figure 41).[1012] Of course, small does not necessarily mean poor harbours, but from these modern descriptions, perhaps the smaller size of these anchorages meant these places were only suitable for particular types of small vessels, thus limiting the potential amount of exchange along this coast. Still, further research into the ancient anchorage facilities between Cide and Sinop is needed before any definitive remarks can be made.

It is also important to consider whether changes in economy may have impacted the vitality of maritime exchange in particular areas and by extension the preferred ports of call of sailors, which may have subsequently impacted the degree of settlement along specific coasts. Might low levels of north central Anatolian coastal settlement between Cide and the western Sinop promontory be due in part to vessels not making routine stops in this particular area when travelling between Constantinople and Sinop (perhaps Amastris or Tios were preferred)?

Interestingly, a similar situation may be identified in the south of Anatolia, as there is a notable lack of evidence for settlement behind Anemurium in the southern coastal hinterland of Isauria. It is possible that other areas of the region had greater economic significance, such as the eastern Isaurian coastline (or Cyprus perhaps) and so may have been preferred by sailors and merchants in the late Roman period, thus leading to a lower degree of settlement in the south (Chapter 4). Again, whether this is an accurate representation of late antique settlement is uncertain, but it may also be that a combination of variables, including geographical factors and a preference of particular areas by vessels, account for a low level of late Roman settlement in southern Isauria and the north central Anatolian coast.

[1012] Heikell, Heikell, *Turkish Waters & Cyprus Pilot*, pp. 368-70.

Following on from this observation, the concentration of settlement around Sinop and the petering off of settlement elsewhere emphasises the central economic role of this promontory in the southern Black Sea zone. Given the picture of late antique settlement derived from the evidence currently available, it is possible to speculate that due to geographical and economic factors, settlement along the north central coast may not have been as desired by northern Anatolian inhabitants to such a degree as their southern counterparts so as to facilitate a possible migration, but more information is needed before conclusive remarks concerning coastal populations can be made. These preliminary observations highlight the need for further research in north central Anatolia so that the late antique settlement and economy of the region can be more fully understood and questions surrounding the movement of goods and people can be more comprehensively explored.

The development of Hadrianopolis has been a point of discussion in the previous chapter. The connectivity of this settlement, and the inner Paphlagonian region in general, to coastal settlements is debatable. Evidence of some imported goods in inland settlement draws parallels with the inland settlement of Lycia and Isauria. Finds in the area of the upper Göksu valley (Isauria) and possibly at Choma (Lycia), suggest that some imported commodities may have reached these inland places, although distant from the coast. Goods of inland north central Anatolia may have reached coastal settlement in perishable materials, just as the goods from the Yenibahçe valley may have been transported to the coast for packaging into LR1- a possible difference being the degree to which this exchange occurred. Although the late antique building activity at Hadrianopolis appears to be exceptional in north central Anatolia, evidence of two or three churches, bath buildings and residences are not necessarily exceptional finds in the settlements of the southern Anatolian coastline.

A Constantinople effect?

The foundation of the capital likely broadened the potential scope of the movement of goods and people through both state fiscal and commercial markets as well as stimulating maritime traffic in the eastern Mediterranean in Late Antiquity. Whether or not the foundation of Constantinople directly impacted the late antique economies of Lycia and Isauria remains an open question. We can speculate that the presence of the capital may have stimulated maritime traffic and so facilitated an increase in maritime exchange in particular areas of Lycian and Isaurian shores. This may account in part for the concentration of settlement in particular coastal areas of Lycia and Isauria, but it is more difficult to connect the foundation of the capital directly with changes in settlement elsewhere in these provinces. For example, there is little direct evidence to connect the decline of and potential ruralisation of inland Lycian urban centres to the foundation of Constantinople. As we lack detailed quantitative information for the Roman economy of Lycia, we cannot detect changes in the production or exchange of goods from *c.* AD 330 onwards. Moreover, we can not say definitively if the foundation of the capital was a factor in the shift of amphorae production from western to eastern Isauria, or if this phenomenon was a coincidental development. Does evidence suggest that the foundation of Constantinople played a role in impacting the Black Sea maritime economy and the settlement and exchange of north central Anatolia?

As mentioned, the foundation of Constantinople has been directly connected to the development of the Sinop promontory by Doonan (Chapter 6). In terms of Sinop's export, important economic precursors were already in place which pre-date the foundation of the capital, such as the potential exclusivity of olives in the Sinop area as well as previous amphorae production on Boztepe, suggesting that a demand for Sinopean products and

the apparatus for agricultural production and export was already established. The subsequent presence of Constantinople may have sustained and increased demand for Sinopean goods, leading to continued agricultural production on the promontory.

The impact of Constantinople may be detected for the Sinop promontory in particular but due to the current state of evidence, the potential economic influence of the capital elsewhere in north central Anatolia cannot be determined fully. In terms of other coastal areas, it might be suspected that coastal exchange may have increased along the coast between Constantinople and Sinop (and beyond) following the capital's foundation. Yet, as discussed above, there appears to be a lack of substantial settlement along the north central coastline under consideration, possibly due to geographical unsuitability. This suggests that cabotage activities may have been minimal along this stretch of coast, therefore limiting the potential impact the foundation of the capital may have had on exchange in this particular area.

However, the current picture of a low degree of coastal settlement may be due in part to the difficultly of identifying late Roman remains and it may be that the economic activity of this coastal area is more difficult to detect archaeologically (fishing, timber). For example, in the case of Lycia, the significance of the location of the capital's grain supply is important as maritime traffic between Constantinople and Egypt may have provided a greater stimulus for the demand of Lycian timber in Egypt, but it is difficult to gauge the extent of the exploitation of Lycian forest resources (Chapter 4). A similar situation may be applicable to the north central coastal zone. That is, Strabo states that the area from Sinop to Bithynia (and so incorporating the area of the north central coast considered here) encompassed valuable timber, so it is possible to speculate that greater demand or use of this resource may have resulted from the foundation of the capital (for ship building, or as fuel for amphorae production etc., Chapter 6). It is possible, therefore,

that the foundation of Constantinople did impact settlement and the exchange of north central coastal Anatolia, but evidence of this is currently difficult to detect. Further inland, a lack of evidence renders it difficult to gauge the degree to which settlements of the north central Anatolian interior were economically impacted (directly or indirectly) by the foundation of Constantinople.

Conclusion

Although preliminary and tentative, a comparison of northern and southern Anatolia highlights a number of important aspects and raises questions concerning late antique settlement development and maritime exchange of the Black Sea and Mediterranean regions. This comparison illustrates how the unique characteristics of Lycia, Isauria and north central Anatolia- whether it be geographical, geological, or a combination of factors- influenced the settlement and economic developments across the three regions and that sub-regions within Lycia, Isauria and north central Anatolia developed uniquely.

A comparison of northern and southern Anatolia reveals that although Lycia, Isauria and north central Anatolia border major maritime zones, evidence for coastal settlement varies within each region, sometimes drastically. Significantly, an analysis of the coastal areas of the three regions reinforces a common point: coastal areas cannot be assumed to have been settled based on a presumed premium placed on settlement proximity to the sea and by extension maritime exchange. This point has been stressed in the case of Lycia (Chapter 4) and is reflected in the discrepancy of settlement identified along Isaurian and north central Anatolian coastlines.

Importantly, a comparison of northern and southern Anatolia reveals how information from one area may guide research elsewhere. For example, it may be that the

study of the Sinop promontory may suggest directions for research into the agricultural exploitation of valleys and economic connectivity behind the eastern Isaurian coast. Study of the coastal settlements of southern Lycia may suggest future paths of research into minor ports and cabotage of the north central Anatolian coastline.

Further research of southern and northern Anatolia will help to refine the preliminary comparison presented here. It is clear from the discussion above that by widening the geographic scope of analysis by undertaking a northern and southern Anatolian comparison, important nuances in the development of areas are brought to light which allow us the opportunity to better our knowledge of the variables that shaped the late antique development of diverse yet similar places.

Chapter 10. Conclusion

The preceding chapters have demonstrated that the late antique settlement development of Lycia, Isauria and north central Anatolia was diverse. An analysis of the available archaeological evidence from these regions has revealed that various sub-regions within these provinces developed uniquely and that overarching narratives do not accurately convey the development of these regions. Only when nuances in the development of sub-regions are recognised can we begin to explore economic variables that may have influenced similarities and differences in development within a region and on a wider geographic scale.

In an attempt to present an up-to-date picture of late antique settlement of Lycia, Isauria and north central Anatolia, this study has not only discussed what we know of the late antique economy and development of these regions, but also, and just as importantly, where evidence is currently lacking and how this influences the conclusions drawn regarding the settlement of these regions in this period.

In the case of Lycia, an analysis of the available archaeological evidence has revealed that late antique settlement appears concentrated around three major maritime areas, demonstrating that the entire coastline of the province did not develop similarly. Evidence also suggests that there were changes in the investment trends of inland cities at this time, when urban centres were no longer loci of substantial investment in monumental public buildings. This contrasting development between interior and coastal regions illustrates that inland settlement cannot be ignored when investigating economic developments on a regional level. Whether or not changes in the construction activities of inland cities can be attributed to a ruralisation of urban centres and a shift in population to

more rural areas, or a possible migration of inhabitants to what may have been more economically active coastal locations, remains an open question.

Another significant point that this study has emphasised in regards to the economic development of Lycia is that while we might be able to identify where late antique settlement is located in the region or changes in settlement activity, we know little about the economy of the region in general. Evidence concerning the agricultural production of Lycia has been reassessed in order to demonstrate that we lack information to derive secure conclusions regarding the production and exchange of goods, and that we are far from being able to speak confidently about the possibility of surplus export of Lycian agricultural products beyond the region.

In the case of Isauria, the combination of amphorae evidence and settlement remains revealed that the eastern coastal area of the region encompassed the highest number of late antique settlement. Beyond this area, evidence suggests other areas were not loci of substantial investment, again highlighting the importance of considering micro-regions in economic regional analysis. The picture of southern and western Isaurian settlement from the evidence currently available suggests that these sub-regions were not as densely settled as the eastern coastal area of Isauria. A similar picture can be seen in the interior of the province where settlement appears dispersed as well.

A comparison of the late antique settlement of Lycia and Isauria illustrates how each region may have played a different role in wider economic exchange, one contributing staple goods of oil and wine, the other predominantly facilitating maritime exchange with Lycian oil and wine likely being locally transported and consumed in the region itself in Late Antiquity. This comparison therefore demonstrates that although agricultural production likely underlay the livelihoods of the majority of the empire's population, export of agricultural goods, particularly oil and wine, is not necessarily a

common denominator in the economies of eastern Mediterranean settlements. We ought to consider the different use of agricultural production in different geographic contexts.

Less evidence is available in regards to the late antique development of north central Anatolia, but a comparison between the settlement development of this region with its southern counterparts is possible. As the study of southern Black Sea pottery increases, our knowledge of the production, consumption and distribution of fine wares, coarse wares and amphorae will certainly improve and add invaluable knowledge to exchange across this region. With a greater awareness of the economic connectivity between Black Sea and Mediterranean regions, the full scale and complexity of the late antique economy may be brought to light. Little can be said regarding the economic relationship between inland and coastal areas, but preliminary survey evidence suggests that an increase in small-sized settlement may have been a commonality in the development of inland and coastal areas in north central Anatolia. The suitability of anchorages along the northern Anatolian coast may have also played a role in impacting the economic potential and settlement development along this littoral. Hopefully future research will shed light on the port facilities of the northern Anatolian coastline.

Alongside the regional analysis of Lycia, Isauria and north central Anatolia, I have discussed methodological considerations regarding the state of research and research techniques across Turkey that impact the picture of late antique settlement and economy presented in this thesis. By examining the settlement development of inland regions, I have attempted to expand attention beyond coastal areas that have predominated previous research interests, as well as integrate areas of Anatolia that are not often considered together in late antique economic discourse. For all three regions, the need for further survey and excavation work in inland regions and rural areas is of paramount importance if we are to further refine our understanding of the relationship between urban centres and

the countryside, and examine shifts in settlement outside of urban loci. Further study may refine, support or challenge the interpretations presented here - progress that will only benefit our understanding of the late antique world. Despite differences in the degree of ceramic study, survey and excavation work across Lycia, Isauria and north central Anatolia, this thesis has demonstrated that it is possible to compare these regions and that the benefits of this comparison provides avenues for future research that will help to elucidate our knowledge of the late antique development of Anatolia and the economy of the late antique empire.

Appendix 1

Sites in the region of Lycia under consideration with pertinent remains according to the TIB 8[1013]

* Sites that are mentioned in the main text

LA: Late Antique; LRom: late Roman; EByz: early Byzantine; pd: period

Site	Evidence that may be LA, LRom or EByz or occupation /activity is attested	Evidence less securely attribute-ed to LA, LRom, EByz pd	Church may be dated to the LA LRom, EByz pd	Church, less securely attributed to the LA, LRom, EByz period. Sites with possible Christian remains	Misc.	TIB 8, p.
Ağırtaş	X				Lack of detail	421-2
Akalissos (1)				X2?		422
Akalissos (2) (see Pharroa)[1014]	X		X2			422-5
Alacadağköyü		X		X date?	'?'	429-30
Alakır Çayı	X					430-1
Aloanda		X			'?' lack of detail	433-4
Andriake*	X		X5			435-9
Andriakos		X			'?' Location of remains? Not indicated on Map 1	439

[1013] For further information concerning categorisation methodology see Chapter 4.
[1014] Harrison, 'Church and chapels', pp. 131-6.

Site	Evidence that may be LA, LRom or EByz or occupation /activity is attested	Evidence less securely attribute-ed to LA, LRom, EByz pd	Church may be dated to the LA LRom, EByz pd	Church, less securely attributed to the LA, LRom, EByz period. Sites with possible Christian remains	Misc.	TIB 8, p.
Antiphellos*	X		X2?			440-2
Aperlai*	X		X[1015]			443-6
Apollonia (1)	X		X			446-8
Arap Yurdu	X				Lack of detail	448
Araxa		X		X	‘wohl’, ‘?’	448-9
Arif*	X		X3		Compare with Harrison	451-3
Armutlu*	X					453-4
Arneai*	X		X3	X (Church D not assigned a date)		454-5
Arykanda*	X		X	X date?		457-9
Arymaxa*	X				‘vermutlich’, ‘jedoch’	459-60
Asarlık		X			‘?’ Location unknown. Not indicated on Map 1	462

[1015] See Chapter 4 for further information concerning a fourth and possibly a fifth church.

Site	Evidence that may be LA, LRom or EByz or occupation /activity is attested	Evidence less securely attribute-ed to LA, LRom, EByz pd	Church may be dated to the LA LRom, EByz pd	Church, less securely attributed to the LA, LRom, EByz period. Sites with possible Christian remains	Misc.	TIB 8, p.
Asarönü	X			X		463
Aşırlı Adası				X	'möglicher-weise'	463-4
Attelebusa	X					470
Ayıbeleni	X					474
Balbura*	X		X[1016]			477-9
Beğiş				X		482
Belen (1)	X			X date?		482-3
Bezirgân	X		X and triconch			485-6
Bubon	X					487-9
Bunda	X		X2			490
Büyük Avşar	X			X date?		491
Çağman	X			X	'wohl'	492
Çakırlar	X		X?		Church based on finds	493
Çakmak	X		X			493-4
Çaltılar				X		494
Çamarkası			X			495

[1016] See main text for updated information.

Site	Evidence that may be LA, LRom or EByz or occupation /activity is attested	Evidence less securely attribute-ed to LA, LRom, EByz pd	Church may be dated to the LA LRom, EByz pd	Church, less securely attributed to the LA, LRom, EByz period. Sites with possible Christian remains	Misc.	TIB 8, p.
Çandır Asarı		X			‘wohl’	495
Çardaklı				X date?		496
Çayiçiköyü		X			‘antike/frühbyz.’	498
Chimairas Oros		X		X date?	‘früh- u./oder mittelbyz’; possible displaced remains	502-5
Choironesi*	X		X			505
Choma*	X		X			506
Çobanisa				X?		508
Çukurceylan				X		509
Çukurhisar		X			‘wohl’	509
Cuma Tepesi	X				Location?	510
Daidala		X		X	‘vermutlich’, ‘?’	510-11
Dalaman	X			X?	mosaic	511
Danabaşı	X		X date?		‘offensichtlich’	512-13
Darboğaz	X				Location?	513
Davazlar	X			?		514
Derekuyu*				X	Not dated. Lack of information. Location?	516

Site	Evidence that may be LA, LRom or EByz or occupation /activity is attested	Evidence less securely attribute-ed to LA, LRom, EByz pd	Church may be dated to the LA LRom, EByz pd	Church, less securely attributed to the LA, LRom, EByz period. Sites with possible Christian remains	Misc.	TIB 8, p.
Devekuyusu	X		X			517
Dikitanaura*	X		X2			518-20
Dikmen (1)			X			520
Dinek*		X?			Questionable description. Location?	521
Doğanlar	X			X		522
Dragonesi					Late Roman-early Byzantine shipwreck. Location? Not indicated on Map 1	523
Ebi*		X	X		'vermutlich'	524-5
Emirtaşı					Location? Coins Not indicated on Map 1	529
Eşa Alan	X?				Location? Lack of information	530
Gagai*	X		X2	X		540-1
Gâvur Kalesi	X		X		Location unknown. Not indicated on Map 1	541-2

Site	Evidence that may be LA, LRom or EByz or occupation /activity is attested	Evidence less securely attribute-ed to LA, LRom, EByz pd	Church may be dated to the LA LRom, EByz pd	Church, less securely attributed to the LA, LRom, EByz period. Sites with possible Christian remains	Misc.	TIB 8, p.
Gedelma*	X		X1 and triconch	X2		543
Gemiler Limani[1017]*	X		X		Location?	544-5
Girdev Gölü				X		546
Gödene	X			X		548
Göktas Kalesi		X			'?', 'vermutlich'	548-9
Güceyman Tepesi			X1 and triconch (date?)			550-1
Gülmez Asarı	X		X	X	'?'	551-2
Gürses	X					552
Hagioi Pente	X				Location?	554-5
Hamadiye*		X	X		Location? 'wohl'	555-6
Hippokome, Hippukome		X			'wohl'	559
Hisarönü		X			'?'	560
Hoyran	X			X?		561
Idebessos*	X		X			563-4

[1017] See 'Gemiler Beach Basilica', *Preliminary report*, pp. 10-11.

Site	Evidence that may be LA, LRom or EByz or occupation /activity is attested	Evidence less securely attribute-ed to LA, LRom, EByz pd	Church may be dated to the LA LRom, EByz pd	Church, less securely attributed to the LA, LRom, EByz period. Sites with possible Christian remains	Misc.	TIB 8, p.
Idyros[1018]*	X		X2		Date of church implied by settlement date	564-5
(Büyük) Illa		X			'wohl'	566-7
İnişdibi	X			X	Location? 'wohl'	569-70
Isinda (1)		X			'vielleicht', '?'	570-1
Istlada*	X		X			574-5
Kabo tu Phoinika	X		X	Chapel		577
Kadyanda*	X					578-9
Kakaba Ada*	X		X[1019]			581-4
Kalabatia*	X		X			584
Kalamin				X?	Shipwreck with amphorae	584-5
Kalynda	X		X			594-5
Kandyba	X			X		595-6

[1018] See also Çevik, 'Northeast', p. 208, footnote, 83.
[1019] More recent survey results have yielded further religious structures though not all are dated, see main text.

Site	Evidence that may be LA, LRom or EByz or occupation /activity is attested	Evidence less securely attribute-ed to LA, LRom, EByz pd	Church may be dated to the LA LRom, EByz pd	Church, less securely attributed to the LA, LRom, EByz period. Sites with possible Christian remains	Misc.	TIB 8, p.
Kapaklı	X				Location?	596-7
Kara Ada			X			597
Karabol			X			597-8
Karabucak				X date?	Location?	598
Karaca Burun*	X		X			598
Karacaören Limanı and Ada*	X	X	X X		Mainland: 'wohl' (indicated separately on Map 1)	599-601
Karadağ	X					601
Karahasantaşı				X		601
Karaköy		X?			Dating problem	602
Karakuyu*	X		X			603
Karkabo (Alakilise)[1020]*	X		X		Nearby structures	607-10
Kastabara*			X			612-13
Kavaklı					Location unknown. Find of *solidi*. Not indicated on Map 1	620

[1020] Compare to Harrison, 'Churches and chapels', pp. 126-30.

Site	Evidence that may be LA, LRom or EByz or occupation /activity is attested	Evidence less securely attribute-ed to LA, LRom, EByz pd	Church may be dated to the LA LRom, EByz pd	Church, less securely attributed to the LA, LRom, EByz period. Sites with possible Christian remains	Misc.	TIB 8, p.
Kavaklıpınar				X	? 'vermutlich', 'vielleicht'	620
Kel Tepe[1021]				X		622-3
Kelbessos*	X			X		623
Kemerarası*				X		625
Keşlik	X		X2			627-8
Kilepe		X		X	'vermutlich'	631
Kilise (1)		X	X			631
Kilise Alanı*		X?	X		?	632
Kilise yakası				X	Location?	632
Kınalı	X			X	'spolia'	632
Kınık				X?	'vielleicht'	633
Kişneli Adası			X			636
Kissides[1022]*			X			637
Kızılaliler					Location? Milestone. Not indicated on Map 1	637-8
Kızılbel (1)	X			X	?	638

[1021] Different find spots. Palamutdüzü area is named. See Chapter 4.
[1022] This is the co-called 'Mustafa basilica' according to *Preliminary report*, pp. 10, 110-12. See main text discussion of the Gemiler Island area.

Site	Evidence that may be LA, LRom or EByz or occupation /activity is attested	Evidence less securely attribute-ed to LA, LRom, EByz pd	Church may be dated to the LA LRom, EByz pd	Church, less securely attributed to the LA, LRom, EByz period. Sites with possible Christian remains	Misc.	TIB 8, p.
Kızlar Kalesi	X				'?'	641
Kocaboynuz	X		X			644
Kocaköy				X		645
Komba*	X		X			651
Korba	X?		X			652
Korma		X			'vermutlich'	653
Korydalla	X		X?	X	'vermutlich' 'Sion treasure'	655-7
Kyaneai*	X		X3	X?		671-5
Lebissos*	X					681-3
Letoon*	X		X			683-5
Limyra*	X		X?		church numbers (*c.* 3)? dates?	686-90
Lissa*	X					690-1
Lornaia		X			'wohl'	692
Lydai*	X		X			693-4
Macun*				X	Lack of information	700

Site	Evidence that may be LA, LRom or EByz or occupation /activity is attested	Evidence less securely attribute-ed to LA, LRom, EByz pd	Church may be dated to the LA LRom, EByz pd	Church, less securely attributed to the LA, LRom, EByz period. Sites with possible Christian remains	Misc.	TIB 8, p.
Makra[1023]		X			'vermutlich'	703-4
Makre*	X			X		704-9
Mastaura			X			716-8
Megiste		X	X	X	'?' (indicated once on Map 1)	721-5
Melanippe	X		X3			725-7
Melanoscope*	X		X		'offenbar'	727-8
Müğren*	X			X	'vielleicht'	737
Myra*****	X			Development of Saint Nicholas church	Due to overbuilding and silting, difficult to determine remains and dating	Vol. 1, 342-59
Neapolis*	X?		X		Lack of detail	744-5
Nenealanı		X			? Lack of information	746
Oinoanda*	X		X1	X2 dates?		750-4

[1023] For updated information *Island of St. Nicholas*, 'Sövalye Island', pp. 216-17.

Site	Evidence that may be LA, LRom or EByz or occupation /activity is attested	Evidence less securely attribute-ed to LA, LRom, EByz pd	Church may be dated to the LA LRom, EByz pd	Church, less securely attributed to the LA, LRom, EByz period. Sites with possible Christian remains	Misc.	TIB 8, p.
Olbia	X				4th century finds	755-7
Oluklu Tepe			X			757
Olympos (1)*	X		X6			758-62
Olympos (3)	X		X			763-4
Onobara*	X					764-5
Orpenna*	X		X	X	'wohl'. Date of church in the area of Yapraklar taken to be implied with the settlement date	768-9
Ortasarı*	X			X		769
Ovacık*	X			X2?	'wohl'	770-1
Patara*	X		X number?	X dates?	Total of at least 12 early and middle Byzantine churches[1024]	780-8
Perdikiai	X			X		793-4

[1024] Apparently, a recent count puts the number of churches to 13 (undated), İşkan, 'Patara', p. 159.

Site	Evidence that may be LA, LRom or EByz or occupation /activity is attested	Evidence less securely attribute-ed to LA, LRom, EByz pd	Church may be dated to the LA LRom, EByz pd	Church, less securely attributed to the LA, LRom, EByz period. Sites with possible Christian remains	Misc.	TIB 8, p.
Perdikonesi*	X		X4			794-7
Pharroa (Karabel)*	X			X	‘wohl’	798
Phaselis*	X		X6			798-802
Phellos*	X			X	‘offenbar’, ‘vermutlich’	802-3
Phileta	X			X	Location? Inscription	804
Phoinix				Early Christian inscription	Overbuilt	806-9
Pinara*	X		X3		‘offenbar’, ‘vermutlich’	811-13
Podaleia	X					815-16
Polcellae	X					816-17
Porto Genubize	X					818-9
Pydnai*	X		X	X?		822-3
Pygela		X			‘vermutlich’	824
Rodiapolis*	X		X2?			825-6

Site	Evidence that may be LA, LRom or EByz or occupation /activity is attested	Evidence less securely attribute-ed to LA, LRom, EByz pd	Church may be dated to the LA LRom, EByz pd	Church, less securely attributed to the LA, LRom, EByz period. Sites with possible Christian remains	Misc.	TIB 8, p.
Roge		X		X	'?'	827
Sapun				X		830
Saraylı	X			X		831
Şehtan		X			'vermutlich'	834
Serkiz Alanı*		X		X?	'?', See Soklai	840
Sidyma*	X		X2	X (number? dates?)	'wohl' '?'	845-7
Simena*		X	X		'?'	848-51
H. Sion (Alacahisar)[1025]*			X			852-6
Sipolo*	X		X?[1026]		Lack of detail regarding settlement.	856-7
Soklai*	X			X	Lack of detail. See Serkiz Alanı	860-1
Sura	X		X2?			865-6
Tekkeköy (1)*	X?					874-5

[1025] On differing opinions of where Holy Sion ought to be identified, Harrison, 'Churches and chapels', pp. 131-5, 150 who considered 'Karabel' to be Holy Sion. Foss agrees, Foss, 'Cities and villages', p. 309.
[1026] Two churches mentioned in the TIB correspond to the so-called 'Ölüdeniz Beach Church' and the 'Iskender Basilica', see *Preliminary report*, pp. 106-9; *Island of St. Nicholas*, pp. 293-303.

Site	Evidence that may be LA, LRom or EByz or occupation /activity is attested	Evidence less securely attribute-ed to LA, LRom, EByz pd	Church may be dated to the LA LRom, EByz pd	Church, less securely attributed to the LA, LRom, EByz period. Sites with possible Christian remains	Misc.	TIB 8, p.
Tenedos	X		X?		Implied date of church?	877
Terponella					Inscription?	882-3
Tessai				X?	Location unknown. Lack of information. Not indicated on Map 1.	883
Tlos*****	X		X1			885-8
Topak Adası	X		X		Not indicated on Map 1	597
Tore de Stalimure		X			'?'	888-9
Tragalassos	X		X	X		890-2
Trebenna*****	X		X1	X1	'vermutlich'	892-4
Tristomon*	X		X2	X		895-7
Trysa	X			X?	'wohl'	897-8
Turant Asarı	X		X			898
Tüse	X?				Lack of information	898-9

Site	Evidence that may be LA, LRom or EByz or occupation /activity is attested	Evidence less securely attribute-ed to LA, LRom, EByz pd	Church may be dated to the LA LRom, EByz pd	Church, less securely attributed to the LA, LRom, EByz period. Sites with possible Christian remains	Misc.	TIB 8, p.
Tyberissos*	X			X	'?'	899-900
Tymena				X date?		901
Typallia*		X?		X	'wohl'	902
Tyriaion	X			X	'?'	902-3
Ürer				X	Location? '?'	907
Xanthos*	X		X	X date?	Implied date of churches?[1027]	911-15
Xindacopo					'offenbar spätröm. Amphoren u. Ballaststeine'	916-17
Yaka Çiftlik*				X		917
Yalakbaşı	X					917-18
Yaylakuzdere		X	X	X		919
Yazır (1)			X			919
Yukarı Beymelek	X		X			921-2
Yukarı Karaman				X	Location?	922
Zından	X				Location?	923

[1027] See main text.

N.B. Remains identified in the vicinity of places are included in the same site entry as they appear in the TIB. The only exception is Topak Adasi because it is an island.

Total sites: 203

Appendix 2

Sites in the region of Isauria under consideration with pertinent remains according to the information in the TIB 5[1028]

* Sites that are mentioned in the main text

LA: Late Antique; LRom: late Roman; EByz: early Byzantine; pd: period

Site	Evidence that may be LA, LRom or EByz or occupation/ activity is attested	Evidence less securely attributed to LA, LRom, EByz pd	Church may be dated to the LA, LRom EByz pd[1029]	Church, less securely attributed to the LA, LRom, EByz pd. Sites with possible Christian remains	Misc.	TIB 5, p.
Adamkaylar	X?				'wahr-scheinlich'	153-4
Adrasos*	X		X4[1030]			159
Akkale	X			X		165-6
Ala Kilise	X		X[1031]			170
Al Oda*		X		X		173
Anemurion*	X		X4[1032]		Dating of churches implied	187-91
Antiocheia am Kragos*	X		X2	Early Byzantine triconch, function?[1033]		191-3

[1028] For further information concerning categorisation methodology see Chapter 4.
[1029] For further information concerning the churches of Isauria see Hill, C*hurches*. Note that he draws on the work of the TIB 5 and of Hild and Hellenkemper (the editors of the TIB 5), although he does not always agree with their dating of church remains. Not all of the churches discussed by Hill are explicitly dated in his text. I have referenced this work when it offers more or different information concerning religious buildings from that which is presented in the TIB 5.
[1030] Hill, *Churches*, pp. 99-101, on the different opinions on the churches.
[1031] Hill, *Churches*, pp. 83-4.
[1032] Hill, *Churches*, p. 91 states there are four churches dating to *c*. the late 4th to 5th century and possibly others.
[1033] Hill, *Churches*, pp. 170-1 presents a discussion regarding the confusion over the location of the site which is indicated farther north than the site of Antiochia ad Cragos by the TIB 5. On the churches, three

Site	Evidence that may be LA, LRom or EByz or occupation/ activity is attested	Evidence less securely attributed to LA, LRom, EByz pd	Church may be dated to the LA, LRom EByz pd[1029]	Church, less securely attributed to the LA, LRom, EByz pd. Sites with possible Christian remains	Misc.	TIB 5, p.
Apadnas*	X		X3[1034]	Baptistery		193-4
Aphrodisias*	X		X2			195-6
Kösrelik Adası			X1		(not indicated on Map 2)	195
Arsinoe	X		X3			198
Aşağı Dünya	X				Location?	199
Aslanlı	X					200
Ayvasil	X				Location?	205
Balabanlı	X					209
Balkusan		X				209
Barakçıkalesi	X					210
Batısandal	X		X			212
Bey Ören				X[1035]	Location?	214
Bıçkıcı Kalesi*	X		X? [1036]			215
Bonjuk Kalesi	X			X		216-17
Bozburun	X					217
Burçun Kale	X				Location? Lack of	219

are dated to the early Byzantine period without adding further information regarding the possible use of the triconch.

[1034] Hill, *Churches*, pp. 72-83 'cave church', 'west church', 'east church', 'baptistery'.

[1035] Hill, *Churches*, p. 103 a church is no longer visible.

[1036] Hill, *Churches*, p. 103 the date of the church is debated.

Site	Evidence that may be LA, LRom or EByz or occupation/ activity is attested	Evidence less securely attributed to LA, LRom, EByz pd	Church may be dated to the LA, LRom EByz pd[1029]	Church, less securely attributed to the LA, LRom, EByz pd. Sites with possible Christian remains	Misc.	TIB 5, p.
					detail (not indicated on Map 2)	
Çadırlı				X		220
Çaltı (2)	X?			X?	Lack of information	222
Çanakçı	X					222
Canbazlı	X		X3			223
Çarıklar	X		X			224
Çatıören	X		X			224-5
Cemilli		X		X	'wohl'	225
Çet Tepe	X					225-6
Çırga		X?		X[1037]	Lack of information	228
Crionaro	X		X			229-30
Çukur	X		X			230
Demirciören (1)	X		X			237
Demirciören (2)	X		X			237
Devecili	X		X		Location?	238

[1037] Hill, *Churches*, p. 148 unconfirmed reports of a church.

Site	Evidence that may be LA, LRom or EByz or occupation/ activity is attested	Evidence less securely attributed to LA, LRom, EByz pd	Church may be dated to the LA, LRom EByz pd[1029]	Church, less securely attributed to the LA, LRom, EByz pd. Sites with possible Christian remains	Misc.	TIB 5, p.
Diokaisareia*	X		X3	X date?[1038]		239-40
Domalan	X					242
Elbeyli	X			X		248
Emirzeli	X		X3[1039]			249
Ezvendi				X		254
Germani-kupolis	X			X	Overbuilt	258-9
Gevinde		X			‘vielleicht’	259
Gökbelen				X		260
Gökburç	X					260
Gökkale	X			X		260-1
Gökören	X				Lack of detail	261
Görmel				X[1040]		262
Güvercin Adası*		X		X[1041]		264
Güvere	X					264
Güzeloluk		X date?			‘offenbar’	264
Hacıömerli	X		X			266

[1038] Hill, *Churches*, pp. 252-6 ‘temple church’, ‘church near the theater’, ‘church of Stephanos’, ‘cemetery church’ of uncertain dates.
[1039] Eichner, *Wohnhäuser*, pp. 127-8 corroborates three churches, one being destroyed, two are visible.
[1040] Hill, *Churches*, p. 170 possible churches unconfirmed and undated.
[1041] Hill, *Churches*, p. 172 citing the editors of the TIB dates a church on the island as early Byzantine.

Site	Evidence that may be LA, LRom or EByz or occupation/ activity is attested	Evidence less securely attributed to LA, LRom, EByz pd	Church may be dated to the LA, LRom EByz pd[1029]	Church, less securely attributed to the LA, LRom, EByz pd. Sites with possible Christian remains	Misc.	TIB 5, p.
Halil Limanı*	X			X date?[1042]	'vermutlich'	268
Hançerli		X			'wahr-scheinlich'	270
Hasanaliler	X		X			270
Hisarkalesi	X			X	Location unknown (not indicated on Map 2)	272
Holmoi*		X			'vermutlich'	272
Hüsametli	X			X		273
Imamlı	X		X		Implied date of the church based on settlement date[1043]	274
Imbriogon Kome	X					275
Iotape*	X?			X	Difficult to date remains	275-6
Işıkkale*	X		X		Implied date of the church based on settlement date[1044]	276-7

[1042] Hill, *Churches*, p. 172 undated church.
[1043] Hill, *Churches*, pp. 174-5 does not assign a date to the church identified here.
[1044] See Eichner, *Wohnhäuser*, p. 259; Varinlioğlu, 'Landscape'.

Site	Evidence that may be LA, LRom or EByz or occupation/ activity is attested	Evidence less securely attributed to LA, LRom, EByz pd	Church may be dated to the LA, LRom EByz pd[1029]	Church, less securely attributed to the LA, LRom, EByz pd. Sites with possible Christian remains	Misc.	TIB 5, p.
Kabaçam	X				Location unknown (not indicated on Map 2)	281
Kalanthia*			X	X		281
Kanytella*	X		X5[1045]			285-6
Karaahmetli	X					288
Karaböcülü	X		X			288
Karadedeli	X		X3			289
Karakabaklı*	X		X2[1046]			290
Karakilise*	X		X number ?			290-1
Kayacı	X					296
Keçikalesi	X					TIB 8, 621
Kelenderis*	X		X number ?		Lack of remains	298
Keşli	X		X?[1047]		Location? (not indicated on Map 2)	299

[1045] Hill, *Churches*, pp. 179-93 could not identify evidence for Church 5.
[1046] See Eichner, *Wohnhäuser*, p. 189; Varinlioğlu, 'Landscape'.
[1047] Hill, *Churches*, p. 196 on reported sightings of churches here.

Site	Evidence that may be LA, LRom or EByz or occupation/ activity is attested	Evidence less securely attributed to LA, LRom, EByz pd	Church may be dated to the LA, LRom EByz pd[1029]	Church, less securely attributed to the LA, LRom, EByz pd. Sites with possible Christian remains	Misc.	TIB 5, p.
Keşlitürkmenli	X		X			299-300
Kestroi*	X					301
Kızılaliler	X		X			303
Kızılbağ	X		X			303-4
Kızılisalı	X		X			304
Kızılören (1)	X		X		Location? (not indicated on Map 2)	305
Kızılören (2)	X		X		Location unknown (not indicated on Map 2) Implied EByz date of church based on settlement date	306
Klaudiupolis	X		X		? Overbuilt	307-8
Korasion*	X		X2	Possible 3rd church in area?		311-12
Koropissos*			X3	X		313-14

Site	Evidence that may be LA, LRom or EByz or occupation/ activity is attested	Evidence less securely attributed to LA, LRom, EByz pd	Church may be dated to the LA, LRom EByz pd[1029]	Church, less securely attributed to the LA, LRom, EByz pd. Sites with possible Christian remains	Misc.	TIB 5, p.
Korykion Antron	X		X2			314-15
Korykos[1048]*	X		X12			315-20
Köşkerli[1049]	X		X number ?			320
Kotrada	X				Inscription, see Yunt	320-1
Lamos (2)	X					330-1
Lamos (3)*		X			‘offenbar’	331
Mağara	X?					334-5
Mahras Dağı			X		Church complex	336
Manastır			X			340
Mancılık Kale	X?				Location? Lack of detail (not indicated on Map 2)	340
Mandane	X		X			340-1
Meydan Kalesi (2)	X					348-9

[1048] Hill, *Churches*, pp. 115-44 churches A-L and an additional chapel to the east.
[1049] Hill, *Churches*, p. 197 citing Hild and Hellenkemper discusses two early Byzantine churches and a medieval chapel.

Site	Evidence that may be LA, LRom or EByz or occupation/ activity is attested	Evidence less securely attributed to LA, LRom, EByz pd	Church may be dated to the LA, LRom EByz pd[1029]	Church, less securely attributed to the LA, LRom, EByz pd. Sites with possible Christian remains	Misc.	TIB 5, p.
Meydancık Kalesi*		X			Lack of detail	349
Mezgit Kalesi	X					350
Mylai	X		X2			362
Myus	X?				Location? See Crionaro (not indicated on Map 2)	363
Narlıkuyu	X					364
Nauloi	X					TIB 8, 743
Neapolis				X?	Lack of detail	365
Nesulion*	X		X		Church and associated building[1050]	366-7
Nuruköy	X?			X		368
Öküzlü	X		X2[1051]		Implied early Byzantine dates of the churches based on settlement date	369

[1050] See main text for updated information.
[1051] Eichner, *Wohnhäuser*, p. 94 discusses three churches, one being unpublished, therefore updating the TIB information. Earlier, Hill, *Churches*, pp. 237-40 mentions only two churches.

Site	Evidence that may be LA, LRom or EByz or occupation/ activity is attested	Evidence less securely attributed to LA, LRom, EByz pd	Church may be dated to the LA, LRom EByz pd[1029]	Church, less securely attributed to the LA, LRom, EByz pd. Sites with possible Christian remains	Misc.	TIB 5, p.
Olba[1052]*	X		X	X number of churches? (*c.* 4)		369-70
Otanada	X			X number?	'vielleicht'	371
Palaiai*	X					372
Papadola		X			'wohl'. Lack of detail	373
Paslı	X			X		376
Philadelpheia	X		X			378
Pityussa*	X			X church numbers and dates?	'wohl'	380
Platanus	X			X	'wohl', 'vermutlich'	381
Pompeiupolis*	X			X?	Remains displaced, overbuilt	381-2
Roto	X					393
Ṣaha	X		X		Implied early Byzantine date of church based on settlement date?	394

[1052] Hill, *Churches*, pp. 250-2 'town church', 'cemetery church', 'monastery complex' – not well-preserved, not dated.

Site	Evidence that may be LA, LRom or EByz or occupation/ activity is attested	Evidence less securely attributed to LA, LRom, EByz pd	Church may be dated to the LA, LRom EByz pd[1029]	Church, less securely attributed to the LA, LRom, EByz pd. Sites with possible Christian remains	Misc.	TIB 5, p.
Şamlıgöl	X					395
Sarıkavak (1)				X date?		397
Sarıveliler			X			398
Sebaste*	X		X[1053]	X	'wohl'	400-1
Seleukeia*	X		X?[1054]	X?	Limited remains	402-6
Selinus*	X		X[1055]	X	'wohl', 'vielleicht', '?'	407-8
Sibyla		X?		X?	Difficult to locate and interpret remains	410
Sichinum	X					410
Sinekkale*	X					412
Sivastı**				X		416-17
Sömek	X			X[1056]		419
Syedra	X		X	X		TIB 8, 866-9
Tagai				X		424

[1053] See main text for updated information.
[1054] Hill, *Churches*, pp. 240-1 on earlier reports of the site and the 'temple church'.
[1055] Hill, *Churches*, pp. 167-9.
[1056] Hill, *Churches*, p. 241 on earlier observations of a (undated) church.

Site	Evidence that may be LA, LRom or EByz or occupation/ activity is attested	Evidence less securely attributed to LA, LRom, EByz pd	Church may be dated to the LA, LRom EByz pd[1029]	Church, less securely attributed to the LA, LRom, EByz pd. Sites with possible Christian remains	Misc.	TIB 5, p.
Tahtacıbelen Mahallesi	X					424
Takkadın	X		X2 (church and chapel)	X		424-5
Tapureli[1057]			X5?			426
Telemeci			X		Location?	440
H. Thekla*	X		X[1058]	X date? Number?		441-3
H. Theodoros				X[1059]		444
Titiupolis	X		X3			447-8
Tömük Kale		X?				449-50
Türkmenuşağı	X					451
Üçtepe*	X		X2			452-3
Uğurlu				X		453
Veyselli Kale	X					455
Viranköy	X			X[1060]		456
Yağda	X					458

[1057] Hill, *Churches*, pp. 246-9 not all five churches are assigned dates in the text.
[1058] Hill, *Churches*, pp. 208-34.
[1059] Eichner, *Wohnhäuser*, pp. 314, 318-19.
[1060] Hill, *Churches*, p. 256 based on an earlier reports of a church (undated) and a possible small church (undated).

Site	Evidence that may be LA, LRom or EByz or occupation/ activity is attested	Evidence less securely attributed to LA, LRom, EByz pd	Church may be dated to the LA, LRom EByz pd[1029]	Church, less securely attributed to the LA, LRom, EByz pd. Sites with possible Christian remains	Misc.	TIB 5, p.
Yanıkhan	X		X2			458-9
Yapısıgüzel	X		X[1061]			459-60
Yelbis Kalesi	X		X	X?	'offenbar'	460-1
Yeniçıktı	X					461
Yeniyurt Kale	X		X1	X2[1062]		462
Yunt	X?			X	Inscriptions	463
Zenonopolis					Inscription? Lack of remains	463-4

Total sites: 152

[1061] Eichner, *Wohnhäuser*, fig. 8, pp. 31-2 (two churches).
[1062] Hill, *Churches*, p. 264.

Appendix 3.

Churches identified in the area of Telmessus (Fethiye) and Ölüdeniz as published in Tsuji (1995) and Asano (2010)[1063]

Source: S. Tsuji, (eds), *The survey of early Byzantine sites in Ölüdeniz Area (Lycia, Turkey). The first preliminary report* (Osaka, 1995); K. Asano, (eds), *The Island of St. Nicholas. Excavation and survey of the Gemiler Island Area, Lycia, Turkey* (Osaka, 2010).

Location	Church name and brief description	Reference
Fethiye	'A church on a cliff between Fethiye and Ölüdeniz' • Three-aisled (*c.* 27m length) • Southwest chapel (and additional features) • Not dated	*Island of St. Nicholas*, pp. 214-16.
	'Monastery at Afkule' (the monastery of Saint Nicholas) • Church with adjoining/nearby structures • frescoes dating to late or post-Byzantine period • re-used material (suggested early Byzantine period construction)	*Preliminary report*, pp. 131-2; *Island of St. Nicholas*, pp. 217-22.
Sövalye Island	Church • three-aisled basilica • church is described as 'Byzantine'. Not more specifically dated • mosaic floor • elsewhere, a cistern (uncertain date) was later decorated with fresco, suggesting it was used as a chapel • 'early Christian capital' found, but its relation to the church (if any) is unclear	*Island of St. Nicholas*, pp. 216-17.

[1063] The names of the churches differ across publications.

	• Roman period remains on island	
Ölüdeniz[1064]	'Ölüdeniz village church' (possibly the 'Church at the Ocean Camp of the Village, Belceğiz Deniz Kamp Kilisesi'? see below) • Apse and walls • Modern use at site • Vaulted structure • Marble capital • 17m stylobate • Incorporated in modern building works	*Preliminary report*, p. 7
	'Church at the Ocean Camp of the Village, Belceğiz Deniz Kamp Kilisesi' (possibly the 'Ölüdeniz village church'? see above) • In Ölüdeniz village • Implied the church belongs to the early Byzantine period • Three-aisled • Total length 34.93m • Mosaic floor • Column bases • Limestone pieces • Marble column pieces • Synthronon • Architectural elements • Earlier architectural pieces 'spolia' • Marble architectural elements • 'pool' • Coins (not *in situ*) (#1 dated *c*. 6th century; #3 dated *c*. last half of the 4th century)	*Island of St. Nicholas*, pp. 286-93.

[1064] Based on the brief description of the 'Ölüdeniz village church' in the *Preliminary report* (no image or plan accompanies the report of this find), it is difficult to determine if it is the same building as the 'Church at the Ocean Camp of the Village, Belceğiz Deniz Kamp Kilisesi' described in *Island of St. Nicholas*. The more recent reports refers to the *Preliminary report* but the different names of the buildings leads to confusion.

	‘Ölüdeniz Beach Church’ (‘Church at the Sand Bank/Kumburnundaki Kilise’) • Tri-apsed • Width: *c*. 18m (outer measurement) • Length: nave *c*. 27m • (Prelim. report measurements: *c*. 18.8x33m) • Fresco • Implied 6th and 7th century dating (?) • Some remains of settlement nearby	*Preliminary report*, pp. 7-9, 106-8; *Island of St. Nicholas*, pp. 300-303.
	‘Iskender Basilica’ (‘Church at Sun City’) • Internal measurements *c*. 17.9x11.7m • (Prelim. Report gives two sets of measurements: 22x13m) • Side chamber(s) • Marble pieces inside the structure • Underwater remains of structures • Later research revealed: a three-aisled basilica with synthronon, atrium • 21.8x12.7m • Additional marble pieces • Based on fresco the church is dated at the latest to the first half of the 6th century • Baptismal ‘pool’ • adjoining chapel and area with baptismal pool are possibly later additions	*Preliminary report*, pp. 9-10, 109; *Island of St. Nicholas*, pp. 293-300.
Gemiler Beach/Beştaş Bay	‘Mustafa Basilica’ • Interior naos measurements 15.3x9.5m	*Preliminary report*, pp. 10, 110-12.

	• Stylobate, side room (possible baptistery) • Annexes • Fresco • Three-aisled • Atrium with cistern • Possible crypt for relic • Structure nearby • Not assigned a date in this text	
	'Basilica and Adjacent Buildings on Gemiler Beach' • Three-aisled basilica • External measurements 25x14.9m without the atrium • Chapel • Cistern • Overbuilt structures on shore • 'early buildings' and tombs in area • Overall suggested this is evidence for a 'flourishing maritime Byzantine settlement'	*Preliminary report*, pp. 10-11.
Karacaören area	Church at the Port of Markianè • Amongst the ruins on the peninsula is a basilica • Side arcades • Annexes adjoining the basilica • Tombs and civic buildings nearby • Possibly funerary function • Date?	*Preliminary report*, pp. 11-12.
Kaya	'Spolia' pieces in churches, number of early Byzantine churches uncertain (see Chapter 4). • Marble fragments • Limestone fragments	*Island of St. Nicholas*, pp. 222-33, at p. 231 footnote 11.

Appendix 4. Eastern Isaurian sites documented in ANMED (2003-2016)[1065]

Site Name	Houses	Cistern	Presses 'oo/w'	Threshing Floor/ Area	Church	Misc.	Date	ANMED Vol. reference
1. Seyranlik (30km from Silifke)	Yes	Yes			Yes 1	'farming villa'; 'ateliers'	LA-EByz	A. Aydın, 'Surveys of late antique and Byzantine architecture at Seyranlık village, Silifke-Mersin, 2002', *ANMED*, 1 (2003), p. 49.
2. Yumuktepe[1066] (Mersin-Yumuktepe)					Yes 1	Buildings, storage structures, fortification	Dated 'Byzantine'12th-13th centuries. Church has three phases, but not dated	I. Caneva, 'The 2003 excavation campaign at Mersin-Yumuktepe', *ANMED*, 2 (2004), pp. 60, 62.
3. Seyranlik See #1		6				Structures (~25-30)		H. Şahin, 'Surveys in central Rough Cilicia in 2005', *ANMED*, 4 (2006), p. 133.[1067]
4. Kümbet-beleni[1068]	250	30			Yes 1 EByz			Şahin, 'Surveys 2005', p. 133.

[1065] Funerary remains (tombs, sarcophagi) were not recorded unless in connection with late antique or early Byzantine evidence (inscriptions).
[1066] The Byzantine layers of this site are dated from the 12th to 13th centuries. However, as the church seems to have different building phases it is not known whether it dates back to late antique or early Byzantine times. Not indicated on Map 7.
[1067] The survey was conducted in the Erdemli and Silifke townships.
[1068] Due to a possible duplication of this site (entries #4, #62) this site was only indicated once on the corresponding map.

See #56, #62 (of Karadedeli village, 14km west of Silifke)								
5. Akpınar area[1069] (Pınarbaşı, 60 km northeast of Erdemli)					Yes 1 EByz			Şahin, 'Surveys 2005', p. 134.
6. Serdöğül[1070] (5.5km southeast of Kızılen, Erdemli township)	25 LRoman					Sarcophagi with crosses	LRoman houses	Şahin, 'Surveys 2005', pp. 134-5.
7. Sulucin cave[1071] (around Kayacı village, *c*. 12 km northeast of Erdemli)						LA occupation, millstone	LA occupation	Şahin, 'Surveys 2005', p. 135.
8. Fakiköy area (described as nearby #7)	~8 LRoman-EByz						LRoman-EByz houses	Şahin, 'Surveys 2005', p. 135.
9. Küstüllü village[1072]	250-300	Yes			Yes 1	Structures	No date given	Şahin, 'Surveys 2005', p. 135.

[1069] Not indicated on Map 7.
[1070] Not indicated on Map 7.
[1071] Indicated on Map 7 between Erdemli and Kayacı.
[1072] Not indicated on Map 7.

(area) (Erdemli township) See #42								
10. Kepir Kale[1073] (in neighbourhood of Erdemli centre)	~60	Yes				Fortification walls; EByz structure	Structure on slope EByz	Şahin, 'Surveys 2005', p. 136.
11. Kavmil Ali'nin Kilise (1.5km south of Olba)	5		2 oo			2-storey structure	LRoman-EByz	H. Şahin, 'Surveys in Rough Cilicia in 2006', *ANMED*, 5 (2007), p. 116.[1074]
12. Islata Sırtı[1075] (of Seyranlık Köyü, see above)	5-7		2 oo		Yes 1 EByz church			Şahin, 'Surveys 2006', p. 118.
13. Gölcük area[1076] See #55 (of Göğere Köyü, Silifke)	70-80	10	9 work areas oo or w	3			LRoman-EByz settlement	Şahin, 'Surveys 2006', p. 118.
14. Alafu/					Yes 1 EByz church	LRoman-EByz settlement nearby church	LRoman-EByz site	Şahin, 'Surveys 2006', p. 118.

[1073] Indicated on Map 7 near Erdemli.
[1074] Research was conducted around Seleucia, Olba-Diokaisareia, Korykos, Korasion.
[1075] Indicated on Map 7 near Seyranlik
[1076] Not indicated on Map 7.

Alakilise area[1077] (of Bayındır Köyü, 22km northeast of Silifke)								
15. Baklaların Yıkığı area[1078] (4km west of Ovacık Köyü)	13-15	Yes	3-4 'winer-ies of olive oil presses'	1			LRoman-EByz settlement	Şahin, 'Surveys 2006', p. 119.
16. Ovacıkalanı area (3km east Keşlitürkmenli Köyü, 15km north of Silifke)	~30					2-3 work areas	LRoman-EByz settlement	Şahin, 'Surveys 2006', p. 119.
17. Yükseksin (1km west of Kültesir area of Karadedeli Köyü)	5-6					3 work areas	LRoman-EByz settlement	Şahin, 'Surveys 2006', p. 120.
18. Bağlıçukur See #35 (3km north of Karadedeli)	5-6		'Winer-ies'			Farmhouse	EByz settlement	Şahin, 'Surveys 2006', p. 120.
19. Kocabeyli area	~30		3 winer-ies				LRoman-EByz settlement	Şahin, 'Surveys 2006', p. 120.

[1077] A site TIB 5, 'Ala Kilise' p. 170 is described as being to the west-northwest of Seleucia, so this is likely another site.
[1078] Not indicated on Map 7.

(of Karadedeli Köyü)								
20. Bayramlıören (2km northwest of Karadedeli)	~30		8 winer-ies				LRoman-EByz settlement	Şahin, 'Surveys 2006', p. 120.
21. Konuröküz (1.5km east Karakabaklı)	~10			7 areas			LRoman-EByz settlement	Şahin, 'Surveys 2006', p. 120.
22. Near Hasanaliler Köyü, rock caves (6km north Narlıkuyu area)						Inscription stating it was a monastery cemetery, tombs	Inscriptions on tombs date 5th-6th c	Şahin, 'Surveys 2006', p. 121.
23. Yenibahçe[1079] (behind Korasion)	3			Yes		Work area (storage)	One building had parts d LRoman-EByz	H. Şahin, 'Rough Cilicia 2007: settlement history and epigraphic surveys', *ANMED*, 6 (2008), pp. 121-2.[1080]
24. Erikliseki (east)[1081] (descriptions suggest it is in	6 or 7		Reused weights			Millstone	LRoman-EByz burials	Şahin, 'Rough Cilicia 2007', p. 123.

[1079] Descriptions of this site suggests it is the name of the modern village, not necessarily the valley.
[1080] Research was conducted around Korykos, Seleucia, Olba-Diokaisareia, Korasion.
[1081] Not indicated on Map 7.

the area of Yenibahçe)								
25. Kültesir Mevkii (8km north of Karadedeli Köyü)	~10	6	Yes oo and w (weights)			Burial nearby	Burial inscription d 5th c	Şahin, 'Rough Cilicia 2007', p. 124.
26. Harnuplu Çukur Mevkii (3km southwest of #25)	6 or 7					Work areas, tomb with cross		Şahin, 'Rough Cilicia 2007', p. 124.
27. Murt Boğazı (Karadedeli)	5 or 6		Yes w/oo	Yes		Possible farm building, millstone	Masonry and ceramics d 5th-6th c	Şahin, 'Rough Cilicia 2007', p. 124.
28. Yonozlu (Karadedeli)						Buildings; Roman ceramics	Settlement d Late Hellenistic-EByz	Şahin, 'Rough Cilicia 2007', p. 125.
29. Veledli Boğaz Mevkii (Karadedeli)	~15			Yes		Cross on lintel	No date given, cross inscription.	Şahin, 'Rough Cilicia 2007', p. 125.
30. Sakızlak (5km northeast of Karadedeli)	~10		'Winery' in threshing floor	Yes		Work areas	Some EByz masonry	Şahin, 'Rough Cilicia 2007', p. 125.
31. Kızılekinlik Mevkii (of İmamlı)	~10, ~15		Yes, wineries			Possible farmhouse, Roman ceramics	Some LRoman-EByz houses with work areas	Şahin, 'Rough Cilicia 2007', p. 126.

32. İmamlı-Ahatlı Mevkii (presumably in the area of İmamli)	5			2		Farm building; work areas	Masonry and ceramics- Late Hellenistic – LRoman	Şahin, 'Rough Cilicia 2007', p. 127.
33. Zeynelli Mevkii (of Uzuncaburç)	10-12			Yes		Lintel with cross	Roman ceramics, cross	Şahin, 'Rough Cilicia 2007', p. 127.
34. Keçiliköy (~7km south of Olba, also known as Derbent Mevkii)	~10-12		'Winery'	2		Work area is winery	Late Hellenistic to LRoman-EByz	Şahin, 'Rough Cilicia 2007', pp. 127-8.
35. Bağlıçukur mevkii[1082] See #18 (of Hüseyinler Köyü, Silifke İlçesi)						Inscriptions, 5-6th c		H. Şahin, S. Pullu, 'Rough Cilicia 2008: settlement history and epigraphy surveys', *ANMED*, 7 (2009), p. 128.[1083]
36. Hömerli mevkii (2km north of Keşlitürkmenli)	uncertain			1		Work areas	Roman-EByz settlement	Şahin, Pullu, 'Rough Cilicia 2008', p. 128.
37. Şahinkayası (8km north of Karadedeli Köyü)	Yes		Wine press with 'pool',				LRoman-EByz	Şahin, Pullu, 'Rough Cilicia 2008', p. 129.

[1082] Not indicated on Map 7 as it may be a duplicate.
[1083] Research was conducted around Korykos, Seleucia, Olba, Diokaisareia, Korasion.

			millstone pieces					
38. Bademliyurt (7km northeast of Karadedeli)	~10			3			EByz	Şahin, Pullu, 'Rough Cilicia 2008', p. 129.
39. Unnamed site[1084] (location: 1 km w Allıören/2km se Türkmenuşağı) Silifke İlçesi	~50	3		1			LRoman-EByz	Şahin, Pullu, 'Rough Cilicia 2008', p. 130.
40. Çaltılı Köyü (Mut İlçesi, Mersin province)	~15						LRoman-EByz settlement	Şahin, Pullu, 'Rough Cilicia 2008', p. 131.
41. Örenpınar Köyü[1085] (20km northwest of Gülnar, Gülnar İlçesi, Mersin province)						LRoman settlement	LRoman	Şahin, Pullu, 'Rough Cilicia 2008', p. 131.
42. Hisar[1086] See #9					2 churches,			Ü. Aydınoğlu, 'Surveys of

[1084] Not indicated on Map 7.
[1085] Not indicated on Map 7.
[1086] The location of a site TIB 5, 'Hisarkalesi', p. 272 is unknown, possibly in the area of the Yenibahçe valley, so is unlikely this site, which may be located further north based on the description. There is a Hisar located to the northwest of Silifke but it is unclear if this is the correct site, therefore it is not indicated on Map 7.

(Küstüllü Köyü, Erdemli)					'tetra-conch building'			urbanization and of agricultural organization during Antiquity within the Townships of Erdemli and Silifke in Mersin Province in 2008', *ANMED*, 7 (2009), pp. 148-9.
						33 new settlements identified and inscriptions d. Roman Imperial to EByz. No further information stated		H. Şahin, 'Rough Cilicia 2009: settlement history and epigraphy surveys', *ANMED*, 8 (2010), p. 149.
43. Demirciören[1087] (descriptions suggest the site is located around Korykos)					Church	Buildings	No dates	Ü. Aydınloğlu, 'Surveys of urbanization and agricultural organization in Rough Cilicia in 2010', *ANMED*, 9 (2011), p. 185.[1088]
44. Hayrat					Church	Workshops, walls	No dates given	Aydınloğlu, 'Surveys 2010', p. 186.

[1087] It is uncertain if this site has been documented in the TIB 5. The TIB 5, p. 237 lists two different sites as Demirciören, both are located near Korykos and both sites each contain a church.
[1088] Research was conducted between Erdemli and Silifke ilçes.

Mahallesi[1089] ('of Erdemli city center')								
45. Murtluboğaz mevkii (Narlıkuyu) Possible duplicate[1090]	Yes				Church, EByz		EByz	H. Şahin, 'Rough Cilicia 2010: settlement history and epigraphy surveys', *ANMED*, 9 (2011), p. 190.[1091]
46. Sakırgalık mevkii (Kızılisali Köyü)	5	Yes				Work areas	LRoman or EByz	Şahin, 'Rough Cilicia 2010', p. 190.
47. Atayurt Saybant mevkii[1092] (Silifke Atayurt)		Yes				Work area	EByz settlement	Şahin, 'Rough Cilicia 2010', p. 190.
48. Kaleliin mevkii[1093] (detail of location not given, presumably also in Silifke Atayurt)						Inscription EByz		Şahin, 'Rough Cilicia 2010', p. 191.

[1089] Indicated near Erdemli on Map 7.
[1090] Indicated on Map 7.
[1091] Research was centred around Mut, Gülnar, Aydıncık, Bozyazı, and Anamur of Mersin and inland areas of Rough Cilicia. Surveys were conducted around Korykos, Diokaisareia, Olba, Seleucia, Klaudiopolis (Mut), Korasion and Gülnar İlçesi.
[1092] Approximately located to the east of Silifke based on Google Maps.
[1093] Not indicated on Map 7.

49. Kabalar Eteği mevkii[1094] (Silifke Atayurt)						Inscription EByz		Şahin, 'Rough Cilicia 2010', p. 191.
50. Karaharnup mevkii[1095]	20 + 2 villa						Roman Imperial, LRoman, EByz	Şahin, 'Rough Cilicia 2010', p. 191.
51. Makamlar mevkii (Karadedeli Köyü)	4	Yes				Nearby road, work area	EByz	Şahin, 'Rough Cilicia 2010', p. 191.
52. Akhöyük mevkii (Karadedeli Köyü)	20					Work area	'likely' EByz	Şahin, 'Rough Cilicia 2010', p. 191.
53. Kocaburun mevkii (Karadedeli Köyü)	4 or 5					Work area	EByz	Şahin, 'Rough Cilicia 2010', p. 192.
54. Höyük (mound) in Şarlak Mahallesi[1096] (Gülnar İlçesi)						occupied Roman-LRoman	Roman-LRoman	Şahin, 'Rough Cilicia 2010', p. 193.
55. Gölcük mevkii[1097]			Yes, oo		2 churches		No explicit date but related to	G. Varinlioğlu, 'Survey on the

[1094] Indicated near #47.
[1095] Not indicated on Map 7.
[1096] Indicated at Gulnar on Map 7.
[1097] The finds of the survey of G. Varinlioğlu are discussed in Chapter 4. However, this site was included here as it may have also been visited by another scholar (entry #13) who reports further remains. Not indicated on Map 7.

See #13 (1.5km northwest of Boğsak)							LA 'economic expansion'	Boğsak Island 2011', *ANMED*, 10 (2012), pp. 138-9.
56. Kümbetbeleni See #4, #62 (9km northwest of Karadedeli)						Inscription d 4th c		H. Şahin, 'Rough Cilicia 2011: settlement history and epigraphic surveys', *ANMED*, 10 (2012), p. 188.
57. Kapıtaş II ('locale of Hüseyinler village')	~20		Yes oo, mortar			Farmhouse, work area	Possibly LA	Şahin, 'Rough Cilicia 2011', p. 189.
58. Unnamed site location: 200m s Aşağı of Hüseyinler village[1098]	~10	2	Yes oo, mortar	Yes 1		Road, workshop	Possibly Late Roman Imperial-EByz	Şahin, 'Rough Cilicia 2011', pp. 189-90.
59. Kemikli İn[1099] (Tekkadın area of Ovacık village)						Grave d 5th-6th c		Şahin, 'Rough Cilicia 2011', p. 190.
60. Unnamed site	~30-40 uncertain	Yes		Yes		Enclosed, gate	Late Roman Imperial-EByz	Şahin, 'Rough Cilicia 2011', p. 190.

[1098] It is not certain whether this site is documented in the TIB 5, 'Aşağı Dünya' p. 199, which is not indicated on TIB maps, but is described as lying in the area of Yenibahçe. This site is indicated in the area of Hüseyinler on Map 7.
[1099] Not indicated on Map 7.

(location: 15 km southwest of Diokaisereia)								
61. Near Ballıköy[1100] (60km north of town, Mut District?)						Inscription on tomb may be 4^{th}-5^{th} c		Şahin, 'Rough Cilicia 2011', p. 191.
62. Kümbetbeleni mevkisi See #4, #56 (Silifke)	Yes		Yes, oo		Church 'built at a later phase of use'	Buildings	No explicit dates	Ü. Aydınoğlu, 'Surveys on urbanization and rural settlements in Rough Cilicia 2012', *ANMED*, 11 (2013), p. 204.[1101]
63. Tol 3 mevkisi (4km northwest of Hüseyinler Köyü)		Yes				Altar, work areas	'Late Roman Antiquity'	H. Şahin, 'Rough Cilicia settlement history and epigraphy surveys 2012', *ANMED*, 11 (2013), p. 208.[1102]
64. Karaböcülü Valley[1103] (Karaböcülü is 12km north of Silifke)					Church (no date)			Ü. Aydınoğlu, 'Surveys on urbanization and rural settlements in Rough Cilicia 2013',

[1100] Not indicated on Map 7.
[1101] Survey was conducted between the Kalykadnos and Lamos rivers (between Silifke and Erdemli) of Mersin province.
[1102] Research incorporated the areas of Korykos, Seleucia, Korasion, Klaudiopolis, Diokaisareia, Kanytella, Aya Thekla, Titiapolis.
[1103] A site named Karaböcülü is recorded in the TIB 5, p. 288. However, the location of a church is described as being in the vicinity of the valley, so it was included here.

								ANMED, 12 (2014), p. 164.
65. Incirlik mevkisi (Demircili village)	Yes		Yes	2	Church (no date)	Workshops	'Hellenistic character'	Aydınoğlu, 'Surveys 2013', pp. 165-6.
66. Tapureli village[1104] (36km north of Erdemli)	Several				8 (LA? Dating not explicit but implied)	Buildings predominantly d LA; road with propylon		Ü. Aydınoğlu, 'Surveys on the urbanisation and rural settlements in Rough Cilicia 2015', *ANMED*, 14 (2016), p. 191.
67. Öküzlü[1105]	House				3 LA (one is new find)	Road, buildings with possible workshops	Hellenistic- LA	Aydınoğlu, 'Surveys 2015', pp. 193-4.
68. Bayındır See #14 (Silifke district)					Church		Predominantly LA	Aydınoğlu, 'Surveys 2015', p. 195.
69. Akhayat (near Karadedeli village of Atayurt area of Silifke district)	Yes	Yes ~8				Farmhouse, work areas, graves with cross inscriptions	Occupied 'Roman, especially Late Roman, period'	A. Özdizbay, İ. D. Dinçer, 'Surveys on the settlement history and rural settlements in Rough Cilicia 2015',

[1104] The site of Tapureli is recorded in the TIB 5, p. 426, as having five churches. Hill describes five churches at Tapureli, Hill, *Churches*, pp. 246-9. Therefore, it was included here because it appears as though more recent archaeological work brings the total to eight churches, but their dating is uncertain. It has not been indicated on Map 7.

[1105] Öküzlü is documented in the TIB 5, p. 369, but only 2 churches are recorded. Aydinoğlu claims a third church is a new find in this ANMED publication but Eichner had discussed and illustrated a third church in her 2011 publication, Eichner, *Wohnhäuser*, fig. 77, pp. 94-5. It has not been indicated on Map 7.

								ANMED, 14 (2016), p. 198.[1106]
70. Yonuzlu (near Karadedeli of Atayurt area of Silifke district. 800m east of #69)	40	6		Yes		Work areas	Possibly Hellenistic, more securely in Roman, LRoman/ Byzantine	Özdizbay, Dinçer, 'Surveys 2015', pp. 198-9.
71. Kurşun Kalesi (of Yeğenli village of Silifke district. In Olba-Diokaisareia territory)	Yes	Yes			Church	Work areas	Structures built 3rd-4th c, continue to 7th c	Özdizbay, Dinçer, 'Surveys 2015', pp. 201-2.
72. Körüklük (Susanoğlu area of Silifke district)	Yes	1				Work areas	Roman, LRoman/ Byzantine	Özdizbay, Dinçer, 'Surveys 2015', p. 202.
73. Andızlımıdık (*c*. 1km south of #72)	Yes	2				No work areas, called a 'hamlet'	Hellenistic, LRoman	Özdizbay, Dinçer, 'Surveys 2015', pp. 202-3.
74. Kaleliburun (2km east of #72, of Susanoğlu area of Silifke district)	Yes	Yes			Yes church 'Byz-antine'	Work areas, 'farmhouses'	Possibly Hellenistic; Roman, LRoman, Byzantine	Özdizbay, Dinçer, 'Surveys 2015', pp. 203-4.

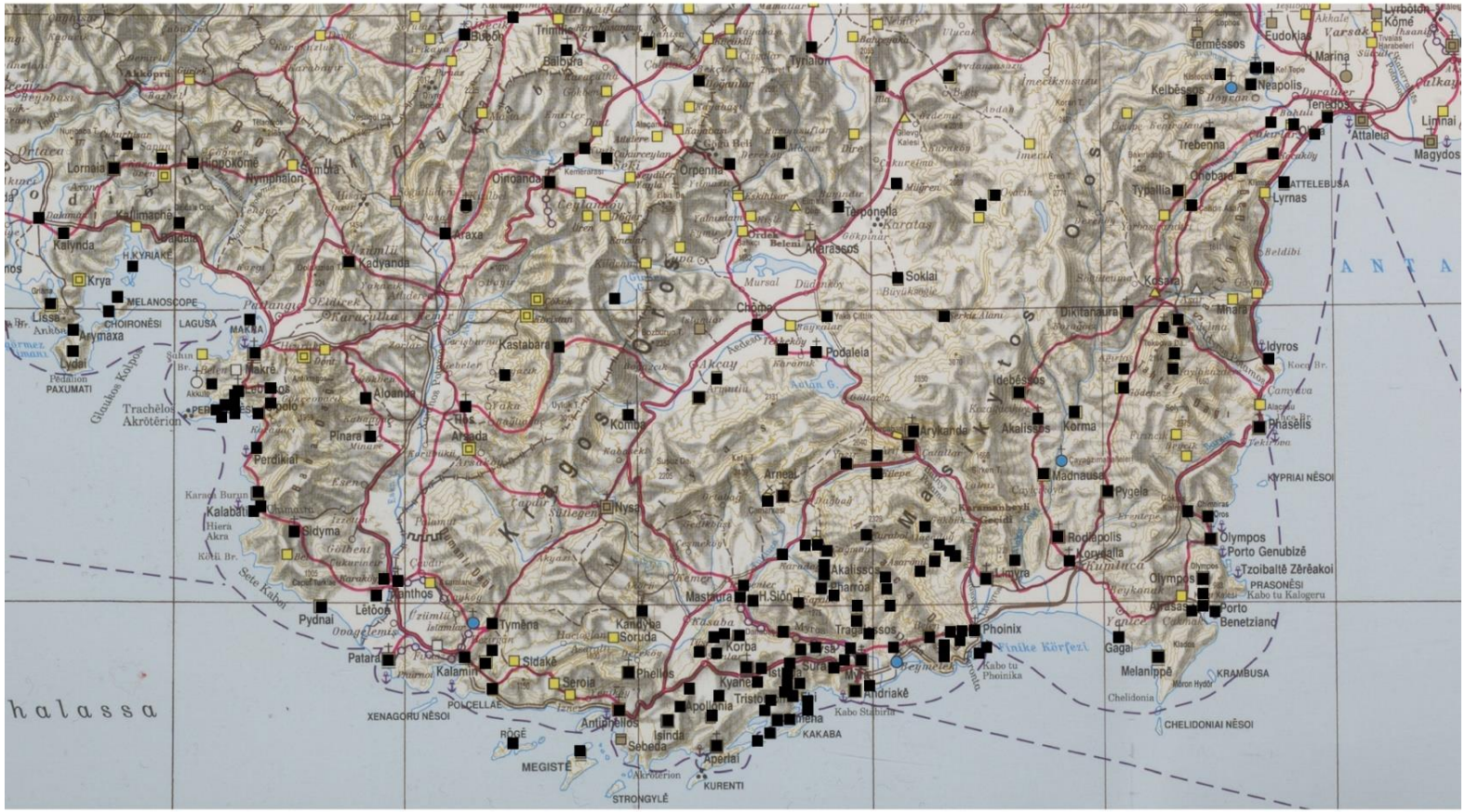
[1106] Research was conducted in the Silifke, Erdemli and Mut districts.

Legend: LA- Late Antique; LRoman- late Roman; EByz- early Byzantine; d - date; c- century; oo- olive oil; w-wine; '~'- approximately; s-south; w-west; se-southeast

N.B. The locations of the sites demarcated on the accompanying map (Map 7) are approximations. Their locations were determined with the utilization of various resources (TIB 5 maps, descriptions of their locations in the survey reports, Google Maps). Some sites could not be located with certainty. Sites with pertinent epigraphic evidence have been included, but are often difficult to date. It is also uncertain what the term 'work areas' refers to (i.e. a press, threshing floor, storage area etc.) and so have been categorised under 'miscellaneous' in most cases.

Maps

Map 1. Map of Lycian TIB 8 sites (as indicated in Appendix 1)



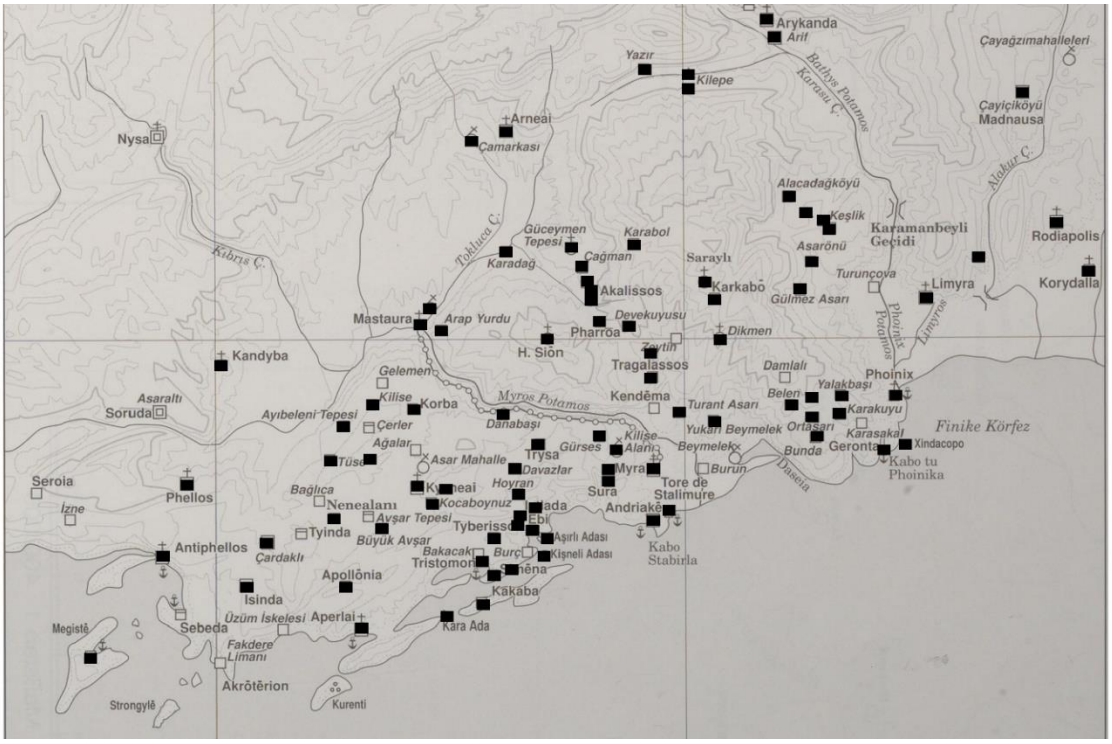
H. Hellenkemper, F. Hild, (eds), *Lykien und Pamphylien, Tabula Imperii Byzantini 8* (3 vols, Wien, Verlag der Österreichischen Akademie der Wissenschaften, 2004), iii, 'Lykien und Pamphylien (1:800.000 Ausfaltkarte)'. Cropped, modified.

Map 2. Map of Isaurian TIB 5 sites (as indicated in Appendix 2)



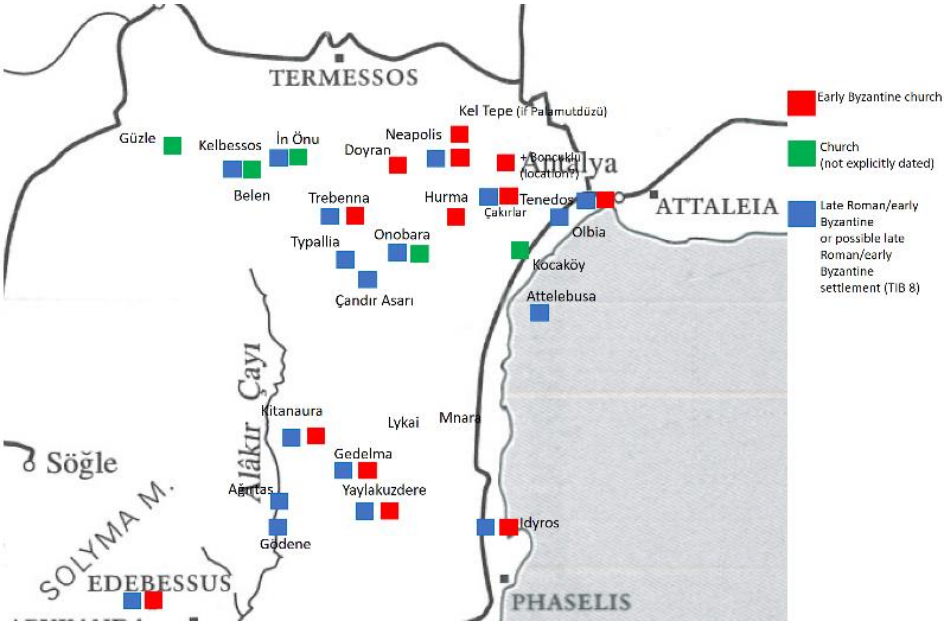
F. Hild, H. Hellenkemper, (eds), *Kilikien und Isaurien*, *Tabula Imperii Byzantini 5* (2 vols, Wien, Verlag der Österreichischen Akademie der Wissenschaften, 1990), ii, 'Kilikien und Isaurien (1:800.000 Ausfaltkarte)'. Cropped, modified.

Map 3. Southcentral coastal Lycia, TIB 8 sites indicated (as indicated in Appendix 1)



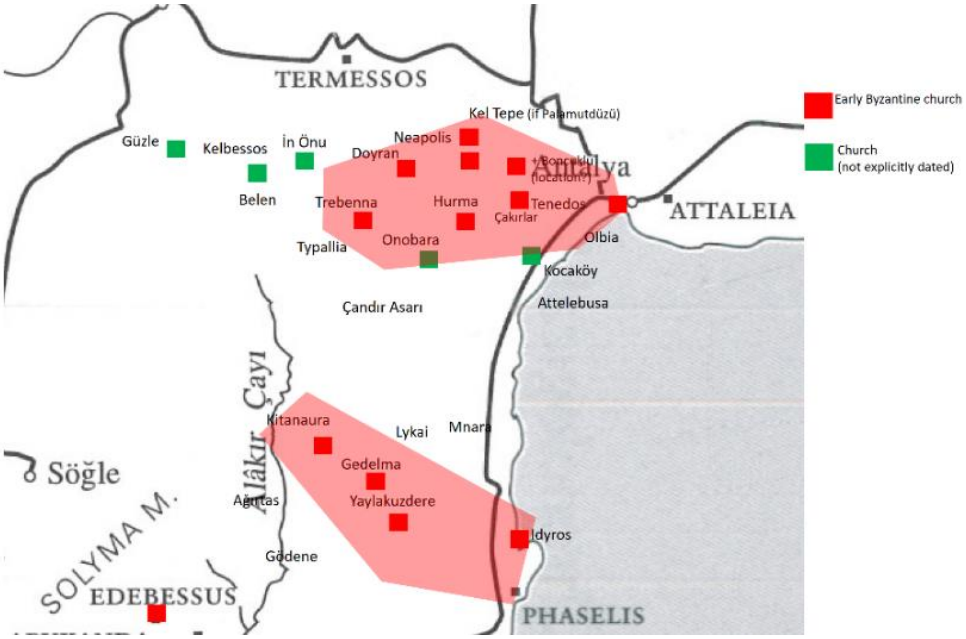
H. Hellenkemper, F. Hild, (eds), *Lykien und Pamphylien*, *Tabula Imperii Byzantini 8* (3 vols, Wien, Verlag der Österreichischen Akademie der Wissenschaften, 2004), iii, 'Sonderkarte 1. Zentrallykien'. Cropped, modified.

Map 4A. Eastern Lycian sites (TIB 8 and Bey Dağ survey information combined)



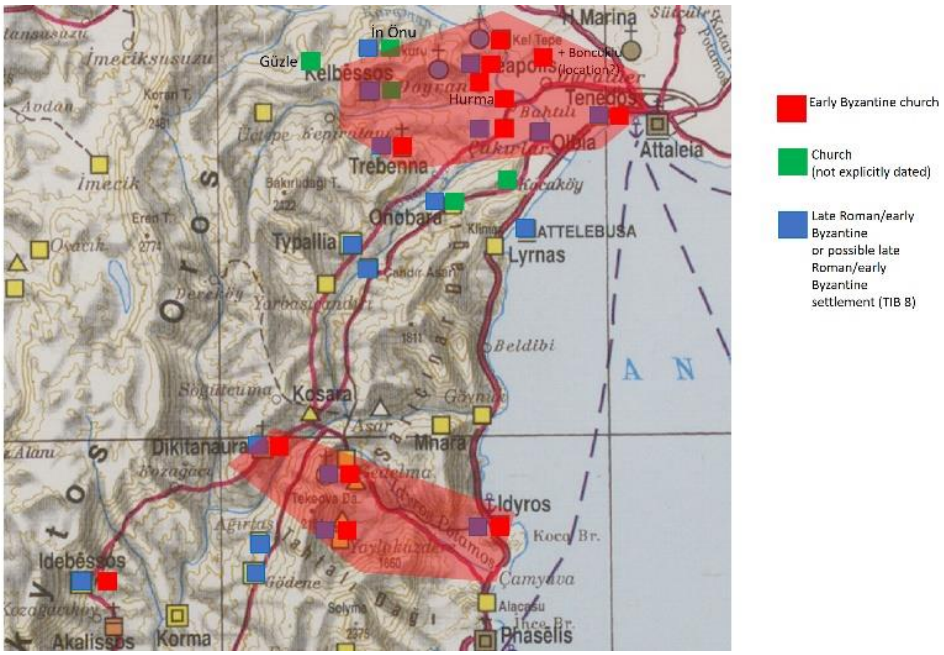
Copyright: University of Michigan Press. M. Harrison, *Mountain and plain*, ed. W. Young (Ann Arbor, 2001), fig. 1. Modified.

Map 4B. Eastern Lycian sites (TIB 8 and Bey Dağ survey information combined). Areas with early Byzantine churches indicated



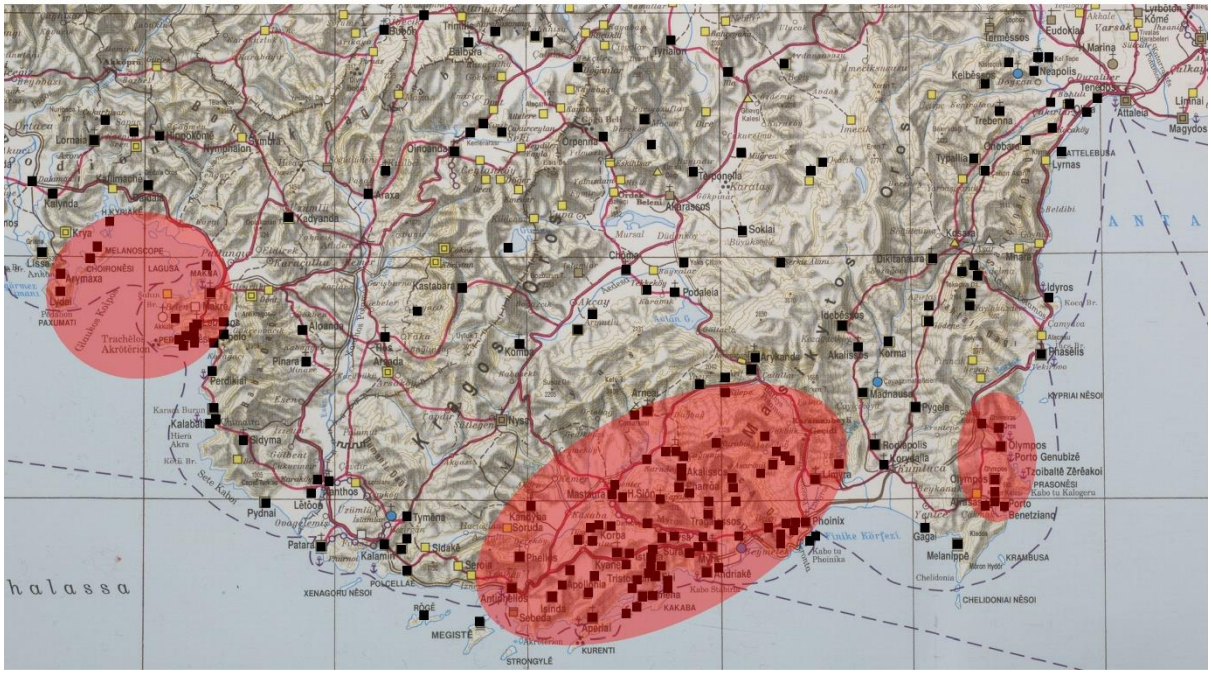
Copyright: University of Michigan Press. M. Harrison, *Mountain and plain*, ed. W. Young (Ann Arbor, 2001), fig. 1. Modified.

Map 4C. Eastern Lycian sites (TIB 8 and Bey Dağ survey information combined) indicated on TIB 8 map

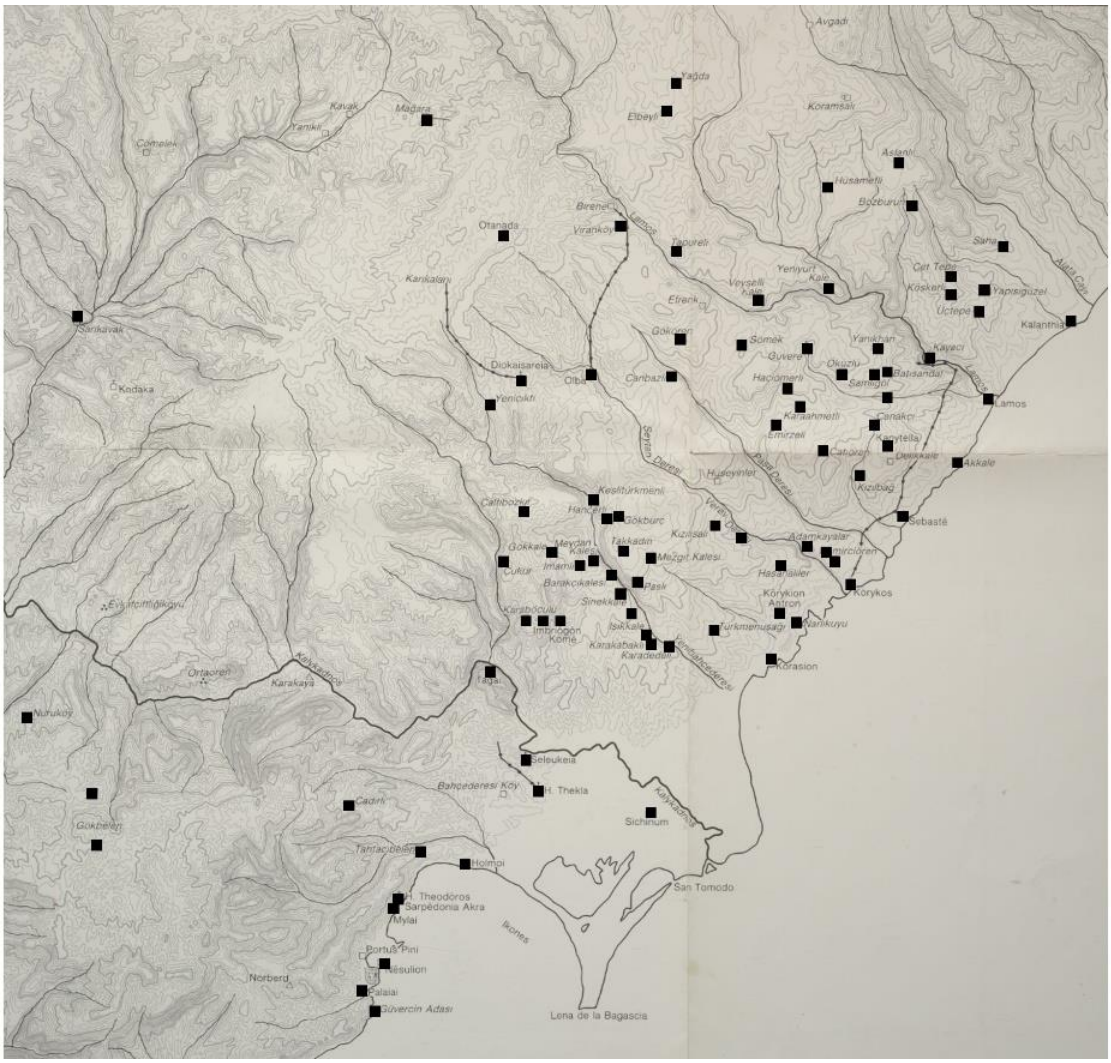


H. Hellenkemper, F. Hild, (eds), *Lykien und Pamphylien*, *Tabula Imperii Byzantini 8* (3 vols, Wien, Verlag der Österreichischen Akademie der Wissenschaften, 2004), iii, 'Lykien und Pamphylien (1:800.000 Ausfaltkarte)'. Cropped, modified.

Map 5. TIB 8 Lycian sites indicated with the three areas of dense settlement highlighted 1) southcentral coast 2) Ölüdeniz/Fethiye 3) Olympus/Phaselis areas

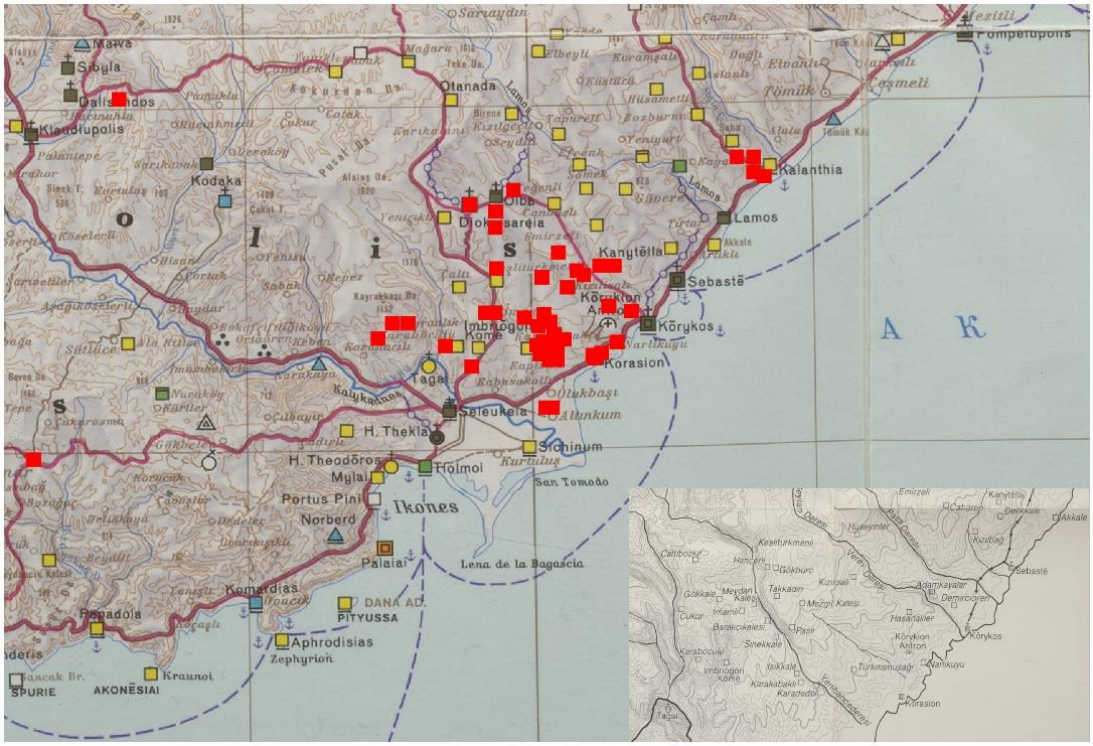

halassa
Xanthos
Letoon
Pydnai
Patara
Kalamaki
Tymena
Sidaka
Sereia
Phellos
Korba
Phoinix
Gagai
Melanippe
Olympos
Porto Genuizé
Tzoibaltè Zèrèakoi
PRASONÊSI
Kabo tu Kologeru
KRAMBUSA
CHELIDONIAI NÊSOI
KYPRIAI NÊSOI
Phaselis
Idyros
Korma
Pygela
Rodopolis
Arykanda
Akalissos
Idebessos
Diktanaura
Myra
Andriakè
KAKABA
Kabo Stavros
Kabo tu Phoinika
Finike Körfezi
Sebeda
Apollonia
Isinda
Antiphellos
MEGISTÊ
KURENTI
STRONGYLÊ
XENAGORU NÊSOI
POLICELLAE
Kyaneai
Trysa
Sidyma
Kadyanda
Araxa
Oinoanda
Balbura
Tlos
Pinara
Arneai
Podaleia
Sokiai
Kastabara
Aloanda
Perdikai
Kalabatia
Lydai
Kalkan
Kaş
Trachèlos Akrôtèrion
PAXUMATI
MELANOSCOPE
CHOIRONÊSI
LAGUSA
MARAA
Aymaxa
Kyra
Kalkanlı
Lymas
Lyrnessos
Kelbessos
Neapolis
Marina
Attaleia
Limnai
Magydos
Trebenna
Tyberissa
Lyrbotai
Kômè
Eudokias
Varsada
Tenedos
Belenli
Akdrasos
Karataş
Beldibi
Mursal
Dutlunca
Çukurcuma
Yavu Dağı
Kızıl Dağ
Sarı Dağ
Kara Dağ
Kara Burun
Sete Kaka
Kabo tu Phoinika
Kabo Stavros
Kabo tu Kologeru
Kaş Br.
Kaş
Kekova
Kekova Adası
Simena
Ova
Ova Br.

Map 6. Map of east coast hinterland Isaurian sites according to the information in the TIB 5



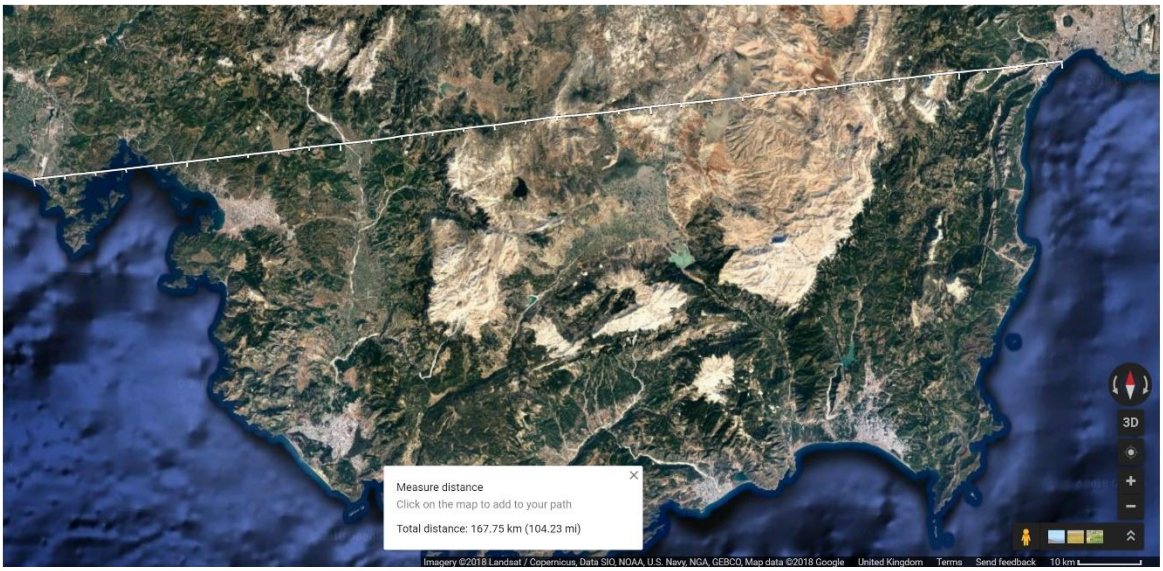
F. Hild, H. Hellenkemper, (eds), *Kilikien und Isaurien*, *Tabula Imperii Byzantini 5* (2 vols, Wien, Verlag der Österreichischen Akademie der Wissenschaften, 1990), ii, 'Seleukeia und Umgebung (1: 200.000 Ausfaltkarte)'. Cropped, modified.

Map 7. Approximate rendering of the location of pertinent sites identified in the east coast region of Isauria according to survey results published in the *ANMED* journal series (with inset of Yenibahçe valley)



F. Hild, H. Hellenkemper, (eds), *Kilikien und Isaurien*, *Tabula Imperii Byzantini 5* (2 vols, Wien, Verlag der Österreichischen Akademie der Wissenschaften, 1990), ii, 'Kilikien und Isaurien (1:800.000 Ausfaltkarte)'. Cropped, modified; Inset: F. Hild, H. Hellenkemper, (eds), *Kilikien und Isaurien*, *Tabula Imperii Byzantini 5* (2 vols, Wien, Verlag der Österreichischen Akademie der Wissenschaften, 1990), ii, 'Seleukeia und Umgebung (1: 200.000 Ausfaltkarte)'. Cropped, modified.

Map 8A. Approximate distance of Lycia under consideration (*c*. 168km)



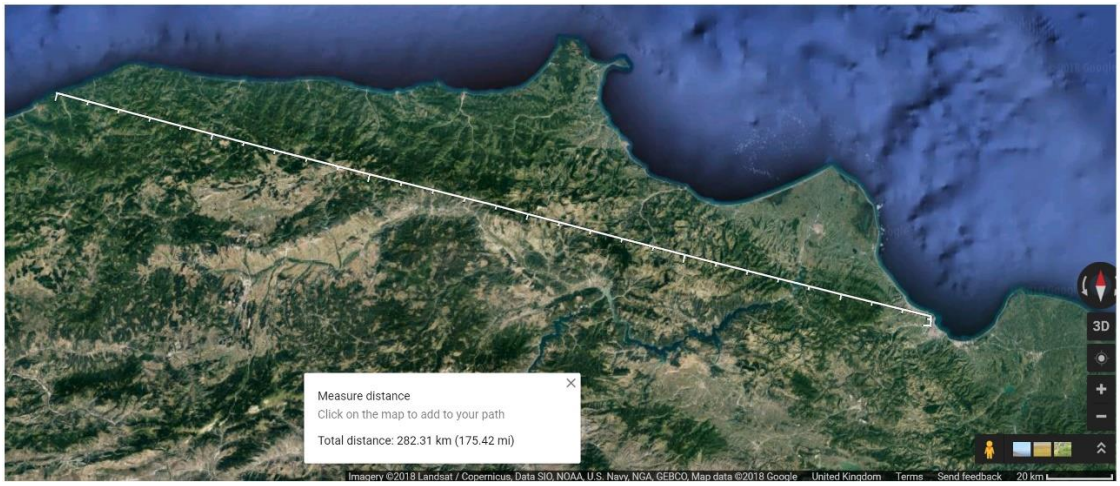
Google Maps, 2018 Google https://www.google.co.uk/maps/@36.5871605,29.6425025,99672m/data=!3m1!1e3?hl=en (accessed 18 February 2018). Cropped.

Map 8B. Approximate distance of Isauria under consideration (*c*. 217km)



Google Maps, 2018 Google, https://www.google.co.uk/maps/@36.661148,33.0925073,153094m/data=!3m1!1e3?hl=en (accessed 18 February 2018). Cropped.

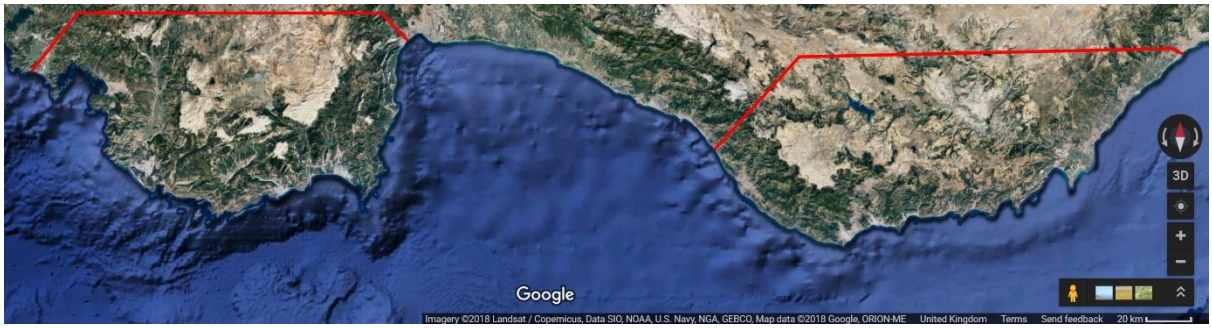
Map 8C. Approximate distance of north central Anatolia under consideration (*c*. 282km)



Google Maps, 2018 Google, https://www.google.co.uk/maps/@41.7977663,34.5069968,204476m/data=!3m1!1e3?hl=en (accessed 18 February 2018). Cropped.

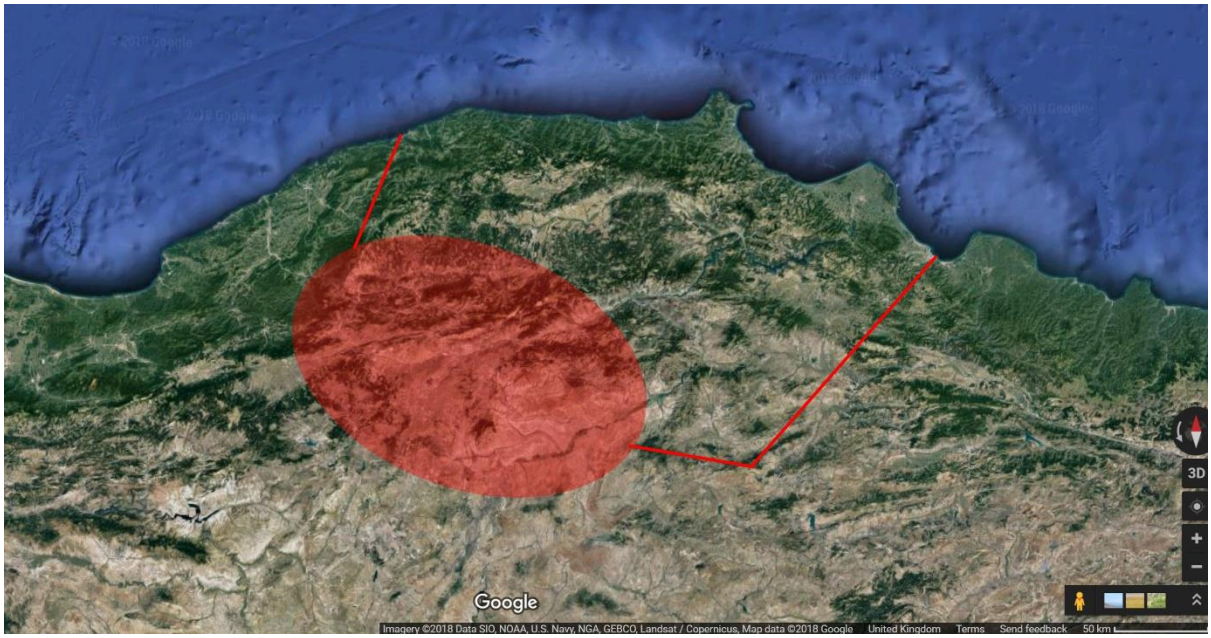
Figures

Figure 1. Approximate geographic area of Lycia and Isauria under consideration



Google Maps, 2018 ORION-ME, https://www.google.co.uk/maps/@37.0006678,31.3182504,285371m/data=!3m1!1e3?hl=en (18 February 2018). Modified.

Figure 2. Approximate geographic area of north central Anatolia under consideration (with approximate Project Paphlagonia survey region indicated)



Google Maps, 2018 Google, https://www.google.co.uk/maps/@41.1543326,33.6077345,371837m/data=!3m1!1e3?hl=en (18 February 2018). Modified.

Figure 3. Lycia



H. Hellenkemper, F. Hild, (eds), *Lykien und Pamphylien*, *Tabula Imperii Byzantini 8* (3 vols, Wien, Verlag der Österreichischen Akademie der Wissenschaften, 2004), iii, ‘Lykien und Pamphylien (1:800.000 Ausfaltkarte)’. Cropped.

Figure 4. Isauria



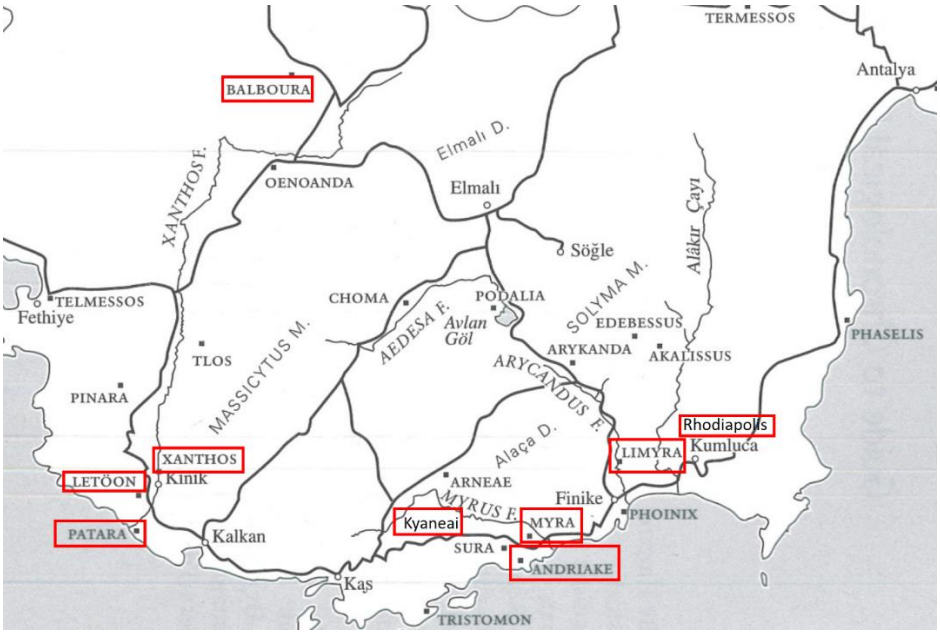
F. Hild, H. Hellenkemper, (eds), *Kilikien und Isaurien*, *Tabula Imperii Byzantini 5* (2 vols, Wien, Verlag der Österreichischen Akademie der Wissenschaften, 1990), ii, ‘Kilikien und Isaurien (1:800.000 Ausfaltkarte)’. Cropped.

Figure 5. Late Roman amphorae of Riley's Carthage classification

This image cannot be displayed due to copyright.

Karagiorgou, 'Mapping trade', fig. 4.2, p. 42. Modified.

Figure 6. Map indicating Lycian sites with amphorae evidence discussed in Chapter 3



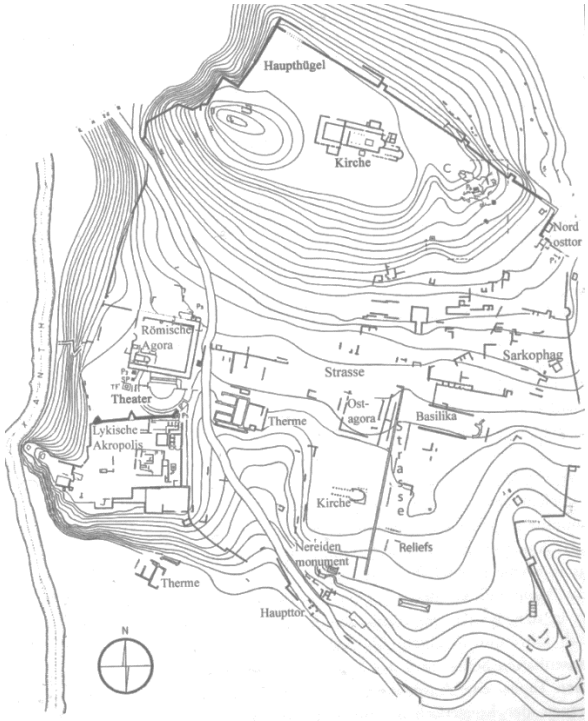
Copyright: University of Michigan Press. M. Harrison, *Mountain and plain*, ed. W. Young (Ann Arbor, 2001), fig. 1. Modified.

Figure 7. Patara site plan



Copyright: Yapı Kredi Yayınları. H. İşkan, 'Capital of Lycian League and province: Patara', in H. İşkan, E. Dündar (eds), *Lukka'dan Likya'ya Sarpedon ve Aziz Nikolaos'un Ülkesi- From Lukka to Lycia the land of Sarpedon and St. Nicholas* (Istanbul, 2016), fig. 5, 'The city plan of Patara. Copyright Patara Excavation Archive', p. 148. Cropped, modified.

Figure 8. Xanthus site plan



Drawing by Th. Marksteiner (Th. Marksteiner, *Lykien. Ein archäologischer Führer* [Wien 2010], p. 63). Cropped, modified.

Figure 9. Plan of the house on the Lycian acropolis, Xanthus

This image cannot be displayed due to copyright.

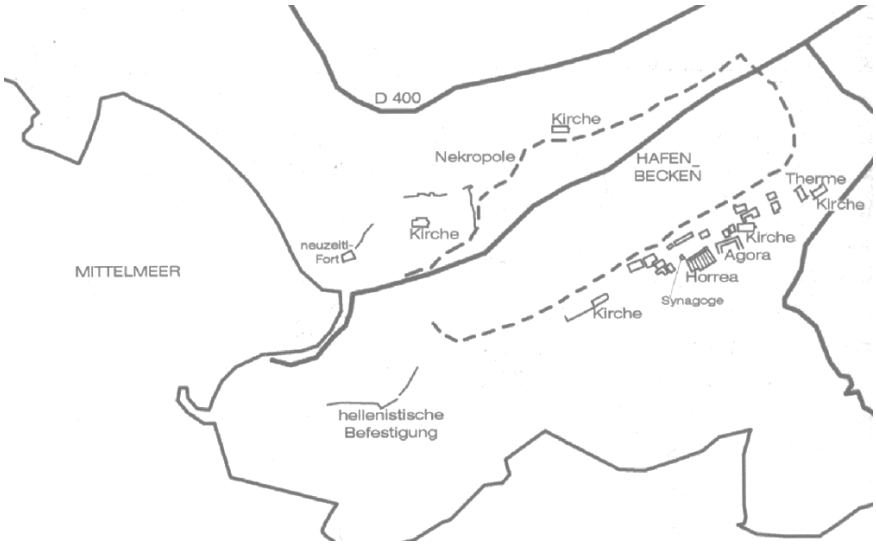
A-M. Manière-Lévêque, 'La maison de l'acropole lycienne à Xanthos', *Anatolia Antiqua*, 10 (2002), fig. 3, p. 239. Cropped.

Figure 10. Find spots of the ceramics from Letoon

This image cannot be displayed due to copyright.

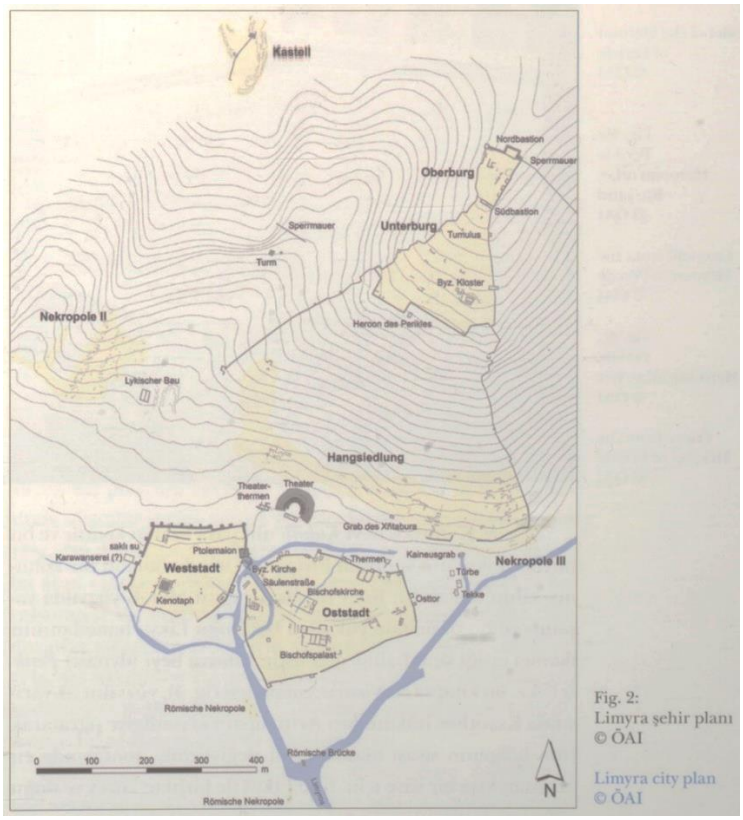
Lemaître, 'Etude préliminaire', i, fig. 2, p. 395. Modified.

Figure 11. Andriake site plan



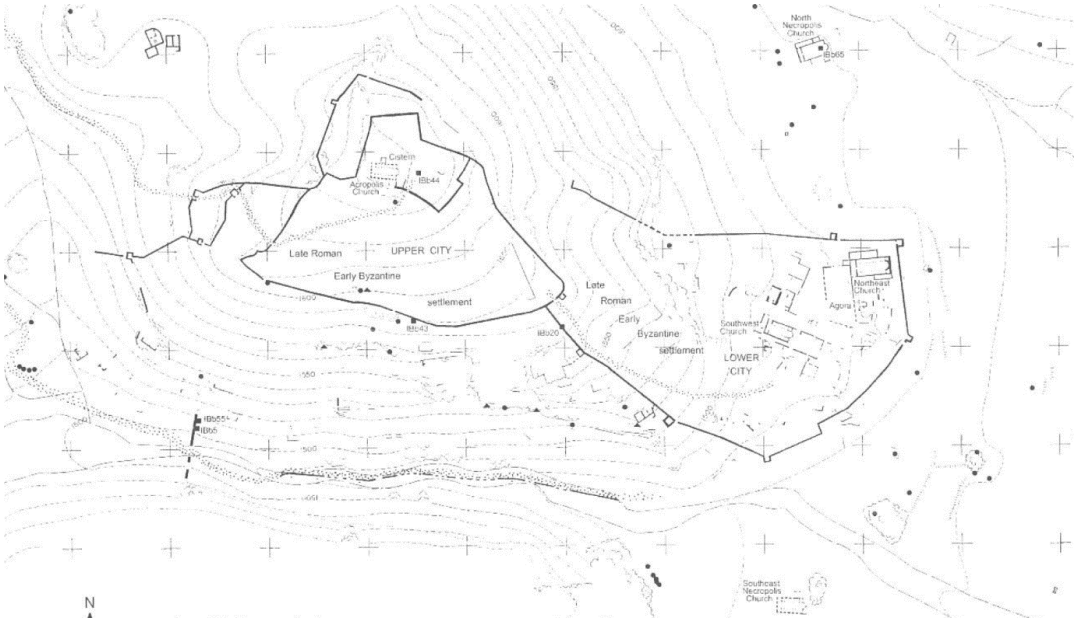
Drawing by Th. Marksteiner (Th. Marksteiner, *Lykien. Ein archäologischer Führer* [Wien 2010], p. 158). Cropped, modified.

Figure 12. Limyra site plan



Copyright: Yapı Kredi Yayınları. M. Seyer, 'The city of king Pericle: Limyra', in H. İşkan, E. Dündar (eds), *Lukka'dan Likya'ya Sarpedon ve Aziz Nikolaos'un Ülkesi- From Lukka to Lycia the land of Sarpedon and St. Nicholas* (Istanbul, 2016), fig. 2, ''Limyra city plan. Copyright ÖAI', p. 261. Modified.

Figure 13. Balboura (*c*. late 3rd to 6th century)



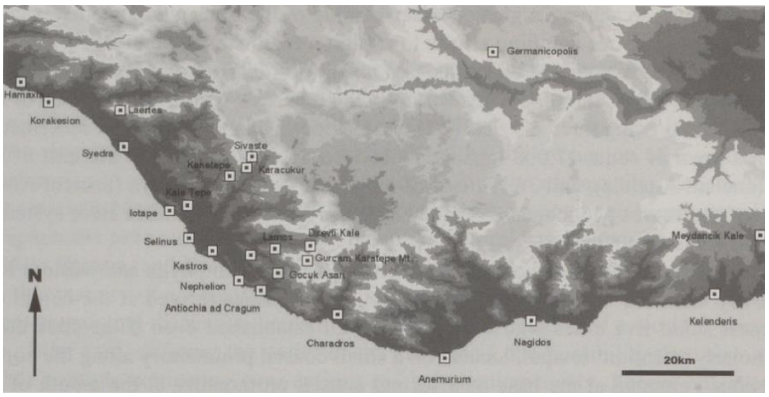
Copyright: British Institute at Ankara. J. J. Coulton, 'Late Roman and Byzantine Balboura', in J. J. Coulton (eds), *The Balboura Survey and settlement in highland southwest Anatolia 1: Balboura and the history of highland settlement*, British Institute at Ankara Monograph 43 (2 vols, London, 2012), i, fig. 7.1, p. 165. Cropped.

Figure 14. Map indicating main coastal Isaurian sites discussed regarding amphorae evidence in Chapter 3



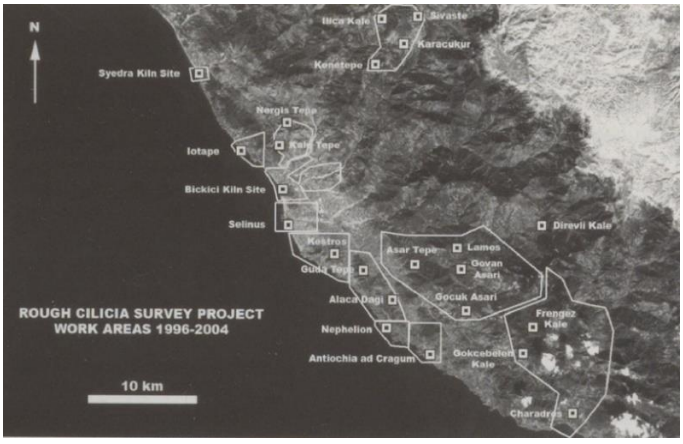
'Google Maps, 2018 Google', https://www.google.co.uk/maps/@36.4228661,33.2887507,120329m/data=!3m1!1e3?hl=en (22 February 2018). Modified.

Figure 15. Map of western Isauria (western Rough Cilicia)



N. K. Rauh, *et al*., 'Life in the Truck Lane: urban development in western Rough Cilicia', *Jahreschefte des Österreichischen Archäologischen Institutes in Wien*, 78 (2010), fig. 1, p. 256. Copyright: Wien, Verlag der Österreichischen Akademie der Wissenschaften.

Figure 16. Rough Cilicia Survey Project survey areas demarcated



N. K. Rauh, *et al*., 'Life in the Truck Lane: urban development in western Rough Cilicia', *Jahreschefte des Österreichischen Archäologischen Institutes in Wien*, 78 (2010), fig. 2, p. 256. Copyright: Wien, Verlag der Österreichischen Akademie der Wissenschaften.

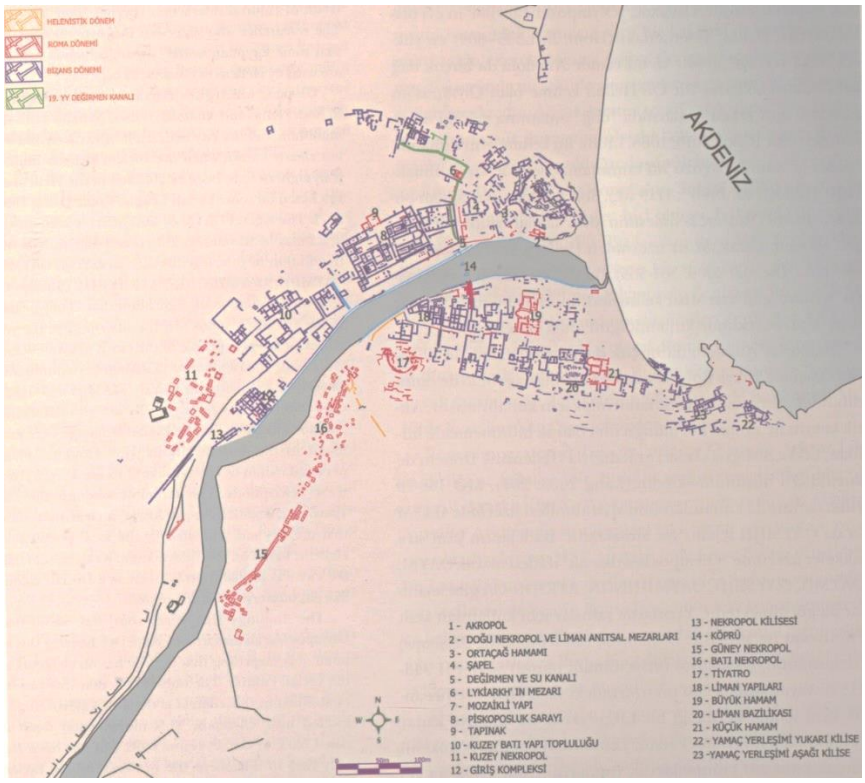
Figure 17. Section of Elaiussa-Sebaste site plan

Elaiussa Sebaste II, 'Tavole', Tav. I. Cropped.

Figure 18. Ölüdenz/Fethiye area

Island of St. Nicholas, fig. 4. Cropped, modified.

Figure 19. Olympus site plan



Copyright: Yapı Kredi Yayınları. B. Y. O. Uçkan, G. K. Öztaşkın, 'Olympos: the city sanctified with water and fire', in H. İşkan, E. Dündar (eds), *Lukka'dan Likya'ya Sarpedon ve Aziz Nikolaos'un Ülkesi- From Lukka to Lycia the land of Sarpedon and St. Nicholas* (Istanbul, 2016), fig. 1, 'Olympos city plan. Copyright Olympos Excavation Archive', p. 275. Cropped, modified.

Figure 20. Eastern Lycia. The Bey Dağ area

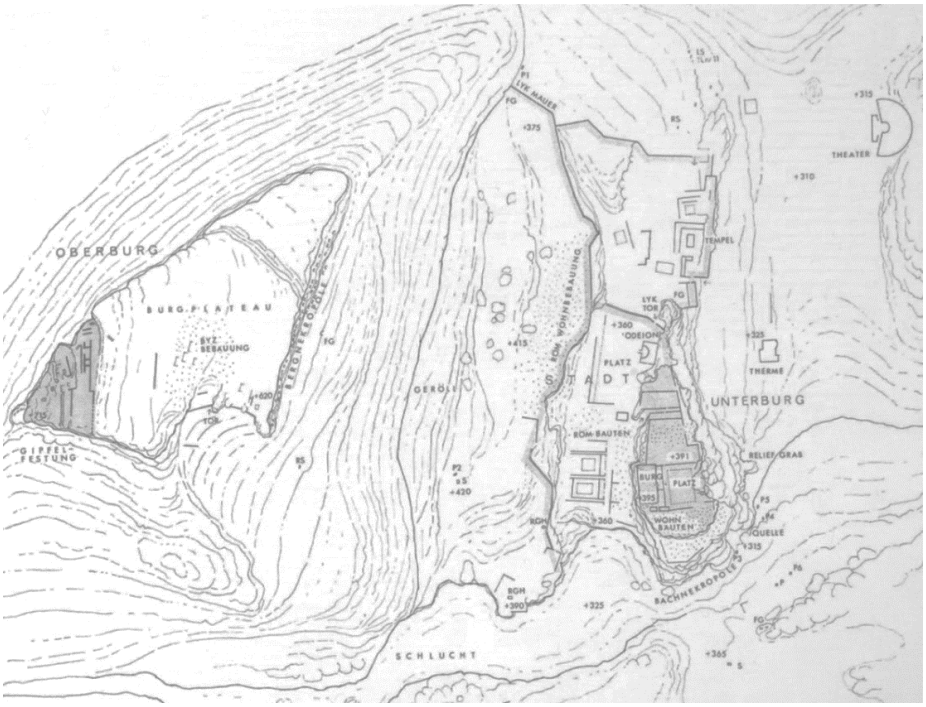
Trebenna, fig. 1, p. 241. Cropped.

Figure 21. Trebenna site plan

This image cannot be displayed due to copyright.

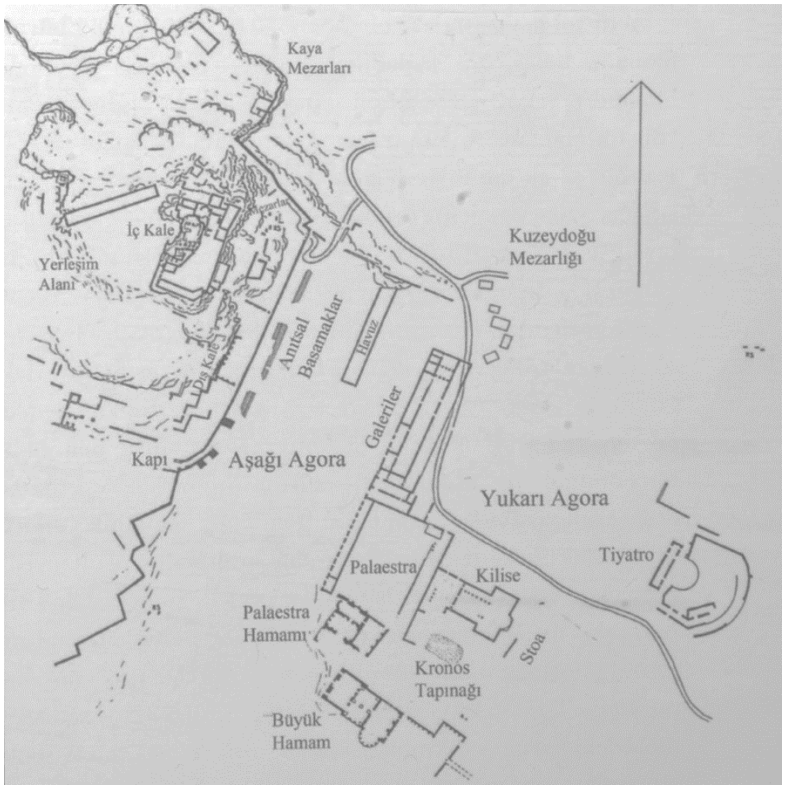
Trebenna, fig. 9, p. 245. Cropped.

Figure 22. Pinara site plan



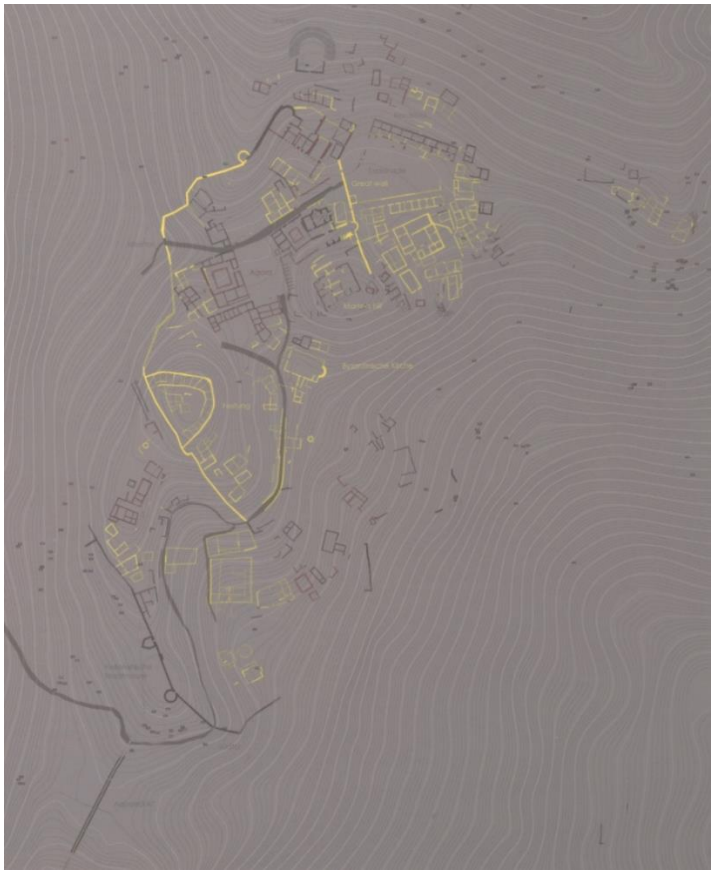
Copyright: Yapı Kredi Yayınları. W. Tietz, 'Western Lycia: Pinara, Telmessos, Kadyanda', in H. İşkan, E. Dündar (eds), *Lukka'dan Likya'ya Sarpedon ve Aziz Nikolaos'un Ülkesi- From Lukka to Lycia the land of Sarpedon and St. Nicholas* (Istanbul, 2016), fig. 1, 'Pinara, city map Wurster-Wörrle 1978: 80, fig. 6', p. 337. Cropped, modified.

Figure 23. Tlos site plan



Copyright: Yapı Kredi Yayınları. F. Işık, 'The powerful city of the "Land of Lukka": Tlos', in H. İşkan, E. Dündar (eds), *Lukka'dan Likya'ya Sarpedon ve Aziz Nikolaos'un Ülkesi- From Lukka to Lycia the land of Sarpedon and St. Nicholas* (Istanbul, 2016), fig. 4, 'The city plan of Tlos drawing after Wurster 1976', p. 213. Cropped, modified.

Figure 24. Oinoanda site plan



Copyright: Yapı Kredi Yayınları. M. Bachmann, 'Northern Lycia: Oinoanda, Balboura, Elmalı', in H. İşkan, E. Dündar (eds), *Lukka'dan Likya'ya Sarpedon ve Aziz Nikolaos'un Ülkesi- From Lukka to Lycia the land of Sarpedon and St. Nicholas* (Istanbul, 2016), fig. 6, 'Oinoanda, map showing the three main stages of development of the city's history (gray = Hellenistic, red = Roman; yellow = Late Antique-Byzantine) drawing K. Berner'. Bachmann, 'Northern', p. 355. Cropped, modified.

Figure 25. Arykanda site plan

Bayburtluoğlu, *Arykanda*, map. Cropped.

Figure 26. Anemurium site plan

Russell, 'Anemourion', fig. 1. Cropped.

Figure 27. Boğsak Island area

Varinlioğlu, 'Boğsak Island 2010', fig. 1, p. 154.

Figure 28. Elaiussa Sebaste second season report - identified Byzantine churches

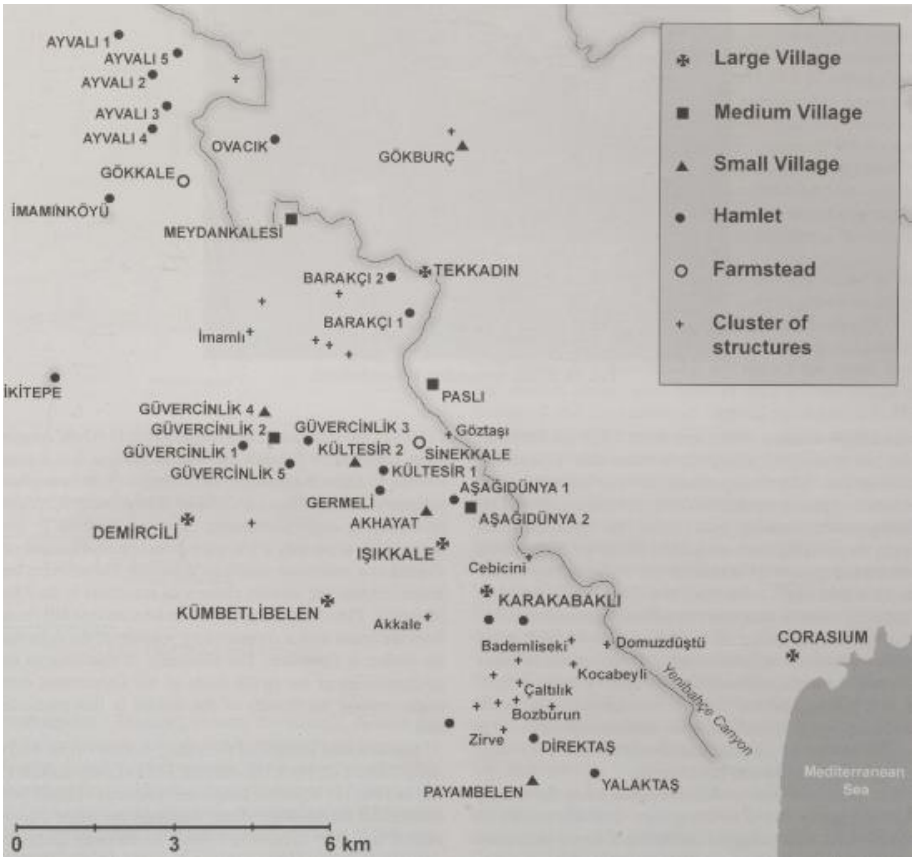
Equini Schneider, '1996 Elaiussa Sebaste', fig. 1, p. 398.

Figure 29. View of the Yenibahçe Valley



F. Hild, H. Hellenkemper, (eds), *Kilikien und Isaurien*, *Tabula Imperii Byzantini* 5 (2 vols, Wien, Verlag der Österreichischen Akademie der Wissenschaften, 1990), ii, 'Seleukeia und Umgebung (1: 200.000 Ausfaltkarte)'. Cropped, modified.

Figure 30. Settlements and sites of southeastern Isauria examined and discussed by Varinlioğlu in her survey work



Copyright: Oxbow Books. G. Varinlioğlu, 'Rural habitat in the hinterland of Seleucia ad Calycadnum during Late Antiquity', in M. C. Hoff, R. F. Townsend (eds), *Rough Cilicia. New historical and archaeological approaches* (Oxbow Books, 2013), fig. 16.2, p. 201. Cropped.

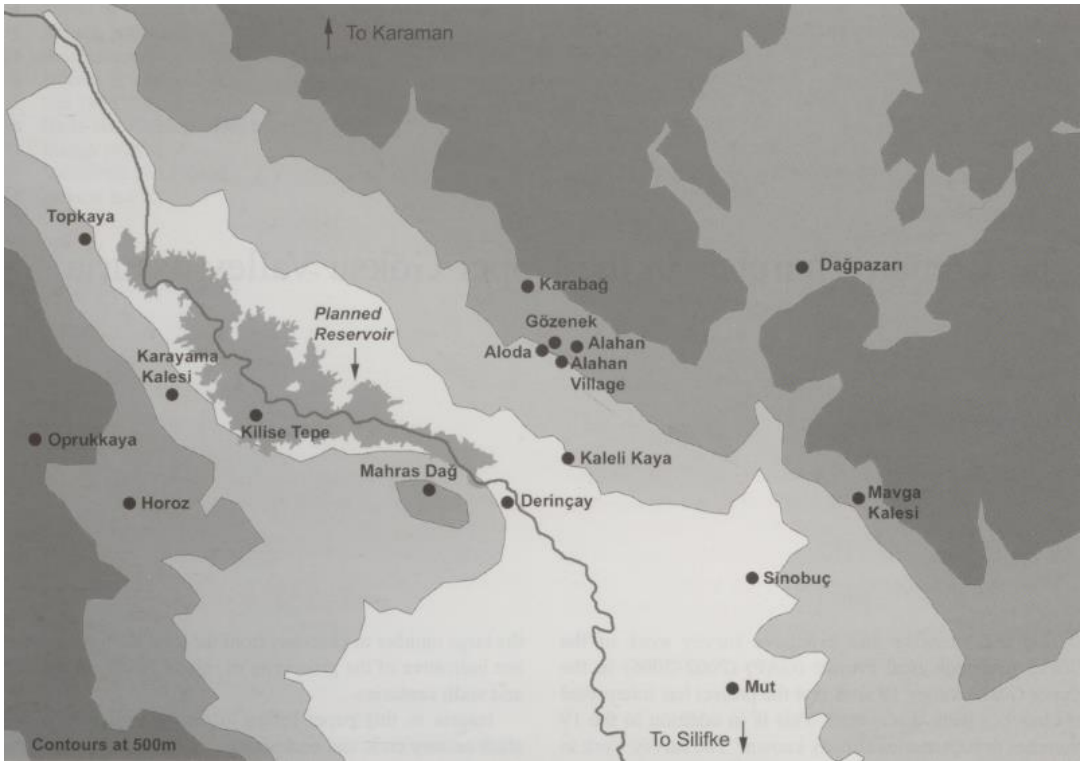
Figure 31. The Göksu Valley indicating the location of Kilise Tepe

Kilise Tepe, ii, fig. 472, p. 819.

Figure 32. The Lower Göksu valley with the Lower Göksu Archaeological Salvage Survey Project sites demarcated from the third season (2016)

Şerifoğlu, *et al*., 'Third season', fig. 1, p. 12.

Figure 33. Göksu Archaeological Project survey area



Copyright: Oxbow Books. H. Elton, 'Late Roman churches in the Upper Göksu Valley, Isauria', in M. C. Hoff, R. F. Townsend (eds), *Rough Cilicia. New historical and archaeological approaches* (Oxbow Books, 2013), fig. 19.1, p. 234.

Figure 34. Map of north central Anatolia (see Figure 2, Figure 38 for the location of Project Paphlagonia)



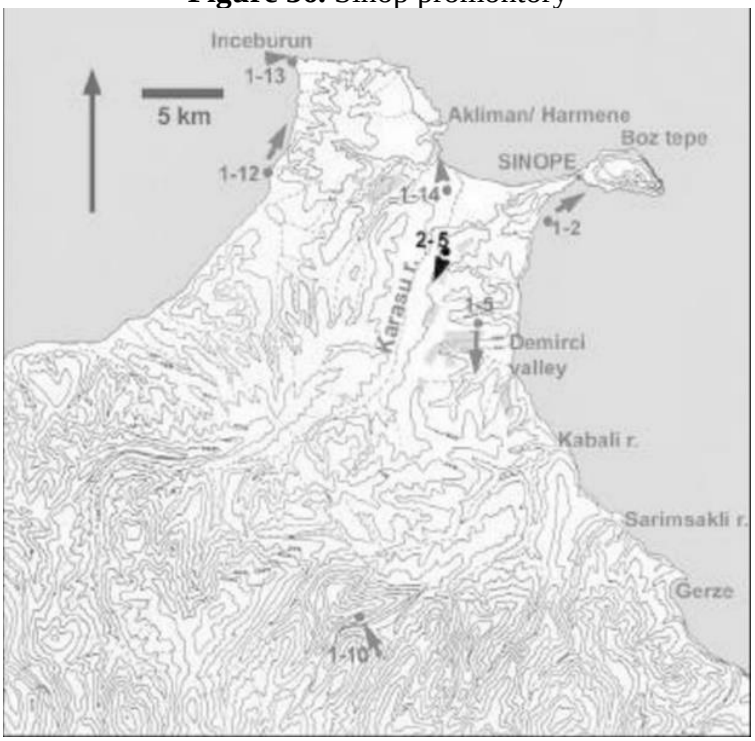
Google Maps, 2018 Google, https://www.google.co.uk/maps/@41.4571746,34.1848569,226891m/data=!3m1!1e3?hl=en (23 February 2018). Modified.

Figure 35. Map of areas described by Bryer and Winfield

This image cannot be displayed due to copyright.

Bryer, Winfield, *Monuments*, Map I. Cropped.

Figure 36. Sinop promontory



Copyright: Courtesy of Penn Museum. O. Doonan, *Sinop landscapes. Exploring connection in a Black Sea hinterland* (Philadelphia, 2004), fig. 1-4, p. 5. Modified.

Figure 37. Sinop promontory (detail)



Copyright: Courtesy of Penn Museum. O. Doonan, *Sinop landscapes. Exploring connection in a Black Sea hinterland* (Philadelphia, 2004), fig. 5-1, p. 94. Modified.

Figure 38. Project Paphlagonia survey area



Fig. 1.1. Map of Turkey to show Project Paphlagonia survey region

Copyright: British Institute at Ankara. R. Matthews, 'Project Paphlagonia: research issues, approaches and methods', in R. Matthews, C. Glatz (eds), *At Empires' edge: Project Paphlagonia. Regional Survey in north-central Turkey*. British Institute at Ankara Monograph 44 (London, 2009), fig. 1.1, p. 2. Cropped.

Figure 39. Hadrianopolis site plan

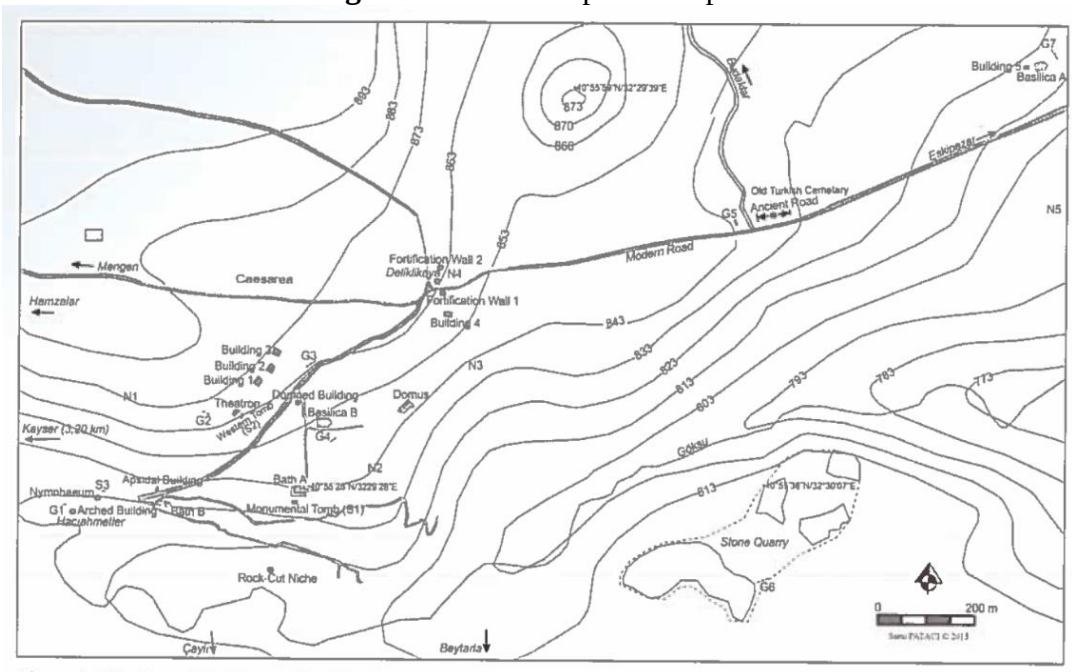


Figure 2: Site plan of Hadrianopolis with all surveyed and excavated areas in 2008.

E. Laflı, G. K. Şahin, *Hadrianopolis III. Ceramic finds from southwestern Paphlagonia* (Oxford, 2016), fig. 2, p. 6. Reproduced with permission of BAR Publishing, www.barpublishing.com.

Figure 40. Locations discussed by the CAP

Glatz, Düring, Cassis, 'Three landscapes', fig. 14.1, p. 393. Cropped.

Figure 41. Map of the southern Black Sea coast with modern port information indicated

Heikell, Heikell, *Turkish Waters & Cyprus pilot*, p. 363.

Tables

Table 1. Rough Cilicia Survey Project sherd information with chronological periods explained (2012)

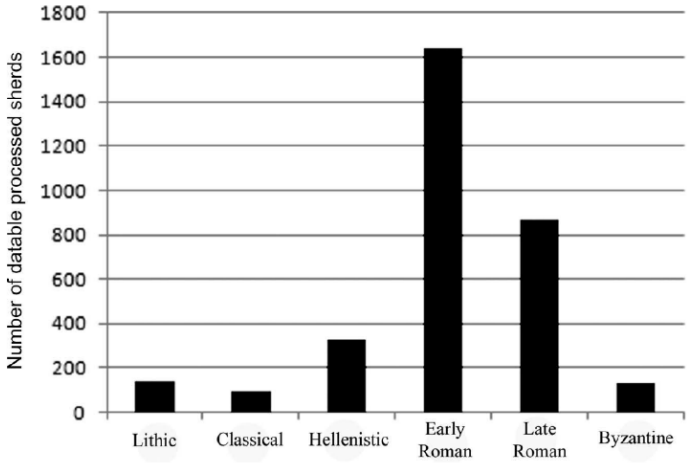


Figure 2. Datable sherd counts of the Rough Cilicia survey (Lithic = before 800 BCE; Classical = 800–300 BCE; Hellenistic = 300–50 BCE; Early Roman = 50 BCE–250 CE; Late Roman = 250–650 CE; Byzantine = 650–1200 CE). Prepared by Yifan Miao.

Copyright: http://www.tandfonline.com. Ü, Akkemik, H. Caner, G. A. Conyers, M. J. Dillon, N. Karlioğlu, N. K. Rauh, L. O. Theller, 'The archaeology of deforestation in south coastal Turkey', *International Journal of Sustainable Development & World Ecology*, 19.5 (2012), fig. 2, p. 396.

Table 2. Lower Göksu Archaeological Salvage Survey Project second season (2014) site distribution table

This image cannot be displayed due to copyright.

Şerifoğlu, *et al*., 'Second season', table 1, p. 187.

Table 3. Types of settlement identified by the SRAP (Hellenistic period)

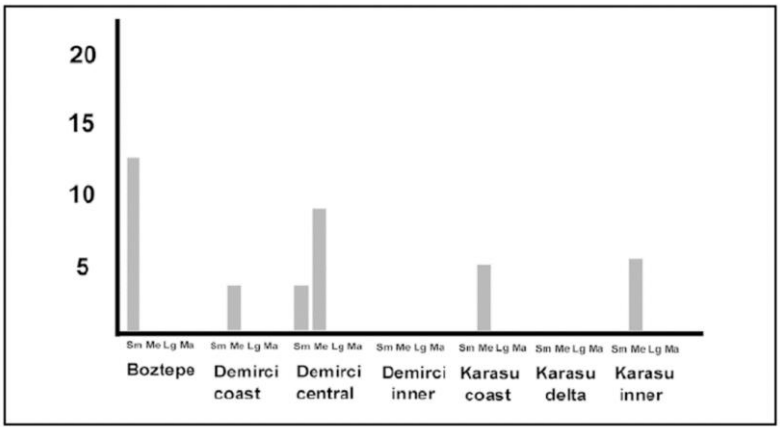


Figure 7-2: Hellenistic settlement frequency on Boztepe and in the Demirci and Karasu valleys.

Copyright: Courtesy of Penn Museum. O. Doonan, *Sinop landscapes. Exploring connection in a Black Sea hinterland* (Philadelphia, 2004), fig. 7-2, p. 156.

Table 4. Types of settlement identified by the SRAP (Roman and late Roman period)

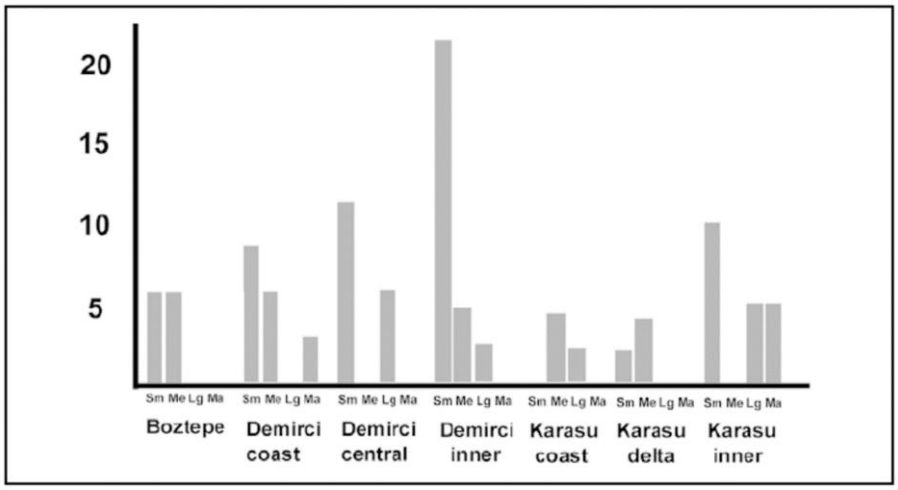


Figure 7-3: Roman and late Roman settlement frequency on Boztepe and in the Demirci and Karasu valleys.

Copyright: Courtesy of Penn Museum. O. Doonan, *Sinop landscapes. Exploring connection in a Black Sea hinterland* (Philadelphia, 2004), fig. 7-3, p. 157.

Table 5. Types and evidence of settlement identified by Project Paphlagonia by period

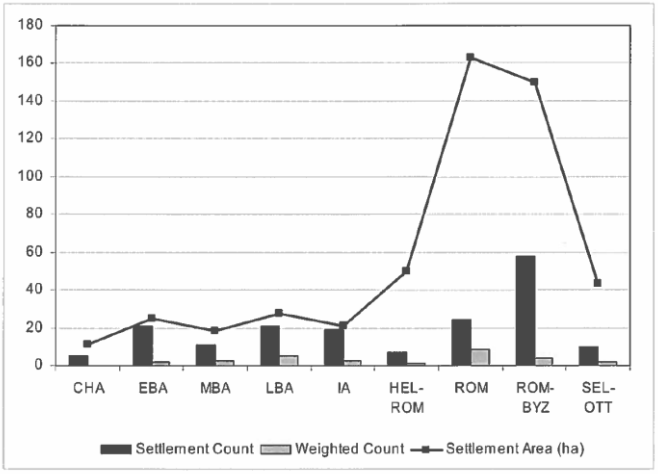


Fig. 8.1. Summary chart of settlement count, weighted count (sites per century) and aggregate settlement areas, in hectares, per period

Copyright: British Institute at Ankara. R. Matthews, C. Glatz, 'People and place in Paphlagonia: trends and patterns in settlement through time', in R. Matthews, C. Glatz (eds), *At Empires' edge: Project Paphlagonia. Regional Survey in north-central Turkey*, British Institute at Ankara Monograph 44 (London, 2009), fig. 8.1, p. 240.

Table 6. Categories of site identified by Project Paphlagonia by period

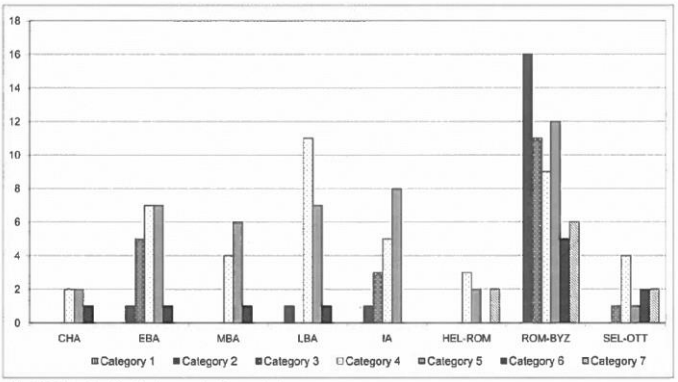
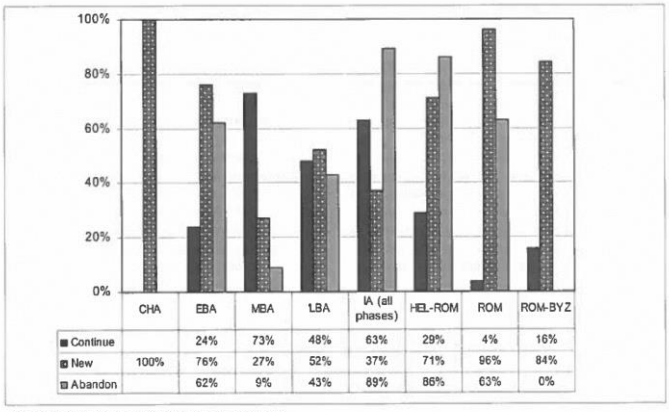


Fig. 8.2. Site-size distributions period by period

Copyright: British Institute at Ankara. R. Matthews, C. Glatz, 'People and place in Paphlagonia: trends and patterns in settlement through time', in R. Matthews, C. Glatz (eds), *At Empires' edge: Project Paphlagonia. Regional Survey in north-central Turkey*, British Institute at Ankara Monograph 44 (London, 2009), fig. 8.2, p. 240.

Table 7. Settlement continuity identified by Project Paphlagonia by period



	CHA	EBA	MBA	LBA	IA (all phases)	HEL-ROM	ROM	ROM-BYZ
Continue		24%	73%	48%	63%	29%	4%	16%
New	100%	76%	27%	52%	37%	71%	96%	84%
Abandon		62%	9%	43%	89%	86%	63%	0%

Fig. 8.3. Settlement continuity and abandonment

Copyright: British Institute at Ankara. R. Matthews, C. Glatz, 'People and place in Paphlagonia: trends and patterns in settlement through time', in R. Matthews, C. Glatz (eds), *At Empires' edge: Project Paphlagonia. Regional Survey in north-central Turkey*, British Institute at Ankara Monograph 44 (London, 2009), fig. 8.3, p. 241.

Table 8. Categories of site defined by Project Paphlagonia

Category 1	Isolated small feature (e.g., inscribed pillar, architectural fragment, pithos)
Category 2	Site covering up to 0.1ha
Category 3	Site covering 0.1–0.25ha
Category 4	Site covering 0.26–1ha
Category 5	Site covering 1.01–4ha
Category 6	Site covering 4.01–10ha
Category 7	Site covering more than 10ha

Table 1.2. Size categories of sites in Project Paphlagonia

Copyright: British Institute at Ankara. R. Matthews, 'Project Paphlagonia: research issues, approaches and methods', in R. Matthews, C. Glatz (eds), *At Empires' edge: Project Paphlagonia. Regional Survey in north-central Turkey*. British Institute at Ankara Monograph 44 (London, 2009), table 1.2, p. 24.

Table 9. Categories of site characteristics defined by Project Paphlagonia

Category A	Town/large village (including sites of Categories 6–7 in table 1.2)
Category B	Village (including sites of Category 5 in table 1.2)
Category C	Farmstead (including sites of Categories 2–4 in table 1.2)
Category D	Lowland fortified site
Category E	Hilltop fortified site
Category F	Rock-cut tomb/chapel/cistern
Category G	Flat inhumation cemetery
Category H	Tumulus
Category I	Quarry
Category J	Lithic scatter
Category K	Inscription on discrete stone element
Category L	Inscription on rock-face
Category M	*Höyük* (settlement mound)
Category N	Standing building
Category O	Natural cave
Category P	Field systems
Category Q	Sherd scatter
Category R	Road or path
Category S	Pile of stones
Category T	Isolated, not *in situ*, stone element or pithos
Category U	Church

Table 1.3. Typology of sites in Project Paphlagonia

Copyright: British Institute at Ankara. R. Matthews, 'Project Paphlagonia: research issues, approaches and methods', in R. Matthews, C. Glatz (eds), *At Empires' edge: Project Paphlagonia. Regional Survey in north-central Turkey*. British Institute at Ankara Monograph 44 (London, 2009), table 1.3, p. 25.

Bibliography

Primary Sources

Fitzgerald Johnson, S., (trans.), 'Miracles of Saint Thekla', in *Miracle tales from Byzantium*, ed. A-M. Talbot, S. Fitzgerald Johnson (Cambridge, London, 2012), pp. 2-201

Jeffreys, E., Jeffreys, M., Scott, R., (trans.), *The chronicle of John Malalas. A translation* (Melbourne, 1986)

Ševčenko, I., Ševčenko, N. P., (trans.), *The Life of Saint Nicholas of Sion* (Brookline, Massachusetts, 1984)

Strabo, *Geography*, tr. H. L. Jones (8 vols, Cambridge, London, 1917)

Strabo, *Geography*, tr. H. L. Jones, (8 vols, Cambridge, London, 1928)

Whitby, M., (trans.), *The ecclesiastical history of Evagrius Scholasticus* (Liverpool, 2000)

Secondary Works

Akkemik, Ü., Caner, H., Conyers, G. A., Dillon, M. J., Karlioğlu, N., Rauh, N. K., Theller, L. O., 'The archaeology of deforestation in south coastal Turkey', *International Journal of Sustainable Development & World Ecology*, 19.5 (2012), pp. 395-405

Akkemik, Ü., Caner, H., Conyers, G., Karlıoğlu, N., Dillon, M. J., Rauh, N. K., Theller, L., 'Rough Cilicia Highland Archaeological Survey: deforestation research in 2011', *ANMED*, 10 (2012), pp. 183-7

Aktaş, Ş., 'Wooden granaries in Lycia and Milyas regions', in H. İşkan, E. Dündar (eds), *Lukka'dan Likya'ya Sarpedon ve Aziz Nikolaos'un Ülkesi- From Lukka to Lycia the land of Sarpedon and St. Nicholas* (Istanbul, 2016), pp. 578-83

Akyürek, E., 'The Bey Dağları in the Byzantine period: Trebenna, Neapolis and their territories', in K. Dörtlük, B. Varkivanç, T. Kahya, J. des Courtils, M. D. Alparslan, R. Boyraz (eds), *The IIIrd Symposium on Lycia 07-10 November 2005 Antalya* (2 vols, Antalya, 2006), i, pp. 1-18

Akyürek, E., 'Palamutdüzü: a medieval Byzantine village settlement in the Bey Mountains', *ADALYA*, 11 (2008), pp. 297-318

Alper, E. G., 'Hellenistic and Roman period ceramic finds from the Balatlar Church excavations in Sinop between 2010-2012', *Anatolia Antiqua*, 22 (2014), pp. 35-49

Armstrong, P., 'The survey pottery: Hellenistic and later', in J. J. Coulton (eds), *The Balboura Survey and settlement in highland southwest Anatolia* (2 vols, London, 2012), ii, pp. 31-82

Arnaud, P., ‘Ancient sailing-routes and trade patterns: the impact of human factors’, in D. Robinson, A. Wilson (eds), *Maritime archaeology and ancient trade in the Mediterranean* (Oxford, 2011), pp. 61-80

Arsen’eva, T., Kassab Tezgör, D., Naumenko, S., ‘Un dépotoir d’atelier d’amphores à pâte claire. Commerce entre Héraclée du Pont et Tanaïs à l’époque romaine’, *Anatolia Antiqua*, 5 (1997), pp. 187-98

Arslan, M., Önen, N. T., ‘The surface exploration of Phaselis and its territorium 2013’, *ANMED*, 12 (2014), pp. 189-95

Arslan, M., Önen, N. T., ‘The surface exploration of Phaselis and its territorium in 2014’, *ANMED*, 13 (2015), pp. 198-207

Arslan, M., Önen, N. T., ‘The surface exploration of Phaselis and its territorium in 2015’, *ANMED*, 14 (2016), pp. 236-46

Asano, K., (eds), *The Island of St. Nicholas. Excavation and survey of the Gemiler Island area, Lycia, Turkey* (Osaka, 2010)

Aşkın, E., ‘Archaeological traces of olive oil and wine production in Korykos in antiquity and their relationship to the settlement pattern’, in Ü. Aydınoğlu, A. K. Şenol (eds), *Olive oil and wine production in Anatolia during antiquity. Symposium proceedings 06-08 November 2008, Mersin, Turkey* (Istanbul, 2010), pp. 33-52

Aslan, E., ‘Archaeological land and underwater surveys at Kekova Island in 2015’, *ANMED*, 14 (2016), pp. 175-82

Aslan, E., ‘Harbour surveys in Kekova region in 2009: “Harbour of Aperlai”’, *ANMED*, 8 (2010), pp. 181-8

Aslan, E., ‘Harbor surveys in Kekova region in 2010: Dolichiste (Kekova Adası) Harbor Areas’, *ANMED*, 9 (2011), pp. 231-5

Autret, C., Dillon, M., Lund, J., Rauh, N., Zoroğlu, L., ‘The trading networks of ancient Rough Cilicia’, in S. Ladstätter, F. Pirson, T. Schmidts (eds), *Harbors and harbor cities in the eastern Mediterranean* (2 vols, Istanbul, 2014), ii, pp. 593-618

Autret, C., Kızılarslanoğlu, A., Rauh, N., ‘New developments with amphora research in western Cilicia’, *ANMED*, 14 (2016), pp. 333-7

Autret, C., Rauh, N., ‘Roman amphora production in western Rough Cilicia’, in Ü. Aydınoğlu, A. K. Şenol (eds), *Olive oil and wine production in Anatolia during antiquity. Symposium Proceedings 06-08 November 2008, Mersin, Turkey* (Istanbul, 2010), pp. 109-22

Autret, C., Yağcı, R., Rauh, N. K., ‘An LRA 1 amphora kiln site at Soli/Pompeiopolis’, *ANMED*, 8 (2010), pp. 203-7

Aydın, A., ‘Surveys of late antique and Byzantine architecture at Seyranlık village, Silifke-Mersin, 2002’, *ANMED*, 1 (2003), pp. 49-50

Aydınoğlu, Ü., ‘The farms in Rough Cilicia in the Roman and early Byzantine periods’, *ADALYA*, 13 (2010), pp. 243-82

Aydınoğlu, Ü., ‘Olive oil production in Rough Cilicia: production installations - settlement pattern - dating’, in Ü. Aydınoğlu, A. K. Şenol (eds), *Olive oil and wine production in Anatolia during antiquity. Symposium proceedings 06-08 November 2008, Mersin, Turkey* (Istanbul, 2010), pp. 1-17

Aydınloğlu, Ü., ‘Surveys of urbanization and agricultural organization in Rough Cilicia in 2010’, *ANMED*, 9 (2011), pp. 184-7

Aydınoğlu, Ü., ‘Surveys of urbanization and of agricultural organization during Antiquity within the Townships of Erdemli and Silifke in Mersin Province in 2008’, *ANMED*, 7 (2009), pp. 146-9

Aydınoğlu, Ü., ‘Surveys on urbanization and rural settlements in Rough Cilicia 2012’, *ANMED*, 11 (2013), pp. 204-6

Aydınoğlu, Ü., ‘Surveys on the urbanisation and rural settlements in Rough Cilicia 2015’, *ANMED*, 14 (2016), pp. 190-5

Aydınoğlu, Ü., ‘Surveys on urbanization and rural settlements in Rough Cilicia 2013’, *ANMED*, 12 (2014), pp. 163-7

Bachmann, M., ‘Northern Lycia: Oinoanda, Balboura, Elmalı’, in H. İşkan, E. Dündar (eds), *Lukka’dan Likya’ya Sarpedon ve Aziz Nikolaos’un Ülkesi- From Lukka to Lycia the land of Sarpedon and St. Nicholas* (Istanbul, 2016), pp. 350-61

Bachmann, M., ‘Report on campaign at Oinoanda in 2011’, *ANMED*, 10 (2012), pp. 195-203

Badie, A., Lemaître, S., Moretti, J-C., ‘Le théâtre du Létôon de Xanthos. Etat des recherches’, *Anatolia Antiqua*, 12 (2004), pp. 145-86

Baird, D., ‘Settlement expansion on the Konya plain, Anatolia: 5th-7th centuries AD’, in W. Bowden, L. Lavan, C. Machado (eds), *Recent research on the late antique countryside* (Leiden, Boston, 2004), pp. 219-46

Bayburtluoğlu, C., *Arykanda: an archaeological guide. The place near the high rocks*, trans. D. Y. Erdem-Georgescu (Istanbul, 2005)

Bean, G. E., *Lycian Turkey. An archaeological guide* (London, 1978)

Bean, G. E., *Turkey’s southern shore: an archaeological guide* (London, 1968)

Bekker-Nielson, T., ‘350 years of research on Neoklaudiopolis (Vezirköprü)’, *Orbis terrarum*, 11 (2012-2013), pp. 3-31

Bekker-Nielsen, T., 'Neapolis-Neoklaudiopolis: a Roman city in northern Anatolia', in Ü. Yalçın (eds), *Anatolian Metal VI* (Bochum, 2013), pp. 203-13

Belke, K., (eds), *Paphlagonien und Honorias*, *Tabula Imperii Byzantini 9* (Wien, Verlag der Österreichischen Akademie der Wissenschaften, 1996)

Bes, P., 'The Cide-Şenpazar region in the Roman period', in B. S. Düring, C. Glatz (eds), *Kinetic landscapes: the Cide Archaeological Project: surveying the Turkish western Black Sea region* (Warsaw, Berlin, 2015), pp. 260-93

Bes, P., 'Roman-period finds from the Cide region', in K. Winther-Jacobsen, L. Summerer (eds), *Landscape dynamics and settlement patterns in northern Anatolia during the Roman and Byzantine Period* (Stuttgart, 2015), pp. 23-42

Bikoulis, P., Elton, H., Haldon, J., Newhard, J., 'Above as below: the application of multiple survey techniques at a Byzantine church at Avkat', in K. Winther-Jacobsen, L. Summerer (eds), *Landscape dynamics and settlement patterns in northern Anatolia during the Roman and Byzantine Period* (Stuttgart, 2015), pp. 101-17

Bowden, W., 'A new urban élite? Church builders and church building in late-antique Epirus', in L. Lavan (eds), *Recent research in late-antique urbanism* (Portsmouth, 2001), pp. 57-68

Bowden, W., Lavan, L., Machado, C., (eds), *Recent research on the late antique countryside* (Leiden, Boston, 2004)

Braund, D., 'Across the Black Sea. Patterns of maritime exchange on the northern periphery of Roman Asia Minor', in S. Mitchell, C. Katsari (eds), *Patterns in the economy of Roman Asia Minor* (Swansea, 2005), pp. 115-38

Bryer, A., Winfield, D., *The Byzantine monuments and topography of the Pontos* (2 vols, Washington, 1985)

Can, B., 'Surveys at Syedra (First Season) 2015', *ANMED,* 14 (2016), pp. 263-7

Can, B., Hoff, M., Townsend, R., Erdoğmuş, E., Howe, T., 'The Antiochia ad Cragum Archaeological Research Project: 2014 Season', *ANMED,* 13 (2015), pp. 8-14

Caneva, I., 'The 2003 excavation campaign at Mersin-Yumuktepe', *ANMED,* 2 (2004), pp. 58-62

Cassis, M., 'The Cide-Şenpazar region in the Byzantine period', in B. S. Düring, C. Glatz (eds), *Kinetic landscapes: the Cide Archaeological Project: surveying the Turkish western Black Sea region* (Warsaw, Berlin, 2015), pp. 294-363

Cavalier, L., '*Horrea* d'Andriakè et Patara: un nouveau type d'édifice fonctionnel en Lycie à l'époque impériale', *Revue des études anciennes*, 109.1 (2007), pp. 51-65

Çevik, N., '"The city breathing Myrrh": Myra', in H. İşkan, E. Dündar (eds), *Lukka'dan Likya'ya Sarpedon ve Aziz Nikolaos'un Ülkesi- From Lukka to Lycia the land of Sarpedon and St. Nicholas* (Istanbul, 2016), pp. 224-37

Çevik, N., 'Introduction', in N. Çevik, B. Varkıvanç, E. Akyürek (eds), *Trebenna. Its history, archaeology and natural environment,* Adalya Supplementary Series 1 (Antalya, 2005), p. 157

Çevik, N., 'Northeast Lycia. The new evidence - results from the past ten years from the Bey Mountains Surface Surveys', *ADALYA*, 11 (2008), pp. 189-233

Çevik, N., 'Surveys in the Bey Mountains in 2004', *ANMED*, 3 (2005), pp. 109-15

Çevik, N., Bulut, S., Akyürek, E., 'Excavations and surveys at Myra-Andriake in 2011', *ANMED*, 10 (2012), pp. 65-72

Çevik, N., Bulut, S., 'The Belen and Kelbessos farmsteads with towers on the border of Pisidia-Lycia and some thoughts on security in the countryside', *ADALYA*, 10 (2007), pp. 105-30

Çevik, N., Bulut, S., 'The rediscovery of GAGAE/ 'GAXE' in the south-east corner of Lycia. New finds from the total surface surveys', *ADALYA*, 11 (2008), pp. 63-98

Çevik, N., Kizgut, İ., Bulut, S., 'Surveys in the Bey Dağları in 2006', *ANMED*, 5 (2007), pp. 102-6

Çevik, N., Varkıvanç, B., Akyürek, E., (eds), 'Appendix. The discussion on the dating problems presented by the acropolis', in *Trebenna. Its history, archaeology and natural environment,* Adalya Supplementary Series 1 (Antalya, 2005), pp. 197-204

Çevik, N., Varkıvanç, B., Akyürek, E., (eds), 'Remains from the Byzantine period', in *Trebenna. Its history, archaeology and natural environment,* Adalya Supplementary Series 1 (Antalya, 2005), pp. 205-10

Çevik, N., Varkıvanç, B., Akyürek, E., (eds), *Trebenna. Its history, archaeology and natural environment,* Adalya Supplementary Series 1 (Antalya, 2005)

Çevik, N., Varkıvanç, B., Bulut, S., Kızgut, İ., 'The remains from the Roman period', in N. Çevik, B. Varkıvanç, E. Akyürek (eds), *Trebenna. Its history, archaeology and natural environment,* Adalya Supplementary Series 1 (Antalya, 2005), pp. 175-94

Çevik, N., Varkıvanç, B., Bulut, S., Kızgut, İ., 'The topography', in N. Çevik, B. Varkıvanç, E. Akyürek (eds), *Trebenna. Its history, archaeology and natural environment,* Adalya Supplementary Series 1 (Antalya, 2005), pp. 171-3

Çömezoğlu, Ö., ‘Coarse wares from the early Byzantine (episcopal) church of Rhodiapolis: cooking wares and amphorae’, in N. Poulou-Papadimitriou, E. Nodarou, V. Kilikoglou (eds), *LRCW 4 Late Roman coarse wares, cooking wares and amphorae in the Mediterranean: archaeology and archaeometry. The Mediterranean: a market without frontiers* (2 vols, Oxford, 2014), ii, pp. 665-75

Coulton, J. J., (eds), *The Balboura Survey and settlement in highland southwest Anatolia* (2 vols, London, 2012)

Coulton, J. J., ‘The buildings of Oinoanda’, *The Cambridge Classical Journal,* 29 (1983), pp. 1-20

Coulton, J. J., ‘Churches and other early Christian remains’, in J. J. Coulton (eds), *The Balboura Survey and settlement in highland southwest Anatolia* (2 vols, London, 2012), ii, pp. 189-99

Coulton, J. J., ‘Crops and climate during the city period’, in J. J. Coulton (eds), *The Balboura Survey and settlement in highland southwest Anatolia* (2 vols, London, 2012), i, pp. 99-122

Coulton, J. J., ‘Intensive survey: methodology, primary results and problems’, in J. J. Coulton (eds), *The Balboura Survey and settlement in highland southwest Anatolia* (2 vols, London, 2012), ii, pp. 201-40

Coulton, J. J., ‘Late Roman and Byzantine Balboura’, in J. J. Coulton (eds), *The Balboura Survey and settlement in highland southwest Anatolia* (2 vols, London, 2012), i, pp. 163-84

Decker, M., ‘Food for an empire: wine and oil production in North Syria’, in S. Kingsley, M. Decker (eds), *Economy and exchange in the east Mediterranean during Late Antiquity: proceedings of a conference at Somerville College, Oxford - 29th May, 1999* (Oxford, 2001), pp. 69-86

Delehaye, H., *Les Saints Stylites* (Brussels, Paris, 1923)

Deligiannakis, G., *The Dodecanese and the eastern Aegean islands in Late Antiquity, AD 300*-700 (Oxford, 2016)

Demesticha, S., ‘Amphora production on Cyprus during the late Roman period’, in Ch. Bakirtzis (eds), *VIIe Congrès international sur la céramique médiévale en Méditerranée, Thessaloniki, 11-16 Octobre 1999: actes* (Athens, 2003), pp. 469-76

Demesticha, S., ‘Late Roman amphora typology in context’, in N. Poulou-Papadimitriou, E. Nodarou, V. Kilikoglou (eds), *LRCW 4 Late Roman coarse wares, cooking wares and amphorae in the Mediterranean. Archaeology and archaeometry. The Mediterranean: a market without frontiers* (2 vols, Oxford, 2014), i, pp. 599-606

Demesticha, S., Michaelides, D., 'The excavation of a Late Roman 1 amphora kiln in Paphos', in E. Villeneuve, P. M. Watson (eds), *La céramique byzantine et proto-islamique en Syrie-Jordanie (IV^e^-VIII^e^ siècles apr. J.-C.): actes du colloque tenu à Amman les 3, 4 et 5 décembre 1994* (Beyrouth, 2001), pp. 289-96

des Courtils, J., *A guide to Xanthos and Letoon* (Istanbul, 2003)

des Courtils, J., 'Xanthos. Rapport sur la campagne 2010', *Anatolia Antiqua*, 19 (2011), pp. 321-50

des Courtils, J., Cavalier, L., 'The city of Xanthos from Archaic to Byzantine times', in D. Parrish (eds), *Urbanism in western Asia Minor* (Portsmouth, 2001), pp. 149-71

des Courtils, J., *et al*., 'Xanthos. Rapport sur la campagne de 2000', *Anatolia Antiqua*, 9 (2001), pp. 227-41

des Courtils, J., Laroche, D., *et al*., 'Xanthos et le Létôon. Rapport sur la campagne de 1999', *Anatolia Antiqua*, 8 (2000), pp. 339-83

des Courtils, J., Laroche, D., 'Xanthos et le Létôon: rapport sur la campagne de 2003', *Anatolia Antiqua*, 12 (2004), pp. 309-40

Domzalski, K., 'Late Roman pottery from Pompeiopolis', in L. Summerer (eds), *Pompeiopolis I. Eine zwischenbilanz aus der Metropole Paphlagoniens nach fünf Kampagnen (2006-2010)* (Langenweissbach, 2011), pp. 163-77

Doonan, O., 'The corrupting sea and the hospitable sea: some early thoughts toward a regional history of the Black Sea', in D. B. Counts, A. S. Tuck (eds), *Koine. Mediterranean studies in honor of R. Ross Holloway* (Oxford, Oakville, 2009), pp. 68-74

Doonan, O., 'Production in a Pontic landscape: the hinterland of Greek and Roman Sinope', in M. Faudot, A. Fraysse, É. Geny (eds), *Pont-Euxin et commerce. La Genèse de la "Route de la Soie". Actes du IX^e^ Symposium de Vani (Colchide)-1999* (Paris, 2002), pp. 185-98

Doonan, O., 'Settlement and economic intensification in the late Roman/early Byzantine hinterland of Sinop', in K. Winther-Jacobsen, L. Summerer (eds), *Landscape dynamics and settlement patterns in northern Anatolia during the Roman and Byzantine Period* (Stuttgart, 2015), pp. 43-59

Doonan, O., *Sinop landscapes. Exploring connection in a Black Sea hinterland* (Philadelphia, 2004)

Doonan, O., 'Sinop landscapes: towards an archaeology of community in the hinterland of a Black Sea port', *Ancient civilizations from Scythia to Siberia*, 16 (2010), pp. 175-87

Doonan, O., Smart, D., 'Gerna dere, Roman and Byzantine settlement in Sinop province, Turkey', *Talanta*, 32-33 (2000-2001), pp. 17-26

Drakoulis, D. P., 'Regional transformations and the settlement network of the coastal Pontic provinces in the early Byzantine Period', in G. R. Tsetskhladze (eds), *The Black Sea, Paphlagonia, Pontus and Phrygia in Antiquity. Aspects of archaeology and ancient history* (Oxford, 2012), pp. 79-95

Dündar, E., 'The ceramics from Patara: investigations, productions and trade. Past studies – future projections', in H. İşkan, F. Işık (eds), *From sand into a city. 25 years of Patara excavations. Proceedings of the international symposium of 11-13 November 2013 Antalya* (Istanbul, 2015), pp. 199-227

Dündar, E., 'Ceramics in Lycia: an overview on production and trade', in H. İşkan, E. Dündar (eds), *Lukka'dan Likya'ya Sarpedon ve Aziz Nikolaos'un Ülkesi- From Lukka to Lycia the land of Sarpedon and St. Nicholas* (Istanbul, 2016), pp. 504-19

Düring, B. S., Glatz, C., (eds), *Kinetic landscapes: the Cide Archaeological Project: surveying the Turkish western Black Sea region* (Warsaw, Berlin, 2015)

Düring, B. S., Glatz, C., 'The origins and development of the Cide Archaeological Project', in B. S. Düring, C. Glatz (eds), *Kinetic landscapes: the Cide Archaeological Project: surveying the Turkish western Black Sea region* (Warsaw, Berlin, 2015), pp. 1-8

Düring, B. S., Glatz, C., 'Remote landscapes in flux- the Cide and Şenpazar region', in B. S. Düring, C. Glatz (eds), *Kinetic landscapes: the Cide Archaeological Project: surveying the Turkish western Black Sea region* (Warsaw, Berlin, 2015), pp. 9-35

Durugönül, S., (eds), *Nagidos. Results of an excavation in an ancient city in Rough Cilicia* (Antalya, 2007)

Eichner, I., *Frühbyzantinische Wohnhäuser in Kilikien. Baugeschichtliche Untersuchung zu den Wohnformen in der Region um Seleukeia am Kalykadnos* (Tübingen, 2011)

Eisenmenger, U., 'Late Roman pottery in Limyra (Lycia)', in C. Abadie-Reynal (eds), *Les céramiques en Anatolie aux epoches hellenistique et Romaine: actes de la Table Ronde d'Istanbul 22-24 mai 1996* (Paris, Istanbul, 2003), pp. 193-6

Elton, H., 'The economy of Cilicia in Late Antiquity', *Olba*, 8 (2003), pp. 173-81

Elton, H., 'The economy of southern Asia Minor and LR 1 amphorae', in J.M[a]. Gurt i Esparraguera, J. Buxeda i Garrigós, M. A. Cau Ontiveros (eds), *LRCW 1 Late Roman coarse wares, cooking wares and amphorae in the Mediterranean: archaeology and archaeometry* (Oxford, 2005), pp. 691-5

Elton, H., 'Göksu Archaeological Project 2002-2004', *AST*, 23.1 (2005), pp. 331-42

Elton, H., 'Göksu Archaeological Project 2005-2006', *AST*, 25.2 (2007), pp. 237-50

Elton, H., 'Late Roman churches in the Upper Göksu Valley, Isauria', in M. C. Hoff, R. F. Townsend (eds), *Rough Cilicia. New historical and archaeological approaches* (Oxford, Oakville, 2013), pp. 233-46.

Elton, H., ‘The Roman countryside at Alahan, Turkey’, in A. S. Lewin, P. Pellegrini (eds), *Settlements and demography in the Near East in Late Antiquity. Proceedings of the colloquium, Matera 27-29 October 2005* (Pisa, Rome, 2006), pp. 59-65

Elton, H., Haldon, J., Newhard, J., Lockwood, S., ‘Avkat Archaeological Project, 2007-2008’, *AST*, 27.3 (2009), pp. 29-49

Elton, H., Jackson, M., Mietke, G., Newhard, J., Özgenel, L., Twigger, E., ‘A new Late-Roman urban centre in Isauria’, *Journal of Roman Archaeology*, 19 (2006), pp. 300-11

Empereur, J-Y., Picon, M., ‘Les régions de production d’amphores impériales en Méditerranée orientale’, in *Amphores romaines et histoire économique: dix ans de recherche* (Rome, 1989), pp. 223-48

Empereur, J-Y., Picon, M., ‘The production of Aegean amphorae: field and laboratory studies’, in R. E. Jones, H. W. Catling (eds), *New aspects of archaeological science in Greece* (Athens, 1988), pp. 33-8

Equini Schneider, E., ‘1996 Excavations and research at Elaiussa Sebaste’, *KST*, 19.2 (1997), pp. 391-408

Equini Schneider, E., ‘1998 Excavations and research at Elaiussa Sebaste’, *KST*, 21.2 (1999), pp. 237-48

Equini Schneider, E., (eds), *Elaiussa Sebaste I, campagne di scavo 1995-1997* (Rome, 1999)

Equini Schneider, E., (eds), *Elaiussa Sebaste II, un porto tra Oriente e Occidente* (2 vols, Rome, 2003)

Equini Schneider, E., (eds), *Elaiussa Sebaste III, L’Agora Romana* (Istanbul, 2010)

Equini Schneider, E., ‘Elaiussa Sebaste – the 2007 excavation and conservation season’, *KST*, 30.4 (2008), pp. 177-90

Equini Schneider, E., *Elaiussa Sebaste: an archaeological guide* (Istanbul, 2008)

Equini Schneider, E., ‘Elaiussa Sebaste - The 2010 excavation and conservation campaign’, *KST*, 33.4 (2011), pp. 195-208

Equini Schneider, E., ‘Elaiussa Sebaste: 2011-2012 excavation and conservation works’, *KST*, 35.3 (2013), pp. 415-27

Equini Schneider, E., ‘Elaiussa Sebaste - Report of 2005 excavation season’, *KST*, 28.2 (2006), pp. 561-74

Equini Schneider, E., ‘Elaiussa Sebaste - Report of 2006 excavation season’, *KST*, 29.2 (2007), pp. 299-310

Equini Schneider, E., ‘Excavations and research at Elaiussa Sebaste: 1995 first campaign’, *KST*, 18.2 (1996), pp. 367-81

Equini Schneider, E., ‘Excavations and research at Elaiussa Sebaste: the 2000 campaign’, *KST*, 23.1 (2001), pp. 223-36

Equini Schneider, E., ‘Excavation and research at Elaiussa Sebaste: the 2003 campaign’, *KST*, 26.2 (2004), pp. 181-92

Equini Schneider, E., Borgia, E., ‘Elaiussa Sebaste: 2008-2009 excavation and conservation works’, *KST*, 32.3 (2010), pp. 313-27

Erciyas, D. B., Kaparal, E., (eds), *Black Sea Studies Symposium Proceedings 16-17 April 2004, Ankara. Karadeniz Araştırmaları Sempozyum Bildirileri (Yayına Hazırlayanlar) 16-17 Nisan 2004, Ankara* (Istanbul, 2006)

Erten, E., ‘Archaeological surveys at Mersin-Olba (Uğuralanı) in 2004’, *ANMED*, 3 (2005), pp. 143-7

Erten, E., ‘Archaeological surveys in Mersin-Olba (Uğuralanı) in 2005’, *ANMED*, 4 (2006), pp. 121-4

Erten, E., ‘Excavations at Olba (Silifke, Mersin) in 2011’, *ANMED*, 10 (2012), pp. 73-7

Erten, E., ‘Surveys in Mersin-Silifke-Olba in 2006’, *ANMED*, 5 (2007), pp. 133-6

Erten, H. N., Kassab Tezgör, D., Türkmen, I. R., Zararsız, A., ‘The typology and trade of the amphorae of Sinope. Archaeological study and scientific analyses’, in J. Eiring, J. Lund (eds), *Transport amphorae and trade in the eastern Mediterranean. Acts of the international colloquium at the Danish Institute at Athens, September 26-29, 2002* (Aarhus, 2004), pp. 103-15

‘The Euchaita/Avkat Project. An interdisciplinary and international co-operative project’, https://history.princeton.edu/centers-programs/center-collaborative-history/special-projects/avkat (10 July 2017)

Fellows, C., *Travels and researches in Asia Minor, more particularly in the province of Lycia* (London, 1852)

Ferrazzoli, A. F., Ricci, M., ‘*Elaiussa Sebaste*: produzioni e consumi di una città della Cilicia tra V e VII secolo’, in M. Bonifay, J.-C. Tréglia (eds), *LRCW 2 Late Roman coarse wares, cooking wares and amphorae in the Mediterranean: archaeology and archaeometry* (2 vols, Oxford, 2007), ii, pp. 671-88

Ferrazzoli, A. F., Ricci, M., ‘Production and trade of a Cilician city from the Roman to Byzantine age: the case of Elaiussa Sebaste’, in M. C. Hoff, R. F. Townsend (eds), *Rough Cilicia: new historical and archaeological approaches* (Oxford, Oakville, 2013), pp. 210-18

Fiema, Z. T., 'City and countryside in Byzantine Palestine. Prosperity in question', in A. S. Lewin, P. Pellegrini (eds), *Settlements and demography in the Near East in Late Antiquity. Proceedings of the colloquium, Matera 27-29 October 2005* (Pisa, Rome, 2006), pp. 67-88

Foss, C., 'Cities and villages of Lycia in the Life of Saint Nicholas of Holy Zion', *Greek Orthodox Theological Review*, 36.3-4 (1991), pp. 303-39

Foss, C., 'Lycia in history', in J. Morganstern (eds), *The fort at Dereağzı and other material remains in its vicinity: from antiquity to the Middle Ages* (Tübingen, 1993), pp. 5-25

Foss, C., 'The Lycian coast in the Byzantine Age', *Dumbarton Oaks Papers*, 48 (1994), pp. 1-52

Foss, P. W., 'The Hacımusalar Project Regional Survey: landscape and settlement investigations in the Elmalı Basin', https://quemdixerechaos.files.wordpress.com/2012/11/3lykiatext_foss.pdf (16 May 2017)

Foy, D., 'Une production de verre à Xanthos au début de l'époque byzantine', *Anatolia Antiqua*, 15 (2007), pp. 233-46

Garlan, Y., Kassab Tezgör, D., 'Prospection d'ateliers d'amphores et de céramiques de Sinope', *Anatolia Antiqua*, 4 (1996), pp. 325-34

Glatz, C., Düring, B. S., Cassis, M., 'A tale of three Landscapes: Okçular, Abdulkadir, and Çamdibi in long-term perspective', in B. S. Düring, C. Glatz (eds), *Kinetic landscapes: the Cide Archaeological Project: surveying the Turkish western Black Sea region* (Warsaw, Berlin, 2015), pp. 392-433

Glatz, C., Düring, B. S., Wilkinson, T. C., Gratuze, B., Jones, R., Photos-Jones, E., Klinkenberg, V., 'Developing an adaptive field methodology for challenging landscapes', in B. S. Düring, C. Glatz (eds), *Kinetic landscapes: the Cide Archaeological Project: surveying the Turkish western Black Sea region* (Warsaw, Berlin, 2015), pp. 53-103

'Google Maps', https://www.google.co.uk/maps

Gough, M., (eds), *Alahan. An early Christian monastery in southern Turkey* (Toronto, 1985)

Grossmann, P., Severin, H-G., *Frühchristliche und Byzantinische Bauten im Südöstlichen Lykien. Ergebnisse zweier Surveys* (Tübingen, 2003)

Haldon, J., Elton, H., Newhard, J., 'The Avkat Archaeological project 2009', https://drive.google.com/file/d/0B94lc52VVv8Cd1JvU0Y4VWtEYUE/view (10 July 2017)

Haldon, J., Elton, H., Newhard, J., 'The Avkat Archaeological Project 2009', *Anatolian Archaeology*, 15 (2009), pp. 17-18

Haldon, J., Elton, H., Newhard, J., 'The Avkat Archaeological Project 2010', *Anatolian Archaeology*, 16 (2010), pp. 16-17

Haldon, J., Elton, H., Newhard, J., 'The Avkat Archaeological Project', *Anatolian Archaeology*, 14 (2008), pp. 17-20

Hall, A., 'The Oenoanda Survey: 1974-76', *Anatolian Studies*, 26 (1976), pp. 191-7

Hannestad, L., 'Timber as a trade resource of the Black Sea', in V. Gabrielsen, J. Lund (eds), *The Black Sea in antiquity: regional and interregional economic exchanges* (Aarhus, 2007), pp. 85-99

Harrison, M., *Mountain and plain*, ed. W. Young (Ann Arbor, 2001)

Harrison, M., 'Nouvelles découvertes romaines tardives et paléobyzantines en Lycie, communication du 23 mars 1979', *Comptes rendus des séances de l'Académie des Inscriptions et Belles-Lettres*, 123.2 (1979), pp. 222-39

Harrison, R. M., 'Aspects of late Roman and early Byzantine Lycia', in *VIII. Türk Tarih Kongresi. Ankara: 11-15 Ekim 1976* (Ankara, 1979), i, pp. 525-31

Harrison, R. M., 'Churches and chapels of central Lycia', *Anatolian Studies*, 13 (1963), pp. 117-51

Harrison, R. M., 'Lycia in Late Antiquity', *Yayla*, 1 (1977), pp. 10-15

Harrison, R. M., 'Upland settlements in early Medieval Lycia', *Actes du colloque sur la Lycie Antique* (Paris, 1980), pp. 109-18

Headlam, A. C., *Ecclesiastical sites in Isauria (Cilicia Trachea)* (London, 1892)

Heikell, R., Heikell, L., *Turkish waters & Cyprus pilot*, 9th edn (St. Ives, 2013)

Hellenkemper, H., Hild, F., (eds), *Lykien und Pamphylien, Tabula Imperii Byzantini 8* (3 vols, Wien, Verlag der Österreichischen Akademie der Wissenschaften, 2004)

Hild, F., Hellenkemper, H., (eds), *Kilikien und Isaurien, Tabula Imperii Byzantini 5* (2 vols, Wien, Verlag der Österreichischen Akademie der Wissenschaften, 1990)

Hill, S., 'Çiftlik', *Anatolian Archaeology*, 4 (1998), pp. 6-7

Hill, S., *The Early Byzantine Churches of Cilicia and Isauria* (Birmingham, 1996)

Hill, S., 'The first season of rescue excavation at Çiftlik (Sinop)', *Anatolian Studies*, 45 (1995), pp. 219-31

Hill, S., 'Rescue excavations at Çiftlik', *Anatolian Archaeology*, 1 (1995), pp. 2-3

Hill, S., ‘Rescue excavations at Çiftlik (Sinop)’, in R. Matthews (eds), *Ancient Anatolia. Fifty years’ work by the British Institute of Archaeology at Ankara* (London, 1998), pp. 285-300

Hoff, M., Townsend, R., Erdoğmuş, E., Can, B., Howe, T., ‘The Antiochia ad Cragum Archaeological Research Project: 2015 season’, *ANMED,* 14 (2016), pp. 1-8

Hohlfelder, R. L., Vann, R. L., ‘Cabotage at Aperlae in ancient Lycia’, *The International Journal of Nautical Archaeology,* 29.1 (2000), pp. 126-35

Hohlfelder, R. L., Vann, R. L., ‘A church beneath the sea at Aperlae, Lycia’, *ADALYA,* 4 (1999-2000), pp. 207-19

Hohlfelder, R. L., Vann, R. L., ‘Uncovering the maritime secrets of Aperlae, a coastal settlement of ancient Lycia’, *Near Eastern Archaeology,* 61.1 (1998), pp. 26-37

Honigmann, H., *Le Synekdèmos d’Hiéroklès et l’opuscule géographique de Georges de Chypre* (Bruxelles, 1939)

Horden, P., Purcell, N., *The corrupting sea: a study of Mediterranean history* (Oxford, 2000)

Iacomi, V., ‘Some notes in Late-antique oil and wine production in Rough Cilicia (Isauria) on the light of epigraphic sources: funerary inscriptions from Korykos, LR 1 amphorae production in Elaiussa Sebaste and the Abydos Tariff’, in Ü. Aydınoğlu, A. K. Şenol (eds), *Olive oil and wine production in Anatolia during antiquity. Symposium proceedings 06-08 November 2008, Mersin, Turkey* (Istanbul, 2010), pp. 19-32

Inaishvili, N., Khalvashi, M., ‘Byzantine amphorae from southwestern Georgia’, in C. Tzochev, T. Stoyanov, A. Bozkova (eds), *PATABS II Production and trade of amphorae in the Black Sea. Acts of the international round table held in Kiten, Nessebar and Sredetz, September 26-30, 2007* (Sofia, 2011), pp. 265-70

Işık, F., ‘Patara in 2004’, *ANMED,* 3 (2005), pp. 57-65

Işık, F., ‘The powerful city of the “Land of Lukka”: Tlos’, in H. İşkan, E. Dündar (eds), *Lukka’dan Likya’ya Sarpedon ve Aziz Nikolaos’un Ülkesi- From Lukka to Lycia the land of Sarpedon and St. Nicholas* (Istanbul, 2016), pp. 206-23

Işık, H., Aktaş, Ş., Dündar, E., Koçak, M., Ceylan, B., ‘Excavations and conservation work at Patara in 2015’, *ANMED,* 14 (2016), pp. 98-108

Işın, G., ‘The Hellenistic and Roman pottery of Patara’, in C. C. Mattusch, A. A. Donohue, A. Brauer (eds), *Proceedings of the XVIth International Congress of Classical Archaeology, Boston, August 23-26, 2003. Common ground: archaeology, art, science, and humanities* (Oxford, 2006), pp. 98-101

Işın, M. A., ‘Sinop region field survey’, *Anatolia Antiqua,* 6 (1998), pp. 95-139

İşkan, H., ‘Capital of Lycian League and province: Patara’, in H. İşkan, E. Dündar (eds), *Lukka’dan Likya’ya Sarpedon ve Aziz Nikolaos’un Ülkesi- From Lukka to Lycia the land of Sarpedon and St. Nicholas* (Istanbul, 2016), pp. 142-65

İşkan, H., Dündar, E., (eds), *Lukka’dan Likya’ya Sarpedon ve Aziz Nikolaos’un Ülkesi- From Lukka to Lycia the land of Sarpedon and St. Nicholas* (Istanbul, 2016)

İşler, B., ‘Surveys on the Byzantine settlements around Alacadağ in Lycia’, *ANMED*, 14 (2016), pp. 217-25

Izdebski, A., ‘The economic expansion of the Anatolian countryside in late antiquity: the coast versus inland regions’, in L. Lavan (eds), *Local economies? Production and exchange of inland regions in late antiquity* (Leiden, Boston, 2013, 2015), pp. 343-76

Izdebski, A., *Rural economy in transition. Asia Minor from Late Antiquity into the early Middle* Ages (Warsaw, 2013)

Jackson, M., ‘2007-2011 Excavations at Kilise Tepe. A Byzantine rural settlement in Isauria’, *Dumbarton Oaks Papers*, 69 (2015), pp. 355-80

Jackson, M., ‘Byzantine settlement at Kilise Tepe in the Göksu Valley’, in M. C. Hoff, R. F. Townsend (eds), *Rough Cilicia. New historical and archaeological approaches* (Oxford, Oakville, 2013), pp. 219-32

Jacobek, R., ‘Anhang: Das mittelalterliche Kastell bei Gedelme’, in J. Borchhardt, G. Dobesch (eds), *Akten des II. Internationalen Lykien-Symposions Wien, 6-12. Mai 1990* (2 vols, Wien 1993), ii, pp. 68-70

Johnson, P., ‘How did the landscape of Pompeiopolis become Roman?’, in K. Winther-Jacobsen, L. Summerer (eds), *Landscape dynamics and settlement patterns in northern Anatolia during the Roman and Byzantine Period* (Stuttgart, 2015), pp. 61-82

Johnson, P., ‘Topographies of urbanization: survey in and around Pompeiopolis’, in L. Summerer (eds), *Pompeiopolis I. Eine zwischenbilanz aus der Metropole Paphlagoniens nach fünf Kampagnen (2006-2010)* (Langenweissbach, 2011), pp. 195-205

Jones, A. H. M., *The cities of the eastern Roman provinces*, 2nd edn (Oxford, 1971)

Karagiorgou, O., ‘LR2: a container for the military *annona* on the Danubian Border?’, in S. Kingsley, M. Decker (eds), *Economy and exchange in the east Mediterranean during Late Antiquity: proceedings of a conference at Somerville College, Oxford - 29th May, 1999* (Oxford, 2001), pp. 129-66

Karagiorgou, O., ‘Mapping trade by the amphora’, in M. M. Mango (eds), *Byzantine trade, 4th-12th centuries. The archaeology of local, regional and international exchange: papers of the thirty-eigth spring symposium of Byzantine studies, St John’s College, University of Oxford, March 2004* (Farnham, Burlington, 2009), pp. 37-58

Karlıoğlu, N., Akkemik, Ü., Caner, H., Rauh, N. K., Theller, L. O., Dillon, M. J., Conyers, G. A., ‘The Rough Cilicia Archaeological Survey Project: palaeo-environmental research in 2012’, *ANMED*, 11 (2013), pp. 199-203

Kassab Tezgör, D., ‘Les ateliers implantés sur la rive sud de la mer Noire: un état de la question’, in L. Buzoianu, P. Dupont, V. Lungu (eds), *PATABS III Production and trade of amphorae in the Black Sea. Actes de la Table Ronde international de Constanţa, 6-10 octobre 2009* (Constanţa, 2013), pp. 149-63

Kassab Tezgör, D., *Les fouilles et le materiel de l’atelier amphorique de Demirci près de Sinope* (Paris, 2010)

Kassab Tezgör, D., ‘Le réseau commercial des amphores sinopéennes entre les IIe-IIIe s. et le VIe s. de notre ère’, in D. Kassab Tezgör, N. Inaishvili (eds), *PATABS I Production and trade of amphorae in the Black Sea. Actes de la table ronde international de Batoumi et Trabzon, 27-29 avril 2006* (Paris, Istanbul, 2010), pp. 167-73

Kassab Tezgör, D., ‘Types amphoriques romains tardifs produits simultanément à Demirci près de Sinope et dans d’autres centres’, in C. Tzochev, T. Stoyanov, A. Bozkova (eds), *PATABS II Production and trade of amphorae in the Black Sea. Acts of the international round table held in Kiten, Nessebar and Sredetz, September 26-30, 2007* (Sofia, 2011), pp. 259-64

Kassab Tezgör, D., Tatlıcan, İ., Özdaş, H., ‘Prospection sous-marine près de la côte sinopéenne: transport d’amphores depuis l’atelier et navigation en mer Noire’, *Anatolia Antiqua*, 6 (1998), pp. 443-9

Kassab Tezgör, D., Touma, M., ‘Amphores exportées de mer Noire en Syrie du Nord’, *Anatolia Antiqua*, 9 (2001), pp. 105-15

Keay, S. J., *Late Roman amphorae in the western Mediterranean* (2 vols, Oxford, 1984)

Kingsley, S. A., ‘The economic impact of the Palestinian wine trade in Late Antiquity’, in S. Kingsley, M. Decker (eds), *Economy and exchange in the east Mediterranean during Late Antiquity: proceedings of a conference at Somerville College, Oxford - 29th May, 1999* (Oxford, 2001), pp. 44-68

Kingsley, S., Decker, M., (eds), *Economy and exchange in the east Mediterranean during Late Antiquity: proceedings of a conference at Somerville College, Oxford - 29th May, 1999* (Oxford, 2001)

Kingsley, S., Decker, M., ‘New Rome, new theories on inter-regional exchange. An introduction to the east Mediterranean economy in Late Antiquity’, in S. Kingsley, M. Decker (eds), *Economy and exchange in the east Mediterranean during Late Antiquity: proceedings of a conference at Somerville College, Oxford - 29th May, 1999* (Oxford, 2001), pp. 1-27

Kızgut, İ., ‘The city of Opramoas the Benefactor: Rhodiapolis’, in H. İşkan, E. Dündar (eds), *Lukka’dan Likya’ya Sarpedon ve Aziz Nikolaos’un Ülkesi- From Lukka to Lycia the land of Sarpedon and St. Nicholas* (Istanbul, 2016), pp. 288-99

Kızgut, İ., Bulut, S., Çevik, N., ‘An east Lycian City: Idebessos’, *ADALYA*, 12 (2009), pp. 145-72

Kolb, F., *Burg - Polis - Bischofssitz. Geschichte der Siedlungskammer von Kyaneai in der Südwesttürkei* (Mainz am Rhein, 2008)

Kolb, F., ‘Terrassenkomplexe, Pressanlagen, Zisternen und Wirtschaftsgebäude: zur agrargeographie des Yavu-Berglandes/Terassenkomplexe, Pressanlagen und Wirtschaftsgebäude im Yavu-Bergland’, in F. Kolb (eds), *Lykische Studien 8: Keramik, Münzen, Kirchen und Wirtschaftskomplexe des zentrallyischen Yavu-Berglandes (Gebeit von Kyaneai)*, Tübinger Althistorische Studien 4 (Bonn, 2008), pp. 195-245

Kolb, F., Kupke, B., Miller, M., Zimmermann, M., ‘Spätantike und byzantinische Besiedlung auf dem Gebiet der lykischen Polis Kyaneai’, *Klio*, 73 (1991), pp. 563-85

Kolb, F., Thomsen, A., ‘Forschungen zu Zentralorten und Chora auf dem Gebiet von Kyaneai (Zentrallykien): Methoden, Ergebnisse, Probleme’, in F. Kolb (eds), *Chora und Polis* (München, 2004), pp. 1-42

Konecny, A., ‘Lykische Ölpressen’, *Jahreshefte des Österreichischen Archäologischen Institutes in Wien*, 67 (1998), pp. 120-94

Konecny, A., ‘Lykische Ölpressen II’, *Jahreshefte des Österreichischen Archäologischen Institutes in Wien*, 68 (1999), pp. 142-70

Korkut, T., ‘Die spätantike und frühbyzantinische Keramik aus Patara’, in B. Böhlendorf-Arslan, A. O. Uysal, J. Witte-Orr (eds), *Çanak. Late antique and medieval pottery and tiles in Mediterranean archaeological contexts. Proceedings of the first international symposium on Late Antique, Byzantine, Seljuk, Ottoman pottery and tiles in archaeological context (Çanakkale, 1-3 June 2005)* (Istanbul, 2007), pp. 147-68

Kramer, N., *Diokaisareia in Kilikien. Keramik und Kleinfunde aus Diokaisareia* (Berlin, Boston, 2012)

Kunnert, U., ‘Archäologische Funde und Befunde in den Territorien von Pompeiopolis und Abonuteichos-Ionopolis’, in L. Summerer (eds), *Pompeiopolis I. Eine zwischenbilanz aus der Metropole Paphlagoniens nach fünf Kampagnen (2006-2010)* (Langenweissbach, 2011), pp. 207-14

Kuzucuoğlu, C., Marro, C., Özdoğan, A., Tibet, A., ‘Prospection archéologique franco-turque dans la région de Kastamonu (mer Noire). Deuxième rapport préliminaire’, *Anatolia Antiqua*, 5 (1997), pp. 275-306

Laflı, E., ‘Archäologische Evidenzen zum Weinanbau im südwestlichen Paphlagonien in römischer und frühbyzantinischer Zeit’, in E. Olshausen, V. Sauer (eds), *Die Schätze der Erde - Natürliche Ressourcen in der antiken Welt. Stuttgarter Kolloquium zur Historischen Geographie des Altertums 10, 2008* (Stuttgart, 2012), pp. 261-79

Laflı, E., ‘Hellenistic and Roman ceramic archaeology on the southern Black Sea coast: an overview of the Turkish archaeological literature related to ceramic archaeology of Paphlagonia and Pontus’, in D. B. Erciyas, E. Kaparal (eds), *Black Sea Studies Symposium Proceedings 16-17 April 2004, Ankara. Karadeniz Araştırmaları Sempozyum Bildirileri (Yayına Hazırlayanlar) 16-17 Nisan 2004, Ankara* (Istanbul, 2006), pp. 169-202

Laflı, E., Christof, E., *Hadrianopolis I. Inschriften aus Paphlagonia* (Oxford, 2012)

Laflı, E., Şahin, G. K., *Hadrianopolis III. Ceramic finds from southwestern Paphlagonia* (Oxford, 2016)

Laflı, E., Zäh, A., ‘Archäologische Forschungen im byzantinischen Hadrianupolis in Paphlagonien’, *Byzantinische Zeitschrift*, 101.2 (2008), pp. 681-713

Laflı, E., Zäh, A., ‘Beiträge zur frühbyzantinischen profanarchitektur aus Hadrianupolis-Blütezeit unter Kaiser Iustinian I.’, *Byzantinische Zeitschrift*, 102.2 (2009), pp. 639-59

Laroche, D., *et al*., ‘Rapport sur les travaux de la mission archéologique du Létôon en 2006’, *Anatolia Antiqua*, 15 (2007), pp. 325-34

Lavan, L., (eds), *Local economies? Production and exchange of inland regions in late antiquity* (Leiden, Boston, 2015)

Lavan, L., (eds), *Recent research in late-antique urbanism* (Portsmouth, 2001)

Leadbetter, B., ‘Diocletian and the purple mile of Aperlae’, *Epigraphica Anatolica*, 36 (2003), pp. 127-36

Lemaître, S., ‘La Lycie et les échanges commerciaux dans l’Antiquité: les données du mobilier amphorique. Etude préliminaire’, in K. Dörtlük, B. Varkivanç, T. Kahya, J. des Courtils, M. D. Alparslan, R. Boyraz (eds), *The IIIrd symposium on Lycia 07-10 November 2005 Antalya* (2 vols, Antalya, 2006), i, pp. 385-99

Lemaître, S., ‘La Lycie et les échanges commerciaux dans l’antiquité les données du mobilier amphorique, premiers éléments de réflexion’, *Revue Archéologique*, 1 (2007), pp. 174-80

Lordkipanidze, G., ‘Sinopian amphorae and Trapezuntine coins from Pityus’, in D. Kassab Tezgör, N. Inaishvili (eds), *PATABS I Production and trade of amphorae in the Black Sea. Actes de la table ronde internationale de Batoumi et Trabzon, 27-29 avril 2006* (Paris, Istanbul, 2010), pp. 149-50

Lund Sørensen, S., *Between kingdom and* koinon*. Neapolis/Neoklaudiopolis and the Pontic cities* (Stuttgart, 2016)

Mader, I., ‘Keramik der Feldforschungen im Gebiet von Kyaneai aus den Jahren 1989-1992’, in F. Kolb (eds), *Lykische Studien 3: Die Siedlungskammer von Kyaneai in Lykien. Bericht über Feldforschungen im Yavu-Bergland im Sommer 1992*, Asia Minor Studien 24 (Bonn, 1996), pp. 87-127

Mader, I., ‘Keramik der Feldforschungen auf dem Gebiet von Kyaneai. Teil II: Die Funde aus den Jahren 1993/94’, in F. Kolb (eds), *Lykische Studien 4: Feldforschungen auf dem Gebiet von Kyaneai (Yavu-Bergland) Ergebnisse der Kampagnen 1993/94*, Asia Minor Studien 29 (Bonn, 1998), pp. 91-123

Mango, M. M., (eds), *Byzantine trade, 4th-12th centuries: the archaeology of local, regional and international exchange: papers of the thirty-eighth spring symposium of Byzantine studies, St John’s College, University of Oxford, March 2004* (Farnham, Burlington, 2009)

Manière-Lévêque, A-M., ‘La maison de l’acropole lycienne à Xanthos’, *Anatolia Antiqua*, 10 (2002), pp. 235-43

Marek, C., *Pontus et Bithynia. Die römischen Provinzen im Norden Kleinasiens* (Mainz am Rehin, 2003)

Marksteiner, T., ‘Der Bonda-Survey: Archäologische Feldforschungen auf dem Territorium der ostlykischen Polis Limyra’, in F. Kolb (eds), *Chora und Polis* (München, 2004), pp. 271-90

Marksteiner, T., *Lykien. Ein archäologischer Führer* (Wien, 2010)

Marksteiner, T., ‘Surveys in Andriake in 2005’, *ANMED*, 4 (2006), pp. 71-4

Marksteiner, T., Lemaître, S., Yener-Marksteiner, B., ‘Die Grabungen am Südtor von Limyra’, *Jahreshefte des Österreichischen Archäologischen Institutes in Wien*, 76 (2007), pp. 171-277

Marksteiner, T., Yener-Marksteiner, B., ‘Die Grabungen in Sondage 30/36/37 in der Weststadt von Limyra: Der archäologische Befund und die Keramik’, *Jahreshefte des Österreichischen Archäologischen Institutes in Wien*, 78 (2009), pp. 221-52

Marro, C., Özdoğan, A., Tibet, A., 'Prospection archéologique franco-turque dans la région de Kastamonu (Mer Noire). Premier rapport préliminaire', *Anatolia Antiqua*, 4 (1996), pp. 273-90

Marro, C., Özdoğan, A., Tibet, A., 'Prospection archéologique franco-turque dans la région de Kastamonu (mer Noire). Troisième rapport préliminaire', *Anatolia Antiqua*, 6 (1998), pp. 317-35

Marsh, B., Roberts, N., Toprak, V., Matthews, R., Eastwood, W., Carolan, J., Arcasoy, A., Süzen, M. L., 'Contexts of human interaction: geology, geography, geomorphology and environment', in R. Matthews, C. Glatz (eds), *At Empires' edge: Project Paphlagonia. Regional Survey in north-central Turkey* (London, 2009), pp. 27-73

Marzano, A., *Harvesting the sea: the exploitation of marine resources in the Roman Mediterranean* (Oxford, 2013)

Matthews, R., 'Project Paphlagonia: research issues, approaches and methods', in R. Matthews, C. Glatz (eds), *At Empires' edge: Project Paphlagonia. Regional Survey in north-central Turkey* (London, 2009), pp. 1-25

Matthews, R., Glatz, C., 'People and place in Paphlagonia: trends and patterns in settlement through time', in R. Matthews, C. Glatz (eds), *At Empires' edge: Project Paphlagonia. Regional Survey in north-central Turkey* (London, 2009), pp. 239-49

Matthews, R., Glatz, C., (eds), 'Project Paphlagonia: site catalogue', in *At Empires' edge: Project Paphlagonia. Regional Survey in north-central Turkey* (London, 2009), pp. 251-60

Matthews, R., Metcalfe, M., Cottica, D., 'Landscapes with figures: Paphlagonia through the Hellenistic, Roman and Byzantine periods, 330 BC-AD 1453', in R. Matthews, C. Glatz (eds), *At Empires' edge: Project Paphlagonia. Regional Survey in north-central Turkey* (London, 2009), pp. 173-226

Matthews, R., Pollard, T., Ramage, M., 'Project Paphlagonia: regional survey in northern Anatolia', in R. Matthews (eds), *Ancient Anatolia. Fifty years' work by the British Institute of Archaeology at Ankara* (London, 1998), pp. 195-206

McCormick, M., *Origins of the European economy. Communications and commerce, A.D. 300-900* (Cambridge, 2001)

Meiggs, R., *Trees and timber in the ancient Mediterranean world* (Oxford, 1982)

Metzger, H., *Les céramiques archaïques et classiques de l'acropole lycienne*, Fouilles de Xanthos 4 (Paris, 1972)

Mitchell, S., *A history of the Later Roman Empire, AD 284-641*, 2nd ed (Malden, Oxford, West Sussex, 2015)

Mitchell, S., ‘Olive cultivation in the economy of Roman Asia Minor’, in S. Mitchell, C. Katsari (eds), *Patterns in the economy of Roman Asia Minor* (Swansea, 2005), pp. 83-113

Morrisson, C., (eds), *Trade and markets in Byzantium* (Washington, 2012)

Müller, K., ‘Der Grossbau auf dem Stadthügel von Pompeiopolis’, in L. Summerer (eds), *Pompeiopolis I. Eine zwischenbilanz aus der Metropole Paphlagoniens nach fünf Kampagnen (2006-2010)* (Langenweissbach, 2011), pp. 29-47

Onur, F., ‘The history’, in N. Çevik, B. Varkıvanç, E. Akyürek (eds), *Trebenna. Its history, archaeology and natural environment*, Adalya Supplementary Series 1 (Antalya, 2005), pp. 161-70

Onur, F., ‘“The monument of the Roads” at Patara’, in H. İşkan, E. Dündar (eds), *Lukka’dan Likya’ya Sarpedon ve Aziz Nikolaos’un Ülkesi- From Lukka to Lycia the land of Sarpedon and St. Nicholas* (Istanbul, 2016), pp. 570-7

Opaiţ, A., *Local and imported ceramics in the Roman province of Scythia (4th-6th centuries AD)* (Oxford, 2004)

Opaiţ, A., ‘Sinopean, Heraklean and Chersonesan “carrot” amphorae’, *Ancient civilizations from Scythia to Siberia,* 16 (2010), pp. 371-401, 552-6

Opaiţ, A., ‘A weighty matter: Pontic fish amphorae’, in V. Gabrielsen, J. Lund (eds), *The Black Sea in antiquity: regional and interregional economic exchanges* (Aarhus, 2007), pp. 101-21

Özbayoğlu, E., ‘Notes on natural resources of Cilicia: a contribution to local history’, *Olba,* 8 (2003), pp. 159-71

Özdaş, H., Kızıldağ, N., ‘Archaeological underwater surveys along the Mediterranean coastline 2013’, *ANMED,* 12 (2014), pp. 130-4

Özdaş, H., Kızıldağ, N., ‘Underwater archaeological surveys along the Mediterranean coastline in 2012’, *ANMED,* 11 (2013), pp.149-53

Özdizbay, A., Dinçer, İ. D., ‘Surveys on the settlement history and rural settlements in Rough Cilicia 2015’, *ANMED,* 14 (2016), pp. 196-205

Özgen, İ., Baughan, E., ‘Hacımusalar Höyük/ Choma a regional center in northern Lycia, from the Early Bronze Age to the Byzantine era’, in H. İşkan, E. Dündar (eds), *Lukka’dan Likya’ya Sarpedon ve Aziz Nikolaos’un Ülkesi- From Lukka to Lycia the land of Sarpedon and St. Nicholas* (Istanbul, 2016), pp. 318-35

Özüdoğru, Ş., Dökü, E., ‘Patara Seramik Fırınları – Pottery kilns in Patara’, *Seres 2007 IV. Uluslararası Katılımlı Seramik, Cam, Emaye, Sır ve Boya Semineri 26-28 Kasım 2007* (Eskişehir, 2007), pp. 399-411

Peacock, D. P. S., Williams, D. F., *Amphorae and the Roman economy: an introductory guide* (London, New York, 1986)

Pellegrino, E., 'Les céramiques de la maison du nord-est de l'acropole lycienne de *Xanthos*: un ensemble original de la fin du VI^{e}- début du VII^{e} s. apr. J.-C.', in M. Bonifay, J-C. Tréglia (eds), *LRCW 2 Late Roman coarse wares, cooking wares and amphorae in the Mediterranean: archaeology and archaeometry*, (2 vols, Oxford, 2007), ii, pp. 659-69

Pellegrino, E., 'Le matériel céramique issu des fouilles menées en 1995 et 2000 sur l'acropole lycienne de Xanthos', *Anatolia Antiqua*, 10 (2002), pp. 245-60

Pellegrino, E., 'Notes sur un dépotoir de céramique du III^{e} s. ap. J.-C. et la datation de la résidence du Nord-Est de l'acropole lycienne de Xanthos', *Anatolia Antiqua*, 12 (2004), pp. 123-43

Pellegrino, E., 'Présentation des céramiques issues des fouilles menées en 1998-1999 sur l'acropole Lycienne de Xanthos', *Anatolia Antiqua*, 11 (2003), pp. 215-21

Peloschek, L., Seyer, M., Yener-Marksteiner, B., Bes, P., 'Limestone, diorite and radiolarite: first petrographic data of fired clay objects from Limyra (southwest Turkey)', *ADALYA*, 20 (2017), pp. 241-66

Postgate, N., 'The site of Kilise Tepe', in N. Postgate, D. Thomas (eds), *Excavations at Kilise Tepe, 1994-98. From Bronze Age to Byzantine in western Cilicia* (2 vols, Cambridge, 2007), i, pp. 9-13

Postgate, N., Thomas, D., (eds), *Excavations at Kilise Tepe, 1994-98. From Bronze Age to Byzantine in western Cilicia* (2 vols, Cambridge, 2007)

Ramsay, W. M., *The historical geography of Asia Minor* (London, 1890)

Rauh, N. K., Dillon, M. J., Dore, C., Rothaus, R., Korsholm, M., 'Viticulture, oleoculture, and economic development in Roman Rough Cilicia', *Münstersche Beiträge zur Antiken handelsgeschichte*, 25.1 (2006), pp. 49-98

Rauh, N. K., Slane, K. W., 'Possible amphora kiln sites in W Rough Cilicia', *Journal of Roman Archaeology*, 13 (2000), pp. 319-30

Rauh, N. K., Townsend, R. F., Hoff, M. C., Dillon, M., Doyle, M. W., Ward, C. A., Rothaus, R. M., Caner, H., Akkemik, Ü., Wandsnider, L., Ozaner, F. S., Dore, C. D., 'Life in the Truck Lane: urban development in western Rough Cilicia', *Jahreschefte des Österreichischen Archäologischen Institutes in Wien*, 78 (2009), pp. 253-312

Reynolds, P., 'Levantine amphorae from Cilicia to Gaza: a typology and analysis of regional production trends from the 1st to 7th centuries', in J. M^{a} Gurt i Esparraguera, J. Buxeda i Garrigós, M. A. Cau Ontiveros (eds), *LRCW 1 Late Roman coarse wares, cooking wares and amphorae in the Mediterranean: archaeology and archaeometry* (Oxford, 2005), pp. 563-611

Ricci, M., 'Elaiussa Sebaste: context, production & commerce', in B. Böhlendorf-Arslan, A. Osman Uysal, J. Witte-Orr (eds), *Çanak. Late antique and medieval pottery and tiles in Mediterranean archaeological contexts. Proceedings of the first international symposium on Late Antique, Byzantine, Seljuk, Ottoman pottery and tiles in archaeological context (Çanakkale, 1-3 June 2005)* (Istanbul, 2007), pp. 169-80

Riley, J. A., 'The coarse pottery from Berenice', in J. A. Lloyd (eds), *Excavations at Sidi Khrebish Benghazi (Berenice)* (3 vols, Tripoli), ii, pp. 91-467

Riley, J. A., 'New light on relations between the eastern Mediterranean and Carthage in the Vandal and Byzantine periods: the evidence from the University of Michigan Excavations', in *Actes Colloque sur la Ceramique Antique Carthage 23-24 Juin 1980* (Carthage, 1982), pp. 111-22

Ritter, M., 'The end of late antiquity in Paphlagonia: disurbanisation from a comparative perspective', in K. Winther-Jacobsen, L. Summerer (eds), *Landscape dynamics and settlement patterns in northern Anatolia during the Roman and Byzantine Period* (Stuttgart, 2015), pp. 119-33

'Roman amphorae: a digital resource. Agora G199', http://archaeologydataservice.ac.uk/archives/view/amphora_ahrb_2005/details.cfm?id=369&CFID=7469c890-edf0-49b5-bba7-0cfba4421d0d&CFTOKEN=0 (last day accessed 8 February 2018)

'Roman Amphorae: a digital resource. Agora M334', http://archaeologydataservice.ac.uk/archives/view/amphora_ahrb_2005/details.cfm?id=312&CFID=7469c890-edf0-49b5-bba7-0cfba4421d0d&CFTOKEN=0 (19 January 2018)

'Roman Amphorae: a digital resource. Late Roman Amphora 1', http://archaeologydataservice.ac.uk/archives/view/amphora_ahrb_2005/details.cfm?id=236&CFID=7469c890-edf0-49b5-bba7-0cfba4421d0d&CFTOKEN=0 (last day accessed 19 January 2018)

'Roman amphorae a digital resource. Late Roman Amphora 2', http://archaeologydataservice.ac.uk/archives/view/amphora_ahrb_2005/details.cfm?id=239&CFID=7469c890-edf0-49b5-bba7-0cfba4421d0d&CFTOKEN=0 (last day accessed 9 February 2018)

'Roman Amphorae: a digital resource. Late Roman Amphora 3', http://archaeologydataservice.ac.uk/archives/view/amphora_ahrb_2005/details.cfm?id=240&CFID=7469c890-edf0-49b5-bba7-0cfba4421d0d&CFTOKEN=0 (24 November 2017)

'Roman Amphorae: a digital resource. Late Roman Amphora 5', http://archaeologydataservice.ac.uk/archives/view/amphora_ahrb_2005/details.cfm?id=267&CFID=7469c890-edf0-49b5-bba7-0cfba4421d0d&CFTOKEN=0 (24 November 2017)

‘Roman Amphorae: a digital resource. Late Roman Amphora 6’, http://archaeologydataservice.ac.uk/archives/view/amphora_ahrb_2005/details.cfm?id=351&CFID=7469c890-edf0-49b5-bba7-0cfba4421d0d&CFTOKEN=0 (24 November 2017)

‘Roman Amphorae: a digital resource. Late Roman Amphora 7’, http://archaeologydataservice.ac.uk/archives/view/amphora_ahrb_2005/details.cfm?id=243&CFID=7469c890-edf0-49b5-bba7-0cfba4421d0d&CFTOKEN=0 (24 November 2017)

‘Roman Amphorae: a digital resource. Late Roman Amphora 13’, http://archaeologydataservice.ac.uk/archives/view/amphora_ahrb_2005/details.cfm?id=237&CFID=7469c890-edf0-49b5-bba7-0cfba4421d0d&CFTOKEN=0 (last day accessed 16 January 2018)

‘Roman Amphorae: a digital resource. University of Southampton, 2005 (updated 2014). Homepage’, http://archaeologydataservice.ac.uk/archives/view/amphora_ahrb_2005/index.cfm

Roueché, C., ‘Asia Minor and Cyprus’, in A. Cameron, B. Ward-Perkins, M. Whitby (eds), *The Cambridge Ancient History Volume 14. Late Antiquity: Empire and Successors, A. D. 425-600* (Cambridge, 2000), pp. 570-87

Russell, J., ‘Anemourion’, in A. E. Laiou (eds), *The economic history of Byzantium from the seventh through the fifteenth century* (3 vols, Washington, 2002), i, pp. 221-8

Russell, J., *The mosaic inscriptions of Anemurium* (Wien, 1987)

Şahin, H., ‘Rough Cilicia 2007: settlement history and epigraphic surveys’, *ANMED*, 6 (2008), pp. 120-9

Şahin, H., ‘Rough Cilicia 2009: settlement history and epigraphy surveys’, *ANMED*, 8 (2010), pp. 148-51

Şahin, H., ‘Rough Cilicia 2010: settlement history and epigraphy surveys’, *ANMED*, 9 (2011), pp. 188-93

Şahin, H., ‘Rough Cilicia 2011: settlement history and epigraphic surveys’, *ANMED*, 10 (2012), pp. 188-91

Şahin, H., ‘Rough Cilicia settlement history and epigraphy surveys 2012’, *ANMED*, 11 (2013), pp. 207-10

Şahin, H., ‘Surveys in central Rough Cilicia in 2005’, *ANMED*, 4 (2006), pp. 133-6

Şahin, H., ‘Surveys in Rough Cilicia in 2006’, *ANMED*, 5 (2007), pp. 116-21

Şahin, H., Pullu, S., ‘Rough Cilicia 2008: settlement history and epigraphy surveys’, *ANMED*, 7 (2009), pp. 125-31

Sazanov, A., ‘Les amphores “LA 1 Carthage” dans la région de la mer Noire (typologie et chronologie: V^{e}-VII^{e} s. apr. J.-C.)’, in Y. Garlan (eds), *Production et commerce des amphores anciennes en mer noire* (Aix-en-Provence, 1999), pp. 265-79

Schäfer, J., (eds), *Phaselis. Beiträge zur Topographie und Geschichte der Stadt und ihrer Häfen* (Tübingen, 1981)

Şenol, A. K., Cankardeş-Şenol, G., ‘Commercial ties of Cilicia by means of Hellenistic and Roman amphorae’, *Olba*, 7 (2003), pp. 119-43

Şerifoğlu, T. E., MacSweeney, N., Colantoni, C., ‘The Lower Göksu Archaeological Salvage Survey Project: preliminary results of the first season’, *Anatolica*, 40 (2014), pp. 71-92

Şerifoğlu, T. E., MacSweeney, N., Colantoni, C., ‘Lower Göksu Archaeological Salvage Survey Project, the second season’, *Anatolica*, 41 (2015), pp. 177-89

Şerifoğlu, T. E., MacSweeney, N., Collar, A., Colantoni, C., Eve, S., ‘Lower Göksu Archaeological Salvage Survey Project, the third season’, *Anatolica*, 42 (2016), pp. 11-27

Ševčenko, I., Ševčenko, N. P., ‘Introduction’, in trans. I. Ševčenko, N. P. Ševčenko, *The Life of Saint Nicholas of Sion* (Brookline, Massachusetts, 1984), pp. 11-19

Seyer, M., ‘The city of king Pericle: Limyra’, in H. İşkan, E. Dündar (eds), *Lukka’dan Likya’ya Sarpedon ve Aziz Nikolaos’un Ülkesi- From Lukka to Lycia the land of Sarpedon and St. Nicholas* (Istanbul, 2016), pp. 260-73

Seyer, M., ‘Limyra 2013’, *ANMED*, 12 (2014), pp. 73-80

Seyer, M., ‘Limyra 2014’, *ANMED*, 13 (2015), pp. 72-81

Seyer, M., Lotz, H., Brandstätter, P., ‘Survey on Toçak Dağı (Limyra) 2015’, *ANMED*, 14 (2016), pp. 275-81

Summerer, L., (eds), *Pompeiopolis I. Eine zwischenbilanz aus der Metropole Paphlagoniens nach fünf Kampagnen (2006-2010)* (Langenweissbach, 2011)

Summerer, L., ‘Pompeiopolis. Eine Zwischenbilanz aus der Metropole Paphlagoniens nach fünf Kampagnen (2006-2010)’, in L. Summerer (eds), *Pompeiopolis I. Eine zwischenbilanz aus der Metropole Paphlagoniens nach fünf Kampagnen (2006-2010)* (Langenweissbach, 2011), pp. 3-15

Summerer, L., von Kienlin, A., Herdt, G., ‘Frühe Forschungen in Paphlagonien - Neue Grabungen in Pompeiopolis’, in Ü. Yalçın (eds), *Anatolian Metal VI* (Bochum, 2013), pp. 257-66

Summerer, L., von Kienlin, A., ‘Pompeiopolis. The metropolis of Paphlagonia’, in H. Bru, G. Labarre (eds), *L’Anatolie des peuples, des cités et des cultures (II^{e} millénaire av. J.-C.-V^{e} siècle ap. J.-C.)* (2 vols, Besançon, 2013), ii, pp. 115-26

Takmer, B., ‘Lex Portorii Provinciae Lyciae. Ein Vorbericht über die Zollinschrift aus Andriake aus neronischer Zeit’, *Gephyra*, 4 (2007), pp. 165-88

Talbert, R. J. A., (eds), *Barrington atlas of the Greek and Roman world* (Princeton, 2000)

Tietz, W., ‘Central Lycia: Kyaneai, Phellos, Kekova’, in H. İşkan, E. Dündar (eds), *Lukka’dan Likya’ya Sarpedon ve Aziz Nikolaos’un Ülkesi- From Lukka to Lycia the land of Sarpedon and St. Nicholas* (Istanbul, 2016), pp. 362-73

Tietz, W., ‘Western Lycia: Pinara, Telmessos, Kadyanda’, in H. İşkan, E. Dündar (eds), *Lukka’dan Likya’ya Sarpedon ve Aziz Nikolaos’un Ülkesi- From Lukka to Lycia the land of Sarpedon and St. Nicholas* (Istanbul, 2016), pp. 336-49

Townsend, R. F., Hoff, M. C., ‘The Rough Cilicia Survey Project: architectural work 2004’, *ANMED*, 3 (2005), pp. 129-33

Trombley, F. R., ‘Korykos in Cilicia Trachis: the economy of a small coastal city in Late Antiquity- A Précis’, *The Ancient History Bulletin*, 1.1 (1987), pp. 16-23

Tsetskhladze, G. R., (eds), *The Black Sea, Paphlagonia, Pontus and Phrygia in Antiquity. Aspects of archaeology and ancient history* (Oxford, 2012)

Tsuji, S., (eds), *The survey of early Byzantine sites in Ölüdeniz area (Lycia, Turkey). The first preliminary report* (Osaka, 1995)

Türker, A. Ç., *Demre- Myra Aziz Nikolaos Kilisesi Bizans Dönemi Sırsız Seramikleri- Byzantine unglazed pottery of Saint Nicholas church at Demre- Myra*, Adalya Supplementary Series 8 (Antalya, Istanbul, 2009)

‘Turkey: wheat Production. Foreign Agricultural Service, Office of Global Analysis, International Production Assessment Division’, https://ipad.fas.usda.gov/rssiws/al/crop_production_maps/metu/Turkey_wheat.jpg (9 January 2018)

Uçkan, B. Y. O., Mergen, Y., Uğurlu, E., ‘Surveys at ancient Olympos in 2005’, *ANMED*, 4 (2006), pp. 125-31

Uçkan, B. Y. O., Öztaşkın, G. K., ‘Excavations at Olympos 2014’, *ANMED*, 13 (2015), pp. 87-90

Uçkan, B. Y. O., Öztaşkın, G. K., ‘Olympos: the city sanctified with water and fire’, in H. İşkan, E. Dündar (eds), *Lukka’dan Likya’ya Sarpedon ve Aziz Nikolaos’un Ülkesi- From Lukka to Lycia the land of Sarpedon and St. Nicholas* (Istanbul, 2016), pp. 274-87

Varinlioğlu, G., ‘Boğsak Archaeological Survey 2013’, *ANMED*, 12 (2014), pp. 135-9

Varinlioğlu, G., ‘Boğsak Archaeological Survey 2014’, *ANMED*, 13 (2015), pp. 151-7

Varinlioğlu, G., ‘Boğsak Archaeological Survey (BOGA) 2015’, *ANMED*, 14 (2016), pp. 162-8

Varinlioğlu, G., ‘Rural habitat in the hinterland of Seleucia ad Calycadnum during Late Antiquity’, in M. C. Hoff, R. F. Townsend (eds), *Rough Cilicia. New historical and archaeological approaches* (Oxford, Oakville, 2013), pp. 199-209

Varinlioğlu, G., ‘Survey on Boğsak Island 2012’, *ANMED*, 11 (2013), pp. 169-73

Varinlioğlu, G., ‘Survey on the Boğsak Island in 2010’, *ANMED*, 9 (2011), pp. 153-8

Varinlioğlu, G., ‘Survey on the Boğsak Island 2011’, *ANMED*, 10 (2012), pp. 137-41

Varkivanç, B., ‘Patara’da bir Seramik İşliği- A ceramic atelier at Patara’, *ADALYA*, 5 (2001-2002), pp. 137-52

Vnukov, S. Yu., ‘Pan-Roman amphora types produced in the Black Sea region’, in J. Eiring, J. Lund (eds), *Transport amphorae and trade in the eastern Mediterranean. Acts of the international colloquium at the Danish Institute at Athens, September 26-29, 2002* (Aarhus, 2004), pp. 407-15

von Kienlin, A., ‘Topographie und bauliche Entwicklung in Pompeiopolis’, in L. Summerer (eds), *Pompeiopolis I. Eine zwischenbilanz aus der Metropole Paphlagoniens nach fünf Kampagnen (2006-2010)* (Langenweissbach, 2011), pp. 215-29

Vroom, J., ‘Late antique pottery, settlement and trade in the east Mediterranean: a preliminary comparison of ceramics form Limyra (Lycia) and Boeotia’, in W. Bowden, L. Lavan, C. Machado (eds), *Recent research on the late antique countryside* (Leiden, Boston, 2004), pp. 281-331

Vroom, J., ‘Limyra in Lycia: Byzantine/Umayyad pottery finds from excavations in the eastern part of the city’, in S. Lemaître (eds), *Céramiques antiques en Lycie (VII^{e} S. a.C.- VII^{e} S. p.C.) Les produits et les marchés. Actes de la table-ronde de Poitiers (21-22 mars 2003)* (Bordeaux, 2007), pp. 261-92

Vroom, J., ‘New light on “Dark Age” pottery: a note on finds from south-western Turkey’, *Rei Cretariae Romanae Fautorum Acta*, 39 (2005), pp. 249-55

Ward, C., ‘Four ships of Late Antiquity in the Black Sea’, *Ancient civilizations from Scythia to Siberia*, 16 (2010), pp. 189-98, 541-2

Ward-Perkins, B., ‘Land, labour and settlement’, in A. Cameron, B. Ward-Perkins, M. Whitby (eds), *The Cambridge Ancient History Volume 14. Late Antiquity: Empire and Successors, A. D. 425-600* (Cambridge, 2000), pp. 315-45

Ward-Perkins, B., ‘Specialized production and exchange’, in A. Cameron, B. Ward-Perkins, M. Whitby (eds), *The Cambridge Ancient History Volume 14. Late Antiquity: Empire and Successors, A. D. 425-600* (Cambridge, 2000), pp. 346-91

Wickham, C., *Framing the early Middle Ages: Europe and the Mediterranean 400-800* (Oxford, 2005)

Williams, C., *Anemurium. The Roman and early Byzantine pottery* (Toronto, 1989)

Williams, C., 'A Byzantine well-deposit from Anemurium (Rough Cilicia)', *Anatolian Studies*, 27 (1977), pp. 175-90

Williams, D. F., 'An integrated archaeometric approach to ceramic fabric recognition. A case study on Late Roman Amphora 1 from the eastern Mediterranean', in J. Mª. Gurt i Esparraguera, J. Buxeda i Garrigós, M. A. Cau Ontiveros (eds), *LRCW 1 Late Roman coarse wares, cooking wares and amphorae in the Mediterranean: archaeology and archaeometry* (Oxford, 2005), pp. 613-24

Wilson, A., 'Developments in Mediterranean shipping and maritime trade from the Hellenistic period to 1000', in D. Robinson, A. Wilson (eds), *Maritime archaeology and ancient trade in the Mediterranean* (Oxford, 2011), pp. 33-59

Winther-Jacobsen, K., 'Contextualising Neoklaudiopolis: a glimpse at settlement dynamics in the city's hinterland', in K. Winther-Jacobsen, L. Summerer (eds), *Landscape dynamics and settlement patterns in northern Anatolia during the Roman and Byzantine Period* (Stuttgart, 2015), pp. 83-99

Winther-Jacobsen, K., Summerer, L., (eds), *Landscape dynamics and settlement patterns in northern Anatolia during the Roman and Byzantine Period* (Stuttgart, 2015)

Yağcı, R., 'Excavations at Soli/Pomeiopolis in 2005', *ANMED*, 4 (2006), pp. 57-60

Yağcı, R., 'Excavations at the ancient port city of Soli/Pompeiopolis in 2003', *ANMED*, 2 (2004), pp. 55-7

Yağcı, R., 'Soli-Pompeiopolis 2002', *ANMED*, 1 (2003), pp. 34-7

Yağcı, R., Kaya, F. H., 'Excavations at Soli/Pompeiopolis in 2010', *ANMED*, 9 (2011), pp. 113-18

Yağcı, R., Yiğitpaşa, D., 'Excavations at Soli Pompeiopolis 2015', *ANMED*, 14 (2016), pp. 148-54

Yener-Marksteiner, B., 'Surveys in Andriake in 2008', *ANMED*, 7 (2009), pp. 105-7

Yılmaz, Z., 'Die Keramik der späthellenistischen, kaiserzeitlichen, spätantiken und frühbyzantinishen Epochen (End 2. Jh. v.-7. Jh. n. Chr.)', in F. Kolb (eds), *Lykisch Studien 8: Keramik, Münzen, Kirchen und Wirtschaftskomplexe des zentrallykischen Yavu-Berglandes (Gebiet von Kyaneai)*, Tübinger Althistorische Studien 4 (Bonn, 2008), pp. 105-71

Zhuravlev, D., 'Early Roman fine ware from Pompeiopolis', in L. Summerer (eds), *Pompeiopolis I. Eine zwischenbilanz aus der Metropole Paphlagoniens nach fünf Kampagnen (2006-2010)* (Langenweissbach, 2011), pp. 149-62

Zimmermann, M., ‘The discovery of Lycian civilization’, in H. İşkan, E. Dündar (eds), *Lukka’dan Likya’ya Sarpedon ve Aziz Nikolaos’un Ülkesi- From Lukka to Lycia the land of Sarpedon and St. Nicholas* (Istanbul, 2016), pp. 4-9

Zimmermann, M., ‘Survey in Phellos (central Lycia) 2003’, *ANMED*, 2 (2004), pp. 101-4

Zoroğlu, K. L., ‘Excavations at Kelenderis in 2010’, *ANMED*, 9 (2011), pp. 29-35

Zoroğlu, K. L., ‘Excavations at Kelenderis in 2011’, *ANMED*, 10 (2012), pp. 40-5

Zoroğlu, K. L., ‘Excavations at Kelenderis in 2012’, *ANMED*, 11 (2013), pp. 40-6

Zoroğlu, K. L., ‘Excavations at Kelenderis in 2014’, *ANMED*, 13 (2015), pp. 39-46

Zoroğlu, L., ‘Excavation and restoration work at Kelenderis in 2008’, *ANMED*, 7 (2009), pp. 26-31

Zoroğlu, L., ‘Excavations at Kelenderis in 2009’, *ANMED*, 8 (2010), pp. 31-6

Zoroğlu, L., ‘Kelenderis 2002’, *ANMED*, 1 (2003), pp. 14-16

Zoroğlu, L., *et al*., ‘Recent Archaeological Research in Turkey’, *Anatolian Studies*, 38 (1988), pp. 191-208

Unpublished Theses

Anderson, W., ‘Paphlagonia in Late Antiquity: landscape and material culture in north-central Anatolia’ (PhD thesis, University of Melbourne, 2011)

Commito, A. R., ‘Southern Asia Minor and northwest Syria at the end of antiquity: a view from the countryside’ (PhD thesis, University of Michigan, 2014)

Rice, C. M., ‘Port economies and maritime trade in the Roman Mediterranean: 166 BC to AD 300’ (DPhil thesis, University of Oxford, 2013)

Varinlioğlu, G., ‘Rural landscape and built environment at the end of antiquity: limestone villages of southeastern Isauria’ (PhD thesis, University of Pennsylvania, 2008)

Wilson, D. R., ‘The historical geography of Bithynia, Paphlagonia and Pontus in the Greek and Roman Periods: a new survey with particular reference to surface remains still visible’ (B.Litt thesis, University of Oxford, 1960)