

# **City and Country in Pisidia from Classical**

## **Antiquity to the Middle Ages:**

**Ariassos, Sia and their Territories.**

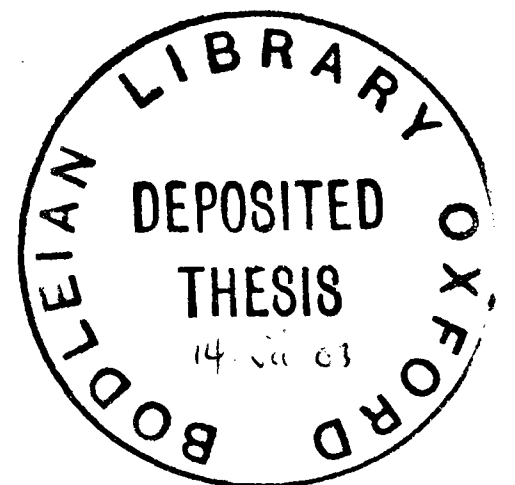
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Submitted for the degree of Doctor of Philosophy in Archaeology

Oxford University

Michaelmas 2002 (ie 2003)



To the memories of Robert Buttimore and John Lloyd

# City and Country in Pisidia from Classical Antiquity to the Middle Ages: Ariassos, Sia and their Territories

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## ABSTRACT

This thesis provides a study of the growth and decline of two small Pisidian urban settlements, Sia and Ariassos, with an especial focus on the relationship, both social and economic, between town and country. The thesis addresses the subject primarily chronologically, although chapter two is diachronic. The first chapter provides an historical and geographical introduction to the subject. The complexities of the ethnic and cultural environment in which the two cities were founded are discussed along with the history of early settlement in the region.

The succeeding chapters present, discuss and analyse the archaeological evidence for the growth, transformation and, ultimately, the decline of the settlements. The central argument of the thesis is that the settlements can only be understood if seen both within their local physical and social environment and their larger political environment. The settlements existed as part of a complex urban and rural network. The effects of the changes of the third century AD, the arrival of Christianity, tax reforms and social unrest are all explored.

The thesis concludes that the image of uniformity and continuity in this mountainous region can be highly deceptive. During the period in which the Pisidian urban landscape grew, flourished and then disintegrated, the area was subject to an enormous variety of changes, social, political and economic, all of which have to be taken into account when attempting to understand the complexity of the process of urban change.

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## INTRODUCTION

The central focus of this study is two small urban settlements, Sia and Ariassos, in southern Pisidia. Pisidia itself has never been an area of great renown. In antiquity, when considered at all, it appears to have been viewed as a region inhabited by troublesome, warlike and credulous highlanders. It owed its brief appearances in recorded history to its location, peripheral to Pamphylia and the Mediterranean coast and containing one of the major routes from the Anatolian interior to the southern shore. It appears in histories primarily as an area to be traversed, and thus to be neutralised, pacified, and, possibly, civilised. Pisidia may not appear a promising subject for great, narrative histories, nevertheless, archaeologically and epigraphically, it is a rich source of information for social and economic historians.

Until the 1990s, the amount of archaeological research carried out in Pisidia was limited, both in number and scope. The first major archaeological work published on Pisidia was Count Lanckoronski's imposing nineteenth-century study of Pisidian and Pamphylian cities. Lanckoronski, following in the footsteps of Spratt and Forbes and others, surveyed a number of Pisidian sites, providing us with two large volumes of site plans, drawings, inscriptions and reconstructions of the more imposing works of sculpture, individual tombs, temples and other public buildings.<sup>1</sup> Lanckoronski's expedition was concerned more with presenting a record of sculptural, epigraphic and architectural detail than with addressing the questions raised by these once living, changing settlements.

The Pisidia Survey established in the 1980s by S. Mitchell deliberately followed in the footsteps of Lanckoronski.<sup>2</sup> The principal aim of the survey was initially to record all the visible architectural and epigraphic remains of surviving Pisidian settlements as they stood, aiming to achieve as complete coverage as was feasible of all the extant architecture and inscriptions at the settlements studied. From this architectural and epigraphic survey work, it was hoped that the wealth of archaeological remains in Pisidia could be recorded and that a better picture could be gained of many of the facets of Pisidian urban life.

Archaeology is often the art of the possible. The research method employed by the Pisidia survey team was designed to maximise returns from a limited budget. In Pisidia, as is frequently the case, there is a danger of archaeological sites being destroyed before they have even been mapped. The urban settlement at Kaynar Kale in Pisidia had been thoroughly plundered by illegal excavators before it was mapped in 1994.<sup>3</sup> The Pisidia Survey was established to record extant ruins quickly, efficiently and to a minimal budget. Whilst such a survey can never hope to provide the same quantity or quality of data as an excavation, it has the benefits of being non-invasive, non-destructive, repeatable, relatively quick and inexpensive. It is to be hoped, that, as with the city of Sagalassos, more of the settlements recorded by the survey can later be excavated.

The aim of this study is not to provide a broad overview of Pisidian urbanisation. It is rather my intention to sharpen the focus, to concentrate on two small, largely undistinguished settlements, Sia and Ariassos, and their territories. I wish to examine how and why two

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<sup>1</sup> Lanckoronski and Niemann 1890; Lanckoronski and Niemann 1892.

<sup>2</sup> See Mitchell 1998a for an overview of the survey and for further bibliography.

<sup>3</sup> See Aydal, Mitchell, Mühlenbrock, Robinson forthcoming.

obscure highland settlements were created, expanded and then declined. Given the location, size and appearances of the two settlements there is little question that both settlements would have been almost entirely dependent on the land in their immediate environs, and those who worked it, for their subsistence and production for purposes of tax and trade. In order to understand the history and development of these settlements, therefore, it is important to have some understanding of the relationship between urban settlements and their territories.

Before any such study can be undertaken, however, it is vital that the methodology employed in gathering the data upon which the analysis is based be clearly explained. The choice of sampling strategy for any particular survey is usually determined primarily by four factors: time, money, personnel and geography. Non-probabilistic sampling methods are clearly of benefit to those with little time, money or personnel. Sites can be looked for in the most 'likely' places; information from local inhabitants can be sought and followed up upon. There are not many surveyors who would eschew these methods completely. However, although non-probabilistic surveying usually yields good results in the form of sites, statistically such methods are of little use. It is hard to determine how representative such results are, as the 'gaps' between sites have not been surveyed. Intensive, probabilistic field survey, the systematic investigation of a landscape, provides the answer. Theoretically and statistically the best method of surveying must contain a random element. It is important, however, that all areas or zones of a landscape are sampled. Thus some form of stratified, systematic sampling is preferable.

Regional Surveys in the Mediterranean such as the Balboura Survey, Kyaneai Survey, Pylos Regional Archaeological Project, Mallakstra Regional Archaeological Project, the Sphakia Regional Survey, the Methana Survey, the Boeotia Survey, the Argolid Survey, the Melos Survey and the Keos Survey have all employed different combinations of intensive and extensive, probabilistic and non-probabilistic sampling strategies in order to collect data.<sup>4</sup> These surveys have all attempted to record systematically the density and distribution of artefacts and sites over pre-defined areas.

As examples of survey methodologies, the Balboura and Methana Surveys provide a clear picture of both the theory and the practicalities of sampling techniques. The Balboura Survey employed both non-probabilistic sampling – locating sites through inquiry – and stratified, systematic sampling – the walking of transects along and up steep ridges, over alluvial plains, and through scrub, trees, bare rock and agricultural crops. The non-probabilistic method resulted in more 'finds'; the systematic sampling allowed these finds (and subsequent ones) to be placed within a meaningful, statistical framework.<sup>5</sup> The Methana Survey followed a similar pattern of sampling, although steep, densely covered slopes were avoided.<sup>6</sup> In both

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<sup>4</sup> See [Balboura] Coulton 1998; [Kyaneai] Kolb 1993, 1995, 1996; [Pylos] Bennet, Davis and Zarinebaf-Shahr 2000; [Pylos] Davis, Alcock, Bennet, Lolos, Shelmerdine and Zangger 1996-2001; [Mallakstra] Davis and Korkuti 2000; [Sphakia] Nixon, Price, Moody and Rackham 1994; [Sphakia] Nixon, Moody, Price and Rackham 2000; [Methana] Mee and Forbes 1997; [Boetia] Bintliff and Snodgrass 1985; [Argolid] Jameson, Runnels and van Andel 1994; [Melos] Renfrew and Wagstaff (eds.) 1982; [Keos] Cherry, Davis and Mantzourani 1991.

<sup>5</sup> The author worked on the Balboura Survey in 1991 and 1993; for a discussion of the survey, see Coulton 1998, esp. 232, and fig. 19.1 (with transects marked); Coulton, forthcoming.

<sup>6</sup> Mee and Forbes 1997, 3-4, 33-41, fig. 3.1 (with transects marked).

surveys, methods were adapted to the actual situation on the ground: in the case of the Balboura Survey, after a significant area of alluvial plain had been surveyed, revealing no sites, it was decided to move on to a more fruitful transect, as, although the transect was statistically significant, it was clear that any sites on the plain had been covered with silt. On the Methana Survey, for reasons of safety and visibility, it was decided against surveying on overgrown, steep slopes. The two surveys attempted systematically to survey, and sherd, a representative sample of the areas under examination, thereby allowing the possibility of statistically valid period comparisons.

Without the use of systematic sampling methods, it is possible that unexpected factors may be completely overlooked on a survey. The Pisidia Survey was established primarily as a survey of architectural and epigraphic remains, and was neither conceived of nor executed as a systematic, holistic regional survey. In contrast to the above-mentioned surveys, the Pisidia Survey consisted, for the most part, in mapping and recording settlements that had already been discovered, and no systematic survey of any kind of the region surrounding the settlements was made. This naturally presents a problem when one is trying to present an analysis of the settlements within their environment. It is very much possible that the small amount of probabilistic, non-random surveying that was carried out missed certain types of site completely. Lacking the evidence of sherding also presents serious problems with the dating and identification of possible sites. It must be emphasised, therefore, that no matter how desirable it may be, no systematic sherding was carried out nor any systematic field-walking. Where pottery is discussed in this thesis, therefore, this was pottery that was observed and recorded during work on the various sites, in a more or less random fashion.

However, the hypotheses presented in this thesis and the conclusions reached are based upon observed data; further systematic survey work may always produce surprises, but it is hoped that it will fill in depth and colour to the outlines presented in this thesis, rather than revealing a completely different picture.

I participated in the survey and mapping of Panemoteichos, Ören Tepe and Sia on the Pisidia Survey in 1995 and in the completion of the mapping of Sia in 1996. In 1998, I carried out a study season at Ariassos and Sia, and, using a GPS either alone or with the aid of L. Schouten, carried out a (necessarily) extensive, highly selective survey of the territory of Sia. It was impossible to expand the scope of the survey (i.e. to carry out any systematic form of field-walking or site-sherding). The survey method I employed was non-probabilistic, thereby preventing the collation of statistics about changes in land-use or habitation in the territories of the settlements in antiquity. Local inhabitants were questioned about ruins that they were aware of; these were then visited and recorded. Having noted the proximity of these sites to basins of agricultural land within the forest, I then tried to survey as many of these basins as I could reach to see whether there was evidence of settlement on or around them. I also questioned the local inhabitants about how they lived and, in particular, on questions of subsistence and water supply in the area. The lack of a systematic rural survey makes it impossible to present an accurate analysis of regional settlement hierarchies and the dynamics of change over time.

The evidence available for this study is limited in particular ways. However, as with the work published on the Pisidian city of Cremna there is much that can be discerned from the

remains of the buildings and epigraphy alone.<sup>7</sup> The lack of a systematic regional survey does not mean that no attempt should be made to provide an analysis of the settlements within their environment. Rather, it is vital that, instead of presenting a simplified, static model of the environment as a backdrop to an urban study, an attempt should be made to explore the potential dynamics of the regional environment, and to examine how the urban settlements could have functioned within and interacted with that environment. Lacking much of the specific evidence that a regional survey would provide, I have instead attempted to examine a number of possibilities, to explore which subsistence options would have been possible and/or desirable in antiquity in the region, and to see whether we have evidence for any particular forms of land-use. I have attempted to show that we should not be trapped into thinking within a framework of geographical determinism. I provide a discussion of the complex interactions between subsistence practices, the environment and political and social organisation based on epigraphy, the works of contemporary historians and geographers, Ottoman tax records and surveys, travellers' accounts, modern agricultural surveys, excavation reports, palynological surveys from within the areas addressed, interviews with modern inhabitants of the region, my own observations and further ethno-archaeological parallels, including my own experiences as a shepherd. Other questions will have to wait to be answered until systematic surveying, sherding and excavation have been carried out.

The core of data upon which the thesis is based is the considerable body of evidence provided by the mapping and recording of the architectural and epigraphic remains at the two settlements, Ariassos and Sia. Domestic architecture and urbanisation are increasingly popular subjects of study – monumental architecture, funerary customs and artistic works have often proved more attractive (and fruitful) objects of study than housing. There have naturally been exceptions; Ostia and Pompeii in Italy, and Priene in Asia Minor are notable. Housing has received less attention than it warrants for a multitude of reasons, but the most important has been that it is rare to discover a significant quantity of housing still standing above ground. Excavation of entire domestic areas is expensive and has traditionally been considered to pay lower dividends than the excavation of monumental or funerary areas. Sia and Ariassos are most unusual in that the majority of the (stone) housing of these settlements has survived to the extent that it could be surveyed without recourse to excavation. No other Pisidian site has yet been surveyed where it has been possible to survey so completely almost an entire settlement. Thus, at present, these two sites stand alone in the picture that they present of Pisidian settlements. The question is, therefore, how to employ the information gathered. The domestic areas of Sia and Ariassos have clearly been used and re-built over many centuries. The plans of the settlements that we have today are essentially those of the Late Roman/Byzantine settlements. However, both settlements were constructed from the Hellenistic period onwards almost entirely from the local limestone, a durable and enduring material; despite earthquake damage and later rebuilding it is possible therefore to draw a workable sketch of the development of these settlements, although the finer nuances of interpretation made possible by excavation are not available to the surveyor.

It is very difficult to arrive at a convincing, water-tight chronology for the buildings at Sia and Ariassos despite the fact that the condition of much of the building matches or even betters that of much excavated elsewhere. Without excavation the date of construction of

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<sup>7</sup> Mitchell 1997.

individual buildings is extremely hard to fix. The method of dating employed in this thesis therefore is relative; the method employed involved examining buildings within the original city-circuit that appear to have been built at the same time as the city-circuit and to see what types of modification they have undergone. Any datable buildings have been used as comparanda for undated buildings. For the analysis of architecture, I have made extensive use of the publications of S. Mitchell in particular, and the reports of the Pisidia Survey. These reports are by their nature mainly summary reports and do not always contain all the argumentation necessary for the hypotheses presented. I attempt below to present arguments for ascriptions of dates and functions to buildings where this is possible. It is apparent therefore that the date of construction of the circuit walls is important, and that few buildings can be dated with certainty. Nevertheless, interesting trends are visible; later excavation, if it should occur, could clarify matters further.

Despite the lack of systematic survey, through a combination of architectural analysis, epigraphy and a range of other types of evidence, ancient and modern, I aim to trace the development of two Pisidian settlements within their geographical, historical and political environments.

## CHAPTER ONE

### GEOGRAPHICAL AND HISTORICAL BACKGROUND

#### 1.1 THE EXTENT OF PISIDIA

It is a commonplace of discussions of Pisidia that the region is impossible to define with precision.<sup>8</sup> The cause of this difficulty, observed by Syme, was that ‘the same name may carry a meaning ethnical, political, or geographical.’<sup>9</sup> Pisidia, as Lanckoronski noted, is more of an ethnographic than a political term.<sup>10</sup> As both the size and character of regions defined by their ethnical or political constitution alter over time, it is best for the purposes of this thesis to treat Pisidia as a somewhat artificially defined geographical region. In this thesis, therefore, the term ‘Pisidia’ will be used to describe the region which can be said to have contained the majority of the ‘Pisidian’ peoples in the Hellenistic period; further complexities will be discussed below.<sup>11</sup>

The geographical region thus defined, in modern terms, covers the area from Lake Eğirdir in the north to the Pamphylian plain in the south, from Lake Burdur in the east to Lake Beyşehir in the west (fig. 1). In the Hellenistic period, Pisidia was bordered by Phrygia to the north, Isauria to the east, Pamphylia to the south, Lycia to the southwest, and the Milyas and the Kabalis to the west.<sup>12</sup> The northern boundary of Pisidia ran from the north of Lake Burdur (the Pisidian city of Baris) to Lake Eğirdir (the Pisidian cities of Prostanna and Parlais) and across to Lake Beyşehir and beyond. The eastern boundary is uncertain – Isaurians, Cilicians and Pisidians almost certainly intermingled in this region, but Amblada, approximately 30 km to the south of the southeast corner of Lake Beyşehir, was probably one of the easternmost outposts of Pisidian dominance. The southern boundary can roughly be defined as the border between the mountains and the lowland plain of Pamphylia, although it is unclear whether the largely barren plain to the north of Antalya lay within Pamphylia or Pisidia – it is likely that use of the plain was contested at various times.<sup>13</sup> Strabo states both that the Pamphylians inhabited the southern parts of the foothills of the Taurus, but also that the Pisidians behind Aspendos and Side (ie the Selgeans and Etenneis) cultivated the hills.<sup>14</sup> The stronger Pisidian cities such as Termessos and Selge would undoubtedly have been able to hold territory further into the lowlands than the lesser Pisidian cities such as Pednelissos or Ariassos, who would have been in competition with the larger Pamphylian cities, Aspendos, Perge and Antalya. The southernmost Pisidian cities were Termessos, in the west, and Etenna, in the east. Whilst it is useful to look for boundaries between city territories, there have been insufficient territorial surveys to provide

<sup>8</sup> See, for example, Lanckoronski 1892, 13-14; Brandt 1992, 8; Bracke 1993, 15; Mitchell 1992, 1.

<sup>9</sup> Syme 1995, 179.

<sup>10</sup> Lanckoronski 1892, 18.

<sup>11</sup> See also Bracke 1993, 15, and esp. Syme 1995, 179-92.

<sup>12</sup> For a map of Pisidian and Pamphylian cities, see Brandt 1992, 224.

<sup>13</sup> On the eastern Pamphylian plain see Mason (ed.) 1942, 147-8; De Planhol 1958, 122-3. The stony plateau directly to the north west of Antalya was only suitable in small areas for limited agriculture; Fellows 1838, 178, described it thus: ‘for the next thirty miles, extending to Adalia [Antalya], not an acre of land is cultivated, the whole being bare rock and stone, scarcely concealed by the small shrubs and brushwood.’ For further discussion over territorial boundaries in this area see below, chapter 2.

<sup>14</sup> Strabo 12.7.1-2.

us with the precise boundaries between the cities. The western boundary of Pisidia with the Milyas and the Kabalis is even more problematic and requires more detailed elucidation.

It should be apparent that the definition of Pisidia as given above is less helpful in border areas, especially as we are unable clearly to distinguish Pisidians through archaeological means from some of their neighbours. The problem of precisely locating and identifying the Pisidians in relation to their neighbours is reflected in the literary sources. Neither Homer nor Herodotos, both of whom mention the Lycians, make any reference to Pisidians.<sup>15</sup> They both, however, refer to the Solymians. Homer (*Iliad* 1.173) describes the Solymians as the original inhabitants of Lycia, and (*Iliad* 6.184-5; 203-4) he mentions the Solymians fighting Bellerophon and his son, Isander (who were fighting for the Lycian people). Herodotos (1.173) states that the Lycians occupied land formerly inhabited by the Milyans, who were called Solymians.<sup>16</sup> Strabo (12.8.5; 14.3.10) repeats the same tale (although he also states that some think that the Lycians were previously called Solymians but later took the name of the Termilai who came from Crete).<sup>17</sup> Strabo (13.4.16) calls the inhabitants of Termessos, Solymians, and the appearance of the word in Roman period inscriptions lends some support to this statement.<sup>18</sup> However, Strabo (12.7.2; 14.3.9) also describes Termessos as a Pisidian city, whilst his contemporary Ptolemy (5.5.5) lists it as a city of Kabalia.

A further complication is added by Strabo's description (13.4.17) of the 'territory of the Milyans', as 'the territory from the defiles by Termessos and the passage through them to Isinda, stretching into the Taurus region as far as Sagalassos and the territory of Apameia.' Strabo's Milyas appears to include the 'Pisidian' cities of Isinda, Ariassos, Huia, Colbasa and Kaynar Kale (possibly ancient Codrula). Ptolemy, on the other hand, describes a region of Kabalia which appears to cover approximately the same area as Strabo's Milyas, listing among his nine 'cities of Kabalia', Termessos, Pogla, Kretopolis and Milyas.<sup>19</sup> The Kabalians and Milyans appear to have been distinct groups, but both peoples along with the Termessians, according to Strabo, could be counted as Solymians.<sup>20</sup> 'Southwest Pisidia', therefore, as it is defined in this thesis, appears to have lain precisely in the region where boundaries (such as they existed) became blurred, as neighbouring, and related, tribal groups impinged upon, and intermingled with, one another.<sup>21</sup> The Milyas, like Pisidia, is an area which to some extent eludes definition because, like 'Pisidia' it denotes a region inhabited by

<sup>15</sup> Strabo 12.3.27 notes Homer's omission of the Pisidians, Pamphylians and Milyans, but states that we should not conclude that the poet was ignorant of their existence. The Homeric works are, of course, works of poetry; we should therefore be wary of drawing any strong conclusions on the basis of this omission. Herodotos, on the other hand, was attempting, on one level at least, to present an accurate account of events; the name of the Pisidians has been inserted into a lacuna in the text at Herodotos 7.76, but this reading is uncertain.

<sup>16</sup> On Bellerophon and Lycia, see Bryce 1986, 14-20, 244-5.

<sup>17</sup> On Strabo's work in general see Van der Vliet 1977; on Strabo and ethnic history, see Clarke 1999, 276-81.

<sup>18</sup> Strabo 14.3.10; Heberdey 1941, 18, 103, 127, 135, 548; Cranier 1832, 267-9.

<sup>19</sup> Ptolemy 5.5.5. The list, under the heading Καβαλιας δε πολεις, was: Κρητοπολις, Πωγλα, Μενεδημιον, 'Ουρανοπολις, Πισινδα, 'Αριασσος, Μιλυας, Τερμησσος, Κορβασα. Πισινδα and Κορβασα should be read as 'Ισινδα and Κολβασα. Syme 1995, 184-92.

<sup>20</sup> Strabo 12.8.5; 13.4.16; 14.3.10. On the distinct identities of the Milyan and Kabalian peoples see Herodotos 7.77; Hall and Coulton 1990, 149-50.

<sup>21</sup> For a full discussion of the Milyans, the Pisidians and the regions they inhabited see now the excellent discussion in Syme 1995, esp. 177-203; see also Hall 1986, and Hall and Coulton 1990.

a people, the Milyans. A final addition to the racial complexity of the region is added by Strabo (12.7.3; 13.1.59), who speaks of the presence of Leleges in Pisidia, who settled in the area because of the similarities between them and the Pisidians.<sup>22</sup>

It may be thought that linguistics would be able to help us better to delineate regions, but we have too few inscriptions to be able to differentiate between the peoples. 'Pisidian' inscriptions were identified by Ramsay, but, as Shafer has demonstrated, all of the inscriptions were found in one find-spot in the northeast, at Sofular, and thus may not be 'Pisidian' at all.<sup>23</sup> Similarly, it has been suggested that the inscription on the Inscribed Pillar at Xanthos (constructed in the early fourth century BC) may have been inscribed in parts in Milyan and Solymian; at present, although the theory is attractive, we are unable to establish its veracity, as they would be the only recorded examples of these languages.<sup>24</sup> The only textual record of spoken Pisidian that we have is in Strabo (13.4.17) where the language of the Pisidians is mentioned as being spoken at Kibyra, along with the languages of the Solymians, the Greeks and the Lydians.

In discussing the problem of defining both Pisidia and the different ethnic groups within Pisidia, Bracke came to the cautious conclusion that 'the safest way to describe the Pisidians ... seems to be as the 'inhabitants of Pisidia', although 'the region cannot be fixed within exact boundaries'.<sup>25</sup> This 'solution' is useful in that it provides the historian with a term to apply to the people(s) inhabiting the geographical region under discussion. Unfortunately, 'Pisidian' is not a neutral term, and the circularity of Bracke's definition precludes discussion of ethnic groups, and possible differences and conflicts between them, thus presenting a deceptive and static view of the region and its inhabitants. The various ethnic groups were differentiated at least prior to the Roman period, and we should be open to the possibility that these differences are reflected in the archaeological record.<sup>26</sup>

Bracke's solution reverses the usual view of the relationship between peoples or races, and their homelands.<sup>27</sup> 'Pisidia' and the 'Milyas' received their names from the people who inhabited the areas concerned and not vice-versa; however, these groups of related peoples

<sup>22</sup> The Lelegians appear to have been the original pre-Carian inhabitants of Caria. They are distinguished from the Carians both by Homer (*Iliad* 10.428) and also by Strabo (13.611); archaeologically also they appear to have been distinct, inhabiting fortified hill-top cities including eight listed by Pliny (*Natural History* 5.107) and Strabo (13.611): Syangela, Myndus, Termera, Side, Madnasa, Pedasa, Uranium and Telmissus (Telmessus). The Lelegians also buried (some of) their dead in tumulus tombs. In the early second century BC it seems that the Lelegians were differentiated from other Carians and formed a serf class rather like the helots, which may have been another reason why some chose to remain in Pisidia; see Radt 1970; Zahle 1975; Hornblower 1982, 13.

<sup>23</sup> Ramsay 1928; Shafer 1950; Mitchell 1993, 1.175, n. 82.

<sup>24</sup> Shafer 1963; Keen 1992; Demargne, 1958, 79; Bryce 1986, 97-8; Robinson 1999a.

<sup>25</sup> Bracke 1993, 16.

<sup>26</sup> Note Hall's call for further research on the place and personal names of the region to see if these different groups could be differentiated; see also Coulton's suggestions on differences visible in the material record; Hall 1994a, 5; Coulton 1993b, 85. For a stimulating discussion of notions of ethnicity, change, and racial and cultural identity in Lycia, see now Williamson 1999; see also Hall 1997, 17-33.

<sup>27</sup> The modern Turkish definition of Turkey and Turkishness has also been based on a similar circularity and the (often intentional) confusion of nationality with ethnicity. Such circular definitions are of no use for anthropologists attempting to differentiate between ethnic groups within Turkey itself, nor are they of any use in the determination of disputed boundaries; see Andrews (ed.) 1989, 17-52.

undoubtedly intermingled. We should not attempt, therefore, to look for clean ethnopolitical boundaries (as far as such things have ever existed) nor should we imagine a clear division between Pisidians and Milyans even in the earlier periods. We should be aware of the possibility, or even probability in this region, of the existence of groups with what have been described as 'partial ethnic identities'.<sup>28</sup> All of these racial, cultural and geographical terms must, therefore, be seen as possessing a significant and necessary degree of fluidity. Pisidia and the Milyas, unsurprisingly, appear to have defied clear definition in antiquity, as now (although, of course, at different times various rulers attempted to create administrative districts, but these were not based upon clear ethnic and cultural boundaries).<sup>29</sup> If we wish to define Pisidia, or the Milyas as precise geographic areas we should be aware that our use of a fixed terminology is a convenience, as it must have been also in antiquity.<sup>30</sup> Strabo (13.4.12), unsurprisingly, found the application of names to regions similarly vexing, blaming an intermixture of races and the Romans for ignoring racial divisions when deciding administrative boundaries.<sup>31</sup>

The earliest direct reference that we have to Pisidians is in Xenophon's account of the ill-fated campaign of Cyrus the Younger against his brother, Artaxerxes II, in 401 BC. Xenophon's comments show that the Pisidians were a continuous source of trouble to the people on the plains (ie the Pamphylans), and that Cyrus had more than once led expeditions against them (*Anabasis* 1.1.11; 1.2.1; 1.9.14; 3.2.14; *Hellenica* 3.1.13). The Pisidians provided Cyrus with a pretext for assembling an army to lead against his brother. Although Herodotus omitted Pisidians from his list of Persian subject peoples, it is probable also that the people in Xerxes' army in 480/79 BC, described by Choerilus of Samos as inhabiting the Solymaean mountains and the shore of a broad lake, were Pisidians from the lake district of northern Pisidia.<sup>32</sup> Pliny the Elder (*Natural History* 5.24) states that the Pisidians occupied the territory of the Solymians, thus furnishing us with a possible picture of the ethnic development of the region. The Milyans and Kabalians, distinct sub-groups or tribes of the Solymian peoples originally inhabited the region later known as Lycia.<sup>33</sup> The Solymian tribes were either driven north or assimilated by the Lycians, or Termilai, as they called themselves.<sup>34</sup> It is not clear to what extent the highland areas were already populated at this time, and by whom, but the Milyans and Kabalians appear to have gained control over a band of highland running across the north of Lycia and some of Pamphylia.<sup>35</sup> Here, they came into contact with a related indigenous people, the Pisidians. Syme noted that 'the Pisidians as a people impinge upon their neighbours and interpenetrate them over a broad

<sup>28</sup> See Magnarella 1979, 116; Frankel and Webb 1998.

<sup>29</sup> Ramsay 1917, 278, comments that '[t]he boundaries of such geographical or ethnic names as Phrygia, Mysia, Cilicia, Isauria, etc. were so difficult to fix as to be a proverb. Racially the peoples were changed frequently in the most puzzling way.'

<sup>30</sup> Burgundy provides a good example of the fixing of an ethnic name to a region. Originally the name denominated the area of eastern Gaul which had been annexed by the Burgundians by the late fifth century AD. After their defeat in 534 AD by the Franks, the Burgundians were absorbed into Frankish society; the 'ethnic' name of the region has remained long after the ethnic differences have disappeared.

<sup>31</sup> Ramsay 1916, 83.

<sup>32</sup> Radici Colace 1979.

<sup>33</sup> Frei 1993.

<sup>34</sup> The origins of the Lycians is still unsure; the inscribed language, however, is Luvian and thus Anatolian; see Bryce 1986, 21-41 for an overview; see also Houwink Ten Cate 1961.

<sup>35</sup> For an overview of the archaeological culture of the highlands prior to the coming of the Romans, see Coulton 1993b.

zone from Caria and Lycia round to Lycaonia... Pisidia and the Milyas are comprehensive terms, the former sometimes embracing the latter'.<sup>36</sup> In the Hellenistic period, the Pisidians can clearly be seen to be in the ascendancy across the Milyas with the founding of colonies at Oinoanda, Balboursa and Kibyra.<sup>37</sup>

The account provided by Strabo (14.3.10) that the Lycians were originally called Solymians, but changed their name to Termilai on the arrival of the Termilai from Crete is interesting and apposite. Initially, this account appears simply to be a means of reconciling the multiple names attached to the population of Lycia. It may, however, provide a very good example of precisely how fluid ethnic groups and terms are. It is possible that the Termilai drove out many of the Solymians and took control of their land. Those Solymians who remained were assimilated by whatever means – through coercion or voluntarily, through intermarriage or simply through daily interactions. Ultimately there may have been more 'Lycians' or 'Termilai' of Solymian origin, but culturally and possibly linguistically they may have become indistinguishable from the offspring of the invaders.<sup>38</sup> The creation of Lycia as a distinct cultural entity may have been the result of the creation of a common culture encompassing people from different ethnic groups.<sup>39</sup> In the highlands, the situation may have been little different with Milyans and Kabalians interacting with Pisidians – the cities of Kibyra, Balboursa, Oinoanda, and Termessos all appear to have been 'mixed-race' settlements. It is difficult now to judge how important these cultural or racial differences may have been perceived to have been in contrast to differences of tribal group within these racial groupings.<sup>40</sup> We simply have no way of telling how Pisidian tribal groups were formed or how they operated internally nor of how fluid the identities of the different groups were. As the different ethnic groups were distinguished in antiquity, however, an attempt will be made to point out regional variations in the material record in Pisidia and the Milyas where they can be seen.

## 1.2 ARIASSOS AND SIA

The two Pisidian settlements which are the focus of this thesis lie in southwest Pisidia some fifty kilometres to the North of Antalya: Sia at Taşdandam Tepesi between the village of Karaot and the hamlet (mahalle) of Kozagaç on a wooded hill (ca. 840-925m); Ariassos at the head of a relatively secluded valley (ca. 910-1060m) at Üçkapı near the village of Bademağacı.<sup>41</sup> The two settlements stand close to a number of passes into the highlands

<sup>36</sup> Syme 1995, 184.

<sup>37</sup> Coulton 1982; Hall and Coulton 1990, esp. 192; Robert 1954, 72-9.

<sup>38</sup> Here Gellner's (not entirely secure) definition of nationhood is appropriate: 'two men are of the same nation if and only if they share the same culture...and if and only if they recognise each other as belonging to the same nation'; Gellner 1983, 7. The complex issue of ethnic identity and nationhood is related to the issues of personal identity raised by Williams 1975; it is impossible to tell simply from material remains how someone may have felt, even if outwardly they share the same material culture as their neighbour; see also Mirza and Dungworth 1995; Robinson forthcoming.

<sup>39</sup> See also Bryce 1986, 19-35, 41.

<sup>40</sup> The Scots prior to the nineteenth century provide a good comparison; divisions between clans, and between Highlanders and Lowlanders often proved just as important as the divisions between Scots and the English; see, for example, Hobsbawm 1992, 90.

<sup>41</sup> The modern names for the two settlements reflect the ruins still to be found there: 'Taşdandam Tepesi' can be translated as 'stone-house hill', and Üçkapı as 'triple gateway', referring to the triumphal archway still standing at the site.

leading up from the cities and plain of Pamphylia towards central and northern Pisidia and on into central Anatolia (figs. 2 and 3).

Ariassos and Sia were never settlements of great moment. Both sites appear always to have lain on the peripheries, in a transitional zone, geographically and politically. In antiquity, Ariassos and Sia lay in a nebulous fringe area on the borders of Pamphylia and Pisidia, the Milyas and the Kabalis, in the Ottoman period on the western edge of the Sancak (Ottoman administrative district) of Teke, and in modern times on the border of the İls (modern provinces) of Burdur and Antalya.

Sia is located today in a forest of red and black pine and prickly oak (plate 1). It is located on a hill, Taşdandam Tepesi, a short distance from two passes to the lowlands, which lie some two hours walk below. These passes, today called the *Merdivenli* (Stepped) and *Akdere* (White Valley) passes, were almost undoubtedly used in antiquity as a relatively easy route between the Pamphylian plain and the highlands, suitable for individuals and small groups but not for the easy passage of large armies nor for wheeled vehicles.

Ariassos, at the head of a small valley, is situated close to several routes to and from the lowlands (plate 2). The first route led northwards from Termessos through the present village of Bayatbademlisi and passed just below the site of Ariassos to the west.<sup>42</sup> The second, followed by the modern road, leads up from the plain and passes through the Çubuk Boğazı, entering out onto the Kızılova, the highland plain some two kilometres to the east of Ariassos. The third, and most important, route ran through the Döşeme Boğazı and was most probably the major highway from the south coast to western Anatolia which was later transformed into the main (although probably unpaved) road of the Roman province of Asia by M. Aquilius between 129 and 126 BC.<sup>43</sup> The Roman road was incorporated in 6 BC into the (paved) *Via Sebaste* that ran from Selge to Pisidian Antioch and to Iconium (modern Konya).<sup>44</sup> The Döşeme Boğazı was almost certainly the 'klimax' pass referred to by Polybius.<sup>45</sup>

It is impossible to state with any degree of certainty from what race the founders and original inhabitants of Ariassos or Sia came. It seems to be accepted, however, that the cities of Pisidia were inhabited for the most part by Pisidians. However, although it has previously been suggested that the Milyans remained organised into village communities perhaps as late as even the second century AD, there is evidence to suggest that this picture is, at the least, misleading. The Milyans, like the Pisidians, appear to have been building cities in the Hellenistic period. The recently published decree from the city of Olbasa from the second century BC in which a boule is mentioned proves that at least one Milyan city existed at this time.<sup>46</sup> Olbasa also occupied a naturally well-defended position, unlike the lower-lying

<sup>42</sup> The village at Bayatbademlisi appears to have lain within the territory of Termessos in antiquity, as it was the find-spot of an inscription honouring the Termessian Trokondas, see French (ed.) 1994, 95-105 and pl.4.3.

<sup>43</sup> Mitchell 1994, 132, 144, figs.1&2; on the issue of paving, see French 1997.

<sup>44</sup> See, in general, French 1992, esp. 174 fig.1; Mitchell 1993, 70.

<sup>45</sup> Polybius v 72.4. See also Syme 1995, 193-9.

<sup>46</sup> Cicero (*Verrines* 1.95) wrote of a *commune Milyadum* (presumably a federal organisation of tribes or villages) complaining about their treatment at the hands of Dolabella in 80/79 BC, and an inscription honouring Augustus was set up simply by the Μίλυαδεις. An inscription from Pogla from the second

majority of Milyan settlements.<sup>47</sup> If the Bozova is considered part of the Milyas, as it must surely have been, the picture of urban Pisidians and Milyan villagers may be called into doubt. Olbasa, however, appears to have had inhabitants with Pisidian connections and may even, like Oinoanda in the Kibyris, have been founded either by or with Pisidians.<sup>48</sup> The edges of the Bozova, a fertile plain well-suited to agriculture, are home to a succession of sites, of which, for the most part, only limited traces remain. There is little reason to prefer Pisidian to Milyan inhabitants for these sites, although a mixture of both may well have been present at many of the sites. The image of the non-urbanised Milyan may arise from the fact that many of the most powerful and impressive Pisidian sites occupy high, well-defended, inaccessible sites which have been little disturbed save by earthquake and modern treasure-hunters. The sites on the Bozova, however, are more easily accessible, and are likely to have been inhabited with scarcely a pause since antiquity. At no place is this more evident than at Pogla, a site known to have been Milyan, whose name survived until recently as Fiğla. The present-day buildings at Fiğla/Çomaklı and are a patchwork of mudbrick, wood, and ancient cut blocks.

The relationship between Pisidian and Milyan is opaque. Both Oinoanda and Balbura, however, founded in the same period as Ariassos, appear to have been, at least partly, Pisidian foundations in territories occupied by Kabalians, Milyans, and Lydians, and their ethnic composition seems to reflect this multi-ethnic background.<sup>49</sup> Ariassos and Sia were founded in regions where, as far as we can discern, administrative and demographic boundaries did not coincide, and it is probable that several ethnic groups (dominated, perhaps, by a majority of Pisidians) also inhabited them.<sup>50</sup> Strabo, following Artemidorus identifies Ariassos as Pisidian; it is possible therefore that Ariassos was a Pisidian foundation built on (or in very close proximity to) Milyan territory.

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century AD was seen by Jones as recording its transition from a federal constitution to a city constitution (*JGR* 3.418, 419); this has however been refuted by Magie amongst others; see Hall 1986, 137-9, 147 n.39; Bean 1960, 58-61; Jones 1940, 68, 174; Magie 1950, 1317 n.25. On the city of Olbasa, see Kearsley 1994, 47-57.

<sup>47</sup> Levick 1967, 48-9 provides a good description of the site.

<sup>48</sup> A decree from Olbasa dating from 159 BC included four names (out of thirteen) with Pisidian connections, see Kearsley 1994, esp. 51. On Oinoanda, see Coulton 1982a.

<sup>49</sup> Hall and Coulton 1990, esp. 147-52; Coulton 1982a.

<sup>50</sup> On the mixed population of western Kabalia, see Strabo 13.4.12.

### 1.3 THE ENVIRONMENT IN ANCIENT PISIDIA

Locating a settlement within its environment is more than simply providing a backdrop against which to view it. In the modern, developed world, urban settlements have often become separated economically and socially from their environs. Such a separation is not unique to the modern world, for ancient Athens was partially freed from the constraints of her relatively poor agricultural land through exploiting the sea for trade and empire, and, above all, through her silver mines; nevertheless Athens was an exception.<sup>51</sup> Few antique settlements, especially those of moderate size, could insulate themselves from their immediate environments. It is important, therefore, to understand in some detail the environment in which they existed. This is no easy task, as one geographer studying the area remarked: '[e]very chain of mountains, indeed every mountain village, in the Mediterranean world has its own geology, climate, vegetation, and history.'<sup>52</sup>

Pisidia lies in the Western Taurus mountains; the precise definition of this range varies, but, following Van Zeist et al. and Brunn et al., the Western Taurus refers, in this thesis, to the mountains between Eski Anamur (ancient Anemurium) in the east and Muğla in the west.<sup>53</sup> The Western Taurids curve up from Lycia towards Isparta where they then bend around to the southeast; a formation that has been named the 'Courbure d'Isparta'. The Antalya plain is located between the two limbs of the 'Courbure d'Isparta'. The Western Taurus mountains are formed predominantly from allochthonous, porous limestone, although in the region around ancient Cremna (Çamlık), outcrops of travertine are also present, and further to the west, near ancient Balboursa, there are outcrops of serpentine.<sup>54</sup>

Pisidia is a mountainous region, but the altitude, harshness and inaccessibility of the region are often over-emphasised.<sup>55</sup> The Western Taurus in the area in antiquity known as the Milyas is less rugged and precipitous than further to the east. From the Pamphylian plain looking north, one is faced by imposing, jagged peaks, yet there is no shortage of passes into this mountainous region, and if one crosses over into the broad mountain valleys, the immediate impression is one of agricultural plenty, and, in the summer months, of cool breathable air.<sup>56</sup> It appears perfectly natural that the Turkish inhabitants of the region used to desert the littoral in the summer months for the cool repose of the mountain villages.<sup>57</sup>

<sup>51</sup> Osborne 1987, esp. 77-8, 97-104.

<sup>52</sup> McNeill 1992, 19.

<sup>53</sup> For a full discussion of the geology of the region see, Van Zeist, Woldring, and Stapert 1975, 56-60; Brunn, Dumont, De Graciansky, Gutnic, Juteau, Marcoux, Monod, and Poisson 1971.

<sup>54</sup> Paulissen, Poesen, Govers, and De Ploey 1993, 229-31.

<sup>55</sup> Differing views are to be found over the relative fertility of the region, see, for example, the references to Bozova in French (ed.) 1994, 55, and in Mitchell 1993, 152; see also Bracke 1993, 15; Syme 1995, 186; Robinson, 1999.

<sup>56</sup> Davis described a place on the Kızılova not far from Bademağacı as 'one of the most verdant spots one could imagine;' Davis 1874, 198. On the supposed inaccessibility of the highlands, note Ritter's comment that only a pair of passes are known today in the vicinity of Kretopolis (=Ariassos) and Milyas (=the site at Melli); Ritter 1859, 661. There are at least six passes from highland to lowland between these two sites, although most are seldom used today.

<sup>57</sup> 'Havası ağırdır. Bu yüzden her sene İstinaz yaylasına çıkarlar (the climate [in Antalya] is oppressive. Every summer they go up to the İstinoz yayla [modern Korkuteli]).' Evliya Çelebi, *Seyahatname* 9, under the heading 'Adalya Kalesi Evsafi (description of the citadel of Antalya).' On the 'naturalness' of such seasonal movement, see below, chapter 2.3.3.

The broad valleys also provide easy lines of communication for routes running parallel to the valley sides; connections between valleys are less easy, but are seldom truly difficult.<sup>58</sup>

The Western Taurus is a karstic environment, and although mountainous, the defining feature of the area south of Ağlasun running towards Bademağacı and Korkuteli is a series of poljes in the karst.<sup>59</sup> These poljes, in antiquity described as 'aulones', are flat-bottomed, fertile mountain plains, which provide easy lines of access through the area as a whole.<sup>60</sup> The poljes are bounded by steep walls with a limestone base overlain by alluvial or lake deposits.<sup>61</sup> The soil-rich plains themselves are suitable for agriculture, while the steep sides of these plains are in many parts either wooded or sparsely covered with brush and grasses, usable as pasturing for flocks of goats and sheep.<sup>62</sup> To the east of the Bademağacı plain, however, the landscape changes quite dramatically as the steep, scantily soiled, wooded hillsides are interrupted only occasionally by small, fertile dolines, or enclosed depressions.<sup>63</sup> Slope wash accumulates in these depressions providing small basins of cultivatable land in an otherwise bare environment.<sup>64</sup>

Karst environments are fragile, as the limestones on which they occur usually contain less than 10% insoluble material, and often less than 5%. Thus the soils of such an environment are often shallow, and, due to the free drainage of the limestone, they are also very susceptible to erosion.<sup>65</sup> The soils of the highland plains are of similar types, largely consisting of Terra Rossa, Terra Fusca and alluvium, all generally suited for agriculture.<sup>66</sup> The high clay content of the soils in the poljes and dolines is beneficial for agriculture; although, due to its relative impermeability, it can become waterlogged following heavy rains. The sides of the valleys become less fertile as the soils, which contain less clay, become thinner and rockier.

In the region west of Korkuteli, the landscape reveals signs of severe erosion, which may or may not be due to deforestation and grazing.<sup>67</sup> There is some amount of debate over the impact of humans on the environment. Deforestation in the region by humans appears to have first begun in the Neolithic period.<sup>68</sup> Pollen core samples reveal a major phase of forest clearance followed by farming with arboriculture.<sup>69</sup> Yet it is not clear that the near complete denudation of soils from moderate and steep slopes was the result of this deforestation, as it

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<sup>58</sup> French 1992, 167.

<sup>59</sup> On karst environments (and the terminology used below), see Sweeting 1972, esp. 332-5; Drew 1985; Ford and Williams (eds.) 1989.

<sup>60</sup> Sweeting 1972, 192-207; Herak and Springfield (eds.) 1972, 16; Ford and Williams (eds.) 1989, 428-32; on aulones see Syme 1995, 197, 340-3 (after Polyaeus *Strat.* iv 6,4).

<sup>61</sup> Drew 1985, 47-9.

<sup>62</sup> Williams uses photographs taken in the Taurus as an illustration of a typical karstic landscape; Williams (ed.) 1993, 5, photos 1, 2; see also De Planhol 1958, pl. V., VI.

<sup>63</sup> On the formation of dolines, see Ford and Williams (eds.) 1989, 396-405.

<sup>64</sup> Sweeting 1972, 44-73.

<sup>65</sup> Williams (ed.) 1993, 4-12.

<sup>66</sup> Oakes 1954.

<sup>67</sup> Van Zeist, Woldring, and Stapert 1975, 58 suggest deforestation as a cause of massive erosion, but Rackham 1996, 31-2 cautions against interpreting badlands as the result of deforestation.

<sup>68</sup> Bottema and Woldring 1984, 147-8.

<sup>69</sup> Van Zeist, Woldring, and Stapert 1975; Roberts 1990, 59.

may also have been caused through climatic and tectonic changes.<sup>70</sup> It is mainly the plain areas that were likely to have been deforested, as it was here that the richest and deepest soils lay, as they do today. We should not imagine that the hillsides were also covered in rich soils that have since been washed away. Rackham, in a series of articles stressing both the resilience and responsiveness of the natural environment and the tendency of tectonically active limestone regions to natural erosion, has attacked the view that man has been the cause of widespread and continued erosion and the degradation of the environment through deforestation all over the Mediterranean region.<sup>71</sup> As Rackham stresses, different trees react differently to being cut, burned or browsed upon; in an environment with more browsing animals different trees will predominate, in particular the prickly oak (as a bush), and cypresses and pines (as trees).<sup>72</sup> Man and domestic animals may well at times have assisted in the acceleration of erosional processes (such as during the first period of forest clearance in the Neolithic period), but the environment that is visible today in the Taurus mountains is typical of a karstic region; there is little need to call on human induced erosion as an explanatory factor for a degraded environment.<sup>73</sup>

The hydrology of karst environments is characterised by high infiltration and low surface run-off, although the permeability of karst areas differs according to the size of surface cracks and other local environmental factors.<sup>74</sup> Consequently, springs are a common feature of limestone regions. Limestone aquifers are susceptible to changes in output, both over the short and long terms, and (due to the solubility of the rock) they can also change course or dry up over time.<sup>75</sup> Due to the thinness of soil cover and the high infiltration rate, karstic water supplies are very susceptible to pollution, something that is more of a problem today, with the advent of modern pesticides, than in antiquity.<sup>76</sup>

Another factor affecting the hydrology of the region is that the Western Taurus is an area of tectonic activity.<sup>77</sup> Southwest Pisidia (including the ancient sites of Termessos, Ariassos, Sia and Sagalassos) lies in an area of medium to moderately high earthquake risk. Between 1881 and 1986, it has been subjected to earthquakes of up to force 7 or 8 on the Richter scale, although most earthquakes have been of a magnitude of 4.2-5. Apart from the considerable physical damage to artificial structures that an earthquake of a magnitude of 7 to 8 on the Richter scale can cause, lesser earthquakes may be sufficient to fracture water pipes or to change subsurface structures, blocking or redirecting aquifers.

The climate, and consequently some of the vegetation, of Southwest Pisidia is different from that of the lower-lying Pamphylian plain. The lowlands possess a typical Mediterranean climate. The average annual rainfall usually exceeds 1000mm, falling during autumn, winter

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<sup>70</sup> Wagstaff 1981.

<sup>71</sup> Contra McNeill 1992, esp. 76-86; Rackham 1990a; Rackham 1990b, esp. 92-5, 109-111; Rackham 1996.

<sup>72</sup> Rackham 1990b, 94; Bottema and Woldring 1984, 139.

<sup>73</sup> On the effects of man on the landscape due to the initial clearance of forest see Roberts 1990; Eastwood, Roberts, and Lamb 1998, 78-9.

<sup>74</sup> Ford and Williams (eds.) 1989, 127-241; Leibundgut, Gunn, and Dassargues 1998; Sweeting 1972, 208-51.

<sup>75</sup> Sweeting 1972, 212-3.

<sup>76</sup> Leibundgut 1998; Gunn, Tranter, Perkins, and Hunter 1998; Smith 1993.

<sup>77</sup> Gencoğlu, İnan, and Güler 1990, 14, ill.1, 75-89 (Antalya province), 175-84 (Burdur province).

Southwest Pisidia lies on the border of earthquake zones 2 and 3.

and spring - from October to April - with very little rain falling in summer.<sup>78</sup> Winters are mild, with temperatures seldom falling below freezing point, while summers are made uncomfortable by the high humidity, caused by proximity to the sea. The climate of the highland areas of the western Taurus is not as severe as the continental climate of the Anatolian plateau; it is, however, less beneficial for plant growth than the Mediterranean environment of the Pamphylian plain. The climate of the highland regions can be described as a modified subtropical climate, with long, hot, dry summers and cold winters. İsparta, the nearest upland weather centre to the settlements studied in this thesis, lies at 1050 metres (approximately 100-200m higher than the territories of Sia and Ariassos).<sup>79</sup> Temperatures in summer are somewhat lower than those in the lowlands, with a mean temperature of 20°C measured at İsparta in August, compared with a mean temperature of 28 °C in Antalya. From November to March, mean temperatures usually fall within the range of 0-5 °C, although temperatures down to -15.4 °C have been recorded. The area around İsparta averages about ten days of snow cover every year; further south and at lower altitudes snow is rarer but not unusual.<sup>80</sup> The temperature at İsparta reaches -10 °C every winter; the average temperature in January and for much of February is slightly below freezing. Winter ends in March or April.<sup>81</sup> The mean annual temperature of the area around Sia and Ariassos can be calculated to be approximately 13.5-14.0 °C in contrast with the mean annual temperature of İsparta of 12.5 °C.<sup>82</sup> Most of the rainfall in the area falls in the winter months, but a second rainy season in May refills springs, wells and cisterns. Average rainfall for the Elmalı plain, which lies at a similar altitude (1000-1200m) and possesses a similar environment to the area around Sia and Ariassos, is about 540 mm, over 400 mm of which (74%) falls between September and March.<sup>83</sup> İsparta receives an annual rainfall of about 628 mm; Ađlasun (Sagalassos) an annual rainfall of 884mm.<sup>84</sup>

The problem for those who wish to grow crops or graze animals in this region is not so much one of extremes of temperature but rather annual climatic fluctuations. Sandwiched between the continental interior and the coastal plains, Pisidia experiences annual shifts between the continental climate of humid summers and dry winters, and the Mediterranean climate of dry summers and wet winters. In 1932, a Mediterranean summer was followed by a continental winter - in such circumstances crops fail and animals die.<sup>85</sup> Although most of the highland plains are not lacking in natural aquifers, other places, such as the modern village of Karaot and the ancient settlement at Sia are not so fortunate. Highly variable rainfall is deeply undesirable in a region with few natural aquifers.

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<sup>78</sup> The figures for the lowlands are published in Van Zeist, Woldring and Stapert 1975, 62.

<sup>79</sup> For a comparison of the climates of Antalya and İsparta, and a discussion of the climate at Sagalassos, see Paulissen, Poesen, Govers, and De Ploey 1993, 231-3.

<sup>80</sup> The nineteenth-century traveller, Schönborn, is described struggling through snow from the Elmalı plain to Sögüt in February 1842 (the 'easy' route into the southern Kibyrtis); Ritter 1859, 838-40.

<sup>81</sup> De Planhol 1958, 37 records the local proverbs: 'Mart ayı dert ayı' (the month of March is the month of suffering), and 'martın onbeşinci günü yaz, martın onaltıncı günü kışır' (on the fifteenth of March it is summer, on the sixteenth, winter).

<sup>82</sup> See Akman and Daget 1971.

<sup>83</sup> All figures for the Elmalı plain are from the unpublished records of the Antalya Meteorological Office (1985) cited in Harrison 1986, 17-22.

<sup>84</sup> Bottema and Woldring 1995, 327; Waelkens and the Sagalassos team 1997, 229.

<sup>85</sup> De Planhol 1958, 37-8, figs. 4 and 5.

The most immediately noticeable contrast between the highlands and lowlands in summer is the dryness of the mountain air compared with the sometimes oppressive humidity of the lowlands. Another consequence of the altitude of the highland plains is that there is only a four-month growing season between the cold winter and the arid summer, with another short season of growth from mid October to the end of November; the higher plains experience even shorter growing seasons.<sup>86</sup> Without irrigation, therefore, the growing period is shorter than in the lowlands, and the possibility of crop failure commensurately higher. The difference between the rich Mediterranean flora of the coast (Eu-Mediterranean vegetation) and the flora of the cooler uplands (Oro-Mediterranean vegetation) is also apparent. Pollen core samples taken in the highlands help determine which flora were cultivated in antiquity.<sup>87</sup>

Pollen core samples can be misleading in several ways, not least in that as a result of differential production, dispersal and preservation of pollen it is impossible to draw any direct correlation between the share of various pollen types in samples and the share of the plant taxa concerned in the past vegetation.<sup>88</sup> Nevertheless, pollen samples can provide us with an idea of some of the species present. Furthermore, it should be born in mind that pollen samples only present us with a record of the changes within the environment of a particular catchment area; it is advisable, therefore, to look at samples from several sites.<sup>89</sup>

The first evidence of human impact on the natural environment in southwest Turkey, dating from the later Holocene, is seen in pollen diagrams from many sites including those in the Milyas and Southwest Pisidia.<sup>90</sup> A period of heightened agricultural and pastoral activity has been identified, beginning ca. 3200 <sup>14</sup>C BP (calibrated ca. 1450 BC) and continuing in most places to ca. 1500 <sup>14</sup>C BP (calibrated ca. AD 600). De-forestation at the start of this period is visible as a drop in the quantity of tree pollen types over time. Pollen-core samples taken from Söğüt Gölü and the Elmalı plain indicate that major forest clearance occurred in this particular area between ca. 1050 and 50 BC.<sup>91</sup> The early end to the supposed forest clearance is at first glance puzzling, as it would appear to contradict the archaeological evidence. Reforestation appears to have begun as early as the first century AD, in the period for which the archaeological evidence indicates that the highlands were being heavily exploited. *Pinus* pollen grains are, however, known to travel and to be over-represented especially in non-

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<sup>86</sup> Fellows, the nineteenth-century traveller, noted that the plants of the Elmalı plain (which he described as 'the largest tract of corn-land and the best cultivated, that [he had] seen in Asia Minor') were at a stage of development 'fully six weeks later' than those in the lowlands; Fellows 1841, 228 (= Fellows 1852, 381). Leake also noted a similar delay in the growing season of 'a month or six weeks' when compared with Antalya; Leake 1824, 136. The growing season continues to decrease as altitude increases – the figures for the Elmalı plain (ca. 1000m) agree with those cited by Garnsey: around 170 days at 1000m to around 95 days at 2000m; Garnsey 1988, 198.

<sup>87</sup> For further discussion of the environment of this area today and in antiquity, see Van Zeist, Woldring, and Stapert 1975, esp. 71, fig.10, 72-105; Ariassos lies very close to where pollen cores numbers 47 (altitude ca. 350 m –ie on the Pamphylian plain- ca. 30km NNW of Antalya) and 52 (altitude ca. 700m, ca. 22 km south of Bucak) were taken, the terrain around Sia is similar to that where sample number 50 (altitude ca. 700m, ca. 5km north of Kocaaliler/Melli) was taken; see also, in general, De Planhol 1958; McNeill 1992; Bottema, and Woldring 1995; Robinson forthcoming.

<sup>88</sup> Roberts 1990, 53-4.

<sup>89</sup> Eastwood, Roberts and Lamb 1998, 69.

<sup>90</sup> Van Zeist, Woldring and Stapert 1975; Bottema and Woldring 1990; Eastwood, Roberts and Lamb 1998.

<sup>91</sup> Van Zeist, Woldring and Stapert 1975, 131 (diagram), 138-41 (interpretation).

forested environments.<sup>92</sup> It has, therefore, been suggested that the over-representation of *pinus* pollen types may be due to the suppression of other types through fire or (over) grazing.<sup>93</sup>

The natural vegetation of the oro-Mediterranean zone of the Taurus mountains below ca. 1200m should consist for the most part of mixed evergreen forests, primarily *Pinus brutia* and *Quercus coccifera* or *calliprinos* (evergreen oak). Above 1200m to approximately 2000m it should naturally consist of needle-leaved evergreens. In the area of Southwest Pisidia around the settlements studied in this thesis, the plain below Ariassos is today cultivated and initial vegetation is absent. The mountain slopes consist of grazed maquis (predominantly evergreen prickly oaks and hollies); the plain is covered with grain fields and fruit trees, including apple, almond, pear, quince, cherry-plum, apricot, walnut and pomegranate.<sup>94</sup> Sia is surrounded by forest, largely consisting of black and red pines but with some undergrowth of prickly oak.<sup>95</sup> The forest is occasionally broken by small soil-filled dolines covered with grain fields and fruit trees, along the sides of a few of which (for example, at Merdivenli Boğazi) olive trees grow.

Wheat and barley in antiquity could be grown at the altitude of the plains of Southwest Pisidia, as could chickpeas (which are indigenous to the region) and other seed crops. Palynological surveys indicate an increase in the amount of *Cerealia*-type pollens, which may have been produced by cultivated grains; however, various Near-eastern wild grass species produce similar pollen-grains. What is important for this study, however, is that the highland environment appears to have been largely similar to that of today, with a predominance of juniper, pine and oak, but with willow, poplar, nut and fruit trees, as well as grape-vines present (in varying degrees) on the plains. The lowlands in antiquity also appear to have had similar flora to the lowlands today, with a predominance of pine with some cedar, and with many of the trees which are seen in the mountains also present, as well as olives, which are thought to have an altitude limit of ca. 1000m.<sup>96</sup>

The evidence for the cultivation of olives is of particular importance in the debate about the environmental history of the Western Taurus. The northernmost occurrence of olives as recorded by Davis and Rikli appears to be just south of Bucak, that is to say, in the area of southwest Pisidia with which this thesis is concerned.<sup>97</sup> However, olive trees were sighted at a higher altitude (ca.1000-1200m) growing to the north of Bucak at Girme (Cremna) by Ritter in the nineteenth century.<sup>98</sup> Furthermore, significant amounts of olive pollen has been discovered in pollen core samples from the highland areas at higher altitudes, in particular from Soğut Gölü (in the territory of the ancient city of Balboura), which lies at an altitude of

<sup>92</sup> Eastwood, Roberts and Lamb 1998, 79.

<sup>93</sup> Bottema, Woldring and Aytuğ 1993.

<sup>94</sup> Similar fruit trees, growing wild, have been recorded approximately 15km to the north of Ariassos at Ürkütlü; Bottema and Woldring 1995, 328.

<sup>95</sup> On the forestry of the region see Bottema and Woldring 1984, figs.1 and 2 (a reproduction of Orman Genel Müdürlüğü Yayınlarından Orman Haritası 1962).

<sup>96</sup> Bottema and Woldring 1984, 123-49.

<sup>97</sup> Davis 1978, 153; Rikli 1943, 41-62; see also De Planhol 1958, fig. 7; Bottema and Woldring 1984, 140; Bottema and Woldring 1990, 257-9, incl. 259 fig. D (map of extent of olive culture), 262-3; Bottema and Woldring 1995, 334; Eastwood, Roberts and Lamb 1998, 77-8.

<sup>98</sup> Ritter 1859, 553.

1400m. It has been suggested that the pollen has been carried from coastal areas, but other sites closer to the coast (Elmalı or Avlan Gölü) have not revealed similar quantities of olive pollen. It is possible, therefore, that it was carried from other lower-lying highland areas (such as the Bozova). Evidence from the Sagalassos excavation and survey has also been used to suggest that olives were grown at higher altitude in antiquity. Press weights discovered in the territory of Sagalassos have been interpreted as being from olive presses, and the presence of a piece of burnt olive wood at the site itself has been seen as evidence of the growth of olives in the territory of Sagalassos.<sup>99</sup> Although neither of these assumptions is secure, the presence of olive groves in the lower-lying parts of the territory of Sagalassos until as recently as 1967, indicates that it is still possible for olives to be grown in some areas close to Sagalassos, and that it is, therefore, unnecessary to posit climatic change. If, however, olives were really present at altitudes of up to 1400m in antiquity, it has been calculated that temperatures in winter and spring would have to have been 2-3°C higher than today, as olives cannot withstand hard spring frosts once they have started to grow.<sup>100</sup> At present, it is still uncertain whether olives were grown at altitude in antiquity, and whether or not this can be attributed to climate change; more archaeobotanical work needs to be done. It is clear, however, that olives could be, and were, grown at the lower altitudes of the highland plains of Southwest Pisidia.

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<sup>99</sup> Waelkens and the Sagalassos team 1997, 237.

<sup>100</sup> Bottema and Woldring 1984, 140; Roberts 1990, 61; Eastwood, Roberts and Lamb 1998, 78.

#### 1.4 EARLY SETTLEMENT IN PISIDIA:

The origins of the Pisidians are obscure. The first references that we possess to the Pisidians are in the passages from Xenophon (ca. 400 BC) discussed above. Yet the settlement history of Pisidia, though still little researched, is a long one.<sup>101</sup> Systematic intensive survey has not been carried out in Pisidia; the picture of settlement that we have is, therefore, necessarily patchy. Nevertheless sufficient extensive survey work has been accomplished, along with several excavations, to give us a rough idea of early settlements in Pisidia.

The earliest material discovered in Pisidia has been worked flints, found at the later settlement at Panemoteichos. These flints have been dated to the palaeolithic era. The earliest of the flints has been identified as possibly being a Middle Palaeolithic Levallois flake (200,000-50,000 bp); the other diagnostic flints resemble lithic material found from the cave at Karain (ca. 18 km to the southeast of Ariassos on the border of the Taurus mountains and the lowland plains), which has been dated to between ca. 40,000 and 10,000 bp.<sup>102</sup> No identifiable settlements connected with these flints have been discovered.

In the Neolithic period, Pisidia appears to have been quite extensively settled.<sup>103</sup> Settlements have been excavated at Hacilar (ca. 12 km south of Lake Burdur), at Kuruçay (ca. 5 km east of the Lake Burdur), Bucak, and Bademağacı in southwest Pisidia (ca. 25 km and 5 km to the north of the settlement at Ariassos respectively).<sup>104</sup> The recent, and ongoing, excavations at Bademağacı höyük in Southwest Pisidia have revealed habitation levels as early as those at Çatal Höyük level 6 (between ca. 6050-5880 BC).<sup>105</sup> The settlement at Kuruçay has revealed finds from the early Chalcolithic period (ca. 5000 BC) up until the early Bronze Age (end of the third millennium BC).<sup>106</sup> On the Bozova in Southwest Pisidia, Woodward and Ormerod reported höyüks at the sites of the later cities of Pogle (Fığla/Çomaklı) and the Roman colony of Comama.<sup>107</sup>

From the second millennium BC, evidence of Hittite material culture in Pisidia has been found in two monuments discovered near Lake Beyşehir at Eflatun Pinar and Fasıllar.<sup>108</sup> It is not clear who erected these monuments. Further traces of Hittite influence or activity have yet to be discovered. The topography of Anatolia in the Hittite period is notoriously difficult to pin down. In the Hittite period, (ca. 1650-1200 BC), southern Pisidia is now thought to have lain in, or on, the border of a region known as Lukka or the Lukka lands.<sup>109</sup> The Lukka appear to have been a sub-group of the Indo-European Luwian people, and the Lukka lands are thought to have included the regions of Classical Lycia, Pisidia, Lycaonia

<sup>101</sup> For detailed overviews of pre-Hellenistic Pisidia, see Özsait 1980; Brandt 1992, 11-38.

<sup>102</sup> Aydal, Mitchell, Robinson and Vandeput 1997, 143-4.

<sup>103</sup> For a (somewhat outdated) map of the prehistoric settlements in the region, see Özsait 1980, harita no.1; see also Mellaart 1955; Mellaart 1961b; Özsait 1980, 79-83; Özsait 1984; Özsait 1985; Özsait 1986; Özsait 1987; Özsait 1988; Özsait 1989; Özsait 1990; Özsait 1991; Özsait 1993; Özsait 1994; Özsait 1995; Özsait 1996; Özsait 1997; Özsait and Şahin 1998; Özsait 1999.

<sup>104</sup> On Hacilar, see Mellaart 1958; Mellaart 1959; Mellaart 1960; Mellaart 1961a; see also Özsait 1980, 69-78 (Hacilar), 79 (Kuruçay), 80-3 (Bucak).

<sup>105</sup> Duru 1995, 69-73; Mellaart 1967, 52.

<sup>106</sup> Özsait 1980, 74, 79.

<sup>107</sup> Woodward and Ormerod 1910, 89-105.

<sup>108</sup> Mellaart 1962; Brandt 1992, 17.

<sup>109</sup> Bryce 1998, 54-7; see also Houwink ten Cate 1961, 113, 190-7, 202.

and Pamphylia.<sup>110</sup> The Lukka lands were never a unified political entity, but appear rather to have contained independent, but ethnically related, communities. The Lukka people were at times subject to the Hittite kings; a treaty inscribed on bronze during the reign of Tudhaliyas IV (1237-1228 BC) found at Boğazköy, ancient Hattuşaş, includes parts of Eastern Pisidia and Pamphylia (up to the Cestrus and Perge) in the vassal kingdom of Tarhuntašša, which was first certainly attested in the first half of the thirteenth century BC.<sup>111</sup> The treaty inscription also refers to the Hulaya River Land, which is thought to have centred on the Çarşamba Su running from Lake Beyşehir to Lake Suğla to the region east of Konya.<sup>112</sup> The southern border of Hulaya River land is unclear, but it may have reached the sea, and almost certainly included the town of Kuwalapassa, which has been identified with the later city of Colbasa (modern Kuşbaba) in the Milyas/Southwest Pisidia.<sup>113</sup> The texts suggest that the Lukka were not compliant subjects, and were prone to rebellion.<sup>114</sup> Linguistically, Hittite influence has been seen in Pisidian place, river and personal names, but we should be wary of drawing too many conclusions from this.<sup>115</sup> The Hittite Empire was multi-racial, and multi-lingual, and we do not know enough about interactions between ethnic groups at this time to draw conclusions about political structures from purely linguistic evidence.<sup>116</sup> With the collapse of Hittite rule in the thirteenth to twelfth centuries BC, Pisidia was presumably once more (relatively) free of outside interventions.

By the early first millennium BC, on the basis of ceramics and tumulus burials, Mellaart has identified a common Anatolian material culture encompassing Lydia, Caria, Lycia, Pisidia, Pamphylia and part of Phrygia in the Bronze Age.<sup>117</sup> It should be emphasised, however, that a common material culture is by no means indicative of a common political culture. In Southwest Pisidia, black-on-white and bichrome painted wares discovered at the site 'Panemoteichos 1' belong to a little studied type of ceramic ware, broadly termed Southwest Anatolian ware.<sup>118</sup> Similar pottery has been discovered at Fiğla/Çomaklı (in the Milyas), and also at the 'In' (cave) at Çaltılar (in the Kibyris/Kabalis).<sup>119</sup> An approximate date of production from the eighth to the sixth century BC has been given to this ware. Similar wares have been found in Phrygia to the north, and it is tempting to see the designs on the pottery as an indication of the spread of Phrygian power and influence into the region.<sup>120</sup> By the end of the ninth century BC the north of Pisidia at least was incorporated into Greater Phrygia, and the might of Phrygia continued to grow in the eighth century BC.<sup>121</sup> The

<sup>110</sup> The location of the Lukka lands has been the subject of some debate, see Bryce 1986, 3-10; Bryce 1998, 54-7.

<sup>111</sup> Houwink ten Cate 1961, 130; Otten 1988, 3, 13, 37-8; French 1992, 169; Houwink ten Cate 1992, 250, suggests that a sixteenth-century BC seal impression may carry the term 'king of Tarhuntašša'; he also discusses the geographical details of the treaty inscription in full.

<sup>112</sup> Garstang and Gurney 1959, 69.

<sup>113</sup> Neumann 1961, 18; Garstang and Gurney 1959; Houwink ten Cate 1992, 257-9; recently, however, Carruba 1996, 27, has suggested that Kuwalapassa is instead Telmessos.

<sup>114</sup> The Lukka lands are known to have revolted against Hattusili III (1267-1237 BC); Bryce 1986, 8-10; Bryce 1998, 320-1.

<sup>115</sup> Brandt 1992, 16.

<sup>116</sup> Bryce 1998, 18-19.

<sup>117</sup> Mellaart 1955, 126-9.

<sup>118</sup> Aydal, Mitchell, Robinson and Vandeput 1997, 151-3.

<sup>119</sup> Mellaart 1955, 120, 133; Coulton 1993a, 461; Coulton 1993b.

<sup>120</sup> Haspels 1957, 34, pl.9c; Young 1956, 249-266; Anadolu 1994; Sams 1986.

<sup>121</sup> Hall 1968, 59; Muscarella 1989.

influence, or even presence, of the Phrygians in the Elmalı plain at this time is apparent from finds from tumuli from the Karaburun area.<sup>122</sup> It is, however, impossible simply on the evidence of the material remains to state with any certainty that Phrygians themselves were in positions of political power in Pisidia or the Milyas at this time.

If the evidence from Southwest Pisidia is sparse, more has been revealed about the inhabitants of the nearby Elmalı plain (part of the Milyas). There is evidence for the continuous occupation of the Elmalı plain from the early Bronze Age; nearly 500 tombs, for the most part simple pithoi burials, have been found. A number of small tumuli have also been discovered near the villages of Bayındır and Söğle-Geçmen. These probably date from the early Archaic period.<sup>123</sup> An excavated tumulus at Kızılbél on the Elmalı plain (ca. 525 BC), and another (ca.475 BC) excavated tumulus at Karaburun are similar to a Phrygian type in that they are gabled rooms finished on the interior only, with no dromos. The grandeur of these tumuli in comparison with the other forms of burial would indicate a strongly hierarchical society.

The connections of the Elmalı plain at this time appear to have lain mainly to the north, a fact reflected not only in the architecture and wall-painting of the tombs, but also in finds in tumuli from the Karaburun area.<sup>124</sup> Finds from tumuli C and D near Bayındır include several cauldrons with identical Phrygian graffito, omphalos bowls, fibulae, jewelry, weapons, and two silver belts very similar to those found in tumulus P at Gordion; all of which, dated to the eighth to seventh centuries BC, indicate strong connections with Phrygia.<sup>125</sup> Coulton suggests that the Milyan custom of securing their cloaks with a fibula, noted by Herodotos, and perhaps visible in one of the tomb paintings from Karaburun, may well be indicative of this Phrygian connection.<sup>126</sup>

Similar tumuli to those discovered near Bayındır have been found in Southwest Pisidia at the site of Sia and in its territory, in the territory of Sagalassos at Aykırıkça Mevkii, and in the southern Kibyris above Çaltılar.<sup>127</sup> Tumuli have also been discovered in lowland Lycia; however, there is no evidence by which to date them, and their connections seem to lie westwards with the tumuli of the Lelegians in Caria, as they have dromoi, and either corbelled vaulting (like the Lelegian tumulus at Gebe Kilise) or one or two monolithic slabs laid across the top.<sup>128</sup> The wall-paintings of the tumuli at Kızılbél and Karaburun, however, are painted in a recognisably Greek style. The most natural place for the Milyans to have come into contact with the Greeks is on the Lycian coast (which lay on the trade route from Greece to the Levant).<sup>129</sup> Evidence of Pisidian contact with the Phrygians is available only from North Pisidia (which bordered on Phrygia), where inscriptions in Phrygian have been

<sup>122</sup> Özgen and Özgen 1988, 32-49, 187-95; Mellink 1989, 120. See also Young 1981, 227-33 and 239-49.

<sup>123</sup> Mellink, 1976, 21-34.

<sup>124</sup> Mellink 1972, 257-69.

<sup>125</sup> Dörtlük 1988, 32-49, 187-95.

<sup>126</sup> Herodotos 7.77; Coulton 1993b, 81.

<sup>127</sup> Coulton 1993a; Waelkens and Poblome 1997, 37, and 38 fig.28.

<sup>128</sup> Zahle 1975, 312-50.

<sup>129</sup> Greek pottery dated to the late eighth century BC has been found at Xanthos and Limyra; Metzger and Coupel 1963, 77-8; Metzger 1972, 21-6, 188; Borchhardt 1986, 2.

discovered.<sup>130</sup> Unfortunately, we do not possess similar evidence for Southwest Pisidia at this time, although it is likely that they too had contacts with Greeks as well as Phrygians.

After the Persians had defeated the Lydians in 547/6 BC, the Persian general Harpagos attacked and conquered Lycia.<sup>131</sup> The fate of Pisidia is less clear. Although the Milyans, Pamphylians and Lycians are all listed by Herodotos (3.90) as belonging to the first *nomos*, paying tribute to the Persian king, and Kabalia is also mentioned as a satrapy, there is no certain mention of Pisidia.<sup>132</sup> Southwest Pisidia may have been included along with the Milyans, but it is possible that the tribute-paying Milyans were only those who lived on the Elmalı plain. It may be, however, that Herodotos simply neglected to append the Pisidians to his list. By the time of the Great Satrap Revolt in ca. 362 BC the Pisidians appear to have been (nominally, at least) under the power of the Persians, as they are mentioned by Diodorus (15.90.3) as participating in the revolt along with the Lycians and Pamphylians.

Although the Persians maintained a military presence in Pamphylia, with a garrison at Sillyon, there is no evidence of a Persian presence in Pisidia.<sup>133</sup> Indeed, Xenophon's reference to fortified Pisidian settlements, and the fact that he alleges that they managed to make a living from raiding the king's territory in the plains suggests that the Pisidians forcibly maintained (or attempted to maintain) a considerable degree of independence.<sup>134</sup>

Of the Pisidian settlements, only Selge, lying close to Pamphylia, is known to have minted coins under the Persians.<sup>135</sup> Selge minted silver coinage from the early fifth century BC, as did the nearby Pamphylian cities of Side and Aspendos.<sup>136</sup> The coinage of Selge was of the same type as the Aspendos coinage, indicating close links between the two settlements. In contrast, of the other major Pisidian cities, Termessos first minted (bronze) coinage in ca. 100 BC, whilst it was not until the time of Amyntas (36-25 BC) that Sagalassos first minted.<sup>137</sup> Selge's early adoption of coinage was probably the result of its location and its dealings with the major Pamphylian cities, in particular, Aspendos.<sup>138</sup> It may have been minting in order to facilitate trade, to pay for mercenaries, or to be able to pay tribute to the Persians. The other Pisidian settlements clearly did not feel the need to produce coinage at this time.

Although Persian rule appears to have left little discernible trace in Pisidia, it was during the Persian occupation of Anatolia that Pisidia appears to have begun to become 'urbanised.' By the time of the invasion of Alexander the Great (334 BC), the largest Pisidian settlements represented a real obstacle to Alexander. Selge could be described as a large city, and both

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<sup>130</sup> Hall 1968, 59.

<sup>131</sup> Herodotos 1.176.1-3.

<sup>132</sup> The name of the Pisidians has been inserted into a lacuna in the text at Herodotos 7.76. Although the suggestion is plausible, it is by no means certain, especially as the Pisidians are neglected from the list of tribute-paying peoples.

<sup>133</sup> Arrian *Anabasis* 1.26.5.

<sup>134</sup> Xenophon *Memorabilia* 3.5.25; see also the discussion below, chapter 3.1.

<sup>135</sup> Von Aulock 1979, 2.45; Weiss 1992, 149.

<sup>136</sup> Jones 1971, 124; Brandt 1992, 34.

<sup>137</sup> Von Aulock 1979, 2.42-3 (Sagalassos); 2.46-7 (Termessos).

<sup>138</sup> Weiss 1992, 149.

Sagalassos ('not a small city') and Termessos possessed significant fortification circuits.<sup>139</sup> Although we only hear of the larger Pisidian settlements in the histories of this time, it is probable that the smaller settlements were similarly affected by their interactions with Persians, Greeks and each other. It may be that the first Pisidian cities owe their genesis to Persian (attempts at) domination.

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<sup>139</sup> Arrian *Anabasis* 1.28.1 (Selge); 1.28.2 (Sagalassos); 1.27.7 (Termessos). For further discussion, see below chapter 2.

## CHAPTER TWO

### SETTLEMENT AND TERRITORY

#### 2.1 TOWN AND COUNTRY

The problem of how to understand the relationship between town and country in the ancient world is hardly a new one, and various explanatory models have been advanced. The most famous model was that proposed by Weber and elaborated upon by Finley, Jones and De Ste Croix (amongst others).<sup>140</sup> Weber attempted an explanation of the differences between mediaeval cities and ancient cities with regards to the rise of capitalism. He described how large, aristocratic, land-owning families formed the urban elite in antiquity. This elite gained its wealth largely through exploiting their land-ownership, through rents or through the sale of surplus products. Jones and De Ste Croix portrayed the wealthy landowners residing in the cities living off the labour of the 'voiceless toilers' in the countryside.<sup>141</sup> Weber contrasted the parasitic relationship between the urban elites in antiquity living in 'consumer cities' and the countryside they exploited, with the mediaeval 'producer' cities, where the urban elite consisted instead largely of a merchant class, or bourgeoisie. Unlike the elites of the ancient world, the interests of mediaeval urban and rural elites could (and often did) differ, as they were no longer identical to one another.

In a recent article, Whittaker discusses the 'consumer city model' along with alternative models of town-country relationships: the 'service city', 'la cité organisatrice', and the 'processor city'. All of the models emphasise particular aspects of town-country relationships: the city as a (dependent and exploitative) consumer of rural produce, the city as centre of manufacturing, trade and services, the city as administrative centre, and the city as 'processor' in the transferral of cash taken in taxes back to the rural population from which the cash was originally raised.<sup>142</sup> Whittaker begins his survey in querying the usefulness of such models; he concludes that theories of the city are useful, but those that we have are still insufficient to the task 'because of the ambiguity of spatial distinctions in the ancient city between the *pars urbana* and the *pars rustica*; because of the indifference of a specifically economic relationship between urban and rural; but above all because the study of cities is only an imperfect way of studying the operations of power in society'.<sup>143</sup> Whittaker highlights the problem, as others have before him, of separating the city from its territory as if it were a distinct economic (and also social and political) entity. Although he concludes that the 'consumer city' model, although flawed, is still perhaps the most useful model, he ends by criticising the study of cities as a way of studying power relationships. His critiques of the various theories of the roles of cities are interesting and useful. His conclusion, however, begs the question of why we study urban settlements. The study of cities may be an imperfect way to study the operations of power in society; on the other hand, the study of the operation of power in society has much to offer the study of urban settlements.

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<sup>140</sup> Weber 1921; Finley 1981; Jones 1940; De Ste Croix 1981.

<sup>141</sup> De Ste Croix 1981, 13, 205-75; see also Jones 1940, 268-7; 295; 259-304.

<sup>142</sup> Whittaker 1995 (with bibliography); see also Rich and Wallace-Hadrill (eds.) 1991 (various authors).

<sup>143</sup> Whittaker 1995, 22.

Cities are complex and changing entities, whose (multiple) roles are dependent upon many circumstantial factors. The relationships between cities and the land (and peoples) that surround them are similarly complex and changeable. If we wish to understand these relationships, it is necessary to ask not only why urbanisation takes place, but also to examine the form that it takes, to see what the function(s) of the urban settlements are, both for those who inhabit them and for those outside them. Individual ancient cities should be considered as the sum of their parts (urban and rural), in order to determine how their functions and characters changed as the focuses of power shifted.

To speak of ancient cities *per se* is 'to deal in abstractions;' we should be wary of losing sight of the actual cities that we wish to discuss.<sup>144</sup> Trigger's characterisation of a city as a polyfunctional settlement is useful, but clearly requires elaboration.<sup>145</sup> Following Weber in attempting to differentiate between urban communities which were capable of achieving capitalism and those that were not, Andreev denies ancient cities the title of true cities, defining a 'true' city as a 'stable form of spatial consolidation of a heterogeneous population not directly engaged in agricultural production'.<sup>146</sup> Andreev subdivides the urban settlements of the ancient world into quasi-cities (a largely socially homogeneous 'farming settlement possessing some external characteristics of a city') and proto-cities ('fundamentally a farming community' with a 'relatively high level of social production ensuring surplus produce', as well as 'an advanced social stratification of society', 'the political integration of isolated farming communities and the formation of a primitive state mechanism').<sup>147</sup> Although Andreev's terminology is useful, neither the Greeks nor the Romans would have recognised the distinctions he draws.

The Classical Greek polis or city-state was typically small, socially homogeneous, and dependent for the most part on agriculture; its defining feature, however, was political (semi) autonomy. By the late second century AD, the defining feature of a polis was clearly its political and administrative function, as Pausanias' (10.3.4) scornful appraisal of Panopeus in Greece shows. Pausanias states that Panopeus was a city even though it had no state buildings, gymnasium, theatre, agora, no running water at a fountain and the inhabitants lived in shelters like mountain huts. Clearly Pausanias feels that the monumental aspects that he lists are (very) important features for a proper polis; nevertheless, as he says, Panopeus has boundaries with its neighbours and sends delegates to the assembly of Phocaea (and that is sufficient to warrant the name of polis).<sup>148</sup> A polis need not, therefore, be in any respect grand or monumental, it need only possess autonomy from its neighbours.

Employing Andreev's terminology, a polis like Panopeus could best be described as a quasi-city, whereas poleis like Perge, Pergamon or even Athens, all fall within the definition of a proto-city. The differentiation is meaningful, as clearly the functions of these poleis were different. Kirsten, less concerned with capitalism, typified the average Greek polis as a *Dorfstadt*, a variant of a traditional Greek nucleated village, whereas only a few poleis ever

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<sup>144</sup> Morris 1991, 26.

<sup>145</sup> Trigger 1972, 577, 592.

<sup>146</sup> Andreev 1989, 169.

<sup>147</sup> Andreev 1989, 170-1.

<sup>148</sup> In fact, Panopeus also had fourth-century fortification walls, see Alcock 1993, 29.

escaped the economic and political boundaries of their own territories in order to become true towns, or *Stadtstädte*.<sup>149</sup> Kirsten's *Dorfstadt* includes both Andreev's quasi-city and his proto-city. Andreev's proto-cities, however, can be divided into *Dorfstädte* and *Stadtstädte*. Andreev's real city, however, was one that was truly isolated from its hinterland; even Athens, whilst clearly a *Stadtstadt*, never achieved such 'real isolation'.<sup>150</sup>

Kirsten viewed the Greek polis as a political metamorphosis of the Mediterranean village. In the case of Sia, however, the transformation is not clear-cut. When Sia was originally founded as a fortified settlement, it is unknown whether it was permanently settled, or was simply a refuge site, although both Xenophon's reference to the fortified settlements of Pisidia and the evidence provided by Panemoteichos 1 would suggest that it is most likely that Sia was permanently settled.<sup>151</sup> It appears likely that the settlements of tribal Pisidia were for the most part socially homogeneous quasi-cities or *Dorfstädte*. The inhabitants of the settlements almost certainly herded, farmed and fought together. There was, at least initially, little distinction between 'town' and country.

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<sup>149</sup> Kirsten 1956.

<sup>150</sup> Osborne 1987, 102; Osborne 1991.

<sup>151</sup> See further below, chapter 3.

## 2.2 TERRITORIES

The territories of cities in antiquity could, and did, differ in size and quality enormously. Since land was the primary source of the income of a settlement, the size, quality and relative positioning of the territory of a city was directly related to its ability to expand and prosper. The initial Pisidian tribal strongholds would have been defensive 'central places'; their territories would have consisted of a catchment area around the site. Research on settlement patterns has (unsurprisingly) revealed a common pattern of smaller settlements at distances of half an hour's walking or two, to two and a half, kilometres distance from the centre settlement.<sup>152</sup> A distance of about five kilometres, or one to two hours walking time, from a settlement to the land has been suggested as representing the maximum amount that a farmer is willing to endure on a regular basis.<sup>153</sup> The construction of Thiessen polygons around settlements enables us to construct theoretical territories.<sup>154</sup> Naturally the more powerful a neighbouring site is, the less likely the boundary is to be placed equidistant between the two settlements.

It is sometimes useful to differentiate between types of settlements in a region by establishing a hierarchy of sites. It is clear that settlements often can be arranged into some form of a hierarchy. Site size and function are usually used as criteria for differentiation between sites, although the two criteria need not necessarily coincide. However, larger sites will often dominate smaller sites; they will more often be administrative centres, or possess functions that smaller sites do not. Once a hierarchy has been established, it is possible to investigate whether different sites of different rank size reacted differently to particular events or stimuli than other sites of different rank size.

The division of the settlements in a region into tiers of community sizes can be useful, but also has its pitfalls.<sup>155</sup> There is a danger that an artificially imposed model hierarchy will distort our view of how various settlements in reality interacted with one another. Do settlements always and necessarily fall into easily defined hierarchies? Is this the best way to represent and analyse the interactions between settlements? We should be even more wary in regions where we are heavily or solely dependent upon archaeological evidence for our analysis. Will we always be able to discern from the archaeology whether a smaller site has political, social, religious or economic influence over a larger site?

Flannery, in producing settlement hierarchies for Iran, concentrated mainly on size as a criterion of distinction: towns were between five and seven hectares in area, large villages between two to three hectares and small villages between one half and one hectare; he clearly

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<sup>152</sup> Bintliff 1994b.

<sup>153</sup> Burford 1993, 57; Bintliff 1994b, 208. The two hour walking-distance limit does not, of course, preclude the creation of larger territories over time through conquest or assimilation. Furthermore, if the territory around a 'central place' is particularly poor or difficult of access, the limit may again be broken. Sterret recorded that the territory of Melli was eight hours from north to south due to the poor quality of the land; Sterret 1888, 318.

<sup>154</sup> For Ariassos and Sia, see fig. 2. For a succinct discussion of the use of Thiessen polygons and their weaknesses, see Renfrew and Bahn 1991, 158-62.

<sup>155</sup> See Flannery 1998 for an example of the establishment of a hierarchy for the settlements in southwest Iran.

left room for settlements to fall between these categories.<sup>156</sup> However, Flannery's typification places a priority on size; with Greek-style poleis, function must surely be more important than size alone. A further practical problem is presented when we have different amounts and types of evidence for different sites. Thus in Pisidia, the only sites where presently the housing as well as the monumental centres have been recorded are Ariassos, Sia and Cremna, and the housing at Cremna, as mapped, is insufficiently well-preserved to provide a detailed comparison with the better-preserved housing from Ariassos and Sia.<sup>157</sup> At Sagalassos, the excavations have focused until now primarily on the monumental centre of the city; Termessos and Selge remain unexcavated, although both have been surveyed. It is very difficult, therefore, to make like-for-like comparisons between Pisidian settlements.

Nevertheless, with the above reservations in mind, in Hellenistic Pisidia it is clearly possible to identify the dominant cities: the 'big three' of Selge, Sagalassos and Termessos.<sup>158</sup> These three cities drew the attention of Alexander the Great, and re-appear consistently in historical accounts of the region into the Roman period.<sup>159</sup> The 'big three' cities clearly acted as regional centres of power; beneath them, however, it becomes harder to differentiate clearly between the next rungs on the ladder. In Pisidia, from the Hellenistic period onwards we know that major settlements were adapting to a Greek model of civic life; during this period of transition it is perhaps best to treat all fortified settlements as being on a similar level, unless there is some obvious reason for differentiation. However, those settlements that failed ultimately to adopt a Greek civic infrastructure, such as Huia, can be considered (and would have been considered) to have declined to a lower order than those that did adopt it. We can usefully employ here Pausanias' distinction – anything that acts like a city and is treated by other cities as such, is a city, regardless of size. A village may be larger than a city.

Mitchell, for the purposes of discussing Hellenisation, divides the cities of Pisidia into 'large', 'medium' and 'other' cities. As size does not appear to have necessarily been the most important indicator of status in antiquity, and as we do not have an accurate indication of the size of all Pisidian settlements in the Hellenistic period at least, I would rather merge his 'medium' and 'other' settlements into one category, but identify two further differentiations in the lower orders. Thus, in Pisidia, we can usefully identify a fourfold hierarchy of settlements with, at the top, the large, regional centres, cities with considerable political and economic power over other cities in their region (although not necessarily complete dominance over the other cities). The next level in the hierarchy would be settlements with control over territories which included dependent settlements. This second level, the hardest to define precisely, would originally in Pisidia have been tribal fortified settlements. During the Hellenistic period many of these settlements would develop into medium and small cities, others would become dependent settlements of more powerful neighbours and would thus fall into the third class of villages. Villages would be those settlements without the civic infrastructure of a city, and that were under the control of another settlement. The fourth 'tier' would be loose groupings of one or two independent houses, villas or farmsteads, which cannot easily be identified as villages. Ariassos and Sia, therefore, appear

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<sup>156</sup> Flannery 1998, 17.

<sup>157</sup> See Mitchell 1995, fig. 4.

<sup>158</sup> Mitchell 1991b; Mitchell 1992.

<sup>159</sup> See below chapters 3.1; 3.2; 4.1.

to have belonged to the second rank in the hierarchy, although the two settlements were by no means identical in either form or development.

As a 'central place', we should expect to find settlements positioned near the centre of their territories. There may, however, be distorting factors; primarily the nature of the terrain involved. Apart from the southern boundary of the territory of Ariassos, we have no direct evidence for the territories of Sia and Ariassos in any time period; we are reliant therefore on constructing theoretical territories for both.<sup>160</sup> The approximate territories were constructed using Thiessen polygons, actual boundaries (where known), and natural geological boundaries, such as mountain ridges. The nature of the terrain and the close proximity of neighbouring cities mean that the proposed territories are unlikely to be misleading. The territories of Sia and Ariassos were both small. The territory of Ariassos covers an area of ca. 160 km<sup>2</sup>. The territory of Sia was even smaller, covering an area of ca. 100 km<sup>2</sup>. The nearby city of Balboura in the Kabalis, which appears visibly to be a very similar city to Ariassos, had a territory of approximately 700 km<sup>2</sup>.<sup>161</sup> The size of the territories of these cities is small, but not extraordinary. Meyer speaks of 'hundreds' of self-sufficient cities in the Classical period with territories ranging from 100 km<sup>2</sup> to 20 km<sup>2</sup>.<sup>162</sup> The amount of land suitable for arable cultivation in the territories of Sia and Ariassos, however, is noteworthy. Ariassos sits above and between two basins of agricultural land, the Yürükbademlisi basin to the southwest, and the broader Bademağacı plain to the northeast.<sup>163</sup> The Yürükbademlisi basin, with an area of ca. 4 km<sup>2</sup>, must have been completely under the control of Ariassos. The plain of Bademağacı, however, could not have been completely controlled by Ariassos. The city of Panemoteichos to the north must have prevented Ariassos from using the northern part of the plain, and the inhabitants of the site at the top of the Döşeme Boğazı may have prevented them from using the eastern part of the plain.<sup>164</sup> Following the territorial boundary proposed by French, Ariassos would have had the use of approximately 12 km<sup>2</sup> of the plain. The situation at Sia was worse. Unlike Ariassos, Sia is not positioned where one would expect if constructing a Thiessen polygon with no regard for topographical detail. Sia is not equidistant between its neighbours, but rather towards the southern end of its territory. A glance at a relief map will provide the reason for this (fig. 6). Sia is positioned between three small basins of agricultural land. These basins are not moderate-sized poljes like the plains of Ariassos, but rather small soil-filled dolines.<sup>165</sup> The soil is good, but the area is small. Sia sits between the basins of Kızılcaoz and Karaot (ca. 3 km<sup>2</sup>),

<sup>160</sup> The southern boundary of Ariassos borders upon the territory of Termessos which appears to have included the plain below Bayatbademlisi; for a map of the territory of Ariassos and Termessos, and a discussion of the problems involved in drawing territorial boundaries in southern Pisidia, see French (ed.) 1994, 56-7, and plates 4.2, 4.3; see also Heberdey 1929, 5, fig.1; Heberdey 1941, 1.

<sup>161</sup> Coulton 1998, 226, fig. 19.1, 232.

<sup>162</sup> Meyer 1968, 80.

<sup>163</sup> The plain on which Bademağacı is located will be referred to as the 'Bademağacı plain'; there appears to be no agreed-upon name for the plain which stretches north towards Bucak and east towards the mouth of the Döşeme Boğazı.

<sup>164</sup> French notes that the remains at the top of the Döşeme Boğazı do not appear to be considerable enough to be those of a polis. It appears rather to be a small (originally Hellenistic?) settlement that grew up around the top of the pass into the highlands. It is unclear in whose territory it lay – Sia, Ariassos or Panemoteichos. If it lay within the territory of Ariassos, there would have been more land available for the city, but also more mouths to feed. At the present time it is impossible to judge who would have been in control of this site; D. French, pers. comm.

<sup>165</sup> See above, chapter 1.2.

Köletaşı (ca. 1.5 km<sup>2</sup>), and Kozacağı (ca. 0.5 km<sup>2</sup>). At a distance of ca. 4 km to the southwest of Sia is the basin of Çakıraz (ca. 1 km<sup>2</sup>), which probably lay just inside the boundary of Sia's territory. These are the largest basins of soils within the territory of Sia providing only 6 km<sup>2</sup> of good agricultural land. Further small basins occur, but, for the most part, the territory of Sia is typically karstic; the soil is thin and suitable for little except forestry.

Meyer estimated that the average Classical city possessed between 66 to 400 citizens; estimating four inhabitants for every citizen, this produces an approximate range of 265 to 1600 inhabitants.<sup>166</sup> Furthermore, he proposed that on average agricultural land will support between twenty to forty people per square kilometre. Fifty-two houses have been identified at Ariassos. Although this is certainly not the total number of houses that stood in antiquity, if we take an approximation of between four and six people per household, Ariassos can be said to have been home to at least 208-312 people.<sup>167</sup> This number of people would require between 5.2 km<sup>2</sup> (208 people at 40/km<sup>2</sup>) and 15.6 km<sup>2</sup> (312 people at 20/km<sup>2</sup>) of agricultural land. Ariassos possessed approximately 16 km<sup>2</sup> of agricultural land, which would support between 320 and 640 people (including approximately 80-160 adult males). On the other hand, eighty-seven houses have been identified at Sia, giving an approximate population of between 348-522 inhabitants. The inhabitants of Sia would require between 8.7 km<sup>2</sup> of agricultural land (348 people at 40/km<sup>2</sup>) and 26.1 km<sup>2</sup> (522 people at 20/km<sup>2</sup>). Sia possessed approximately 6 km<sup>2</sup> of adequate agricultural land, which would support between 120 to 240 people (or approximately 30-60 adult males). Whilst Ariassos was employing (at least) between 32.5% and 97.5% of the carrying capacity of its agricultural land, the land available to Sia for agricultural purposes represented between 23% and 69% of its possible requirement. The population density per km<sup>2</sup> suggested by the housing of Sia is in the order of 58-87 per km<sup>2</sup> of agricultural land, or, if Çakıraz was not in the territory of Sia, 70-104 people per km<sup>2</sup>. The population density per km<sup>2</sup> of agricultural land suggested by the housing of Ariassos is in the order of 13-19.5 people per km<sup>2</sup>. The population figure for Sia is more likely to be correct than that for Ariassos, as it is difficult to judge how many houses at Ariassos have been destroyed in landslides (although it is impossible without excavation to be certain that all houses visible today were inhabited at the same time).<sup>168</sup>

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<sup>166</sup> Meyer 1968, 80.

<sup>167</sup> The average household living in the villages around Bucak in 1980 consisted of 4.5 people. The average household of Karaot in 1980 was 5.3 people. The average household of Bademağacı in 1896 was 6.2 people, while, at the same time, the average household in Fuğla was 5.26 people. For Bucak and Karaot, see Çavuş 1983, 20-3; for Bademağacı and Fuğla, see *Konya Vilayet Salnamesi* H.1317/AD1899, 285.

<sup>168</sup> The figure for Ariassos is probably not far wrong, however. The allotment list of Balboura records ca. 280 lot holders, which has been estimated to represent ca.1120 inhabitants. The territory of Balboura was ca. 700 km<sup>2</sup>. The population densities for their entire territories (regardless of land quality) at 4-6 people per household come to 1.6-2.4 people per km<sup>2</sup> at Balboura, and 1.3-1.95 people per km<sup>2</sup> at Ariassos.

1. *Populations and Arable Territory in the Roman and Ottoman Periods*<sup>169</sup>

Settlement	Number of houses recorded	Estimated number of inhabitants	Arable land available	Arable land required @ 20 people/km <sup>2</sup>	Arable land required @ 40 people/km <sup>2</sup>
Ariassos	52	208-312	ca. 16km <sup>2</sup>	10.4-15.6km <sup>2</sup>	5.2-7.8km <sup>2</sup>
Bademağacı 1568	48	192-288	ca. 16km <sup>2</sup>	9.6-14.4km <sup>2</sup>	4.8-7.2km <sup>2</sup>
Bademağacı 1844	106	424-6	ca. 16km <sup>2</sup>	21.2-31.8km <sup>2</sup>	10.6-15.9km <sup>2</sup>
Bademağacı 1896	122	488-732*	ca. 16km <sup>2</sup>	24.4-36.6km <sup>2</sup>	12.2-18.3km <sup>2</sup>
Sia	87	348-522	ca. 6km <sup>2</sup>	17.5-26.0km <sup>2</sup>	8.7- 13.0km <sup>2</sup>
Kozağacı 1450	14	56-84	ca. 0.5km <sup>2</sup>	2.8-4.2km <sup>2</sup>	1.4-2.1km <sup>2</sup>
Kozağacı 1530	20	80-120	ca. 0.5km <sup>2</sup>	4-6km <sup>2</sup>	2-3km <sup>2</sup>
Kozağacı 1568	20	80-120	ca. 0.5km <sup>2</sup>	4-6km <sup>2</sup>	2-3km <sup>2</sup>
Kozağacı 2000	6	24-36*	ca. 0.5km <sup>2</sup>	1.2-1.8km <sup>2</sup>	0.6-0.9km <sup>2</sup>
Karaot 1981	66	264-396	ca. 6km <sup>2</sup>	13.2-19.8km <sup>2</sup>	6.6-9.9km <sup>2</sup>

\* See footnotes 170 and 173 below for precise numbers.

In order to judge whether these estimates for antiquity are reflected in the numbers of people who have subsisted on the land in recent times, the Ottoman tax records can provide us with some comparative figures. Whereas the settlement at Sia in antiquity consisted of approximately ninety houses, the nearest settlement to the site today, the village of Koz Ağacı, consists today of six households.<sup>170</sup> In antiquity, a subsidiary settlement of Sia of as

<sup>169</sup> The figures presented here for the Ottoman period were gathered from various Ottoman tax records examined by the author in the Ottoman archives in Ankara and Istanbul in Turkey, and the National Library in Sofia, Bulgaria; on the nature and uses of Ottoman tax records for this purpose, see Appendix One.

<sup>170</sup> These figures were given to me by a local resident, Mehmet Cankara, who stated that the number of inhabitants of the hamlet is between 25 and 30. These numbers fall within the range included in table 1

many as thirty households (ca. 120-180 people) clustered around the small basin of good agricultural land at Koz Ağacı (thus increasing the population density potentially subsisting on the arable land of Sia even more). In the Ottoman tax records for 1450, the village of Koz Ağacı is recorded as having 14 households. In the records for 1530 it is recorded as having 20 households; in 1568 the number remains steady at 20 households.<sup>171</sup> If the inhabitants of Koz Ağacı were only using the basin of soil at Koz Ağacı itself, this would give a maximum figure of 240 people per km<sup>2</sup>. If, however, the inhabitants of Koz Ağacı were using the neighbouring basins of land also (which is not at all unlikely as there are no other villages identified in the records that can be placed in the area) then the figure even at its maximum falls to 20 people per km<sup>2</sup>. In 1981, however, the village of Karaot (which now officially includes Koz Ağacı) had 66 households with 349 inhabitants, giving a figure of 58 people per km<sup>2</sup> of good agricultural land.<sup>172</sup>

The village of Bademağacı, near Ariassos, was recorded in 1568 as having 48 houses; in 1844 as having 106 houses, and in 1896 as having 122 houses (and 761 residents).<sup>173</sup> The villagers of Bademağacı certainly had access to the land that had belonged to Ariassos; the density of land-use would be between an estimated minimum of 12 people per km<sup>2</sup> in 1568 (if there were 4 people to a household), to a maximum of 47.6 people per km<sup>2</sup> in 1896 (using the actual figure of 6.2 people per household). Whilst the figures for Ariassos in antiquity appear to be roughly in agreement with the sixteenth- and early nineteenth-century statistics for Bademağacı, the number of people apparently living at Sia at its height of expansion probably exceeds the number of people living in the area today. The figures for both Ariassos and Sia indicate that there was no significant carrying-capacity for secondary settlement on their territories if it is assumed that the population was only subsisting from arable (yet there are several secondary settlements in both territories).

In conclusion, Ariassos could survive from its arable territory alone even at a ratio of twenty people per km<sup>2</sup>, whereas nineteenth-century Bademağacı could only survive at a ratio of forty people per km<sup>2</sup>. Fifteenth- and sixteenth-century Koz Ağacı could survive at twenty inhabitants per km<sup>2</sup>; Sia and Karaot could barely survive at forty people per km<sup>2</sup>. The inhabitants of modern-day Karaot have turned to commercial logging, carpet-making and seasonal labour in order to be able to live. For Sia in particular, therefore, it is necessary to seek an explanation for its expansion beyond the apparent carrying-capacity of its agricultural land.

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above; a population estimate has been included in the table to allow comparison with earlier periods where exact numbers of inhabitants are unknown.

<sup>171</sup> Başbakanlık Osmanlı Arşivleri, İstanbul, Teke survey, *Maliyeden Müdevver Defteri* 14 (H.859/AD 1455), 255; Başbakanlık Osmanlı Arşivleri, İstanbul, Teke survey, *166 Numaralı Muhâsebe-i Vilayet-i Anadolu Defteri* (H. 937/ AD 1530), 593; Tapu Kadastro Genel Müdürlüğü, Ankara, *Tahrir Defteri* no. 107 (H.976/1568 AD), fol. 201r.

<sup>172</sup> Çavuş 1983, 21.

<sup>173</sup> Tapu Kadastro Genel Müdürlüğü, Ankara, *Tahrir Defteri* no. 107 (H.976/1568AD), fol 187v; Tapu Kadastro Genel Müdürlüğü, Ankara, *Temettüat Defteri* no. 10.232 (H.1260/1844AD); *Konya Vilayet Salnahmesi* H.1317/AD1899, 285. It should be pointed out that the record for 1896 of 761 residents falls outside the estimated range employed in the table (it represents an average household of 6.2 people). The error (29 people), however, does not affect the conclusion; at 40 people per km<sup>2</sup> the amount of arable needed would be 19.0km<sup>2</sup>, and at 20 people per km<sup>2</sup> the amount of arable required would be 38.1km<sup>2</sup>. The estimate has been employed in the table, even though incorrect, to allow for comparison.

## 2.3 SUBSISTENCE OPTIONS

Bloch commented that he could 'hardly be persuaded that it is perfectly legitimate to describe a state, without first having tried to analyse the society on which it rests' - it should be added that it is hard to justify the analysis of a society without reference to its physical environment and various subsistence strategies, the relationship between people and landscape.<sup>174</sup> At first sight this may seem both obvious and simple to accomplish. Most accounts of sites or regions provide brief environmental introductions embellished with personal observation, many refer to the accounts of (primarily European) travellers from recent centuries, some include fragments from ancient authors. Such methods, however, although useful, can perpetuate a static model both of the environment and also of settlement and agricultural practices.

Accounts of subsistence in Anatolia in particular have been dominated by the Braudelian concept of the *longue durée*, with numerous references to the timelessness of the Anatolian village coupled with the (often explicit) assumption of the continuity of farming and pastoral practices.<sup>175</sup> Braudel conceived of geography as a slow-moving force shaping the actions of man; the picture he presents of the Mediterranean is one of environmental determinism, and others have followed his lead. The environment and, concomitantly, rural life in the Mediterranean until the early twentieth century (and even beyond) is often conceived of as a changeless continuum, the life of a nineteenth-century peasant being seen as little different from the life of a peasant in antiquity. This rural timelessness is beguiling - crops and livestock vary according to availability, demand and environmental fluctuations; there is seldom one 'right' way to farm a landscape. The static, uniformitarian view of the environment and subsistence options has not therefore lacked critics.<sup>176</sup> It is a mistake to think that the environment alone determines subsistence options and that agricultural communities employ a single invariable economic-subsistence strategy; it is essential to consider the causes of the various subsistence options and the effects that they may have had on the communities involved.<sup>177</sup>

Reconstruction of ancient subsistence strategies without the retrieval and examination of palaeobotanical samples carries many of the risks of other forms of archaeological survey without excavation. It is hard to be precise over figures and chronology; nevertheless it is worthwhile to attempt a discussion if only to illustrate many of the factors involved in the choices of subsistence strategies.

### 2.3.1 AGRICULTURE

Agriculture almost certainly played the most important, and enduring, role in providing the urban communities of Ariassos and Sia with their subsistence. The primary source of subsistence for most cities in antiquity was undoubtedly cereals.<sup>178</sup> Grain has been estimated

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<sup>174</sup> Bloch 1934, 307.

<sup>175</sup> Braudel 1972, eg. 23-4.

<sup>176</sup> See *inter alia* Halstead 1987, 77-87; Barker, G. 1989, 1-19; Sallares 1991, 294; Horden and Purcell 2000, 40-3; Robinson forthcoming.

<sup>177</sup> Smith 1972, 421.

<sup>178</sup> For literary sources, see Sartre 1995, 272; see also Foxhall and Forbes 1982.

as forming up to two thirds of the diet in antiquity.<sup>179</sup> The account of the plague at Myra in the sixth century AD recorded in the life of St. Nicholas of Sion lends support to this. It is recorded that the urban dwellers were starving because 'the farmers brought down into the city neither grain, nor flour, nor wine, nor wood, nor anything else needed for sustenance.'<sup>180</sup> Grain and flour clearly formed the basis of the diet of the Lycian city-dwellers. We should expect, therefore, most cities to attempt to expend most energy on attempting to acquire these crops either through growing them themselves or, when this was not possible, through trade.

The Elmalı plain, similar in altitude and soil quality to the plain of Bademağacı, was a major source of wheat and barley in the nineteenth century, and almost certainly also in antiquity.<sup>181</sup> Skeletal analysis has revealed that the inhabitants of Karataş-Semayük on the Elmalı plain relied more on grain products than meat for their nutrition.<sup>182</sup> Similar work has yet to be carried out in exploring the diet of the Pisidians. In 189 BC, Manlius Vulso is recorded as having taken 20,000 medimnoi of wheat and 20,000 medimnoi of barley from Sagalassos.<sup>183</sup> It would be reasonable, therefore, to expect these two cereals to have been the primary cereal crops in the region in antiquity.

Wheat has a 35 per cent greater nutritive value per weight (unprocessed) than barley, and was valued more highly in antiquity.<sup>184</sup> As an item of medium to long-distance trade, therefore, it made more sense to transport wheat. On the other hand, barley grows better on poorer soils and has greater tolerance of drought conditions than wheat. Barley can still provide a crop on 200mm of rain a year; wheat suffers seriously if it receives less than 300mm of rain per year.<sup>185</sup> The Eleusis eparche accounts appear to indicate that over ten times more barley was grown in the territory of Athens than wheat.<sup>186</sup> Given the variability of the climate it would only make sense to plant wheat if the amount of barley (and other more hardy crops) planted were sufficient, or almost sufficient, to survive upon in case the wheat crop failed. In the case of Sia, therefore, the planting of wheat would probably have represented an unacceptable level of risk. The villagers of Koz Ağacı today cultivate barley as their primary crop.<sup>187</sup>

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<sup>179</sup> Potter and Mattingly (eds.) 1999, 172; Garnsey 1983, 118; Foxhall and Forbes 1982, 69-72; Rickman 1980, 3-8; Gallant 1991, 64-7.

<sup>180</sup> Sevcenko and Sevcenko 1984; 82, section 52 (plague).

<sup>181</sup> See below, chapter 4.4.6.

<sup>182</sup> Lawrence Angel, 1970, 253-5. All but one of the skeletons examined were from the Bronze Age, only one was from the early Iron Age, nevertheless it is clear that the inhabitants of the Elmalı plain in this period, at least, were able to live (relatively well) on a diet of mainly agricultural produce.

<sup>183</sup> Livy 38.15.9.

<sup>184</sup> Rathbone 1983, 46, but see Foxhall and Forbes 1982, 44-46; the nutritive components by weight of the edible portions of wheat and barley are closer, but barley is considerably more difficult to process efficiently.

<sup>185</sup> Osborne 1987, 33.

<sup>186</sup> Rathbone 1983, 47-8; De Planhol 1958, 151 noted the growth of barley in Pisidia on poorer fields.

<sup>187</sup> Although useful indicators of what is possible in the natural environment as it exists today, we should be wary using modern crops as comparanda for antiquity; two of the principal cash crops in the highland area today are maize and tobacco, neither of which would have been present in antiquity. Modern hybrids and planting practices are also present.

The agricultural territory of the people of Ariassos presents a different picture from Sia. The agricultural land of the city of the Milyan city of Pogla is comparable in quality to that of Ariassos; Pogla is known to have provided grain to be sent to Egypt in the second century AD.<sup>188</sup> It is probable that the grain sent was wheat (due to its higher nutritive value to unprocessed weight). As mentioned above, the territory of Sagalassos to the north was capable of producing a considerable quantity of wheat and barley, and Livy praised the territory as rich and fertile.<sup>189</sup> The land around the present-day village of Ariassos is also suited to growing wheat, and the stream there could even be used to irrigate small areas of crops in cases of water shortage, thus reducing the risk of total crop failure.<sup>190</sup> In the 1870s, Davis noted wheat growing on the plain from Bucak to Bademağacı.<sup>191</sup> In antiquity, as now, Ariassos would have had more good quality arable land than Sia, so the planting of some wheat would not pose so great a risk.<sup>192</sup>

Cereals, although important, were almost certainly not the only crops to be grown. The importance of legumes in antiquity has been the matter of some debate, due to the intolerance that some Mediterranean peoples have to beans.<sup>193</sup> Chickpeas, however, possess no adverse affects, and, having developed in Anatolia, are suited to the environment, growing on the poorer soils of the hillsides. It was also likely that bitter vetch was grown in antiquity in Pisidia (as it was until recently). Bitter vetch is a fodder crop, but in times of famine it could be, and was, consumed by humans.<sup>194</sup>

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<sup>188</sup> See below, chapter 4.3.6, 121 fn. 633.

<sup>189</sup> Livy 38.15.9; 38.45.

<sup>190</sup> There is a slight risk in comparing the territory of Sagalassos with that of Ariassos, as the territory of Sagalassos was larger and more varied. The valley in front of Ağlasun, for example, is water-logged and rich in clay, and is therefore dissimilar to the territory of Ariassos. Nevertheless, the areas of the territory of Ariassos which could be irrigated if necessary, would have been, if anything, slightly better for growing crops, as they are at a lower altitude. An indication of the similarity between the production of the two areas may be seen in seventeenth-century records of land-use (*Başbakanlık Arşivleri Maliyeden Müdevver Evrak* 4347 (AD 1637-8), 44-80, reproduced in Güçer 1964, 166-7). Ağlasun (the successor of Sagalassos), was recorded as a village of 37 households providing 74 kile of barley and 18.5 of flour for taxes; Kızılkaya (17 km to the north of Ariassos), a village of 40 households was recorded as providing 80 kile of barley and 20 of flour. Although the tax levied was more of a flat tax (ie less related to the abilities of the individual villages to pay them) certain areas appear to have been taxed more heavily, presumably according to their ability to pay; see, for example, the villages of Kemer-i-Hamit and Avşar in Güçer 1964, 166; thus it may be assumed that the areas around the two ancient cities were assessed as being largely similar in potential output in the seventeenth century.

<sup>191</sup> Davis 1874, 195, 197.

<sup>192</sup> For a discussion of the territories of Sia and Ariassos, see above chapter 2.2.

<sup>193</sup> On the dangers of favism, anaemia induced in some individuals of Greek and other Mediterranean populations of particular genotypes through the consumption of certain beans, see Sallares 1991, 301-2. The presence of beans in the Ottoman tax records cannot, therefore, be used as evidence for the consumption of beans in antiquity, as many Turks would not have developed the adverse reaction to the beans (although inbreeding with previous population groups would certainly have had an effect). On the other hand, the genotype susceptible to favism evolved as a result of contact with malaria. Pisidians, being mountain peoples, would be less likely to be susceptible to favism, as they inhabited a region where malaria was less likely to occur.

<sup>194</sup> Sallares 1991, 302. Vetch was consumed during a subsistence crisis at Ainos in Thrace in the late fifth century BC; vetch was also consumed by the inhabitants of Aspendos during the subsistence crisis in the reign of Tiberius; Philostratus *Vita Apollonii* 1.15; MacMullen 1974a, 33.

Fruit and nut trees grew in Southwest Pisidia in antiquity; apple, almond, pear, quince, cherry-plum, apricot, walnut and pomegranate have all been identified in pollen core samples.<sup>195</sup> Although fruit and nuts would certainly have complemented the largely cereal diet of the Pisidians, it is uncertain whether fruit and nut trees were cultivated on a significant scale.<sup>196</sup> Strabo (12.7.3) does not mention fruit or nuts among the produce of Selge; this omission probably reflects the fact that they were grown on a small scale for local consumption only.

In the Ottoman tax records for 1450, the village of Koz Ağacı is recorded as having 14 households which had to take 400 trees annually to Antalya in lieu of usual taxes.<sup>197</sup> This is not only indicative of an abundance of trees, but also of insufficient land for agricultural purposes; modern villagers express wonder at the ability of the ancients to support such a large population off the same land. The area around Sia in antiquity would have been heavily wooded, as it is today. The villagers of Koz Ağacı and Karaot today all make their living through forestry work. It may seem difficult for the inhabitants of Sia to have made much of a living from hauling timber down to Antalya. Nevertheless, as the inhabitants of Koz Ağacı in 1450 showed, it was possible to take (a minimum of) 400 trees to Antalya annually from this region. It must, therefore, have been possible in antiquity. Timber could be sold whole, or as charcoal and pitch. As timber was felled in the autumn, much of the work could be done after crops had been harvested, thus complementing cereal cultivation.<sup>198</sup>

The most important product of Pisidian Selge, according to Strabo, was the styrax tree, the source of storax-gum.<sup>199</sup> He also mentions the orris-root from which is made an ointment. Styrax can only have been produced in such large quantities as a cash crop for export.<sup>200</sup> Similarly the orris-root ointment was also probably produced for export. Olive oil, storax gum and orris-root ointment were all constituent parts of perfume which could be exported as a low volume, high value commodity in order to raise cash.

Another possible source of income is recorded in an imperial inscription from the south agora of Miletos, which refers to traganthus gum.<sup>201</sup> Traganthus, produced from a plant of the *Astragalus* family, a leguminous plant, was a speciality of the Ottoman province of Hamid in the Middle Ages.<sup>202</sup> Produced in the highlands it was sold abroad from Antalya, to be used in medicines and paints. In the nineteenth century, Hamilton commented on the extensive production of traganthus gum in Burdur.<sup>203</sup> Pliny gave a price of three denarius

<sup>195</sup> See above, chapter 2.3.1.

<sup>196</sup> Sallares 1991, 286, notes Diokles of Karystos (fourth-third century BC) and Galen's (second century AD) suspicion of the nutritional value of fruit.

<sup>197</sup> The number of trees to be taken to Antalya is surprisingly high; it may be that the inhabitants of Koz Ağacı were responsible for providing the trees and not for their transport, although this is not stated. Başbakanlık Osmanlı Arşivleri, İstanbul, Teke survey, *Maliyeden Müdevver Defteri* 14 (H. 859/AD 1455), 255.

<sup>198</sup> Meiggs 1982, 325-70, esp. 331.

<sup>199</sup> Strabo 12.7.1-3. The wine of Selge was also mentioned by Pliny (*Natural History* 14.117).

<sup>200</sup> On the uses of styrax (*liquid amber orientalis*) as a fixative in perfumery or as incense, see Day 1979, 210.

<sup>201</sup> Robert 1980, 342-50.

<sup>202</sup> *Astragalus gummifer* or *verus* produces tragacanth; see Polunin 1987, 289; Rikli 1943, 32.

<sup>203</sup> Hamilton 1842, 1.449.

per pound of gum. Clearly the gum, like the styrax of Selge, was a useful low volume, high value cash crop, and it appears that Pisidian traganthus was being traded in Miletos in the imperial period.

In addition to more specialised products, however, it is clear that both wine and olive oil were not only a good source of nutrition and energy, but also a potential commodity to be traded. Strabo (12.7.2) mentions the wine of Pisidian Amblada as having medicinal properties, and the wines of both Selge and Termessos are mentioned by Pliny.<sup>204</sup> Vines require better quality and deeper soil than olives, but are nevertheless hardy.<sup>205</sup> Once again few vines are grown in the region today.<sup>206</sup> It is almost certain, however, that the area around the site of Sia is to be identified with the *Bağ Ovası* (lit. vineyard plain) mentioned in the Turkish tax records of H. 937/AD 1530, but the name does not appear to be in use today.<sup>207</sup> There is no reason why vines should not have been grown in the territories of Sia and Ariassos in antiquity, utilising some of the more marginal lands around the edges of the agricultural basins. Furthermore, if the wine of Amblada, in the north of Pisidia, was of good repute in antiquity, then it must have been transported some considerable distance. There is no reason why other Pisidian vintages could not travel similarly. The Southwest Pisidian cities must have benefited from their relative proximity to the Pamphylian ports, and also from the high quality of the main route from north to south, the *Via Sebaste*.<sup>208</sup>

There has been considerable debate over the cultivation of olives in antiquity, and it is clear that regional diversity in olive cultivars, soils, climates, cultivation techniques, harvesting and processing methods all lead to significant differences in the quantities and quality of olives produced.<sup>209</sup> On judging whether olive production would have been a reasonable subsistence option at Sia in antiquity it is simply necessary to consider whether the risks of cultivation would have outweighed the benefits.<sup>210</sup> In a study of the role of olive production in the economy of the Southern Argolid, Forbes suggests that olive oil production was 'an aspect of agricultural intensification in response to a need for new sources of cash in the context of increased population pressure'.<sup>211</sup> Olive trees are hardier than vines, are less dependent upon rainfall, and will grow on poorer quality soils (but may yield fewer olives as a consequence). In modern-day Italy, therefore, olives are planted in higher densities to make up for the lower yields.<sup>212</sup> Olive crops are known for their fluctuating crop yield that normally falls into a biennial pattern.<sup>213</sup> Such fluctuations are, for the most part, predictable

<sup>204</sup> Pliny 14.117; 14.74.

<sup>205</sup> Rackham and Moody 1996, 78-82; olives (in contrast to vines) have shallow roots ideal for growing on the sides of karstic mountains.

<sup>206</sup> Cuinet 1891, 1.855 notes that vines are planted in small quantities in the districts of Kızılkaya and Milli-Bucak.

<sup>207</sup> Başbakanlık Osmanlı Arşivleri, İstanbul, Teke survey, 166 Numaralı Muhâsebe-I Vilayet-I Anadolu Defteri (H. 937/ AD 1530), 596.

<sup>208</sup> French 1992, 172.

<sup>209</sup> Forbes 1992; Mattingly 1994.

<sup>210</sup> Rikli 1943, 55 shows production figures per hectare ranging from 411.25 kg per ha in Spain to 179.2 kg per ha in Italy. It is possible to give an estimate of total average oil production using Forbes' figure of ca. 2400-3600 kg of oil per press, but there are too many unknowns to make this of any value; see Forbes 1992, 96, fig.5. On the potential output of small presses see Mattingly 1993, 483-98.

<sup>211</sup> Forbes 1993, 213-26, esp. 218.

<sup>212</sup> Mattingly 1994, 95.

<sup>213</sup> Mattingly 1994, 96.

and extra crops, including vines, could be planted to even out production for the lean years that would follow the bumper years. The potential of bumper crops, however, represents a very good return on land that is less well suited to other forms of agricultural cultivation.<sup>214</sup> That olives were grown in this region in antiquity may be adduced from Strabo, who described the Pisidians behind Side and Aspendos as planting olives everywhere.<sup>215</sup>

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<sup>214</sup> Mattingly 1994, 104.

<sup>215</sup> Strabo 12.7, C570.

### 2.3.2 Pastoralism

Pastoralism has generally been characterised as being less economic and carrying a greater risk of failure than arable farming. Garnsey begins an article on transhumance with a devastatingly succinct attack on 'pure pastoralism'.<sup>216</sup> He points out that the amount of sheep required to live the life which he describes as 'pure pastoralism' is very large, and consequently the amount of land required is prohibitive. He estimates that the number of sheep (of approximately 15 kg) needed to feed a family of six, if mutton is to be their main source of energy, is about 130 a year. This, he says would require the maintenance of a flock of 360 animals requiring a pasturage of c.3.6 km<sup>2</sup>. In order to support a city of ninety households, like Sia at its peak, a territory of 314 km<sup>2</sup> would be required. Koz Ağacı in 1568, however, would have required a territory of 72 km<sup>2</sup>.

Garnsey's argument, however, is invalidated by false premises, and it is important to see quite how misleading it is. He makes allowance for 230 sheep to produce 130 lambs, probably allowing for a 75% lambing rate (172 lambs) and a 24% mortality rate. These figures, however, are exceptionally poor: in recent times, a bad lambing year for a shepherd from Denizli (without the assistance of modern antibiotics), due to poor feed at lambing time, led to losses of 25%; the birth rate for another flock in the same region was 95% with no losses. Fat-tailed sheep in the Küçük Menderes valley achieved a lambing rate of 200% with 10% losses: a high lambing rate (although by no means extraordinary), but 80-95% appears to be more usual in the region.<sup>217</sup> The typical lambing produce of a flock of 230 ewes can be expected, therefore, to be in the range of 147 (80% lambing rate and 20% mortality rate) to 196 (95% lambing rate and 10% mortality rate), although significantly better rates are possible. As a rough comparison, a flock of Black Welsh Mountain sheep in Hampshire over the past five years have maintained an average of a 172% lambing rate (over the entire flock, ie including ewes which do not lamb) and 4.36% mortality rate with minimal use of antibiotics. Antibiotics were administered to 15% of the ewes as a precautionary measure; if half of these would otherwise have died (almost certainly an overestimate) the total number of sheep following lambing would be 379 lambs and 214 ewes.<sup>218</sup> Furthermore, Garnsey's average sheep weighs 15-20 kg; the modern Akkaraman sheep weighs 25-30 kg, and its ancient ancestor was probably little different, so fewer still might be required to satisfy a family's requirements. Most of the sheep could be fattened up on the yayla (of which not more than ca. 2.4 km<sup>2</sup> would be required) slaughtered and then preserved before winter. With this new estimate, Sia would require a territory of 210 km<sup>2</sup>, whilst sixteenth-century Koz Ağacı would require 48 km<sup>2</sup>.

It is not only the selection of figures which may mislead, however, but also the simplicity of the model which Garnsey chooses to attack: transhumant farmers usually keep goats as well as sheep, hence fewer animals are required to produce the number of offspring desired, as more primitive breeds of goats tend to produce multiple offspring. Anglo-Nubian goats, similar both in stature and hardiness to the goats of southern Turkey, weigh in the region of 30-40 kg after seven to eight months (the age at which many are slaughtered prior to the

<sup>216</sup> Garnsey 1988b, 198. The statistics (which Garnsey is not alone in using) were for the most part presented by Dahl and Hjort 1976, 220; the size of flock required was presented by Halstead 1981, 314.

<sup>217</sup> Ryder 1983, 220-1, and Cribb 1991, 30-2.

<sup>218</sup> Statistics compiled from own flock.

onset of winter) and can, when adult (and male), weigh up to 86 kg.<sup>219</sup> Furthermore, the gestation period for goats is shorter than for sheep (120 days versus 150) allowing for two lots of kids per year.<sup>220</sup> Goats also do not require pastures of the same quality as sheep, which means that more marginal land can be exploited: it should be noted that in the area around Sia today few sheep are kept, and goat is the most abundant source of meat.<sup>221</sup>

The equation of 'pure pastoralist' with 'carnivore' is false. The main food of many pastoralists is milk, and the meat of the animal is only one of a multitude of products. Sheep and goats are almost as valuable alive as when slaughtered; it has been noted that the last thing primitive husbandmen do is to kill and eat their animals.<sup>222</sup> Milk production is the most efficient way of converting vegetable to animal protein: sheep's cheese is at least 25% protein compared with 15-20% in meat, and its proportion of fat is 35% compared with 30% in meat.<sup>223</sup> The sheep present in highland Lycia today, the Akkaraman, yield their body-weight in milk, 20-35 kg per ewe, over the four month summer season (May to August). Goats are even more productive than sheep, producing about 2 kg of milk a day (224 kg over four months), with 3 kg of milk producing 1 kg of cheese; a flock of one hundred milking goats, therefore, produces 66.6 kg of cheese per day, or 7,466 kg of cheese over the summer months.<sup>224</sup> The cheese can be stored, matured and sold, as it is today at Koz Ağacı, and on the Elmalı plain.<sup>225</sup> Such milch-flocks, however, also produce a substantial quantity of offspring which can be used for their meat, or (if female) for augmenting the flocks.<sup>226</sup> Allowing for a complete turn-over of the flock within seven years and allowing for up to five males (which is higher than normal), it can be assumed that fifteen of the goats are non- or less-productive for much of the year. Eighty-five goats would still produce ca. 6,350 kg of cheese in the four summer months. Garnsey estimated that a family of six would require ca. 1,950 kg of meat per year, which has 5-10% less nutritional value than cheese. Twenty milch-goats of an average 20 kg would, over the summer months alone, provide 1,493 kg of cheese. If these twenty animals were slaughtered at the end of the summer months, a family of six would be able to gain sufficient nourishment. In order to ensure that twenty animals could be replaced, thirty breeding nannies could be maintained (assuming an approximate kidding rate of 80% with 20% mortality). Assuming a 50% male-female ratio of offspring, all female offspring could be kept and all male (castrated) offspring slaughtered along with around ten of the older nannies. Replacement billy-goats could be kept when required. A flock of thirty would be a bare minimum, however, as it offers a minimal buffer against wolf-loss, disease, accidental death and fluctuations in birth-rate.<sup>227</sup> No family, however, would

<sup>219</sup> Holmes Pegler 1910, 166, 181, 183.

<sup>220</sup> Renfrew and Wagstaff (eds.) 1982, 165.

<sup>221</sup> In the Negev desert, goats are kept as they are able to survive and produce much better than sheep on shrub vegetation and stony hills. Levy 1992, 70. See also Chang 1984, 47.

<sup>222</sup> Ryder 1983, 714-5.

<sup>223</sup> Ryder 1983, 721.

<sup>224</sup> Goats yield a milk to body weight three times better than cows, and four times better than sheep; Renfrew and Wagstaff (eds.) 1982, 162. The 2kg of milk per day per goat is an average, Syrian milk goats have been recorded as producing as much as 9 kg of milk per day (1016kg over four months); Holmes Pegler 1910, 63.

<sup>225</sup> Cheese is matured at Koz Ağacı today in a small cavern beneath one of the ancient houses on the edge of the plain. On Elmalı, see Harrison 1986, 34.

<sup>226</sup> Chang and Koster 1986, 109.

<sup>227</sup> Extreme fluctuations in birth-rate, though moderately rare, have to be guarded against; for example the birth-rate of the Black Welsh Mountain flock mentioned in footnote 218 above dropped by 47% in one

require the large flock proposed by Garnsey, as much of their nutritional requirements could be satisfied by milk products alone (either through their consumption or sale). Furthermore, besides milk and meat, other products of the animals - a twice-yearly wool crop, leather, horn and bone - could be traded with non-pastoralists for cereals, further reducing the number of animals required. Modern pastoralists in the Antalya/Burdur region survive in this fashion today; the number of animals they are required to kill during the winter months when milk production dries up is about one per week for consumption by their families and friends: a total of about 32 animals (although it should be born in mind that they do not gain all of their nutritive requirements from meat alone).<sup>228</sup> A flock of an average size of one hundred animals would be ample for subsistence purposes, requiring about 1 km<sup>2</sup> of land; in times of crisis it would certainly be possible to survive on fewer animals still.<sup>229</sup> The number of animals owned today by the villagers of Koz Ağacı is 500 goats and 200-250 sheep, which is 116 to 125 animals per household.<sup>230</sup>

Despite the flaws in Garnsey's argument, he is correct in stating that for a population of limited land resources, pure pastoralism is no alternative to agriculture. The risks inherent in keeping only animals, with the ever-present dangers of disease, malnutrition, accident, predation and theft, coupled with the less intensive use of the land, make pure pastoralism a less efficient and more risky subsistence option than agriculture. Pure pastoralism as a self-contained system, however, is something of a myth; pastoralists usually have dealings with non-pastoralists, if not practising some agriculture themselves.<sup>231</sup> Pastoralism is not necessarily (and seldom is) a substitute for agriculture, nor do the two systems need to be in competition.<sup>232</sup> Pastoralism has been represented as wasteful of resources, and consequently an extremely unwise choice for the subsistence farmer.<sup>233</sup> The assumption has been that it necessarily competes with agricultural production for arable land. However, ethnographic evidence for modern herders in Greece and Turkey reveals that pastoralism can and does articulate with crop cultivation without competition over ecological or territorial resources. Koster has demonstrated how trophic exchanges in both pastoral and agricultural regimes increase the overall productivity of the ecosystem of Greek village herders.<sup>234</sup> Sheep graze off fallow and stubble fields while providing dung for them; sheep and especially goats graze

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year, from 171% in 1993 to 124% in 1994. It returned back to 172% the following year. Various causes such as lack of good pasture or sickness can all lead to such fluctuations.

<sup>228</sup> For the figures on the milk production of goats and the number of animals killed, see Harrison 1986, 33-4. The average number of animals kept by pastoralists in the Elmalı plain today is two hundred sheep and fifty goats, about twice the number required for subsistence in the past. See Ryder, 1983, 647. Until recently in modern Turkey pastoralists grazed their flocks 'for free'. Modern state control has ensured that grazing fees are paid; consequently, in southeast Turkey the number of animals required to support a family has doubled since 1950 to an average flock size of 268.

<sup>229</sup> See Cribb 1991, 35-6 for actual sizes of flocks maintained by seasonal nomads.

<sup>230</sup> Figure provided by Mehmet Cankara of Koz Ağacı. The villagers of Koz Ağacı, however, have a mixed economy and sell much of the meat and milk products that they produce.

<sup>231</sup> On the non-existence of pure pastoralism see Goldschmit 1979, 15-28, esp.16.

<sup>232</sup> Chang and Koster 1986, 98.

<sup>233</sup> Lewthwaite 1981, 57-66: 'The myth of archaic pastoralism dies hard. Pastoralism is not a substitute for agriculture in unfavourable circumstances. Both forms depend on herbaceous growth, which dairy pastoralism channels through the extra trophic level of the flock, leading to a minimum 90% loss of efficiency.' This ignores the fact that much of the herbaceous growth is unsuitable for human consumption and may be growing in areas unsuited to agricultural use.

<sup>234</sup> Koster 1977, cited by Chang and Koster 1986, 103.

land that cannot be ploughed. Agricultural residues are given to sheep and goats as supplemental feed. In the Eastern Taurus mountains today pasturage in the yayla is rented from landowners in alternate years: the landowners are paid for the use of their fallow fields while benefiting from the deposition of animal droppings.<sup>235</sup> A rotation system is maintained which benefits agriculture and animals alike.<sup>236</sup> The consumption of fodder crops by humans in times of famine, as discussed above, is another way in which the integration of animal husbandry with agriculture helps to act as a 'safety valve' minimising risks in times of subsistence crisis. In times of plenty, excess or spoiled stores of food, which have not been, or cannot be, sold, can be fed to animals as fodder. In times of crisis, not only can the animals themselves be eaten, but their fodder can also be consumed.<sup>237</sup> Localised, small-scale forms of pastoralism, therefore, are efficient and help to minimise subsistence risk while maximising output.

One animal frequently neglected from discussions of animal husbandry in the ancient world is the ox.<sup>238</sup> Oxen provide milk, leather and meat, but more importantly they are working animals, pulling carts and ploughing the land. In a primarily agricultural society, therefore, we should expect oxen to be valued, whereas in a primarily pastoral society they would not be as highly rated as they would not be required as draught animals, they are not as efficient as either sheep or goats at converting vegetable into animal protein, and are not as hardy (the risk of losing one's entire investment with the loss of a single animal was obviously also greater). The Pisidians appear to have valued oxen very highly, they are said to have worn helmets decorated with ox-horns and ears, and also to have carried ox-hide shields (although this was probably because ox-hide was the best material for the job).<sup>239</sup> Terracotta figurines of oxen were left as votive offerings at the sanctuary of the Perminoudeis in southwest Pisidia, and it was oxen that the citizens of Oinoanda in the Kibyris were required to bring to be slaughtered during the Demostheneia.<sup>240</sup> Animal remains excavated at Sagalassos were made up of 46% bovids, 28% ovicaprids and 26% suids.<sup>241</sup> It is revealing to compare this with a known pastoral site, the Shiqmim cave in the Negev where the percentages are 86.7% ovicaprids and 8.17% bovids.<sup>242</sup> Furthermore, the bovid remains from Sagalassos reveal a high incidence of pathologies associated either with heavy burdening or with 'unnatural positioning of the extremities'.<sup>243</sup> It has been suggested that oxen were raised at Sagalassos both for their meat and for milk, as only adults were killed.<sup>244</sup> They may primarily have been kept for their strength. The pathologies are ascribed to herding on steep slopes. It is less usual for oxen to be herded on steep slopes, not least because they require higher quality grazing than sheep or goats. Given the relative inefficiency of oxen in producing milk when compared with goats, it seems more likely that the pathologies were caused by

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<sup>235</sup> Cribb 1991, 117-9.

<sup>236</sup> The articulation of the two systems enables land to be used more intensively with less need for lengthy periods of fallow, hence an increase in animal produce (up to a certain level) leads to an increase in agricultural produce. Gallant 1991, 52-3.

<sup>237</sup> Halstead and Jones 1989, 54.

<sup>238</sup> Jongman 1988, notes this neglect.

<sup>239</sup> Herodotos 7.76.

<sup>240</sup> Mitchell 2000, 110; Wörrle 1982.

<sup>241</sup> Van Neer and De Cupere 1993, 226-33.

<sup>242</sup> Levy, 1992, 73.

<sup>243</sup> Van Neer and De Cupere 1993, 231-2.

<sup>244</sup> Van Neer and De Cupere 1993, 233.

overburdening. Nucleated settlements with dispersed land-holdings often lead to an extensive pattern of land-use only practicable with the use of animals for traction and haulage.<sup>245</sup> The oxen were probably employed in ploughing land, and in hauling crops and timber up to the site at Sagalassos.<sup>246</sup> The Sagalassos results point to a site dependent upon agriculture but with a significant element of pastoralism; Ariassos is unlikely to have been different.

The percentage of suid bones discovered at Sagalassos is interesting. We have no comparative evidence for pig breeding in the region in Ottoman times, due to the prohibition of pork consumption in Muslim law, but pig appears to have been an important source of meat at Sagalassos in antiquity.<sup>247</sup> Unlike sheep, goats or oxen, pigs are primarily a source of meat. The high percentage of pig bones found at Sagalassos indicates that pig was a more important source of meat than sheep or goats (as the percentage of meat to bone is higher). Pigs could be grazed in forests, thus utilising poorer soils. It appears that ham was something of a highland speciality in antiquity, as Lycia and Kibyra were both renowned for their hams.<sup>248</sup> Ham, as a speciality product, could help to produce money from the utilisation of non-agricultural land.

Bee-keeping is another subsistence option whose importance is always difficult to estimate without written evidence. Bees may be kept both in hives at a settlement, or they may be moved along with the apiarist. Honey could prove a lucrative element of trade. Honey (and wine) is recorded as having been traded from Coracesium on the Pamphylian coast with Alexandria in the third century BC.<sup>249</sup> Three niches in an external wall of house Qp3 at Sia may well have been bee boles built to contain hives.<sup>250</sup> In the Milyas there are pillar apiaries (to keep out bears) which have been seen as the model on which the Lycian pillar tombs were based.<sup>251</sup> Honey can serve as an important seasonal crop and an adjunct to pastoralism, as bees need no tending during the winter months (and little tending during the summer).<sup>252</sup> Bee-hives, like sheep and goats, are also notoriously difficult to count accurately for the purposes of taxation and may therefore have provided a useful tax-free source of income.

### 2.3.3 MOBILE PASTORALISM

A moderately important, and high profile, means of subsistence utilised even today in the region is transhumant pastoralism - the seasonal movement of livestock and men between highland and lowland pastures. Transhumant pastoralism has been seen as an enduring, even essential bond between the various inhabitants of the mountains and lowland plains in

<sup>245</sup> Halstead and Jones 1989, 49.

<sup>246</sup> Davis 1874, 195-6, noted 'two miserable oxen' being used to draw carts in the plain south of Bucak on the way to Bademağacı.

<sup>247</sup> Pigs are occasionally recorded in the Ottoman tax documents for areas inhabited by non-Muslims underneath the heading 'resm-i canavar' or tax on monsters.

<sup>248</sup> Athenaeus 14.657E.

<sup>249</sup> French 1992, 172; Edgar 1926.

<sup>250</sup> For similar structures, see Crane 1983, 117-62, esp. figs. 165 and 179. See also plate 3.

<sup>251</sup> Fellows 1978, 158; Petersen and von Luschan 1889, 163; Kjeldsen and Zahle 1975, 345, abb. 25-6.

<sup>252</sup> Harrison 1986, 37. Beekeepers today travel from the coast to the Seki and Elmalı plains for the months April to September.

southwest Turkey throughout history. With varying degrees of confidence it has been proposed that in antiquity the Lycians, Pamphylians and Pisidians all practiced transhumance, and that this ancient tradition can still be observed in the seasonal movements of the dwindling numbers of semi-nomadic *Yürüks* from winter pastures (*kışla*) on the coast to summer pastures (*yaşla*) in the Taurus mountains. The practice of transhumance on any scale in antiquity raises many questions about the inter-relationships between regions, cities, cities and their territories, different ethnic groups, and sedentary agriculturists and mobile pastoralists. An examination of the issues involved can help to illuminate the frequently under-emphasized complexities involved.<sup>253</sup>

Ferdinand Braudel, in general, and Xavier de Planhol, in particular, documented the relationship between highland and lowland, mobile pastoralist and sedentary agriculturist in different areas of the Mediterranean region.<sup>254</sup> The temptation has been to take the outline of Braudel's account, to fill it in with detail provided by De Planhol, and to project this picture back into antiquity regardless of the different races and cultures of the successive inhabitants of the region. The apparent timelessness of village life in Anatolia is beguiling and often commented upon; it is not unsurprising that transhumance has been supposed to be part of this changeless pattern.<sup>255</sup> Considerable energy has been expended on revealing the faults of such an approach to transhumance in Italy in antiquity, but such scepticism remains almost entirely absent from the fleeting references to transhumance in southwest Turkey.<sup>256</sup>

Pastoralism and transhumance in antiquity have received some attention, and earlier assumptions about their importance as a subsistence option have been strongly challenged. These challenges, however, while proving a useful counter-balance to over-enthusiastic claims about transhumance and pastoralism, have themselves often been over-emphasised. The arguments against transhumance have tended to proceed from general criticisms of pastoralism, to more specific arguments against transhumance itself. By addressing some of these arguments in detail, I hope to reveal that transhumant pastoralism can, in particular circumstances, be desirable, even necessary, subsistence options.

If pastoralism on a small scale integrates well with agriculture, then it needs to be seen why transhumance should become necessary. Transhumance involves the temporary relocation of peoples on a seasonal basis, and the type of transhumance is distinguished through the

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<sup>253</sup>The need for an understanding of transhumance in this region in antiquity is emphasised by Mitchell: 'Mountain and plain, Pisidia and Pamphylia, were inextricably bound together. Seasonal migration, transhumance, and mutually complementary economic conditions meant that neither could exist without the other. This complex relationship can be described in infinitely more detail by a modern geographer than by an archaeologist or a historian, but it is fundamental to an understanding of the region at all periods. It had cultural as well as economic and social ramifications.' Mitchell 1991b, 121.

<sup>254</sup> Braudel 1972, esp. 85-102; de Planhol 1958.

<sup>255</sup> See, for example, Broughton 1938, 628: "[the villages] seem to be almost indestructible and have remained in all regions regardless of racial stock, political organization, vicissitudes of conquest, or degree of culture." See also Fowden 1990, 343-70. In a topographical 'tour' through Lycia, Fowden states that the inhabitants of the valleys "in antiquity as now" escaped the summer heat by travelling to the highlands. Not all have been convinced of the longevity of transhumance in the western Taurus, see Ramsay 1892, 17-18; Hütteroth 1982, 202-18, esp. 207.

<sup>256</sup> For an overview of the debate about Italian transhumance, see Barker 1989; see also Garnsey and Morris 1989; Garnsey 1988b; Goldschmit 1979, 15-28; Halstead 1987; Lewthwaite 1981.

location of the 'permanent' homestead. 'Normal' transhumance is the movement of peoples from their 'permanent' winter residences in the plains into the mountains, and 'inverse' transhumance, the movement of peoples from their 'permanent' summer homes in the mountains down into the lowland plains. The underlying principle behind both systems is the same: to exploit the resources of another area while avoiding the worse consequences of one's own local environment.

Recent studies of transhumance have revealed a noticeable duality of approach. The first is primarily ecologically-based, as the physiological needs and relations between humans and animals are played out on a certain geographic terrain: the players change, but the playing-field remains the same.<sup>257</sup> Hence, in order to discover whether transhumance took place in a particular society, and what form it took, we need to see what it is about the environment that makes a particular form of transhumance either desirable or necessary. The second approach is ethnoarchaeological: once a study has been made of environmental conditions, comparisons are made with modern (or well-documented) pastoralist societies in similar environments. This approach tends to de-emphasise historical and political events as external to the focus of the study: the relationship of man and animal (and land). Against this view, Garnsey has claimed that geographical facts 'do not account for long-range transhumance, or even for the existence of a pastoral industry at all'.<sup>258</sup> He argues that we need instead to look to specific political and economic factors to discover the causes of transhumance.

Unsurprisingly, both views contain an element of truth; the former takes the nature of humans as a given and (relatively) constant factor, and seeks to explain what environmental factors make transhumance likely or even necessary, whilst the latter looks for the reasons why, in the appropriate geographic and environmental circumstances, transhumant pastoralism may (or may not) have been practised. However, these approaches are not mutually exclusive: appropriate environmental conditions are a necessary, but not always sufficient condition for transhumant pastoralism (although, *contra* Garnsey, they can be a sufficient condition, for instance, in some desert environments where arable land is poor and irrigation is uneconomical or impossible), and appropriate political, economic and cultural conditions are also a necessary, but insufficient condition. It is only a combination of the two elements which will (usually) provide us with a necessary-and-sufficient condition for the existence of transhumant pastoralism.

Mediterranean transhumant pastoralism is often seen as a response to population pressure on limited agricultural resources. Small herds of cattle, sheep, and goats are considered to have been part of the economic strategy discussed above for increasing the total production of a land-use system based on cultivation. Transhumance emerges out of sedentary pastoralism as a means of exploiting marginal environments, the need for which increases with the number of animals. If economic factors intervene, increasing the value of animals, this too adds to the necessity of transhumance. Taxation, for example, can lead both to an increase in animal population, and also an increased interest in transhumance: more animals are required in order to meet taxes, while the mobility of flocks means that animals can be moved in order to escape the notice of the tax man. However, while such an explanation is

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<sup>257</sup> Levy 1992, 66.

<sup>258</sup> Garnsey 1988, 206-7.

plausible, it is unnecessary. Larger flocks may arise as a result of transhumance, not as a cause of it. Transhumance need not be seen as a response to population pressure, so much as a means of exploiting (more distant or lower quality) land resources more effectively. Furthermore, although pastoralism clearly operates together with agriculture in a beneficial fashion, the requirements of each system are somewhat different. Garnsey has argued that the removal of livestock from the lowlands is detrimental to agriculture as it deprives the soil of fertiliser.<sup>259</sup> Such considerations are important but need to be weighed against the benefits of transhumance.<sup>260</sup>

In a Mediterranean environment such as that in Pamphylia, livestock could graze in the lowlands from late October until late April providing a substantial quantity of fertiliser at precisely the time when it would be needed for the growing of crops (with the exception of winter wheat). When the animals were absent, the soil would have half a year to recover from the winter grazing.<sup>261</sup>

Transhumance is beneficial for the animals as it enables them to move to fresh pastures and, because of the delay between growing seasons, results in the grazing of the two quantities of spring growth. Moreover, the use of extra land is not only beneficial in itself, it also means that the lowland pastures are free of livestock for a substantial amount of time. Overuse of pastures can be damaging both for livestock and for crops. If animals graze the same land for too long it becomes deficient in many vital minerals and the soil becomes too acidic for most crops to grow.<sup>262</sup> Grass which is too rich is not only unpalatable for sheep, but can result in 'pulpy kidney' or enterotoxaemia.<sup>263</sup> Sheep do not readily graze on fouled grass, in addition to which the initial effect of fresh, concentrated dung is harmful to the grass.<sup>264</sup> Intensive grazing leads to a proliferation of poisonous grasses and the eradication of edible grasses; furthermore, when herbage is grazed too closely (and for too long) the chances of parasitic and viral infections are greatly increased, not only for the sheep but also for the humans in contact with them, as parasites, bacteria and viruses are harboured in the basal herbage and the faeces lying on the soil.<sup>265</sup> Finally, the lowlands in summer, especially in Southwest Turkey, are not conducive to good health; the hot, humid weather is not only unpleasant (especially for sheep with the added disadvantage of their fleeces) but also greatly

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<sup>259</sup> Garnsey 1988, 207.

<sup>260</sup> Sallares 1991, 383-4, argues that pastoralism and agriculture were largely divorced from one another in antiquity.

<sup>261</sup> In central Lycia, modern transhumant pastoralists camp in the lowland plains from late October/November to April, moving when the winter pastures are exhausted, usually by late April, through the Elmalı plain to the yaylas where they remain until August. They then spend September and October in Elmalı, grazing their animals on wheat stubble, and returning to the coast when winter sets in; Harrison 1986, 32-3.

<sup>262</sup> Robinson 1979, 32-3.

<sup>263</sup> Ryder 1983, 167 and 333.

<sup>264</sup> Ryder 1983, 735.

<sup>265</sup> Ryder 1983, 323. Although the combination of these two factors, heat and disease, are often stated, in the case of Lycia, to be sufficient reasons to induce the Lycians to travel into the mountains for their own benefit, they seem, in fact, to play virtually no part at all in the choice of farming systems (the emphasis of these factors is probably related to the fact that most authors on the subject come from temperate, relatively disease-free environments). The presence of malaria in Ancient Greece, for example, does not appear to have changed habitation patterns but rather led to the evolution of malaria-resistant peoples; Sallares 1991, 278-9.

increases the chances of infection and fly-strike. The alternation of land-use is beneficial both for the soil and the livestock.

Pastoralism, transhumance and agriculture have so far been spoken of in general terms as options for societies; yet societies are rarely homogeneous. Interactions within societies can make options viable which if practised on their own would carry too great a risk for the individual. Kinship and village ties can help reduce the consequences of failure for particular individuals. Individuals, or family groups, can be 'pure pastoralists' within a society which is primarily agricultural.<sup>266</sup> The poorer elements of society would tend to be forced into more mobile forms of pastoralism either because their marginal land fails to produce an adequate crop, or because they have no land to farm.<sup>267</sup> Transhumance may not have been an option for the poor, landless elements of society, but a necessity. The poorest shepherds, unable to afford their own flocks, may well have had to look after the sheep of the wealthy, or a communal flock may have been kept on behalf of the whole community: both systems are practised in Southwest Turkey and Greece today.<sup>268</sup> Even when substantial flocks are not necessary for subsistence, they can act as an insurance against partial crop failure. If drought kills the pastures (and hence the crops also), the animals can be slaughtered, and the meat preserved (along with the fleece, bone and horn).<sup>269</sup> If livestock perish from disease, or when waiting for flock numbers to increase following a bad year, shepherds may be able to rely on their agricultural kin to support them through hard times.<sup>270</sup> However, it should be remembered that even dead, diseased sheep provide wool, leather and horn, which can be traded for food. Transhumance practised by part of a community is a good form of risk management, as bad conditions in the lowlands need not affect the highlands, and vice-versa. In his work on subsistence in antiquity, Gallant mentions shepherding only once: as a means of removing excess population from a household in times of subsistence crisis.<sup>271</sup> Diversifying means of production, and extending the area of exploitation (with the additional possibility of trade with other peoples further afield) is a good insurance against subsistence crisis.<sup>272</sup> Transhumant pastoralism, therefore, if articulated with agriculture and given the right environmental conditions is both a useful and desirable means of subsistence.

Pastoralism and transhumant pastoralism, can be seen not only as a desirable form of 'insurance', and a useful source of meat and income for society as a whole, but also as one of

<sup>266</sup> The heterogeneous, yet articulated, nature of farming systems within a single area is demonstrated in the present-day Elmalı plain; Harrison 1986, 29-44.

<sup>267</sup> Such a case is recorded as having happened in the sixth century AD: a farmer needed 25 modii of seed grain to sow his land, yet in return it only yielded 25 modii. In this case he was fortunate enough to have been assisted by St. Nicholas, and his land subsequently yielded 125 large modii Sevčenko and Sevčenko (eds.) 1984, 92 section 59.

<sup>268</sup> Chang 1984, 45: less than 10% of the village of Didyma (population 1,500) herd as a full time occupation the 9,500-12,000 sheep and goats owned by the villagers. For the payment of shepherds in Turkey, see Ryder 1983, 220; see also Dio Chrysostom, *Or.7*; Homer, *Odyssey* 14.104.

<sup>269</sup> Many Turkish peasants today kill their excess sheep in the autumn to make *kavurma*: the meat is cooked and preserved in fat, and stays edible throughout winter. In times of emergency this process ensures that essential food is not lost.

<sup>270</sup> The inscriptions from Lycian tombs seem to indicate that the Lycians had close ties with their extended families. See Bryce 1986, 156.

<sup>271</sup> Gallant 1991, 133-4.

<sup>272</sup> See Garnsey and Morris 1989, 98-106, esp.99.

very few options open to those who live on the peripheries of society.<sup>273</sup> The form of transhumance practised, the sizes of the flocks and their purpose are all variables dependent on many factors: the demand for wool, leather, meat or milk may all change the constitution and sizes of flocks.<sup>274</sup> The more sheep or goats that are required, the more marginal land is exploited and the more incentive there is to travel further. Many geographic regions can be divided into three zones, lowland, middle lands and highlands; the coastal plain of Pamphylia, the highland plains of Pisidia and the surrounding mountain slopes can be divided more or less into three such zones. At different times peoples can be driven up into the higher areas in order to find security, and transhumance may then be to the plains below in winter or to the highlands above in summer, depending on the circumstances.<sup>275</sup> It is clear that transhumance is far from being the static system that it has been depicted.

Many of the arguments against pastoralism and transhumance are valid, but over-emphasised; it is clear that it often makes sense for limited numbers of people from within a particular society to practice pastoralism alongside the agricultural activities of their sedentary neighbours, as a form of insurance against local environmental conditions, a method of removing surplus population from a particular locality, and of employing land further afield that would otherwise remain unexploited.<sup>276</sup> Sia suffered from a dearth of good agricultural land; both lay on passes to the lowlands. In the case of Sia, therefore, both a limited form of transhumance exploiting the poorer land in its territory, and a more long-range form of transhumance, moving down the Merdivenli Pass to the lowland area around Karaveliler (8 km or two and a half hours walk to the southeast of Sia and potentially within the territory of Pamphylian Perge), would appear to complement the agricultural exploitation of the good land. The neighbouring city of Sia at Melli some twenty kilometres to the east was in a similar environment. Although the Melli region was occupied in the fifteenth century almost entirely by pastoralist nomadic groups, with only two villages recorded, we should be wary of seeing such large-scale transhumance as being the necessary result of the environment.<sup>277</sup> As Ramsay points out the practice of entire-community transhumance would be counter to Roman urban culture (and we have no evidence that it occurred). Transhumance could, however, be practised by a lesser number of the community, and would constitute a viable, and at times, desirable subsistence strategy. That transhumance can survive alongside agriculture is born out by records from Ottoman through to modern times for the region in antiquity roughly defined by Lycia, Pamphylia, Pisidia, the Milyas and the Kabalis. The environmental conditions of the region are clearly favourable enough for some degree of mobile pastoralism; the archaeological and literary evidence for transhumance in antiquity in the region is sparse, but likewise encouraging.

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<sup>273</sup> Halstead states that 'the *recent* highland economy has been heavily subsidized by and parasitic upon the market economy of the lowlands (my italics)'; although it is better to substitute inter-active for parasitic (except in the case of banditry) there is no reason to deny such a relationship in antiquity. Furthermore, he accepts that 'specialized pastoralism' may have existed in agriculturally marginal areas in antiquity but not usually in the arable lowlands; it is better to describe it as being practised by the peripheral elements of the same society; Halstead 1987, 80-1.

<sup>274</sup> For example, the unusual composition of flocks of sheep recorded on Crete in the Late Bronze Age appears to indicate that they were kept for their wool; Killen 1964, 1-15.

<sup>275</sup> See, for example, Nixon, Moody, Price, and Rackham 1994, 258.

<sup>276</sup> Gallant 1991, 133-4.

<sup>277</sup> Başbakanlık Osmanlı Arşivleri, İstanbul, Teke Liva Müsellem Survey, *Tapu Defter* 14 (late fifteenth century), 398-438.

Shepherding has never been a glamorous or particularly noteworthy profession, and the few times ancient authors refer to Pisidia and the Milyas it is not for the most part to speak of agricultural practices but to describe incidents of violent confrontation. A small number of funerary monuments to the north of Pisidia depict the tools of trade of sheep and goat-herds, but in the rest of Pisidia, Pamphylia, the Milyas and the Kabalis such testaments to animal husbandry are lacking.<sup>278</sup> We must look for direct evidence of pastoralism in the archaeological record, and although the view that pastoralists are archaeologically invisible has been refuted, it is nevertheless extremely difficult to find and date many of the remains which semi-permanent campsites leave.<sup>279</sup> Stone-lined hearths, tent foundations and stone-built corrals are used, re-used and re-built and do not tend to have been built in a datable style in the first place. About 2.5 km southwest of Balbura in the Kabalis, a pastoral site dated by pottery remains to some time in the eighth to the sixth centuries BC, has been identified at Karlağaç Kayası. Another possible pastoral site has been identified below the İn (cave) above the village of Çaltılar approximately 10 kilometres to the east, where there are also signs of occupancy during the eighth to sixth centuries BC.<sup>280</sup> The sites in the Kabalis are similar to a possible Pisidian pastoral site that has been discovered on a small *yayla* lying opposite Panemoteichos, although no sherds were found at this site. All of the sites were situated in areas and at altitudes where arable cultivation could not have been the principal means of subsistence. Further pastoral sites have also been proposed to the north at the *yayla* of Demirli, and also at Girdev Gölü near the city of Oinoanda.<sup>281</sup>

Literary evidence for transhumance in Lycia has been seen in Herodotos' account of the sack of Xanthos in 545 BC when eighty families escaped slaughter because they were absent.<sup>282</sup> Treuber, Metzger, Bean and De Planhol have all conjectured that these families were summering their flocks in the mountains.<sup>283</sup> Similar evidence for the highland regions, Pisidia, the Kabalis and the Milyas is lacking. The later evidence we possess, however, describes a situation in which agriculture was clearly the primary means of subsistence. Strabo spoke elsewhere of mountain peoples as being forced into trade (and brigandage) with lowlanders because of the poverty of their own territory, and speaks of the Ligurian highlanders exploiting the lowland plains (inverse transhumance).<sup>284</sup> However, in discussing Pisidia, Strabo, or rather his source, whilst he mentions agriculture, makes no mention of transhumance. Good evidence for transhumance in Pisidia, however, is provided by Cicero, who had first-hand experience of the region. Cicero (*De Divinatione* I.42.94) describes the Pisidians (amongst others) as being chiefly engaged in the rearing of cattle and therefore constantly wandering over the plains and mountains in winter and summer; he contrasts the Pisidians and others with the Carians and Telmessians who possessed fertile land. Although we cannot be sure to what extent Cicero is exaggerating for rhetorical purposes, his description of (at least a noteworthy number of) Pisidians leading a life of transhumant

<sup>278</sup> See Robert 1949, 152-60; Robert 1955, 28-33, pl.vii; Robert 1960, 578; Brixhe and Gibson 1982, 138-9, 141-3; Waelkens 1977, 277-315.

<sup>279</sup> Cribb 1991, 65-6.

<sup>280</sup> Coulton 1992, 49, 55, fig. 4, and Coulton 1993a, 459-72.

<sup>281</sup> Personal observation; Bean 1960, 43.

<sup>282</sup> Herodotos, 1.176.

<sup>283</sup> Metzger, and Coupel (eds.) 1963, 80 n. 23 (suggested by De Planhol); Bean 1978, 50; see also Robinson 1999; Robinson forthcoming.

<sup>284</sup> Strabo C 202.

pastoralism is credible. Transhumant pastoralism is naturally a more noticeable lifestyle than sedentary agriculturism, and its extent may therefore be exaggerated without any rhetorical intent.

It is clear that the Pisidian cities were frequently in conflict with one another; it is therefore possible that transhumance was practised within a city's territory solely by those who paid allegiance to that particular city.<sup>285</sup> However, at least some mainland Greek cities shared the use of the mountain pastures in antiquity, a practice attested by Thucydides (5.42) and Sophocles (*Oed. Tyr.*1121). Both Sia and Ariassos are located close to passes to the lowland plains; it would have been possible, therefore, for transhumant pastoralists to use the hill-sides and the yaylas in the summer months and to move down with their flocks into the lowland plains in the winter.

Not all cities were equally likely to be able to practise transhumance. Our picture of Hellenistic Pisidia, the Kabalis, Milyas and Pamphylia, is focused on the urban centres, yet it is apparent that many cities were at the centre of a network of small villages, rather like modern Turkish *mahalles*. Although we lack accurate data for the territories of Sia and Ariassos, Oinoanda in the second century AD is recorded as possessing thirty-five villages;<sup>286</sup> the Kyaneai survey in lowland Lycia has revealed a broad spread of settlements across the territory;<sup>287</sup> the Balboura survey in the Kabalis has revealed a similar, if less dense pattern. The Roman period, therefore, is likely in many areas to have become a 'saturated milieu' in which transhumant routes would become fixed with little scope for flexibility.<sup>288</sup>

The relationships of shepherds and settled farmers can be imagined to have involved all the usual difficulties of nomadic/settled relationships, regardless of the ethnic identities of the two groups. In modern Italy, nomadic shepherds, despite being of the same ethnic background, are recorded as having been treated with great distrust and suspicion by the villagers with whom they traded. In Turkey, the relationships of Yürüks and settled Turks were little different. In such a situation the ethnic origins of the transhumant shepherds matters little in their interactions with settled communities, their way of life makes them both useful and dangerous: it is what they do that matters and not where they come from.<sup>289</sup> It may be that we are misled by labels of ethnicity and of region, and that it did not matter where a shepherd had come from but rather with whom he traded, or where he wintered his animals. However, there is evidence to believe that herders were, at least sometimes, perceived as having ties to particular cities: the terms laid out in a recently discovered inscription resolving (amongst other things) a dispute over land-rights between Tlos and Oinoanda are indicative of a conflict arising from the encroachment of herders from one city (Oinoanda) onto the agricultural land of the other (Tlos).<sup>290</sup>

Access to pasture and water constitutes a political as well as a physical problem, determined by ethnic, political, social and economic considerations. Throughout history, and regardless

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<sup>285</sup> Ramsay 1892, 18.

<sup>286</sup> Wörrle 1988.

<sup>287</sup> Kolb 1993.

<sup>288</sup> Sallares 1991, 384, suggests that moving animals across multiple political boundaries in the Classical period in mainland Greece would likewise have been very difficult.

<sup>289</sup> See also, Tapper 1979, 95-114.

<sup>290</sup> Gates 1994, 233-4.

of region, transhumant pastoralists have coexisted in an often uneasy state of dynamic equilibrium with their sedentary neighbours. An example of this uneasy balance between pastoralist and agriculturist can be seen in Ottoman times.<sup>291</sup> Nomadic groups were reliant upon trade with their sedentary cousins, and formed an important part of the army; nevertheless the question of how to deal with such mobile groups was a continuous problem both on a local and state level. Transhumance, often a precarious form of existence, is sensitive to political, economic and environmental changes, and it is, therefore, extremely unlikely that transhumant pastoralism should remain unchanged through the centuries.<sup>292</sup> The history of transhumance is likely to be filled with land-disputes, outbreaks of violence and persistent animal-rustling. It is a small step from shepherd to bandit.<sup>293</sup> Population growth and the influx of new peoples into a region would exacerbate already existing problems. If transhumance were a way of life in the southwest Taurus in antiquity, it would be reasonable to expect a pattern of co-operation, coercion and mutual antagonism between and within population groups. Transhumance is a complex phenomenon dependent upon, and susceptible to political and environmental changes; the number of transhumant pastoralists at any one time must have depended on the ease of access to suitable pastures, climatic changes, and the viability of other means of subsistence. The balance between pastoralism and cultivation would have depended as much on the balance of power as on optimal land-use.

Semi-nomadic pastoralism should not be mistaken as a sign of primitiveness or tribalism; it is simply as a means of better utilising limited resources. Transhumance would have offered the inhabitants of Sia one way of alleviating their lack of good agricultural land, and exploiting the (limited) benefits of their territory to the full. Yet it is very unlikely, even from the outset, that many of the inhabitants of Sia would have been directly involved. A form of transhumance which would fit the physical evidence for Pisidia in antiquity is seen among the Pashtuns in Afghanistan, where some families remain in their villages to attend to crop cultivation while others specialise in pastoralism, migrating in the summer months to the mountain pastures.<sup>294</sup> A similar arrangement is seen also in Morocco, in the Atlas mountains.<sup>295</sup> Herds could have been communal or owned by family groups or even individuals. The example of King Amyntas with his three hundred flocks reveals how the very powerful could in some cases accumulate control over a large number of animals; such an accumulation of animals under the control of one man, on a much smaller scale, may have occurred at Sia.<sup>296</sup> Initially, when Sia was simply a small defensive tribal site, it is probable that the only pastoralism practised within the ca. 100 km<sup>2</sup> territory of the settlement was semi-nomadic. Economic and population pressures in the Roman period could have led to longer-range transhumance into the lowlands.<sup>297</sup> The need for any form of mobile pastoralism at Ariassos is less clear-cut. Furthermore, the territory around Sia formed something of a fortified backwater, ringed in by mountains. The lowland area at the

<sup>291</sup> İnalcik 1973, 38-41; Barkey 1994, 115-23, esp. 118 n.83.

<sup>292</sup> *Contra* Fowden 1990, 361, who sees it as 'almost as long-term as the landscape itself'.

<sup>293</sup> See further chapter 5.5.

<sup>294</sup> Tapper 1977, 163-70.

<sup>295</sup> Coon 1965, 213.

<sup>296</sup> Strabo 12.5.4-6.1.

<sup>297</sup> Semi-nomadic pastoralism in North Africa under the Roman Empire appears to have developed into long-distance nomadism due to demand from the Italian economy. Long-distance pastoralism ceased in the sixth century AD as the market collapsed; Bruce-Hitchens 1994.

bottom of the Merdivenli pass below Sia, although it may have lain on the northern border of (and within) the territory of Perge, was both of a low enough quality agriculturally and far enough away from Perge to allow the uninterrupted practice of transhumance.<sup>298</sup> The territory of Ariassos, on the other hand, was bordered by two powerful cities, Termessos and Comama, and several other smaller cities like Sibidunda and Panemoteichos, who would probably not have tolerated flocks from Ariassos on their land.

Mixed farming strategies are important in reducing the risk of subsistence crisis.<sup>299</sup> A mixture of farming strategies is visible in Strabo's summary description of the agricultural activity of the inhabitants of Selge. Strabo describes the 'wonderful' nature of the country around Selge where olives grow in many places and there are fine vineyards, good pastures, and varied stands of timber. Strabo draws a picture of an ideal mixed farming strategy. Animal husbandry is integrated with agriculture; different crops with different levels of demand and resilience are combined into a single farming system for the community as a whole.

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<sup>298</sup> Leake 1824, states that 'no cultivation was in sight' on the plain above Antalya (and below Sia). For Fellows' description of the same area, see above, chapter 1, 6, fn. 13.

<sup>299</sup> Gallant 1991, 34-6.

## CHAPTER THREE

### HELLENISTIC PISIDIA

#### 3.1 THE BEGINNING OF HISTORY IN PISIDIA

The history of Pisidia, as far as the literary record is concerned, truly begins in the Hellenistic period. Pisidia is mentioned four times in the context of the military campaigns of Alexander and his successors.<sup>300</sup> Alexander passed through the region in 334 BC, befriendng Selge, fighting past Termessos without attempting the formidable task of storming the city, conquering Sagalassos and some other (unnamed) Pisidian forts, before passing on.<sup>301</sup> Pisidia was clearly not of vital importance in Alexander's reckoning, as he left two of the three major cities relatively unfettered. Why Alexander chose to storm Sagalassos is unclear, it may be that it was not as well-defended as Termessos, that Alexander judged its position in the highlands to be of greater strategic importance, or that he wished to send a signal to the cities which he had left unharmed. Although Arrian's account presents the Sagalassians as the most warlike of the Pisidians, this may be literary exaggeration. Both Selge and Termessos appear to have been of more significance in the region at this time, as their re-appearance in later historical episodes confirms. Arrian was writing a history of Alexander, it would not cast Alexander in such a good light to suggest that he had by-passed his most difficult foe, the Termessians, to fight an easier opponent. The numbers of dead at the battle for Sagalassos as presented by Arrian hardly gives the picture of a well-defended city or of particularly formidable defenders. The Termessians had succeeded in holding off Alexander when they were manning their fortifications, for some reason the Sagalassians went beyond their fortifications and were routed. It is open for speculation whether the walls of Sagalassos were simply not as well-constructed as the walls of Termessos and could not therefore be relied upon, or whether the commander of the Sagalassians was reckless or foolish enough to think that his lightly-armed men could defeat Alexander's more heavily armed soldiers face to face. Unfortunately, Arrian's account provides little further information about the Pisidians. It is clear, however, that Sagalassos, Termessos and Selge were all organised, defended communities of significant stature by the fourth century BC.

The suppression of Sagalassos appears to have been the first step in pacifying the highlands. Some time after 332 BC (but before 319 BC), Alexander's satrap, Nearchos the Cretan, founded a colony, Cretopolis, in the Bozova at Büğduz.<sup>302</sup> Although nothing remains today that can be identified from the time of its foundation, the establishment of a settlement of Macedonian veterans in the region must have had an impact on the area. The presence of 'Macedonian' shield types on (probably) Hellenistic ostothecae from Sagalassos has been seen to be a sign of Macedonian settlers.<sup>303</sup> Even if the identification of the shield type as Macedonian is sound, however, we should not necessarily suppose that they indicate the

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<sup>300</sup> On the history of this turbulent period in Pisidia see Brandt 1992, 39-93; Mitchell 1991b, 122-5; Mitchell 1992, 4-6; on the Attalids and southern Asia Minor, see McNicoll 1997, 118-56.

<sup>301</sup> Arrian *Anabasis* I 27, 5-28.

<sup>302</sup> Mitchell 1994, 129-36; Sekunda 1997.

<sup>303</sup> Mitchell, Owens and Waelkens 1989, 67-68, pl. 16a; Waelkens and Kosmetatou 1997.

presence of ethnic Macedonians.<sup>304</sup> It is not uncommon for one group to adopt the weaponry or clothing of another, and it is known that Pisidians were recruited as mercenaries in the armies of Alexander's successors.<sup>305</sup> In Seleucid and Lagid forces, Pisidians were recruited as light-armed soldiers alongside Lycians and Pamphylans. Grave stelae of Pisidian mercenaries found at Berytos/Laodiceia reveal that Pisidians were also active in the Ptolemaic army. An inscription from Aspendos, dated to the period when the city was controlled by Ptolemaios I, also mentions Pisidian mercenaries.<sup>306</sup> None of the shield-reliefs has been accompanied by an inscription indicating that the deceased was Macedonian in origin. We should be wary of regarding shield-reliefs as indicators of ethnicity.

The next historical episode reveals once more the importance and power of Termessos in the region, as well as something of the way that the city was run. Alketas, the brother of Perdikkas, was defeated by Antigonos near the city of Cretopolis in Pisidia in 319 BC. It is likely that the reason why Alketas chose to fight near Cretopolis was because he had the support of the colonists, but his army also included six thousand Pisidians, many of whom appear to have come from Termessos. The elders of Termessos betrayed Alketas to Antigonos; Alketas killed himself, and was buried by the young men in the city, who then proceeded to attack Antigonos' men, who had to retreat from the area.<sup>307</sup> This single incident reveals not only the considerable military capabilities of Termessos but also something of the workings of the system of government in Termessos. The young men voted to defend Alketas, the elders to betray him. The young men then buried Alketas, against the will of the elders, within the city. We are not told more about the constitution of Termessos, nor who it was who was acting illegally (or contrary to customary practice), the young men or the elders. It is possible that the elders constituted a gerousia, and the so-called young men some form of an assembly.<sup>308</sup> It is equally possible that what we see is a tribal arrangement whereby the fighting-men have a council subordinate to the older men. The rebellion of the young men may represent the start of some form of democracy, or at least the decline of an older form of oligarchy. Diodoros' account is unfortunately too scanty to be able to draw any firm conclusions on the subject.

Pisidia re-appears in the historical narrative after a gap of one hundred years; in 218 BC Selge was involved in a conflict with Pednelissos.<sup>309</sup> A Seleucid force was sent under Garsyeris to help to defend Pednelissos. The neighbouring cities of Aspendos and Etenna, clearly worried by their expansionist neighbour, also sent troops to aid Pednelissos. Selge was defeated with, it is claimed, the loss of 10,000 men. Selge itself was besieged, and, after bloody fighting, was forced to capitulate in paying reparations of 700 talents and returning the Pednelissan prisoners of war (who otherwise would presumably have been kept or sold as slaves). The intervention of outside forces once again provides us not only with a brief glimpse of the power struggles between the cities of Pisidia but also of the importance attached to the region by outside forces. Antiochus III probably sent Garsyeris because he

<sup>304</sup> Nollé has claimed a Pisidian origin for the shields but it is hard to judge his claim as he provides no evidence; Nollé and Schindler 1991, 13-14, note 11.

<sup>305</sup> Griffith 1935, 44, 145, 261, 316; Bracke 1993, 19-20.

<sup>306</sup> Robert 1935, 428-30; Brandt 1992, 87-9.

<sup>307</sup> Diodoros XVIII 46: 11.

<sup>308</sup> Mitchell 1992, 6.

<sup>309</sup> Polybius V 72-7

was concerned that Selge was becoming too great a regional power, posing a considerable threat to the cities of the Pamphylian seaboard and thus to trade and communication.

It would be only thirty years before Pisidia was again visited by foreign military forces, following the defeat of Antiochus III at Magnesia in 190 BC.<sup>310</sup> The Roman consul Cn. Manlius Vulso swept through Pisidia with his army, coming to the aid of the Isindans, who were being besieged by their neighbours from Termessos. The siege was raised by the Romans, and Termessos was forced to pay 50 talents as a penalty. Sagalassos was the next to suffer, having also to pay 50 talents and 20,000 medimnoi of wheat and also of barley to prevent the Romans from laying waste to their lands. It has been convincingly argued that Manlius Vulso's rapacity was a deliberate and intelligent strategy that served to weaken the strong cities in the region, thereby gaining for the Romans the support of the weaker cities, whilst keeping his own army provisioned and occupied (and also adding to his own wealth).<sup>311</sup> At the same time, once again, we gain a glimpse of the inter-relations between Pisidian cities, with neighbour fighting neighbour whilst looking for alliances with whomsoever could be of assistance in their local disputes.<sup>312</sup>

In 165 BC Eumenes II launched a campaign against Selge, an indication yet again of the threat that Selge posed to the important coastal region of Pamphylia and to the interests of the Attalids. Selge appealed to Rome; the outcome of this appeal is unknown, but it reveals that the influence of Rome remained after the passing of Manlius Vulso. Selge remained a problem to the Attalids, as Attalos II invaded the territory of Selge again a few years later.<sup>313</sup> An inscription from the Milyan city of Olbasa, dated probably to 159 BC reveals the participation of the people of Olbasa in the 'Pisidian war' on the side of Attalos II.<sup>314</sup> Pogla also appears to have taken the side of the Attalids.<sup>315</sup> Kearsley has plausibly suggested that Selge was the cause of the 'Pisidian war,' and that they and their allies had succeeded in getting as far as to attack Olbasa, where they were defeated. Olbasa was clearly loyal to the Attalids. Given Termessos' animosity to Selge, we should expect that she too was on the side of the Attalids; the gift of the north stoa to Termessos by Attalos II provides confirmation.<sup>316</sup>

As Termessos appears to have been on good terms with the Attalids, the presence of fortification walls at Kapıkaya across the road that runs through the pass directly below Termessos has caused some debate.<sup>317</sup> Stark and Winter have suggested that the walls were constructed by the Attalids to prevent the Termessians from venturing into the territory of Attaleia. McNicoll supports this view, arguing, however, that it must have been erected at an

<sup>310</sup> Livy 38.15.

<sup>311</sup> Grainger 1995.

<sup>312</sup> Such a relationship can be seen in the treaty between Adada and Termessos, formed most likely as a defence against their two most powerful rivals, Sagalassos and Selge. See *TAM* III no.2; Wilhelm 1909, 3-26.

<sup>313</sup> Pompeius Trogus, *Prologus libri* 34; Allen 1983, 83; see in particular Kearsley 1994 on the actions of the Attalids in Pisidia at this time.

<sup>314</sup> Kearsley 1994.

<sup>315</sup> Bean 1960, 56-9, no. 103, pl. VII d.

<sup>316</sup> Heberdey 1941, 1.4, 9; Magie 1950, 2.1136-7; Lanckoronski 1892, 38-9; Coulton 1976, 287-8 fig. 113.

<sup>317</sup> Spratt and Forbes 1847, 1.233-8; Woodward and Ormerod 1910, 79-80, fig.3; Stark 1958, 119; Winter 1966, 129-30; Bean 1979, 107-8.

earlier date under Eumenes II and not Attalos II.<sup>318</sup> McNicoll's re-dating removes the problem, raised by Bean, that the construction of the walls so close to Termessos does not fit with the apparently good relations between Termessos and Attalos II. Nevertheless, if McNicoll's argument is to be accepted, it is less easy to explain why the walls were allowed to continue to stand once good relations were established with the Attalids. Surely Termessos would have demanded the destruction of the walls as the terms of any agreement with the Attalids. Bean must be correct in his suggestion that the walls were constructed either by or with the consent of the Termessians. The wall was clearly built to control the passage of people through the pass below Termessos (presumably in both directions, thus the orientation of the towers is largely immaterial), perhaps for the purposes of taxation.<sup>319</sup> The 'Pisidian war' as recorded in the Olbasa decree provides us with another possible reason for the construction of the wall. If the army of Selge and its allies were able to attack Olbasa, the need to prevent them from gaining access to the highlands via the territory of Termessos was clear. The walls could have been paid for either by the Attalids or by Termessos; similarly the men who manned the wall could have been Termessians or others in the service of the Attalids. The wall was built as an element of regional defence, although once built it would clearly enable the Termessians better to regulate (and tax) passage through the pass.

The Termessians do not appear to have suffered under the Attalids. By the time of Manlius Vulso's intervention in the region Termessians were already involved in colonising the Kibyris to the west (perhaps a source of their dispute with the Isindans).<sup>320</sup> At some time in the first quarter of the second century BC, probably ca. 169 BC, they were also involved in a conflict with the Lycian League.<sup>321</sup> The Attalids appear to have been willing to tolerate Termessos' behaviour. The Attalids were clearly exerting considerable effort in an attempt to maintain their control over the region. A further step was taken with the foundation of the port of Attaleia in Pamphylia in 158 BC. The period of colonising by the west Pisidians, and the establishment of a new Attalid Mediterranean port are unlikely to have been unconnected. It is possible that a mutual agreement was reached between the west Pisidians and the Attalids, a situation similar to that in 332 BC when the Selgeans supported Alexander as a means of furthering their campaign against the Termessians.<sup>322</sup>

It is not clear how the foundation of Attaleia would have been regarded by Termessos. On the one hand it may have represented an increase of traffic and trade heading inland from the port, on the other hand, its foundation also represented the establishment of a permanent power-base for the Attalids in the region. The actions of Termessos are not indicative of weakness, and it is possible that the Attalids did not resist this expansionism to the west (or even encouraged it), so long as they were unimpeded in founding Attaleia and in restricting the expansionist moves of Selge. Selge's expansionism was probably once more threatening the important Pamphylian ports. It is worth noting, however, that we have no record of Pisidian cities clashing with their Pamphylian neighbours. We read always of alliances of Pisidian cities against one another. The reasons for this may simply have been

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<sup>318</sup> McNicoll 1997, 120.

<sup>319</sup> Bean 1979, 107-8.

<sup>320</sup> See above chapter 3.1.

<sup>321</sup> The conflict with the Lycian league is recorded in the Araxa inscription of ca. 169 BC; *Supplementum Epigraphicum Graecum* 18.570; Bean 1948, 46-56, and Larsen 1956; for the date see Errington 1987.

<sup>322</sup> Arrian *Anabasis* I, 27-9.

that the Pamphylian cities were too powerful adversaries, or, perhaps, for Selge at least, that the Pamphylian port cities such as Side represented a source of income through trade that was too valuable to risk.

Pisidia was clearly considered to be of some importance by the Hellenistic kings, almost certainly as it provided a land route through to the coast from the interior. Unfortunately, all we catch are glimpses of the methods employed to gain control of the region. Force was, of course, common, but the foundation of a colony at Cretopolis reveals the first use in the region of a tactic that was later to be employed on a larger scale by Augustus.<sup>323</sup> The presence of an Attalid city-governor at Olbasa shows that their grip on the region may have been considerably greater than has been previously supposed, but, with the more powerful of the cities at least, the Attalids appear to have used blandishments as well as force.<sup>324</sup> As well as the gift of the north stoa to Termessos, it is possible that they were responsible for the construction of the walls at the newly-founded site of (Termessos at) Oinoanda.<sup>325</sup>

Pisidia was far from peaceful in the Hellenistic period, but nor was it a stagnant backwater. It is clear that from the time of Alexander the Great, Pisidia was an area of some strategic importance for the rival Hellenistic generals. We know that Pisidians fought alongside and against the Hellenistic generals and their armies within Pisidia in 319 and 218 BC, and that they submitted to Manlius Vulso in 189 BC. Pisidians also served as mercenaries in the Hellenistic armies.<sup>326</sup> Pisidia was clearly seen as strategically significant by the Attalids; the picture of Pisidia as an uncivilised and unimportant region is misleading.<sup>327</sup> Nevertheless, the cultural attainments of Hellenistic Pisidia (compared, for example, with Lycia) should not be over-emphasised based on present evidence.<sup>328</sup>

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<sup>323</sup> See Levick 1967, and below chapter 4.

<sup>324</sup> Kearsley 1994, 53-4. A small fortress at Ören Tepe lying opposite Panemoteichos in southwest Pisidia has been (mis) identified as an Attalid garrison post in the region; the site is almost certainly a Late Roman construction, see below, chapter 5.

<sup>325</sup> Magie 1950, 2.1136-7; Coulton 1982a, 121; Hall 1976, 196.

<sup>326</sup> Griffith 1935, 44, 145, 261, 316; Bracke 1993, 19-20.

<sup>327</sup> See Brandt 1992, 92-3, for a similar conclusion: '...Pisider waren ... aktive Teilnehmer am wirtschaftlichen, kulturellen, sozialen und politischen Leben der hellenistischen Welt ...'.

<sup>328</sup> Contra Bracke 1993, 28.

### 3.2 URBAN PISIDIA

The first literary account of urban settlements in Pisidia appears in a comment attributed by Xenophon (*Memorabilia* 3.5.25) to Socrates about the strongly fortified settlements of the Pisidians in the land of the Persian King. The discovery, in 1995, of a fortified mountain-top site situated c. 500m to the east and ca. 80m above the later site of Panemoteichos in southern Pisidia has provided us with an example of such an early Pisidian fortified settlement (fig. 7).<sup>329</sup> The name of the site is unknown, although, like the later settlement that was to replace it, it may also have been called Panemoteichos. It is referred to here as Panemoteichos 1.

The site of Panemoteichos 1 is substantial, covering an area of roughly 6.5 hectares. The most prominent feature of the site is its extensive wall-circuit of about 1.32 km (plate 4). Small piles of stone rubble provide some evidence of (probably domestic) buildings within the walls. There is also a building probably to be identified as a small in-antis temple.<sup>330</sup> There is no recognisable funerary architecture at, or near, the site. An inner enclosure on the hill-top, built against the most impregnable section of the wall circuit, appears to have served as some kind of acropolis. Most of the circuit was built in a very rough, uncoursed polygonal style, but the better-preserved east and southeast section was built with smaller, irregular trapezoidal blocks laid in courses with larger polygonal and trapezoidal blocks interspersed at irregular intervals. The construction of the walls is similar throughout, with two faces of more carefully prepared stones packed with smaller stones and rubble. There are no traces of mortar in the walls. The wall thickness varies along the course of the wall-circuit between c.2.5 m (on the north, west and southwest) to c.3.6 m (in the east and the southeast). The walls are nowhere preserved to a height of more than one and a half metres, so it is impossible to estimate their original height, nor is it possible to tell whether they would have originally carried wooden ramparts. The 'acropolis' area possessed a commanding view over the entire site, and could clearly be defended from all sides - a fort within a fort. Southwest Anatolian ware pottery dated from the eighth to the sixth century BC discovered beneath the fortifications of the site provide us with a *terminus post quem* for the walls, and hence, almost certainly for the site itself.<sup>331</sup>

Xenophon's reference to the fortified settlements of the Pisidians indicates the existence of inhabited Pisidian fortified sites. It is probable that Panemoteichos 1 included within its walls areas of (semi) permanent housing. Although little is left today apart from piles of small stone rubble, the domestic buildings could have been constructed from less durable materials like mud-brick and wood, or, like many of the older houses in the region today, from layers of wood and small stone rubble. Both methods of construction leave few visible traces (without excavation) once the building has fallen into collapse.<sup>332</sup> The extension of the

<sup>329</sup> Aydal, Mitchell, Robinson and Vandeput 1997.

<sup>330</sup> For a discussion of the temple building see Aydal, Mitchell, Robinson and Vandeput 1997, 155-7.

<sup>331</sup> Aydal, Mitchell, Robinson and Vandeput 1997, 151-3; see also above chapter 1.3.

<sup>332</sup> It is worth noting Fellows' observation on the houses of Elmali in the mid-nineteenth century, that they were 'good, but entirely built of mud and timber'; left to decay, such houses leave little visible trace in a surprisingly short amount of time; Fellows 1841, 229 (= Fellows 1852, 381-2). Spratt and Forbes I.270-1, also commented on the lack of housing visible at Balboursa: 'Piles of small stones cover the surface of the hill where there are no buildings. It is possible that these are the remains of the houses of the ancient inhabitants; at the present day the walls of the houses, often of large size, in the highlands of Lycia are

'great circuit' of the walls of Panemoteichos 1 to include the water supply would indicate that it was intended to defend a community for an indefinite period of time.<sup>333</sup>

Strabo describes a division in (first century BC) Pisidia between cities and tribal communities.<sup>334</sup> At Panemoteichos 1, the small, enclosed acropolis area created a small citadel area within the site itself. The temple building lay outside this area, so it is not likely that it had a religious function. The fortification wall of Panemoteichos 1 resembles walling at other nearby sites in Pisidia including Colbasa, Pogla, Huia, Prostanna and a smaller fortress-type site recently discovered at Arılık Tepesi (fig. 8; plate 5).<sup>335</sup> Of these sites, only Arılık Tepesi shows no indications of later rebuilding, and it too possessed a fortified enclosure within its circuit. A parallel may perhaps be seen with the Archaic site of Emporio on the island of Chios where the fortified area of the site possessed only one recognisable domestic building which has been identified as the hall of the chieftain.<sup>336</sup> The fortified area of Arılık Tepesi, like that of Emporio, was too small to have been anything other than a citadel or refuge site, with most of the population living outside its walls. Panemoteichos 1 and Arılık Tepesi present two slightly different pictures of tribal settlement in Pisidia. Panemoteichos 1 seems to have been built as a fortified settlement, and not just as a place of retreat in times of trouble. Whilst the acropolis area provided a distinct (and fortified) area for the tribal leader and his entourage, the fortifications seem to have been intended to defend an entire community.<sup>337</sup> The site was clearly first and foremost a defensive site; the temple structure points also to a religious function. Arılık Tepesi, on the other hand, appears to have been both simpler and smaller.

We know nothing of the tribal organisation of Pisidia, either before or after the move to fortified settlements. We possess no securely datable evidence of burial practices, nor of domestic buildings.<sup>338</sup> Given this lack of information, it is at present impossible archaeologically to define a distinct Pisidian culture at this time. Thus it is also impossible to assess exactly what impact interactions with the Persians may have had on Pisidian society

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constructed of alternate layers of earth or sods, and small stones; and as heaps of small stones abound at all the ancient sites, it is probable that the dwelling-houses were constructed formerly as they are now.' See also plate 18.

<sup>333</sup> Aydal, Mitchell, Robinson and Vandeput 1997, 144-51.

<sup>334</sup> Strabo 12.7.3.

<sup>335</sup> For the fortification walls at Colbasa (modern Kuşbaba), Pogla (modern Çomaklı) and Huia see Bean 1960, 44-7, 56, 80-2, pl. Vc, XIIa. For a description of Prostanna, 'more a stronghold than a city', see Ballance 1959. The site at Arılık Tepesi (37°16'5.25"N, 030°36'10.39"E, 1.25 km NNE of Sia) surrounded by a wall ca. 55 x 30m, with a smaller fortified enclosure of ca. 17.5 x 10m was discovered and mapped during the Pisidia Survey; it is not yet published. The probably later fortifications of the site at Kaynar Kale (Codrula?) also have a separate acropolis fortification, although on a larger scale; see Aydal, Mitchell, and Vandeput 1998, 275-7, resim 1. These fortified strongholds may have been very similar to the forty-four 'castella' of the neighbouring Homonadenses described by Pliny (*Hist. Nat.* 5.94).

<sup>336</sup> Boardman 1967.

<sup>337</sup> Aydal, Mitchell, Robinson and Vandeput 1997, 151, 146 fig.3. McNicoll notes that long walls and synoecism are often indicative of social organisation led by an autocrat; McNicoll 1972 788-9. It is unknown whether the foundation of a site such as Panemoteichos 1 would have involved the synoecism of different communities, but it is not unlikely.

<sup>338</sup> For a discussion of many of the issues involved in synoecism and the formation of nucleated settlements, see Cavanagh 1991.

and culture.<sup>339</sup> We can suspect that the changes brought about in Pisidian society by the movement to fortified settlements had major social and political implications; more archaeological work is required in order to clarify the picture.

The question of why (some of) the Pisidians abandoned the valley-bottom settlements inhabited by their predecessors since the Neolithic period is impossible to answer for certain. It may well be that the Persian intervention acted as a catalyst. Pisidia lay within the Persian domain.<sup>340</sup> As well as attempting to 'pacify' the Pisidians, the Persians almost certainly attempted to raise tribute from them. It is clear that the Pisidians were unruly and recalcitrant, but it is highly unlikely that they escaped paying tribute at some stage.<sup>341</sup> Taxation requires organisation, even if only of a very primitive nature. Effective opposition also requires a degree of organisation. The role that these pre-urban settlements may have played as 'middlemen' or nodes of communication is important. The twin forces of Persian impositions and Pisidian opposition may well have led to the creation of these earlier defensive tribal settlements. Pisidians may have been forced to collect together into defended nucleated settlements in order to be able to respond to an external threat.<sup>342</sup> Xenophon's mention of the fortified settlements of the Pisidians, and the fact that they were clearly a considerable source of trouble for their Persian overlords may indicate that they moved to fortified strongholds away from the plains as a result of their struggle with the Persians. Furthermore, given our knowledge of the lack of fondness shown by the larger Pisidian cities for one another, there may have been something of an 'arms race' as communities scrambled to catch up with their neighbours. Andreev describes the constant tension that existed between neighbouring states as producing an effect similar to two electrodes immersed in a bath of solution stimulating the growth of early city settlements.<sup>343</sup> It is probable that many of the fortified settlements were founded within a relatively brief time span.

Most of the later Pisidian cities probably developed from fortified tribal settlements like Panemoteichos 1. Most of the sites of the Pisidian cities appear to have been chosen primarily with an eye to their defensive capabilities; most sites, unsurprisingly, were also positioned in proximity to a water source. Panemoteichos 1 was positioned away from the plain that must have supplied it with sustenance, but considerable effort was expended to ensure that its source of water was included within its fortifications.<sup>344</sup> The site at Kaynar Kale (probably to be identified as Codrula), high above the Bozova plain, was situated near several water sources. The exact positioning of the settlement, however, appears to have been determined by reasons of security, as there was no water source at the site itself.<sup>345</sup> The

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<sup>339</sup> Even in an area which is known to have been ruled by the Persians, Lycia, the cultural and political impact of the Persians is very much in dispute, see Keen 1998, 61-6.

<sup>340</sup> Xenophon's references to Cyrus' previous expedition against the Pisidians and the expedition(s?) of Pharnabazus against the Pisidians, suggests that they had to be held in check through regular campaigns; Xenophon *Hellenica* 3.1.13; *Anabasis* 1.1.11; 1.9.9.

<sup>341</sup> See above, chapter 1.

<sup>342</sup> Renfrew and Wagstaff 1982, 254, note the 'strong relationship between settlement nucleation and intervention and/or influence in the island by an external power'.

<sup>343</sup> Andreev 1989, 172; Kirsten 1956, 92.

<sup>344</sup> See Aydal, Mitchell, Robinson and Vandeput, 1997.

<sup>345</sup> The single aqueduct discovered appears to have been built in the Roman period in order to supply the bathhouse. It was usual for Greek cities prior to Roman rule to be situated in close proximity to their water

search for security is unsurprising given that all the sources available to us indicate that the urban communities of Pisidia appear to have been engaged in a near-permanent state of hostility and competition with one another and with outsiders.

The city and definitions of the city have been the subject of a considerable amount of literature.<sup>346</sup> Side-stepping the issue, for the moment, of to what extent Greek-style poleis can be considered to be cities, I wish to re-examine the question of when and how the tribal settlements of Pisidia became transformed into Greek-style poleis. Jones, Broughton and Levick all recognise that Pisidia possessed urban communities by the second and first centuries BC, but question whether they were more than superficially 'hellenised'.<sup>347</sup> Mitchell has forcefully challenged this view.<sup>348</sup>

Cultural, social and political change are complex phenomena, as are the interactions between different cultures and societies. Talk of 'Hellenisation', 'Romanisation' and suchlike has been seen in the past as a useful form of shorthand for the adoption of various distinctly Greek and Roman traits: their languages, religious practices, political and social structures, art, music, drama, customs and mores. The dangers inherent in using such conceptual hold-all terminologies is that they can oversimplify, obscure and distort what it is we are trying to analyse.<sup>349</sup> As Woolf has shown, one could become 'Roman', whilst remaining Greek, or Gaulish – or Pisidian; the process of becoming Roman, however, could also create new divisions in a society.<sup>350</sup> As with questions of national identity, as discussed above, being 'Roman' or 'Greek' meant being seen to have, and feeling that one had, something in common with other 'Romans' or 'Greeks'; thus inhabitants from first century AD Apollonia in Illyria would not feel completely foreign in first century AD Selge. They would recognise the civic infrastructure and (if literate) would be able to read the inscriptions. This does not mean that they might not find the Pisidians strange, superstitious, aggressive or in other ways very different from the Illyrians they knew. However, it is the adoption and adaptation of more or less common cultural, social and political infrastructures that is being referred to when Hellenisation and Romanisation are spoken of in this thesis. Hellenism has been described as having been a tool for advancement and participation in an international culture.<sup>351</sup> At all times it should be born in mind that when Hellenisation is spoken of, what is being referred to is in fact an ongoing series of many kinds of interactions on all levels of society. It should also be understood that the same cultural object may have many different meanings, even within the same 'culture' – a theatre might be seen by an Athenian Greek as part of the religious panoply of a city, required for the Dionysia, to others it may have appeared to be simply part of the requisite civic apparatus required to maintain the prestige of ones city. We should be very wary of reading singular cultural meanings into buildings and objects. Nevertheless, with these dangers in mind, and adapting Woolf's phrase,

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supplies without aqueducts, see Coulton, 1987a, 72; on Kaynar Kale, see Aydal, Mitchell, Mühlenbrock and Robinson forthcoming.

<sup>346</sup> For a discussion of some of the issues involved see chapter 2.1.

<sup>347</sup> Broughton 1938, 699; Jones 1971, 146; Levick 1967, 17.

<sup>348</sup> Mitchell 1991b; Mitchell 1992.

<sup>349</sup> The utility of the terminology of cultural influence, and of talk about Hellenisation has been much criticised; see, for example, Baxendall 1985, 58-9; Bowersock 1990. For similar views on Romanisation see Mattingly (ed.) 1997.

<sup>350</sup> Woolf 1994; Woolf 1998, 107.

<sup>351</sup> Horsley 1999, 28.

Hellenisation should be understood as the process of 'becoming Greek while remaining Pisidian'.

In Arrian's account of Alexander's campaign in Pisidia, he mentions the cities of Selge, Termessos and Sagalassos along with some other (unnamed) Pisidian forts.<sup>352</sup> To Arrian, at least, Selge, Termessos and Sagalassos were all poleis by the fourth century BC; the unnamed forts were probably smaller fortified sites like Panemoteichos 1. The development of the other Pisidian cities is less clear. By the first century BC, Pisidia appears to have become more urbanised. Strabo (12.7.2), quoting Artemidorus (fl. ca.100 BC), states that 'the cities of the Pisidians are Selge, Sagalassus, Petnelissos, Adada, Tymbriada, Cremna, Pityassus, Amblada, Anabura, Sinda, Aarassus, Tarbassus, and Termessus'. Strabo excludes the city of Cretopolis, founded between 332-319 BC, either because it was in the Milyas, or because its inhabitants were not considered to be Pisidian.<sup>353</sup> Strabo (or Artemidorus) also omits two Milyan settlements that we now know to have been poleis by this time, Olbasa and Pogla. The Attalid decree from Olbasa reveals that already in the second century BC it was a polis with a boule and demos; furthermore, of the thirteen names mentioned in the Olbasa decree, nine are Greek, indicating a large number of Greeks in the population, or a significant degree of assimilation.<sup>354</sup> A probably contemporary inscription from Pogla reveals that it, too, was a polis by this time.<sup>355</sup> For the Pisidian cities, we know a letter from Attalos II in ca. 159 BC was addressed to the polis and elders of Amlada.<sup>356</sup> An alliance between Termessos and Adada dated to the second century BC (again probably during the Pisidian war) speaks of upholding democracy in each other's cities.<sup>357</sup>

Archaeological evidence for Hellenistic buildings in Pisidia is less easy to discover. Mitchell provides a list of all possibly Hellenistic buildings known in Pisidia. The principal examples come, naturally, from the three largest cities, Sagalassos, Termessos and Selge. The only Hellenistic building to which a secure date can be attached is the north stoa of Termessos (which is no longer standing), which is known to have been donated by Attalos II, and is thus dated between 159 and 138 BC.<sup>358</sup> It has also been suggested that the walls of Termessos should be dated to the late third, early fourth century BC on the grounds of similarities with the walls of Pergamon.<sup>359</sup> A funerary rock relief, possibly the memorial of Alketas, has been dated on stylistic grounds to the late fourth century BC.<sup>360</sup> All other potentially Hellenistic buildings in Pisidia are dated to the second or first centuries BC. Some of them, for instance, the so-called 'Kakasbos' or Doric temple from Sagalassos, the market-building from Pednelissos, and the peripteral ionic temple from Termessos may well be early Imperial rather than Hellenistic.<sup>361</sup> Dating on the grounds of masonry styles alone in

<sup>352</sup> Arrian, *Anabasis* I 27, 5-28; 1.28.1-2.

<sup>353</sup> Sekunda 1997.

<sup>354</sup> Kearsley 1994, esp. 55-7.

<sup>355</sup> Bean 1960, 55-60 (contra Jones 1971, 143).

<sup>356</sup> *OGIS* 751; Welles 1934, nr. 54.

<sup>357</sup> Heberdey 1941, 2.

<sup>358</sup> Coulton 1976, 287-8, ill. 113.

<sup>359</sup> Mitchell 1992, 10.

<sup>360</sup> Pekridou 1986.

<sup>361</sup> The Pednelissos market-building has been dated on stylistic grounds alone; its internal walls are mortared, however, and it appears to be part of a larger complex including a sebasteion. More research is necessary before it can be securely dated; see Mitchell 1992, 17; Işın 1998, 115. The Ionic temple has been dated through stylistic analysis of the Atreus frieze that it was supposed to have carried; Stähler 1968

Pisidia is very difficult, as the construction of dry stone monumental walls continued well into the Roman period; any date provided solely on the grounds of masonry, therefore, without any correlating evidence provided by either inscriptions or decorated stonework should be treated as provisional.<sup>362</sup>

Pisidian sculpture is more easily stylistically datable than masonry. As with the datable buildings, apart from the so-called 'grave of Alketas' and possibly some third century ostothekes, the majority of the datable sculpture appears to be second or first century BC. At Sagalassos, a heröon may have supported a nearly life-size frieze, studied by Fleischer, representing a female kithara player and a row of dancing girls holding each other's cloaks or veils.<sup>363</sup> The figures are similar in style (although engaged in very different activities) to the female figures on the friezes of the Great Altar from Pergamon.<sup>364</sup> The Pergamon friezes have most often been dated to the reign of Eumenes II (197-159 BC) but the latest possible date for their dedication from the evidence available is the death of Attalos II in 139 BC.<sup>365</sup> Fleischer dates the Sagalassos frieze to ca. 150-130 BC in the light of the fact that the dancers appear to be in the Pergamene tradition of sculpture visible on the Great Altar, and the influence of Pergamon was ended in 133 BC when the Romans inherited Attalos III's kingdom.<sup>366</sup> A Corinthian capital found near where the frieze is supposed to have been placed has also been dated during the second half of the second century BC, due to the similarity between its expressive acanthus leaves and those of the capitals of the Olympieion in Athens built by Antiochos IV (completed in 164 BC), which agrees with the date of the frieze proposed by Fleischer.<sup>367</sup> We do not have a secure terminus ante quem for these sculptures. Waelkens believes the prototypes of the reliefs were Pergamene and he may be correct, as the only other frieze found at Sagalassos is of a near-identical scene.

Three fragments of another limestone frieze at Sagalassos, representing a female flute player and seven dancing girls holding each others hands, were discovered in a late Roman wall blocking the entrance to the late Roman fountain house.<sup>368</sup> The dancing figures appear to be more clumsily executed than the frieze discussed above. Their arms appear thicker and are sometimes held at awkward angles, their legs, where visible, are thick and clumsy, in marked contrast to the elegance and motion of the figures in the other frieze. Whilst the drapery is similar in style to the other frieze, once again it is less well executed with very deep and rigid-seeming folds and swirls having the opposite effect from the motion desired. Waelkens suggests a date in the second quarter or the middle of the second century BC (that is preceding the frieze mentioned above) presumably due to this discrepancy in styles. It seems however that the opposite could, in fact, be true. The less well-executed frieze need not have been a prototype of the first frieze but rather a clumsy copy perhaps made at a later date by a local craftsman. There is no way to determine this.

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concludes that the frieze was too long to have been carried on the temple; Lanckoronski 1892, 44-6, 105-7, Abb. 68, Taf. 17; Mitchell 1992, 11.

<sup>362</sup> On the difficulties of dating by masonry style alone, see Bier 1994, 43-4; Waelkens 1987.

<sup>363</sup> Waelkens (ed.) 1993, fig.23; Fleischer 1981.

<sup>364</sup> Smith 1991, pl.196.1 and 196.2 (the east frieze and north projection).

<sup>365</sup> Smith 1991, 158.

<sup>366</sup> Fleischer 1981.

<sup>367</sup> Waelkens (ed.) 1993, 43, fig.24.

<sup>368</sup> Waelkens (ed.) 1993, figs. 20-22.

A large loggia discovered at Sagalassos appears to have possessed two fluted half-columns with fine Corinthian capitals on the inside, attached to rectangular piers with Attic bases on the outside. The interior lateral sides of both piers were decorated with reliefs identified by Waelkens as representing Athena with a naked male prisoner and Ares with a clad female prisoner respectively.<sup>369</sup> The figures appear eroded now and it is hard therefore to date them with accuracy. However, the entablature of the loggia combined a triglyph and metope frieze, containing wreaths and ribbons in some of the metope spans, with an Ionic cornice; a mixture of orders which was common from the second century BC onwards. The swirls visible in the dress of Athena may reflect a similar date to the reliefs and it is perhaps not unlikely that the reliefs were all carved over a moderate span of time in the second century in emulation of the impressive building programme at Pergamon.

Termessos too provides some examples of late Hellenistic sculpture. The so-called Iphigenia reliefs, found in 1882 by Lanckoronski east of the temple of Artemis, were made of the local limestone and were previously thought to have been placed on the 6 x 11 Ionic peripteral temple of Artemis. However, the temple provided too little space for the frieze to have fit, so they must have been placed on another unknown building.<sup>370</sup> Stähler dated the friezes to the last quarter of the second century BC: the figures are static and bear a certain similarity to the figures on the Telephos frieze on the Great altar at Pergamon.<sup>371</sup> Due to the eroded state of the friezes, it is very hard to make any more definite dating than that the relief appears to be late Hellenistic. The influence of Pergamon is also visible in the late Hellenistic Gigantomachy, which was part of the destroyed temple of Zeus Solymeus. On the first relief Apollo and Zeus are represented fighting with snake-legged giants. On the other reliefs we see Apollo and snakes, fighting one another. At Pergamon, a similar frieze decorated the Great Altar.<sup>372</sup> Although the Termessian example is not a straight copy, the debt to Pergamon is apparent.<sup>373</sup>

No similar datable friezes have been discovered at other Pisidian cities. The majority of the extant sculpture of Sagalassos, Termessos and Selge belongs to a very similar time and tradition. None of the friezes display the originality of the earlier friezes of their Lycian neighbours, whose sculpture, as represented by the fourth-century BC 'Nereid' Monument and the Gölbaşı-Trysa monuments was executed in an original fashion, blending Persian and Greek sculptural traditions.<sup>374</sup> Pisidian sculpture appears to have been limited to the three major cities and to have been heavily dependent upon either Pergamene craftsmen or templates (or both). It may be that the friezes were the direct result of an active cultural policy initiated by the Attalids.<sup>375</sup>

The second century BC in Pisidia was without a doubt a time of considerable turmoil and change, politically, socially and culturally. Termessos was engaged in sending out colonies to the west, and fought a war with the Lycian League. Selge was engaged in a continuing struggle against the Attalids. At the same time the Attalids appear to have been pursuing a

<sup>369</sup> Waelkens (ed.) 1993, figs. 27-28.

<sup>370</sup> Stähler 1968, 281.

<sup>371</sup> Smith 1991, fig. 199.1-3.

<sup>372</sup> Smith 1991, fig. 195 N.

<sup>373</sup> Lanckoronski 1890, 47-50, Abb. 7 and 8; Smith 1991, fig. 195 N; Pollitt 1986, 97-110.

<sup>374</sup> Akurgal 1941; Childs 1978; Boardman 1995, 188-92; Robinson 1999a.

<sup>375</sup> Waelkens (ed.) 1993, 42.

vigorous policy in the area, founding a city at Antalya, donating a stoa to Termessos, and fighting Selge with the help of Termessos and her allies. The sculptural friezes found at Sagalassos and Termessos may show that the Attalids were currying favour with their allies by adorning their cities with architecture and sculpture. It is during this time that we first hear of the cities of Olbasa and Pogla, and that Termessos is first recorded as a democracy. The adoption of Hellenic ideas of the polis and government in general may initially have been a slow process, but the second century BC appears to have been a time of heightened political activity. Competitive interaction between communities, alongside the active intervention of the Attalids, may well have led to an acceleration in the formation of poleis.

The Pisidians, like their Pamphylian and Lycian neighbours, must have been in contact with Greeks for a long time. The question of why they should choose to adopt elements of Hellenic culture at a particular time is interesting. Talk of 'Hellenisation' is apt to cast the subject of the process in a passive light; it is important to attempt to understand why the Pisidians chose to adopt Greek forms of culture and language. The conquest of Alexander and the foundation of Cretopolis must have been important moments in the 'Hellenisation' of Pisidia. After the conquests of Alexander, if not before, Greek must have been seen as the language and culture of power. The already existing larger cities of Pisidia were now part of a larger world where Greek cultural values predominated, and where to be considered a barbarian was disadvantageous.

In Selge, Amblada and Termessos, and possibly in other Pisidian cities, it seems that Pisidian tribal society was divided into elders and young men, with the elders having, in theory, the upper hand. The revolt of the young men of Termessos in 318 BC reveals something perhaps akin to the alleged 'hoplite reform' in Athens.<sup>376</sup> The warriors discovered that they in fact held power, and threatened to leave the city if their will were not done. Although they did not leave the city immediately, by the second century BC Termessos had sent out colonists to Kibyra, Balboura and Oinoanda. Malkin has seen the colonising experience in Archaic Greece as a trigger for political reform.<sup>377</sup> The impulse that saw Termessos sending out colonists to the west may also have seen the establishment of the democracy recorded in the treaty with Adada.

Just as with the foundation of fortified settlements, as the larger settlements developed more Hellenic forms of government, the other smaller settlements probably followed. The history of the Pisidian communities reveals a considerable degree of what can be described as competitive peer polities; in order to avoid being dominated by one's neighbours a comparable degree of organisational complexity would have been advisable.<sup>378</sup> It was at this time that we can distinguish a change in the organisation of the second tier settlements, with some of the smaller settlements being merged with larger polities. Huia and Ceritae both came to be controlled by their larger neighbour Cremna; likewise, Cretopolis came to be dominated by Comana.<sup>379</sup> Alexander and his successors may have stimulated this competition both unintentionally but also as a form of control and reward.<sup>380</sup>

<sup>376</sup> Diodoros XVIII 46: 11; Snodgrass 1992, 19 (with bibliography fn.1).

<sup>377</sup> Malkin 1971.

<sup>378</sup> Tainter 1988, 201.

<sup>379</sup> Mitchell 1995, 8, 34.

<sup>380</sup> Renfrew and Cherry 1986.

Strabo (12.7.3) concludes his list of thirteen Pisidian cities by recording that 'all the rest of the above-mentioned Pisidians who live in the mountains are divided into tyrannies, like the Cilicians, and are trained in piracy.' Strabo, following Artemidorus, has been accused of both prejudice and ignorance for this comment, yet he speaks both of polis-inhabiting, albeit warlike, Pisidians and also of Pisidian bandits ruled by tyrants.<sup>381</sup> He describes a situation where some Pisidians live in cities whilst others maintain their original tribal organisations and presumably settlements. Although he might not have had first-hand experience of the region he was describing, we have no evidence at all to suggest that Strabo's description of a partially urbanised Pisidia was incorrect. The archaeological evidence from sites such as Huia, Panemoteichos, Kaynar Kale and Colbasa lend credence to his account.

It is hard to doubt that Pisidia in the second century BC was undergoing a political and cultural transformation. The impact of Greek culture is visible in the larger, first tier and the smaller, second tier Pisidian sites, but it is difficult to assess the further implications of this; both Mitchell and Waelkens argue, however, for widespread Hellenic influence.<sup>382</sup> The survival of the Pisidian language, however, is indicative of some resistance (albeit passive) to the pervasive spread of Greek. The Pisidian language appears to have persisted at least until the first century AD; it was still spoken in Pisidian Antioch (situated to the north of Pisidia) at the time of St Paul, and inscriptions found at Sofular dated to the first century AD have also been identified as having been written in the autochthonous language. Indigenous names had however died out in the inscriptions of Termessos by the second century AD; this, of course, reflects little on the names and language employed by those outside the urban elites. The effect of these changes on the inhabitants of the smaller fortified settlements and more scattered rural settlements are difficult to judge, but they cannot have been unaware of, or unaffected by, the political and cultural changes taking place.

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<sup>381</sup> Bracke 1993, 21; Van der Vliet 1977, 261-2; Syme, 1995, 222, 214.

<sup>382</sup> Mitchell 1991b and 1992; Waelkens, 1993; see also Ramsay 1928, 353.

### 3.3 ARIASSOS AND SIA

Sia appears in no written source before the time of Justinian, where it is listed amongst the Pamphylian cities recorded by Hierocles, as ‘Δεμουσια’.<sup>383</sup> Nothing further is known of the history of the site. Ariassos, however, was more prominent than its neighbour, appearing, as Aarassos, in Artemidorus’ (ca. 100 BC) list of thirteen Pisidian cities.<sup>384</sup> Ariassos was also mentioned by Ptolemy of Alexandria and in Byzantine bishop lists.<sup>385</sup>

No coins have been discovered that were minted at Sia; however, a collection of 63 coins minted in various cities including Selge and Sillyon in Pamphylia and dating from Late Hellenistic to early Ottoman times was found less than 2 km from Sia at Kozagaçı.<sup>386</sup> Once again Ariassos differs from its neighbour; a few coins have been discovered which were minted in the late Hellenistic period when it was incorporated into the Roman province of Galatia (25 BC), and further coins are known to have been minted from the time of Antoninus Pius (AD 138-61) to Gallienus and Salonina (AD 253-67).<sup>387</sup>

Sia was discovered in 1890 by V. Bérard, and identified as ‘Osia’ from a single imperial inscription. It was visited again in the 1950s by George Bean who gave a brief description of the site, singling out the possible bouleuterion and the east fortification wall for particular mention. He also recorded a single inscription from a monumental built tomb, and, in a discussion of the imperial inscription recorded by Bérard, suggested that the site should be known as Sia.<sup>388</sup> In 1995 and 1996 the site was mapped at a scale of 1:500 as part of the Pisidian survey.<sup>389</sup> A preliminary survey of the environs of Sia was undertaken in 1998.

Ariassos appeared on a map published in 1740 but received little attention until 1892 when it was visited and described by K. Lanckoronski and his team, who mistakenly identified it as Cretopolis.<sup>390</sup> V. Bérard correctly (re)identified the site from inscriptions in the same year.<sup>391</sup>

<sup>383</sup> Hierocles 681.10; Ramsay 1893, 253. For a collection of the ancient testimonia on the region of Pisidia covered by this thesis, see Mitchell 2000, 1-10.

<sup>384</sup> Strabo 12.7.2: Φησι δ’ Ἀρτεμιδώρος τῶν Πισιδῶν πόλεις εἶναι Σελγην, Σαγαλασσον, Πετηλισσον, Ἀδαδα, Τυμβριαδαδα, Κρημαν, Πιτυασσον, Ἀμβλαδα, Ἀναβουρα, Σινδα, Ἀαρασσον, Ταρβασσον, Τερμησσον .... Aarassos is probably simply a textual error rather than a variant as it does not occur elsewhere; Pityassos and Tarbassos have yet to be identified.

<sup>385</sup> Ptolemy 5.5.5; Hierocles 679.1-681.12; *Notitiae Episcopatum* I.450; III.399; VII.221; VIII.500; IX.410; X.516; XIII.366. The Pisidian section of Hierocles’ list is published in Mitchell 2000, 9 (T.8), and the Pisidian and Pamphylian sections are published in French 1994, 61-2.

<sup>386</sup> This find, discovered in 1998, has yet to be published; it was allegedly made when an ancient cistern was bulldozed during the construction of a stabilised road.

<sup>387</sup> Von Aulock, 1977, 26-8; 67-76. Most of the Hellenistic coins were found in a single hoard, now in the Istanbul Museum, see Olçay, 1969, 289-304. On the inclusion of Galatia into the Roman Empire see Dio, 53.26.2; there is some dispute over the precise date, see Mitchell, 1993, 61, n.1.

<sup>388</sup> Bérard identified the site as Osia as the inscription on the imperial monument ends with the phrase ΟΔΗΜΟΣΟΣΙΗΝΩΝ; Bean points out that the repetition of the definite article is normal; Bérard 1892, 434-5; Bean, 1960, 74-5. The fossilisation of the term *demos* along with the name of Sia is interesting. The small settlement at Huia also possessed a *demos* but no boule, which is taken as a sign that it was never considered to be a city, see Mitchell 1991b, 138, and Bean 1960, 80-1.

<sup>389</sup> Mitchell 1991b, 137; Mitchell 1992, 17-19.

<sup>390</sup> The map ‘Patriarchatus Constantinopolitani Tabula ex pluribus Graeciae et Asiae Minoris Tabulis ab Anvillaeo Geographo Regno editis conflata’ was printed in Michel le Quien 1740, and reproduced at the front of Machatschek and Schwarz 1981; see also Lanckoronski and Niemann 1892, 123-6; pl. XXII.

Ariassos was subsequently visited and briefly described by H. Rott, and M. Paribeni and P. Romanelli.<sup>392</sup> In 1988 and 1989, as part of the Pisidian survey under the directorship of S. Mitchell, the site was mapped at a scale of 1:500, and several short discussions of the site have appeared in the light of this new research.<sup>393</sup>

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<sup>391</sup> Bérard 1892, 427-34.

<sup>392</sup> Rott 1908, 23-5; Paribeni and Romanelli 1914, 241-7.

<sup>393</sup> Mitchell, Owens and Waelkens 1989; Cormack 1989; Mitchell 1991a; Mitchell 1991b; Mitchell 1992; Schulz 1992; Cormack 1996; Mitchell 1996; Mitchell 1998a.

### 3.4 SIA - THE EARLY SETTLEMENT

We have no foundation date for the settlement at Sia, no inscription earlier than the second/third century AD, and no historical documentation regarding the site before Late Antiquity.<sup>394</sup> The early history of the site, therefore, is obscure. However, through examination of the remaining fortifications, and by comparison with other early Pisidian sites, it is possible to present a rough picture of the development of this small Pisidian settlement.

The ruins of Sia are spread out over an area of more than 24 hectares; the nucleus of the settlement covers an area of approximately 12 hectares (fig. 9). The original settlement was located on a hill, Taşdandam Tepesi, lying at about 840-925m above sea level. Domestic areas on the site appear to be grouped into three more or less distinct clusters, at the northern corner of the site, the southern end of the site and along the western slope. At the top of the site there is a broad open space, which appears to have been paved at some time in antiquity. Seven buildings have been identified on the eastern-facing slope. The southern end of the site looks out over the Merdivenli (stepped) pass and the Pamphylian plateau (plate 6); the northern end looks out towards a small fortified site at Arılık Tepesi, 1.25 km northeast of Sia, and the road from Melli. The western slope would have provided a view towards a small fortified site, ca. 1.6 km northwest of Sia, at Çalbalı Tepesi near Karaot. The gentlest approach to the site was from the west and northwest, and traces of an ancient road from this direction can be seen today. The eastern and southern ends of the site were the most precipitous, and would have represented a formidable obstacle to an attacking enemy. The area around Sia is not particularly suited to agriculture, and is now heavily wooded.

#### 3.4.1 FORTIFICATIONS

As recorded by the survey, the fortifications of Sia consist of a large circuit, and two further curtains; the first built to reduce the original circuit by approximately one half, and the second to extend the area once more to include a flat area just below the top of the hill containing the large paved area mentioned above. None of the walls are today standing to their full height, so it is impossible to judge whether they had wall-walks of any kind. The circuit wall [A] encloses the greatest area, approximately 7.5 ha, and probably initially encompassed most, or possibly all, of the original settlement. The wall is built from the local limestone, and the thickness is usually approximately 1.30 m (plate 7). The stones are, for the most part, roughly polygonal in shape, with smaller stones employed to fill gaps. Only the upper surviving courses contain larger, more or less rectangular blocks - an arrangement also observed at Kaynar Kale.<sup>395</sup> The construction of the walls consists of two faces of more carefully prepared stones with a central fill of smaller, more roughly shaped stones between them. There are no traces of mortar in the wall.

<sup>394</sup> For a brief overview of the site and discussion of the survey work carried out there, see Aydal, Mitchell, Vandeput 1998.

<sup>395</sup> See Aydal, Mitchell, Vandeput 1998, 275-7, pl.1, 8; see also Aydal, Mitchell, Mühlenbrock, Robinson forthcoming.

The circuit wall [A] is especially well preserved on the north side where it includes three open-backed towers. Much of the east curtain has collapsed down the steep hill slope, but the wall can be readily followed on the southeast and south side. The majority of the west curtain has been removed or built into structures of the Roman period. A gate flanked by two towers can be identified in the west wall, which almost certainly represents the west gate of the early settlement.

The size, construction and plan of the circuit wall [A] is similar to the early Pisidian site situated behind Boğazköy, Panemoteichos I situated approximately 10 km to the northwest of Sia.<sup>396</sup> The construction of the walls is also similar to that observed at the sites of Huia, Colbasa and Melli.<sup>397</sup> The fortifications of Panemoteichos I, like the early circuit at Sia, were not particularly sophisticated – strategic elements appear not to have been considered to be of the greatest importance.<sup>398</sup> The aim of the fortifications appears to have been to surround and protect an entire settlement, even at the cost of weakening the effectiveness of the fortifications as a whole. A similar arrangement is visible both at the site at Kaynar Kale and at Prostanna.<sup>399</sup> The presence of a similarly fortified, but smaller (0.165 ha), site at Arılık Tepesi, 1.25 km to the north east of Sia, and the remains of another apparently similar, smaller site 25 m east south east of Çalbalı Tepesi, 1.6 km north west of Sia point to the desirability of secure strongholds at the time.<sup>400</sup> It is possible that each stronghold represented a separate tribal group or clan; local animosities are a recurrent theme in the recorded history of Pisidia, hence the need for fortified settlements. The larger fortifications appear to have been designed to provide a sanctuary within which to live as a permanent protection against constant but relatively low-level local threats, the smaller fortifications perhaps to offer temporary shelter when times were hard. Neither would have provided adequate defence against major invasions from further afield.

The uppermost area of Sia is protected by two walls, one of which [B] excludes the lower-lying level area to the east, and one [C] which includes it. Both walls appear to have been constructed to defend the upper area from attacks from the East and the South. It is apparent that both of these wall phases are of a later date than the main circuit, as they abut the original, thinner, less well-built city wall [A] at P 18a, and no attempt was made to bond the two circuits. The upper wall [B] is generally between 1.90 and 2.10 m thick, built from large, carefully cut, roughly coursed trapezoidal tending to rectangular blocks, laid in a double-skin structure with smaller, more roughly shaped stones between, although the two faces are in places in contact (plate 8).<sup>401</sup> Much of the stone appears to have been cut from rock outcrops on the summit of the hill, where traces of ancient quarrying may be seen. The wall demonstrates stretches of much poorer constitution (plate 11), in particular the south-

<sup>396</sup> See Aydal, Mitchell, Robinson, Vandeput 1997.

<sup>397</sup> For photographs of the wall construction at Huia and Colbasa, see Bean 1960, 44-7, 80-2, pl. Vc, XIIa; Mitchell 1991b, pl. 17.1 and 18.2; for Melli, see Bean 1960, 76. On the identification of Colbasa, see Mitchell 1988, 107-8.

<sup>398</sup> I employ here McNicoll's definition of strategic concepts referring to 'the ideas governing the location of walls'; McNicoll 1997, 4, 211.

<sup>399</sup> Ballance 1959.

<sup>400</sup> The unpublished site near Çalbalı Tepesi consists of a partially destroyed rough stone wall ca. 100 m long and 2.40 m wide forming an enclosure ca. 20 m in width (ca. 0.2 ha). There is no sign of housing within the enclosure, but the remains of at least two houses are to be seen ca. 30 m to the east.

<sup>401</sup> This style of building is typical of Pisidia and Pamphylia, see McNicoll 1997, 152.

facing stretch east of T7 which is made from smaller, irregular stones; it is most likely that the wall was destroyed through earthquake or human agency and then rebuilt. The lower storey of T7 was constructed from hammer-faced pseudisodomic masonry, the upper courses from trapezoidal tending to rectangular blocks similar to the rest of the newer wall [B].<sup>402</sup> The external corners of T7 were drafted (plate 10). South of T7 a steep slope leads to a wide, level area between the upper wall and a second, well-defined ridge, largely empty of buildings except for four very large cisterns and some houses at the west end. The second wall [C] is similar in construction to wall [B], but is not so carefully executed; it is of a similar width and is also built from large, roughly coursed trapezoidal tending to rectangular blocks with the occasional polygonal block, laid in a double-skin (plate 9); it included a single, closed (and now collapsed) rectangular tower (at P12). The reason behind the construction of the second wall [C] and the nature of the area which it enclosed in front of T7, is not immediately apparent. It may be that it was thought expedient to deprive an attacking enemy of the cover they would gain climbing the slope to the east of the level area, and also of the advantages of the level area in front of the walls once the slope had been won. Perhaps more importantly, if the city were besieged for any amount of time, the loss of the cisterns on the hilltop would disadvantage the defenders and profit the attacking force. The upper area was paved, and there are clear indications of piping running from the paved area towards the cisterns. The level area would be an important catchment area at a site with no running water. The fortifications at the top of the city look out to the East and South with commanding views as far as the Pamphylian plain.<sup>403</sup> It seems most likely that the construction of wall [C] was contemporary with the reconstruction of the section of wall adjoining T7. This reconstruction is, unfortunately, not possible to date. It may be that the section of wall near T7 was breached in the Hellenistic period and that the circuit was then re-fortified and strengthened with the creation of the new curtain [C]. It seems less likely that wall [C] is a third-century rebuild as it appears to have been constructed with greater care than, for example, the fortifications at Ariassos, and without re-using blocks from elsewhere and without mortar.

Although the relative chronology of the walls is clear, it is difficult to fix absolute dates. The use of small, open-backed square towers in the lower city-circuit [A], and its broad similarities to the Panemoteichos I circuit would tend to favour an early date, perhaps in the sixth or fifth century BC (although no pottery of this date has yet been discovered at the site).<sup>404</sup> The halving of the circuit and the building of close-backed towers on the new circuit reflect changes in the region demonstrated by the construction of the 'straight line' circuit at Perge (ca. 225 BC), at Side (ca. 180 BC), Sillyon and Pednelissos (both probably late second century BC) and Oinoanda (ca. 150 BC).<sup>405</sup> The narrow embrasures in T7 and G6 also find parallels in the Perge defences, although the closest parallel for T7 is the second of the (undated) towers positioned in the hills above Aspendos at GÜvencirlik, described by

<sup>402</sup> Aydal, Mitchell, and Vandeput 1998, 286, resim 2; for a similar juxtaposition of styles (mock deep and narrow and isodomic) compare with Sillyon in McNicoll 1997, 139 and 152.

<sup>403</sup> Bérard 1892, 434-5.

<sup>404</sup> McNicoll 1972, 788 points to Mausolus and the Lelegians to show that the construction of great circuits often reflects the organisation of a community under an autocrat.

<sup>405</sup> McNicoll 1972, 789; McNicoll 1997, (Oinoanda) 121-6, (Perge) 126-131, (Pednelissos) 132-4, (Sillyon) 137-42, (Side) 142-8 and (general discussion) 148-56.

Paribeni (plate 12).<sup>406</sup> The use of two masonry styles side-by-side in T7 and the use of a drafted margin are examples of what McNicoll terms 'aesthetic preciousity'; both are features of Late Hellenistic masonry in Pamphylia and Pisidia.<sup>407</sup>

The original site at Sia appears to have been a fortified tribal settlement similar to many others in the region. In the later Hellenistic period, the original 'grand' circuit seems to have been deemed inadequate for opposing the types of armies which were to be seen at not infrequent intervals in the region. A smaller, stronger circuit was constructed (at the expense of leaving some buildings outside the new circuit), to which a further modification was subsequently made. The construction technique and appearance of the acropolis circuit [B] is not dissimilar to that of Balboura and the other circuits mentioned above, and may have been built at a similar time, that is in the early second century BC, a time of considerable upheaval in this region.<sup>408</sup> The construction of the reduced circuit [B] may have been linked with the campaigns of Garsyeris in the region in 218 BC, and the slight enlargement [C] may be linked with the campaigns of Amyntas in 32-25 BC.<sup>409</sup> Unless further evidence is forthcoming, however, such precise dating is impossible and may, in any case, be misguided. The history of Pisidia in the Hellenistic period was turbulent enough to warrant continuous attention to fortifications, despite their considerable expense in terms of time, work and money.

### 3.4.2 PUBLIC BUILDINGS

One public building at Sia which has been assumed to have been pre-Roman is the so-called bouleterion (plate 13).<sup>410</sup> It is a modest but monumental building situated (unusually) some 10m to the east of the west gate of the city. The building consisted of eight broad rows of seats laid out in a rectangular block (16m x 20m) divided asymmetrically by a staircase. The building was unroofed. There is an open, paved area (10m x 20m) at the front, a well-preserved wall with a sloping balustrade along the south side, and a rectangular, and presumably enclosed, room (10m x ?) with an imposing door slightly offset at the top of the auditorium to the rear. The plan is unique, bearing no relation to the odeion-like council chamber of the neighbouring settlement of Ariassos.<sup>411</sup> A second century AD inscription from Sia mentions a boule, and this building is the only one that appears suited to the task of holding the council.<sup>412</sup> The area at the front of the bouleterion, however, is unusually large, and appears more appropriate for the performance of plays or of music. It is impossible to be certain of the primary function of this building but the small room positioned behind the main area suggests an official purpose, as no theatre was in need of such a room. Despite its oddities the building is of a similar size, but not design, to the bouleuteria of Priene,

<sup>406</sup> Lauter 1992, 1-11; the Güvencirlik towers appears to have been constructed on the boundary of the territory of Aspendos and Side, Paribeni 1914, 107-12, figs. 19 and 20.

<sup>407</sup> McNicoll 1997, 152.

<sup>408</sup> Coulton 1994.

<sup>409</sup> Amyntas attacked and captured Cremna in 32/31 BC or 31/30 BC; Sia may well have been one of the unnamed strongholds captured by Amyntas at the same time. See Strabo 12.6.4; Von Aulock 1979, 38-9; Mitchell 1994b, 104.

<sup>410</sup> Bean 1960, 74; Mitchell 1991b, 135; Mitchell 1992, 19; Aydal, Mitchell, Vandeput 1998.

<sup>411</sup> On the Ariassos bouleterion see below, 80-1; Mitchell 1991a; Filgis 1988.

<sup>412</sup> For the inscription see Bérard 1892, 434-5; Bean 1960, 74-5.

Termessos, Sagalassos and Notium, despite the fact that Sia was a smaller settlement. Due to its simpler seating structure, and the large space left at the front, however, it would not have been possible to have seated the seven hundred people that the Priene bouleuterion is thought to have been able to hold.<sup>413</sup> Estimating one person per 0.4-0.5 m of seating, an estimated holding capacity of ca. 300-380 people is more likely. It is probable, therefore, that this building served as the general purpose meeting-place of Sia, although it could have been used equally as a theatre or performance hall. It is perhaps for this reason (in addition to paucity of funds) that the inhabitants of Sia did not follow the inhabitants of Ariassos or Balboura in attempting to build theatres that they were never able to complete.<sup>414</sup> The presence of the room at the back of the bouleuterion, however, is unparalleled. It may have served a similar function to that of the so-called prytaneion at Ariassos (see below), or it may have had a function peculiar to the people of Sia.

It is impossible to date the bouleuterion building precisely. The construction of the sloping stone 'balustrade' down one side of the building bears a striking resemblance to the theatre at the neighbouring site at Melli (plate 14). The theatre at Melli is unfortunately also undated, but it is of a Roman plan, and Bean suggests that it is Roman.<sup>415</sup> Furthermore, its position so close to what had been the main gate of the settlement is suggestive of a later date, and appears to represent a shifting of focus within the settlement. The bouleuterion may date to the time, presumably in the first century AD under the Romans, when the city walls were breached at this point to allow for the expansion of the city. One feature of the early settlement at Sia is that there is no easily identifiable 'centre'. This lack of any clear administrative nucleus is possibly a reflection of Sia's origin as a fortified tribal settlement.<sup>416</sup> The construction of a council building may have been a key event in the change from a tribal to a more Hellenic-style democratic government.

The bouleuterion lay a short distance from the west gate of the city wall, apparently behind a set of adjoining rectangular rooms where two pieces of Doric entablature were found. This was probably a stoa. The stoa is laid out on the same orientation as the bouleuterion and may well have been constructed at the same time. The bouleuterion at Ariassos is also adjacent to a stoa; this arrangement is not unusual. When the inhabitants of Sia decided to build a council chamber, along with a stoa (possibly following the example of Ariassos and Termessos), they may have been faced with a dearth of suitable and available sites; hence, perhaps, the unconventional location close to the gates. It is also possible, however, that the bouleuterion was situated on the site of a previous tribal meeting-place. We know nothing of Pisidian tribal organisation. It is noteworthy that there is no distinguishable marketplace

<sup>413</sup> See Dinsmoor 1950, 295-7.

<sup>414</sup> It has been suggested that the 18 steps below the bathhouse at Sia were suitable to have been used as a theatre. This is unlikely, as the risers on the steps are not high, the steps are not arranged in a semi-circle and there is no evidence of an open space for a stage or for scenery. The steps must have been an important thoroughfare from the Roman market-place to the bathhouse and beyond. On Sia, see Mitchell 1998a; on Balboura, Bier 1994; on Ariassos, Schulz 1992, 31, pl 4.1.

<sup>415</sup> Bean 1960, 76; another similarity is that what may be a market building runs directly behind the scene area of the theatre at Melli, much as a stoa appears to have run behind the 'orchestra' area at Sia. In both cases the rear walls of the stoa/scene building could have been employed as makeshift scene buildings for theatrical productions.

<sup>416</sup> Similarities may be seen between such an 'unfocused' settlement pattern and the loosely articulated inward-looking family-centred Islamic cities described by Weber and others. For a discussion of this aspect of Weber's thesis, see Dauntun 1989.

or agora near the bouleuterion, although the stoa immediately beneath it may have been used as such. It is very unusual to find either an assembly hall or a market area situated immediately next to the city wall in such a way.

As stated above, it is possible that the bouleuterion building was constructed in the early Roman period, as the Romans encouraged urban centres as a means of controlling the countryside and of collecting taxes.<sup>417</sup> An imperial letter probably written at the time of Diocletian (AD 284-305) about the raising of Tymandus in Northern Pisidia from the rank of village to that of city authorises the establishment of a city council of fifty members.<sup>418</sup> A letter written in AD 158 by the Emperor Antoninus Pius to a potential city in Macedonia authorised a council of 80 members in similar circumstances. The small number of councillors at both cities reflects the Roman tendency to favour concentrating power into the hands of the wealthiest few; the power of assemblies under the Romans was severely reduced. Although it is possible that its scale was the result of its dual function as a theatre as well as a bouleuterion, the size of the bouleuterion at Sia is more appropriate to a Hellenistic or early Roman date of construction, as it could certainly hold three hundred people.

There are several further public monuments at Sia that are similarly difficult to date, as they lack both substantial decoration and inscriptions. A small (5 m x 7 m) structure, Rq1, lying about 10m to the east of the bouleuterion, consists of a square room and porch in antis (plate 15). It was built from large (2m x 2m) square ashlar blocks and may have been constructed at the same time as the bouleuterion as part of the new official complex, but it may also belong to a later period. The building does not appear to have had any prostyle columns but simply two short antae, whose capitals were decorated with a pair of rosettes. There were single pilasters on either side of the door, whose large console capitals were decorated with scroll patterns. In favour of an earlier date of construction is its placement next to the bouleuterion and stoa. The focus of the later Roman settlement appears to have been further downhill. As the bouleuterion was still functioning in the second century AD, however, it is apparent that this area of the settlement was still of importance. A later date, therefore, cannot be ruled out. The plan of the building suggests that it was either a temple or a treasury (or both).

Another building of unusual plan and unknown date is building Vr1 situated on the east of the site just within the original city circuit [A]. Vr1 is constructed from monumental pulvinated blocks (ca. 1.90 x 0.4 x 0.7m) and faces south with a view out over the Merdivenli pass towards Pamphylia (plate 16). There is no evidence for the function or significance of this structure. Vr1 consists of two chambers; the outside doorway (2.10m wide) leads into a narrow antechamber (5x1m), which in turn opens into the main chamber (5x4m) through a 1.50m wide entrance. Vr1 lies directly to the north of a smaller, similar shaped building Vs1. Vs1, however, is constructed from coursed rough trapezoidal stones tending to rectangular (plate 17). Vs1 possesses a similar two-chamber structure, but the two rooms are of equal size (4x3m; 4x4m). The external doorway of Vs1 measures 1.62m. Vs1 is placed directly next to a large, flask-shaped cistern. Vs1 appears to be a house with its own supply of water. The plan of Vr1, however, is odd, in that it has a very wide external doorway. Furthermore,

<sup>417</sup> Rostovtzeff 1957, 49-51; Magie 1950, 639-41.

<sup>418</sup> *MAMA* IV.236/*ILS* 6090; see De Ste Croix 1981, 313-4.

unlike the less monumental Vs1, Vr1 does not appear to have had its own cistern. It is impossible to judge whether these two relatively isolated buildings constitute a religious structure and a house, or two houses. No other building at the site is built in the same style as Vr1. Although it is probable that the building is Hellenistic and of civic significance, no firm conclusions can be drawn.

The sparseness of evidence for public buildings at Hellenistic Sia may simply be the result of later buildings overlying earlier structures. However, the excavations of the significantly larger site of Sagalassos have only revealed a few (probably) Hellenistic buildings, none datable to before the second century BC, and all potentially datable to the first century BC.<sup>419</sup> At Panemoteichos 1 the remains of a small temple, and the traces of a few buildings were discovered;<sup>420</sup> at the smaller site at Arılık Tepesi, there are traces of two, probably domestic, buildings within the fortification walls. The lack of substantial buildings apart from the fortification circuit may simply be the result of stone-robbing. As most of the fortification walls at both sites have been left relatively intact, however, this explanation is unlikely. The lack of substantial remains probably indicates that most structures were constructed from organic materials, most probably from wood, a plentiful resource in antiquity in the region, or from stone and wood, or possibly mud brick.<sup>421</sup>

Sia's absence from Artemidoros' list of Pisidian cities may be indicative of its continuing tribal organisation. It is likely that Sia continued to be little more than a fortified tribal community into the Late Hellenistic period. Its fortifications, the earliest identifiable construction at the site, would have provided some degree of protection for its inhabitants. The construction of the bouleuterion at Sia may reveal a change in the administrative structure of the settlement, although as we do not know how tribal Pisidia was organised it is impossible to say anything substantive about such a change. It can only be stated that it was probably in the late Hellenistic/early Roman period that inhabitants of Sia adopted Greek terminology (and ideology?) to form a boule.<sup>422</sup> It is possible that Sia at this time was not yet considered to be a polis - the fossilisation of the term *demos* in the name of the city in Hierocles' list from the sixth century AD would indicate that Sia remained a *demos* for some time. The bouleuterion of Sia could, however, have provided for a citizen assembly and/or a council of elders to meet, when, and if, it came to be governed in a similar fashion to those Pisidian cities mentioned in the historical sources.<sup>423</sup>

It is almost certainly a mistake to conceive of the early settlement at Sia as a Hellenic-type city-site.<sup>424</sup> The early fortifications of Sia were by no means primitive, but we should not draw hasty conclusions about the influence of Hellenic culture at a site like Sia. The lack of

<sup>419</sup> See Waelkens 1993, 41-5; Mitchell 1991b; Mitchell 1992 on Hellenistic Sagalassos.

<sup>420</sup> Aydal, Mitchell, Robinson and Vandeput 1997, 146-7, 155-7.

<sup>421</sup> The speed with which Ottoman houses (constructed from wooden frames with stone infill) disintegrate once abandoned is visible in the village of Bademağacı where buildings abandoned ten years ago are now reduced to ever-decreasing mounds of stone (see plate 18). Usable stones are quarried for use in new houses and walls.

<sup>422</sup> See Bérard 1892, 434-5, and Bean 1960, 74-5, on the imperial inscription referring to the *demos* of Sia.

<sup>423</sup> Termessos possessed a 'sovereign assembly', and both Adada and Termessos are mentioned as having some form of democratic government in the second century BC. See Robert 1966, 53-8; Heberdey 1941, 2; Mitchell 1991b, 123-5, 140-1.

<sup>424</sup> See Andreev 1989.

public buildings, and the loose inward-looking plan of the settlement are not indicative of a Hellenic lifestyle. The erection of a council building, albeit in an unusual form, may reflect a dramatic change in the administration and organisation of society at Sia, but it may also reflect a small step in a more gradual process of change, a monumentalisation and Hellenisation of already existing structures and organisations.<sup>425</sup>

As the power and influence of the Pergamene kingdom spread, and as the larger sites in the area adopted more openly Hellenic building forms along with the Greek language and forms of administration this must have had an effect on the smaller sites such as Sia. Nevertheless, the situation as described by Artemidoros in ca. 100 BC would indicate that the some of the smaller sites, including Sia, were still some way from being able, or willing, to consider themselves as part of the larger Hellenic world.<sup>426</sup>

### 3.4.3 HOUSING

The immediate and greatest problem posed by the housing at both Sia and Ariassos is how it can be dated. The use of mortar in the housing appears to offer one means of dating. A vexed question, and one that can still not be positively answered, is at what time mortar began to be employed in construction in Pisidia. It has previously been claimed that mortar was employed in the Hellenistic walling at Ariassos. It can be shown, however, that mortar was employed only when the walls were re-constructed, possibly in the late third century AD (see below). Mortar is also visible in the internal walls of the market-building from Pednelissos, which has been previously seen as a Hellenistic construction. This market-building, however, appears to have been constructed as part of a complex including a Sebasteion; the site requires further detailed surveying if such buildings are to be accurately dated.<sup>427</sup> There is no building in Pisidia that is certainly Hellenistic in date, apart from cisterns, in which mortar has been employed.<sup>428</sup> A study of mortars from Sagalassos identifies only one Hellenistic mortar, used in a cistern.<sup>429</sup> One other mortar may have been late Hellenistic or early Roman. Mortar at Sagalassos begins to be used in the building of rubble walls in the second century AD. With the housing at Sia, mortar is only employed in eighteen houses out of a total of eighty-seven surveyed (20.7% or approximately 1 in five). The mortar is employed in all cases in walls that are demonstrably later in date than the earliest housing. Mortar is used in the majority of the instances discovered where walls are joined to pre-existing buildings. Only two buildings within the original Hellenistic circuit

<sup>425</sup> For a different view see Mitchell 1991b; Mitchell 1992.

<sup>426</sup> The size of Sia alone would certainly not have precluded it from considering itself to be a polis, as Balboura in the Kabalis was a similar sized settlement which probably considered itself to be a polis by the first century BC.

<sup>427</sup> The dating of the market building to the Hellenistic period provides a salutary warning on the pitfalls of dating on the basis of masonry styles alone; it is worth mentioning the example of the second or third century AD gymnasium of Termessos constructed completely from ashlar; see Lanckoronski, 1892, 60, 103-4. On the Pednelissos market-building, see Paribeni 1921, 107 which identifies the market-building as a house; Mitchell 1991b, 136 pl.14.2; Mitchell 1992, 14-15.

<sup>428</sup> Mortar was not unheard of in the Hellenistic period in Asia Minor, but its use in this area in the Hellenistic period has yet to be proven; see Waelkens 1987 esp. 94-5, fn. 3 and 4.

<sup>429</sup> Viaene, Waelkens, Ottenburgs, and Callebaut 1997, esp. 408-10.

were constructed with the use of mortar, and both are demonstrably non-Hellenistic.<sup>430</sup> One immediate dating criterion employed here, therefore, is the dating of any house to the Roman period in which the walls can be seen to be dependent structurally on the use of mortar. On the other hand, the building of walls from carefully cut and shaped blocks with no visible use of mortar appears to have been a practice that continued well into the imperial period.<sup>431</sup> It is only possible therefore to use the inclusion of mortar in a structure as a rough *terminus post quem*. Lack of mortar is, therefore, inconclusive as a dating criterion.

A further criterion for dating all structures at the various settlements is the masonry style in which they were constructed. As noted above, we need to be wary of making chronological judgements solely on the basis of the type of masonry employed in building a house. Nevertheless, it is possible to build a picture both at Ariassos and at Sia of phases of building, in which different styles of masonry were employed.

A further means of dating is provided by the expansion pattern of the settlements. It is reasonable to assume that the earliest housing at Sia would be contained within the original circuit [A]. Most of the houses still standing within this circuit reveal signs of rebuilding. It should be stressed that rebuilding a house requires considerable effort and expense, and is not likely to have been carried out lightly at any time. The housing at Priene, for example, which was constructed in the fourth century BC appears to have remained largely unchanged in its general form, despite existing into the Byzantine period.<sup>432</sup> It is not unreasonable therefore to expect to be able to find traces of the earlier housing from the two sites despite the extensive period of habitation. Much of the rebuilding that can be seen at Sia and Ariassos appears to have taken place as the result of earthquake damage, although the filling of doorways and building of extra internal walls was a different matter.

Forty houses are contained within the original city circuit [A] at Sia built from the local limestone in a variety of styles ranging from extremely rough rubble through to carefully shaped and finished polygonal and ashlar. The houses are grouped into five distinct clusters which appear to have corresponded to probable locations of gates into the city in antiquity – these groupings of housing will be referred to as the Outer Northern Group, Inner Northern Group, Southern Group, Southwestern Group and Western Group. The physical geography of the site meant that moving between these areas would have required a considerable degree of physical effort. The separate groupings of housing identified may represent sub-groupings within the society of the Sienoi, perhaps families or clans. There does not appear to be an immediately visible differentiation in status between the different

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<sup>430</sup> The two houses, Qq1, Tt1 were both definitely built later than the Hellenistic period. Tt1 was rebuilt from spolia, probably in the Late Roman period, and Qq1 was erected on the line of the Hellenistic wall next to the west gate.

<sup>431</sup> Besides the second or third century AD gymnasium of Termessos, see the probably Vespasianic aqueduct of Patara built from polygonal masonry, Coulton 1987a, 80, the probably first century AD aqueduct at Pisidian Antioch built from unmortared *opus quadratum*, Mitchell and Waelkens 1998, 175-95, the large dry stone ashlar temple wall, probably Severan in date, at Cremna, Mitchell 1995, 118, pl. 61, and further examples of dry stone construction well into the Roman period in Lycia, Pamphylia, Pisidia and Cilicia cited in Waelkens 1987. Further afield, the dry stone ashlar buildings of Serjilla and other of the ‘dead cities’ of Northern Syria are testimony enough that the technique was employed into the fifth and sixth centuries AD; Tate 1992. From Sia and Ariassos themselves examples of dry stone walling without the use of mortar abound.

<sup>432</sup> See Wiegand and Schrader 1904.

groupings, but each grouping identified possessed its own non-domestic and probably religious building – Vm3, Rt7, Rt2, Sp5, and Rq1.<sup>433</sup> Vm3 is especially interesting in that it was built abutting the house Vm2 (plate 19). Vm3 contained a lion of the type employed in the Kibyrtis as a funerary monument, examples of which are also found at the site at lower Döşeme Boğazı.<sup>434</sup> It is possible that Vm3 is a monumental tomb, but there are no similar constructions elsewhere on the site nor at neighbouring sites, and the physical connection with a domestic building is highly unusual. It is perhaps more likely that Vm3 possessed a religious function also. It is possible that it was a heröon, and that whoever constructed it wished to emphasise his connection with the hero involved. The other religious buildings emphasised may have been of a similar nature. If this hypothesis is correct, then it could provide us with some indication of how Pisidian society was formed, with different family groups or clans each having a particular place of religious significance. How or if this was reflected in the political organisation of the settlement we do not know. We lack epigraphic evidence and suitable archaeological comparanda to see whether this pattern was repeated at other Pisidian sites. Of the groupings of housing, the Outer Northern Group and the Southern Group appear to have been the least changed through the history of the site.

Two of the forty houses, Qr1 and Qq1, on the original city circuit can be dated to the period following the expansion of the settlement beyond the walls, as they are situated on the line of the wall itself. Of the thirty-eight houses remaining, one, Tt2, is clearly a late construction, as it is built from very rough rubble and mortar; fifteen other houses are [re-]constructed from rubble of varying qualities, and two houses are only visible as cuttings in the rock. Nine houses are constructed mainly from trapezoidal and ashlar masonry, twelve mainly from polygonal masonry. Differences in masonry style need not be indicative of different times of construction; indeed all of the houses built using ashlar except Vm1 use less labour-intensive (and thus expensive) forms of masonry in the less visible rear walls. Furthermore, regular small ashlar, which may appear to be less monumental, would represent a greater expenditure of energy and time than larger ashlar, especially as the stone did not need to be moved far from its place of quarrying. With the majority of the houses, the steep gradient of the hill was utilised to save labour, as the stone for the houses appears to have been quarried on the spot, creating at the same time parts of the back and side walls from the rock-face. As with the Hellenistic housing from Priene, it is unclear whether the houses were built on two floors or not. There is no real evidence of large quantities of fallen masonry within the remains of the housing. This may be because fallen masonry was re-used in later buildings (following earthquake damage), or it may be because upper storeys were constructed from wood, or wood and mud-brick. There is, however, no strong reason to suppose that two storey housing was the norm; there is only clear evidence for two storeys in four of the buildings at the site, Qp1, Qn2, Sm2 and Qq3 three of which lie outside the Hellenistic city circuits. Rock-cut steps are visible at Tm1, but these appear to lead to Tm2 rather than to an upper floor (plate 20). It should nevertheless be born in mind that the plans of the buildings as they are recorded might fail to represent a second level of living space.

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<sup>433</sup> This evidence of religiosity would nicely fit Cicero's observations on Pisidians as a superstitious bunch, see Cicero, *De Divinatione* 1.2; 1.25; 2.80; esp. his comment at 1.105 where an augur was mocked as being 'a Pisidian'. Rq1 contains one of two sculptures from the site, of a man's face; unfortunately it is so poorly executed (and furthermore eroded) as to be undatable.

<sup>434</sup> See Money 1990.

Beam-holes are visible in the rock face at the rear of Rt8, indicating wooden supports for the roof. There is surprisingly little roof-tile to be seen on the site, which may imply the use of organic materials such as thatch, mud or wooden shingles for roof covering.<sup>435</sup> The wooden house doors were set between stone posts and lintels, while the windows, identifiable in a few of the better-preserved structures, had slot fittings for wooden shutters.<sup>436</sup> The steep contours of the hill may not have been conducive to a regular street system, but the more bunched lay-out of the buildings is probably the result both of a more gradual building programme than at Sia's closest neighbour, Ariassos, but also of a more inward-focused, socially differentiated settlement.

Many of the larger houses within the city circuit are built in an L-shape around a courtyard; from the Outer Northern Group, houses Tm1, Vm1 and possibly also Tn1 are built to this plan; from the Inner Northern Group house Sp1, and from the Southern Group, Sv2 and Sv3 may originally have been one L-shaped house; from the Western Group cluster Qp4 represents an aggrandisement of the design with a double inner courtyard. Only the Southwestern Group contains no house of this plan. The courtyard of these houses contained a cistern to gather water from the roofs of the house, and may even have been used to house valuable or vulnerable animals at night. Only eighteen (45%) of the houses within the circuit can be seen to have possessed cisterns, but this is almost certainly an under-representation of the actual number. In addition to these cisterns, three very large cisterns were built in the acropolis area (St), and a further three cisterns were cut into the rock face below point 46 (Sr).

House Tt1 built from fine quality ashlar with chamfered edges at the front (plate 21), with a rubble back wall, and house Sv4 constructed from rougher, coursed ashlar at the front, with a rubble back wall, are the only identifiable examples of a house type more common at Ariassos.<sup>437</sup> They consist of three rooms in a row with a shallow terrace in front. They may represent a somewhat later style of building than the L-shaped houses with courtyard; the design is more outward-looking, and may represent a shift in attitude to private space. The housing in the southern housing groups are both smaller, and in a worse state than the other groups of housing. In particular, the housing at the Southwestern Group has clearly been reconstructed in an inferior rubble style. There is no evidence of any single large house in this area. Much of the area appears to have been a public area, possibly consisting of a rudimentary stoa (Rt1), and market-place (with two cisterns) in front of the religious building Rt2.

The housing of Hellenistic Sia was not especially egalitarian – whilst 68.4% of the Sienoi lived in houses with three rooms or less, 18.9% lived in houses with six or more rooms. The presence of the large L-shaped houses in all of the housing areas apart from the Southwestern Group (which may rather have been a general commercial area shared by all) adds to the impression of a site divided along familial or clan lines, rather than by class or social status.

<sup>435</sup> For the regional diversity of roof coverings in this region in modern times, see De Planhol 1958, fig. 29.

<sup>436</sup> See, for example, the perfectly preserved window from Qq1 (plate 22), and the windows of Qp4.

<sup>437</sup> See below 3.5.3.

The most notable signs of economic activity at the settlement are heavy stone weights, and stone spouts which may have belonged to oil presses. Although four press weights were found, two in Qq3 (plate 23) and one in Sv2 (plate 72), the fitting for a press is only visible in Rr2 and Qq2.<sup>438</sup> None of these houses, however, was definitely built in the Hellenistic period; indeed Qq3 was almost certainly constructed during the period of expansion, and Sv2 was also extensively reconstructed at a later date. Rr2 and Qq3 are both undatable, being constructed in the simplest of styles, from rubble with rock-cut backs. There is therefore no evidence for the use of presses in the Hellenistic period at Sia.<sup>439</sup>

#### 3.4.4 WATER SUPPLY AND DRAINAGE

The problem of maintaining the water supply for Sia must have been acute. There does not appear to have been a source of water at the site itself. The nearest springs lie to the East over twenty kilometres away on the other side of the neighbouring city site at Melli to the east of Sia.<sup>440</sup> The modern village of Karaot near the site of Sia, was until very recently entirely dependent upon roof-fed (mainly ancient) cisterns for its water.<sup>441</sup> Sia was clearly totally dependent upon cisterns for its water; the site is perforated with cisterns, from smaller flask-shaped cisterns for individual houses and groups of houses, to the larger square cisterns, which appear to have been for public use. Such was the need for cisterns that large flask-shaped cisterns, at least 6m deep, were cut into the rock wherever possible along the line of the upper western circuit wall [B]. For everyday domestic purposes, the majority of houses must have had their own underground cisterns in their courtyards to collect and store rainwater from their roofs. Several stone water-spouts, presumably for directing water into the cisterns, have been discovered on the site, and cuttings for pipes are visible on several of the house walls.<sup>442</sup> The most common type of cistern was flask-shaped: a bulbous cavity with a narrow circular neck, with waterproof cement-coated walls. Draw-shaft heads cut from a single or two blocks of stone were placed over the cisterns, and cuttings were made in these to take a cross-stay on which, presumably, a bucket or container of some kind was suspended. The draw-shafts would have been covered to prevent evaporation. Some of the larger houses possessed two cisterns, but this appears to have been exceptional.<sup>443</sup>

<sup>438</sup> See discussion below, chapter 5.

<sup>439</sup> There was little evidence found for Hellenistic pressing equipment also in the Hellenistic Argolid. It has been suggested that the reason for this may lie partly in changes in the construction of the presses themselves – from modular presses to more permanent ones. It is nevertheless unlikely that many olives were being pressed in either region; for further discussion see Mee and Forbes 1997, 259-61.

<sup>440</sup> Mehmet Cankara (farmer, seasonal forestry worker, and inhabitant of Kozagacı), pers. comm.

<sup>441</sup> The inhabitants of Karaot are eager to attest to the fact that the drinking water from the cisterns leaves much to be desired. On the amount of water required and the demand for and usage of aqueducts in antiquity, see Coulton 1987a, 81 esp. n. 46.

<sup>442</sup> These water-spouts are precisely the same as spouts found in presses on the site; a spout was found in situ in the press in house Qn1, and another identical spout can be seen employed in the fortified tower at Güvencirlik, see Paribeni, 1914, 107-12; see also plate 12. One form appears to have been sufficient for both functions; it is impossible, therefore, to tell whether a spout found out of context is from a press or the water system.

<sup>443</sup> House Qp4 situated next to the bouleuterion had eight rooms on the ground floor and two cisterns; its position, size and construction all indicate that it was the house of an important citizen.

There is no visible indication of how sewage was dealt with in Sia, but with the lack of running water it is most likely that ordure was collected together with animal dung as a valuable source of fertiliser and soil for crops.

### 3.5 ARIASSOS – THE EARLY SETTLEMENT

Ariassos appears to have been founded as a city in the Hellenistic period. A *terminus ante quem* for the foundation is provided by Artemidorus' list composed in ca. 100 BC. Three inscriptions from the site enable us to be more precise. According to calculations based principally on a single inscription, the foundation date of Ariassos has been reckoned as 189/88 BC.<sup>444</sup> Two inscriptions bearing the era dates 427 and 453 support, but do not confirm, this precise date. A large statue-base lying face up at the west end of the central basilica carries an inscription containing the names and titles of Caracalla as sole emperor (between AD 211/2 and 216/7) ending with the era date of the city 402.<sup>445</sup> Ariassos thus dates its era some time between 191/0 and 186/5 BC, most probably after the Treaty of Apameia in 189/8 BC, when Eumenes II, king of Pergamon, received the Milyas from the Seleucids.<sup>446</sup> The margin of error, though not particularly significant, is worth consideration.<sup>447</sup>

Manlius Vulso's intervention in the dispute between Termessos and Isinda in 189 BC may well be connected with the new era date of Ariassos. Polybius is not helpful, but the foundation of Ariassos may have been either a cause or a result of this dispute; it is doubtful that the foundation of a city whose land bordered on the territories of both cities was unaffected by their conflict and the forceful (and expensive) intervention of the Roman consul.<sup>448</sup> It is not necessary, however, that the era date should represent the foundation of the site. Era dates were used to commemorate particularly auspicious occurrences, and it was not unheard of for a city to employ more than one era system.<sup>449</sup> It is therefore probable, but by no means necessary, that the era date of Ariassos marks either the foundation or re-foundation of the site.

The southern boundary of Pisidia was insufficiently described in the Treaty of Apameia, and Eumenes exploited the imprecise phrasing to claim much of Pamphylia also from Antiochus. The possession of the Milyas (however defined), the subsequent campaigns of Eumenes II and his successor Attalos II against Selge, and the foundation of Attaleia on the Mediterranean coast must have meant that the Attalids had a great interest in controlling the routes through the plain below Ariassos.<sup>450</sup>

It is possible that Ariassos was founded by Pisidian mercenaries returning victorious from the Battle of Magnesia.<sup>451</sup> Even if this were the case, however, the foundation need not have been an Attalid initiative. It may have occurred as a result of the Attalids' inability

<sup>444</sup> Ramsay, 1893, 253-6; Mitchell, Owens and Waelkens 1989, 65.

<sup>445</sup> Mitchell 2000, 1-2.

<sup>446</sup> Polybius 21.46 (48); Livy 38.39; Livy, 37.56; see also Magie 1950, 758-62 n.56.

<sup>447</sup> Leschhorn 1993, 369, 390-8.

<sup>448</sup> See Grainger 1995, 34-5; Hall 1994, 51; French 1994.

<sup>449</sup> Kibyra is known to have used both a Sullan era date and its own Kibyran era date, and Isinda also appears to have used two era dates, see Leschhorn 1993, on Kibyra 348-51, 352-9, and on Isinda, 395, 538.

<sup>450</sup> The movement of the settlement of Panemoteichos c.10 km to the northeast of Ariassos to a lower-lying site overlooking the plain probably in the Hellenistic period may be evidence of Attalid activity in this valley. The fort at Ören Tepe lying opposite Panemoteichos as it is visible today, however, appears to be wholly a Late Roman construction (see below) contra Aydal, Mitchell, Robinson, Vandeput 1997; Mitchell 1998, 241.

<sup>451</sup> On Pisidians fighting at Magnesia, see Griffith 1935, 145; Livy 37.40.

completely to control the notoriously belligerent Pisidians, combined with a desire to remain on friendly terms with them.<sup>452</sup> The (re)foundation of Ariassos may have been a Pergamene initiative, a means of settling and perhaps pacifying unruly locals. It may have been a reward for support offered previously, or it may have been a part of a series of negotiations between the Attalids and the Pisidians. It is unlikely, however, that the Attalids would have been tolerant if the inhabitants of Ariassos had caused them any trouble. The foundation of Ariassos can be seen, perhaps, as part of the same (possibly independent) westward expansion of Pisidians that seems to have led to the foundation of Kibyra, Oinoanda and Balboura.<sup>453</sup> Whether the era date, therefore, commemorates the Treaty of Apameia itself or a subsequent treaty between the Pisidian settlers of Ariassos, or their metropolis (if there was one), and the Attalids is uncertain.

The site upon which Ariassos was built has hitherto not been thought to have been occupied before the Hellenistic foundation, yet recent re-examination of the site has revealed a rock-cut niche (0.86 x 0.80m) in the northwest corner of the site facing the setting sun (310°) near which was found a fragment of so-called Southwest Anatolian ware pottery, a pottery type datable to the eighth to the sixth century BC.<sup>454</sup> Such rock-cut niches are not uncommon in Pisidia, the Milyas and the Kabalis, and it may have held a 'movable' relief of a type known particularly in the Milyas and the Kabalis.<sup>455</sup> It is therefore possible that the site had been at least of religious significance before the date of its official foundation. The niche is undatable in the absence of inscriptions, although excavation might reveal votive dedications of a datable nature. The presence of the Anatolian ware indicates that the site could have been used as the (uninhabited) religious centre of a community, like the shrine of the neighbouring Perminoundeis, for some time prior to the foundation of the city.<sup>456</sup> The presence of the shrine may also have been an additional reason for the extension of the city walls to the northwest where there are otherwise no signs of buildings.

Whether the site was inhabited before the Hellenistic foundation is impossible to say; it is possible that previous buildings were made of organic materials, as at Sia. A parallel may be seen with the foundation of Balboura in the Kibyris, where the allotment inscription would appear to indicate that the site or, more likely, its territory was already inhabited, or with the creation of 'Termessos near Oinoanda' at a similar time.<sup>457</sup> An influx of new population may have led to the establishment of a polis at a site that had previously been the site of a smaller, less organised community. It is more likely, however, that the inhabitants of a nearby

<sup>452</sup> Coulton 1982a, 129-30. On the oft-quoted warlike nature of the Pisidians see, amongst others, von Aulock 1977, 13; Levick 1967, 16-20; Mitchell 1991b, 122.

<sup>453</sup> Hall and Coulton 1990, 148-9. Pisidians ventured further westwards into Caria, settling around Tabai and Kidrama, see Robert and Robert 1954, 73-6, 88, 136-7.

<sup>454</sup> See Mellaart 1955; for similar pottery at the neighbouring site at Panemoteichos, see Aydal, Mitchell, Robinson, Vandeput 1997.

<sup>455</sup> See Smith 1997; Mitchell 1993, 2.13; Robert 1983, 569-73; for a similar series of niches at nearby Huia, see Bean 1960, pl. 12b, 80; for the shrine of the Perminoundeis near Kızılcağaç south of Lake Kestel, see Mitchell 2000, pl. 69.

<sup>456</sup> The name of the site 'Ariassos' has also been seen to have ancient philological connections stretching back to the third millennium BC. The name could, however, have been a toponym that survived, or may reflect an enduring linguistic usage; see Özşait 1980, 108.

<sup>457</sup> See Coulton 1982.

settlement moved to Ariassos together with the newcomers to found a new, secure settlement at the site of a local shrine.<sup>458</sup>

The ruins of Ariassos cover an area of over 7 hectares on the south- and west-facing slopes of a hill, lying at about 910-1060m above sea level (fig. 10).<sup>459</sup> They spread some 400 metres from northeast to southwest along the bottom and in a series of rough terraces up the northwest side of a relatively steep-sided valley (plate 24). The Hellenistic city walls roughly describe a triangle running along the side of the valley along the top of a small cliff, and then run up to encompass the hill-top and some of the northwest face of the hill. The buildings, however, peter out towards the top of the hill on the south side, and do not continue over the brink of the hill and up to the city walls in the northwest corner of the city. The inhabitants of Ariassos therefore enjoyed a sunny southward-facing aspect, overlooking fertile plains at both ends of the valley in which it was built, and surrounded today by partially wooded hills.

There are a few difficulties in obtaining an accurate picture of the domestic quarters of Ariassos. Some of the domestic areas, particularly higher up the slope appear to have been damaged by successive earthquakes and rockfalls from above. However, much of this damage could already have occurred in Later Antiquity, and indeed stone appears to have been looted from some of the heavily ruined houses. Although this may have been carried out by Turks in later times, the removal of stones from houses higher up the site rather than the more easily accessible lower houses would tend to indicate activity by the settlement's own inhabitants. The picture gained of many of the buildings reflects their ultimate forms and uses (although the ground plans of many, or even most, may well have remained unchanged through the centuries).

### 3.5.1 FORTIFICATIONS

Hellenistic Ariassos was enclosed by a fortification wall, about 850 metres in length. The wall that is visible today has a breadth of ca. 1.80m and stands in places to heights of two to five metres (plate 25). As it stands today, it is constructed from a combination of large, hammer-faced ashlar and smaller rubble, bonded together with mortar (plate 26). It has been suggested that the wall, as it stands today, is the result of a single period of construction in the Hellenistic period.<sup>460</sup> The suggestion that the wall was built at one time, but in such a wide variety of styles requires careful examination; such an extensive and visible use of mortar as a structural element would be extremely unusual.<sup>461</sup> Whilst it is probable that the city circuit was initially constructed at the time of the city's foundation, most city walls in Asia Minor have a late Roman phase; it would be unlikely that no changes were made to the wall in succeeding centuries.

<sup>458</sup> The settlement of Kibyra was re-founded in a secure position in this way; Strabo 13.4.17.

<sup>459</sup> The exact area of the site is difficult to calculate given the uneven nature of the terrain. Much of the following description is dependent on the preliminary accounts given of the site by Mitchell 1989, and Mitchell 1991.

<sup>460</sup> Mitchell 1991b, 134 states that most of the wall now visible is Late Roman; this was omitted from Mitchell 1992 and retracted in Mitchell 1991a, 159-60, and Schulz 1992, 35-6.

<sup>461</sup> See Waelkens, 1987.

The pseudisodomonic masonry on what has been interpreted as the 'East bastion' that stands today to a height of 9.5 metres, has been used as one of the primary dating criteria for the fortifications of Ariassos (plates 27 and 28). As the pseudisodomonic style in which this 'bastion' was made was popular in Asia Minor in the second century BC, and was widely used by Pergamene architects, the 'East bastion' has, therefore, been seen to be Hellenistic.<sup>462</sup> There are several reasons for doubting both the dating and the interpretation of this building.

The dating of buildings by masonry style alone is extremely difficult in this region, where dry-stone masonry in various styles appears to have continued well into the Roman period. There is little doubt that pseudisodomonic masonry was used in the Hellenistic period. Pseudisodomonic masonry (with the use of mortar) was employed in the construction of the levelling platform for the upper theatre at Balboura. The upper theatre is difficult to date, but Bier suggests a date in the second century BC.<sup>463</sup> However, as Bier notes, the masonry style in itself is not an adequate dating criterion. The pseudisodomonic style visible in the 'bastion' and the Balboura upper theatre is also employed both at the west end of the (possibly first century AD) bathhouse and also in the (fifth or sixth century AD) Large Basilica at Pisidian Antioch.<sup>464</sup> Not only is the masonry style inadequate in providing us with a date, but the walls of the 'bastion' would have been seriously inadequate as an element of the fortifications. The 'bastion' walls are a single course thick, contain mortar in the lower levels, and possess one broad window (ca.1.20m wide, 1.65 m high) at a height of about two metres above the (present) ground level on the south side, and another smaller window (0.5 wide, height unmeasurable) on the east side, which is now partially buried. The thin walls and the large windows would have compromised the fortifications at the least defensible part of the site.

There is no clear evidence that the 'bastion' was built at a separate date from the rest of the building of which it is a part, which has been identified as a Late Roman peristyle house.<sup>465</sup> Furthermore, the line of the original, Hellenistic, wall circuit in the south has been misidentified. The wall that has been indicated on the map of Ariassos running up the hill, which appears to follow the line of the 'bastion', is very hard to follow on the ground. It appears to consist of a late wall constructed by joining as many pre-existing walls as possible (the widths of the various joined walls vary from 0.85, 1.15, 0.75 to 0.72 m). The original circuit can be traced for some distance along the ridge that passes some 100m above and to the northwest of the 'bastion'.

That the city walls were re-built at a later stage can also be seen along the line of the north wall. The original structure is visible as the lowest courses of the later wall at several points. Re-used shaped blocks are also apparent, and 35 m to the northwest along the wall from Tower 1, rock-cut steps lead up to meet the present wall surface, where previously there must have been some form of gate or sally-port (plate 29).

<sup>462</sup> Scranton 1941, 73-4, 93-8; Lawrence 1983, 291-2; Schulz 1992, 36, abb. 3.

<sup>463</sup> Bier 1994, esp. 30, fig. 5, 31-2, 43-6, plates I (b), II (a).

<sup>464</sup> See Mitchell and Waelkens 1998, 194 for the date, and 198-9 for a description of the bathhouse; see Mitchell and Waelkens 1998, 210-17, esp. 213 and pl. 142, for the Large Basilica.

<sup>465</sup> See Mitchell 1996.

The original circuit at Ariassos appears therefore to have been relatively small yet well-positioned. The circuit was constructed from the carefully shaped ashlar still visible along the long northern section of the wall. It is impossible to say anything about the towers along the original wall, as they all appear to have been rebuilt. The circuit was simply conceived; the extension of the circuit over the brink of the hill increased the number of defenders necessary to man the walls but would have allowed defenders to control the advance of an enemy attempting the steep slope from below. Every use appears to have been made of natural features, such as cliffs and outcrops, that would assist in the defence of the site. Ariassos did not possess the natural advantages of the sites of its larger neighbours Termessos and Cremna, nor would the defences have proved adequate against royal armies equipped with siege engines.<sup>466</sup> As with the fortifications at Sia, the walls of Ariassos would have been sufficient to defend the inhabitants against smaller-scale, local threats.

The date of the city circuit cannot be fixed with certainty. It is probable however that the original city wall was one of the first structures to be built after the foundation of the city. City circuits were not only essential for security in a far from peaceful region but were also symbolically an important element of city identity. The original circuit should therefore be dated either to within or shortly following the period 191-185 BC.<sup>467</sup>

### 3.5.2 PUBLIC BUILDINGS

The public buildings of Hellenistic Ariassos were concentrated on the southwest slope. The building identified as a bouleterion occupied the full depth of the fifth terrace of the southwest slope, and was entered from above from the 'agora' area in front of the so-called stoa. The rectangular building (ca. 18.1 x 13.9 m), constructed from limestone, consists today of seven rows of seats divided by a central staircase with a small, paved orchestra below (plate 30). The building appears to have possessed twelve rows of seats, and, although it was originally suggested that the building also had seats along the side walls, this now appears not to be the case.<sup>468</sup> Dowel marks, collapsed doorposts, and a large, fallen lintel indicate that there were three entrances in the rear, northwest wall. The fallen lintel was decorated with an archetypal shield relief, the ubiquitous yet enigmatic indicator of Pisidian handiwork.<sup>469</sup> I was unable to distinguish either side-doors or a passageway under the seating.<sup>470</sup> It is likely that the building possessed three windows in the southeast wall.<sup>471</sup>

<sup>466</sup> On Termessos, see Lanckoronski and Niemann 1892, 2, 21-77; on Cremna, see now Mitchell 1995. On the capabilities of certain fortifications against siege warfare, see McNicoll 1997, 149, 217; note Milner's comment on the walls of Pednelissos that because a wall was built to withstand bandits or local threats rather than siege engines is not a sign that it was built after the time of the Roman protectorate. The evidence of the Ariassos walls would support this.

<sup>467</sup> An inscription honouring a man from Olbasa indicates that there was a conflict in the area ca. 160 BC; Kearsley 1994.

<sup>468</sup> See now Mitchell 1991a, 160 (*contra* Mitchell, Owens and Waelkens 1989, 65-6).

<sup>469</sup> This is briefly described in Webb 1996, 132. The origin and dating of the shield reliefs is still unclear; it is (*contra* Waelkens and Kosmetatou 1997) unlikely that the reliefs are indicative of Macedonian ethnicity – these reliefs are found on many of the most central monuments in many Pisidian cities including Termessos and Selge, neither of which fell to Alexander or his successors. The reliefs appear on Pisidian tombs, ostothecae, houses and other buildings from the Hellenistic into the Roman period; see Robert 1950, 129, n. 25; Nollé and Schindler 1991, 13-14 n.11 (for local origin); see also Pekridou 1986.

<sup>470</sup> The passageway and doors are referred to in Mitchell, Owens and Waelkens 1989, 65. The second lintel illustrated in Mitchell, Owens and Waelkens 1989, plate XIIb, may also have fallen from the rear of the

The building appears to have been roofed; there is no indication of internal supports for the roof.

Although at first glance the building may appear to be a theatre or odeion, the great bouleuterion of Miletus erected during the time of Antiochus IV (175-64 BC) was a 'theatral bouleuterion', as was the earlier (ca. 300 BC?) bouleuterion at Messene.<sup>472</sup> The bouleuterion of Termessos was similar in form.<sup>473</sup> The positioning of the building at the centre of the Hellenistic city makes it most likely that it was a bouleuterion, although it could also have been used for theatrical or musical purposes. The Ariassos bouleuterion is similar in size and form to the odeion erected to Diodorus Paspurus at Pergamon after 85 BC.<sup>474</sup> The Ariassos bouleuterion, although it is smaller in area than that at Sia, has more rows of seats; estimating one person per 0.4-0.5 m of seating, an approximate capacity of ca. 335-420 people is likely.

Next to the bouleuterion to the west stood a square building built of large, quarry-faced isodomic ashlar (plate 31). The lintel above the entrance to this building was decorated with a Pisidian shield relief. This building (7x7m) has been identified by Mitchell as a prytaneion.<sup>475</sup> Whilst it would not be unusual to find a prytaneion in such a position, there are several difficulties with making such an identification in this case. Prytaneia had several distinct functions in Greek poleis, primarily they had a religious function as the seat of the eternal fire of the city; alongside this however they also functioned as a dining hall for city dignitaries and for embassies from outside. Prytaneia are also recorded as having served as archives, places for the display of statues, law courts and even social treasuries for the paying of monies to certain needy people.<sup>476</sup> To fulfil these functions prytaneia required more than a single room – from such descriptions and remains it appears that prytaneia would typically consist of a minimum of two main rooms – a dining room and the hearth room – a courtyard, and such subsidiary rooms as were required for the fulfilment of its other functions. The Ariassos building, whose walls survive to a height of over two metres in places, shows no signs of ever having had windows which would make it an unpleasant place in which to dine; if a hearth were also contained here the atmosphere would presumably be most unpleasant given the relatively small dimensions of the room and the apparent lack of windows. The building could have contained the hearth alone, but, if so, there is no sign of it. The building is clearly an official building, as the lack of windows precludes a domestic function. It could have had a religious function, or it could have served as a city treasury or as an archive building. No other Pisidian city has an identifiable prytaneion building; it must be concluded therefore that although this building was official, its function is unknown. The

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building. In Mitchell 1991a, 160, Mitchell suggests that the passageway could date prior to the installation of stone seating. There is no indication of several building stages, and little reason (or space) for a passageway. It should be stated, however, that the overgrowth of scrub and the ruined nature of the building make it very difficult to discern features on the northeast wall.

<sup>471</sup> Mitchell, Owens and Waelkens 1989, 65 reports at least two windows (unmarked on fig. 1), three are indicated on the plan in Mitchell 1991a 161, fig.2.

<sup>472</sup> Dinsmoor 1950, 296-7; Robertson 1945, 335.

<sup>473</sup> Lanckoronski 1892, 43, 98-100, figs. 57-9; Filgis 1988, 1-6, fig. 6.

<sup>474</sup> Müller-Wiener 1988, 160-1; Filgis 1988; Mitchell 1989, 65-6; Mitchell 1991, 160 (corrigendum).

<sup>475</sup> Mitchell, Owens and Waelkens 1989, 66; Mitchell 1991b 134; Mitchell 1992, 17.

<sup>476</sup> On prytaneia see Miller 1978, on function see esp. 4-24, on form, 25-37.

style of the building and decoration is not accurately datable, but its position and unmortared ashlar masonry support a Hellenistic date.

Above and opposite the bouleuterion lay a small prostyle temple on a steep podium reached by six steps.<sup>477</sup> Mitchell originally proposed that the building was Roman, but later suggested, by analogy with the Doric temple (sometimes called the 'Kakasbos temple' at Sagalassos), and also from a small fragment of door moulding, that this temple was Hellenistic.<sup>478</sup> The fragment, which in any case is not necessarily from the temple building, is inconclusive for dating purposes, as the Hellenistic architectural decoration of this region is still largely unknown. Although the temple of Hera Basileia at Pergamon (built at some time in the period 159-138 BC) was reached from steps from below, thus appearing to be raised on a podium, this was a result of the positioning of the temple which was sunk back into the hillside; temples raised on steep podia with steps only from the front are more likely to be Imperial in date.<sup>479</sup> There is no convincing evidence to suggest that the Doric temple at Sagalassos is Hellenistic, and its raised podium would suggest that it too may well be Imperial in date.<sup>480</sup> In addition, the foundation courses of the temple include mortar, which has been said to be similar to that found in the city walls (although this was not based on scientific analysis of the materials). The city walls, as they now stand, are almost certainly a late third-century AD rebuild.<sup>481</sup> Although it is not possible to date simply on the appearance of this local mortar, it is probable that the temple is at least early imperial in date.

A more enigmatic public building, previously identified by Mitchell as possibly being a 'terrace temple', lay directly to the east of the bouleuterion on the fourth terrace (plate 32). At the northwest side of an open area there is a thirty metre terrace wall with what has been seen as a double stairway running up to what may possibly have been a temple or altar built behind it, which was surmounted by a facade of rectangular pilasters and, perhaps, columns on square bases. Two small triangular gables, decorated with a shield and a plumed Pisidian helmet, were discovered below this wall and have been supposed to belong to the building behind. An irregular wall running off behind the feature has been seen as a temenos wall. There are several problems with the description and tentative identification of this structure. The 'staircase' at the front of the terrace wall is in fact simply a platform with a moulded base, which juts out from the front of the terrace. The uppermost stones have fallen from the corners of the platform creating the impression that these were steps. The gable decorations are unfortunately reproduced in publication with no scale, and were not visible upon recent visits to the site. The building behind the terrace that has been identified as a temple or altar is unlikely to be so. The two walls which are visible today are of very poor quality, the west wall in particular is little more than rubble and mortar, and it is not at all clear that the two walls are parallel to one another. The east wall is more substantially built but can hardly be described as monumental. It is by no means clear that there was a substantial structure here at all. The gable decorations have been seen as suggesting a late Hellenistic or early Imperial date, although it is now unclear from where these gables came.

<sup>477</sup> Mitchell 1991, 160.

<sup>478</sup> Mitchell, Owens and Waelkens 1989, 66; Mitchell 1990, 160, 168 fig. 7.5.

<sup>479</sup> Lawrence 1983, 281; for an early Imperial temple at Side on a raised podium see Ward-Perkins 1981, 299, fig. 195a.

<sup>480</sup> Waelkens recognises that the original comparisons with Pergamene architecture were not strong, Waelkens 1993, 45.

<sup>481</sup> Mitchell 1991, 160.

Nevertheless the terrace wall itself is built with a mortared core suggesting that it was constructed at a later date than the bouleuterion and the original Hellenistic settlement. Although the function of the terrace is still unclear, it may well have been built as a prominent feature for the display of statues (as the plinths along the course of the edge of the wall indicate). Without any measurement for the gable decorations it is hard to comment upon where they came from, but it is possible that they belonged to a small heroon-like structure on the platform that has previously been identified as a staircase.

The building identified as a stoa stood directly behind and above the bouleuterion building (plate 33). It seems reasonable to suppose that such a building would have been built in this area to create an agora at the heart of the city. The stoa as it now stands is clearly the result of several building phases, as windows along the course of the front wall have been blocked up with mortared rubble, and much of the wall itself has been reconstructed with mortared rubble. It is not possible to reconstruct the original building with much certainty, and is, therefore, impossible to date with any accuracy.<sup>482</sup>

The remains of a small theatre are visible at the south west of the site near the bottom of the valley. Only the middle of the cavea of the theatre is visible, and there is no sign of a scene building. It is impossible to provide a construction date for the theatre. It is likely that the theatre was never completed.<sup>483</sup>

Although it may be the case that the public buildings discussed above were built at the time of the city's foundation, most of the parallels for the buildings are late Hellenistic/Early Imperial in date. Sagalassos also has very few buildings indeed that can be dated with any certainty to the Hellenistic period. Hellenistic Pisidia may not have been as Hellenised architecturally as has been suggested.<sup>484</sup>

Hellenistic Ariassos was a small, fortified settlement, covering an area of less than four hectares. Yet the site appears from the start to have been founded as an independent polis. The construction of city walls and a council chamber would have been seen as the indicators of an autonomous polis.<sup>485</sup> Ariassos, like its neighbours at Sia and Termessos, had a building

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<sup>482</sup> Mitchell 1989, 64 and Mitchell 1991, 161, show the actual state and reconstruction of this area including the stoa. The stoa reconstruction must be treated as extremely tentative, although the presence of a stoa here would not be unlikely and is supported by the fact that it appears to have been constructed with a gap between it and the rock-face (unlike the housing); on this feature see Coulton 1976, 138-9.

<sup>483</sup> The city of Balbura, which was of a similar size and possibly even ethnic make-up to Ariassos, possessed two theatres, neither of which was completed. This is probably indicative of lack of funds and/or a lack of sufficient interest; however, it is also indicative of the perceived desirability of a theatre from an early date. See Bier 1990; Bier 1994.

<sup>484</sup> On the Hellenisation of Pisidia, see Mitchell 1991b, and Mitchell 1993; many of the buildings identified in these articles as Hellenistic in date are not certainly so; similarly, Waelkens' claim for the Hellenistic date of the bouleuterion at Sagalassos, although credible, is not certain.

<sup>485</sup> See Boardman, Griffin, Murray (eds.) 1986, 331, on Colophon's symbolic wall-building. The independence of Ariassos may have been considerably curtailed, if the site at Panemoteichos approximately ten kilometres to the northeast of Ariassos, was indeed used by the Attalids. However, the garrison fort identified at Ören Tepe, previously thought to have been Attalid, is most probably a late antique construction comparable in every way with the late antique fort identified at Ovacık 45 km east of Elmalı, and also with the Late Roman fort identified on the southwest hill at Oinoanda. See Aydal, Mitchell, Robinson, Vandeput 1997; Hall 1983; Coulton 1983, 17, fig. 7, n. 49.

where an assembly and/or a council of elders could meet. The bouleuterion, stoa, fortifications and, possibly, temple all had their counterparts at Termessos, and more generally, in Hellenistic and Early Imperial civic construction and city planning.<sup>486</sup> 'Hellenistic' Ariassos may have taken shape at a relatively gentle pace, as funds and time allowed, starting with the fortifications and housing. The monumental centre of the city may well, therefore, have been completed in the Early Imperial period.

### 3.5.3 HOUSING

Most of the settlement of Ariassos is laid out along the southwest side of the west end of a valley (plate 34). It is reasonable to presume that the domestic framework of the city was laid out in the Hellenistic period after the city was founded, but such an assumption should not be accepted without argument. The site has not been excavated, and sherds from the site have not been studied. It might be supposed, therefore, that the site was established as a 'ritual' or refuge site with little or no permanent housing built on the site until a later date, perhaps after it was included into the Roman province of Galatia.<sup>487</sup> There are several points that may tell against this; firstly, the warlike nature of the Pisidians is often mentioned, and the history of Pisidia as far as we know it, is characterised by inter-city rivalries. At the only certainly Archaic/Classical Pisidian site, at Panemoteichos 1 ca. 10 km to the northeast of Ariassos, there is every indication that this was a permanent fortified settlement.<sup>488</sup> Other sites in the region such as Huia, Colbasa, and the early site at Sia all appear to have been similar settlements to that at Panemoteichos. The need for protection appears, therefore, to have been permanent; attacks from neighbours may have been frequent; the situation in the Hellenistic period was hardly more benign than in earlier times.<sup>489</sup> City walls represent a very considerable expenditure of time and labour; it is unlikely that a complete city circuit would be constructed by such a small community if it were not thought to be a necessity. Furthermore, there is no reason (as there is at the higher lying sites of Oinoanda and Sagalassos) to suppose that the site at Ariassos provided its inhabitants with a harsh environment - if that were the case the Roman inhabitants would have moved down into the valley as they no longer required the security of the Hellenistic site. Finally, if Ariassos were the result of Pisidian expansion into a region formerly controlled by others (either Milyans or simply a different tribal group) this would have provided an additional motive for the fortification circuit. It is probable, therefore, that the domestic layout of the city, which is still visible today, was laid out shortly after the foundation of the city in ca. 191-185 BC.

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<sup>486</sup> Mitchell 1991b; Mitchell 1992.

<sup>487</sup> It has been suggested that Oinoanda may have acted more as a ritual centre and as a refuge, and it has also been suggested, for different reasons, that Sagalassos was only occupied in the summer months. It has been suggested also that Sagalassos may originally have served as a fortified refuge, and a religious and political centre rather than as a place of habitation. Similar queries have been raised over the status of Samnite hill-forts. Whilst these hypotheses are interesting, there is no compelling evidence in their favour. Year-round habitation at all of the sites is possible, if not comfortable; to function as poleis it would be much easier (and probable) that people should inhabit the sites all year round; see Coulton 1982a, 19 n.13.; Coulton 1987a, 81; Paulissen, Poesen, Govers, de Ploey 1993, 233, 239; Oakley 1995, 141-2.

<sup>488</sup> See Aydal, Mitchell, Robinson, Vandeput 1997.

<sup>489</sup> The Pisidians were well-known for their violence, but the Pamphylians were not innocent of attacks on their highland neighbours; Strabo 12.7.2.

Fifty-two houses have been identified and recorded on a plan, laid out on four rough terraces on the west, and eight on the south face of a hill. Of these houses thirteen lie outside the line of the original Hellenistic circuit, and thirty-nine within. The houses are constructed from the local limestone; the predominant masonry style, unlike at Sia, was trapezoidal tending to ashlar, or ashlar masonry (20 houses, or 51% of the housing), rubble masonry was the second most common style of masonry (15 houses, or 39%). Polygonal masonry was employed in two of the houses (5%), and two of the houses (5%) are only visible as rock-cuttings. Of the thirty-nine houses within the Hellenistic circuit at Ariassos, 8, 12b, 21 are clearly later constructions, being built from rubble and mortar, and 11a, 11b, 19a, 19b, 20, 26 and 49 were constructed from re-used elements from previous buildings mixed with varying amounts of rubble; so few blocks remain from 38 as to make it impossible to comment upon its construction. Twenty-six of the houses (two thirds or 66.6%) show significant signs of having been reconstructed, which is almost certainly indicative of post-earthquake repairs. Unlike Sia, two of the houses, 7 and 8, bore lintels decorated with Pisidian shield reliefs. Although such a shield relief is visible on the Tomb of Alketas at Termessos, it is not useful as a dating criterion, as it was used on Pisidian tombs at least into the second century AD.<sup>490</sup> The significance of the shield is not precisely understood, but it must have been a sign of pre-eminence, if not originally of tribal leadership.

The housing of Ariassos was built on a more regular plan than that of Sia, something that was facilitated by the geography of the site. The housing can nevertheless be separated into four rough groupings, which, although much less clearly marked than at Sia, may reflect similar sub-groupings of family or clan. These groupings will be referred to as the West Gate Group (35, 36, 37, and surrounding houses), the House 4 Group (1, 2, 3, 4, 5, 6), the Central Group (9, 10, 11, 12, 14-18), and the Eastern Group (25 and environs). Unlike at Sia, there is no sign that these groups possessed their own separate religious buildings.

Only one house within the Hellenistic circuit at Ariassos, 7, clearly had more than one storey. As at Sia and Priene, it is impossible to say whether the other housing had more than one storey, but one would perhaps expect more evidence if it were a common feature at either site. Beam holes are visible at the back of 45 (the remains of which are clearly late, although the original house may have been constructed in the Hellenistic period). Roof tile is visible on the site, although not in great quantities; it is possible that many of the houses employed organic materials for roofing. As at Sia, wooden house doors would have been set between the stone posts and lintels, with wooden shutters in the windows.<sup>491</sup>

The House 4 group, below the prytaneion, appears to have been initially constructed at a similar time to the civic centre. House 4 (plate 36) appears to have been constructed originally from rusticated trapezoidal blocks tending to ashlar, and ashlar with chamfered edges. Much of the house has been subsequently rebuilt, but along with house 5 (built from coursed rubble with ashlar corners and monolithic door lintels and jambs) it appears to have been built around a shared courtyard containing a cistern. To the north of house 4 was

<sup>490</sup> On the shield relief in the Alketas tomb see, Pekridou 1986, 52-4, 55-61; on uses of the motif in the Roman period, see Cormack 1989, 32 n.6, 34-40; Mitchell 1989, 66; Mitchell 1991, 170; Mitchell 1995b, resim 7.

<sup>491</sup> See, for example, 36, 18, 7.

house 6 (plate 37), a smaller two- or three-roomed building, originally constructed in the same masonry style as the prytaneion. House 2 also appears to have been part of this same group, and it is possible that house 1 was, in its original form, joined with house 2 in a similar way to houses 4 and 5. These houses are orientated towards each other forming the kind of self-contained, possibly clan or familial, grouping identified at Sia. This housing group is the earliest identifiable housing at Ariassos. Its proximity to the administrative centre of the site and the similarity of masonry styles employed makes it likely that they were constructed at approximately the same time. None of the other groups of housing distinguished above is orientated towards each other in a similar way.

In contrast with Sia, the L-shaped plan appears only to have been used once, in house 25.<sup>492</sup> It is rather the row house with a shallow terrace in front which predominates; the more significant examples of this house design are 9 (plate 38), 10 (plate 39), 14 (plate 40), 20, 35, 36, and 37. The row plan is less inward-looking, and would remove the protected external area where animals might be kept, or where daily household activities could be carried out away from the eyes of ones neighbours. It is hard to judge the significance of this difference.

Two of the houses at Ariassos, 14 and 25 (plate 41), reveal an unusual feature – one external wall is built from smooth-dressed, close-jointed ashlar until it joins a wall at right angles which, although in both cases it appears to be from the same building phase, is constructed from rusticated ashlar with chamfered edges. There is no explanation for this use of different masonry styles apart from aesthetic appeal.<sup>493</sup> These may be domestic examples of what McNicoll has termed ‘aesthetic preciousity’: the juxtaposition of different styles of masonry, which appears to have been a popular style in the construction of fortifications in Pisidia and Pamphylia in the Late Hellenistic period.<sup>494</sup>

More of the housing of Hellenistic Ariassos appears to have been of a similar size and status than that at Sia – 75% of the Ariassans lived in houses with three rooms or less, whilst 2.6% lived in houses with six or more rooms. Our lack of knowledge of more temporary housing forms may of course provide us with a somewhat distorted picture. The impression gained from the housing of Ariassos, however, is of general uniformity with some exceptions. Unlike at Sia, the grander houses are to be found closer to a monumental administrative, mercantile and possibly religious centre, which may have consisted of a small temple, a council house or bouleuterion, a small row of shops, identified as a stoa, and the so-called prytaneion.<sup>495</sup> It is unsurprising to find the grandest buildings centred on the political and religious focus of the city.

<sup>492</sup> For 25 see Mitchell 1991a, 161, pl. xxxi c, 167, fig. 6; Mitchell 1996b, 196, fig. 4.

<sup>493</sup> A slightly less dramatic change in style is visible in the front wall of the so-called prytaneion which changes from fairly smooth-faced ashlar with a chamfered edge, to rusticated ashlar with chamfered edges, see plates 30 and 31. The masonry style of smooth-faced ashlar with chamfered edges laid in a pseudisodomic style was employed in this region at least until ca. the second century AD, if the bathhouse at Kaynar Kale (Codrula) can correctly be dated to this period; see Aydal, Mitchell, Mühlenbrock, Robinson forthcoming.

<sup>494</sup> McNicoll 1997, 152.

<sup>495</sup> Mitchell 1989, 64-6; Mitchell 1991a, 161.

Those houses identified tentatively as Hellenistic only cover approximately 40% of the total area of the city. The traces of partially rock-cut housing at the top of the ridge above houses 36, 37 and 49 and to the northwest of the site above houses 24 and 25 indicate that other, humbler forms of housing existed (plate 42). It is worth noting that little remains to be seen of housing at the sites at Huia or Panemoteichos I. Traditional Pisidian housing may well have been simpler and less durable than the monumental lithic style that is so visible at Sia and Ariassos. The style of housing most easily identifiable as 'Hellenistic' is a monumental style – carefully cut and shaped blocks, monolithic door lintels, thresholds and jambs. These blocks were naturally re-used in later times wherever possible, but we should be wary of jumping to the conclusion that all of the Hellenistic inhabitants of Ariassos lived in such carefully executed buildings. That such buildings should have survived the centuries, and that they should have been considered worth repairing after suffering earthquake damage, is unsurprising; it is equally to be expected that poorer, less well-constructed housing should have been swept away by change and by earthquake. Furthermore, whilst it is relatively easy to spot re-used ashlar, re-used rubble is more difficult to identify. Rubble appears to have been employed in at least some housing at both sites (for example, house 5 from Ariassos, and Tm1 from Sia). We should not presume that the houses that we see today as the Hellenistic housing of Ariassos and Sia were typical of its poorer (and possibly the majority) of its citizens. We should be wary, therefore, in attempting to use the houses that are still present as a basis for population estimates and as indicators of social differentiations.

No presses were discovered at Ariassos; stone spouts were found in 4 and 27 (plate 43), but it is unclear whether these were for water, or were parts of now-vanished presses. Other signs of economic or subsistence activities were clay loom-weights found in three of the houses.

### 3.5.4 WATER SUPPLY

There does not appear to have been a source of water at the site itself.<sup>496</sup> The nearest springs (both below the level of the site) are above the modern village of Bademağacı approximately three kilometres northeast of Ariassos, and above the modern village of Akkoç some four kilometres to the south. The karstic limestone landscape in which the site is situated is not conducive to the retention of rainwater, which runs off through cracks and crevices; hence the need for the many cisterns evident across the site. The inhabitants of Ariassos, unlike their neighbours at Sia, could have had recourse to the springs when desired (or necessary).

A fountain-house with three arched shelters where water could be drawn from a row of vaulted cisterns is situated on the southwest slope near what may have been the west gate of the city. The structure visible today is clearly Roman, as it is constructed from mortar and rubble, but it may have had a Hellenistic predecessor. It is possible that this fountain-house made use of natural aquifers that have since ceased running or of run-off channelled from other areas of the site. It may be however that the water supply for this fountain was provided by the Roman aqueduct (see below), and was thus entirely a later addition to the site. Another fountain-house which lay to the northeast of the bouleuterion and was

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<sup>496</sup> It is possible, though unlikely, that there was a source at the site in antiquity that has since disappeared underground as the limestone bedrock dissolved, but the abundance of cisterns would indicate that if such a source did exist, it was inadequate.

reached from the fifth terrace, but with its cisterns projecting into the fourth terrace below, may well have originated as a Hellenistic fountain-house given the similarity in style between the arches of the building with the arches in 7 and 36 (plate 44). The building is constructed from medium sized ashlar that have been mortared together at a later date, possibly as a result of reconstruction following an earthquake.

Only ten to twelve (26-30%) of the houses within the Hellenistic circuit of Ariassos can be seen to have possessed cisterns. Although some of these cisterns were almost certainly shared (such as between 4 and 5, 10 and 9, and the two to three cisterns of 37), it is likely that further cisterns have either disappeared since antiquity or were seen to be supernumerary once the aqueduct brought fresh running water to the site, probably in the second century AD.<sup>497</sup> Stone waterspouts, identical in design to those at Sia, have been discovered on the site, and cuttings for pipes are visible on several of the house walls. As at Sia, the most common type of cistern was flask-shaped (usually approximately ca.2-3m wide at their widest point and ca. 3 - 4m deep) with waterproof cement-coated walls. Draw-shaft heads like those at Sia were placed over the cisterns. A few of the houses also had larger square cisterns.<sup>498</sup>

As at Sia, there is no indication of how sewage was disposed of at Ariassos, but with the lack of running water, in the Hellenistic period at least, it is probable that human and animal ordure alike were removed and spread on the fields.

### 3.6 CITY AND TERRITORY

As the Pisidia Survey did not carry out any systematic survey of the territory of Ariassos, and only a rudimentary, extensive survey in the territory of Sia, the following, largely historical discussion is intended to provide a picture of the possible relationships between these settlements and their territories. Clearly further survey work in the territories would help clarify the picture.

The new cities of the Hellenistic period mark a visible stage in the organisation of Pisidian cities. The Hellenistic allotment list discovered at Balboura provides us with a useful insight into the organisation of a new city foundation, very similar to, and probably contemporaneous with, Ariassos.<sup>499</sup> The allotment list from Balboura appears to show the division of land between (probably) approximately 280 lot holders.<sup>500</sup> This number of lot holders probably constitutes the majority of the adult male population of Balboura. The names of the lot-holders reveal strong links with west Pisidia, in particular Termessos. The westward expansion of the Pisidians in the Hellenistic period appears to have proceeded not through the eradication or expulsion of local populations but through some degree of re-organisation and integration. Thus the Pisidians established the (multi-ethnic) settlement at Kibyra, and Oinoanda was probably also (re?)founded by Pisidians from Termessos.<sup>501</sup> It is reasonable to suppose that Ariassos was founded in a similar fashion. The size of the

<sup>497</sup> On the aqueduct, see below 4.3.5.

<sup>498</sup> Mitchell 1994, 174.

<sup>499</sup> Hall and Coulton 1990.

<sup>500</sup> Hall and Coulton 1990, 147.

<sup>501</sup> On Kibyra, see Strabo 13.4.17; on Oinoanda, see Coulton 1982a.

allotments allocated at Balboura is unclear, but it appears that the allotments were normally of equal size.<sup>502</sup> The terminology applied to these allotments was *δεκανία*; Coulton suggests that the term applies both to a group of about ten men, and the amount of land normally assigned to such a group. The entitlement to land may well have carried a corresponding duty of military service on behalf of the city.<sup>503</sup> At Oinoanda in the Hadrianic period some of the villages in the territory of the city had men of authority called *ἄρχιδέκανοι*.<sup>504</sup> The presence of *ἄρχιδέκανοι* is presumably indicative of the presence of *δεκανία*. The occurrence of *ἄρχιδέκανοι* in only some of the villages may indicate that only some of the villages of Oinoanda were inhabited by newcomers. Given the probable presence of a named settlement, Oinoanda, prior to the arrival of the Pisidians from Termessos, this suggestion is plausible.<sup>505</sup> It may be the case, however, that some villages were not considered large enough, or important enough to have an *ἄρχιδέκανος*; furthermore, by the time of Hadrian the meaning of the title had almost certainly altered, thus it is difficult to gauge the significance of its absence in some villages.<sup>506</sup> If the absence is significant, however, then the presence of separate villages of newcomers and natives is interesting. It is impossible to tell how the land at Ariassos was divided up, but the largely egalitarian nature of the Hellenistic centre, the similar background of the settlers and the near contemporaneous establishment of the two sites supports the picture presented by the Balboura allotment list, that is, of a largely equal division of land between the settlers.

At the time of its foundation, it is unclear whether Ariassos possessed a high level of social stratification or not. The Balboura allotment list, however, records a few names of allotment holders who received more than the normal amount of land.<sup>507</sup> The allotment of land at Balboura would, unsurprisingly, indicate that the majority of the Balbourans were involved in working the land. Thus we have a picture of a largely egalitarian, political, religious, administrative and defensive centre established and inhabited by what would be termed today a rural or peasant people.<sup>508</sup> Although we have little evidence of settlements in the territory of Ariassos, it is possible that a significant percentage of those provided with allotments lived on the land away from the city.<sup>509</sup> We need not, however, necessarily speak of a town-country divide. Kleisthenes' reforms in Athens fully integrated the rural village populations in the politics of the city; the rural allotment holders of Balboura, or Ariassos, would have been almost certainly similarly involved in their city politics. Once again, to talk of a town-country divide is misleading.

A problem with the Balboura allotment list as evidence for social egalitarianism, however, is that, naturally, there is no mention of who is excluded. Just as only some of the villages of Oinoanda may have been inhabited by newcomers, likewise the allotment list of Balboura

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<sup>502</sup> Hall and Coulton 1990, 142-7.

<sup>503</sup> The allotment of land in Ptolemaic colonies carried similar duties, as did the *timar* system of land allotment in the Ottoman period; see Hall and Coulton 1990, 144-7; Launey 1949, 337-47; Beldiceanu 1980, esp. 74-93.

<sup>504</sup> Wörle 1988, 146.

<sup>505</sup> The name of Oinoanda has been seen in the Hittite *Wiyawanda*, Gurney 1997, 136; for a full discussion of the settlement of Pisidians at Oinoanda, see Coulton 1982a.

<sup>506</sup> See Hall and Coulton 1990, 146.

<sup>507</sup> Hall and Coulton 1990, 142-7.

<sup>508</sup> Osborne 1991, 122.

<sup>509</sup> See further below, chapter 6.

may represent something more sinister: the exclusion of certain local elements of population, called at different times *perioikoi*, *katoikoi* or *paroikoi*. There may not have been a distinct town-country divide, there may, however, have been a citizen/non-citizen divide focused on the city. It is possible, therefore, even at this early stage that some non-urban people were excluded from the political aspects of the city, and were open to exploitation. In the fourth century BC trilingual inscription from the Letöon near Xanthos, *perioikoi* are mentioned three times, as distinct from the *Xanthioi*.<sup>510</sup> A similar distinction is attested in several inscriptions of the third century BC from Limyra and Telmessos.<sup>511</sup> It has been argued that these *perioikoi* represent a non-urban, non-Hellenised, Lycian population, who were not members of a polis and lacked the property qualifications and political and legal status of full citizens, and therefore had no inalienable rights over the land they occupied.<sup>512</sup> Ariassos, however, was a new foundation in a region that was almost certainly already inhabited. Excluding the inhabitants of the region from the new foundation would almost certainly lead to difficulties, and the evidence from Kibyra, Oinoanda and Balboura would all suggest that local populations were included in the new foundations.<sup>513</sup> It is probable, however, that *perioikoi* would not take very long to gather.<sup>514</sup>

It is unclear at what time Sia made the transition from fortified centre to urban settlement, from quasi- to proto-city, but it is possible that the re-organisation of the settlement and of their administrative affairs went hand in hand with a reorganisation of their land in a similar fashion to the land allotment at Balboura. The Hellenistic housing of Sia, although different in some ways from that at Ariassos, also reveals no great differences in size or grandeur, suggesting that the society of Sia at that time was not greatly vertically differentiated. In the Hellenistic period, therefore, it is very unlikely that urban dwellers of Sia and Ariassos were, to any great extent, living off the work of an oppressed rural population. The urban settlements would indeed have survived off the produce of their territories, but the inhabitants of Ariassos and Sia would for the most part have been involved in the process of agricultural and pastoral production themselves.<sup>515</sup>

Even if there was no systematic exploitation of a rural 'proletariat' to produce a surplus for the uses of the powerful, it is nevertheless possible that some of the inhabitants of both settlements would have attempted to produce a surplus from their land-holdings in order to exchange it for cash, as Osborne demonstrates was the case in fourth century BC Athens and third-century Tenos.<sup>516</sup> It is entirely unclear to what extent a need for such a surplus would have been felt at either settlement. If cash were required in any great amount, it might be expected that one of the two settlements would have begun coining. Ariassos

<sup>510</sup> For the full text and a discussion of the Letöon trilingual, see Metzger 1979, 49-127.

<sup>511</sup> Wörrle 1977; Wörrle 1978; Wörrle 1979.

<sup>512</sup> Hahn 1981, esp. 55-6.

<sup>513</sup> Coulton 1982a; Hall and Coulton 1990. *Perioikoi* could also be granted full citizenship at a later date as happened at Pergamon in 133 BC; see De Ste Croix 1981, 157-8, 160.

<sup>514</sup> At the same time as one group of *perioikoi* were given full citizenship at Pergamon, other non-*perioikoi* were raised to that status; *perioikoi* are also recorded in second-century AD Oinoanda; De Ste Croix 1981, 158; Wörrle 1988, 134-5; Milner 1991, 39 (on Balboura).

<sup>515</sup> It is impossible to estimate the number of slaves in Pisidian society at any time; it is clear that they must have existed, it is open to question to what extent the average citizen (ie the majority) could afford to purchase and 'maintain' a slave; children may have been a more economic source of labour for the poor. De Ste Croix, however, places great emphasis on the economic potential of slaves, 140-7, 256-9.

<sup>516</sup> Osborne 1991.

appears to have minted coins only after Pisidia was integrated into the province of Galatia after 25 BC.<sup>517</sup> Nevertheless, the coin hoard discovered at Ariassos, whose earliest datable coin was one minted by Termessos in 71 or 70 BC, indicates that, by the time of Augustus at least, someone at Ariassos was earning and hoarding cash.<sup>518</sup> The inequalities of status that were to become highly visible in the Roman period, almost certainly had their roots in the Hellenistic period.

### 3.7 DISCUSSION

#### 2. Construction at Sia prior to the Roman period

Building Type	Name	Approximate date
Fortification	Circuit Wall [A]	6 <sup>th</sup> -5 <sup>th</sup> centuries BC
Fortification	Circuit Wall [B]	Late 3 <sup>rd</sup> century BC
Fortification	Circuit Wall [C]	Late 1 <sup>st</sup> century BC
Public Building	Vr1 (temple)	Hellenistic
Public Building	Vm3 (temple/heröon)	Hellenistic
Public Building	Rt7 (temple)	Hellenistic
Public Building	Rt2 (temple?)	Hellenistic
Public Building	Sp5 (temple)	Hellenistic
Housing	Qq2, Qq3, Qp4, Rr1, Rr2, Rt1, Rt2, Rt3, Rt4, Rt5, Rt6, Rt8, Sp1, Sp2, Sp3, Sp4, Sp6, St1, St2, St3, St4, Sv1, Sv2, Sv3, Sv4, Sv5, Tj1, Tj2, Tm1, Tm2, Tm3, Tn1, Tn2, Tn3, Tp1, Vm1, Vm2, Vn1, Vs1	Hellenistic

#### 3. Construction at Ariassos prior to the Roman Period

Building Type	Name	Approximate date
Fortification	Circuit Wall	ca.191-185 BC
Public Building	Bouleuterion	(Late?) Hellenistic
Public Building	'Prytaneion'	(Late?) Hellenistic
Public Building	Stoa	Hellenistic/Early Imperial?
Public Building	Theatre	Hellenistic/Early Imperial?
Housing	1, 2, 3, 4, 5, 6, 9, 10, 11, 12, 14, 15, 16, 18, 20, 25, 27, 35, 36	Hellenistic?

Sia and Ariassos reveal two somewhat different faces of Hellenistic urbanisation; Sia appears to have followed a path of organic development growing from a Pisidian fortified site, similar to those at Panemoteichos, Prostanna, Orgun Hisar, Huia, Aralık Tepesi and Colbasa, into a settlement not too dissimilar in function from the newly-founded city-site at Ariassos. Urban sites were not new to this part of the world, Termessos, Selge and Sagalassos amongst others were all in existence at the time of Alexander.<sup>519</sup> It is perplexing that we do not know

<sup>517</sup> Von Aulock 1977, 2.26-9; 67-9.

<sup>518</sup> Von Aulock 1977, 2.27-8.

<sup>519</sup> Arrian's account mentions all three settlements by name, the other Pisidian fortified settlements that Alexander reduced are not named, see Arrian *Anabasis* I, 27-9.

what form these ancient settlements took, and the absence of any clearly identifiable early Hellenistic remains from any of these may indicate that they were not as permanent or monumental in form as we may be led to suppose by their later appearances. The early history of the Pisidian city is largely missing, at least partially because the larger sites almost certainly built over or removed earlier buildings to make way for new construction. The smaller sites such as Huia and Panemoteichos, or indeed Sia, may show what form the early city sites took. Given the frequent references to inter-city rivalries between Pisidian cities and their inhabitants, the role of the early city-sites was probably primarily as protected settlements and centres of command – the situation of the earliest sites reflects this defensive role. These centres could nevertheless have acted as centres of intra-regional, and possibly inter-regional, trade and exchange. The development of these cities is at present impossible to describe in any detail, although with the passing of Alexander (and possibly previously also) came the Greek language and the multitude of ideas and ideals of the Greek world. Again it is unclear at what time and in what ways the various cities responded to their contact with Greeks and others (including presumably Lycians, Pamphylians, and Phrygians) but the larger cities show the effects of contact with Hellenic culture from the third century BC onwards.<sup>520</sup> It is probably erroneous to ask whether the adoption of Hellenic ways was a façade or not. Cultural interactions are seldom simple affairs, and people do and think things for a multiplicity of reasons. Hellenic culture clearly came to represent a new language of power, a *lingua franca* shared by the Seleucid and then Attalid overlords of Pisidia, and by the Pisidians' neighbours, the Pamphylians, Milyans and Lycians. Nevertheless it is worth suggesting the Pisidians were not sitting in a cultural vacuum waiting to be filled by all things Greek. Although it is impossible for us now to be able to tell much about Pisidian culture, it is quite possible that many, or even most, of the Pisidians had not adapted themselves thoroughly to the Greek way of life before the arrival of the first Roman colonists.

It is worth looking to the smaller sites such as Sia and Ariassos to see whether these sites differ from their larger neighbours. Rather than looking for signs of Hellenism, it is worth asking in what ways these sites can be seen to represent something different. Both Sia and Ariassos, for example, possess meeting chambers for (some proportion of) their people, but to what degree this reflects a direct Hellenic influence it is difficult to say. If we look for signs of the adoption of the Greek language, no inscription survives from either site from before the second century AD, and Sia, in particular, does not appear to have taken to the epigraphic habit. We know nothing of the political organisation of either site; we should perhaps be wary in equating the construction of a meeting place with the immediate adoption of a Hellenic democracy.

The example of the four cities of the Kibyris shows how local ways could be recast into a semi-'Greek' mould: the four cities, though ruled over by a dynast, Moagetes, were united, in theory, in a league modelled on the Lycian league.<sup>521</sup> Strabo indicates that Pisidia was divided between the urban Pisidians and those who maintained their previous form of organisation. We do not know much of their previous decision-making apparatus. Decisions made through the meeting of a body of tribal elders are not unusual in tribal societies, decisions made through the congress of all fighting men are also not uncommon.

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<sup>520</sup> For an overview, see Mitchell 1991b and Mitchell 1992.

<sup>521</sup> See Jones 1940, 46.

Although the former situation could be described as a *gerousia* and the latter as a *boule*, neither may initially have appeared so to an Athenian observer.<sup>522</sup> It is perhaps unhelpful to think solely in terms of Hellenisation, it is preferable to see that the Pisidians, already urbanised and politicised at least to some degree before the advent of Alexander, embarked upon an urban-based expansion at the beginning of the second century BC.

An examination of the forms and nomenclature of urban government in the Hellenistic period has revealed a diffusion of titles spreading from settlement to settlement, as neighbours or trading relations adopted practices from other urban centres.<sup>523</sup> The inhabitants of second tier settlements such as Sia may have started out by applying titles copied from their more important, first tier neighbours, such as Termessos and Sagalassos, to pre-existing positions or institutions, but the institutions may themselves have become altered in the process into being more like their Greek counterparts.<sup>524</sup>

Religiously, it is also difficult to judge precisely when the second-tier settlements such as Sia and Ariassos adopted both Greek nomenclature and practise. It does appear to have been a slow process, however. The earliest possible occurrence of a Greek form of temple known in Pisidia is an *in antis* building at Panemoteichos 1. The Panemoteichos building is, however, neither securely identified nor dated.<sup>525</sup> Selge and Termessos are both known to have possessed temples to Hellenised gods - Selge possessed a temple to Zeus Kesbelios (pre-220 BC);<sup>526</sup> Termessos a temple of Zeus Solymeus (late Hellenistic).<sup>527</sup> The Doric temple from Sagalassos has been identified as a Hellenistic building, but this is still not certain.<sup>528</sup> At Sia buildings Vm3, Rt7, Rt2, Sp5, and Rq1 appear to have had a religious function, but they too are impossible to date with precision and we have no epigraphic or archaeological evidence by which to identify them. Although the process of change is thus obscured through a dearth of sufficiently solid evidence, it is apparent that, by the early Imperial period, the Pisidians had adopted Greek forms of worship; although Cicero's sneer would appear to indicate that the Pisidians were still idiosyncratic in their practise of religion.<sup>529</sup>

It is clear that no single Greek blueprint was imposed upon these settlements. Neither Ariassos nor Sia have much in common with cities such as Priene, Miletos or Olynthos; neither settlement possesses a large agora area, or a prominent and well-defined temple temenos area. Sia and Ariassos differ from each other in that Ariassos appears to have at least been built with a clearly defined and visible (albeit somewhat small) administrative, mercantile (and possibly religious) centre. The settlement at Sia is much less regimented in

<sup>522</sup> See also Syme 1995, 214-5.

<sup>523</sup> See Jones 1940, 46-8.

<sup>524</sup> The use of the term 'democracy' as employed in the treaty between Adada and Termessos (*TAM* III.2) may be an example of Greek terminology being employed flexibly. The term was often used to denote autonomy in the Hellenistic period rather than strict democracy; see Aydal, Mitchell, Robinson, Vandeput, 1997, fn.59; Ferrary 1988, 158-70, esp. 163 n. 122.

<sup>525</sup> Aydal, Mitchell, Robinson and Vandeput 1997, 155-7.

<sup>526</sup> Machatschek and Schwarz 198, 89-93; Mitchell 1992, 7-8.

<sup>527</sup> Lanckoronski 1892, 47-50; Mitchell 1992, 11.

<sup>528</sup> See above chapter 3.2, 63.

<sup>529</sup> See above fn. 433.

its organisation; it possesses several focuses of interaction, at the north gate, west gate and the south gate. Sia probably reveals its tribal origins in its separated clusters of houses.

The housing at both Sia and Ariassos varies in size considerably, although the predominance of housing at both sites possess either one or two rooms, neither site reveals the similarity of construction, finish or design seen in the housing of Priene, Miletos, Olynthos or Abdera.<sup>530</sup> Ariassos, however, is built in a more linear fashion than Sia, probably as a result of an initial land allotment, with the city being planned and then constructed in a shorter space of time rather than evolving from a pre-urban settlement. The development of Sia from small fortified settlement into a small town of the Greco-Roman world was a pattern followed throughout the Roman Empire.<sup>531</sup>

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<sup>530</sup> See Hoepfner and Schwandner 1994.

<sup>531</sup> See Wachter 1995, 208.

## CHAPTER FOUR

### THE ROMAN CITIES

#### 4.1 ROMAN PISIDIA

Upon his death in 133 BC, Attalos III bequeathed his kingdom to the Roman people. The new province was organised between 129 and 126 BC under its governor, Marcus Aquilius. The status of Pisidia in this period is unclear, but it seems likely that it was taken under nominal Roman control.<sup>532</sup> The extent of Roman involvement or jurisdiction in the area may well have been minimal. The Romans appear to have continued in the manner of the Attalids before them in coming to agreements with the individual, and still powerful, cities of Pisidia. In 91 BC, Termessos, which previously had been on good terms with the Attalids, appears to have come to an agreement with Rome. This agreement is known to us from the 'Lex Antonia de Termessibus' drawn up in 71 or 68 BC following the Mithridatic revolt, which had begun in 88 BC, during which the previously impregnable Termessos was occupied by Eumachos.<sup>533</sup> The 'Lex Antonia de Termessibus' guaranteed the autonomy of the Termessians as friends and allies of the Roman people.<sup>534</sup> It is likely that similar, although almost certainly not so favourable, agreements were made with other of the Pisidian cities as listed by Artemidorus.<sup>535</sup> The Romans appear to have been reluctant to involve themselves more deeply in the affairs of this often-troubled region than was absolutely necessary.

In 39 BC, Mark Antony granted northern Pisidia to King Amyntas of Galatia, followed three years later by parts of Pamphylia (and probably southern Pisidia). The Pisidians were not compliant subjects, and Amyntas had to fight to gain control. The Pisidians and the Isaurians resisted, and launched raids on neighbouring areas (although this may not have been out of the ordinary). In southern Pisidia Amyntas captured Cremna around 30 BC, but made no attempt to take the neighbouring fortified site of Sandalion.<sup>536</sup> Sandalion was probably deemed to be too difficult a site to take by storm, but, if isolated, was probably also of little strategic importance. With the major site of Cremna under the control of Amyntas, the Sandaliotoi were probably reduced to a containable localised threat. Amyntas continued his campaign into Isauria, where he died.

An inscription found in the territory of Termessos reveals that, even if Amyntas had refrained from attacking their settlement, he had certainly been engaged in fighting with the

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<sup>532</sup> Mitchell 1993, 72.

<sup>533</sup> On Termessos and the Attalids, see Heberdey 1941, 1.4.9; Magie 1950, 2. 1136-7; for the *Lex Antonia* see *CIL* 1, 2.589; *ILS* 1.38; see also Ferrary 1985, 419-57; Sherwin-White 1976, 11-14.

<sup>534</sup> On such freedoms see De Ste Croix 1981, 302-4.

<sup>535</sup> Strabo (12.7.2) quoted a list of Pisidian cities taken from Artemidorus (fl. ca.100 BC) consisting of: 'Selge, Sagalassus, Petnelissos, Adada, Tymbrida, Cremna, Pityassus, Amblada, Anabura, Sinda, Aarassus, Tarbassus, and Termessus'. The following comment that (12.7.3): 'all the rest of the above-mentioned Pisidians who live in the mountains are divided into tyrannies, like the Cilicians, and are trained in piracy' may reflect an inability or lack of desire on the part of the Romans to address terms with the smaller of the Pisidian settlements.

<sup>536</sup> Strabo, 12.6.4; on Sandalion, see Mitchell 1995, 43, 44 pl.14.

Sandaliotai.<sup>537</sup> The inscription also reveals that inter-city rivalry was as strong as ever in the region. Amyntas was supported in his campaign by Termessos, the nearest major Pisidian city to the south of Cremna, and by the Typalliotai (the inhabitants of a small settlement near, and subordinate, to Termessos). The roles of Ariassos and Sia in this campaign went unrecorded, but they cannot have been unaffected. After he had taken Cremna, Amyntas continued eastwards, and was killed in 25 BC fighting the Homonadeis.<sup>538</sup> It is apparent from Amyntas' failure to capture Sandalion that the Pisidians could still be formidable as well as recalcitrant subjects.

On Amyntas' death in 25 BC, the Romans finally set about taking full control of Asia Minor, and Pisidia was included in the newly created province of Galatia.<sup>539</sup> 'Wheresoever the Roman conquers, he inhabits'.<sup>540</sup> Augustus immediately set about ensuring the pacification of Pisidia and the security of his lines of communication between the inland cities and the coast with the creation of five military colonies at Pisidian Antioch, Cremna, Comama, Olbasa and Parlais.<sup>541</sup> These colonies must have (intentionally) disrupted the old power structure in the region, not least in providing a 'line of control' separating the 'big three' cities of Pisidia – Sagalassos, Termessos and Selge. In 6 BC the construction of the main road, the oddly named *Via Sebaste*, linking all the colonies was undertaken.<sup>542</sup> Pisidia lay on a moderately important route of communication, and, if it were not kept under control, it represented a threat to the interests of Rome and its trade route along the south seaboard. Augustus established the colonies to safeguard his interests in the region and to pacify a potentially dangerous centre of resistance, much as Alexander's general had previously attempted with the foundation of Cretopolis, and the Attalids had tried with a mixture of force and largess. Augustus succeeded where his predecessors had failed, Pisidia was pacified, and the *Via Sebaste* linked Pisidia both to the interior and coast facilitating and no doubt encouraging trade.

Roman government of its provinces was of a limited kind. The Romans did little to impose any single system of local government upon their subjects.<sup>543</sup> Systems of taxation were varied, and organisational bodies on local levels were similarly varied in type and range.<sup>544</sup> The Roman system of government was dependent upon largely self-governing cities.<sup>545</sup> Roman hegemony, however, encouraged the shifting of power away from assemblies towards councils.<sup>546</sup> Urban politics became increasingly dominated by a hereditary oligarchy of land-owners, the *curiales* or *bouleitai*, who were responsible for raising taxes and maintaining their cities through the system of liturgies.<sup>547</sup> The liturgical system imposed an obligation on the wealthier citizens to provide for various public services, which included the

<sup>537</sup> See Mitchell, 1994b; Mitchell, 1995, 43.

<sup>538</sup> Appian *BC* 5.75; Cassius Dio 49.32.3; Plutarch, *Ant.* 61.3; Strabo, 12.5.1 and 12.6.4. See also French 1994, 95-105.

<sup>539</sup> Levick 1967, 25-30.

<sup>540</sup> Seneca *Consolat. ad Helviam*, ch. 6, quoted by Gibbon 1776-88, 1.2 = Womersley (ed.) 1994, 1, 63.

<sup>541</sup> *Res Gestae* 28; Levick 1967, esp. 28-38.

<sup>542</sup> Levick, 1967, 39-41.

<sup>543</sup> For a brief overview of this subject see Garnsey and Saller 1987, 20-40.

<sup>544</sup> For some comments on the potential rapacity of Roman taxation, see De Ste Croix 1981, 345-7.

<sup>545</sup> On Greek cities and Roman government see Jones 1940, 113-55.

<sup>546</sup> Magie 1950, I.114-5.

<sup>547</sup> See Jones 1940, 179-210, 248-50; Rostovtzeff 1957, 49; Garnsey and Saller 1987, 32-4; Whittow 1990, 4-7; De Ste Croix 1981, 300-26.

building and upkeep of temples, baths and other public buildings. Acts of public munificence would add to the status of the benefactor; political office became the preserve of the wealthy, and competition between benefactors accelerated the development of monumentalised cityscapes.<sup>548</sup> The letters of Pliny written to the emperor Trajan reveal some of the consequences of the building boom as experienced in Bithynia and Pontus.<sup>549</sup> In the words of Gibbon, the second century AD was a time when the 'peaceful inhabitants' of the Roman Empire 'enjoyed and abused the advantages of wealth and luxury'.<sup>550</sup> Roman law and custom accentuated social divisions; Jones commented on the impact of Roman rule that: 'its chief effect was to promote an ever increasing concentration of land in the hands of its governing aristocracy at the expense of the population at large.'<sup>551</sup> The increasing social divisiveness of Roman domination, therefore, may be expected to be reflected in the archaeological record in Pisidia much as it was throughout the Empire.

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<sup>548</sup> See Alcock 1993, 77-8 on the rise and dominance of social elites in Greece under Roman domination; for a brief overview of benefactors and urban building see MacMullen 1974, 142-5.

<sup>549</sup> See Pliny *Letters* 10.17a, 18, 23, 24, 37, 38, 39, 40, 70, 71, 90, 91, 98, 99; see also Dio of Prusa *Orations* 40.11 praising public building in Smyrna, Ephesos, Tarsus and Antioch, and *Orations* 47.12 on his own attempts to advocate public building work at Prusa.

<sup>550</sup> Gibbon 1776-88, 1.1 = Wormersley (ed.) 1994, 1, 31.

<sup>551</sup> Jones 1974, 135; see also Alcock, 77-80.

## 4.2 SIA - THE ROMAN SETTLEMENT

### 4.2.1 FORTIFICATIONS

The *Pax Romana* removed the necessity for settlements such as Sia to possess fortified circuits; indeed the active upkeep of fortifications would probably have been frowned upon, if not actively prevented. In any case, as expenditure on fortifications became unnecessary it is highly unlikely that any local benefactor would squander money on their upkeep. The superfluous city-circuits would therefore become restrictive, confining the size of a settlement and preventing new building.<sup>552</sup> They also represented a convenient and substantial quarry of cut stone ready for re-use.

It is not clear when the southern wall [A] of Sia was first breached, but it may have been contemporaneous with the construction of the assembly building discussed above.<sup>553</sup> The construction of an assembly building, and the market buildings in front may have provided the Sienoi with a reason for dismantling their fortifications. It is not unlikely, therefore, that the walls of Sia were breached relatively soon after the region was included into the Roman province of Galatia. The Romans are likely to have approved of the destruction, and may even have provided money for the purpose.

### 4.2.2 PUBLIC BUILDINGS

If it is correct to suppose that the assembly building, adjoining stoa and temple/treasury were constructed in the early Roman period, as has been argued in the previous chapter, the considerable expansion of housing and further public buildings further downhill may well have been built later still.<sup>554</sup> It is worth noting that at Cremna, despite the fact that it was the site of a new colony, little public architecture appears to have been constructed in the Augustan period. It was not until the time of Hadrian that Cremna embarked on a major public building programme.

Eighteen broad flights of a monumental staircase lead from behind a row of temples (Nr1, Nr2, Nr3) and an agora area towards the largest Roman building on the site, which appears to be the remains of a palaestra, with an apsidal vaulted exedra, and a bath building, supplied by an immense, rectangular public cistern. The bathhouse was constructed some twenty metres south west of the assembly building, outside the now redundant fortification circuit [A].

The bathhouse is unusual in its plan, and the individual uses of its rooms are, without excavation, impossible to discern for certain (plate 45). Although a single round hypocaust tile was discovered on the slope below the building, there is no sign of tiles in the building itself, which appears to have been little disturbed below floor-level. The building was fed by

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<sup>552</sup> A similar example may be taken from the town of Nijmegen in the Netherlands which was forced to maintain its fortifications at considerable expense against the will of its inhabitants. Once the obligation was lifted in 1877 the townsfolk began tearing down the walls which they blamed for their loss of trade and status; the walls were completely demolished by 1884 to make way for new quarters of the city.

<sup>553</sup> See above 3.4.2.

<sup>554</sup> Mitchell 1995, 53-4; 56-77.

a large square cistern (7m x 7m) constructed from rough cut stones and mortar (plate 46); it was not possible accurately to measure the depth of the cistern, but it was at least 7m deep (giving a capacity of at least 343m<sup>3</sup>).<sup>555</sup> The cistern backed onto the circuit [A]. The bathhouse appears to have consisted of five rooms, although it is possible that the buildings to the south of the cistern were also connected with the bathhouse in some way. The focus of the complex appear to have been the room at the south west corner of the palaestra area (the largest room with the apse), and from the room with windows which provided access to the baths from the monumental staircase outside. The room to the south west of the palaestra contained a flask shaped cistern and stone-cut basin, and thus presumably functioned as a frigidarium. To the south of this room was another, positioned directly below the large cistern above (plate 47); its projecting doorway, possibly constructed to retard heat loss, may indicate that it was the caldarium. The projecting doorway has no parallels elsewhere on the site, but is present in bath buildings from Apollonia, Cadyanda and in baths Ml 1 at Oinoanda.<sup>556</sup> The walls of the bathhouse were constructed from mortarless coursed ashlar, one block thick.<sup>557</sup> The layout of the bathhouse with the oddly skewed palaestra (a trapezium, with apse) with sides of ca. 16, 13, 13, and 10 m), and adjoining room (caldarium?) is unusual. The slope below the bathhouse is particularly steep and is now buried under fallen blocks. It may be that a linear design of bathhouse was altered to fit the site. The possible caldarium may have been set back because of the presence of the house Pr3 in front of it. There are no real parallels for the Sia bathhouse. The bathhouses of Lycia have been studied in detail, and the majority of these appear to have been constructed around the end of the first century AD and into the second century AD.<sup>558</sup> The bathhouse at Kaynar Kale (Codrula?), has been tentatively dated to the second century AD, and the bathhouse at Cremna to the late first, early second century AD.<sup>559</sup> A similar date would fit the context of the bathhouse at Sia. The bathhouse was built close to the assembly building and stoa, the new focus of the settlement, and this may explain why compromises were made in the plan of the bathhouse in order to fit the site. It is very unlikely that the bathhouse post-dated the imperial monument in the marketplace below (which can be dated to the late second century AD), as the construction of the new marketplace and monuments below would have shifted the focus of the site once more. The lower ground around the marketplace would have provided the Sienoi with level ground on which to construct their bathhouse.<sup>560</sup>

The lower, Roman marketplace lies outside and below the Hellenistic city wall on the west side of the site. The precise extent of the marketplace is difficult to determine precisely, but it may have been as large as 80 x 50m. It was dominated on the east side by three small in-antis temples in a row, one now reduced to the level of the foundations, but two well-preserved, with the largest surviving to roof level (plate 48). This temple has a triangular gable decorated with a shield relief, the roof of the temple consisted of a mortared rubble vault. The other temples seem to have been simpler ashlar constructions.

<sup>555</sup> This is comparable with the cistern of the bathhouse at Kaynar Kale (Codrula?) which had cisterns with a capacity of approximately 340m<sup>3</sup>.

<sup>556</sup> Farrington 1995, 4, ill. 1,3 and 6.

<sup>557</sup> As Farrington notes this style of masonry is effectively undatable; Farrington 1995, 70-1, fig. 8.

<sup>558</sup> Farrington 1995, 81-2, table 13.

<sup>559</sup> See Aydal, Mitchell, Muhlenbrock and Robinson forthcoming; Mitchell 1995, 155-6.

<sup>560</sup> See below 4.2.2.

Opposite these temples was a high podium, possibly approached by a flight of three or four steps, with inscribed statue bases arranged around the other three sides (plate 49). The podium was constructed from regular, evenly-coursed, smooth-faced stone ashlar with no visible mortar on the outside. The inside of the monument, beneath where the steps may have been laid, has been (illegally) excavated, revealing a concrete core.

The inscriptions on the monument, some of which were published by Bérard, were erected by the people of Sia in honour of the emperors Septimius Severus, Caracalla, Geta and two other members of the imperial family whose names have been erased, and later, for Gallienus.<sup>561</sup> The monument, although slightly smaller, is similar to the Sebasteion excavated at Bubon in the Kabalis.<sup>562</sup> The inscriptions and statues of the Bubon monument, however, begin in ca. AD 62 with a representation of Nero's second wife Poppaia Sabeina, and cease with Cornelia Salonina, the wife of Gallienus from AD 254-268. All of the inscriptions from the Sia monument are datable to the second or third centuries AD; those emperors whose names and titles are still legible and datable are Septimius Severus (from AD 196-211), probably Geta, whose name was deliberately erased (AD 196-211), Caracalla (from AD 198-217), and Gallienus (AD 253-68).<sup>563</sup> Above the inscriptions would have stood marble statues, the feet-holes for which are still visible.

The area around the imperial monument was almost certainly also used for the erection of statues of the local elite on high, altar-shaped bases which were placed on stone benches and podia around the temples. Nine of these bases are still visible today.<sup>564</sup> Although it is evident that these statue bases once carried inscriptions, the limestone has eroded making them illegible. One possible exception to this standard pattern of honorific monument was a column, whose front had been cut flat and carries a relief of a male figure standing beside a tree or holding a staff, possibly to be identified as Apollo.<sup>565</sup>

Two more Roman-period temples lay in different parts of the site. One, Vq1, was sited at the east side of the site in a temenos which extended outwards from the later fortification wall [B] but was enclosed within the earliest circuit [B]. The ground plan in this case was distyle in antis, 13.55 x 8.40m. The side and the rear walls are of excellent isodomic ashlar masonry, but they included mortar, which is visible in the interior; the temple was, therefore, probably of Roman date (plate 51). The only significant decorations are two simple rosettes carved on the anta capitals.

The second temple, Sp5, lies inside the west gate [G6] where one of the main city streets led through a public area furnished with stone benches. Sp5 is a narrow distyle in antis building, 10.30 x 5.70m, with benches on the inner faces of the anta walls and two steps at the front.

None of the buildings are easy to date. They all lack datable decoration, and none bears an inscription. The imperial monument, however, can be dated to the end of the second century AD. The imperial monument is not aligned with the temples opposite it, nor are the

<sup>561</sup> See Mitchell 2000,

<sup>562</sup> İnan, 1993, pls. XI-XXXVI; İnan 1994, esp. res. 5.

<sup>563</sup> See Mitchell forthcoming, nos. 138-144.

<sup>564</sup> See plate 50.

<sup>565</sup> Mitchell, 1996a, 53, 62 resim 10. It is comparable with the statue of Apollo from Pednelissos, Işın 1999, 117-8, 126, figs. 16, 17.

temples themselves placed in any strict geometric alignment with each other. It is unlikely therefore that they were planned and constructed in one phase. At most it can be said that construction began in this area at the same time as, or slightly after the bath buildings above, which would make a date in the late second or early third century AD probable. Temples Vq1 and Sp5 are harder to date, as there are no significant dating criteria. The only argument that can be tentatively offered is that they belong to an earlier phase of development, as it appears that by the third century AD the focus of the site had shifted emphatically to the west side. It would be less likely for a benefactor to construct temples on the neglected, and therefore less prestigious, northern and eastern sides of the site, unless, of course, a sanctuary of sufficient importance were already established there.

#### 4.2.3 HOUSING

In the Hellenistic period the domestic area of Sia was contained within the city circuit [A]. With the coming of the *Pax Romana* the Sienoi were free to expand beyond the constraints of the city circuit. Fifty-four houses are identifiable outside the bounds of the city circuit. With regards to the dating of the housing, it is probable that the closer a house is to the old city-wall, the earlier it was built.

One of the earliest groups of houses to be built outside the circuit was almost certainly the inward-facing cluster of houses, Sm (plate 52). This group of houses lies under the walls of the city and consists of six to seven houses built around a central courtyard area, which contains two large flask-shaped cisterns. Five metres to the west of this grouping is another group of houses, Rn. Rn is a conglomeration of six or possibly seven houses built onto and around, and probably from, the fortification wall [A]. Sixteen or seventeen rooms can be distinguished in Rn; the precise number of dwellings that these constituted may have changed over the years. These two groups continue a style of inward-looking, possibly familial or clan based housing groups visible in the earliest housing from the site. Nowhere else outside the circuit is such a cluster of housing visible. None of the other houses built outside the fortification circuit shares a common wall with a neighbour. This change during the Roman period may reflect the fact that the inhabitants of Sia became wealthier or an underlying change in social structures.

Five metres below Rn2, below what used to be a tower in the fortification circuit [A], stands Qn2, the most monumental of all houses at Sia (plate 53). Built on two levels the house is constructed from monumental ashlars. Qn2 is the only perfectly rectangular house on the site, covering an area of 425m<sup>2</sup> (17x25m). The house could be entered on the upper level through a doorway of monolithic blocks, the lintel of which was decorated with a roof relief. No other house at Sia possesses any form of sculptural relief decoration. The doorway itself was two metres high and one metre thirty wide, and led into a courtyard with a square cistern. The door into the lower level on the west side was somewhat less monumental in size and was without decoration, although it too was constructed from monolithic jambs and lintel. It is probable that a shield relief lying in the south western corner has fallen from above this door. House Qn2 must have been built for a man of the highest status at Sia. The significance of the shield relief is still unclear, but it must have been indicative of prestige, and may have signified tribal leadership.<sup>566</sup> Qn2 is also important in that it is

<sup>566</sup> Houses 7 and 8 at Ariassos possess similar reliefs above their doorways.

probably the earliest house in which an oil press was found, in a small chamber in the middle of the north wall.

Qn2 represents a new type of house, distinct from its neighbours, with more rooms. Whereas 68.4% of the Hellenistic houses at the site possessed three rooms or less, 30% of the Roman housing falls into this category, 20% of which can be accounted for by the two early housing groups at Sm and Rn. Roman Sia gives the appearance of being more prosperous. Furthermore, after the building of the groups at Sm and Rn no further distinct groupings of houses are discernible. Old social differentiations appear to have lost their importance, as social prestige appears to have become attached to the building of bigger houses and suitably impressive funerary monuments.

The larger houses, Ms1, Qt1, Ps1, Qs1, Pr1, Pr2, Pr3, Mj1, Qn2, Sj1, and Rj3 all share a common design. The main entrance of the house leads directly into an open courtyard with a cistern from which the other rooms of the house may be entered. Windows were positioned around the courtyard so that it would act as a light well for the rest of the house. That this design continued into the Roman period marks a difference with Sia's neighbour Ariassos. It was noted above that at Ariassos the house design with a courtyard appears to have been replaced by a house with a longitudinal porch area. A reason for the change at Ariassos may well have been the building of the aqueduct, which made private cisterns superfluous. The grandest Roman period house of Ariassos, however, 28/29, was built around a central courtyard with a peristyle. Although no peristyle is now visible, houses Ms1 and Mj1 were both constructed with particularly large central courtyards, and it is quite possible that a peristyle of wood was constructed.

The expansion of the site beyond the fortifications in the Roman period into grander, larger houses must have had the effect of turning the 'old quarters' into less desirable and prestigious areas. It is probable, therefore, that simply by constructing the new housing that new social distinctions could be made. Those who could not afford to construct a house in the new style would have been marked out as the social inferiors of those who could.

#### 4.2.4 CEMETERIES

In Roman Pisidia, social distinctions also became more marked in death, as in life. The necropolis of Sia is well-preserved, and provides us with evidence for an unusual and interesting array of burial practices.<sup>567</sup> The main necropolis area begins immediately to the west of the Roman public area, extending out over the valley bottom. Its limits are hard to define, not only because the forest cover makes definitive survey very difficult, but also because tombs were built here and there in clusters spreading away from the city. The most impressive of the funerary structures are monumental built tombs or heroa, designed as small temples which accommodated sarcophagi or other types of burial (plate 54). At least thirteen of these tombs, of various types, have been discovered. The best preserved is a small, room-shaped tomb built from good quality ashlar masonry. Its antae are decorated with reliefs of weapons and a console on the right of the doorway, and it was roofed with

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<sup>567</sup> The cemetery of Sia is being studied for publication by Stephanie Mühlenbrock. The following discussion is based on Aydal, Mitchell and Vandeput 1998, 280-1.

monolithic slabs cut into the shape of a triangular gable (as at the south tomb at Cremna).<sup>568</sup> This appears to have been the centrepiece of a group of funerary architecture, which was probably intended for the members of a single family. The heröon was flanked by three sarcophagi, one with a half-legible inscription and decorated with a carving of an urn; in front there was a rectangular foundation for another funerary monument and at the rear there was a semi-circular exedra with a curved bench which faced the street running alongside the tombs. The combination of several tomb types in 'family' units is visible elsewhere in the cemetery. Heroa are typically flanked by sarcophagi or by simple rock-cut graves or graves built with rough stone sidewalls. Two of the heroa carry legible inscriptions, apparently of the later second century AD, and two have a 'Syrian' facade with an arch within a triangular gable. These grand funerary monuments were all constructed within clear view of the marketplace, standing directly opposite the housing. The size, decoration and location of one's funerary monument were clearly a matter of prestige.

At the same time, however, circular tumuli of rough stones with rectangular grave chambers sunk into them appear also to have been a local tomb type. The largest lies about 1 km north-northeast of Sia, and there are two well preserved examples, 5-6 m across, located next to a well preserved heröon beside a road on a hill about 500m to the west of the city. Further tumuli are visible in small clusters of three and four in the wooded area around Sia.<sup>569</sup> Similar tumuli have been discovered in the territory of Balboursa above the modern village of Çaltılar, and in the territory of Sagalassos at Aykırıkça Mevkii.<sup>570</sup> These tumuli may represent a native tradition of burial, preceding the Greco-Roman heroa, or they may be representative of a separate ethnic group such as the Milyans. Grander tumuli were employed by the Milyan inhabitants of the Elmalı plain for their most prestigious burials, and the tumuli discovered in the territory of Balboursa may likewise have been constructed by Milyans.<sup>571</sup> The closest tumulus to the city (at Mq1), no more than 50 m from the Roman agora, included a re-used funerary inscription of the Roman period in its outer wall and was built up against a heröon which was almost certainly no earlier than the second century AD. The tradition of tumulus burials therefore survived until the later Roman period.

The area of the cemetery is criss-crossed by rough stone field walls, up to a metre wide, which may have served as tomb enclosures, as property boundaries, or as terraces in an area which was also evidently cultivated. The large round press-bed in one of these field walls has already been noted. Moreover, several Roman extra-mural houses were located in the cemetery area. There appears to have been no sharp distinction between settlement and burial area, and at Sia, as at Ariassos, sites for heroa appear to have been chosen for their accessibility and to be clearly visible from the occupied areas. The uninhibited juxtaposition of the living and the dead is clear also from occasional graves noted inside the city where a small number of ostothekae and sarcophagi were recorded. The former were originally placed on rock-cut or built pillars (in one case 3m high) either immediately outside the city walls or next to houses inside them. Rock-cut cist graves with gabled stone lids were also noted on the acropolis east of T7.

<sup>568</sup> Mitchell, 1995, 69-75; tomb N3 at Ariassos likewise possessed console blocks, perhaps for supporting statues, see Cormack 1996, 6.

<sup>569</sup> See plate 55.

<sup>570</sup> Coulton 1993a; Waelkens and Poblome 1997, 37, and 38 fig.28.

<sup>571</sup> Mellink 1970; Mellink 1971; Mellink 1972.

#### 4.2.5 WATER SUPPLY

Sia is somewhat unusual in that no aqueduct was ever built at the site, for the simple reason that there is no source of running water for a very considerable distance.<sup>572</sup> When the bath-building was built, therefore, a large cistern was constructed above it to provide it with water.<sup>573</sup> The lack of an aqueduct was probably not the privation that it may seem to the modern viewer. As has already been stated the modern inhabitants of Karaot are still entirely dependent on water from cisterns. More importantly the main impetus behind building aqueducts in antiquity appears to have been the desire to provide bathhouses and *nymphaia* with running water. It has been suggested that the aqueduct at Oinoanda was built not to provide the citizen body with drinking water, as it appears that Oinoanda was never heavily populated, but rather to provide water for their bathhouses. At Sagalassos, which has the appearance, if anything, of being more of a monumental city than Oinoanda, virtually no cisterns have yet been found on the site, although it possessed six aqueducts.<sup>574</sup> The absence of an aqueduct at Sia, therefore, may have been more of an aesthetic privation.

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<sup>572</sup> Distance in itself was not an insurmountable problem, but the nearest springs identifiable today clearly lay in the territories of Sia's neighbours at Melli and Ariassos; see Coulton, 1987, 76.

<sup>573</sup> The early baths of Pompeii also lacked a major source of running water; Coulton, 1987, 82.

<sup>574</sup> On the possibility of Oinoanda and Sagalassos being monumental sites, see Coulton, 1983, 19 n.13; Coulton, 1987, 81; Waelkens and Poblome (eds.), 1993.

## 4.3 ARIASSOS- THE ROMAN CITY

### 4.3.1 FORTIFICATIONS:

It is likely that once under Roman hegemony, as at Sia, the fortifications of Ariassos were soon deemed to be unnecessary and a hindrance to expansion. Once again, however, it is difficult to determine precisely when the walls were breached for the first time. A *terminus ante quem* is provided by the inscriptions from the site found in the area of expansion outside the city walls. As at Sia, no inscription can be positively dated to before the beginning of the third century AD, although some are thought to be second-third century AD.<sup>575</sup> The earliest securely dated inscription is one carved on a large statue base found re-used in basilica 2 below the bathhouse. The inscription to Caracalla mentioned the Ariassos era date 402, and gave the names and titles of Caracalla as sole emperor (between AD 211/2-216/7); if the era of Ariassos referred to was indeed 189 BC, then the inscription can be dated to AD 213-4.

### 4.3.2 PUBLIC BUILDINGS

Asia Minor enjoyed something of a building boom around AD 200, and Ariassos appears to have been no exception (plate 56).<sup>576</sup> The one monument on the site that is securely dated is the most visually striking monument of the entire site: a triumphal archway on which stood four statues (plate 57). The archway, erected at the northeast end of the site on the valley floor, was most probably set up to commemorate the victories of the Roman emperor Severus Alexander in his campaigns against the Sassanidae between 231 and 233 AD.<sup>577</sup> The inscription to Severus Alexander (AD 222-35) declared that the monument was paid for by Diotimos, son of Samos, a man known already from a statue base erected during his gymnasiarchy which was dated to the Ariassan era date 427 (AD 238/9, if the era began in 189BC).

Diotimos, son of Samos, himself appears in two further inscriptions, being honoured as gymnasiarch, and, as high priest of the Augusti, providing a foundation to provide oil for the gymnasium in perpetuity.<sup>578</sup> In the foundation inscription, Diotimos donated lands held outside the territory of the city to aid in the upkeep of his 'sweetest homeland'. It is not impossible that Diotimos, the man most frequently mentioned in the inscriptions of Ariassos, was single-handedly responsible for the development of Ariassos in the Roman period. Unlike at Sia, the Roman supra-mural expansion gives every impression of having been planned, and possibly executed, as a whole. Part of the city wall was demolished to allow for an expansion of the city into the valley bottom, and monumental tombs began to be erected: flanking the road leading to the city from the east, the south side of the city, and climbing the hill spur which led to the agora.<sup>579</sup> The building programme now embarked

<sup>575</sup> Mitchell 2000.

<sup>576</sup> Mitchell, 1987, 18-25.

<sup>577</sup> On the correct dating of this archway, presumed originally to have been Hadrianic, see Mitchell, 1991, 162-5; for a plan of the arch see Schulz 1992, 39, fig. 5.

<sup>578</sup> See Berard 1892, 427-9, no. 58; Mitchell 1989, 65, pl.12a; Robert 1937, 378-82; Mitchell 2000, nos. 7, 8, 9.

<sup>579</sup> Mitchell 1989, 66; Cormack 1989; Cormack 1996.

upon changed the focus and orientation of the site, drawing attention away from the old Hellenistic civic centre and the West gate, to a new public fountain, bathhouse, gymnasium and forum. The overflow from the new fountain fed into large public cisterns which in turn fed into the bathhouse. These were served by an aqueduct built to carry water from the spring at Akkoç 4 km away. The area below the bathhouse to the east was made into a forum, probably with small temples around it, with a grand street leading from the forum to the triumphal arch. The whole public area was adorned with statues of members of the local elite and of the ruling emperors. The forum appears to have been the original location of several inscriptions honouring emperors of the second and third centuries AD, including Lucius Verus, Commodus and a huge statue base set up for Caracalla.<sup>580</sup> The new development would have had a marked effect on the orientation of the site. The monumental centre of the site was shifted away from the bouleterion to the valley bottom, and the archway would have become the principal entrance to the city. The shift of focus from the apparatus of urban government to the new forum and the bathhouse reflects the decreasing importance of the city council.

The bathhouse conforms to a simple row plan with three adjacent rectangular rooms set with their longitudinal axes parallel with a further room set at right angles along the back wall of the building. This plan would allow for an annular as opposed to retractive style of bathing.<sup>581</sup> At the west end of the bathhouse there was a rectangular colonnaded palaestra with a deep vaulted exedra at the west end (plate 58). In terms of architectural style, the simple row structure and mortared coursed masonry of the bathhouse is yet another permutation of a type prevalent in Lycia and the Kabalis to the south. The design of the building, as far as it is still visible, is simple and linear, with no visible use of curving space. More than a third of the twenty-five inscriptions found at Ariassos came from the vicinity of the bathhouse, and relate to competitions (themides) held in the gymnasium.<sup>582</sup> It is not possible to arrive at any definite date for the building, but, as at Sia, it is reasonable to suppose that it was constructed in the second to third centuries AD, possibly at the same time as the triumphal arch.

The bathhouse signifies an enormous, but gradual change in the life of the city. The Hellenistic public area, centred on the bouleterion was no longer so important in the daily lives of the Ariassans; the bathhouse, gymnasium and forum, all the products of euergetism of the local magnates, were the new focal point of the city. The previous, less publicly ostentatious nature of society had clearly undergone a transformation. As elsewhere in Asia Minor, the wealthy members of the community, whose political powers had steadily diminished under Roman rule, resorted to ostentation and public acts of benefaction to single themselves out from their fellow citizens, and to increase their *auctoritas*. The city laid out in Hellenistic times was no longer suitable to accommodate the new need for building, and there was no longer any need to maintain a full fortification circuit. The city, therefore, expanded outside its previous boundaries and into its new monumental centre. The Hellenistic centre, however, was possibly restored at the same time.<sup>583</sup> In a small settlement

<sup>580</sup> Mitchell 1989, 63; Mitchell, 1991, 165.

<sup>581</sup> Mitchell, Owens and Waelkens 1989, 64; Farrington 1995, 48.

<sup>582</sup> Mitchell 1989, 65.

<sup>583</sup> Mitchell, Owens and Waelkens 1989, 66, remarking on the inscription from the time of Gordian (AD 238?) contemporaneous with Diotimos, son of Samos.

such as Ariassos, it is not unlikely to suppose that one man could be responsible for most of the new buildings seen.<sup>584</sup> Although it is impossible to prove, Diotimos, son of Samos, may well have been responsible for the complete transformation of his mother city.

### 4.3.3 HOUSING

Unlike at Sia where the breaching of the Hellenistic circuit was followed by a marked expansion of housing outside the walls, of the fifty-two houses recorded at Ariassos only twelve lie outside the original Hellenistic circuit. The majority of these houses lies in the north east of the site, marking a clear break from the old Hellenistic civic centre. There is no visible sign, however, that these houses were intended to represent a distinct grouping, as appeared to be the case with the earlier extra-mural houses at Sia. Of the thirty-nine houses within the Hellenistic circuit at Ariassos, 8, 12b, 21 are clearly later constructions, being built from rubble and mortar, and 11a, 11b, 19a, 19b, 20, 26 and 49 were constructed from re-used elements from previous buildings mixed with varying amounts of rubble; so few blocks remain from 38 as to make it impossible to comment upon its construction.

The twelve houses visible today, 27, 28/29, 30, 31, 40, 41, 42, 43, 44, 46, 47, 48, which lay outside the Hellenistic circuit have all clearly been altered since construction, probably as a result of earthquake damage. The most immediately apparent of these houses is the large peristyle house (28/29) which occupied a prominent position northeast of the Triumphal arch, overlooking the road into the city.<sup>585</sup> House 28/29 possessed a monumental façade of pseudisodomic masonry bonded with mortar at ground level; due to its imposing nature this structure was previously misidentified as a Hellenistic bastion.<sup>586</sup> The main entrance to the house appears to have been at the southwest end where a street led from the Triumphal arch to a small courtyard in front of the house, which may have been entered through an archway. In the southeast corner of the house it is possible to see that it possessed an underground, cellar area, with thick walls and very narrow doors; the east side of the house can be seen to have had larger ground-floor rooms. These opened onto a rectangular colonnaded courtyard. Four of the alternating squared and rounded columns are still visible, and fragments of a small marble sundial were also discovered here. Below the open area of the courtyard lay two rectangular vaulted cisterns beneath its paved floor. The house itself is a good example of a peristyle house, a type which was not uncommon in the wealthier communities of Late Roman Anatolia, which is found also at Sia, Melli and Cremna.<sup>587</sup> This house, however, covering an area of approximately 1800m<sup>2</sup>, is substantially larger than any other of the houses at Ariassos, and at Sia or Melli. It is very possible that this house was the domicile of Diotimos son of Samos, Ariassos' most prestigious, and wealthiest, citizen.

<sup>584</sup> Aizanoi in Phrygia is a good example of a settlement which was transformed in the period from AD 120-200 largely through the benefactions of a single family; see Robert 1981, 330; Robert 1982, 399; Price 1982, 196; Mitchell 1996b, 196-7. For a good overview of the actions of particular benefactors in Lycia see Coulton 1987b.

<sup>585</sup> The plan of this house as illustrated in Mitchell 1991, 171, fig.9, and in Mitchell 1996b, 199, res.8, is incomplete and somewhat inaccurate. See Mitchell 1991, 169, fig. 8.

<sup>586</sup> See above 3.4.1.

<sup>587</sup> On Cremna, see Mitchell 1995, 162-75. The housing of Cremna is in general poorly preserved, so does not provide a sufficient body of evidence for a detailed statistical comparison. The housing of Melli, when completely mapped may provide us with a better source of data.

The house would be immediately visible to all who visited the site, taking full advantage of the shift in focus of the site.

Other housing at the site which is almost certainly to be dated to the earlier Roman period are houses 7 (plate 35) and 37 (plate 59). Both of these houses possess archways similar in design both to those of the fountain house next to house 12 and the tomb ST6 (see below). Both houses were built of ashlar bonded with mortar, and house 7 carried a shield relief above its door. House 7, however, despite being grander in its execution than other housing, appears not to have been larger than other housing (ca. 84m<sup>2</sup>). It is suggested, therefore, that house 7 was an early Roman construction. House 37 is more difficult to date. There is no significant difference in its construction technique from house 7; it is however, significantly larger, covering an area of ca. 355 m<sup>2</sup>. The tomb, ST6, discussed below, has been dated to the second century AD (plate 62); the fountain house is harder to date. It could predate the building of the aqueduct and bathhouse, but that is not necessary. The inhabitants of the upper site would still wish to have easy access to water without having to climb up and down the hill. Such is the conservatism of building techniques in this region that it is not far-fetched to suppose that a style of arch-building could endure for a century or two. It is not possible, therefore, to do more than to suggest that houses 7 and 37 were constructed in the first or second centuries AD, prior to the construction of the bathhouse and house 28/29.

The housing that was built in the area around house 28/29 is unfortunately heavily damaged by earthquake and landslide. Building 47 is almost completely obscured by rubble; house 46 (plate 60) is clearly a later rebuild. Houses 42, 43 and 44 (plate 61) lie on the fringes of the city within the east necropolis. These houses resemble the Hellenistic style of housing in their shape. They are single-roomed houses with a small open yard with a cistern in front. They are constructed from rubble and ashlar, and are mortared in places. They were clearly built for the minimum of effort and expenditure.

House 40 lying above house 28/29 was constructed from smooth-faced ashlar in a single-skin. Its door was constructed with monolithic jambs similar to those used in the Hellenistic housing on the site. It appears that the Hellenistic building style did not go out of fashion.<sup>588</sup> Houses 30 and 41 in the same area appear to have been built originally in the same style as house 40, but to have been rebuilt at a later date, probably due to earthquake damage. Houses 30 and 41 both have monolithic jambs, and are constructed from mortar and rubble and ashlar.

The wealthier citizens may also have had villas on their estates, but at Ariassos itself the housing does not appear to have undergone such a drastic change as the housing of the inhabitants of Sia.<sup>589</sup> The originally Hellenistic houses continued to be used and repaired when necessary, and the majority of new housing was built along the same lines, and in the same ways as previous housing. It was only the wealthiest of citizens who could afford to construct something different. House 28/29 must have been designed specifically to

<sup>588</sup> See Farrington 1995, 72.

<sup>589</sup> Such estates are mentioned in the inscriptions from Ariassos; Diotimos, son of Samos, donated his property at Panualla, land and buildings, to the city; see Bérard, 1892, 427-9, no.58; Robert, 1937, 378-82; Mitchell forthcoming, 8. At present, no archaeological evidence for such estates has been sought or found.

advertise its size and difference. The single remaining section of wall, the eastern corner of the house, stands today to nine metres. Once the entire house stood to this height, and it would have been capped by a red tile roof. It may even have put the Triumphal arch in its shade.

#### 4.3.4 CEMETERIES:

The cemeteries of Ariassos have been studied and published by Cormack.<sup>590</sup> Over fifty built tombs are visible at Ariassos, and the site possesses three necropoleis – the north, south and east necropoleis.<sup>591</sup> As at Sia, there is no clear distinction between city and necropolis, and the two merge into one another.<sup>592</sup> Tombs were even placed along the side of the bathhouse, and a short distance from the Hellenistic city centre. In addition to the built tombs, free-standing and rock-cut limestone sarcophagi are also visible on the site. No tumulus tombs have been identified at, or near, the site. A cluster of eight sarcophagi is visible on a small rocky outcrop between the north and south necropoleis. It is clear that considerable effort and wealth was expended on some of the more monumental built tombs, and the architecture of one, ST6, a vaulted double tomb, illustrated by Lanckoronski, bears a marked resemblance to the archways visible in houses 37 and 7 discussed above (plate 62).<sup>593</sup>

The monumental tombs of the north necropolis are the most visible and elaborate at Ariassos – the two elements are undoubtedly connected.<sup>594</sup> The wealthiest families would have wanted the most visible of sites for their monumental tombs. The tombs of the south necropolis are smaller and simpler than those of the north necropolis, reflecting the less desirable nature of its position with relation to the centre of the city.<sup>595</sup> The tombs of the east necropolis, although fewer in number, are comparable with those of the north necropolis. Clearly, if one could not be buried in the north necropolis, the eastern approach to the city was the next best place to have one's tomb.<sup>596</sup> Without inscriptional evidence and without a precise means of dating the different tombs, it is not possible to investigate whether the different necropoleis represented differences of chronology, ethnicity, class or wealth. It is likely that most or all of these factors played a role in where one placed one's tomb. However, with a few exceptions, the monumental tombs of Ariassos are all massive limestone, rectangular tombs with a cella, built on a stone base. There are no great typological differences visible between the three necropoleis. The stone sarcophagi, however, might reveal an intermediary form of burial for the less well-off. Only excavation will reveal how the poor were buried.

<sup>590</sup> Cormack 1989; Cormack 1996.

<sup>591</sup> The north and south necropoleis are almost contiguous, and may in fact constitute one necropolis. The 'gap' in the middle may be due to the fact that there is a depression in the middle, and built tombs placed in this dip would be less visible. There may be inhumations in the depression, thus connecting the two necropoleis, but this can only be confirmed through excavation.

<sup>592</sup> On this see Cormack 1996, 4 n. 5.

<sup>593</sup> On the tomb see Lanckoronski 1892, 125 fig.98, pl. XXII, C and D; Cormack 1996, pl. iv c; 18-19, figs. 12-13.

<sup>594</sup> Cormack 1996, 5.

<sup>595</sup> Cormack 1996, 14.

<sup>596</sup> Cormack 1996, 16.

None of the tombs at Ariassos have been dated to the Hellenistic period. It may well be that the desire to build a home for the deceased had more to do with the status of the living. Funerary architecture, just as domestic architecture, could provide one with an effective means of differentiating oneself from others. A grand and highly visible tomb would undoubtedly reflect glory on the family of the person who had it built.<sup>597</sup>

#### 4.3.5 WATER SUPPLY:

The aqueduct built to supply the baths and the public cisterns consisted of a single terracotta pipe.<sup>598</sup> A similar aqueduct at Cremna seems to have been built solely to provide water for the bathhouse there, and not for the use of private individuals.<sup>599</sup> At Ariassos, however, it is apparent that the public had access to the water before it reached the baths. Cremna had the advantage of having several small streams on the site whereas Ariassos appears to have been without any naturally running water. The new source of water in the city-centre must, therefore, have transformed the daily lives of the Ariassans. As was quite usual in the Roman world, it was the need to supply the new bathing habit that led to the construction of this major public work.<sup>600</sup>

Until the late Hellenistic period, the inhabitants of Sia had almost certainly been largely self-sufficient. In times of subsistence crisis, they would probably have raided the lowlands.<sup>601</sup> In the Roman period, however, they would have been faced by the problem of increasing demographic pressure on the carrying-capacity of their land, combined with an inability to fight and pillage their way out of trouble. Under such circumstances the best option would be to seek ways of utilising more of their territory more profitably.

#### 4.4 CITY AND TERRITORY:

The peasant commuting to the fields from a town, village or hamlet would have been a common sight in the early Roman Empire.<sup>602</sup> During the Roman period, however, the structure of urban society became more socially differentiated. The building boom of the second and third centuries AD highlights (and indeed helped to accelerate) this vertical stratification, as the wealthy competed for office and acclaim through the funding of large-scale public building works, festivals and competitions.<sup>603</sup> At Ariassos, Diotimos son of Samos exemplifies the new provincial Roman elite. Diotimos' donation of prestigious monuments such as the triumphal archway would have required substantial reserves of cash. The foundation inscription of Diotimos (ca. AD 238) provides a useful insight into how rural properties were exploited for cash reserves precisely in order to fund the lavish monuments and donatives considered necessary for the prestige and hence power of the

<sup>597</sup> Robinson 1999a.

<sup>598</sup> Mitchell 1991, 170-2. The aqueduct was a simple affair, operated by gravity with no need for any siphons or towers.

<sup>599</sup> Mitchell, 1995, 150-1.

<sup>600</sup> Coulton and Stenton 1986, 55 n.148; Coulton 1987a, esp. 81.

<sup>601</sup> The highlanders in the Kibyrtis in ca. 169 BC who were launching raids on lowland Araxa may have been attempting to raid their way out of a subsistence crisis; see above chapter 2.3.3.

<sup>602</sup> Lloyd 1991b, 238.

<sup>603</sup> Rouché 1989, xxiv, suggests an increase in the prosperity at Aphrodisias of those formerly outside the old elite in the period leading up to the mid-third century AD.

donor.<sup>604</sup> The inscription records the donation of property beyond the territorial boundary of Ariassos, consisting of plain and mountainous parts, with vineyards and arable land and also what are described as ‘τοις ἐποικίοις’. Mitchell translates this as meaning the buildings on the land; the Greek used is not so clearcut, and, although it may well indicate buildings, was probably something of a euphemism for the people who were settled on, and working, the land.<sup>605</sup> The land was to be donated to the city upon Diotimos’ death; in the meantime, he promised to pay for the provision of a sufficient oil supply (presumably for the gymnasium).<sup>606</sup> The money for the oil supply probably also was to come from the surplus produced by those working on his land at Panualla.

One element of the inscription of Diotimos that deserves emphasis is the ownership of land outside the territory of Ariassos. The ownership of such land meant that crops were being produced elsewhere, presumably in the territory of another city, in order to fund the upkeep of Ariassos.<sup>607</sup> It also means that people who could have no possible interest in Ariassos were being employed for its upkeep. Further evidence of extra-territorial land-ownership in Southwest Pisidia is provided by evidence of a private estate of the Pergean Plancii at Pogla.<sup>608</sup> It is clear that, just as Diotimos could have an estate in the territory of another city, so too could a magnate from another city own land in the territory of Ariassos.<sup>609</sup> When faced with such evidence, it is hard not to speak of parasitic cities and exploited peasants. The conclusion that rural and urban life were ‘worlds apart’ seems self-evident.<sup>610</sup> The schism between city and country is apparent; this schism, however, is not to be understood by making generalisations about the role of the city, but rather by looking at changes in the social and economic structure of society. As Whittaker pointed out, the study of cities is an inadequate way to study power relationships. It is true that the functions of cities changed in the Roman period, as they gradually ceased being true centres of local politics and as even their administrative functions were curtailed. These changes were the result of a shift in the balance of power. The physical form of the cities themselves became an important element in the (local and provincial) political careers of the wealthy.<sup>611</sup> In order not only to pay taxes but, more importantly, to fund the festivals and monuments, large quantities of money had to be produced. The mainstay of the city was agriculture; as Diotimos’ inscription shows, the money was produced from the land.<sup>612</sup>

Mitchell describes a sharp cleavage between rural and urban life in Roman Anatolia; the ‘city-dwellers, *who were not primary producers of grain and other foodstuffs* (his commas, my italics), had to earn enough money’ to pay for their foodstuffs; the ‘economic essence of urban life was that

<sup>604</sup> See Bérard 1892, 427-9, no. 58; *IGRR* 3.422; Robert 1937, 378-82; Mitchell 2000, 161-3.

<sup>605</sup> Diotimos must have had someone working the land for him, whether they were people who were indebted to him, people who were renting the land from him, slaves, or a mixture of all of these. It is probable, however, that the majority were slaves, as an example of an estate confiscated by Kibyra along with one hundred and seven slaves shows; see *IGRR* 4.914; Robert 1937, 377; Milner 1998, 11 no.15.29; De Ste Croix 1981, esp. 208-226.

<sup>606</sup> For further similar examples of donations of estates in lieu of payments, see Broughton 1938, 669.

<sup>607</sup> MacMullen 1974, 20 provides the examples of Alexandrians in the first century AD owning vineyards and gardens in Theadelphia.

<sup>608</sup> Bean 1960, 66, no. 118; Mitchell 1974, 33-4.

<sup>609</sup> The problems of identifying such estates archaeologically are discussed in Broughton 1938, 650-84.

<sup>610</sup> Mitchell 1993, 1.195.

<sup>611</sup> Gehrke 1993.

<sup>612</sup> On the importance of agriculture to the Empire at large, see Rostovtzeff 1957, 66.

a man practised a specialized craft.<sup>613</sup> Such descriptions are possibly true for the inhabitants of the larger *Stadtstädte* such as Pergamon or Ephesos, and maybe to a lesser degree to the 'big three' cities of Pisidia, but, as Mitchell states later, some cities (typical *Dorfstädte*) were 'barely more than villages.'<sup>614</sup> The ubiquity of the second-third century AD building-boom may help to conceal the differences between individual cities. Sia may have been able to afford to build a bathhouse, imperial monument and temples, but it is hard to believe that Sia supported more than a few city-dwellers who were not directly involved, at least part-time, in agricultural or pastoral production. The significant proportion of the later domestic buildings of Sia that contain presses, including in particular the largest of the domestic buildings, reveals a picture of a settlement very much involved in the day to day business of agriculture. Sia, at least, can be seen to fit Andreev's description of a proto-city very nicely; there is 'no clear-cut spatial delimitation between a large agricultural body and a small non-agricultural body', and almost certainly therefore 'no antagonism between city and village'.<sup>615</sup> The 'urban' community of Sia would almost certainly have contained some, if not many, semi-craftsmen and semi-peasants, and very few specialised urban craftsmen indeed.

The picture at Ariassos is less clear-cut. Only the remains of a single press have been discovered at the site; the condition of the housing, however, is more ruinous than at Sia. Ariassos was positioned closer to the *Via Sebaste*, and possessed a larger and more fertile territory than its neighbour. Nevertheless, it is hard to believe that the majority of the population of Ariassos were anything but peasant farmers; some may have had more land than others, but very few indeed could have hoped to have made their livings from trade alone. There is little doubt that the large majority of the population of the empire was engaged in agriculture.<sup>616</sup> Mitchell demonstrates that, in Anatolia as a whole, the majority of the population probably lived not in cities but in villages; Oinoanda with its thirty-two villages provides a good example.<sup>617</sup> Yet it can be questioned whether many, if not most, of the inhabitants of Oinoanda would have lived very different lives from the villagers, except, perhaps, for their daily journey down to and up from their fields. Whether Ariassos could have presided over as many villages as Oinoanda is very doubtful, and Sia certainly would have been unable to have had more than a few in its territory.<sup>618</sup> It is hard to judge the validity of De Ste Croix's claim that in the Greek East 'the peasantry derived little or no benefit from the costly theatres, baths...and so forth which were provided for the enjoyment mainly of the more leisured section of the city population.'<sup>619</sup> Jones typifies the attitude of villagers to cities as one of indifference.<sup>620</sup> Perhaps, for those who lived in the

<sup>613</sup> Mitchell 1993, 1.257; Gregory 1997 suggests that the bleak picture given of village life in Mitchell 1993 should be somewhat more nuanced. The picture given of the rural poor being robbed of their crops by the city-dwellers gained from Galen is probably exaggerated. In bad years, the amount of crop taken as rent and imperial taxes may well have left at least some tenants with too little to survive upon; the Life of St Nicholas of Sion, however, shows that the rural inhabitants were also quite capable of refusing to bring their surplus food into the cities in times of crisis; Mitchell 1993, 1.169; Garnsey and Saller 1987, 97; Sevcenko and Sevcenko (eds) 1984, 82-3.

<sup>614</sup> Mitchell 1993, 1.258.

<sup>615</sup> Andreev 1989, 173.

<sup>616</sup> Rostovtzeff 1959, 343; Garnsey and Saller 1987, 55.

<sup>617</sup> Mitchell 1993, 1.178, 244 (where the number of villages belonging to Oinoanda should be given as thirty-two); see also Rostovtzeff 1959, 345-6.

<sup>618</sup> See above chapter 2.2 on the natures of the territories of both cities.

<sup>619</sup> De Ste Croix 1981, 213.

<sup>620</sup> Jones 1940, 297.

city, or for those who came to the city during festivals, the splendid monuments created from the money raised by their rent may have seemed due recompense.<sup>621</sup> The line from the inscription about the Demostheneia at Oinoanda laying out the penalties for non-provision of sacrificial beasts suggests that some may have preferred not to participate in the festival.<sup>622</sup> It is unlikely, however, to have made the general population feel less alienated when money ceased being lavished on the cities but taxation continued to rise.

Diotimos' donation of his estate to finance his benefaction is indicative of the growing inequalities of the time. Urban competition had to be financed; agricultural estates were the primary source of funding. It has been the subject of some debate to what extent the wealthy sought to maximise their returns from their estates (at the expense of those working them); it is probable that there is no single answer to the question.<sup>623</sup> It is clear that the organisation of land into larger units under the control of one person could be beneficial in terms of increasing yields. Patterson has suggested that increase in the size of rural estates in the Roman period led to economies of scale which in turn led to the influx of the dispossessed rural poor into cities.<sup>624</sup> If this were the case there is no archaeological sign of this influx. It may rather be suggested that those who were forced to sell their land (through economic necessity or other kinds of pressure) may have then rented land back; other options included joining the army or becoming a bandit.

Tönnies described a change in attitudes caused by the development of the urban environment. Early village-type communities are those in which individuals are linked to one another through ties of mutual service and kinship; as the community grows, however, these ties weaken and are replaced by so-called 'rational' or commercial ties, contractual relationships governed by self-interest. Tönnies termed the former type of community a *Gemeinschaft* (community), the latter as a *Gesellschaft* (association or society).<sup>625</sup> Although the probably clan-based society of the early Pisidians would have been replaced, or distorted, by the Roman period, it is not possible to term the urban society of the small Pisidian towns a *Gesellschaft*. Ties of kinship may have weakened, but the Roman *client* system can hardly be described as a strictly rational contractual relationship. Ties of obligation and duty were strong, and must have distorted commercial transactions as much as they appear to have distorted the outcomes of competitive festivals.<sup>626</sup> A constitution of Honorius from AD 408

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<sup>621</sup> De Ste Croix quotes the case of the Chinese villagers in Lucheng County, Shansi who assumed that they were dependent upon their landlords for their livelihood, not vice-versa. The villagers were provided to accept their situation as part of the natural order, so long as they were not actively cheated. They did not realise that they were being exploited until it was pointed out to them. Both urban and rural agricultural workers may likewise have felt proud in the knowledge that the creation of monumental buildings reflected glory upon themselves and their mother-city, even if they had virtually no opportunity to use the bathhouse or gymnasium; see De Ste Croix 1981, 212.

<sup>622</sup> Wörrle 1988, 12-13, line 84.

<sup>623</sup> De Ste Croix 1981, 145 is typically forthright: 'there could be nothing of greater interest to the propertied classes than making the largest possible profit out of their landed estates...'. Kehoe 1994, however, points out that what would probably have been in the best interests of the landowners would be achieving the best average return possible; stability for many would have been more important than maximising profits.

<sup>624</sup> Patterson 1991; see also Lloyd 1991a, 180-93. On the acquisition of rural estates, see Levick 1967, 215-26.

<sup>625</sup> Layton 1972, 377-8; Tönnies 1957, 43-57.

<sup>626</sup> Robert 1949, 110; Milner 1991, esp. 60-1.

or 409 may have been alluding to the pressures that could be brought to bear by the aristocracy when it forbade the wealthy or those rich in property to participate in trade in order that 'the intercourse of buying and selling may be easier between commoner and merchant'.<sup>627</sup>

The question of trade as an element of the economy of ancient cities has been the subject of considerable debate; the role that taxation played in stimulating (or even necessitating) trade has also been at issue.<sup>628</sup> It is not certain how much taxation was taken in kind, although it appears to have been a significant amount; tax taken in kind would not of course stimulate a monetized economy, unless the goods received were subsequently traded.<sup>629</sup> It is still unclear to what extent the exchange of goods was the preferred method of trade at a local level, or even regional level; nevertheless a monetized economy clearly existed, both in villages and cities.<sup>630</sup> Hopkins' suggestion that taxation expanded and encouraged the Roman economy has been treated with some wariness, much of the apparent expansion of the economy may have been the result of increasing inequalities rather than any creation of wealth. Nevertheless, it is impossible to deny that trade took place, and that cities became tied into a wider economy.<sup>631</sup> The costs of long-distance transport have been cited as one reason why trade may have been under-developed in the Roman Empire, yet there is plenty of evidence, ancient and modern, to show that this was not such a great burden as has been supposed.<sup>632</sup> In the case of Southwest Pisidia, there is considerable modern and some ancient evidence that long-distance trade could be profitable, even in relatively bulky products like grain. It is known that Pogle in southwest Pisidia sent grain to Alexandria in the second century AD.<sup>633</sup> Further evidence from ancient Pisidia is lacking.<sup>634</sup> In 1842, however, many caravans were seen travelling from Elmalı to Makri (Fethiye, ancient Telmessos) 'chiefly laden with wheat,' the journey took two and a half days, and was clearly profitable, as Hoskyn's reported Elmalı to be the largest town in that part of Asia Minor, and the residence of many Frank merchants.<sup>635</sup> The journey from Ariassos and Sia to Antalya and Perge in the south would be one day shorter than that between Elmalı and Makri. At around the same time, Davis noted 'chiefly wheat' being transported from İsparta to Antalya, which led to a quadrupling

<sup>627</sup> This constitution has been interpreted as being a sign of the general antipathy towards trade being engaged in (directly) by the aristocracy. It seems unlikely, however, that it would have been issued if members of the aristocracy were not trading, and in such a way as to inconvenience both merchants and customers alike; De Ste Croix 1981, 127; Jones 1964, 2.871.

<sup>628</sup> See, for example, Garnsey and Saller 1987, 43-63; Hopkins 1978; Hopkins 1980; Pleket 1983; Pleket 1998.

<sup>629</sup> Mitchell 1993, 1. 245.

<sup>630</sup> See Gregory 1997; Bean and Mitford 1970, 129; Naour 1980, 72; contra Mitchell 1993, 1.245, 255. A similar debate has taken place on the extent of the Ottoman monetised economy. Faroqhi has shown that in the Konya region in the late sixteenth century all taxes except those on wheat and barley were collected in money. Money payments constituted about one half of the total tax load. Given the similarities of conditions, the percentages of Roman taxes paid in money and in kind may have been similar. See Faroqhi, McGowan, Quataert and Pamuk 1994, 952, 959, 961; Faroqhi 1984, 204.

<sup>631</sup> On the highly profitable wool trade of Laodiceia, Miletos and Hierapolis, for example, see Pleket 1998, 123-6; see also Hopkins 1978, 54; Mitchell 1993, 1.146.

<sup>632</sup> Mitchell 1993, 1. 245-8 (emphasising tax as a reason for long-distance movements); Isager and Skydsgaard 1992, 106.

<sup>633</sup> Ramsay 1885, 335-7; *IGR* 4.409; Bean 1960, 59, no. 104; Mitchell 1993, 1.253.

<sup>634</sup> French 1992, 172-3.

<sup>635</sup> Hoskyn 1842, 153-4.

of its price.<sup>636</sup> İsparta is four times as far away from Antalya as Ariassos or Sia; there is no doubt, therefore, that trade between these places was viable.

It is unclear at what time the cities of Southwest Pisidia would have begun trading in any substantial way. The construction of the *Via Sebaste*, however, must have considerably improved conditions for trade, as it was built to allow the movement of wheeled transport.<sup>637</sup> Ariassos and Sia were only six kilometres from the *Via Sebaste*, which formed the main line of communication from the coastal cities of Pamphylia to the interior. Any trade that was passing from Antalya and Pamphylia northwards to Sagalassos and beyond would pass through the territory of Ariassos. A coin hoard discovered at Ariassos revealed a picture of with whom the citizens of Ariassos may have had regular dealings: Pergamon, Apameia, Oinoanda, Attaleia, Perge, Side, Adada, Etenna, Isinda, Ceraitai, Comama, Cremna, Pednelissos, Sagalassos, Selge, and Termessos.<sup>638</sup>

#### 4. Ariassos Coin Hoard

Origin of coins from Ariassos hoard	Numbers of coins found
Ariassos	133
Perge	24
Termessos	20
Pergamon	6
Attaleia	5
Selge	3
Comama	2
Ceraitai	2
Side	2
Oinoanda	1
Adada	1
Sagalassos	1
Pednelissos	1
Etenna	1
Isinda	1
Cremna	1
King Amyntas	1
TOTAL	207

Of the 207 coins, the majority (133) came from Ariassos itself, minted after 25 BC, the next greatest number from Perge and the next from Termessos, followed by Attaleia and Pergamon. It is unwise to draw conclusions from percentages of coinage in any particular hoard, yet this offers us a glimpse of the economic and political world in which Ariassos existed. The presence of six Pergamene coins hints at long-distance trade. Commerce could remove the need for cities like Ariassos or Sia to be entirely self-sufficient, and allow for specialisation in higher priced products, like wool or olives, which in turn could allow the

<sup>636</sup> Davis 1874, 152-3.

<sup>637</sup> Levick 1967, 38-9; Mitchell 1993, 1.70-1, 246; on lines of communication in Pisidia in general see Greenhalgh 1987, 45-65; French 1992.

<sup>638</sup> See Von Aulock 1977, 27-9.

settlements to grow beyond the carrying capacity of their territories.<sup>639</sup> However, as soon as local self-sufficiency is broken, the cost of labour and production becomes an issue. Any grain that needs to be bought in will compete on price with local grain, and the initial cost of any exports should be as low as possible in order to provide a good return whilst remaining competitive. The expense of wasted labour spent moving from the cities to the fields could become an important factor.<sup>640</sup> Commerce could lead, therefore, both to an increase in wealth for the land-owners, and a potential decrease in well-being for tenants and slaves.<sup>641</sup> It would be in the interests of both the land-owners and whoever worked the land for the workers to be as close to their crops as possible. The growth of urban estates could undermine the market and social functions of the cities.

Mitchell has posited an increase in the area of cereal cultivation in the Roman period, in order to support growing population.<sup>642</sup> As the environment filled with settled villages, pastoralism declined and crop cultivation increased. In general, this picture is probably correct. Cereal production is a more economic and productive form of subsistence than pastoralism. At sites like Sia, however, cereals could only have been grown in the basins of good soil; as stated above, therefore, it is likely that the effect of expansion in the Roman period is likely to have forced the inhabitants of Sia into more use of pastoralism rather than less. The two forms of subsistence were dependent upon different soil types, and thus had little impact upon one another.<sup>643</sup>

Although it is unlikely that the inhabitants of Ariassos would have been able to graze flocks on land outside their own territories, they would, of course, have been able to graze them on the sides of the hills within their own territory. In 1844, however, Bademağacı, a village of 106 households, was recorded as having the remarkably low number of fifty-five goats and sixteen oxen.<sup>644</sup> The arable land of Ariassos was clearly good enough not to warrant any great degree of pastoralism. Ariassos would not have been under the same pressure as Sia to seek additional sources of subsistence.<sup>645</sup>

The growth of specialised cash crops, such as traganthus, styrax, olives or grapes would enable towns like Sia to raise currency in order to be able to purchase essential foodstuffs and other materials from neighbouring towns. Evidence for traganthus or styrax can only be discovered through pollen analysis, but the lever presses identified both in the territory housing of Sia and in the Roman period housing at the site itself are indicative of either wine

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<sup>639</sup> See above 2.3.

<sup>640</sup> Dovring 1965, 30.

<sup>641</sup> A decrease in well-being is not a necessary condition of tenancy. Under a benevolent landowner one's condition could be considerably improved, as being a part of a larger estate meant that less surplus needed to be kept, equipment could be shared, and in times of trouble one could expect to receive some support from the landowner; see De Ste Croix 1981, 214.

<sup>642</sup> Mitchell 1993, 1.241, 245, 257.

<sup>643</sup> It is interesting to note that the fertile agricultural land in the poljes of the Balkans were deemed to be of little importance to pastoralists in the Balkans until the seventeenth century; Sweeting 1972, 192.

<sup>644</sup> Tapu Kadastro Genel Müdürlüğü, Ankara, *Temettüat Defteri* no. 10.232 (H.1260/1844AD), 1-35; for an illustration of an ox from Bademağacı in the nineteenth century, see Lanckoronski 1892, 126, fig.99.

<sup>645</sup> The low number of goats may be explained if Bademağacı is seen as being the agricultural part of a divided system of subsistence in which the mobile *yürüks* provided the pastoral element.

production or olive oil production (or conceivably both).<sup>646</sup> It is not possible to identify the presses themselves definitely either as olive or wine presses.<sup>647</sup> Press weights identical to those discovered at Sia have also been discovered in the area of the Balboura survey at altitudes where olives will not today grow; it is still unclear whether olives were grown there in antiquity, or, as is perhaps most likely, that vines were being cultivated at this altitude.<sup>648</sup> There are some indications, however, that most of the presses at Sia were primarily intended for the pressing of olives.

Grapes are softer and produce far more juice in a shorter time than olives. The surface area of a grape press, therefore, in order to be most economical should have a wide press bed. Although less pressure would be applied, less would be needed and more grapes could be processed in one pressing. Furthermore, not only do grapes produce greater quantities of juice at one pressing, but the juice needs to be stored in order to be allowed to ferment. A grape press, therefore, should have a larger press bed and should also ideally be situated near to a reservoir or fermentation room.<sup>649</sup> The presses of Sia are all remarkably similar in form, although the press beds are often no longer visible. In house 2 at Çakıraz, however, three presses were found, two facing each other in a chamber 3.4m long, and another considerably larger press with a bed measuring 2.5 x 4.4m (fig. 12; plate 65). It seems clear that the two presses were intended for a different purpose from the larger press; the requirement for a smaller area and greater pressure would indicate that these presses were intended for olives. There are no equivalent presses to the larger (presumably) grape press at Sia itself. Note also that olive presses could be used in off years for the pressing of grapes, but not vice-versa.

Further evidence of the inhabitants of Sia attempting to increase their cultivable land can be seen in terrace walls visible near Koz Ağacı around a small basin of good soil in the Merdivenli pass. These long, narrow terraces are today filled with wild olives. Foxhall has expressed well-founded scepticism about the immediate identification of decaying terracing as being ancient.<sup>650</sup> Nevertheless, it seems likely that these terraces are antique as there has not been sufficient sedentary population in the area since antiquity to warrant the terracing of such marginal land.

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<sup>646</sup> This is in marked contrast to Cremna, Sia's prosperous northern neighbour, where only one house on the site has been identified as having a wine or olive press; unfortunately, there is no description of the press or the house in which it was found; see Mitchell 1995, 172.

<sup>647</sup> On the difficulties of identifying the instruments of olive processing see Foxhall 1993, 183-200; see also Amouretti 1986, 153-75; esp. 167, fig. 27a for a diagram of a lever press of a type similar to that used at Sia, although it is possible that weightless presses were also used, see figs. 27b, c, and 28.

<sup>648</sup> See above chapter 1.3.

<sup>649</sup> Rossiter 1981, 346-53 (wine), 353-60 (olive oil).

<sup>650</sup> Foxhall 1996.

## 4.5 DISCUSSION

## 5. Construction at Sia in the Roman Period

Building Type	Name	Approximate date
Public Building	Bouleuterion	Late Hellenistic/Early Imperial
Public Building	Rq1 (temple/treasury?)	Late Hellenistic/Early Imperial
Public Building	Qq2 (stoa)	Late Hellenistic/Early Imperial
Public Building	Nr1 (temple)	Late 2 <sup>nd</sup> -early 3 <sup>rd</sup> century AD
Public Building	Nr2 (temple)	Late 2 <sup>nd</sup> -early 3 <sup>rd</sup> century AD
Public Building	Nr3 (temple)	Late 2 <sup>nd</sup> -early 3 <sup>rd</sup> century AD
Public Building	Vq1 (temple)	1 <sup>st</sup> -2 <sup>nd</sup> century AD
Public Building	Sp5 (temple)	1 <sup>st</sup> -2 <sup>nd</sup> century AD
Public Building	Bathhouse	1 <sup>st</sup> -2 <sup>nd</sup> century AD
Housing	Ms1, Ns1, Pq1, Pq2, Pp1, Pp2, Pp3, Pp4, Pm1, Pm2, Pn1, Pn2, Pr2, Pr3, Ps1, Ps2, Ps3, Qn1, Qn2, Qq1, Qr1, Rj3, Rn1, Rn2, Rn3, Sm1, Sm2, Sm3, Sm4	1 <sup>st</sup> -3 <sup>rd</sup> century AD

## 6. Construction at Ariassos in the Roman Period

Building Type	Name	Approximate date
Public Building	Triumphal Archway	230s AD
Public Building	Fountainhouse	2 <sup>nd</sup> -3 <sup>rd</sup> centuries AD
Public Building	Bathhouse	2 <sup>nd</sup> -3 <sup>rd</sup> centuries AD
Public Building	Gymnasium	2 <sup>nd</sup> -3 <sup>rd</sup> centuries AD
Public Building	Forum	2 <sup>nd</sup> -3 <sup>rd</sup> centuries AD
Housing	7, 27, 29, 30, 31, 37, 40, 41, 42, 43, 44, 46, 47, 48	1-3 <sup>rd</sup> centuries AD

Pisidia was introduced to the new Roman ways most forcefully with the establishment by Augustus of five military colonies at Pisidian Antioch, Cremna, Comama, Olbasa and Parlais.<sup>651</sup> The influx of Italian veterans, and the activities of negotiatores, must have accelerated the adoption of Roman customs at least in the urban centres.<sup>652</sup> Under Roman rule neither cities nor their inhabitants were able to compete with each other through physical means. Wealthy members of the community resorted to ostentation and public acts of benefaction to single themselves out from their fellow citizens, and to increase their *auctoritas*. The glorification of one's city with monumental architecture became increasingly a means of increasing personal and municipal prestige: the greater one's mother city, the greater the increase to one's reputation.<sup>653</sup> The settlements laid out in Hellenistic times were no longer suitable to accommodate the new need for monumental building, and there was no longer any need to maintain a full fortification circuit. Cities, therefore, expanded outside their previous boundaries and into new monumental centres.<sup>654</sup> During the second and third

<sup>651</sup> Levick 1967.

<sup>652</sup> There is unfortunately little concrete evidence of negotiatores in Pisidia; see Hatzfeld 1919, 174, on the possible presence of negotiatores in Comana; see also Levick 1967, 56-67.

<sup>653</sup> Jones 1940, 248-50.

<sup>654</sup> Oinoanda expanded between ca. AD 120 and 230 with a new agora being created in the middle of the site along with other monumental buildings. Balbura similarly underwent such a transformation in

centuries AD, at Ariassos, Sia, and Panemoteichos, as at Balboura to the East and in common with cities across the empire, the domestic and civic centres of the cities expanded outside the original fortification walls onto the lower indefensible ground below. New civic centres were constructed; bathhouses were built along with the necessary plumbing; monumental tombs were erected for all to see. Whereas we have no Hellenistic inscriptions from these smaller sites, in the Roman period, public inscriptions of private benefactions began to appear to record the generosity and importance of the donor.

Aelius Aristides in a speech delivered in the reign of Antoninus Pius (AD 143-156), probably ca. AD 143, described the Roman Empire as an aggregate of cities.<sup>655</sup> Although Pisidia had long been urbanised, it was in the Roman period that Pisidian urban culture appears to have flourished, in common with much of Asia Minor.<sup>656</sup> By the second and third centuries AD, the Pax Romana had made physical adversity impossible, and the Pisidian cities (amongst others) competed instead with displays of wealth and beneficence.<sup>657</sup> Ariassos and Sia were no exceptions.

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Imperial times when a new monumental centre was constructed at the base of the hill on which the Hellenistic city stood; Patterson, 1991, 163; Coulton, 1994, 329; Coulton 1998, 230, 233.

<sup>655</sup> See Aelius Aristides, *Orat. xiv (Ad Romam)*; Rostovtzeff 1957, 130-50.

<sup>656</sup> Syme 1995, 215.

<sup>657</sup> For a brief discussion of euergetism in Lycia see Coulton, 1987b; for Pisidia, see Waelkens and Poblome, 1995.

## CHAPTER FIVE

### THE LATE ROMAN CITIES

#### 5.1 LATE ROMAN PISIDIA

The second and third centuries AD had seen an urban florescence in the eastern Mediterranean, with new building works, festivals and games being established.<sup>658</sup> Sia and Ariassos were not exceptional in enjoying this period of growth and expansion. The wealthier inhabitants of both cities appear to have moved to new areas outside the old city limits in order to build themselves larger houses near to the new monumental centres. The building boom extended also to funerary architecture; grandiose monuments were erected to glorify the wealth and status of the men who built them. Furthermore, inscriptions in Greek began to be erected, apparently for the first time in these settlements, in the second or third centuries AD. Yet, by the end of the third century AD, the number of new inscriptions throughout the empire rapidly decreased, ceasing entirely at Sia, Ariassos and Cremna; the remarkable flowering of monumental urban culture withered, as the building boom was followed by an empire-wide economic downturn.<sup>659</sup> With the murder of Severus Alexander in AD 235 the empire slid into anarchy and civil war.<sup>660</sup> The empire was embroiled in a series of wars between contenders for the imperial post whilst also suffering barbarian invasions and a plague which began in AD 251 and lasted for fifteen to twenty years. Wars, internal and external, drained the imperial coffers, creating a need for large amounts of coinage whilst crippling the economy that was supposed to supply it. Consequently, the silver coinage was repeatedly debased. By AD 260 the silver content of the denarius had fallen from between 80 and 90 per cent, as it had been at the beginning of the second century AD, to one or two per cent.<sup>661</sup> With the rise of inflation, endowments in cash, which had been used to maintain urban facilities and festivals, decreased in value, and cities and their *curiales* or *bouleutai* began to feel the pressure of tightening finances.<sup>662</sup> Across the entire empire spending on monuments, competitions and festivals decreased sharply.<sup>663</sup> At the same time civic coinage also came to an end; the last coins known to have been minted at Ariassos were under Gallienus and Salonina (AD 253-67).<sup>664</sup>

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<sup>658</sup> On festivals see Jones 1940, 211-58; Wörrle 1988; Price 1984, 101-132.

<sup>659</sup> See Mitchell 1993, I.227-40.

<sup>660</sup> Rostovtzeff 1957, 433-501.

<sup>661</sup> Jones 1964, 22-36; Jones 1940, 241-51; Crawford 1975, 567-75.

<sup>662</sup> Some endowments, like the Oinoanda Demostheneia endowment, were in land; this would only lose its value if the land became less productive, the produce of the land declined in value or if not enough people were available to work the land.

<sup>663</sup> Major administrative centres such as Aphrodisias and Sagalassos also experienced a decline in the number of inscriptions from the third century onwards. The greatest decline was in those inscriptions honouring acts of euergetism by private citizens. MacMullen correctly notes, however, that euergetism did not cease entirely across the empire, giving the example of Augustine's comments in the fourth century on the over-generous folly of some *curiales*; MacMullen 1988, 45; see also Liebeschuetz 1992, 4-6; Rouché 1989, 20; Jones 1964, 734-66, esp. 755-6; Jones 1940, 190; De Ste Croix 1981, 465-74; Liebeschuetz 1992, 4-15.

<sup>664</sup> Von Aulock 1977, 67-76; Howgego 1985.

Southern Pisidia was by no means unscathed by the military turmoil of the third century AD. Asia Minor was invaded by the Sassanians in AD 252 and AD 260; Goths during the 250s and 60s had attacked Miletos, Ephesos and Sardis. The Romans based troops in Pamphylia to face the new threat. It has been plausibly suggested that Cremna was used as a site for the billeting of troops by Aurelian around AD 270-1 in preparation for his assault on Zenobia and independent Palmyra.<sup>665</sup> As Mitchell indicates, the billeting of troops may have allowed a few to grow wealthy, but it could prove a very unpleasant burden on the bulk of the population.<sup>666</sup> The Pisidians had little to gain from a campaign against Palmyra, and much to lose from the presence of soldiery in their midst. Some seven years after this campaign, we read of the activities of an Isaurian brigand, Lydius, who was launching raids on Pamphylia and Lycia with his band of supporters. The Romans judged him to be a significant threat, and they assembled a force to fight him. Lydius retreated to Cremna to stand against them.<sup>667</sup> Cremna fell to the besieging Roman army in AD 278.

The violent unrest does not appear to have been completely suppressed with the fall of Cremna. Zimmermann and Mitchell have collected a range of inscriptions, which can plausibly be connected with the revolt.<sup>668</sup> The first of these inscriptions was discovered by Harrison at the site of a small fortified garrison site at Ovacık on the Elmalı plain, some 40 km to the southwest of Ariassos.<sup>669</sup> The inscription includes the text of a letter from the Duke of the Guardposts to a certain Hermaios, 'the noble hunter of brigands'.<sup>670</sup> In the text of the inscription, mention is made of the council of Termessos, and it is apparently indicated that Hermaios should proceed with a band of young men to Cremna.<sup>671</sup> Ovacık appears, therefore, to have been within the territory of Termessos, probably awarded in 70 BC as a part of Termessos' reward for assisting the Romans in their campaign against the 'pirate' Zeniketes, and the cities of Attaleia, Olympus and Phaselis, who were assisting him.<sup>672</sup>

A further inscribed stone from Ovacık bears two documents, one a letter from the prefect, Valerius Euethius, to M. Aurelius Kiliortes, the son of Hermaios, referring to the destruction of the band of bandits who had been wandering over the territory of Termessos, the other document is an honorary inscription from the council and people (probably of Termessos) addressing Kiliortes as the 'most distinguished and renowned champion of peace' and 'high priest of the emperor and his resplendent Caesars'.<sup>673</sup> Harrison approximately dated the Ovacık fort, on the grounds of the inscription, to the early to mid-fourth century AD.<sup>674</sup> On the grounds of the reference to the single emperor and the multiple Caesars, however, which can only apply in the late third or early fourth centuries to the period between

<sup>665</sup> Mitchell 1995, 214-6; Mitchell 1999, 159-61.

<sup>666</sup> See also Jones' comments on the destructive effects of the Roman army on the people they were supposed to be protecting, Jones 1964, 22, 25.

<sup>667</sup> See Zosimus *New History* I, 69-70; MacMullen 1988, 181-2; Mitchell 1995, 177-218; Mitchell 1999; Zimmermann 1996.

<sup>668</sup> Zimmermann 1996; Mitchell 1999.

<sup>669</sup> The fort was previously identified as a monastery complex, Petersen and von Luschan 1889, 164.

<sup>670</sup> Harrison 1979a, 530-1; Harrison 1980, 112-14; Zimmermann 1996; Mitchell 1999, 161-4.

<sup>671</sup> For this reading, see Mitchell 1999, 161.

<sup>672</sup> Ormerod 1922; Mitchell 1999, 168.

<sup>673</sup> İplikçioğlu, Çelgen, and Çelgen 1992b, 12-16, nrs.2-4; Zimmermann 1996; Mitchell 1999, 162-3.

<sup>674</sup> Petersen and von Luschan 1889, 164; Harrison 1979a, 525-31, esp. 529-30, fig. 4, pl. 9.

November 282 and summer 283 when Carus was in power with his sons Carinus and Numerian, Zimmermann concludes that the inscriptions, and the fort, must all be connected with the suppression of the revolt of Lydius. Further inscriptions honouring men involved in the campaign against Lydius have been identified at Arykanda and Trebenna, and Mitchell plausibly links three further inscriptions from Termessos to the times of the troubles.<sup>675</sup>

The fall of Cremna had evidently not been the final chapter in the outbreak of 'banditry'.

The construction of the fortified garrison at Ovacık is one indication of how serious the 'banditry' had become, nor was it the only fort to be constructed. The Ovacık site is so similar in plan to another fortified site situated at Ören Tepe (fig. 11), opposite Panemoteichos, some 10 km to the north of Ariassos, that it is hard to doubt that they were constructed as part of the same initiative (plate 66). The Ören Tepe site has previously been interpreted as an Attalid garrison fort.<sup>676</sup> The masonry of the Ören Tepe fort, however, consists of medium to large roughly shaped blocks and rubble, which appears in places to have been covered with a friable plaster or cement, which has now almost completely washed away.<sup>677</sup> There are no easily identifiable Attalid comparanda for either the masonry style or the fort itself; the similarity of its plan to the Ovacık fort would suggest that they were constructed at the same time. Furthermore, a similar fort constructed on the south west hill at Oinoanda, can plausibly be linked with precautions against the 'bandits', indicating that the troubles spread across as far as the Kibyris.<sup>678</sup>

The Isaurians were renowned for their unruliness and their propensity for banditry. Yet, as Mitchell points out, Lydius was active in Pisidia when he was finally cornered and defeated, and it is from Pisidia and the Milyas that we have evidence of widespread and continuing unrest. A five-year campaign against 'banditry' would indicate that the problem involved more than a one-off cross-border raid by bandits. There is, as has been pointed out, a problem with the terminology; 'brigand' and 'bandit', like 'terrorist', cover a wide variety of evils.<sup>679</sup> The questions that need to be asked are who were these 'bandits', what were they doing, and why were they doing it? Mitchell has stressed that this was not simply a case of highlanders launching raids on lowlanders, as the evidence shows the participation of highlanders in the suppression of the banditry. Mitchell, therefore, suggests that what was taking place in these five years was a regional power struggle, a fight for independence against the domination of Rome and its henchmen, a clash between 'backwoodsmen' and the 'civilised elite'.<sup>680</sup> As Mitchell points out the men named in the inscriptions who were involved in suppressing the revolt possessed the *tria nomina* of Roman citizens; they were most probably men who belonged to the Roman ruling hierarchy. Unfortunately, we possess no information about the reasons behind the actions of Lydius and his supporters. It is possible that Lydius was truly a revolutionary, seeking to establish his own independent

<sup>675</sup> Paribeni and Romanelli 1914, 214 no. 152 (Trebenna); Şahin 1994, no. 26 (Arykanda); Heberdey 1941, I.80, 82; Christol 1978; Mitchell 1999, 165-9.

<sup>676</sup> See Aydal, Mitchell, Robinson, Vandeput 1997, 141-72, esp. 170-2; see also Mitchell 1998a, 241-2.

<sup>677</sup> Contra Aydal, Mitchell, Robinson, Vandeput 1997, 165; the Ovacık fort was constructed without the use of mortar; the absence of mortar is not a valid dating criterion in this region.

<sup>678</sup> Coulton 1983, 16, fig.7, 17.

<sup>679</sup> On brigands and bandits in general, see Hobsbawm 1985; Shaw 1984; De Ste Croix 1981, 475-80; on brigands in Isauria, Cilicia and Pisidia, see Shaw 1984, 42-52; Shaw 1990; Elton forthcoming; Hopwood 1999; Mitchell 1995, 211-7; Mitchell 1999.

<sup>680</sup> Mitchell 1999, 165, 169-70.

state(let); it is more likely, however, that he was either what Hobsbawm termed a 'social bandit' or that he was exploiting an opportunity for personal gain.<sup>681</sup> Mitchell's suggestion that Lydius was exploiting local resentment at hardships imposed by the billeting of troops by Aurelian is attractive, but perhaps insufficient. Peasant societies have been described as passive, and there are several reasons for this.<sup>682</sup> Peasants who lived in dispersed settlements may not have much opportunity to interact and to organise themselves into a co-ordinated movement of opposition. Peasants in Pisidia were probably used to a significant amount of hardship and abuse, much of which may have been seen as inevitable; rebelliousness may only lead to further hardship. Life as an outlaw tended to be brief and unpleasant. The arrival of Lydius and his followers, however, would have left the local population with little choice but to tolerate him. It is hard to tell how much active support he would have received, but it is likely that few would, or could, have offered active opposition.

The construction of separate fortresses near to settlements is an important development. The Ovacik fort was situated near an unwallled Late Roman settlement, the Ören Tepe fort near the unwallled Roman site of Panemoteichos, and the Oinoanda fort within the site of Oinoanda. It must remain a matter for speculation whether separate forts were constructed because it was cheaper and easier than (re-)erecting a wall around established settlements, or because the authorities were concerned that the local populace could not be trusted. The forts that were constructed could be employed both to protect and to control the local peoples.<sup>683</sup>

The crisis of the third century was vigorously addressed by Diocletian (AD 284-305) who enacted a series of significant reforms in order to bring the empire and its finances back under control. The reforms of Diocletian are usually seen as the starting point for the period of Late Antiquity (AD ca.300-600). Amongst his many reforms, Diocletian split the empire into smaller administrative regions; for the first time a province of Pisidia was formed. Southern Pisidia, however, which included the cities of Termessos, Ariassos, Cremna and Selge, became part of the new province of Pamphylia.<sup>684</sup> Despite re-organisation, it is clear that trouble continued in the region, as the neighbouring Isaurians began robustly to assert their independence with three raids upon neighbouring areas; Ammianus records various incursions in AD 353, 359 and 368.<sup>685</sup> Unable to suppress the Isaurians, the Romans were forced to construct fortified defences to hold back the Isaurians from carrying out raids on their neighbours.<sup>686</sup> The Isaurian insurgencies of the fourth century AD were almost certainly not only a response to individual acts of injustice, as described by Ammianus, but

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<sup>681</sup> Hobsbawm 1985, 17 defines 'social bandits' as 'peasant outlaws...remain[ing] within peasant society...[and] considered as heroes'; Blok 1972 condemns the idea of the 'good thief' as a 'mirage'.

<sup>682</sup> Hopwood 1999, 180.

<sup>683</sup> Brigandage was a problem throughout the empire at this time; for a brief overview, see Rostovtzeff 1957, 738-9, n.17; De Ste Croix 1981, 317-8, 475-80, 489.

<sup>684</sup> Ramsay 1890, 393; Mersich 1986, 192; Brandt 1992, 169-70.

<sup>685</sup> Ammianus 14.2.1-14, 19.13.1, 27.9.6-7; Shaw 1990.

<sup>686</sup> On the continuing Isaurian problem, see Matthews 1989, 304-6, 355-67; Jones 1971, 212; MacMullen 1988, 182, 276 n. 34.

also, as with the Pisidian revolt, to a situation of severe economic hardship.<sup>687</sup> Pisidia, in effect, may have become a semi-frontier area, with the threat of raids never far away.<sup>688</sup>

Further insecurity in the region is reflected in the account of Zosimus of the revolt of the Ostrogoths and Gruthungi under Tribigild in AD 399.<sup>689</sup> The rebels caused destruction in Bithynia, Galatia and Pisidia before making their way to Pamphylia. Tribigild was met by a force mustered by Valentinian, a landowner from Selge, who, with a band of his slaves and peasants (who were accustomed to fighting neighbouring bandits), trapped him in a pass between Pisidia and Pamphylia. Tribigild managed to bribe a Roman officer, and his forces escaped. This episode is illuminating. It not only reveals a state of lawlessness and corruption, but it shows that the local curial class was used to dealing with hostile attentions in a forceful manner. Furthermore, on this occasion an official of the state is shown acting contrary to the interests of the local landowners. Whether or not such clashes between officials and locals were normal is unclear. It is to be suspected, however, that this incident reflects a more typical pattern of a corrupt centralised bureaucracy existing in an uneasy compromise with the local magnates.

Economic hardship was not the only factor determining the changing face of the urban environment in this period. It is impossible to address the changes in the Later Roman city without looking at the rise of Christianity.<sup>690</sup> Christianity in the form of St Paul came very early to Pisidia (ca. AD 45-49), as he almost certainly travelled from Perge to Pisidian Antioch along the *Via Sebaste*.<sup>691</sup> There are no signs, however, that his passing had any immediate impact. The earliest indication that Christians had gained some foothold in the region can be seen in two contemporaneous inscriptions against Christians, one, from Arykanda, addressed to the people of Lycia and Pamphylia composed in AD 311/2, and the other an imperial rescript from the emperor Maximinus Daia found at the city of Colbasa dated to AD 312 encouraging the persecution of Christians and their expulsion from city territories.<sup>692</sup> However, with the victory of Constantine I, an emperor with Christian sympathies, over Maxentius at Saxa Rubra in AD 312, the Christian church began to receive active imperial support. Constantine restored property to the church, exempted the clergy from curial duties, donated large sums from the imperial treasury and undertook a massive programme of church-building. From AD 330, with the dedication of Constantinople as the imperial headquarters of the eastern empire, Constantine I rejected paganism, and favoured Christian officials.<sup>693</sup>

In the fourth century Christianity became an increasingly important element of city life.<sup>694</sup> As the authority of city councils decreased, the role of bishops became more important.

<sup>687</sup> See Levick 1967, 173-5; Matthews 1989, 367; Santos Yanguas 1977, 351-78.

<sup>688</sup> The *Historia Augusta* 26.6 described Isauria in the late third century as being comparable to a frontier because of the nature of the terrain. For the differing effects on individual settlements of lying in a border region, see, for example, Goodman 1989, 248-9, on the Anglo-Scottish border region in the mediaeval period.

<sup>689</sup> See Zosimus 5.15-6.

<sup>690</sup> On the rise of Christianity in Anatolia see Mitchell 1993, II; Lane Fox 1986.

<sup>691</sup> See *Acts* 13.13; Mitchell 1993, II.6, n.37; Hemer 1989, 251.

<sup>692</sup> See *TAM* II 785; Konrad 1989; Mitchell 1988, 105-24; Mitchell 1993, II.64.

<sup>693</sup> For an overview of Constantine's activities, see Jones 1964, 77-111.

<sup>694</sup> Claude 1969, 85-101; Dagron 1971; Ward-Perkins 1984, 51-84.

Bishops became moral authorities within their communities, and maintained bonds with clergy in other cities thus creating widespread networks of influence. Election by city communities played an important part in the selection of bishops, thus creating a closer bond with the community.<sup>695</sup> During periods of crisis, communities could turn to their bishops for counsel, increasing their authority.<sup>696</sup>

The earliest datable Pisidian church is the large basilica at Antioch (the church of St. Paul), dated by a mosaic to AD 381; it is one of only two churches in Asia Minor that can be securely dated to the fourth century.<sup>697</sup> It has been suggested, however, that Church A at Cremna was probably converted from being a civic basilica in the same period between AD 350 and 400, although there is no archaeological evidence for this dating. The difficulty of arriving at a date without the help of inscriptions or excavations for buildings identifiable as churches is compounded by the fact that early Christian communities tended to meet in private houses, and, even once churches began to be built, these too often had the outward appearance of private houses.<sup>698</sup> Earlier churches may have existed, therefore, but may remain unidentifiable. It is unlikely that such churches were plentiful, however, given the ever-present threat of persecutions before the time of Constantine.

The crisis of the third century and the advent of Christianity marked a distinct change in urban life throughout the empire but this did not mean that all cities fell into irreversible decline. Late Antique Pamphylia and Lycia appear to have prospered, partially due to their increasing importance as a defensive bulwark and partially due to their natural advantages of position (on sea routes) and fertility.<sup>699</sup> The highlands, however, were not so naturally blessed, and those on the peripheries do not appear to have fared so well.

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<sup>695</sup> Jones 1964, 914-20.

<sup>696</sup> On the power of the clergy, see Mitchell 1993 II.55-6; Lane Fox 1986, 499-517.

<sup>697</sup> See Mitchell 1995, 230; Mitchell and Waelkens 1998, 210-8; Taşlıalan 1997; Kitzinger 1974; Robinson 1926, 234, pl.39.

<sup>698</sup> See, for example, the church-house at Dura-Europos built around AD 200, re-built for Christian use before AD 231, and destroyed in AD 257; see Cumont 1926; Hoepfner and Schwandner 1986, 141.

<sup>699</sup> Foss 1993; Foss 1994; Foss 1996, IV.

## 5.2 SIA - THE LATE ROMAN SETTLEMENT

### 5.2.1 FORTIFICATIONS

The *Pax Romana* of the previous centuries had removed the necessity for settlements such as Sia to possess fortified circuits, and had stimulated the destruction of fortifications as impediments to growth. The increasing instability of the third century AD, however, led to the hasty reconstruction of circuits across Asia Minor. The revolt of Lydius and the siege at Cremna in AD 278 must have added an extra urgency for protection. There is, however, no obvious sign of refortification at Sia. The reasons why Sia did not rebuild her walls may have been various, but it is most likely that Sia could not afford the costs of constructing new fortifications, or that the governor of the province did not approve the allocation of funds for the walling of such a minor site.

It is possible, however, that the uppermost area (ca. 9600m<sup>2</sup>) was still protected by the city walls [B] and [C], as they are still standing today to some height except for a small section adjacent to T7 which has collapsed. Walls B and C appear to have escaped being dismantled during the previous period of expansion, because, despite being superfluous, they were not obstructing the new development. In times of hardship, therefore, it is possible that the Sienoi could abandon their houses and retreat to this protected area for a short period of time, as it contained three large cisterns.

### 5.2.2 PUBLIC BUILDINGS

The only Late Antique public buildings that can be identified at Sia are two basilica churches and a chapel. One church [Ht1] is in the cemetery away from the domestic areas of the site with a small chapel beside it [Ht2], the other church [Rq2] is above the bouleuterion and next to the small temple [Rq1].<sup>700</sup>

The cemetery church [Ht1] measured ca. 14 x 25 m, and was constructed from larger re-used ashlar and trapezoidal tending to polygonal smaller stones laid in a double skin with the larger ashlar blocks acting as stretchers with rubble infill in places (plate 67). Small stone fillers are visible in the outer face. The church is rectangular in plan with the semicircular apse concealed behind the straight east wall. The apse was flanked by two small rectangular chambers. The church had a narthex with three doors leading into two side aisles and the nave. Stone supports, which are still visible, presumably provided bases for wooden pillars, which would have been employed to support the roof, dividing the nave from the aisles. This church is similar in size, plan and construction to the church at Ören Tepe opposite Panemoteichos.<sup>701</sup> It is not clear whether the walls were rendered either externally or internally, and there is no sign of marble décor or mosaics in the interior. It is also similar in size and plan to the cemetery church [B] at Cremna.

The location of the church, in the cemetery away from the settlement, is not unusual; it may be a sign of an earlier date of construction, at a time when paganism was still popular, but it

<sup>700</sup> See Aydal, Mitchell and Vandeput 1998, 281-2, resim 5, 6.

<sup>701</sup> See Aydal, Mitchell, Robinson, and Vandeput, 1997, 141-172, esp. 170-2.

may also simply have been constructed over the grave of a christian martyr at a later date. There are no datable architectural members.

Abutting the cemetery church Ht1 at the southeast corner was a room (ca.7 x 8m), which may have been a baptisterion, a side chapel, a treasury, or some other non-domestic building attached to the church. A potential problem with its identification as a baptisterion is the presence of the cistern some 13m to the south; if the room was built as a baptisterion it would have been more efficient to have placed it nearer to the source of water.

The small (4.5 x 6m) chapel-like building, Ht2, next to the cemetery church Ht1 was constructed from rubble and mortar. It possessed a small projecting semicircular apse. Little remains of the walling today, and it is not possible to tell whether it was rendered and painted or not. The rubble and mortar style of construction appears to be a later style of building than that used in the construction of the cemetery church Ht1.<sup>702</sup>

The second church at Sia [Rq2], though smaller than Ht1 (10x14m) is also built from re-used ashlar and polygonal and trapezoidal stones laid in courses in a double skin with some chip infill (plate 68). Like the cemetery church Ht1, the semicircular apse is enclosed, abutting the East wall; the apse is again flanked by two small rectangular chambers. The church is divided into a nave with two flanking aisles. The aisles were separated from the nave by two walls running approximately half of the length of the church (ca. 6m). The roof was probably supported on wooden pillars over the remaining distance before the apse. The church is smaller than all of the churches of Cremna except church H, and appears to have been constructed with less care than the cemetery church Ht1.

The enclosed apse plan does not appear to have been common in Pisidia.<sup>703</sup> Apart from churches B and C at Cremna, one of the two churches at the site at Lower Döşeme Boğazı, basilica B, also had an enclosed apse.<sup>704</sup> The site where the enclosed apse was clearly very popular was Selge, where, five out of seven basilica churches, basilicas A, D, E, F, and G, were all constructed with enclosed apses.<sup>705</sup> Basilica E had a horse-shoe apse, the others were all semi-circular. Basilicas E, F, and G all lay outside the city walls and appear to have been cemetery churches. It appears that the enclosed apse was popular in a small part of southern Pisidia. Sia may well have sought inspiration, or builders, for its churches from Selge. Unfortunately, not one of these churches can be accurately dated.

Neither of the churches at Sia can be dated through architectural means. The similarity of design with the Ören Tepe church and church B at Cremna probably indicates that the three churches were constructed around the same time, possibly by the same men. As far as dating is concerned, the Ören Tepe church was clearly constructed on top of another building, so is almost certainly later than the original fortifications. The extramural church B at Cremna is similarly undatable.

<sup>702</sup> A similar type of masonry was used in the Late Antique new town at Arif below Arykanda, and also at Alakilise, see Harrison 1980.

<sup>703</sup> Greenhalgh 1987, 246-7.

<sup>704</sup> Rott 1908, 26-7; Greenhalgh 1987, 229-30.

<sup>705</sup> Lanckoronski 1892, 180; Machatschek and Schwarz 1981, 110-13 [A], 113-4 [D], 114-5 [E], 115-6 [F], 116-7 [G]; see also Greenhalgh 1987, 214-20.

It is likely that the church Rq2 was constructed after the cemetery church, but it still appears to have been erected at a time that pagan beliefs were still important at Sia. From the mid-fourth century AD under Constantius (AD 337-361), imperial legislation had encouraged the demolition of pagan places of worship; this gained impetus in the late fourth and early fifth centuries. Yet at Sia the temples are in as good a state, if not better, than most of the remaining buildings on the site. They are certainly in a better state than the churches. The new churches were clearly not built over pagan temples, nor were the pagan temples plundered for stone. The church Rq2 was instead placed next to a temple, Rq1, probably in order to draw away pagan worshippers. It is worth noting that Rq1 was the smallest of the temples at the site. Christianity was clearly not well enough established at Sia to allow for the destruction of the pagan temples. This may indicate that both churches were constructed before the end of the fourth century AD.<sup>706</sup> However, the fact that the pagan temples appear never to have been destroyed, unlike at Cremna, may show that the Sienoi lived up to the Pisidian reputation of being superstitious, and that they managed to retain their pagan temples alongside their churches. The churches, therefore, need not necessarily have been built so early. Unlike at Cremna, neither of the churches of Sia appears to have been built in a particularly prominent position, although Rq2 may have been visible from some distance due to its position on the hillside.<sup>707</sup> The cemetery church Ht1 was removed from the centre of the town, although it would naturally have been seen by those approaching the town from the west. The church Rq2 was not positioned in the agora area near the Roman temples, Nr1, Nr2 and Nr3, but instead near to the older centre above the bouleuterion. However, although Sia, unlike Ariassos, possessed no bishop, it nevertheless appears to have had the same number of churches (see below).<sup>708</sup> Neither of its basilicas was as large as the basilicas of Ariassos, but the difference was not great. Sia was still to some extent capable of competing with its higher status neighbour; something that may well have been a source of pride to its inhabitants.

The other major public building that may have continued to function into Late Antiquity was the bathhouse, although no alterations are visible that can be dated to this period.

### 5.2.3 HOUSING

Following the second or third century AD expansion of the town there is little further evidence of growth. Yet the building of churches would indicate that even if the town was no longer expanding, it was at least still functioning. The early Roman period had seen not only an expansion of the site, but also a change in the style of housing being built. Larger houses were built, separated from their neighbours in contrast to the earlier Hellenistic clusters of housing. Those houses lying on the fringes of the settlement mark the furthest point of expansion of the site. They are not, of course, necessarily the last buildings to have been constructed on the site, but they provide comparanda with buildings that can be shown to have been built earlier, and can therefore help in the identification of buildings

<sup>706</sup> See Deichmann 1939, 105; Mitchell 1995, 230.

<sup>707</sup> See Mitchell 1995, 231.

<sup>708</sup> Mitchell 2000, 7-8, tentatively suggests that Bassus of Sion, bishop at the Robber Council of Ephesus in AD 449 might have come from Sia. As he says, however, the regular ethnic form from Sia is Sienon; the identification, therefore, is highly uncertain and there is no other evidence that Sia possessed a bishop. It is perhaps more likely that Bassus was connected with the monastery of St. Nicholas of Sion in Lycia (possibly located at Karabel); see Harrison 1963, 150.

constructed in a similar style elsewhere on the site. Houses Hr1, Jr1, Mr 1, Ms1, Nr1, Ns1, Pp1, Qj1, Qj2, Rh1, Rh2, Rh3, Rj1, Rj2, Rj3, Sj1 and Mj1 were all constructed on the peripheries of north and western area of expansion. Mortar is only employed in parts of one of these houses, Ns1. Both Ns1 and Mj1 were built in a similar style to the earlier houses, such as Pr1 and Qn2. Both were constructed from smoothed ashlar laid in a double-skin. The mortar is only present in both houses in walls that are clearly later additions to the building (plates 69 and 70). A collapsed wall built from rubble and mortar enclosed a small area in front of the side door of Ns1 forming an enclosed porch (ca.5x3m). Mj1 was clearly altered greatly some time after its construction. Originally it appears to have consisted of five rooms arranged in an L-shape around a central yard with a vaulted cistern. The house appears to have been altered at the same time as an olive press was installed into one of the rooms (plate 71). At this time, two doorways in the north of the building were filled in with smaller rubble, effectively dividing the house into a three-room area, a courtyard, and a single, blocked-off room in the south west corner. It was probably at this time that the rubble and mortar rectangular construction was built abutting the external southwest wall. The mortar and rubble extension possessed no visible entrance, and must, therefore, have been accessed from above. It is possible that it was a cistern, but the walls are thinner than would be expected (ca. 60cm). It is more likely therefore that it was used for storing food-stuffs. It is possible that after the alterations were made to the house, the southwest room was used also as a storage room, or for stabling animals. The remaining houses on the periphery of the site were all constructed either from rubble and re-used ashlar, or from rubble alone. House Sj1, although built at one time, may have contained two households as there is no joining doorway between the northern three rooms and the southern three rooms. An unusual feature of this house is the thickness of the north wall (1.20m), in contrast with the other walls (0.80-0.90m). The extra thickness is difficult to explain as there is no obvious reason why this wall should be expected to bear more of a load than other walls in the building. There is no sign of a second storey (which in any case would not rest more heavily on this wall than on any other), nor of any other stress-causing equipment such as a press.

None of these later houses are grand, either in design or execution. If Sj1 was divided into two separate households, then only one of the houses had seven rooms, Rj3. All of the remaining houses had five rooms or less. Rj3 is divided into three spaces with no enclosed access between them. It is, therefore, possible that it consisted of a domestic area and two separate stabling and storage areas, or of two domestic areas and one storage/stabling area.

Within the inner-circuit C, lie two houses Ss1 and Ss2. Ss 1 and Ss2 both abut the city wall; they are both built from re-used masonry, with a mixture of coursed polygonal, ashlar and rubble laid in a double skin similar to the construction of houses Pt1, Qt1, Qs1, Pr1 and Pr2 (plate 73). There is no use of mortar in either construction; both are now heavily ruined. There is no way to date these houses with accuracy. The similarities with houses Pt1, Qt1, Qs1, Pr1 and Pr2 suggest a date during the later period of expansion outside the city walls, most probably in the third century AD. Both houses were built in what must have been an out of the way, less desirable, and hence lower status area. It is possible that they were built where they were in order to benefit from the protection of the walls. If so, few followed the example. The lack of shelter would have precluded the use of the upper area for protection for any great length of time.

Within the town itself several buildings appear to have been constructed from rubble and re-used blocks in a similar fashion to the peripheral housing. Houses Pt1, Qq3, Qr1, Rt6, Sn1, Ss1, Ss2, Sp4, St2 (plate 74), St3, St4, Rr1, Rr2, Sv1, Sv2, Sv3, Sv5, and Tt2 were all constructed in a similar re-used ashlar-and-rubble style. Other houses on the site were clearly repaired or extended in this period, Tt1 had a room added (or rebuilt); the new room was built with mortar and rubble. The doorway in House Qp3 between the southern two rooms was filled so that there is no visible entrance to the south west room. Similar alterations are visible in houses Pr1 (filled door and window), Qp3 (filled door) and Qn2 (filled window). It is apparent therefore that even though Sia was no longer expanding, houses were still being rebuilt and repaired. Such repairs are impossible to date without further scientific analysis and/or excavation.

Despite these limitations, it is possible to say something of the urban environment in Late Antiquity. The westward expansion of the site ceased in this period, and monumental building styles also ceased. Houses and churches were constructed from spolia and roughly shaped stones. The art of stone-working appears to have fallen out of fashion, here as elsewhere across Asia Minor. It is not unlikely that the outsides of many buildings were plastered in some fashion, possibly with mud and straw as no remains of such a facing can be seen today. The Late Antique town appears to have sprawled out in a crescent, bypassing most of the original walled settlement; it lacked coherence. The churches, which may have acted as some kind of a focus, were both placed in areas largely devoid of housing.

One reason for the 'urban sprawl' at Sia may have been that, in Late Antiquity, ease of access to their land, or to the land that they had to work, was of greater importance to the inhabitants of the town than the need, or desire, to participate in urban life. It appears also that the houses discovered in the area around Sia belong to this period.<sup>709</sup> Positioned around the small fertile basins of land around Sia these houses, built from small stone rubble without the use of mortar, are similar to those on the peripheries of the site. No sherds were immediately visible at these sites, and no systematic sherding was carried out around these sites. The rebuilding within houses and the construction of new houses reveals that Late Antique Sia was still operating, but the focus of the settlement appears once more to have shifted, from the urban centre and the splendours of Roman monumental urbanism towards the land from which the inhabitants of Sia made their living.

#### 5.2.4 CEMETERIES

As inscriptions ceased being inscribed at Sia by the end of the third century AD, so too did the inhabitants of Sia cease erecting monumental tombs. It is apparent that the majority of the inhabitants of Sia at any period must always have been buried in another fashion from

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<sup>709</sup> These groups of houses have not been properly surveyed, see below figs. 10-12 and plates 63-5. These farmsteads appear to reveal a similar pattern of exploitation of the countryside as found on the Methana Survey, which revealed that such isolated groups were a significant feature of the countryside from the Classical into the Late Roman period; Mee and Forbes 1997, 257-8. Limited excavation of these sites could reveal some very useful information, such as the date of construction, duration of habitation and the diet of the occupants.

those that are still visible today, most probably being inhumed.<sup>710</sup> Although the arrival of Christianity may have had something to do with this decline, there are no Christian symbols visible on any monuments on the site. The cessation of monumental tomb building may also have been another sign of the decline of the competitive, prestige-centred urban environment of the second and third centuries AD.

### 5.3 ARIASSOS - THE LATE ROMAN SETTLEMENT

#### 5.3.1 FORTIFICATIONS:

The circuit at Ariassos as it is visible today would have been constructed as a response to renewed insecurity in the area. Once again the precise date of the reconstruction can only be guessed at. It is known, however, that this region was suffering insecurities in the mid-third century AD. Both Balboura and Oinoanda, cities in the Kibyris to the west of Pisidia were similarly re-fortified, most probably during this period, although the refortification of Balboura appears to have had two distinct phases, the initial phase was indicative of either urgency or lack of resources (or both) as only the uppermost part of the city was protected by a ring-wall.<sup>711</sup> At Ariassos the refortification took in more of the city than the original Hellenistic city-circuit. The new circuit was constructed where possible from re-used stones from the original Hellenistic circuit bonded together with mortar (plate 75). Where the wall was extended to protect the area of the town that had expanded outside the previous circuit, signs of haste and economy are visible. The wall extending down past house 25 appears to have been constructed by bonding pre-existing walls wherever possible, incorporating the magnificent pseudisodomic side and front wall of house 28/29.<sup>712</sup> The wall then extended towards the Roman arch, but it is impossible to trace further (plate 76).

The revolt of Lydius in AD 273 may have provided the immediate reason for the re-fortification of Ariassos - it is highly unlikely that the city would have wished to have remained unprotected at such a time. We are faced with two possibilities for our inability to trace the wall: the wall was completed, but then demolished at a later date (naturally or through human agency), or it was never completed in the first place. The wall may have been removed at a later date to allow for the construction of the basilicas on the valley floor. The site as a whole has clearly suffered from landslides (around house 48) almost certainly

<sup>710</sup> Tile graves appear to have been a common form of burial around the city of Balboura. Tiles do not appear to have been common at Sia, as no traces of them have been found. A similar simple form of inhumation, however, may well have been commonplace.

<sup>711</sup> On Balboura and Oinoanda, see Coulton 1983, 1-20; Coulton 1994b; Coulton 1998, 235-6. Foss 1993, 29 fn. 85 suggests that the Oinoanda wall was constructed in the Dark Ages (seventh to mid-ninth centuries AD) due to its 'exclusion of ancient buildings and use of spoils'. The use of spoils need not point to a late date, especially not if Oinoanda had suffered previously from earthquake damage. A reason for favouring a later date of construction is the fact that Oinoanda is mentioned in the tenth-century compilation *De Thematis* (Pertusi (ed.) 1952: I.14.37) of Constantine Porphyrogenitos. There is, however, little to be seen at the site to indicate that it was continuously settled into the tenth century. Our inability to date such a wall more accurately than to within a period of six hundred years is worth noting. In any case, the wall at Ariassos is somewhat different in that it was built to defend the entire settlement. The revolt of Lydius would have created a pressing need to defend the site, and thus provides a reasonable date for the refortification.

<sup>712</sup> The pseudisodomic wall of house 29 was not particularly suited to be used as a fortification wall, but was nevertheless stronger than elements of the new wall on the slope directly above it.

caused by earthquakes. The wall could have been partially destroyed in an earthquake, and then moved to make way for new constructions. Yet, even if the wall were removed in this way, there is still no indication at all that the circuit was ever completed in the southwest corner of the site.

Demolishing the wall would probably have constituted an unwarranted expenditure of time and energy, especially as the enlargement of the Hellenistic circuit to include the Roman city would already have represented a considerable outlay of effort and money. Yet once the revolt of Lydius was suppressed the urgent need for refortification may have been felt to have decreased. Additionally the financial and physical effort involved in the refortification, at a time when the inhabitants of Ariassos were almost certainly also having to help pay for the Roman army's victory over Lydius, may have proved too much of a burden. The Roman governor may also have objected to the refortification of the site, given the trouble that refortified Cremna had just given the army. For this reason the refortification may never have been completed. It is also possible that the rest of the site was protected temporarily with wooden ramparts, but that Roman officials may likewise have wished for these to be removed.

### 5.3.2 PUBLIC BUILDINGS

Four churches have been identified previously at Ariassos: two large basilicas in the area of Roman expansion on the valley floor, and two smaller churches, one in the old Hellenistic centre near the so-called prytaneion, and the other above the housing in the north of the site, near houses 15 and 49.<sup>713</sup> The first basilica, basilica 1, is in a very ruined state, but appears to have been constructed from re-used material and mortar. It is impossible accurately to measure the length or the width of the church. It was at least eighteen metres long and fourteen metres wide; Mitchell estimated its length as being about twenty seven metres long and seventeen metres wide, excluding the narthex that was estimated to have added another fifteen metres to its length. Indications of such a long narthex are not now visible and would, in any case, be extremely unusual. The roof of the basilica appears to have been supported by eight rectangular piers made from re-used blocks, separating nave from aisles.

The second basilica was built in what was probably the forum of the expanded Roman town, next to what may have been small Roman temples.<sup>714</sup> The second basilica appears to have been built on a similar plan to basilica 1, and in a similar fashion. Constructed from re-used blocks, the church was 29.7m long and 14.4m wide. As in basilica 1 eight rectangular piers supported the roof, forming a division between aisles and nave (6.8m). The narthex was ca. 6.3 m wide, but, unusually did not extend across the entire width of the church, adjoining instead a room measuring 11 x 6.5 m, which may have been a baptisterion, similar to the church at Ören Tepe and, possibly, the cemetery church Ht1 at Sia. It is possible, however, that this room, as with church Ht1 may have been a treasury or a side chapel.

Unlike the churches at Sia, and the church at Ören Tepe, both of the large basilicas at Ariassos have externally projecting aisles. Basilica 2 is very similar in scale to church D from Cremna (of date unknown), although its plan with the room jutting into the narthex is most

<sup>713</sup> Rott 1908, 25; Mitchell 1991, 165; Mitchell 1995, 230.

<sup>714</sup> Mitchell 1991, 165.

unusual. There is so little remaining of the churches of Ariassos that it is very difficult indeed to compare them with other churches in the area on any criteria other than their basic ground-plans.<sup>715</sup> The basilica-style church plan with projecting apse was used at Cremna in six of the eight churches.<sup>716</sup> The same plan was prevalent in the churches of Central Lycia and throughout the rest of Pisidia, excepting the neighbouring city of Ariassos, Sia, and Selge.<sup>717</sup>

As at Sia, there are no traces left of possible architectural decoration from the churches. The nearest site where such decoration has been discovered is Pogla. A beautiful and intricately carved fragment of a marble undercut interlaced arch, almost certainly from a church, was found at Pogla.<sup>718</sup> The quality of the marble fragment compares favourably with the stonework in the Justinianic Constantinopolitan churches of Ss. Sergius and Bacchus, of Anicia Julia's palace, and of St. Sophia.<sup>719</sup> The fragment bears a strong resemblance to the work of a group of masons working in Central Lycia, which Harrison has termed the Alakilise-Muskar atelier; in particular, the prominent central Latin cross resembles one in the narthex entablature of the church at Alakilise.<sup>720</sup> The Pogla arch cannot, with certainty, be said to be the work of the same atelier, but it should be dated to the same period. The work of Alakilise-Muskar atelier has been dated (approximately) to the first half of the sixth century AD.<sup>721</sup> Unfortunately, nothing remains of the church at Pogla from which the arch fragment came.

After three visits to the site, I was still unable to find the small church or chapel identified on the published map of Ariassos above house 15. It is possible that the ruins have become covered by fresh earth falls or vegetation.

A small apsed building (6x8m) behind the prytaneion has been identified as a chapel (plate 77). This identification must be called into doubt as the building is oriented not to the east, but north-northwest. It appears, however, that the small single-roomed building, constructed from small re-used blocks, mortared together, was not domestic. If it were a church, its unusual orientation would require a theological justification, which we do not possess.

As with Sia the bathhouse may have continued in use into Late Antiquity. Unlike Sia, however, the Ariassos bathhouse was dependent upon an aqueduct for its water supply. It is not clear when the bathhouse ceased to be in use. Although the inhabitants of Ariassos would maybe have enjoyed the beneficial effects of hard water, the negative consequence of building an aqueduct in a limestone region is visible in water pipes found at the bathhouse at

<sup>715</sup> For an extensive survey of the churches of Pisidia, see Greenhalgh 1987, 153-255. For a survey of the churches of Central Lycia, see Harrison 1963.

<sup>716</sup> Mitchell 1995, 219-32.

<sup>717</sup> Harrison 1963, esp. 148-9.

<sup>718</sup> Özgen and Özgen 1992, 133, fig. 157; Lucas 1714, 244-5; Lanckoroncki 1890, 26-7, figs. 16, 17, Tafel X, XI; Rott 1908, 32-46, Abb. 10-18.

<sup>719</sup> Mango 1986, pls. 80 (Ss. Sergius and Bacchus, 90 (St. Sophia); Harrison 1989 24, pl. 16 (Ss. Sergius and Bacchus), 95, pl. 110 (Anicia Julia's palace).

<sup>720</sup> Rott 1908, pls. 119-21 (Alakilise); Harrison 1963, esp. 126-9 (Alakilise); Harrison 1972, esp. 191-2, fig. 10 (Alakilise narthex entablature).

<sup>721</sup> Harrison 1972, 197.

the site at Kaynar Kale (Codrula?); the clay pipes through which water was piped to the bathhouse are completely furred up with chalk deposits deposited by the hard water.<sup>722</sup> Although the pipes through which water was delivered to the Ariassos bathhouse have yet to be excavated, it is to be expected that they too furred up at some date. It is not clear, however, at which date the bathhouse was allowed to fall into disuse.

### 5.3.3 HOUSING

As at Sia, the grandest of the houses at the site, house 28/29, appears to have been constructed when the settlement was still expanding, probably in the mid-third century AD.<sup>723</sup> There are even fewer signs of entirely new construction in Late Antique Ariassos than at Sia, but many of the houses appear to have been re-built extensively in this period. Twenty-six of the houses of Ariassos (50%) show signs of having been rebuilt (1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12b, 14, 16, 17, 19, 20, 22, 24, 25, 32, 34, 35, 36, 37, and 49). Houses 23, 32 (plate 78) and 33, lying on the peripheries of the site are built from single-skin rubble, an undatable style, but nevertheless similar to the peripheral housing from Sia. House 29 was clearly extended at some time with the addition of the rooms labelled as house 28. The new section was clearly a later addition to 29, as it abutts the wall. The question is whether this addition was made prior to the reconstruction of the fortifications or afterwards. If house 29 was constructed for Diotimos son of Samos then it would have been standing for some forty years by the time of the revolt of Lydius. House 29 was clearly built with the intention that the pseudisodomitic wall should be seen by those entering the city. The construction of the extension would have detracted from the appearance of this façade. It is possible that it was constructed soon after house 29 was built but it is more likely that there was a reasonable length of time before it was added. If it was added before Lydius' revolt, it would have been pulled down to make way for the fortifications, and thus may have had a life of twenty years or less. It is possible, however, that it was constructed after the revolt had been suppressed, and after the need for a wall had been seen to have decreased. This latter option is more likely given the state of the walls of house 28. If it had been pulled down to make way for the new wall, we might expect to be unable to find any traces of the house at all, especially given the need for stone to construct the new fortifications. Thus it appears that Ariassos recovered from the crisis of the third century; the expansion of the largest house on the site is perhaps indicative of how the wealthy could benefit from hard times.

The expansion of house 29 is mirrored also to a lesser extent in house 9. House 9 appears to have been largely reconstructed using mortar and re-using ashlar from the original Hellenistic house. The reconstruction of House 9 may have occurred because of damage caused by a landslide or an earthquake, as it stands today on the edge of a steep drop of several metres. This may explain why the house appears to have been almost completely reconstructed. Care was nevertheless taken to re-dress the blocks to give it a similar appearance to the original. This may indicate an earlier date for the reconstruction, as elsewhere houses appear to have been reconstructed with less attention to aesthetic concerns. After the reconstruction one room appears to have been added to the east side of the house, and three rooms separated by a corridor were added to the west side. The west addition was built from rubble, and the door into the final room to the south west was later

<sup>722</sup> See Aydal, Mitchell, Muhlenbrock and Robinson forthcoming.

<sup>723</sup> See above, chapter 4.3.3.

blocked off. It is possible that the west rooms were originally servants/slaves' quarters, which later became an independent domicile. Houses 16 and 17 appear to have been constructed in a similar fashion in between the larger houses, 14 and 18. It is impossible to tell the status of the owners of these properties, but they were built from dry stone rubble sandwiched between the larger properties on either side. It is possible that house 16 was in fact split in two with the long, narrow south western room forming a separate domicile, or perhaps stable. These houses may have belonged to families serving the owners of the houses on either side.

Houses 36 and 37 appear to have remained largely the same in this period, although they were clearly rebuilt in parts, as mortar was used in the walls of the north east room of house 37, and the two entrances into the northernmost room of house 36 were filled with rubble. These may have been blocked to turn it into a store room with entrance only possible from above.

Elsewhere on the site houses were constructed. House 20 appears to have been built using spolia, as a huge rusticated ashlar block (1.80x0.94) incorporated in the front wall shows. The rest of the building is constructed from ashlar and rubble bonded with mortar. The simple row plan house also underwent alteration at a later date when the door to the south west room was filled in. House 21 may have been built at the same time, as it is constructed from rubble and mortar throughout.

Facing the triumphal arch to Severus Alexander is a house built in a style unique on the site, but with parallels elsewhere. House 46 was not a grand house; one room is still visible, although it is possible that it had more. The walls are constructed from rubble and mortar, with re-used monolithic window and door jambs, with the mortar being used structurally as nowhere else on the site. This style of masonry although it is found nowhere else on the site, nor at Cremna nor Sia has parallels elsewhere in Pisidia, as well as in Lycia and the Milyas. Four fortified settlements, Asar Kale, Sığırılık Kale, Bahçeli Kale and Kızılca Kale to the northwest of Ariassos, southeast of Adada are built from similar masonry.<sup>724</sup> Similar too is a large, as yet unidentified building standing at the bottom of the Döşeme Boğazı. In Lycia too similar masonry appears, and on the edge of the Milyas the houses constructed at Arif below Arykanda are also built in a similar style.<sup>725</sup> It is similar also to the masonry used in church IV on Gemiler Ada in western Lycia. Church IV has been tentatively dated to the sixth century AD, as has the building of Arif.<sup>726</sup> The Pisidian buildings have tentatively been dated to between the seventh and thirteenth centuries AD, but the parallels with sixth- or seventh-century buildings at Lebissos, Aperlae, Olympos, Arif and Alakilise (Karkabo) suggest that a sixth century date is more likely. It is possible, therefore, that house 46 was the last stone building to be constructed at Ariassos.

<sup>724</sup> See Belke and Mersich 1990, 193, 203-4, 306, 383; Mersich 1986, 195-200, ills.8-10, 12-15.

<sup>725</sup> See Foss 1994, 8-9, 16-18, 46, pls. 3, 4, 16, 25, 44, 45; Foss 1991, 311-2; Harrison 1980; Harrison 1979b.

<sup>726</sup> For the dating of church IV, see Tsuji 1995, 83, figs. 54, 59.

### 5.3.4 CEMETERIES

As at Sia, the monumental tomb appears to have lost its appeal in the third century AD. It is possible that burial in sarcophagi or stone cists cut into the rocks continued, as these are undatable. It is also very possible that sarcophagi, cists and tombs were all re-used. Nevertheless, as at Sia, the normal inhabitants of Ariassos appear to have been buried in a less ostentatious and less enduring fashion. There is no sign of any Christian symbolism on any of the surviving sarcophagi or cists.

### 5.3.5 WATER SUPPLY

Ariassos was supplied with water through an aqueduct, probably in the second century AD.<sup>727</sup> How long the aqueduct continued to be maintained is a matter for speculation. The aqueduct, constructed from terracotta piping, extended four kilometres from the source. The aqueduct must have required continuous maintenance, especially in a region where the water is hard and earthquakes are not uncommon. It is impossible to say when the aqueduct finally fell out of use. Once the water supply was reduced to a trickle and the inhabitants of the city no longer had the resources or urge to repair it, an important element of Roman urban life, bathing, must have come to an end. The lack of running water would also make the settlement even less attractive and practical as a place to live.

## 5.4 CITY AND TERRITORY:

The late third century was a time of turmoil, and, although the reforms of Diocletian may have restored order, they did little to better the lot of the poor. In particular, due to Diocletian's reform of the tax system most of the free working agricultural population of the Roman Empire in effect became tied to their villages or land.<sup>728</sup> As far as free-holders were concerned this probably had little impact, as far as tenants or *coloni* were concerned they appear to have been reduced almost to the level of slaves. It has been suggested (above, chapter four) that the cause of the outbreak of banditry in Southwest Pisidia may have been a subsistence failure of some kind; during times of subsistence failure, the rich were likely to benefit, as they were able either to provide relief through the provision of corn rations or *sitoria* (thus gaining favours from those who received it), or through withholding their supplies and making money through profiteering.<sup>729</sup> Two examples, both from the first century AD, reveal how subsistence crises were exploited by landowners. A decree of L. Antistius Rusticus from Pisidian Antioch from the early nineties AD ordered everyone to declare how much grain they had and (only) allowed them to charge twice the normal price for the grain.<sup>730</sup> Likewise, in Aspendos in Pamphylia in Tiberius' reign the rich were withholding grain for export, causing the people to revolt.<sup>731</sup> These subsistence crises were caused not only by a bad crop, but by the wealthy withholding their surpluses in order to make a profit. Mitchell estimates that thirty per cent of the grain crop was taken as tax; ten

<sup>727</sup> See Mitchell 1991, 170-2; see also above, chapter 4.3.5.

<sup>728</sup> Jones 1964, 2.796-801; De Ste Croix 1981, 243-55.

<sup>729</sup> On the provision of the *sitoria*, see Strubbe 1986; Strubbe 1989.

<sup>730</sup> Abbott and Johnson 1926, 65a.

<sup>731</sup> Philostratus *Vita Apollonii* 1.15.; Garnsey 1988a, 22-3, 32, 257-60; Strubbe 1989, 106; Jones 1940, 217-8, 255.

per cent to the state, and twenty per cent as rent to landlords.<sup>732</sup> There is a slight (although, for my argument, unimportant) fault in Mitchell's model here, as not all of those working in the country would have been working on land that belonged to someone else; as at least some must have been working their own land, the figure of twenty per cent is certainly too high.<sup>733</sup> Indeed the number of people in cities like Sia and Ariassos who would have been working their own land is an important, but unanswerable, question. Furthermore, and importantly, under the principate, tax may not have been taken as a tithe, but as a fixed sum based on the value of the land.<sup>734</sup> A fixed-sum tax would clearly exacerbate problems in a bad year. After a run of bad crops, it would be easy for the larger land-owners first to lend money to poorer land-owners, and then perhaps to foreclose on them. Larger land-owners could also charge larger amounts of money for their stores of grain in bad years, and, as was shown at Aspendos, they do not seem to have been averse to creating an artificial shortage by exporting the grain.

Olive oil in antiquity was an expensive commodity; as the inscription of Diotimos son of Samos shows, it was also an integral part of Roman urban life.<sup>735</sup> If the inhabitants of Sia were producing olive oil, and there is every reason to think that they were, they could provision the larger cities to the north, such as Sagalassos, who were unable to produce their own olive oil.<sup>736</sup> Sia, lying on the northern boundary of olive oil production, would have the advantage of lying closest to the non oil-producing cities of the north.<sup>737</sup> If the oil of Sia were deemed to be of a high quality, or, if a boom year at Sia coincided with a leaner year in the lowlands, Sia may also have provided oil to the large lowland cities such as Perge and Antalya, whose demand for oil must have been considerable.<sup>738</sup> Ariassos, not being located in such a closed environment, may also have cultivated some olive, but was probably able to survive largely from mixed agriculture. Sia, however, would only have been able to expand in the Roman period through the exploitation of specialist, commercial products, such as olives, and the exploitation of her extended territory through mobile pastoralism and (relatively small-scale?) logging.<sup>739</sup>

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<sup>732</sup> Mitchell 1993, 1.254-5.

<sup>733</sup> De Ste Croix 1981, 221.

<sup>734</sup> The issue is unclear, see Jones 1940, 266; Mitchell 1993, 1.248-9.

<sup>735</sup> Foxhall 1993, 69-70.

<sup>736</sup> Two passages of Strabo concerning the growth of olives at Melitene and Phrygian Synnada, both of which are at too high an altitude at which to grow olives, have been the subject of some discussion. Robert 1961, esp. 141-8. Robert suggests that Strabo may have mistaken the oleaster for a true olive, such an error is somewhat implausible. Climatic change is also not a good explanation, as we would expect to hear of (and to find evidence of) olive growth at more highland sites. It is possible to grow olives in conditions of late frosts, if the trees and their roots are protected (with straw or cloth) from the cold. Such growth is labour intensive (and therefore probably not economically viable), but possible. The author has been growing olives in Hampshire since 1996, protecting the roots and early growth from frosts in this way. On the effect of frost *per se* on olives see Rackham and Moody 1996, 80.

<sup>737</sup> Mitchell 1993, 1.257, suggests that olive oil was the most important commodity being traded with the interior, with Phrygian Apameia alone spending 34,000 denarii in one year on oil.

<sup>738</sup> Neef notes that in the Jordan valley the olive oil of the highlands is more highly prized than the olive oil produced in the lowlands; Neef 1990, 304.

<sup>739</sup> This observation fits nicely with that of Benedict in discussing modern Turkish urban centres: '[o]ften the specialized activity of a town was also that of a small region in which villages were functionally specific in economic activity.' Benedict 1974, 242.

The Argolid also appears to have experienced an increase in oil production in the Late Roman Period, probably for similar economic reasons as at Sia.<sup>740</sup> At the same time, oil production in Spain and North Africa appears to have reached a peak under the principate and thereafter to have been on the decline. The sources of Sia's growth, however, almost certainly accelerated her decline. With the decline in festivals and games, the market for olive oil must also have decreased. Pollen analysis undertaken for the excavation of Sagalassos indicates the decline and disappearance in olive production south of Bucak.<sup>741</sup> The call for timber for building had probably also decreased. In a time of inflation, political upheaval and local discord, sales of non-essential items are unlikely to have prospered. Furthermore, olive trees are vulnerable in times of hostility, and take several years to recover if damaged. In times of insecurity a (semi)dependency on olive cultivation (or indeed any other vulnerable cash crop) could have proved fatal. Although elsewhere as cities ceased to be a focus of popular politics, as trade and the fruits of euergetism and imperial favour dried up, the focus of life appears to have moved back to the land, at Sia, the land available was simply not of a high enough quality to support all of the inhabitants in insecure times.

The inhabitants of Ariassos would not have suffered so greatly from the loss of a market economy. The prehistoric settlement and the Ottoman records both indicate that the land around Ariassos could support a medium-sized population from mixed agriculture. The decline of the Roman city-orientated world may have had little effect upon the inhabitants of Ariassos. The inhabitants of Sia, however, had probably succeeded in expanding beyond the subsistence potential of their land only through becoming increasingly dependent upon external income. As the market for their produce became reduced, and their opportunities to make up the shortfall in essential crops disappeared, their only option must have been to repair to their old ways: through launching raids on neighbours, or through emigration.

## 5.5 DISCUSSION

In late sixteenth-century Anatolia, a wave of unrest broke out in the countryside with bands of armed men attacking and robbing villages.<sup>742</sup> These bandits, named *celali*, appear to have formed into small bands initially as the result of a crisis. The precise reasons for the crisis have been disputed. Cook, in his study of population pressure, concluded that the population was growing faster than the amount of land that was used for arable farming could be extended; the number of unmarried males consequently increased dramatically (272.9%).<sup>743</sup> Cook argued that the unmarried men were driven elsewhere by lack of land. İslamoğlu-İnan suggested instead that the men went voluntarily to seek a better life in the military or in religious orders, as, although wheat and barley production per capita had decreased, the production of vegetables and fruits had increased to overcome this shortcoming. İslamoğlu-İnan may well be right in seeing the change in subsistence options as an attempt to tackle the problem that Cook noted. The problem that would arise, however, and which is not visible in tax records, is if a bad growing season (or two) occurs at

<sup>740</sup> Mee and Forbes 1997, 89-90, 263.

<sup>741</sup> Bottema and Woldring 1995, 334.

<sup>742</sup> Barkey 1994, 141-88.

<sup>743</sup> Cook 1972, 10-11, 43; Barkey 1994, 148-52, for figures from other regions of Anatolia.

a time when there is intense pressure on the land.<sup>744</sup> If the crop fails and margins are too tight, the young men would be driven away. İnalcık has suggested that the precipitating factor in the entire process was, in fact, the demand by the state for young men to fight in Central Europe.<sup>745</sup> The young bachelors were the first to leave, leading to a drop in production, thus precipitating a food shortage. The return of these men, now armed, would have exacerbated the problem as they would resort to stealing what they could not grow, thus forcing others either to join them, or to arm themselves against them. The end result was the militarisation of the countryside, and an extended period of endemic banditry.

The *Celali* revolts reveal how a combination of population pressure, a weakening of state control, and the militarisation of the countryside can lead to widespread banditry. Hopwood connects the banditry of the Isaurians and the Pisidians in particular with the shift in power from town-councils to individual local grandees. Hopwood suggests that potential bandits tied themselves to local magnates as retainers; if their chosen man of power opposed the state, they would follow.<sup>746</sup> Hopwood's analysis may explain why, in some circumstances, bandits chose to follow a particular leader, but it does not explain why Lydius was active in Cremna (he was not a local man of power).<sup>747</sup> Lydius was carrying out raids in Pamphylia and Lycia, and had clearly moved beyond any local power base that he may once have had. If he found support in Pisidia, which it seems that he had, there must have been a reason for it.

The *Celali* revolts provide a good parallel. Banditry is likely to have arisen in Pisidia, as in Isauria, initially as an expression of extreme economic adversity. The precise causes of this are unclear. The billeting of soldiers, bad harvests, high taxes (or even extortion), population pressure, plague and the collapse of the monetised economy may all have contributed. To leave one's land and to become a bandit, severing ties with one's landlord, was not a step to be taken lightly.<sup>748</sup> As the *Celali* revolt showed, however, banditry and militarisation have their own momentum. As soldiers entered the region to suppress Lydius and his supporters, the effects of this civil disobedience must have been felt at the neighbouring cities, which presumably had not only to suffer the attacks of the bandits but also to provide supplies for the soldiers whose task it was to suppress them. In Isauria, cities can be seen dealing with bandits on moderately friendly terms. It is not clear whether settlements like Sia and Ariassos had lent support, actively or passively, to Lydius, but even if they had resisted him, it is unlikely that they enjoyed the presence of warring armies in the area.<sup>749</sup> Compulsory requisitions of labour (human and animal), food and materials, combined with the presence of large numbers of soldiers, must have made hard times yet harder. It would be difficult for bandits to be re-assimilated into their home villages, and the ongoing requisitioning of supplies by both sides can only have led to further problems. We cannot be certain of the level of support that the bandits received from individual villagers, or indeed entire villages; it is not clear whom they were robbing in order to survive. It is impossible to ascribe a

<sup>744</sup> The level of taxation recorded in the Ottoman tax defters was arrived at by taking the median of the prices of products from a good, bad and average year. Such a system, based on averages, was not responsive to crisis; see Robinson 1999b, 336.

<sup>745</sup> İnalcık 1980, 285-88.

<sup>746</sup> Hopwood 1999, 191-7.

<sup>747</sup> Hopwood 1999, 195-6.

<sup>748</sup> Hopwood 1999, 184.

<sup>749</sup> See De Ste Croix 1981, 477 on popular support for bandits.

'cause' to the insurrection of Lydius and his 'bandits.' As with the *Celali* revolt, there was probably a multitude of causes, of which the most important was probably desperation on the parts of the majority, combined with a desire for power by men such as Lydius. Whether the 'bandits' would initially or, indeed, at any time, have conceived of their actions as constituting a struggle for independence is open to question. The actions of Lydius and his supporters, and those who continued to make trouble in the highlands thereafter are described as bandits; if there had been a significant broad-based revolt against Roman domination (such as the revolt of Boudicca), the Romans would not have described the group as bandits. The bandits would (certainly for the greatest part) have represented the desperate, disenfranchised, landless elements of society, of whom there may have been many in times of subsistence crisis. Their actions should probably not be interpreted as a war of independence, nor as a class war, but first and foremost as the struggles of those attempting to escape from the claws of poverty and starvation. It is most plausible that they had been driven off the land or out of the cities through desperation, and were fighting simply to stay alive (hence the roving nature of their attacks on the lowlands), not for any particular cause.

Both animal rustling and banditry are frequent consequences of pastoralism. In times of hardship, those who relied on pastoralism and who could not rely on agricultural kinsfolk to assist them, probably had little choice but to steal what food they could (although when times were good there must have also been the temptation to supplement flocks with other people's animals as an insurance against hard times to come). It is not unusual in the harsh winters experienced in the highlands today for herdsmen to lose animals to the winter storms.<sup>750</sup> In such a situation, or in any time of crisis when more of a flock than could be replaced had been slaughtered, stealing could have been the only way to survive.<sup>751</sup> Shepherd life and rustling have long been practised together: the shepherd is constantly on the move, and when animals have been stolen they can be integrated, unidentifiable, into the flock, or quickly slaughtered if marked.<sup>752</sup> Theft and banditry were not, of course, limited to those with pastoral backgrounds. Banditry arises as a response to hard times. Those who were not willing to become bandits could also try to sell their services further afield as mercenaries.

It is easy to be trapped into thinking, along with Pausanias, that the impressive array of temples, assembly halls, bathhouses, theatres, statues, built tombs and other monuments that were erected across the empire, above all in the second and third centuries AD, were the defining marks of urban life.<sup>753</sup> As Pausanias' comment reveals, however, a city could be a city without any of these supposedly distinguishing features. The building explosion of the early imperial period was anomalous, akin to the sixth century BC monumentalisation of cities in the Greek world.<sup>754</sup> Cities and their most prominent inhabitants were vying with

<sup>750</sup> Harrison records the case of one man whose flock was caught in a snow storm, all 37 of his goats perished; Harrison 1986, 37.

<sup>751</sup> The problem of recovering from such 'asset-stripping' in times of crisis is discussed by Gallant 1991, 121-7.

<sup>752</sup> Bates notes the cross-breeding in Southeast Turkey between larger, more robust nomadic sheep and the smaller village sheep through mutual rustling of animals; Bates 1972, 48-59 esp.52. Note also Gesemann's remark that 'Vom Hirten zum Hajduken ist nur ein Schritt'; Gesemann 1943, 89.

<sup>753</sup> Pausanias thought Panopeius unworthy of the status of city due to its lack of such public architecture, see Pausanias 10.4.1.

<sup>754</sup> Osborne 1996, 264-66, 269-71.

one another for status, an important element of Roman public life.<sup>755</sup> What became of the (relatively) flourishing urban culture of Pisidia of the early principate? It is hard to discern from the archaeological remains alone without further excavation whether Pisidia suffered a loss of population or, indeed, prosperity in Late Antiquity. Cremna, which had been besieged and captured in AD 278, presumably with some loss of life and property, appears to have recovered, even if not back to its previous glory. The eight basilical churches at the site have been dated from ca. AD 350 until possibly the end of the fifth century AD; it has also been suggested that the housing insulae were continuously occupied at least through the fourth and fifth centuries.<sup>756</sup> The dating of the housing here at Cremna and also at Ariassos and Sia is problematic, but it appears that houses continued to be constructed, although to a lesser extent. Re-use of pre-existing buildings is naturally the easiest and cheapest method of providing accommodation. The transportation of blocks would not have been very difficult at either Sia or Ariassos, hence the fact that we can still see the remains of buildings at both sites which were constructed at earlier times, such as the houses and temples in the north of Sia, and houses 1-5 at Ariassos, shows that these old buildings either remained in use or were still perceived as having some value. If this reasoning is correct, then so long as new houses were being constructed, we can assume that the population of these two sites was increasing.

7. *[Re]Construction at Sia in the Late Roman Period*

Building Type	Name	Approximate date
Public Building	Ht1 (church)	4 <sup>th</sup> -5 <sup>th</sup> centuries AD
Public Building	Ht2 (chapel)	4 <sup>th</sup> -5 <sup>th</sup> centuries AD
Public Building	Rq2 (church)	4 <sup>th</sup> -5 <sup>th</sup> centuries AD
Housing	Hp1, Hr1, Jr1, Mj1, Mq1, Mr1, Ms1, Nq1, Nq2, Nq3, Nr1, Pp1, Pr1, Pr2, Pt1, Qj1, Qj2, Qm1, Qq3, Qr1, Qs1, Qt1, Rh1, Rh2, Rh3, Rj1, Rj2, Rj3, Rr1, Rr2, Rt6, Sj1, Sn1, Ss1, Ss2, Ss3, Sp4, St2, St3, St4, Sv1, Sv2, Sv3, Sv5, Tt2	3 <sup>rd</sup> -5 <sup>th</sup> centuries AD

8. *[Re]Construction at Ariassos in the Late Roman Period*

Building Type	Name	Approximate date
Fortification	Circuit Wall	270s AD ?
Public Building	Basilica 1	4 <sup>th</sup> -5 <sup>th</sup> centuries AD?
Public Building	Basilica 2	4 <sup>th</sup> -5 <sup>th</sup> centuries AD?
Public Building	Apsed Building	?
Housing	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11a, 11b, 12b, 13, 14, 16, 17, 19a, 19b, 20, 21, 22, 23, 24, 25, 26, 28, 32, 33, 34, 35, 36, 37, 38, 39, 45, 46, 47, 49	3 <sup>rd</sup> -5 <sup>th</sup> centuries AD

<sup>755</sup> See Veyne (ed.) 1987, 101-15.

<sup>756</sup> See Mitchell 1995, esp. 219-232.

Whilst there is little sign of a population decline at this time, the raids of the Goths and Persians on Pamphylia may have had a knock-on effect on the highland economies in addition to the harm that was caused by inflation. In Pisidia, coins ceased being minted after the time of Aurelian (AD 270-75).<sup>757</sup> The presence of copious and locally-produced bronze coinage is often seen as the sign of a healthy market economy and of the vigour of the individual urban communities.<sup>758</sup> The inflation of the end of the third century AD had done much to damage the reputation of the coinage. Although the end of local production of coinage in the late third century AD by no means represented the end of the local market economy, it must have represented a significant change in the way that business was carried out and also perhaps more significantly in the way that the cities perceived themselves. The crisis of the third century is well-recorded across the empire, as is the aftermath of the centralising Diocletianic reforms. The institutions of self-government within the cities, the *boulai* and the *curiae* lost much of their political power. The cities of Pisidia entered Late Antiquity suffering from a loss of autonomy, although there is little doubt that the local elites remained powerful - the crises may even have enabled them to add to their personal wealth.

Evidence of building in the fourth and fifth centuries AD is limited to the churches mentioned above, along with some housing. Monumental masonry styles were replaced by drystone rubble, and rubble and mortar. It is unclear whether these new houses were plastered on the outside, if so they may not have appeared as ramshackle as they do today. Whilst there is no indication of increasing inequalities of wealth at Sia, at Ariassos the expansion of house 29 and 9 (and possibly also 10) indicates a growing inequality. Ariassos was clearly still dominated by one family - the owners of house 29. The prominence of the owners of house 29, presumably the heirs of Diotimos son of Samos, may well have been responsible for the difference in status between the two sites. The high status and wealth of the family may have led to the establishment of a bishopric at the site.<sup>759</sup> The first recorded bishop of Ariassos, Pammenios, was present at the Council of Constantinople in AD 381.<sup>760</sup> Panemoteichos appears already to have risen in importance by this time. Bishop Faustus of Panemoteichos attended the Council of Nicaea in AD 325.<sup>761</sup> The establishment of bishoprics would certainly have cemented the superior statuses of both Ariassos and Panemoteichos vis-à-vis Sia. Rivalries over official statuses between cities were not at all uncommon, and were a matter of great importance.<sup>762</sup> Sia was recorded in Hierokles' *Synekdemos* (681.10) under the cities of Pamphylia.<sup>763</sup> Yet it is possible that Sia ceased being

<sup>757</sup> Von Aulock 1977; Howgego 1985.

<sup>758</sup> See for example, Mitchell 1995, 44-5; Haldon 1997, 117-20.

<sup>759</sup> The bishopric of Ariassos is listed under the province of Pamphylia Secunda in the *Notitiae Episcopatum* 1 (ca. AD 640); 2 (ca. AD 800); 3 (9<sup>th</sup> century AD); 4 (ca. AD 870); 7 (AD 900-950); 9 (ca. 10<sup>th</sup>-11<sup>th</sup> century AD); 10 (11<sup>th</sup> century); 13 (AD 1200-1250). For further discussion, see below, chapter 6.

<sup>760</sup> Mansi 1757, 370B quoted in Mitchell 2000, 7. Bishop Theophilus of Ariassos appeared at the Council of Chalcedon in AD 451 and bishop Iohannes signed a letter to the emperor Leo along with other bishops of Pamphylia Secunda in AD 457. Schieffer 1984, 38; Schwartz 1922, II.5, 60, 20, 19-21.

<sup>761</sup> Mitchell 2000, 6-8; Gelzer, Hilgenfeld and Cuntz 1898, V, 174. Bishop Isaïos of Panemoteichos was present at the Council of Ephesos in AD 431 and bishop Hierius of Panemoteichos also signed the letter to emperor Leo in AD 457; Schwartz 1922, I.3, 140, 7; Schwartz 1922, III, 117, 74, 40. It is possible that two bishops Midos and Heraklides, who attended the Council of Constantinople in AD 381, were also from Panemoteichos.

<sup>762</sup> See, for example, the ongoing rivalry for imperial favour between Perge and Side, which appears to have reached a peak in the late third century AD; see Foss 1996, 25; Nollé 1993, 122-4, 287-9.

<sup>763</sup> Hierocles 681.10.

recognised as a city in this period. *Novella* VIII of Justinian, dating to AD 535/6, describes Pisidia as a place of highly populated villages. It is not improbable that Sia was officially demoted to the official status of village some time after Hierokles' list was compiled.<sup>764</sup> The lack of bishop must certainly have represented a lessening of status in comparison with its neighbours; it is possible that Sia became subordinate to Ariassos or Panemoteichos not only in matters episcopalian, but also in the running of everyday affairs.

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<sup>764</sup> Hierocles' list is a complex document; it was probably an (often inaccurate) Justinianic revision of a mid-fifth century AD official list; see Jones 1971, 514-21.

## CHAPTER SIX

LATE ROMAN TO BYZANTINE PISIDIA  
FROM CITIES TO VILLAGES?

*'Many provincial towns in comparison to their past importance are today seemingly floundering in economic despair, while at the same time other towns are emerging out of obscure beginnings to become small but relatively dynamic regional centres.'*<sup>765</sup>

The only Late Antique buildings to which a date, however approximate, can be ascribed at Ariassos and Sia are the churches, and house 46 at Ariassos. Neither of the churches at Sia shows signs of having been modified at a later date; not enough remains of the churches of Ariassos to be certain. At present, therefore, there is no evidence for significant new building at Ariassos and Sia from the fifth or sixth century AD. The construction of house 46 in a style seen elsewhere in the region in the sixth century AD only emphasises the fact that no other similar buildings were erected at Ariassos or Sia. Although houses can be lived in with little change for hundreds of years, and churches can stand for a millennium and more, we know that there were severe earthquakes in the region in the early sixth and seventh century AD. Preliminary reports from the Sagalassos excavation appear to show that the classical city declined sharply in the sixth century probably due to the earthquakes and the ravages of the great plague of AD 542/543; the site, it seems, ceased to be occupied in the mid-seventh century AD.<sup>766</sup> The settlement at Cremna is also supposed to have been abandoned at this time.<sup>767</sup> It is probable that Ariassos and Sia were also affected both by the earthquakes, as they lie on the same fault line some 40 km to the south, and by the plague.<sup>768</sup>

Although new building appeared to grind to a halt in most of the cities of Pisidia, a new and different kind of settlement appears to have arisen in several areas. The fortified sites at Asar Kale, Sığırlık Kale, Bahçeli Kale and Kızılca Kale to the northwest of Ariassos, southeast of Adada, and a large previously unidentified building at lower Döşeme Boğazı (plate 79) all appear to have been built in the same period, probably the sixth or seventh centuries AD.<sup>769</sup> Further archaeological evidence is hard to find.<sup>770</sup>

There is an apparent hiatus in the material record in Pisidia of four centuries or more. A coin of Michael IV (AD 1034-41) has been discovered at Comama.<sup>771</sup> A small chapel was built at Avdanlık, north of Panemoteichos, which has been tentatively dated to the twelfth

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<sup>765</sup> Benedict 1974, 242.

<sup>766</sup> Lucas 1724, I, 249-50; Waelkens 1997, 249-300; some of the effects of the bubonic plague can be seen in the Life of St Nicholas of Sion, see Ševčenko and Ševčenko (eds.) 1984, 82-3 (chapter 52).

<sup>767</sup> Mitchell 1995, 232.

<sup>768</sup> Mitchell 1995, 232; Hütteroth 1982, 39, fig.10.

<sup>769</sup> Belke and Mersich 1990, 193, 203-4, 306, 383; Mersich 1986, 195-200, ills.8-10, 12-15.

<sup>770</sup> For a discussion of the problems facing those wishing to discuss Byzantine Pisidia, see Mitchell forthcoming.

<sup>771</sup> Levick 1967, 182, fn.3.

century AD.<sup>772</sup> A few Byzantine wares have been discovered at Panemoteichos that have also been dated to the twelfth-thirteenth century AD.<sup>773</sup>

Literary evidence is similarly hard to come by. (P)anemoteichos and Sagalassos are mentioned in the tenth-century *De Thematribus* compiled by Constantine Porphyrogenitos as being on the edge of the Kibyrrhaeot theme, which was probably created at the time of Leo III (AD 717-41).<sup>774</sup> Our other sources of information are episcopal. Bishops from Pogla are known to have taken part in the Council of Chalcedon in AD 451, the Second Council of Nicaea in AD 787 and the Council of Constantinople in AD 879/80.<sup>775</sup> Cremna also sent a representative to the Second Council of Nicaea in AD 787.<sup>776</sup> The name of Leon, the brother of the bishop of Pogla is known from a signature on a document from AD 1039.<sup>777</sup> A bishop, Nicholas of Andeda, is known to have existed in the late twelfth century. The names of Ariassos, Cremna, Codrula, and Pogla (all in Pamphylia Secunda) appear in bishops' lists from ca. AD 640 until AD 1200-1250.<sup>778</sup> Bishops from Sagalassos were recorded at least until the thirteenth century AD.<sup>779</sup>

How is it possible to explain the discrepancy between the material record and these limited literary sources? If we look at Pamphylia to the south, a similar picture is revealed – an apparently flourishing Late Antique urban culture withered away almost to nothing, although bishops continued to represent their sees well into the Byzantine period. Pamphylia provides some useful parallels for Pisidia.<sup>780</sup> Perge appears to have become largely deserted in the seventh century AD.<sup>781</sup> There is little evidence to show that Aspendos was still functioning as an urban centre in the Byzantine period.<sup>782</sup> Attaleia, Sillyon and Side, however, continued to be inhabited, but clearly on a much more limited scale.<sup>783</sup> Both Aspendos and Perge, despite their apparent desertion, however, appear in bishops' lists from ca. AD 640 until AD 1200-1250. Perge had appeared in the bishops' lists in the seventh and early ninth century as the metropolis of Pamphylia, but by the mid-ninth century the bishopric is referred to as the bishopric of Sillyon and Perge, indicating that the metropolitan see had been moved to the more defensible site at Sillyon.<sup>784</sup> The movement of the metropolitan see combined with the apparent desertion of Perge is revealing. The discrepancy between bishops' lists and archaeology need not be ascribed to an inability to recognise Byzantine ruins, nor need we suggest that the bishops' lists were an archaism with no relation to reality.<sup>785</sup> The bishops' lists refer to sees, not necessarily to cities; the see of

<sup>772</sup> Pace 1921, 36-7, fig. 20.

<sup>773</sup> Aydal, Mitchell, Robinson, and Vandeput 1997, 158, pl. 21b.

<sup>774</sup> Constantine Porphyrogenitos *De Thematribus* I.14.37.

<sup>775</sup> Darrouzès (ed.) 1981, 146, n.3.

<sup>776</sup> Mansi (eds.), 1759-1927, XII. iiii f.

<sup>777</sup> Lake, S. 1937.

<sup>778</sup> Darrouzès (ed.) 1981.

<sup>779</sup> Darrouzès (ed.) 1981; Belke and Mersich 1990, 386-389.

<sup>780</sup> Foss 1996, esp. 48-51.

<sup>781</sup> Foss 1996, 18-19.

<sup>782</sup> Foss 1996, 24.

<sup>783</sup> Foss 1996, 4-13, 20-1, 43-7.

<sup>784</sup> Foss 1996, 19; Darrouzès (ed.) 1981, 19, 38, 249, 259.

<sup>785</sup> The relationship to reality of the later lists of the thirteenth and fourteenth centuries have been questioned. It needs to be emphasised that the lists refer to bishops' episcopal sees and not to bricks and

Perge could, therefore, still exist (combined with Sillyon) even though the city itself was abandoned. The bishop could administer his see, increased in area but probably not in population, from the safety of Sillyon. Thus the bishops of Ariassos, Cremna and Sagalassos could all have administered their sees from somewhere other than their eponymous cities. It is possible that the bishop of Ariassos had moved to Panemoteichos by the tenth century AD, as the mention of Panemoteichos in the *De Thematibus* would indicate that Panemoteichos was still of administrative importance at this time. The bishops of Cremna and Sagalassos may likewise have relocated to the nearest defensible sites, such as Asar Kale and Sığırlık Kale.

There is further evidence, besides the bishops' lists, to show that, despite the abandonment of the cities, the highland areas remained populated throughout this period. Certainly enough people remained in the region even through the Turkish conquests (from the late eleventh century onwards) for the names of many of the places to be transmitted almost to the present day.<sup>786</sup> The names of many sites are preserved in Turkified forms, including Ağlasun (Sagalassos), Andya (Andeda), Barla (Parlais), Fugla (Pogla), Girme (Cremna), İstanos (Eis ta Stena?), Kemer Ağzı (Cormasa), Kuşbaba (Kolbaba), Tefenni (a possible corruption of Stephanos), Zivint (Sibidunda), possibly Bademağacı (it has been suggested that the *bdm* stem is a corruption of the Greek *potamos*), Kestel (from *castellum*), and, possibly, Melli (Milyas).<sup>787</sup> The continuity of toponyms in Pisidia is indicative of continuity of population, yet history and archaeology reveal next to nothing about seven hundred years of highland settlement. This shortfall should not be taken to be indicative of lack of habitation.

We know that Pisidia was at least partially urbanised in the early Hellenistic period, and we know also that there were forts and tribal settlements in the region.<sup>788</sup> It is only since 1995, however, that we have found direct evidence of this early Hellenistic settlement. We also know that the region was conquered and settled by Turkmen, Selçuk and Ottoman Turks from the late eleventh century onwards.<sup>789</sup> The oldest preserved Ottoman tax register for the sancak of Teke is MAD 14, compiled in 1455 in the reign of *Fatih* Mehmed II. This defter reveals an area covered with many of the villages that are still to be found today. The village of Koz Ağacı approximately one kilometre from Sia serves as a good example (fig. 6). In antiquity, Koz Ağacı was the site of the nearest village to Sia which appears to have consisted of approximately thirty households; in 1450, 14 households were recorded, today

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mortar, and that a see could still be considered to exist even if it had fallen into the hands of the Turks. See Gelzer 1901, 612-3.

<sup>786</sup>On the arrival of the Turks in the region in ca. AD 1078 following the Byzantine defeat at Manzikert in AD 1071, see İ. Kafesoğlu 1953,73; Fleming 1964; see also Armstrong 1998. In recent times it has been official government policy to change non-Turkic names, thus destroying a continuity, in some places, of several millennia.

<sup>787</sup>Ramsay 1888, 15, 18; Ramsay 1917, 261; De Planhol 1958, 100; Melli is thought by some to have gained its name from the Milyas; de Planhol claims that it is rather the name of a small tribal grouping. The small tribal grouping may, however, have taken its name from the region, as Melli is not Turkish. A similar origin has been suggested for the village of Dirmil (modern Altınyayla) whose name almost certainly is derived from the fact that it was a foundation of Lycians or Trmmili as they called themselves; see Zgusta 1984, 27-8; Hall 1994a, 6. On the subject of the survival of place-names in general, see Wittek 1935, 11-64; Robert and Robert 1977.

<sup>788</sup>See above, chapters 1.4; 3.1.

<sup>789</sup>Flemming 1964, esp. 1-8.

this has fallen to 6 households. Traces of mosaic flooring are visible in the small plain on which the village is situated, indicating that a building of some status was situated here in antiquity. However, while examination of the ancient housing around the 'modern' village reveals signs that these houses were rebuilt, it is impossible to tell when or by whom. One house, which had been constructed from large antique ashlar bonded in courses with a small amount of mortar, which now stands to about one metre at its highest point, reveals signs of having been externally plastered (plate 80). If it were not for the fact that local informants indicated that this building had been the site of their mosque until forty years previously it would have been impossible to have told when it was rebuilt; the margin of error could have been as great as one thousand five hundred years. It is notable that traces of earlier Turkic settlement are seldom noted during survey, yet we possess the best of evidence to show how many people were living in each particular area.<sup>790</sup> If five hundred years of Turkish settlement can be virtually invisible, we should not be surprised that we are unable to discover settlements from an earlier period.<sup>791</sup>

The Romano-Greek city is an unusual artefact, in that it provides the archaeologist and historian with inscriptions, sculpture, and monumental buildings. The pottery and settlements of the Byzantine period, however, appear to be as difficult to find as the pottery and settlements of the Turkish period. Intensive survey in southern Lycia has failed to find much that can be dated to Late Antiquity or beyond, yet the Life of St. Nicholas of Sion from the mid-sixth century AD, reveals a countryside filled with villages.<sup>792</sup> This situation is by no means unique to this region. Little or no building work after about AD 579 has been identified at Ravenna even though it was the Byzantine capital of Italy until the mid-eighth century AD. In Italy, at least, it appears that there was a breakdown in traded goods from the sixth century AD, which leads to 'the virtual invisibility of the Italian urban and rural population from the seventh century until the ninth.'<sup>793</sup> Ceramic wares from this period are difficult to recognise or are simply unrecognisable, and some areas are supposed to have been aceramic between ca. AD 600 and 900. Farmers living in wooden houses, eating off wooden plates can only be found through excavation, not surface survey. It is perhaps only excavation of sites such as that at Pogla, which appears to have a continuous record of existence from the second century BC until the modern day, that will provide us with a picture of the continued existence of settlements in Pisidia.

Plagues, banditry, insecurity and earthquakes may help explain why urban settlements were abandoned in favour of smaller rural settlements at a certain date, but they do not provide us with a sufficient reason for the abandonment of Classical urbanism.<sup>794</sup> Earthquakes were not

<sup>790</sup> A good example of this is provided by the Kyaneai survey, which failed to notice any signs of a large Ottoman vakf (religious foundation) which we know existed in the area they were surveying, see Kolb, Kupke, Miller, and Zimmerman 1991. A similar problem arises with the apparent conflict between archaeological and palaeoecological evidence in the Balboura region, where the pollen core samples appear to indicate human activity from the late second millennium BC until Roman times, whereas the archaeological record has a gap between the early and late first millennium BC; see Roberts 1990, 60-1.

<sup>791</sup> See also Foss 1993, 30, on the lack of material evidence for much of the Ottoman period.

<sup>792</sup> See Kolb 1991, 563-85; Ševčenko and Ševčenko (eds.) 1984.

<sup>793</sup> Christie 1995, 100.

<sup>794</sup> We can thus agree with Mango's statement that 'the plagues of the sixth century combined with an unprecedented sequence of natural disasters were a factor, perhaps the determining factor, in the collapse of urban life' (Mango 1980, 68) whilst still seeking long-term causes for the abandonment of Classical urbanism; see Haldon 1990, 92-114, 459-61.

a new occurrence in the region, and cities survived the plague elsewhere. Indeed, regional insecurity may be thought to favour fortified, compact settlements. Settlements could be rebuilt, aqueducts could be repaired. Even population decline need not spell the end of cities, and it is not even clear that population decline was much of a problem. The highland cities had survived the insecurities of the third century AD, and there is little sign that the cities were diminishing in size before the sixth century, although the plague must have caused some level of depopulation. It is more accurate, therefore, to view these natural disasters, not so much as the causes of the decline of Classical urbanism, but rather as catalysts, speeding up an already occurring process.<sup>795</sup> In order to see why the Classical city came to be abandoned at a particular time, therefore, it is necessary to see what replaced it.

The Byzantine city fulfilled a different role from its Classical counterpart. The decline of the curial class had changed the way that municipal affairs were run. Previously cities had drawn their income from rent on lands belonging to the city, from endowments, from local dues, taxes and duties. Constantine I and Constantius II had confiscated city and temple lands and their taxes; having been restored by Julian, these were once more confiscated by Valentinian and Valens.<sup>796</sup> Valens had to refund some of the confiscated moneys back to the cities to pay for the maintenance of buildings and walls. After further protests from cities, who were struggling to maintain themselves, from AD 374 one-third of taxes and one-third of the rent of city lands were returned to cities, and the management of the lands was placed back into the hands of the cities. Civic affairs, although by no means completely removed from the hands of locals, were clearly more dependent upon imperial favour and imperial officials. Power appears to have shifted to the imperial revenue officials on the one hand, and to bishops and clergy on the other.<sup>797</sup> Both the clergy and imperial officials would be tempted to look first to Constantinople for potential career advancement and then to their local communities. Local autonomy was increasingly eroded and it was governors who would allocate funds for building works or festivals. Smaller settlements naturally suffered as a result.<sup>798</sup> It is clear that the erosion of local autonomy was not something that happened all at once; yet by the mid-sixth century AD it seems that city councils had ceased functioning in anything but a ceremonial role.<sup>799</sup> By the later sixth century, therefore, the cities of the empire had lost most of their fiscal, economic and political independence to the state.

None of these changes would have affected the social and economic role of cities as market and craft centres. These functions, however, are not necessarily dependent upon the status of a settlement as a city. Furthermore, it may well be the case that Pisidia had an overabundance of such centres. A quick comparison with the region in the Ottoman period reveals a large number of villages with a few central towns acting as administrative (and trading) centres (*nahiyeler*).<sup>800</sup> The number of cities in Pisidia in antiquity was primarily a consequence of the manner in which Pisidia became urbanised. It is probable that separate tribal groupings formed themselves into autonomous groups primarily for social and political reasons. Cities like Sia almost certainly never played an economic role greatly different from

<sup>795</sup> Brandes 1989, 44-5.

<sup>796</sup> Jones 1964, 732-4.

<sup>797</sup> Jones 1964, 757-63.

<sup>798</sup> Jones 1964, 758.

<sup>799</sup> Jones 1964, 759-60.

<sup>800</sup> See, for example, *Konya Vilayet Salnahmesi* H.1317/AD1899, 284-5.

that of a moderate-sized village. Yet administrative and political functions would have added both to the economy and to the perceived worth of a settlement. Once these functions were removed, the inhabitants of the area might look again at the benefit to themselves of remaining at the settlement. Disasters, natural or man-made, would, therefore, simply have precipitated a decision.

The change in administrative and fiscal practice might explain why the cities of highland Pisidia declined so abruptly in the sixth century. In the aftermath of an earthquake, settlements such as Ariassos and Sia could not hope to receive sufficient funding from the governor's coffers to rebuild housing and fortifications. The governor of Pamphylia Secunda would almost certainly not have had sufficient sums of money available to pay for the rebuilding of the highland sites, nor may it have seemed desirable to do so. A small, easily defensible site, such as Panemoteichos or Ören Tepe would suffice as an administrative base. The settlements of Ariassos and Sia would not repay the investment of rebuilding. Houses could be rebuilt where they were needed, on the land. So long as the lands was still worked and provided revenue for the imperial coffers, the abandonment of the cities may even have been fiscally beneficial, as less money would have to be returned for their upkeep. In areas where taxes were either negligible or difficult to collect, there would be even less reason for money to be sent to aid with rebuilding. Individuals may have chosen to remain in those houses that were undamaged, but, as alternative communities sprung up elsewhere, relocation may have seemed a more attractive option. Outbreaks of plague may have helped empty the smaller settlements once and for all.<sup>801</sup>

If we look once more at the three major cities of Pamphylia in the Byzantine period, Side, Attaleia and Sillyon, it is clear that each survived for a specific reason. Side and Attaleia were very important, well-fortified ports with trade links to Constantinople and elsewhere.<sup>802</sup> Attaleia was the capital of the Kibyrrhaeot theme, and from AD 689 onwards was the base for the Mardaites, a force of elite soldiers from Lebanon. Sillyon, although small, was an impregnable fortress in the middle of a fertile plain, and thus provided a secure administrative centre from which to run (and tax) the surrounding area.<sup>803</sup> All three cities had strong links with Constantinople. They were, in essence, fortified administrative and commercial centres. These cities owed their survival to their importance to the administration and defence of the empire.

As Rostovtzeff noted, the backbone of the Roman Empire had always been its tenants and farmers.<sup>804</sup> These people tended to live on the land, outside the urban centres. An inscription from AD 125 from Oinoanda, a city similar to Ariassos, records thirty-two villages on its territory.<sup>805</sup> The state paid little attention to individual villages, these were

<sup>801</sup> In the first half of the sixth century, when Myra was struck by plague the farmers withdrew from the city, leaving the remaining city-dwellers with no means of sustenance; Sevčenko and Sevčenko (eds.) 1984, 82-3 (chapter 52).

<sup>802</sup> Attaleia was one of the most important and best-fortified commercial centres in the empire, see Foss 1996, 6-13.

<sup>803</sup> Sillyon was the site of an imperial warehouse in AD 718/9, and was the seat of the second-in-command of the Kibyrrhaeot theme in the ninth century. Sillyon withstood an Arab attack in AD 655. See Foss 1996, 20 with references.

<sup>804</sup> Rostovtzeff 1957, I.345.

<sup>805</sup> Wörle 1988, 12, 135-50.

instead run from the city in whose territory they stood.<sup>806</sup> It is clear that at the larger end of the scale, many Roman cities had a semi-parasitic relationship with their hinterlands and villages.<sup>807</sup> As many of these cities became more of a burden than a help to the central administration, it is not surprising that they should be left to fall into ruin.<sup>808</sup> Yet smaller settlements such as Sia were little more than villages themselves. Even if the public buildings at Sia were not maintained, therefore, we might nevertheless expect Sia to have continued to function. This appears not to have been the case, however. The reasons for this were probably local.

Sia differed from Ariassos and others of its neighbours in that, as it expanded as a city, it had almost certainly become dependent upon a source of income that was only truly viable in times of peace. An examination of the housing at Sia has revealed a significant number of presses within the houses, particularly within the later housing built outside the Hellenistic circuit. At Ariassos, presses were only discovered in two of the (Hellenistic) houses. Whereas the housing at Ariassos presents us with few clues to the livelihoods of their owners, and the inscriptions from the site reveal a thriving Roman urban settlement celebrating its benefactors and partaking in festivals, the housing at Sia reveals more about the daily existence of its inhabitants. Even, or especially, the most grandiose of houses at Sia has a press built into it. Sia appears to have survived directly off the land, most probably from the intensive production of olives. In the small groupings of houses found throughout the environs of Sia clustered around fertile basins, every single house discovered possesses at least one press. Sia, therefore, like its Turkish successors appears to have been an agricultural town living off its produce; unlike its smaller Turkish successors, however, cash crops appear to have become of vital importance to its economy and entire way of life.<sup>809</sup> It is quite possible that the olive products of Sia were sold at Ariassos, or at the nearby site at the top of the Döşeme Boğazı, as both were on the route to Attaleia. Olive oil was an important element at games and celebrations, but as these events ceased occurring Sia may have found herself with a decreasing market for her produce. Furthermore, olive trees are vulnerable in times of hostility, and take several years to recover if damaged. In times of insecurity, dependence upon olive cultivation could have proved fatal.<sup>810</sup> Although elsewhere as cities ceased to be a focus of popular politics, as trade and the fruits of euergetism and imperial favour dried up, the focus of life appears to have moved back to the land, at Sia, the land available was simply not of a high enough quality to support all of the inhabitants in insecure times.<sup>811</sup> The inhabitants of Sia were in any case already living off the land.

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<sup>806</sup> Rostovtzeff 1957, I.346; Mitchell 1993, I.178-9.

<sup>807</sup> De Ste Croix 1981, 463-5.

<sup>808</sup> For an account of the decline of many other smaller cities in Asia Minor in the sixth and seventh centuries, see Brandes 1989, 120-4.

<sup>809</sup> The production of olives is not recorded, however, at any of the Turkish villages in the area; see chapter 2.3.1.

<sup>810</sup> For a discussion of the effects on cities of attacks by Persians and Arabs in Asia Minor in the seventh and the first half of the eighth century AD, see Brandes 1989, 44-75, with a chronological listing of recorded attacks, 75-80.

<sup>811</sup> Mitchell 1993, I.240, discusses the decline of the urban settlement of Aezani in Phrygia in the third century in contrast to the apparent continued rural prosperity in the Tembris valley. The decline of Sia appears to have been severe, as at Aezani, but the carrying capacity of its territory was insufficient to support relocation of the entire populace onto the surrounding land.

The difference between Ariassos and Sia was not one of size, although it may have had something to do with wealth. If Ariassos, due to its position on the *Via Sebaste*, was more dependent on trade, either by selling its own produce, acting as a middleman for others or through transit taxes (or a mixture of all of these), than its more directly agricultural neighbour, Sia, the instability of the third century may have forced a change. As more pressure fell on the curial class and the cities lost much of their independence, public displays of benefaction had become rarer.<sup>812</sup> The difference between a village and a city thus became blurred, as neither Sia nor Ariassos minted coins, and both would have been for the most part dependent upon agriculture.<sup>813</sup> The difference between a village and city had always been indistinct at the margins; it need not be one of size, nor of construction, nor even of administration, as it was not uncommon for villages to possess a form of assembly or a *gerousia*.<sup>814</sup> The change from city to village was therefore largely one of perception; there was no immediate need to abandon the sites, however, as the robust ashlar laid by their Hellenistic and early Roman forbears were easy to re-use. Both Sia and Ariassos were small enough to be able to be self-sufficient; both settlements lay within reach of their lands whilst providing security, housing and water for their inhabitants. Ariassos, however, had a more fertile and varied territory to exploit.

As the inequalities of domestic architecture at Ariassos show, the Late Antique city was not necessarily for everyone a desirable place to live. As the city became less of a focus of politics, both local and regional, it lost its importance for the wealthy, but at the same time its benefits for the less prosperous also diminished. Life in relatively crowded accommodation in a city situated away from the land with a single, and perhaps unreliable, source of water may well have been less attractive than moving to a village on the land which possessed a spring. As labour became increasingly beholden to larger landlords, it was likewise not in the interests of the larger land-owners for their work force to have to waste time moving to and from the city. It is probable therefore that many of the inhabitants of Ariassos moved to the plain below, in particular to Bademağacı, a well-situated site, inhabited in neolithic times.<sup>815</sup> It is here that we face a problem that can only be solved through excavation. Whilst the deserted city sites with their monumental architecture are, for the most part, situated on hill-tops, the villages were almost certainly situated on the plains, beneath their present-day counterparts.

If Sia fell casualty to the abandonment of Classical urbanism, other settlements appear to have fared rather better. At Arif on the edge of the Milyas we see a new type of community coming into existence. Martin Harrison, in his 1982 article on 'Upland Settlements in Early Medieval Lycia' asked what became of the inhabitants of the classical cities of Lycia in Late Antiquity.<sup>816</sup> Concentrating on three sites, Arykanda, Ovacık and Alakilise, Harrison concluded that the sixth and seventh centuries saw the establishment of a new type of settlement as populations moved to smaller, more defensible highland settlements away

<sup>812</sup> On the changes to the Roman social system in this period see, De Ste Croix 1981, 456-60, 466-74; see also Rostovtzeff 1957, 530-2; Whittow 1990.

<sup>813</sup> See Jones 1971, 146: '[e]ven in the Byzantine period there were comparatively few large cities, and a great part of the population lived in small communities, which whether they ranked officially as cities or 'peoples', were in reality merely large villages.'

<sup>814</sup> See the comments of MacMullen 1974, 253-61, esp. 253; see also De Ste Croix 1981, 221-6.

<sup>815</sup> On the neolithic site at Bademağacı, see, for example, Duru 1993, 69-73.

<sup>816</sup> Harrison 1980, 109-18.

from the monumental lowland cities which had flourished under the Romans in the second and early third centuries AD. Harrison suggested that the decline of the Classical city and its replacement with this new type of contracted, fortified site could be applied *mutatis mutandis* elsewhere. Although the Classical site may have been abandoned, Sagalassos did not disappear from the records.<sup>817</sup> However, whilst the Lycian/Milyan city of Arykanda appears to have been deserted in favour of the smaller, more defensible site some 2 km below it at Arif in the sixth century AD, the inhabitants of Sagalassos appear to have relocated to a lower-lying, almost certainly less defensible, site such as that occupied by the modern village of Ağlasun.<sup>818</sup> It would appear that to the inhabitants of Sagalassos subsistence was more important than defence. Nevertheless, the examples of Arykanda/Arif and of Sagalassos/Ağlasun illustrate a schism between the Roman urban world, and the world of the Late Antique and Byzantine city. The open, monumental, public city focused on bath, theatre and funerary sculpture was abandoned in favour of a less monumental space, a reflection of a distinct change in lifestyle.

Harrison's hypothesis of lowland decline in the Late Antique period has, however, been refuted by Foss, who sees these highland settlements as a sign of the decline of the highlands in contrast to the relatively flourishing (albeit no longer 'Classical') urban culture of the lowlands.<sup>819</sup> It is clear that although general trends are visible in the evolution of urban settlements, different regions reacted differently to the vicissitudes of fate.<sup>820</sup> The change that occurred in Late Antiquity, which is visible at Arif, need not always be taken to be indicative of a dramatic economic downturn; indeed it may rather reflect the opposite. It would be by no means inexpensive to relocate an entire settlement. The relocation of site marked a clear break from the open, monumental Roman city, but the move may have been considered an improvement. A new urban form was created more suited to the demands and lifestyle of the period. It is too easy to be beguiled into reading monumental buildings as indicators of prosperity.<sup>821</sup> The new site at Arif, in common with the fortified sites at Asar Kale, Sığırılık Kale, Bahçeli Kale, Kızılcıca Kale and the lower Döşeme Boğazı, fulfilled a different role from its predecessor, Arykanda. Expenditure on any type of public architecture apart from churches was clearly no longer feasible, nor perhaps wished for, at such small sites. These sites therefore may be seen as small fortified centres from which larger areas could be governed and which may have been used as refuge sites in times of insecurity. The role of towns as centres of distribution and commerce had not ceased entirely. The number of urban centres had simply become greater than could be supported, and the burden of maintaining public amenities and buildings had become unacceptable.<sup>822</sup>

<sup>817</sup> Belke and Mersich 1990, 386-389.

<sup>818</sup> The defensibility of a site appears to have been of secondary importance; the reasons for this are unclear. It may have been that the majority of communities could no longer afford to build or to man large circuits. Scattered settlements, although individually vulnerable, may have offered the greatest overall protection from slaughter, if not extortion, as they would not have been as desirable to raiding parties as larger cities and towns.

<sup>819</sup> Foss 1994, esp. 46 n.185; see also Tsuji 1995, 44.

<sup>820</sup> For a similar pattern of the decline from prosperity and the end of the Classical urban lifestyle in Roman North Africa, see Mattingly 1995, 183-5.

<sup>821</sup> See, for example, the comments of Thucydides I 10.2-3 on the differences in appearance of Sparta and Athens, and their relative power.

<sup>822</sup> Rostovtzeff describes the Roman Empire as being 'urbanised to excess'; Rostovtzeff 1957, I.346.

Liebeschutz described the end of the Classical city as the liberation of the countryside; it is unclear to what extent this is true – the peasants working the fields around the sites at Arif, Ağlasun or, possibly, Bademağacı, may have noticed little change in their lot, but in places like Sia, the two were so closely linked that the death of one may well have proved the ruin of the other. Indeed, although Sia may have succumbed earlier than other settlements, it does not appear to have been the only highland city that suffered in this way. The end of the so-called ‘Beyşehir occupation phase’ is visible in the results of a palynological survey taken in the Kibyris some 70 km to the west of southern Pisidia. It is apparent that intensive agricultural activity, as visible in the pollen sample, started to decline in 1300 <sup>14C</sup> BP (Cal. ca. AD 700) in the highland area represented in the Gölhisar pollen core.<sup>823</sup> Urban decline and agricultural decline appear to have been interlinked in at least the more marginal areas.

The final decline of the cities due to the stripping away of their administrative and fiscal functions by the state, combined with rising taxation and a series of calamities has been discussed above. Ultimately, Ariassos and Sia were both deserted because they no longer fulfilled a useful or desired function. It was not in anyone’s interests to inhabit an expensive and decaying settlement that was some distance from the land upon which it depended. Throughout their histories, ties between city and territory must have been strong, with no clear demarcation between the two elements. The distinction drawn between town and country, therefore, is not satisfactory; the distinction should be made between wealthy landowners, who also resided in the country, and those who worked ‘in the country’ but who were often also resident in the towns.<sup>824</sup> We should not talk of parasitic consumer cities so much as of a parasitic aristocracy (who often had residences in the country) who required money to further their own ends, to increase their statuses and to advance their careers. Ariassos and Sia, despite their new urban centres, their bathhouses, temples, monumental spaces and festivals, were still proto-cities, *Dorfstädte* tied economically and socially to the land around them. Weber himself recognised the existence of such cities, calling them *Ackerbürgerstädte* or semi-rural cities.<sup>825</sup> There was no clear-cut division between exploited rural people and a city that lived off their labour; the urban elite was identical with the rural elite, and peasants lived in town and country alike.

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<sup>823</sup> Eastwood, Roberts, Lamb 1998, 69-86.

<sup>824</sup> On urban peasants in Italy, see Garnsey 1979.

<sup>825</sup> Weber 1958, 70-1; such small cities were not uncommon, see Jones 1940, 89-90.

## CONCLUSION

It is clear that, even before the advent of the Romans and perhaps in response to the Persians, the Pisidian tribal groups had already begun to group themselves into urban-centred (semi-)autonomous territories. Under the Romans, these cities lost what autonomy they had, whilst at the same time embarking upon a rapid period of exuberant expansion. To what extent this growth was affordable (or rational) is impossible to tell without written evidence. Nevertheless, the incomplete theatre at Ariassos, mirroring the two incomplete theatres from Balboura, would suggest that some tasks at least were beyond the reach, if not the aspirations, of these lesser highland settlements.

To what extent the growth of the Greco-Roman city reflects an underlying cultural change is more difficult to judge. Ethnic identity and change is a very complex issue. The application of terms such as 'Pisidian', 'Roman' or 'Greek' will always be fraught with difficulties. It is possible to imagine an unchanging, underlying tightly-controlled ethnic group clinging onto, and identifying itself with, a concrete culture, but it is highly improbable that such hermetically-sealed ethnic groups did exist. There is no reason to believe that the Pisidians were secretly cultural recidivists or that they had merely cloaked themselves, imperfectly, in a veil, first of Hellenic and then of Roman, civilisation. The acts of municipal beneficence of men (and, occasionally, women) such as Diotimos son of Samos were repeated throughout Pisidia and the wider Roman Empire. The monumental cities constructed across the empire were an indication not only of prosperity but most importantly of aspirations. They were also frequently a sign both of individual wealth and social inequality. To what extent the rural peasants shared the same aims and values as their beneficent patrons it is impossible to say, but there is little evidence from the years of urban expansion that there was significant resistance to the cultural element of the Roman hegemony.

In Pisidia, at least, the revolt of Lydius in AD 273 appears to provide something of a watershed. The urban ideal of the early empire appears to have become tarnished, partly due to adverse economic and social conditions and partly through the advent of Christianity. Although some have argued, quite forcefully, against the entire concept of 'decline', it is quite clear that the rate of expansion of the settlements of Pisidia diminished and that, from the fifth century onwards (and perhaps even before) some sites, such as Sia, ceased to exist as functioning urban centres. In a period of political, social and economic adjustment, it should not be surprising to discover that some settlements fall into decline, whilst others benefit. In the 1980s in Britain, the city of Sheffield and the steel industry upon which it largely depended were clearly experiencing a severe downturn, causing considerable distress and political and social disturbance in the area; at the same time, both the city and the economy of London were booming. Local conditions and particularised economies can make an enormous amount of difference.

Sia almost certainly disintegrated as a functioning urban centre more quickly than its larger neighbours, but its larger neighbours, including Ariassos, did not escape the fate that had befallen Sia. It is unusual for an urban settlement to be suddenly deserted solely as the result of a single catastrophe; more usual is a process of decline and atrophy. The urban settlements of Pisidia appear to have ceased having an essential or sufficiently useful or desirable function. They were located originally apparently primarily with strategic

considerations in mind; as they lost their political and also to some extent their religious and mercantile functions, they became increasingly undesirable places to live: too far from the fields and forests that provided their inhabitants with a living and no longer secure enough to provide an adequate place of refuge. They were no longer desirable as places of habitation or trade; they ceased functioning as central places. The process of decline may have dragged out over a hundred years or more, to be terminated by earthquake or an outbreak of violence or the plague, but by that time the Classical cities of Pisidia had already ceased to exist.

The concept of the *longue durée* can be deceptive. The landscape of Pisidia indeed provides an enduring and slowly-changing backdrop to more fleeting historical events, yet I hope also to have shown that the way that the inhabitants of Pisidia shaped and used their environment would have been very much affected by political and social events. Furthermore, although over the long term an environment can be said to remain little changed, short-term events, such as droughts, earthquakes, early winters and late springs can all have dramatic effects upon peoples' lives. It is almost impossible for the archaeologist to discern these kinds of events, yet they cannot be disregarded. Settlements such as Sia and Ariassos are usually to be found in lists of comparanda or footnotes pointing out similarities with settlements elsewhere; yet by focusing on these two small settlements in Pisidia I hope to have shown just how careful we have to be when drawing up such lists. Sia and Ariassos were neighbouring settlements, yet both existed in their own quite different micro-environments. It is often the case that historians and archaeologists look for evidence of processes, for general explanations for events, but the answers we seek may often be particular (although the two forms of explanation need not be contradictory). The archaeologist cannot hope to capture the entire pattern of regional and local failures and successes; this does not mean, however, that we should forget that such patterns existed.

The conclusions drawn in this thesis can be compared with those drawn by other regional surveys in the Mediterranean, for example the Methana, and Melos projects.<sup>826</sup> The Melos project is of interest here because, even though it was a study of prehistoric social change on an island, the conclusion drawn was that the economies and societies of these islands should not be viewed in isolation but as part of a wider regional network of political and economic systems. Likewise, the economy of Pisidia should be viewed both on a micro-level, that of the settlement alone, but also on an inter- and intra-regional level. Furthermore, the Melos survey presented a picture of significant, intermediate level cultural and political interactions between polities and of production and economies responding to political and social changes. Likewise, the Methana project revealed a clear picture, very similar to that in Pisidia, of agricultural practices and settlement patterns responding to different political and economic situations.<sup>827</sup> With an ever-increasing number of regional surveys being carried out, environmental determinism and simple, static models of subsistence farming are falling from favour as useful explanatory models. Indeed it is unlikely that any single model can ever hope to explain the changes observed on regional surveys; settlements, large and small, are joined to one another through innumerable ties and interactions. Regional survey can reveal just how complex these interactions may be.

<sup>826</sup> Mee and Forbes 1997; Renfrew and Wagstaff (eds.) 1982.

<sup>827</sup> Mee and Forbes 1997, eg. 81, 90, 263.

The Pisidia Survey has provided us with detailed site plans of Sia and Ariassos, and the neighbouring settlement at Melli is presently being mapped. It is to be hoped, however, that a systematic regional survey can ultimately be carried out in the territories of Ariassos, Sia and Melli. The lack of systematic sherding and field-walking has imposed limits on many parts of this thesis. The principal aims of regional survey are to provide a record of fluctuations in settlement patterns and land-use. The Boeotia Survey, amongst others, has provided a clear picture of regional variation through time on all levels of site hierarchies, from farmsteads and hamlets to cities.<sup>828</sup> Such detail is lacking in southwest Pisidia. A systematic regional survey would allow us to see more clearly how land was used over time and to map settlement patterns within the region. Furthermore a large amount of information could be provided at relatively little cost by a series of limited excavations (including the taking of archaeobotanical samples), in contrast to the single-site, large-scale, reconstructive excavations of monumental centres which are currently favoured by the government. Important questions remain to be answered; not least the questions of what happened to the inhabitants of the settlements once they were abandoned, and why are Selçuk and early Ottoman settlements so difficult to discover? With the aid of the Ottoman records, it is possible to identify where at least some of these later settlements were. Excavation may help us discover why it is we are unable to find these sites (and also Byzantine sites) by survey alone. The archaeology of Byzantine and Ottoman Pisidia remains largely unknown; excavation at the lower Döşeme Boğazı site, at Koz Ağacı and at Fiğla/Çomaklı could help us to penetrate this darkness. The excavation of Sagalassos and the regional survey being carried out there, coupled with information gathered in the territories of Sia, Ariassos and Melli could provide us with a very detailed picture indeed of settlement patterns and variation within one region.

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<sup>828</sup> Bintliff and Snodgrass 1985.

## APPENDIX ONE

### Ottoman Records and Classical Archaeology

The value of the Ottoman archives preserved in Istanbul, Ankara and Sofia for multi-period archaeological and historical surveys is beginning to catch the attention of a growing number of Ottomanists and archaeologists.<sup>829</sup> This appendix, an abbreviated version of a paper given in Amsterdam, provides a brief introduction to one of the tools used in this thesis to gather information used in the attempt to provide a more dynamic picture of land-use, demography and settlement.

The Ottoman Empire, founded at the beginning of the fourteenth century, swiftly overwhelmed the rump of the Byzantine Empire. By 1480 the Ottoman Empire stretched from Mostar in the Balkans to Navarino and Coron in the Peloponnese, from Dobruja and Caffa to Trebizond and Karaman; by 1590 the Ottoman Empire stretched from Algiers to the Persian Gulf in the South, and from Zagreb and Buda to Azov, Derbent and Tabriz in the North and East.<sup>830</sup> In order to ascertain the tax-bearing capabilities of its provinces, registers or *defters* of taxable resources of a region were made upon its assimilation into the Ottoman Empire, and thereafter approximately every twenty to thirty years, and following the accession of a new sultan.<sup>831</sup> While compiling a register a survey commission visited every settlement, counting numbers of households, widows, and adult males over the age of thirteen. Nomadic groups were recorded, along with uninhabited farmed land (*meza'a*), mills, tax farms and other sources of income. An official value (*nah*) was ascribed to each product, taking the median of the fluctuating price of products within a region from a good, moderate and bad year. One tenth of production was usually levied as tax, although in some regions 13% was taken; this sum is registered in the *defters*.<sup>832</sup> One copy of the completed register was sent to Istanbul whilst another was kept in the district capital. In Istanbul, summary or *icmal* registers were prepared from the detailed registers. The *icmal* registers record the tax taken from a village or nomadic group giving the name of the person who had the right to collect and use it. The central government retained a copy of every register, approximately 1,500 Ottoman registers (*tahrir defterleri*) survive to this day. In principle, thanks to Ottoman bureaucracy, more or less detailed records exist from the time a region was conquered until the end of Ottoman rule.

Ottoman *defters* changed over time, and also displayed slight regional variations. The early registers tend to list adult males and widows by village (or half village if the usufruct of the tax was to be split between two or more Ottoman cavalymen or *sipahis*) together with lists of taxes on the produce of the villages (whence we can ascertain the agricultural production

<sup>829</sup> See Kiel 1997, 315-58; Robinson 1999b; Bennet, Davis and Zarinebaf-Shahr 2000; Davis and Korkuti 2000; Kiel (forthcoming).

<sup>830</sup> See Inalcik 1973, 23-4.

<sup>831</sup> The practice of compiling *defters* appears to have been inherited from the Selçuks along with the obscure administrative script, *Siyakat*, in which they were written. The Selçuks themselves inherited the system from the Abbasids. The word *defter* reflects this history, stemming from the Middle Hellenic  $\Delta\iota\phi\theta\epsilon\rho\alpha$  meaning hide or parchment whence it came into Persian as *daftar*, and thence to Turkish; Frisk 1973, 400. The script was abolished in the early nineteenth century as part of the Tanzimat reforms. See further Beldiceanu and Beldiceanu 1978, 1-40; 'daftar,' in EI<sup>2</sup>; Kiel 1997, 315-358.

<sup>832</sup> A similar tithe was taken in the Roman period, see Mitchell, 1993, 1, 254.

of a region, village by village). However, the political, social and economic crisis of the late sixteenth century saw a dramatic upheaval in the Ottoman empire as gunpowder removed the demand for cavalymen, causing the collapse of the military system upon which division and collection of taxes was based.<sup>833</sup> Censuses, for the most part, ceased being made on the same lines, as taxes were farmed out by the government, removing the need to make painstaking surveys of resources. Although taxes, including the Christian poll-tax, or *cizye*, continued to be paid and recorded - by those Christians remaining under Ottoman Rule - it is not until the early nineteenth century with the *Tanzimat* reforms that detailed village registers were again compiled.<sup>834</sup> These *Temettüat* defters list villages ordered by house number giving the amount and type of land, and the number and types of animals owned by each householder. It is therefore possible, quite simply, to check whether assumptions of continuity of farming practices in a region over a period of five hundred years are tenable. The number of defters surviving for a region, however, is fortuitous, and the difficulty of finding the apposite defter is often compounded by the changing of administrative boundaries over the centuries. Studies of island economies, or of regions bordered by particularly impassable mountain ranges are therefore the most likely to achieve near total coverage.

It may be supposed that early twentieth-century reports could serve the Classical Archaeologist equally as well as mid nineteenth-century registers; a difference of fifty years may appear to count for little after a gap of over one and a half thousand years, and it is certainly more convenient to pick up an Admiralty handbook than to find the requisite defter. However, although agricultural practices in the Ottoman Empire throughout its history were by no means as changeless as is often assumed, the last decades of the nineteenth century witnessed a particularly dramatic change in agricultural output following a government programme of subsidies, the introduction of new crops and agricultural practices from Europe, and the building of the railroad system.<sup>835</sup> The 'timelessness' of modern-day rural village life is all too deceptive.

The region of southwest Pisidia covered by the Pisidia survey is an area about which little was written in antiquity, and which is unfortunately not well served with Ottoman tax records either, yet the records that exist enable us to penetrate the illusory simplicity and uniformity of the picture normally given of the region. References to the agriculture or other produce of Pisidia are found in several ancient authors. The temptation has been to paste references together to provide a very rough impression of the ancient environment. The defters enable us to scrutinize this picture to provide us with a more nuanced model of the ancient environment.

The oldest preserved Ottoman register for the region in which the ruins of Sia and Ariassos lie, the *sancak* of Teke, is MAD 14 which was compiled in 1455 in the reign of Fatih Mehmed II. Our next preserved source is Tapu Defter 14 compiled in the 1480s, which, like MAD 14 is a detailed register; the next extant register, Tapu Defter 166, compiled in 1530, is a less detailed, intermediate form of register. The defters enable us to view a region as a group of micro-regions, in which village economies visibly differ according to the particular

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<sup>833</sup> Inalcik 1980, 283-337.

<sup>834</sup> On *cizye* defters see Kiel 1990, 70-104.

<sup>835</sup> Quatert 1973. For a regional study see also Höhfeld 1989, 337-352.

qualities or disadvantages of the land. They also enable us to combine this data to give reasonable approximations for the quantities and types of produce that could be generated within an area. The Ottoman tax registers, therefore, allow us to address questions of environmental determinism, to examine various forms of subsistence within the same environment that we, as Classical archaeologists are interested. Furthermore, the plight of Ottoman peasantry and the changing forms of Ottoman subsistence options offer interesting parallels with Classical Antiquity with the increasing occurrence of dispersed settlements from the Hellenistic period into the Roman period and the conglomeration of land into latifundia reflected in a similar picture from the time of the earliest defters to the end of the sixteenth and the beginning of the seventeenth centuries.

It is important to stress that Ottoman *tahrir defterleri* are fiscal, and were not prepared as population censuses, not as records of agricultural practices, nor as gazetteers of sites. Furthermore, it is unwise to assume that any single defter provides a complete and accurate picture of an area. It is easy to imagine corrupt officials and forewarned locals occasionally providing a different picture of events from reality, and notes from subsequent defters indicate that oversights (for whatever reasons) occurred. Errors in simple addition are not uncommon in *mufassal* defters; *icmal* defters show inaccuracies when compared with their *mufassal* defter. However, the Ottoman bureaucracy until the end of the sixteenth century was relatively free from corruption, and where errors were made in previous defters they can often be seen to be corrected in the following defter. Nevertheless, if used together, and especially if combined with other records - including travellers' accounts, wills, the occasional court case or letter to the sultan, palynological surveys and personal observations of contemporary practices - defters can help archaeologists build a dynamic picture of the environment of a region over a period of time. They provide the defterologist with a unique source for tracing quantitatively developments and changes in toponymy, topography, administration, agricultural production, and taxation, and they provide the Classical archaeologist with a detailed picture of how people lived and subsisted within the environment in which they are interested.<sup>836</sup> Given the willingness of archaeologists to seek comparative material from different cultures and time periods, it would appear to be a logical step to seek comparative material from the same environmental milieu. Defters are important not only in showing how the environment in antiquity could have been, but also in showing the different forms that agriculture could have taken. They can help create an informed debate over agriculture and environment, of how people related to the land.

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<sup>836</sup> On *tahrir* defters see Lowry 1992.

## BIBLIOGRAPHY

- Abadie-Reynal, C. (ed.) 1989: *Hommes et richesses dans l'Empire byzantin I* (Paris).
- Abbott, F. F., and Johnson, A. C. 1926: *Municipal Administration in the Roman Empire* (Princeton).
- Abrams, P. and Wrigley, E. A. (eds.) 1978: *Towns in Societies* (Cambridge).
- Adam, J.-P. 1982: *L'architecture militaire grecque* (Paris).
- Adam, J.-P. 1994: *Roman Building: Material and Techniques* (London).
- Akman, Y. and Daget, P. 1971: 'Quelque aspects synoptiques des climats de la Turquie', *Bulletin de la Société Languedocienne de Géographie* 5, 269-300.
- Akurgal, E. 1941: *Griechische Reliefs des VI. Jahrhunderts aus Lykien* (Berlin).
- Akurgal, E. (ed.) 1986: *The Proceedings of the Xth International Congress of Classical Archaeology* (Ankara).
- Alcock, S. E. 1989: 'Archaeology and Imperialism: Roman Expansion and the Greek City', *Journal of Mediterranean Archaeology* 2, 87-135.
- Alcock, S. E. 1993: *Graecia Capta* (Cambridge).
- Alcock, S. E. 1995: 'Pausanias and the *Polis*: Use and Abuse', in Hansen, M. H. (ed.) 1995, 326-44.
- Alcock, S. E. 1997a: 'Changes on the Ground in Early Imperial Boeotia', in Bintliff, J. (ed.) 1997, 287-304.
- Alcock, S. E. 1997b: 'Greece: a landscape of resistance,' in Mattingly, D. J. (ed.) 1997, 103-115.
- Alcock, S. E. (ed.) 1997: *The Early Roman Empire in the East* (Oxford).
- Alcock, S. E. 1991: 'Urban Survey and the polis of Phlius', *Hesperia* 60, 421-63.
- Aldrete, G. S. and Mattingly, D. J. 1999: 'Feeding the City: The Organization, Operation, and Scale of the Supply System for Rome', in Potter, D. S. and Mattingly, D. J. 1999, 171-204.
- Allen, R. E. 1983: *The Attalid Kingdom* (Oxford).
- Allison, P. M. 1993: 'How do we identify the use of space in Roman housing' in

- Moormann, E. M. (ed.), 1993: *Functional and Spatial Analysis of Wall Painting. Proceedings of the Fifth International Congress on Wall Painting* (Leiden), 1-8.
- Alzinger, W. 1974: *Augusteische Architektur in Ephesos* (Vienna).
- Amouretti, M.-C. 1986: *Le pain et l'huile dans la Grèce antique* (Paris).
- Amouretti, M.-C. and Comet G. (eds.) 1993: *Des hommes et des plantes* (Aix-en-Provence).
- Amouretti, M.-C. and Brun, J.-P. (eds.), 1993: *La Production du vin et de l'huile en Méditerranée* (Paris).
- Anadolu, M. U. 1994: 'The Meander Motif in Iron Age South-western Anatolia', in Çilingiroğlu, A. and French, D. H. (eds.) 1994.
- Andreev, Y. V. 1989: 'Urbanization as a Phenomenon of Social History', *Oxford Journal of Archaeology* 8/2, 167-78.
- Armstrong, P. 1998: 'Nomadic Seljuks in "Byzantine" Lycia: New Evidence', *H Buçarıtın Mırapı Aıa*, 321-8.
- Arundell, F. V. J. 1834: *Discoveries in Asia Minor* 1, 2 (London).
- Andrews, P. A. (ed.) 1989: *Ethnic Groups in the Republic of Turkey* (Wiesbaden).
- Von Aulock, H. 1977: *Münzen und Städte Pisidiens I* (Tübingen).
- Von Aulock, H. 1979: *Münzen und Städte Pisidiens II* (Tübingen).
- Ault, B. A. 1994: 'Koprınes and oil presses: Domestic installations related to agricultural productivity and processing at classical Halieis', in Doukellis, P. N. and Mendoni, L. G. (eds.) 1994, 197-206.
- Austin, M. M. and Vidal-Naquet, P. 1972: *Économies et sociétés en Grèce ancienne* (Paris).
- Aydal, S., Mitchell, S., Robinson, T. H. and Vandeput, L. 1997: 'Panemoteichos in Pisidia', *Anatolian Studies* 47, 141-72.
- Aydal, S., Mitchell, S., Vandeput, L. 1998: '1996 Yılı Pisidia Yüzey Araştırması', *XV Araştırma Sonuçları Toplantısı II*, 275-94.
- Aydal, S., Mitchell, S., Mühlenbrock, S., Robinson, T. H. forthcoming: 'Kaynar Kale/Kodrula? in Pisidia', *Anatolian Studies*.
- Bakhuizen, S. C. 1996: 'Men of the Mountains. Observations on Aitolian Raiding', *Stuttgarter Kolloquium zur Historischen Geographie des Altertums* 4, 223-4.

- Balandier, C. 1993: 'Production et usages du miel dans l'antiquité gréco-romaine', in Amouretti, M.-C. and Comet G. (eds.) 1993, 93-125.
- Ballance, M. H. 1959: 'The Site of Prostanna', *Anatolian Studies* 9, 125-30.
- Bar-Yosef, O. and Khazanov, A. M. (eds.) 1992: *Pastoralism in the Levant* (Madison).
- Barker, G. 1989: 'The Archaeology of the Italian Shepherd,' *Proceedings of the Cambridge Philological Society* 35, 1-19.
- Barker, G. 1991: 'Approaches to archaeological survey', in Barker, G. and Lloyd, J. A. (eds.) 1991, 1-9.
- Barker, G. and Lloyd, J. A. (eds.) 1991: *Roman Landscapes* (London).
- Barkey, K. 1994: *Bandits and Bureaucrats. The Ottoman Route to State Centralization* (Cornell).
- Barnes, T. D. 1982: *The New Empire of Diocletian and Constantine* (Cambridge, Mass. and London).
- Barnish, S. 1989: 'The transformation of classical cities and the Pirenne debate', *Journal of Roman Archaeology* 2, 385-400.
- Bartlett, R. and Mackay, A. (eds.) 1989: *Medieval Frontier Societies* (Oxford).
- Barton, I. 1996: *Roman Domestic Buildings* (Exeter).
- Bates, D. G. 1972: 'Differential access to pasture in a nomadic society: the Yörük of South Eastern Turkey', in Irons, W. and Dyson, N. (eds.) 1972, 48-59.
- Bayburtluoglu, C. 1993: 'Arycanda', *Tituli Asiae Minoris* 18 (Vienna), 119-24.
- Baxandall, M. 1985: *Patterns of Intention* (Yale).
- Bean, G. E. 1948: 'Notes and Inscriptions from Lycia', *Journal of Hellenic Studies* 68, 46-56.
- Bean, G. E. 1959: 'Notes and Inscriptions from Pisidia. Part I', *Anatolian Studies* 9, 67-117.
- Bean, G. E. 1960: 'Notes and Inscriptions from Pisidia. Part II', *Anatolian Studies* 10, 43-82.
- Bean, G. E. and Mitford, T. B. 1970: *Journeys in Rough Cilicia 1964-68* (Vienna).
- Bean, G. E. 1979: *Turkey's Southern Shore* (London).

Beldiceanu, I. and Beldiceanu, N. 1978: 'Règlement ottoman concernant le recensement,' in *Südost-Forschungen* 37, 1-40.

Beldiceanu, N. 1980: *Le timar dans l'État ottoman* (Wiesbaden).

Belke, K. and Mersich, N. 1990: *Phrygien und Pisidien, Tabula Imperii Byzantini* 7 (Vienna).

Bender, B. (ed.) 1993: *Landscape: politics and perspectives* (Oxford).

Benedict, P., Tümertekin, E. and Mansur, F. (eds.) 1974: *Turkey* (Leiden).

Benedict, P. 1974: 'The Changing Role of Provincial Towns', in Benedict, P., Tümertekin, E. and Mansur, F. (eds.) 1974, 241-80.

Davis, J. L. and Zarinebaf-Shahr, F. 2000: 'Pylos Regional Archaeology Project, Part III', in *Hesperia* 69, 343-80.

Bérard, V. 1892: 'Inscriptions d'Asie Mineure', *Bulletin de Correspondence Hellénique* 16, 417-46.

Biagi, P. and Nandris, J. (eds.) 1994: *Highland Zone Exploitation in Southern Europe* (Trieste).

Biel, E. 1944: *Climatology of the Mediterranean Area* (Chicago).

Bier, L. 1990: 'The Lower Theatre at Balboura', *Anatolian Studies* 40, 69-79.

Bier, L. 1994: 'The Upper Theatre at Balboura', *Anatolian Studies* 44, 27-46.

Bilde, P. (ed.) 1993: *Centre and Periphery in the Hellenistic World* (Aarhus).

Bintliff, J. 1977: *Natural Environment and Human Settlement in Greece* (Oxford).

Bintliff, J. and Snodgrass, A. 1985: 'The Cambridge/Bradford Boeotian Expedition: the first four years', *Journal of Field Archaeology* 12, 123-61.

Bintliff, J. and Snodgrass, A. 1988: 'Mediterranean Survey and the City', *Antiquity* 62, 57-71.

Bintliff, J. 1991: 'The Roman countryside in central Greece: observations and theories from the Boeotia Survey (1978-1987)', in Barker, G. and Lloyd, J. A. (eds.) 1991, 122-132.

Bintliff, J. 1994a: 'The history of the Greek countryside: As the wave breaks, prospects for future research', in Doukellis, P. N. and Mendoni, L. G. (eds.) 1994, 7-15.

Bintliff, J. 1994b: 'Territorial Behaviour and the Natural History of the Greek Polis',

- Stuttgarter Kolloquium zur Historischen Geographie des Altertums* 4, 208-49.
- Bintliff, J. and Hamerow, H. (eds.) 1995: *Europe Between Late Antiquity and the Middle Ages* (Oxford).
- Bintliff, J. 1995: 'The Two Transitions: Current Research on the origins of the traditional village in Central Greece', in Bintliff, J. and Hamerow, H. (eds.) 1995, 111-30.
- Bintliff, J. 1996: 'The Mountain Peoples of Ancient Greece', *Stuttgarter Kolloquium zur Historischen Geographie des Altertums* 5, 105-41.
- Bintliff, J. (ed.) 1997: *Recent Developments in the History and Archaeology of Central Greece* (Oxford).
- Bintliff, J. 1998: 'Catastrophe, Chaos and Complexity', *Stuttgarter Kolloquium zur Historischen Geographie des Altertums* 6, 417-38.
- Bintliff, J., Howard, P., Snodgrass, A. 1999: 'The Hidden Landscape of Prehistoric Greece', *Journal of Mediterranean Archaeology* 12, 139-68.
- Blagg, T. and Millett, M. (eds.) 1990: *The Early Roman Empire in the West* (Oxford).
- Blakolmer, F., Krierer, K. R., Krinzinger, F., Landskrom-Dinstl, A., Szemethy, H. D., Zhuber-Okrog, K. (eds.) 1996: *Fremde Zeiten* (Vienna).
- Bloch, M. 1934: *Annales d'histoire économique et sociale* 6 (Paris).
- Blok, A. 1972: 'The Peasant and the Brigand: Social Banditry Reconsidered', *Comparative Studies in Society and History* 14, 494-503.
- Boardman, J. 1967: *Excavations in Chios, 1952-55: Greek Emporio* (London).
- Boardman, J., Griffin, J. and Murray, O. 1986: *The Oxford History of the Classical World* (Oxford).
- Boardman, J. 1995: *Greek Sculpture. The Late Classical Period* (London).
- Bommeljé, S., Doorn, p., Deylius, M, Vroom, J., Bommeljé, Y., Fagel, R. and van Wijngaarden, H. 1987: *Aetolia and the Aetolians* (Utrecht).
- Borchhardt, J. (ed.) 1975: *Myra* (Berlin).
- Borchhardt, J. 1993a: *Die Steine von Zëmuri* (Vienna).
- Borchhardt, J., 1993b: 'Zu den Fragmenten eines lykischen Opferreliefs von Dereagzi', in Morganstern, J. (ed.) 1993, 65-75.
- Borchhardt, J. and Dobesch, G. (eds.) 1993: *Akten des II. Internationalen Lykien-*

- Symposions* 1, 2 (Vienna).
- Bottema, S., Entjes-Nieborg, G., Van Zeist, W. (eds.) 1990: *Man's Role in the Shaping of the Eastern Mediterranean Landscape* (Rotterdam).
- Bottema, S. and Woldring, H. 1990: 'Anthropogenic indicators in the pollen record of the Eastern Mediterranean,' in Bottema, S., Entjes-Nieborg, G., Van Zeist, W. (eds.) 1990, 231-64.
- Bottema, S., Woldring, H. and Aytuğ, B. 1993: 'Late Quaternary vegetation history and climate in northern Turkey', *Palaeohistoria* 35/36, 13-72.
- Bottema, S. and Woldring, H. 1995: 'The Environment at Classical Sagalassos', in Waelkens, M. and Poblome, J. (eds.) 1995, 327-340.
- Bowersock, G. 1988: 'The Dissolution of the Roman Empire', in Yoffee, N., and Cowgill, G. L. (eds.) 1988, 165-75.
- Bowersock, G. 1990: *Hellenism in Late Antiquity* (Cambridge).
- Bowersock, G., Brown, P., Grabar, O. 1999: *Late Antiquity* (Cambridge, Massachusetts; London).
- Bracke, H. 1993: 'Pisidia in Hellenistic times', in Waelkens, M. (ed.), 1993: *Sagalassos I* (Leuven), 15-36.
- Brandes, W. 1989: *Die Städte Kleinasiens im 7. und 8. Jahrhundert* (Amsterdam).
- Brandes, W. 1999: 'Byzantine Cities in the Seventh and Eighth Centuries – Different Sources, Different Histories?', in Brogiolo, G. P. and Ward-Perkins, B. (eds.) 1999, 25-58.
- Brandt, H. 1992: *Gesellschaft und Wirtschaft Pamphyliens und Pisidiens im Altertum* (Bonn).
- Braudel, F. 1966: *La Méditerranée à l'époque de Philippe II* (second edition, revised, Paris).
- Braudel, F. 1972: *The Mediterranean and the Mediterranean World in the Age of Philip II* (second edition, revised, translated by Sian Reynolds, London)
- Briant, P. 1982: *Rois, tributs et paysans* (Paris).
- Brixhe, C. and Gibson, E. 1982: 'Monuments from Pisidia,' *Kadmos* 21, 138-9, 141-3.
- Brödner, E. 1989: *Wohnen in der Antike* (Darmstadt).
- Brogiolo, G. P. and Ward-Perkins, B. (eds.) 1999: *The Idea and Ideal of the Town Between Late Antiquity and the Early Middle Ages* (Leiden).

- Brogiolo, G. P. 1999: 'Ideas of the Town in Italy during the Transition from Antiquity to the Middle Ages', in Brogiolo, G. P. and Ward-Perkins, B. (eds.) 1999, 99-126.
- Broughton, T. R. S. 1938: 'Roman Asia Minor,' in Frank, T, (ed.) 1938, 499-950.
- Brown, A. E. (ed.) 1995: *Roman Small Towns in Eastern England and Beyond* (Oxford).
- Brown, P. 1971: *The World of Late Antiquity* (London).
- Bruce Hitchner, R. 1994: 'Image and Reality: The Changing Face of Pastoralism in the Tunisian High Steppe', in Carlsen, J., Ørsted, P. and Skydsgaard, J. E. (eds.) 1994, 27-43.
- Brückner, H. 1990: 'Changes in the Mediterranean ecosystem during antiquity. A geomorphological approach as seen in two examples,' in Bottema, S., Entjes-Nieborg, G., Van Zeist, W. (eds.), 127-37.
- Brunn, J. H., Dumont, J. F., De Graciansky, P. Ch., Gutnic, M., Juteau, Th., Marcoux, J., Monod, O. and Poisson, A. 1971: 'Outline of the Geology of the Western Taurids', in Campbell, A. S. (ed.) 1971, 225-55.
- Bryce, T. R. 1986: *The Lycians I* (Copenhagen).
- Bryce, T. R. 1998: *The Kingdom of the Hittites* (Oxford).
- Burford, A. 1993: *Land and Labor in the Greek World* (Baltimore and London).
- Burillo Mozota, F. 1991: 'The evolution of Iberian and Roman towns in the middle Ebro valley', in Barker, G. and Lloyd, J. A. (eds.) 1991, 37-46.
- Bury, J. 1923: *History of the Later Roman Empire I, II* (London).
- Büyükkolancı, M. 1997: 'Termessos N1 Yapısı', *Adalya* 2, 117-26.
- Cambitoglou, A., Coulton, J. J., Birmingham, J., and Green, J. R. 1971: *Zagora 1* (Sydney).
- Cameron, A. 1993: *The Mediterranean World in Late Antiquity* (London).
- Cameron, C. M. and Tomka, S. A. (eds.) 1993: *Abandonment of Settlements and Regions. Ethnoarchaeological and Archaeological Approaches* (Cambridge).
- Campbell, A. S. (ed.) 1971: *Geology and History of Turkey* (Tripoli).
- Capogrossi Colognesi, L. 1995: 'The limits of the ancient city and the evolution of the medieval city in the thought of Max Weber', in Cornell, T.J. and Lomas, K. (eds.) 1995, 27-38.

- Carlsen, J., Ørsted, P. and Skydsgaard, J. E. (eds.) 1994: *Landuse in the Roman Empire* (Rome).
- Carradice, I. (ed.) 1987: *Coinage and Administration in the Athenian and Persian Empires* (Oxford).
- Carruba, O. 1996: 'Neues zur Frühgeschichte Lykiens', in Blakolmer, F., Krierer, K. R., Krinzinger, F., Landskrom-Dinstl, A., Szemethy, H. D., Zhuber-Okrog, K. (eds.) 1996, 25-39.
- Cartledge, P. and Spawforth, A. 1989: *Hellenistic and Roman Sparta* (London).
- Cartledge, P. 1998: 'City and *chora* in Sparta: Archaic to Hellenistic', in Cavanagh, W. G., and Walker, S. E. C. (eds.) 1998, 39-47.
- Castrén, P. 1999: 'Paganism and Christianity in Athens and Vicinity during the Fourth to Sixth Centuries AD', in Brogiolo, G. P. and Ward-Perkins, B. (eds.) 1999, 211-224.
- Cavanagh, W. G. 1991: 'Surveys, Cities and Synoecism', in Rich, J., and Wallace-Hadrill, A. (eds.) 1991, 97-118.
- Cavanagh, W. G. and Walker, S. E. C. (eds.) 1998: *Sparta in Laconia* (London).
- Çavuş, M. 1983: *Bucak Halk Eğitimi* (İzmir).
- Çilingiroğlu, A. and French, D. H. (eds.) 1994: *Anatolian Iron Ages 3* (London).
- Champion, T. C. (ed.) 1989: *Centre and Periphery* (London).
- Chang, C. 1984: 'The ethnoarchaeology of herding sites in Greece', *MASCA Journal* 3/2, 44-8.
- Chang, C. and Koster, H. A. 1986: 'Beyond bones: toward an archaeology of pastoralism', in Schiffer, M. B. (ed.) 1986, 97-148.
- Chase Dunn, C. and Hall, T. D. (eds.), 1991: *Core/Periphery Relations in Precapitalist Worlds* (Oxford).
- Cherry, J. F. 1988: 'Pastoralism and the role of animals in the pre- and proto-historic economies of the Aegean' in Whittaker, C. R. (ed.) 1988, 6-34.
- Cherry, J. F., Davis, J. L. and Mantzourani, E. 1991: *Landscape Archaeology as Long-Term History. Northern Keos in the Cycladic Islands* (Los Angeles).
- Childs, W. 1978: *The City-reliefs of Lycia* (Princeton).
- Christie, N. 1995: 'Italy and the Roman to Medieval Transition', in Bintliff, J. and Hamerow, H. (eds.) 1995, 99-110.

- Christie, N. 1996: 'Barren fields? Landscapes and settlements in late Roman and post-Roman Italy', in Shipley, G. and Salmon, J. (eds.) 1996, 254-283.
- Christie, N. and Loseby, S. T. (eds.), 1996: *Towns in Transition* (Aldershot).
- Christol, M. 1978: 'Un duc dans les inscriptions de Termessos', *Chiron* 8, 529-39.
- Clarke, K. 1999: *Between Geography and History: Hellenistic Constructions of the Roman World* (Oxford).
- Clarke, J. R. 1991: *The Houses of Roman Italy 100 BC-AD 250* (Berkeley, Los Angeles, London).
- Clarke, M. V. 1926: *The Mediaeval City State* (London).
- Claude, D. 1969: *Die byzantinische Stadt im 6 Jahrhundert* (Munich).
- Clavell-Lévêque, M. and Plana-Mallart, R. (eds.) 1995: *Cité et Territoire I* (Paris).
- Clavell-Lévêque, M. and Vignot, A. (eds.) 1998: *Cité et Territoire II* (Paris).
- Cobban, A. 1961: *A History of Modern France 1* (London).
- Cook, M. A. 1972: *Population Pressure in Rural Anatolia 1450-1600* (Oxford).
- Coon, C. 1965: *Caravan, the story of the Middle East* (New York).
- Cormack, R. 1990: 'Byzantine Aphrodisias', *Proceedings of the Cambridge Philological Society* 36, 26-41.
- Cormack, S. 1989: 'A Mausoleum at Ariassos, Pisidia', *Anatolian Studies* 39, 31-40.
- Cormack, S. 1996: 'The Roman-Period Necropolis of Ariassos, Pisidia', *Anatolian Studies* 46, 1-26.
- Cormack, S. 1997: 'Funerary Monuments and Mortuary Practice in Roman Asia Minor', in Alcock, S. E. (ed.) 1997, 137-56.
- Cornell, T. J. and Lomas, K. (eds.) 1995: *Urban Society in Roman Italy* (London).
- Coulton, J. J. 1976: *The Architectural Development of the Greek Stoa* (Oxford).
- Coulton, J. J. 1982a: 'Termessians at Oinoanda', *Anatolian Studies* 32, 115-32.
- Coulton, J. J. 1982b: 'Oinoanda. The Doric Building', *Anatolian Studies* 32, 45-59.
- Coulton, J. J. 1983: 'The Buildings of Oinoanda', *Proceedings of the Cambridge*

- Philological Society* 209, 1-17.
- Coulton, J. J. and Stenton, E. C. 1986: 'Oenoanda: The Water Supply and Aqueduct', *Anatolian Studies* 36, 15-60.
- Coulton, J. J. 1986: 'Oenoanda: The Agora', *Anatolian Studies* 36, 61-90.
- Coulton, J. J. 1987a: 'Roman Aqueducts in Asia Minor' in Macready, S. and Thompson, F. H. (eds.), 1987: *Roman Architecture in the Greek World* (London), 72-84.
- Coulton, J. J. 1987b: 'Opramoas and the Anonymous Benefactor', *Journal of Hellenic Studies*, 171-8.
- Coulton, J. J., Milner, N. P. and Reyes, A. T. 1988: 'Balboursa Survey: Onesimos and Meleager, Part I,' *Anatolian Studies* 38, 121-45.
- Coulton, J. J., Milner, N. P. and Reyes, A. T. 1989: 'Balboursa Survey: Onesimos and Meleager, Part II,' *Anatolian Studies* 39, 41-62.
- Coulton, J. J. 1992: 'Balboursa Survey 1988-1990', *Araştırma Sonuçları Toplantısı* 9, 47-58.
- Coulton, J. J. 1993a: 'Balboursa Survey 1991', *Araştırma Sonuçları Toplantısı* 10, 459-72.
- Coulton, J. J. 1993b: 'North Lycia before the Romans', in Borchhardt, J. and Dobesch, G. (eds.) 1993, *Akten des II. Internationalen Lykien-Symposiums* (Vienna), 1.79-85.
- Coulton, J. J. 1994a: 'The Fortifications of Balboursa', *Revue des Études Anciennes* 96, nos. 1-2, 327-35.
- Coulton, J. J. 1994b: 'Balboursa Survey 1992', *Araştırma Sonuçları Toplantısı* 11, 429-36.
- Coulton, J. J. 1998: 'Highland Cities in South-West Turkey: the Oinoanda and Balboursa Surveys', in Matthews, R. (ed.) 1998, 225-36.
- Coulton, J. J. (ed.) forthcoming, *Balboursa: A Highland City and its Territory*.
- Cramer, J. A. 1832: *A Geographical and Historical Description of Asia Minor* I, II (Oxford).
- Crane, E. 1983: *The Archaeology of Beekeeping* (London).
- Crawford, M. 1975: 'Finance, Coinage, and Money from the Severans to Constantine', *Aufstieg en Niedergang der römischen Welt*, 2.2, 567-75.
- Cribb, R. 1991: *Nomads in Archaeology* (Cambridge).
- Cuinet, V. 1890: *La Turquie d'Asie* 1, 2, 3, 4 (Paris).
- Cunliffe, B. 1993: 'Core-Periphery relationships: Iberia and the Mediterranean', in Bilde,

- P. (ed.), 53-85.
- Curl, J. S. 1999: *The Oxford Dictionary of Architecture* (Oxford).
- Curtis, R. I. 2001: *Ancient Food Technology* (Leiden).
- Dagron, G. 1971: 'Le christianisme dans la ville byzantine', *Dumbarton Oaks Papers* 31, 1-25.
- Darling, L. 1996: *Revenue-raising and Legitimacy* (Leiden).
- Dahl, G., and Hjort, A. 1976: *Having herds: Pastoral herd growth and household economy* (Stockholm).
- Darlington, C. D. 1969: *The Evolution of Man and Society* (London).
- Darrouzès, (ed.) 1981: *Notitiae Episcopatum Ecclesiae Constantinopolitanae* (Paris).
- Daunton, M. 1989: 'The Social Meaning of Space: The City in the West and Islam', in Takeshi, Y., (ed.), *Urbanism in Islam* 1 (Tokyo), 25-58.
- Davis, J. L. 1991: 'Contributions to a Mediterranean rural archaeology: historical case studies from the Ottoman Cyclades', *Journal of Mediterranean Archaeology* 4, 131-215.
- Davis, J. L., Alcock, S. E., Bennet, J., Lolos, V., Shelmerdine, C. W. and Zangger, E. 1996-2001: *The Pylos Regional Archaeological Project: Internet Edition*, <http://classics.lsa.umich.edu.PRAP.html>
- Davis, J. L. (ed.) 1998: *Sandy Pylos* (Austin).
- Davis, J. L. and Korkuti, M. M. 2000: *Projekti Arkeologjik I Rajonit Mallakastër/The Mdlakastra Regional Archaeological Project: Internet Edition*, [http://river.bleg.uc.edu/mrap/MRAP\\_en.html](http://river.bleg.uc.edu/mrap/MRAP_en.html)
- Davis, P. H. (ed.) 1965, 1967, 1970, 1972, 1975, 1978, 1982, 1985: *Flora of Turkey and the East Aegean Islands* vols. 1, 2, 3, 4, 5, 6, 7, and 8 (Edinburgh).
- Day, I. 1979: *Perfumery with Herbs* (London).
- Deichmann, F. W. 1939: 'Frühchristliche Kirchen in antiken Heiligtümern', *Jahrbuch des deutschen archäologischen Instituts* 54, 105-43 .
- Dell'Aglio, P. L. and Marchetti, G., 1991: 'Settlement patterns and agrarian structures of the Roman period in the territory of Piacenza', in Barker, G. and Lloyd, J. A. (eds.) 1991, 160-8.
- Demargne, P. 1958: *Fouilles de Xanthos I, Les Piliers funéraires* (Paris).
- Demoen, K. 2001: *The Greek City from Antiquity to the Present* (Leuven).

- Dickinson, R. E. 1947: *City Region and Regionalism* (London).
- Diehl, C. 1893: 'Rescrit des Empereurs Justin et Justinien', *Bulletin de Correspondance Hellénique*, 501-20.
- Dinsmoor, W. 1950: *The Architecture of Ancient Greece* (third edition, revised, London).
- Docter, R. F. and Moormann, E. M. (eds.) 1999: *Proceedings of the XVth International Congress of Classical Archaeology, Amsterdam, July 12-17, 1998* (Amsterdam).
- Dominguez, A. J. 1999: 'Hellenisation in Iberia?: The Reception of Greek Products and Influences by the Iberians', in Tsetschladze, G. R. (ed.) 1999, 301-29.
- Doukellis, P. N. and Mendoni, L. G. (eds.) 1994: *Structures rurales et sociétés antiques* (Paris).
- Drew, D. 1985: *Karst Processes and Landforms* (Basingstoke).
- Driessen, J. 1995: '<<Crisis Architecture>>? Some Observations on Architectural Adaptations as Immediate Responses to Changing Socio-Cultural Conditions', *Topoi* 5/1, 63-88.
- Duncan-Jones, R. 1977: *The Economy of the Roman Empire* (Cambridge).
- Durliat, J. 1989: 'La peste du VI<sup>e</sup> siècle. Pour un nouvel examen des sources byzantines', in Abadie-Reynal, C. (ed.) 1989, 107-25.
- Duru, R. 1995: 'Bademağacı Kazıları 1993', *Kazı Sonuçları Toplantısı* 16, 69-73.
- Dyson, S. L. 1971: 'Native Revolts in the Roman Empire', *Historia* 20, 239-44.
- Eastwood, W. J., Roberts, N., Lamb, H. F. 1998: 'Palaeoecological and Archaeological Evidence for Human Occupance in South-West Turkey: The Beyşehir Occupation Phase', *Anatolian Studies* 48, 69-86.
- Eck, W. and Galsterer, H. (eds.) 1991: *Die Stadt in Oberitalien und in den nordwestlichen Provinzen des Römischen Reiches* (Mainz am Rhein).
- Edmondson, J. C. 1990: 'Romanization and Urban Development in Lusitania', in Blagg, T. and Millett, M. (eds.) 1990, 151-78.
- Efstratiou, N. 1993: 'The Archaeology of the Greek Uplands: the Early Iron Age Site of Tsouka in the Rhodope Mountains', *Annual of the British School at Athens* 88, 135-71.
- Ehrenberg, V. 1937: 'When did the polis rise?', *Journal of Hellenic Studies* 57, 147-59.
- Ehrenberg, V. 1969: *The Greek State* (London).

- Eisenstadt, S. N. 1988: 'Beyond Collapse', in Yoffee, N., and Cowgill, G. L. (eds.) 1988, 236-43.
- Ellis, S. P. 1988: 'The End of the Roman House', in *American Journal of Archaeology* 92, 565-76.
- Elton, H. forthcoming: 'Bandits, Cities and Aristocrats in Roman Cilicia and Isauria.'
- Elton, H. and Reger, G. (eds.) forthcoming: *Hellenistic and Roman Asia Minor* (Michigan).
- Emre, K., Hrouda, B., Mellink, M. and Özgüç, N. (eds.) 1989: *Anatolia and the Ancient Near East, Studies in Honour of Tahsin Özgüç* (Ankara).
- L'Equipe écologie et anthropologie des sociétés pastorales (ed.) 1979: *Pastoral Production and Society* (Cambridge, Paris).
- Errington, R. M. 1987: 'Θηά 'Ρώμη und römischer Einfluß südlich des Mäanders im 2. Jh. v. Chr.' *Chiron* 17, 97-118.
- Eslick, C. 1992: *Elm al-Karataş I: The Neolithic and Calcolithic Periods* (Bryn Mawr).
- Faroqhi, S. 1984: *Towns and Townsmen of Ottoman Anatolia* (Cambridge).
- Faroqhi, S. 1986: *Peasants, Dervishes and Traders in the Ottoman Empire* (Aldershot).
- Faroqhi, S., McGowan, B., Quataert, D., and Pamuk, Ş. 1994: *An Economic and Social History of the Ottoman Empire 2* (Cambridge).
- Farrington, A. 1995: *The Roman Baths of Lycia* (London).
- Fear, A. T. 1996: *Rome and Baetica* (Oxford).
- Feinman, G. M. and Marcus, J. (eds.) 1998: *Archaic States* (Santa Fe).
- Fekete, L. 1955: *Die Siyaqat-Schrift in der Türkischen Finanzverwaltung* (Budapest).
- Fellows, C. 1838: *Asia Minor* (London).
- Fellows, C. 1841: *Discoveries in Lycia* (London).
- Fellows, C. 1852: *Travels and Researches in Asia Minor* (London).
- Ferrary, J.-P. 1985: 'La Lex Antonia de Termessibus', *Athenaeum* 63, 419-57.
- Ferrary, J.-P. 1988: *Philhellénisme et Impérialisme. Aspects idéologiques de la conquête romaine du monde hellénistique* (Paris).

- Filgis, M. N. 1988: 'Zur Rekonstruktion der Odeia von Ariassos und Termessos', *Architectura* 18, 1-6.
- Finley, M. 1981: 'The ancient city: from Fustel de Coulanges to Max Weber and beyond', in Shaw, B. D. and Saller, R. P. (eds.) 1981, 3-23.
- Finley, M. 1985a: *The Ancient Economy* (2<sup>nd</sup> edition, London).
- Finley, M. 1985b: *Ancient History: Evidence and Models* (London).
- Flannery, K. 1998: 'The Ground Plans of Archaic States', in Feinman, G. M. and Marcus, J. (eds.) 1998, 15-57.
- Fleischer, R. 1981: 'Der hellenistische Fries von Sagalassos in Pisidien', *Antike Welt* 12.1, 3-16.
- Flemming, B. 1964: *Landschaftsgeschichte von Pamphylien, Pisidien, und Lykien im Spätmittelalter* (Wiesbaden).
- Forbes, H. 1992: 'The Ethnoarchaeological Approach to Ancient Greek Agriculture', in Wells, B. (ed.) 1992, 87-101.
- Forbes, H. 1993: 'Ethnoarchaeology and the Place of the Olive in the Economy of the Southern Argolid, Greece,' in Amouretti, M.-C. and Brun, J.-P. (eds.) 1993: 213-26.
- Forbes, H. 1994: 'Pastoralism and settlement structures in ancient Greece', in Doukellis, P. N. and Mendoni, L. G. (eds.) 1994, 187-96.
- Forbes, H. 1996: 'The uses of the uncultivated landscape in modern Greece: a pointer to the value of the wilderness in antiquity', in Shipley, G. and Salmon, J. (eds.) 1996, 68-97.
- Ford, D. and Williams, P. 1989: *Karst Geomorphology and Hydrology* (London).
- Foss, C. 1976: *Byzantine and Turkish Sardis* (Cambridge, Mass.).
- Foss, C. 1988: 'Strobilos and Related Sites', *Anatolian Studies* 38, 147-74.
- Foss, C. 1991: 'Cities and Villages of Lycia in the Life of St Nicholas of Holy Zion', *Greek Orthodox Theological Review* 36, 303-39, reprinted in Foss, C. 1996.
- Foss, C. 1993: 'Lycia in History', in Morganstern, J. (ed.) 1993: 1-37, reprinted in Foss, C. 1996.
- Foss, C. 1994: 'The Lycian Coast in the Byzantine Age', *Dumbarton Oaks Papers* 48, 1-52, reprinted in Foss, C. 1996.

- Foss, C. 1995: 'The Near Eastern countryside in late antiquity: a review article', in Humphrey, J. H. (ed.) 1995, 213-34.
- Foss, C. 1996: *Cities, Fortresses and Villages of Byzantine Asia Minor* (Aldershot).
- Foucault, M. 1979: *Discipline and Punish: The Birth of the Prison* (Harmondsworth).
- Fowden, G. 1990: 'Religious Developments in Late Roman Lycia: Topographical preliminaries', *Meletemata tou KERA* 10, 343-70.
- Foxhall, L. and Forbes, H. A. 1982: 'Sitometria: The Role of Grain as a Staple Food in Classical Antiquity', *Chiron* 12, 41-90.
- Foxhall, L. 1990: 'The Dependent Tenant: Land Leasing and Labour in Italy and Greece', *Journal of Roman Studies* 80, 97-114.
- Foxhall, L. 1993: 'Oil Extraction and Processing Equipment in Classical Greece', in Amouretti, M.-C., and Brun, J.-P. (eds.) 1993, 183-200.
- Foxhall, L. 1996: 'Feeling the earth move: cultivation techniques on steep slopes in classical antiquity', in Shipley, G. and Salmon, J. (eds.) 1996, 44-67.
- Frank, T. (ed.) 1938: *An Economic Survey of Ancient Rome* 4 (Oxford).
- Frankel, D. and Webb, J. M. 1998: 'Three Faces of Identity: Ethnicity, Community, and Status in the Cypriot Bronze Age', *Mediterranean Archaeology* 11, 1-12.
- Freeman, P. W. M. 1993: 'Romanisation' and Roman material culture', *Journal of Roman Archaeology* 6, 438-45.
- Frei, P. 1993: 'Solymer-Milyer-Termilen-Lykier. Ethnische und politische Einheiten auf der lykischen halbinsel', in Borchhardt, J. and Dobesch, G. (eds.) 1993, 1.87-97.
- French, D. 1980: 'The Roman Road-system of Asia Minor', *Aufstieg und Niedergang der römischen Welt* 2.7.2, 698-729.
- French, D. 1992: 'Roads in Pisidia', in Schwertheim, E. (ed.) 1992, 167-75.
- French, D. 1993: 'A Road Problem: Roman or Byzantine?', *Istanbuler Mitteilungen* 43, 445-54.
- French, D. (ed.) 1994: *Studies in the History and Topography of Lycia and Pisidia. In Memoriam A. S. Hall* (London).
- French, D. 1994: 'Isinda and Lagbe', in French, D. (ed.) 1994, 53-90.
- French, D. 1997: 'Pre- and Early- Roman Roads of Asia Minor', *Arkeoloji Dergisi* 5, 179-87.

- Frisk, H. 1973: *Griechisches Etymologisches Wörterbuch*, Heidelberg.
- Gallant, T. W. 1991: *Risk and Survival in Ancient Greece* (Cambridge).
- Gams, I., Nicod, J., Julian, M., Anthony, E. and Sauro, U. 1998: 'Environmental Change and Human Impacts on the Mediterranean Karsts of France, Italy and the Dinaric Region', in Williams, P. (ed.) 1998, 59-98.
- Garnsey, P. 1974: 'Aspects of the Decline of the Urban Aristocracy in the Empire,' *Aufstieg und Niedergang der römischen Welt* 2.1, 230-52.
- Garnsey, P. 1979: 'Where did the Italian Peasants Live', *Proceedings of the Cambridge Philological Society* 29, 1-25.
- Garnsey, P. 1983: 'Grain for Rome', in Garnsey, P., Hopkins, K. and Whittaker, C. R. (eds.) 1983, 118-30.
- Garnsey, P., Hopkins, K. and Whittaker, C. R. (eds.) 1983: *Trade in the Ancient Economy* (London).
- Garnsey, P. and Whittaker, C. R. (eds.) 1983: *Trade and Famine in Classical Antiquity* (Cambridge).
- Garnsey, P. and Saller, R. 1987: *The Roman Empire* (London).
- Garnsey, P. 1988a: *Famine and Food Supply in the Graeco-Roman World* (Cambridge).
- Garnsey, P. 1988b: 'Mountain economies in southern Europe', in Whittaker, C. R. (ed.), 1988: 196-209.
- Garnsey, P. and Morris, I. 1989: 'Risk and the polis: the evolution of institutionalised responses to food supply problems in the ancient Greek state', in Halstead, P, and O'Shea, J. (eds.) 1989, 98-105.
- Garnsey, P. 1998: *Cities, Peasants and Food in Classical Antiquity* (Cambridge).
- Garstang, J. and Gurney, O. R. (1959): *The Geography of the Hittite Empire* (London).
- Gates, M.-H. 1994: 'Archaeology in Turkey', *American Journal of Archaeology* 99, 233-4.
- Geertz, C. 1973: *The Interpretation of Cultures* (New York).
- Gehrke, H.-J. 1993: 'Thisbe in Boiotien. Eine Fallstudie zum Thema 'Griechische Polis und Römisches Imperium'', *Klio* 75, 145-54.
- Gellner, E. 1983: *Nations and Nationalism* (Oxford).
- Gellner, E. 1988: *Plough, Sword and Book* (Chicago).

- Gelzer, H., Hilgenfeld, H. and Cuntz, O. (eds.) 1898: *Patrum Nicaenorum Nomina* (Leipzig).
- Gelzer, H. 1901: 'Ungedruckte und ungenügend veröffentlichte Texte der Notitiae Episcopatum, ein Beitrag zur byzantinischen Kirchen- und Verwaltungsgeschichte', *Abh. der philos.-philol. Klasse der königl. Bayer. Akad. der Wiss.* 21/3 (Munich).
- Gencoğlu, S., İnan, E. and Güler, H. 1990: *Türkiye'nin Deprem Tehlikesi* (Ankara).
- Gesemann, G. 1943: *Heröische Lebensformen* (Berlin).
- Gibbon, E. 1776-88: *The History of the Decline and Fall of the Roman Empire* 1, 2, 3, 4, 5, 6 (London).
- Glötz, G. 1928: *La Cité grecque* (Paris).
- Goldschmit, W. 1979: 'A general model for pastoral systems', in *L'Equipe écologie et anthropologie des sociétés pastorales* (ed.) 1979, 15-28.
- Goodman, A. 1989: 'Religion and Warfare in the Anglo-Scottish Marches', in Bartlett, R., and Mackay, A. (eds.) 1989, 245-66.
- Goodwin, D. H. 1979: *Sheep Management and Production* (2<sup>nd</sup> edition, London).
- Gough, M. 1972: 'The Emperor Zeno and some Cilician Churches', *Anatolian Studies* 22, 199-212.
- Graham, A. J. 1983: *Colony and Mother City in Ancient Greece* (second edition, Chicago).
- Graham, J. W. 1974: 'The houses of classical Athens', *Phoenix* 28, 45-51.
- Grainger, J. 1995: 'The Campaign of Manlius Vulso in Asia Minor', *Anatolian Studies* 45, 23-42.
- Greenhalgh, J. 1987: *Roman Pisidia – A Study of Development and Change* (Unpublished Phd thesis, University of Newcastle).
- Gregory, A. 1997: 'Country, village and town in Central Anatolia', *Journal of Roman Archaeology* 10, 545-556.
- Griffith, G. T. 1935: *The Mercenaries of the Hellenistic World* (Princeton).
- Gros, P. 1996: 'Les nouveaux espaces civiques en Asie Mineure', in Roueché, C. and Smith, R. R. R. (eds.) 1996, 111-20.
- Güçer, L. 1964: *XVI-XVII Asırlarda Osmanlı İmparatorluğunda Hububat Meselesi ve Hububattan Alman Vergiler* (Istanbul).

- Güldal, N. 1970: 'Karstmorphologische Studien im Gebiet des Poljesystems von Kestel (Westlicher Taurus, Türkei)', *Tübinger Geographische Studien* 40 (Tübingen).
- Gunn, J., Tranter, J., Perkins, J. and Hunter, C. 1998: 'Sanitary bacterial dynamics in a mixed karst aquifer', in Leibundgut, C., Gunn, J. and Dassargues, A. (eds.) 1998, 61-70.
- Gurney, O. 1997: 'The Annals of Hattusilis III', *Anatolian Studies* 47, 127-40.
- Hahn, I. 1981: 'Periöken und Periökanbesitz in Lykien', *Klio* 63, 51-61.
- Haldon, J. F. 1997: *Byzantium in the Seventh Century* (revised edition, Cambridge).
- Haldon, J. F. 1999: 'The Idea of the Town in the Byzantine Empire', in Brogiolo, G. P., and Ward-Perkins, B. (eds.) 1999, 1-24.
- Hall, A. 1968: 'Notes and Inscriptions from Eastern Pisidia', *Anatolian Studies* 18, 57-93.
- Hall, A. 1971: 'The Gorgoromeis', *Anatolian Studies* 21, 125-66.
- Hall, A. 1976: 'The Oenoanda Survey: 1974-76', *Anatolian Studies* 26, 191-7.
- Hall, A. 1986: 'The Milyadeis and their territory', *Anatolian Studies* 36, 137-57.
- Hall, A., and Coulton J. J. 1990: 'A Hellenistic Allotment List from Balboura in the Kibyris', *Chiron* 20, 109-58.
- Hall, A. 1994a: 'The indigenous names of Asia Minor', in French, D. (ed.) 1994, 1-6.
- Hall, A. 1994b: 'Sinda', in French, D. (ed.) 1994, 48-52.
- Hall, A., and Milner, N. 1994: 'Education and Athletics. Documents illustrating the Festivals of Oenoanda', in French, D. (ed.) 1994, 7-47.
- Hall, J. 1985: *Powers and Liberties: the Causes and Consequences of the Rise of the West* (Oxford).
- Hall, J. M. 1997: *Ethnic Identity in Greek Antiquity* (Cambridge).
- Halstead, P. 1981: 'Counting sheep in Neolithic and Bronze Age Greece', in Hodder, I., Isaac, G. and Hammond, N. (eds.) 1981, 307-39.
- Halstead, P. 1987: 'Traditional and ancient rural economy in Mediterranean Europe: plus ça change?', *Journal of Hellenic Studies* 107, 77-87.
- Halstead, P. and Jones, G. 1989: 'Agrarian ecology in the Greek Islands: time stress, scale and risk', 41-55.

- Halstead, P. and O'Shea, J. (eds.) 1989: *Bad Year Economics: Cultural Responses to Risk and Uncertainty* (Cambridge).
- Halstead, P. 1989: 'The economy has a normal surplus: economic stability and social change among early farming communities of Thessaly, Greece', in Halstead, P. and O'Shea, J. (eds.) 1989, 68-80.
- Hamerow, H. 1995: 'Shaping Settlements: Early Medieval Communities in Northwest Europe', in Bintliff, J. and Hamerow, H. (eds.) 1995, 8-37.
- Hamilton, W. J. 1842: *Researches in Asia Minor, Pontus and Armenia* (London).
- Hansen, M. H. and Raaflaub, K. (eds.) 1995: *Studies in the Ancient Greek Polis* (Copenhagen).
- Hansen, M. H. 1995: 'Kome. A study in how the Greeks designated and classified settlements which were not *poleis*', in Hansen, M. H. and Raaflaub, K. (eds.) 1995, 45-81.
- Hansen, M. H. and Raaflaub, K. (eds.) 1996: *More Studies in the Ancient Greek Polis* (Copenhagen).
- Hansen, M. H. (ed.) 1996: *Introduction to an Inventory of Poleis* (Copenhagen).
- Hansen, M. H. (ed.) 1995: *Sources for the Ancient Greek City-State* (Copenhagen).
- Hansen, M. H. (ed.) 1997: *The Polis as an Urban Centre and as a Political Community* (Copenhagen).
- Hansen, M. H. 1998: *Polis and City-State. An Ancient Concept and its Modern Equivalent* (Copenhagen).
- Harrison, G. 1991: 'Changing patterns in land tenure and land use in Roman Crete', in Barker, G. and Lloyd, J. A. (eds.) 1991, 115-21.
- Harrison, L. 1986: *Changes in Farming Systems on the Elmalı Plain, Southwest Turkey* (unpublished BSc thesis, University of Reading).
- Harrison, R. M. 1963: 'Churches and Chapels of Central Lycia', *Anatolian Studies* 13, 117-51.
- Harrison, R. M. 1972: 'A Note on Architectural Sculpture in Central Lycia', *Anatolian Studies* 22, 187-97.
- Harrison, R. M. 1979a: 'Aspects Of Late Roman And Early Byzantine Lycia,' VIII *Türk Tarih Kongresi*, 525-31.

- Harrison, R. M. 1979b: 'Nouvelles découvertes romaines tardives et paléobyzantines en Lycie', *CRAI* 1979, 222-39.
- Harrison, R. M. 1980: 'Upland Settlements in Early Medieval Lycia,' in Metzger, H. (ed.) 1980, 109-18.
- Harrison, R. M. 1989: *A Temple for Byzantium* (London).
- Harrison, R. M. 2001: *Mountain and Plain* (Michigan).
- Haspels, E. 1957: *Exploration archéologique de la Phrygie III* (Paris).
- Hatzfeld, J. 1919: *Les Trafiquants italiens dans l'orient hellénique* (Paris).
- Haverfield, F. 1913: *Ancient Town Planning* (Oxford).
- Heberdey, R. and Kalinka, E. 1896: *Bericht über zwei Reisen im südwestlichen Kleinasien* (Vienna).
- Heberdey, R. 1929: *Temessische Studien* (Vienna).
- Heberdey, R. 1941: *Tituli Asiae Minoris* 3.1 (Vienna).
- Hedrick, C. W. Jr. 1991: 'Phratry shrines of Attica and Athens', *Hesperia* 60, 241-68.
- Hemer, C. J. 1989: *The Book of Acts in the Setting of Hellenistic History* (Tübingen).
- Herak, M. and Stringfield, V. T. 1972: *Karst* (Amsterdam).
- Hesse, B., and Perkins, D. 1974: 'Faunal Remains from Karataş-Semayük in Southwest Anatolia: An Interim Report', *Journal of Field Archaeology* 1, 149-60.
- Higgs, E. S. 1972: *Papers in Economic Prehistory I* (Cambridge).
- Hild, F. and Hellenkemper, H. 1990: *Kilikien und Isaurien, Tabula Imperii Byzantini* 5 (Vienna).
- Hild, F. (ed.) forthcoming: *Byzans als Raum* (Vienna).
- Hillenbrand, R. 1999: "Anjar and Early Islamic Urbanism", in Brogiolo, G. P. and Ward-Perkins, B. (eds.) 1999, 59-98.
- Hillier, B. and Hanson, J. 1984: *The Social Logic of Space* (Cambridge).
- Hirschfeld, G. 1879: *Bericht über eine Reise im südwestlichen Kleinasien* (Berlin).
- Hirschfeld, Y. 1995: *The Palestinian Dwelling* (Jerusalem).

- Hirschfeld, Y. 1999: 'Habitat', in Bowersock, G., Brown, P. and Grabar, O. (eds.), 258-72.
- HM Stationary Office 1937: *Weather in the Mediterranean* 1 (London).
- Hobsbawm, E. J. 1985: *Bandits* (London, second edition).
- Hobsbawm, E. J. 1992: *Nations and Nationalism since 1780* (2<sup>nd</sup> edition, Cambridge).
- Hodder, I., Isaac, G. and Hammond, N. (eds.) 1981: *Pattern of the Past: Studies in Honour of David Clarke* (Cambridge).
- Hodder, I. 1982: *Symbols in Action* (Cambridge).
- Hodges, R. and Whitehouse, D. 1983: *Mohammed, Charlemagne and the Origins of Europe* (London).
- Hodkinson, S. 1988: 'Animal husbandry in the Greek polis', in Whittaker, C. R. (ed.) 1988, 35-74.
- Hoepfner, W. and Schwandner, E.-L. 1994: *Haus und Stadt im klassischen Griechenland* (second edition, Munich).
- Höhfeld, V. 1989: 'Siedlungs-und Wirtschaftsgang im ländlichen Raum der Troas' in *Ostrmittel-und Osteuropa. Beiträge zur Landeskunde, Festschrift für Adolf Karger* 1, Tübingen, 337-52.
- Holmes Pegler, H. S. 1910: *The Book of the Goat* (London).
- Honigmann, E. (ed.), 1939: *Le Synekdemus d'Hierokles et l'opuscule géographique de George de Chypre* (Brussels).
- Hopkins, K. 1978: 'Economic growth and towns in classical antiquity', in Abrams, P., and Wrigley, E. A. (eds.) 1978, 35-77.
- Hopkins, K. 1980: 'Taxes and Trade in the Roman Empire (200 B.C.-A.D. 400)', *Journal of Roman Studies*, 101-25.
- Hopwood, K. (ed.) 1999: *Organised Crime in Antiquity* (Wales).
- Hopwood, K. 1999: 'Bandits between grandees and the state: The structure of order in Roman Rough Cilicia', in Hopwood, K. (ed.) 1993, 177-206.
- Horden, P. and Purcell, N. 2000: *The Corrupting Sea* (Oxford)
- Horsley, G. H. R. 1999: *Homer in Pisidia* (Sydney).
- Hornblower, S. 1982: *Mausolus* (Oxford).

- Hornblower, S. and Spawforth, A. (eds.) 1996: *The Oxford Classical Dictionary* (third edition, Oxford).
- Hoskyn, R. 1842: 'Narrative of a Survey of part of the South Coast of Asia Minor; and of a Tour into the Interior of Lycia in 1840-1', *The Journal of the Royal Geographical Society*, 143-161.
- Houwink Ten Cate, P. H. J. 1961: *The Luwian Population Groups of Lycia and Cilicia Aspera During the Hellenistic Period* (Leiden).
- Houwink Ten Cate, P. H. J. 1992: 'The Bronze Tablet of Tudhaliyas IV and its Geographical and Historical Relations', *Zeitschrift für Assyriologie* 82, 233-70.
- Howgego, C. 1985: *Greek Imperial Countermarks* (London).
- Humphrey, J. H. (ed.) 1995: *The Roman and Byzantine Near East* (Ann Arbor).
- Hütteroth, W.-D. 1982: *Türkei* (Darmstadt).
- İnalcık, H. 1973: *The Ottoman Empire*, (London).
- İnalcık, H. 1980: 'Military and Fiscal Transformation in the Ottoman Empire, 1600-1700', *Archivum Ottomanicum* 6, 283-337 (reprinted in İnalcık, H. 1985, V).
- İnalcık, H. 1985: *Studies in Ottoman Social and Economic History* (Aldershot).
- İnalcık, H. 1994: *An Economic and Social History of the Ottoman Empire* (Cambridge).
- İnan, J. 1993: 'Neue Forschungen zum Sebasteion von Bubon und seinen Statuen', in Borchhardt, J. and Dobesch, G. (eds.) 1993, 213-39.
- İnan, J. 1994: *Bubon Sebasteionu ve Heykelleri Üzerine Son Araştırmalar* (Istanbul).
- İplikçioğlu, B., Çelgen, G. and Çelgen, A. V., 1991: *Epigraphische Forschungen in Temessos und seinem Territorium I* (Vienna).
- İplikçioğlu, B., Çelgen, G. and Çelgen, A. V., 1992a: *Epigraphische Forschungen in Temessos und seinem Territorium I* (Vienna).
- İplikçioğlu, B., Çelgen, G. and Çelgen, A. V., 1992b: *Neue Inschriften aus Nord-Lykien I* (Vienna).
- İplikçioğlu, B., Çelgen, G. and Çelgen, A. V., 1994: *Epigraphische Forschungen in Temessos und seinem Territorium I* (Vienna).
- Isager, S. and Skydsgaard, J. E. 1992: *Ancient Greek Agriculture* (London).

- İslamoğlu-İnan, H. (ed.) 1987: *The Ottoman Empire and the World Economy* (Cambridge).
- İslamoğlu-İnan, H. 1987: 'State and Peasants in the Ottoman Empire: A Study of Peasant Economy in North-Central Anatolia during the Sixteenth Century', in İslamoğlu-İnan, H. (ed.) 1987, 101-59.
- Irons, W. and Dyson, N., (eds.) 1972: *Perspectives on Nomadism* (Leiden).
- Işın, G. 1998: 'The Ruins at Kozan-Bodrumkaya: Pednelissos', *Adabya* 3, 111-28.
- Jameson, S. 1965: *Lycia and Pamphylia under the Roman Empire from Augustus to Diocetian* (Oxford D. Phil thesis).
- Jameson, M. 1983: 'Famine in the Greek World', in Garnsey, P. and Whittaker, C. R. (eds.) 1983, 6-16.
- Jameson, M. H., Runnels, C. N. and van Andel, T. 1994: *A Greek Countryside* (Stanford).
- Jameson, M. 1990: 'Private Space and the Greek City', in Murray, O. and Price, S. (eds.), 1990, 171-95.
- Johnson, G. A. 1972: 'A test of the utility of Central Place Theory in archaeology', in Ucko, P. J., Tringham, R. and Dimbleby, G. W. (eds.) 1972, 769-85.
- Johnson, M. H. 1993: 'Rethinking the Great Rebuilding', *Oxford Journal of Archaeology* 12, 117-25.
- Johnson, S. 1983: 'Late Roman Urban Defences in Europe', in Maloney, J. and Hopley, B. (eds.) 1983, 68-76.
- Jones, A. H. M. 1940: *The Greek City from Alexander to Justinian* (Oxford).
- Jones, A. H. M. 1964: *The Later Roman Empire 284-602* (Oxford).
- Jones, A. H. M. 1971: *The Cities of the Eastern Roman Provinces* (second edition, Oxford).
- Jones, A. H. M. 1974: *The Roman Economy* (Brunt, P. A. (ed.))
- Jongman, W. 1988: 'Adding it up', in Whittaker, C. R. (ed.) 1988, 210-2.
- Kafesoğlu, I. 1953: *Sultan Melikşah Devrinde Büyük Selçuklu İmparatorluğu* (Istanbul).
- Kearsley, R. 1988: 'A leading Family of Cibyra and some Asiarchs of the first century', *Anatolian Studies* 38, 43-51.
- Kearsley, R. 1994: 'The Milyas and the Attalids: a Decree of the City of Olbasa and a New Royal Letter of the Second Century B.C.', *Anatolian Studies* 45, 47-57.

- Keen, A. 1992: 'The Dynastic tombs of Xanthos - who was buried where?', *Anatolian Studies* 42, 53-63.
- Keen, A. 1998: *Dynastic Lycia* (Leiden).
- Kehoe, D. P. 1994: 'Approaches to Profit and Management in Roman Agriculture', in Carlsen, J., Ørsted, P. and Skydsgaard, J. E. (eds.) 1994, 45-58.
- Kent, S. (ed.) 1990: *Domestic Architecture and the Use of Space* (Cambridge).
- Khazanov, A. M. 1994: *Nomads and the Outside World* (2<sup>nd</sup> edition, Wisconsin).
- Kiel, M. 1990: 'Remarks on the Administration of the Poll Tax (*cizye*) in the Ottoman Balkans and the value of Poll Tax Registers for Demographic Research' in *Etudes Balkaniques* 26, 70-104.
- Kiel, M. and Sauerwein, F. 1994: *Ost-Lokeris in türkischer und neugriechischer Zeit (1460-1981)*, Passau.
- Kiel, M. 1997: 'The Rise and Decline of Turkish Boeotia, 15th - 19th Century', in Bintliff, J., (ed.) 1997, 315-58.
- Kiel, M. (forthcoming): 'Ottoman Balboura', in Coulton, J. J. (ed.) forthcoming.
- Killen, J. T. 1964: 'The wool industry of Crete in the Late Bronze Age', *Annual of the British School of Archaeology at Athens* 59, 1-15.
- King, A. and Henig, M. (eds.) 1981: *The Roman West in the Third Century* (Oxford).
- King, R., Proudfoot, L. and Smith, B. 1997: *The Mediterranean* (London).
- Kirsten, E. 1956: *Die griechische Polis als historisch-geographisches Problem des Mittelmeerraumes* (Bonn).
- Kitzinger, E. 1974: 'A Fourth Century Mosaic Floor in Pisidian Antioch', *Mélanges Mansel* I (Ankara), 385-95.
- Kjeldsen, K. and Zahle, J. 1975: 'Lykische Gräber, ein vorläufiger Bericht', *Archäologischer Anzeiger* 90, 312-50.
- Knoblauch, P. 1993: 'Eine topographische Aufnahme des Stadtgebietes von Arycanda in Lykien', in Borchhardt, J. and Dobesch, G. (eds.) 1993, 125-30.
- Koch, G. and Sichtermann, H. 1982: *Römische Sarkophage* (Munich).
- Kolb, F., Kupke, B., Miller, M., Zimmerman, M. 1991: 'Spätantike und byzantinische Besiedlung auf dem Gebiet der lykischen Polis Kyaneai', *Klio* 73, 563-85.

- Kolb, F. 1993: 'Besiedlung und Bodennutzung auf dem Territorium der lykischen Polis Kyaneai', in Borchhardt, J. and Dobesch, G. (eds.) 1993, 97-110.
- Kolb, F. 1998: 'Hanedanlık Yerleşiminden Otonom Kente Gelişme: Klasik Çağ'da Likya'da Akültürasyon', *Adabıya* 3, 37-62.
- Konrad, C. F. 1989: 'Das Datum der neuen Maximinus-Inschrift von Colbasa', *Epigraphica Anatolica* 13, 89-90.
- Kosmetatou, E. and Waelkens, M. 1997: 'The <<Macedonian>> Shields of Sagalassos', in Waelkens, M. and Poblome, J. (eds.) 1997, 277-92.
- Krautheimer, R. 1979: *Byzantine Architecture* (3<sup>rd</sup> edition, Harmondsworth).
- Kravari, V., Lefort, J. and Morrisson, C. (eds.) 1991: *Hommes et richesses dans l'Empire byzantin* II (Paris).
- Lake, S. 1937: *Dated Greek Miniscule Manuscripts to the Year 1200* vol. 7 (Boston).
- Lanckoronski, K. and Niemann, G. 1890: *Die Städte Pamphyliens und Pisidiens I Pamphylien* (Vienna).
- Lanckoronski, K. and Niemann, G. 1892: *Die Städte Pamphyliens und Pisidiens II Pisidien* (Vienna).
- Lane Fox, R. 1986: *Pagans and Christians* (London).
- Launey, M. 1949: *Recherches sur les armées hellénistiques* 1 (Paris).
- Larsen, J. A. O. 1956: 'The Araxa Inscription and the Lycian Confederacy', *Classical Philology* 51, 151-69.
- Laurence, R. 1994: *Roman Pompeii: Space and Society* (London).
- Laurence, R. and Wallace-Hadrill, A. (eds.) 1997: *Domestic Space in the Roman World: Pompeii and Beyond* (Portsmouth, Rhode Island).
- Lauter-Bufe, H. and Lauter, H. 1971: 'Wohnhäuser und Stadtviertel des klassischen Athen', *Athenische Mitteilungen* 86, 109-24.
- Lauter, H. 1971: 'Reisenotizen aus Karien', *BjB* 171, 132-149.
- Lavan, L. 2001: 'The late-antique city: a bibliographic essay', in Lavan L. (ed.) 2001, 9-26.
- Layton, R. 1972: 'Settlement and community', in Ucko, P. J., Tringham, R. and Dimpleby, G. W. (eds.) 1972, 377-81.

- Lawrence, A. W. 1979: *Greek Aims in Fortification* (Oxford).
- Lawrence, A. W. 1983: *Greek Architecture* (fourth edition, revised by Tomlinson, R. A. T., Yale).
- Lawrence Angel, J. 1970: 'Appendix: Human Skeletal Remains at Karatas', *American Journal of Archaeology* 74, 253-5.
- Leake, W. M. 1824: *Journal of a Tour in Asia Minor* (London).
- Le Bas, P. and Waddington, W. H. 1870: *Voyage archéologique en Grèce et en Asie Mineure; Inscriptions* 3.1 (Paris).
- Leibundgut, C., Gunn, J, and Dassargues, A. (eds.) 1998: *Karst Hydrology* (Wallingford).
- Leibundgut, C. 1998: 'Vulnerability of karst aquifers', in Leibundgut, C., Gunn, J, and Dassargues, A. (eds.) 1998, 45-60.
- Lemerle, P. 1979: *The Agrarian History of Byzantium from the Origins to the Twelfth Century* (Galway).
- Lepelley, C. (ed.) 1996: *La fin de la cité antique et le début de la cité médiévale* (Bari).
- Leschhorn, W. 1993: *Antike Ären* (Stuttgart).
- Levick, B. 1967: *Roman Colonies in Asia Minor* (Oxford).
- Levick, B. 1987: 'Urbanization in the Eastern Empire', in Wachter, J. (ed.) 1987, I. 329-344.
- Levy, T. E. 1992: 'Transhumance, Subsistence, and Social Evolution in the Northern Negev Desert', in Bar-Yosef, O. and Khazanov, A. M. (eds.) 1992, 65-82.
- Lewthwaite, J. 1981: 'Plain tales from the hills: transhumance in mediterranean archaeology', in Sheridan, A. and Bailey, G., (eds.) 1981, 57-66.
- Liebeschuetz, W. 1972: *Antioch: City and imperial administration in the Later Roman Empire* (Oxford).
- Liebeschuetz, W. 1992: 'The End of the Ancient City', in Rich, J. (ed.) 1992, 1-49.
- Lightfoot, C. S. 1998: 'Cremna in Pisidia', *Journal of Roman Archaeology* 11, 665-8.
- Lloyd, C. 1983: 'Greek urbanity and the polis', in Marchese, R. (ed.) 1983, 11-41.
- Lloyd, J. 1991a: 'Farming the highlands: Samnium and Arcadia in the Hellenistic and early Roman Imperial periods', in Barker, G. and Lloyd, J. A. (eds.) 1991, 180-93.

- Lloyd, J. 1991b: 'Forms of rural settlement in the early Roman empire', in Barker, G., and Lloyd, J. A. (eds.) 1991, 233-40.
- Locock, M. (ed.) 1994: *Meaningful Architecture. Social Interpretations of Buildings* (London).
- Lohmann, H. 1992: 'Agriculture and Country Life in Classical Attica', in Wells, B. (ed.) 1992, 29-57.
- Lohmann, H. 1993: *Atene I, II* (Cologne, Weimar, Vienna).
- Lomas, K. 1995: 'Urban elites and cultural definition: Romanization in southern Italy', in Cornell, T.J. and Lomas, K. (eds.) 1995, 107-20.
- Lowry, H. 1992: *Studies in Deferology, Analecta Isisiana IV*, Istanbul.
- Lucas, P. 1724: *Voyages du Sieur Paul Lucas par ordre de Louis XIV I* (Rouen).
- MacDonald, W. L. 1986: *The Architecture of the Roman Empire II* (New Haven and London).
- Machatschek, A. and Schwarz, M. 1981: *Bauforschungen in Selge* (Vienna).
- Mackie, N. 1990: 'Urban munificence and the growth of urban consciousness in Roman Spain', in Blagg, T. and Millett, M. (eds.) 1990, 179-91.
- MacMullen, R. 1966: *Enemies of the Roman Order* (Yale).
- MacMullen, R. 1974a: *Roman Social Relations* (Yale).
- MacMullen, R. 1974b: 'Peasants During The Principate,' *Aufstieg und Niedergang der römischen Welt* 2.1, 253-61.
- MacMullen, R. 1982: 'The epigraphic habit in the Roman Empire', *American Journal of Philology* 103, 233-46.
- MacMullen, R. 1988: *Corruption and the Decline of Rome* (New Haven and London).
- Macready, S. and Thompson, F. H. (eds.) 1987: *Roman Architecture in the Greek World* (London).
- Macridy-Bey, T. 1904: *Revue Bibliographique* NS 1 (Paris).
- Magie, D. 1950: *Roman Rule in Asia Minor* 1, 2 (Princeton).
- Magnarella, P. J. 1979: *The Peasant Venture. Tradition, Migration and Change among Georgian Peasants in Turkey* (Cambridge, Massachusetts).
- Malkin, I. S. 1987: *Religion and Colonisation in Ancient Greece* (Leiden).

- Maloney, J. and Hopley, B. (eds.) 1983: *Roman Urban Defences in the West* (London).
- Mango, C. 1980: *Byzantium* (London).
- Mango, C. 1986: *Byzantine Architecture* (London).
- Mansi, J. D. (eds.) 1757-1927: *Sacrorum Conciliorum nova et amplissima Collectio* 53 vols. (Florence).
- Marazzi, F. 2000: 'Rome in Transition: Economic and Political Change', in Smith, J. M. H. (ed.) 2000, 21-41.
- Marchese, R. (ed.) 1983: *Aspects of Graeco-Roman Urbanism* (Oxford).
- Martin, R. 1974: *L'urbanisme dans la Grèce antique* (2<sup>nd</sup> edition, Paris).
- Mason, K. (ed.) 1942: *Turkey 1* (Oxford).
- Matthews, J. 1989: *The Roman Empire of Ammianus* (London).
- Matthews, R. (ed.) 1998: *Ancient Anatolia* (London).
- Mattingly, D. J. 1988a: 'Oil for Export? A Comparison of Libyan, Spanish, and Tunisian Olive Oil Production in the Roman Empire', *Journal of Roman Archaeology* 1, 33-56.
- Mattingly, D. J. 1988b: 'Olea Mediterranea', *Journal of Roman Archaeology* 1, 153-61.
- Mattingly, D. J. 1988c: 'The Olive Boom: Oil Surpluses, Wealth, and Power in Roman Tripolitania', *Libyan Studies* 19, 21-41.
- Mattingly, D. J. 1993: 'Maximum Figures and Maximizing Strategies of Oil Production? Further thoughts on the Processing Capacity of Roman Olive presses,' in Amouretti, M.-C. and Brun, J.-P. (eds.) 1993, 483-98.
- Mattingly, D. J. 1994: 'Regional Variation in Roman Oleoculture: Some Problems of Comparability', in Carlsen, J., Ørsted, P. and Skydsgaard, J. E. (eds.) 1994, 91-106.
- Mattingly, D. J. 1995: *Tripolitania* (London).
- Mattingly, D. J. 1996: 'First Fruit? The Olive in the Roman World', in Shipley, G. and Salmon, J. (eds.) 1996, 213-53.
- Mattingly, D. J. (ed.) 1997: *Dialogues in Roman Imperialism* (Portsmouth, Rhode Island).
- McNeill, J. R. 1992: *The Mountains of the Mediterranean World* (Cambridge).
- McNicoll, A. W. 1972: 'The development of urban defences in Hellenistic Asia Minor', in

- Ucko, P. J., Tringham, R. and Dimbleby, G. W. (eds.) 1972, 787-91.
- McNicoll, A. W. 1997: *Hellenistic Fortifications from the Aegean to the Euphrates* (Milner, N. (ed.), Oxford).
- Mee, C. 1978: 'Aegean Trade and Settlement in Anatolia in the Second Millenium BC', *Anatolian Studies* 28, 121-55.
- Mee, C., Gill, D., Forbes, H. and Foxhall, L. 1991: 'Rural settlement change in the Methana Peninsula, Greece', in Barker, G. and Lloyd, J. A. (eds.) 1991, 223-32.
- Mee, C. and Forbes, H. 1997: *A Rough and Rocky Place* (Liverpool).
- Meiggs, R. 1982: *Trees and Timber in the Ancient Mediterranean World* (Oxford).
- Mellaart, J. 1955: 'Iron Age Pottery from Southern Anatolia', *Bulleten* 19, 115-36.
- Mellaart, J. 1958: 'Excavations at Hacilar. First Preliminary Report', *Anatolian Studies* 8, 127-57.
- Mellaart, J. 1959: 'Excavations at Hacilar. Second Preliminary Report', *Anatolian Studies* 9, 51-67.
- Mellaart, J. 1960: 'Excavations at Hacilar. Third Preliminary Report', *Anatolian Studies* 10, 83-105.
- Mellaart, J. 1961a: 'Excavations at Hacilar. Fourth Preliminary Report', *Anatolian Studies* 11, 39-75.
- Mellaart, J. 1961b: 'Early Cultures of the South Anatolian Plateau I', *Anatolian Studies* 11, 166-72.
- Mellaart, J. 1962: 'The Late Bronze Age Monuments of Eflatun Pinar and Fasillar near Beyşehir', *Anatolian Studies* 12, 111-7.
- Mellart, J. 1963: 'Early Cultures of the South Anatolian Plateau II', *Anatolian Studies* 13, 199-234.
- Mellaart, J. 1967: *Çatal Hüyük* (London).
- Mellink, M. 1970: 'Excavations at Karataş-Semayük and Elmalı 1969', *American Journal of Archaeology* 74, 245-53.
- Mellink, M. 1971: 'Excavations at Karataş-Semayük and Elmalı 1970', *American Journal of Archaeology* 75, 245-55.
- Mellink, M. 1972: 'Excavations at Karataş-Semayük and Elmalı 1971', *American Journal of Archaeology* 76, 257-69.

- Mellink, M. 1976: 'Local, Phrygian and East Greek traits in Northern Lycia', *Revue Archéologique*, 21-34.
- Mellink, M. 1989: 'Archaeology in Anatolia', *American Journal of Archaeology* 93, 105-33.
- Mellink, M. 1998: *Kızılbel: An Archaic Painted Tomb Chamber in Northern Lycia* (Philadelphia).
- Mersich, N. 1986: 'Einige Festungen im pisidisch-pamphyllischen Grenzgebiet', *Jahrbuch des österreichischen Byzantinistik* 36, 1986, 191-200.
- Metzger, H. and Coupel, P. (eds.) 1963: *Fouilles de Xanthos II, l'acropole lycienne* (Paris).
- Metzger, H. (ed.) 1979: *Fouilles de Xanthos 6, La Stèle trilingue de Létöon* (Paris).
- Metzger, H. (ed.) 1980: *Actes du colloque sur la Lycie antique* (Paris).
- Meyer, E. 1968: *Einführung in die antike Staatskunde* (Darmstadt).
- Meyer, E. A. 1990: 'Explaining the Epigraphic Habit in the Roman Empire: the Evidence of Epitaphs', *Journal of Roman Studies* 80, 74-96.
- Millar, F. 1992: *The Emperor in the Roman World* (second edition, London).
- Millar, F. 1967: *The Roman Empire and its Neighbours* (London).
- Miller, S. G. 1995: 'Architecture as Evidence for the Identity of the Early Polis', in Hansen, M. H. (ed.) 1995, 201-44.
- Milner, N. 1991: 'Victors in the Meleagria and the Balbouran Élite', *Anatolian Studies* 41, 23-62.
- Milner, N. 1998: *An Epigraphical Survey in the Kibyra-Olbasa Region Conducted by A. S. Hall* (London).
- Miret, M., Sanmarti, J. and Santacana, J. 1991: 'From indigenous structures to the Roman world: models for the occupation of central coastal Catalunya', in Barker, G., and Lloyd, J. A. (eds.) 1991, 47-53.
- Mirza, M. N. and Dungworth, D. B. 1995: 'The potential misuse of genetic analyses and the social construction of 'race' and 'ethnicity'', *Oxford Journal of Archaeology* 14, 345-54.
- Mitchell, S. 1987: 'Imperial Building in the Eastern Roman Provinces', in Macready, S., and Thompson, F. H. (eds.), 1987, 18-25.
- Mitchell, S. 1988: 'Maximinus and the Christians in AD 312. A New Latin Inscription', *Journal of Roman Studies* 78, 105-24.

- Mitchell, S. and Waelkens, M. 1988: 'Cremna and Sagalassos', *Anatolian Studies* 38, 53-65.
- Mitchell, S., Owens, E. and Waelkens, M. 1989: 'Ariassos and Sagalassos 1988', *Anatolian Studies* 39, 63-77.
- Mitchell, S. 1990: 'Festivals, Games, and Civic Life in Roman Asia Minor', *Journal of Roman Studies* 80, 183-93.
- Mitchell, S. 1991a: 'Ariassos 1990', *Anatolian Studies* 41, 159-72.
- Mitchell, S. 1991b: 'The Hellenization of Pisidia', *Mediterranean Archaeology* 4, 119-45.
- Mitchell, S. 1992: 'Hellenismus in Pisidien', in Schwertheim, E. (ed.) 1992, 1-27.
- Mitchell, S. 1993: *Anatolia. Land, Men, and Gods in Asia Minor* 1, 2 (Oxford).
- Mitchell, S. 1994a: 'Three Cities in Pisidia', *Anatolian Studies* 44, 129-48.
- Mitchell, S. 1994b: 'Termessos, King Amyntas and the war with the Sandaliôtai. A new inscription from Pisidia', in French, D. (ed.), 1994: 93-105.
- Mitchell, S. 1995: *Cremna in Pisidia* (London).
- Mitchell, S. 1996a: '1995 Yılı Pisidia Araştırması', XIV *Araştırma Sonuçları Toplantısı*, 47-62.
- Mitchell, S. 1996b: 'The Development of Classical Cities and Settlements in Late Roman Anatolia', in Yıldız, S. (ed.), *Housing and Settlement in Anatolia: A Historical Perspective* (Istanbul), 193-205.
- Mitchell, S. 1998a: 'The Pisidian Survey', in Matthews, R. (ed.) 1998, 237-54.
- Mitchell, S. and Waelkens, M. 1998: *Pisidian Antioch* (London).
- Mitchell, S. 1999: 'Native rebellion in the Pisidian Taurus', in Hopwood, K. (ed.) 1999, 155-75.
- Mitchell, S. 2000: *The Inscriptions of Central Pisidia* (Bonn).
- Mitchell, S. forthcoming: 'The settlement of Pisidia in Late Antiquity and the Byzantine Period: Methodological Problems,' in Hild, F. forthcoming.
- Modéran, Y. 1996: 'La renaissance des cités dans l'Afrique du VI<sup>e</sup> siècle d'après une inscription récemment publiée', in Lepelley, C. (ed.) 1996, 85-114.
- Money, D. K. 1990: 'Lions of the Mountains: the Sarcophagi of Balboura', *Anatolian Studies* 40, 29-54.

- Moretti, G. 1921: 'Le Rovine di Pednelissos', *Annuario della R Scuola Archeologica di Atene e delle Missioni Italiane in Oriente* 3 (1916-20), 79-133.
- Morgan, C. and Coulton, J. J. 1997: 'The *Polis* as a Physical Entity', in Hansen, M. H. (ed.) 1997, 87-144.
- Moody, J. and Grove, A. T. 1990: 'Terraces and enclosure walls in the Cretan landscape', in Bottema, S., Entjes-Nieborg, G., Van Zeist, W. (eds.) 1990, 183-191.
- Morganstern, J. (ed.) 1993: *The Fort at Dereag̃z̃z* (Tübingen).
- Morganstern, J. 1983: *The Byzantine Church at Dereag̃z̃z and its Decoration* (Tübingen).
- Morris, I. 1991: 'The early polis as city and state', in Rich, J., and Wallace-Hadrill, A. (eds.) 1991, 25-57.
- Morris, I. (ed.) 1994: *Classical Greece, Ancient Histories and Modern Archaeologies* (Cambridge).
- Morris, I. 1994: 'Village society and the rise of the Greek state', in Doukellis, P. N. and Mendoni, L. G. (eds.) 1994, 49-53.
- Müller-Wiener, W. 1988: *Griechisches Bauwesen in der Antike* (Berlin).
- Murray, O. and Price, S. (eds.) 1990: *The Greek City from Homer to Alexander* (Oxford).
- Muscarella, O. W. 1989: 'King Midas of Phrygia and the Greeks', in Emre, K., Hrouda, B., Mellink, M. and Özgüç, N. (eds.) 1989, 333-44.
- Naour, C. 1976: 'Inscriptions et reliefs de Cibyratide et de Cabalide', *Zeitschrift für Papyrologie und Epigraphik* 22, 111-36.
- Naour, Chr. 1980: *Tyriaion en Cabalide: épigraphie et géographie historique* (Zutphen).
- Naroll, R. 1962: 'Floor area and Settlement Population', *American Antiquity* 27, 587-9.
- Neef, R. 1990: 'Introduction, development and environmental implications of olive culture: The evidence from Jordan', in Bottema, S., Entjes-Nieborg, G., Van Zeist, W. (eds.) 1990, 295-306.
- Neumann, G. 1961: *Untersuchungen zum Weiterleben hethitischen und luwischen Sprachgutes in hellenistischer und römischer Zeit* (Würzburg).
- Nielsen, T. H. 1996: 'Arkadia: City-Ethnics and Tribalism', in Hansen, M. H. (ed.) 1996, 117-63.
- Nielsen, T. H. (ed.) 1997: *Yet More Studies in the Ancient Greek Polis* (Copenhagen).

- Nixon, L., Price, S., Moody, J. and Rackham, O. 1994: 'Rural settlement in Sphakia, Crete', in Doukellis, P. N. and Mendoni, L. G. (eds.) 1994, 255-65.
- Nixon, L., Moody, J., Price, S., Rackham, O. 2000: *The Sphakia Survey: Internet Edition*, <http://sphakia.classics.ox.ac.uk>.
- Nixon, L. and Price, S. 2001: 'The Diachronic Analysis of Pastoralism through Comparative Variables', in *The Annual of the British School at Athens*, 395-424.
- Nobbe (ed.) 1966 repr.: *The Geography of Ptolemy*.
- Nollé, J. and Schindler, F. 1991: *Die Inschriften von Selge* (Bonn).
- Nollé, J. 1992: 'Zur Geschichte der Stadt Etenna in Pisidien', in Schwertheim, E. (ed.) 1992, 61-141.
- Nollé, J. 1993: *Side im Altertum I* (Bonn).
- Oakes, H. 1954: *The Soils of Turkey* (Ankara).
- Oakley, S. P. 1995: *The Hill-forts of the Sarmites* (London).
- Olçay, N. 1969: *Annual of the Archaeological Museum of Istanbul* 15/16.
- Oldfield, F. 1983: 'Man's impact on the environment: some recent perspectives', *Geography* 68, 245-56.
- Ormerod, H. A. 1922: 'The campaigns of Servilius Isauricus against the pirates', *Journal of Roman Studies* 12, 35-56.
- Orselli, A. M. 1999: 'L'Idée chrétienne de la ville: quelques suggestions pour l'Antiquité Tardive et le Haut Moyen Age', in Brogiolo, G. P. and Ward-Perkins, B. (eds.) 1999, 181-194.
- Osborne, R. 1987: *Classical Landscape with Figures: The Ancient Greek City and its Countryside* (London).
- Osborne, R. 1995: 'Buildings and residence on the land in Classical and Hellenistic Greece', *Annual of the British School at Athens* 80, 119-28.
- Osborne, R. 1996: *Greece in the Making 1200-479 BC* (London).
- Ostrogorsky, G. 1963: *Geschichte des byzantinischen Staates* (Munich).
- Otten, H. 1988: *Die Bronzetafel von Boğazköy* (Wiesbaden).
- Owens, E. 1991: *The City in the Greek and Roman World* (London).

- Özgen, E. and Özgen, I. (eds.) 1992: *Antalya Museum* (2<sup>nd</sup> edition, Ankara).
- Özsait, M. 1980: *İlkçağ Tarihinde Pisidya* (Istanbul).
- Özsait, M. 1984: '1982 Yılı Burdur Çevresi Prehistorik Araştırmaları', *Araştırma Sonuçları Toplantısı* 1, 7-12.
- Özsait, M. 1985: '1983 Yılı Burdur-Isparta Çevresi Prehistorik Araştırmaları', *Araştırma Sonuçları Toplantısı* 2, 205-20.
- Özsait, M. 1986: '1984 Yılı Burdur-Isparta Çevresi Prehistorik Araştırmaları', *Araştırma Sonuçları Toplantısı* 3, 389-408.
- Özsait, M. 1987: '1984 ve 1985 Yılı Isparta Çevresi Tarih Öncesi Araştırmaları', *Araştırma Sonuçları Toplantısı* 4, 323-33.
- Özsait, M. 1988: '1985 ve 1986 Yılı Yalvaç Çevresi Tarihöncesi Araştırmaları', *Araştırma Sonuçları Toplantısı* 5.2, 257-74.
- Özsait, M. 1989: '1987 Yılı Şarkikaraağaç-Yalvaç Çevresi Tarihöncesi Araştırmaları', *Araştırma Sonuçları Toplantısı* 6, 301-12.
- Özsait, M. 1990: '1987 ve 1988 Yılı Senirkent Çevresi Tarihöncesi Araştırmaları', *Araştırma Sonuçları Toplantısı* 7, 381-9.
- Özsait, M. 1991: '1989 Yılı Gölhisar Çevresi Tarihöncesi Araştırmaları', *Araştırma Sonuçları Toplantısı* 8, 35-44.
- Özsait, M. 1993: '1991 Yılı Burdur-Çeltikçi ve Yeşilova Yüzey Araştırmaları', *Araştırma Sonuçları Toplantısı* 10, 331-44.
- Özsait, M. 1994: '1992 Yılı Isparta-Gelendost Yüzey Araştırmaları', *Araştırma Sonuçları Toplantısı* 11, 301-10.
- Özsait, M. 1995: '1993 Yılı Antalya-Korkuteli Yüzey Araştırmaları', *Araştırma Sonuçları Toplantısı* 12, 483-96.
- Özsait, M. 1996: '1994 Yılı Antalya-Korkuteli Yüzey Araştırmaları', *Araştırma Sonuçları Toplantısı* 13.2, 293-313.
- Özsait, M. 1997: '1995 Yılı Antalya-Korkuteli Yüzey Araştırmaları', *Araştırma Sonuçları Toplantısı* 14.2, 193-214.
- Özsait, M. and Şahin, H. 1998: '1996 Yılı Isparta ve Çevresi Yüzey Araştırmaları', *Araştırma Sonuçları Toplantısı* 15.2, 121-42.
- Özsait, M. 1999: '1997 Yılı Isparta ve Çevresi Yüzey Araştırması', *Araştırma Sonuçları Toplantısı* 16, 77-107.

- Pace, B. 1921: 'La zona costiera da Adalia a Side', *Annuario della R Scuola Archeologica di Atene e delle Missioni Italiane in Oriente* 3 (1916-20), 29-71.
- Paribeni, R. and Romanelli, P. 1914: 'Studi e ricerche archeologiche nell' Anatolia meridionale', *Monumenti Antichi* 23, 5-277.
- Paribeni, R. 1921: 'Di una città della: forse Pednelissos', *Annuario della R Scuola Archeologica di Atene e delle Missioni Italiane in Oriente* 3 (1916-20), 73-8.
- Parker Pearson, M. and Richards, C. 1994: *Architecture and Order* (London).
- Parkins, H. M. (ed.), 1997: *Roman Urbanism* (London).
- Parkins, H. M. and Smith, C. (eds.) 1998: *Trade, Traders and the Ancient City* (London).
- Patterson, J. 1991: 'Settlement, City and Elite in Samnium and Lycia', in Rich, J. and Wallace-Hadrill, A. (eds.), 1991: 147-68.
- Paulissen, E., Poesen, J., Govers, G. and De Ploey, J. 1993: 'The Physical Environment at Sagalassos (Western Taurus, Turkey)', in Waelkens, M. and Poblome, J. (eds.) 1993, 229-248.
- Pekman, A. 1989: *Perge Tarihi* (Ankara).
- Pekridou, A. 1986: *Das Alketas-Grab in Termessos (IstMitt Beih.32)* (Tübingen).
- Percival, J. 1981: *The Roman Villa* (Berkeley and Los Angeles).
- Perring, D. 1991: 'Spatial organisation and social change in Roman towns', in Rich, J., and Wallace-Hadrill, A. (eds.) 1991, 273-94.
- Perry, J. (ed.) 1975: *Personal Identity* (Berkeley, Los Angeles, and London).
- Petersen, E. and von Luschan, F. 1889: *Reisen in Lykien, Milyas und Kibyris* (Vienna).
- Planhol, X. de 1958: *De la plaine pamphylienne aux lacs pisidiens. Nomadisme et vie paysanne* (Paris).
- Pleket, H. W. 1983: 'Urban elites and business in the Greek part of the Roman Empire', in Garnsey, P., Hopkins, K. and Whittaker, C. R. (eds.) 1983, 131-44.
- Pleket, H. W. 1998: 'Models and Inscriptions: Export of Textiles in the Roman Empire', *Epigraphica Anatolica* 30, 117-28.
- Polignac, F. de 1984: *La Naissance de la cité grecque* (Paris).
- Pollitt, J. J. 1986: *Art in the Hellenistic Age* (Cambridge).

- Polunin, O. 1987: *Flowers of Greece and the Balkans* (Oxford).
- Popovic, V. 1982: 'Desintegration und Ruralisation der Stadt in Ost-Illyricum vom 5. Bis 7. Jh. n. Chr.', *Palast und Hütte*, 545-66 (Mainz).
- Potter, D. S. and Mattingly, D. J. (eds.) 1999: *Life, Death, and Entertainment in the Roman Empire* (Michigan).
- Potter, T. 1995: *Towns in Late Antiquity: Iol Caesarea and its Context* (Oxford).
- Price, S. R. F. 1984: *Rituals and Power* (Cambridge).
- Quatert, D. 1973: *Ottoman Reform and Agriculture in Anatolia*, PhD thesis (unpublished) UCLA.
- Le Quien, Q. 1740: *Oriens Christianus in quattuor patriarchatus digestus* I (Paris).
- Rackham, O. 1990a: 'The Greening of Myrtos', in Bottema, S., Entjes-Nieborg, G., Van Zeist, W. (eds.), 341-8.
- Rackham, O. 1990b: 'Ancient Landscapes', in Price, S. and Murray, O. (eds.) 1990, 85-111.
- Rackham, O. 1996: 'Ecology and pseudo-ecology: the example of ancient Greece', in Shipley, G. and Salmon, J. (eds.) 1996, 16-43.
- Rackham, O. and Moody, J. 1996: *The Making of the Cretan Landscape* (Manchester).
- Radici Colace, P. 1979: *Choerili Samii Reliquiae* (Rome).
- Ramsay, W. M. 1883: 'The Graeco-Roman civilisation in Pisidia', *Journal of Hellenic Studies* 4, 23-45.
- Ramsay, W. M. 1885: 'Notes and Inscriptions from Asia Minor', *Mitteilungen des Deutschen Archäologischen Instituts in Athen*, 334-42.
- Ramsay, W. M. 1888: 'Antiquities of Southern Phrygia and the Border Lands', *American Journal of Archaeology* 4, 6-21, 263-83.
- Ramsay, W. M. 1892: *The Church in the Roman Empire before AD 170* (London).
- Ramsay, W. M. 1893: 'Micrasiania 3. Pisidie', in *Revue des Etudes Grecques* 6, 251-7.
- Ramsay, W. M. 1890: *The Historical Geography of Asia Minor* (Oxford).
- Ramsay, W. M. 1895a: *The Cities and Bishoprics of Phrygia* 1 (Oxford).

- Ramsay, W. M. 1895b: *St Paul the Traveller and Roman Citizen* (London).
- Ramsay, W. M. 1897: *The Cities and Bishoprics of Phrygia* 1 (Oxford).
- Ramsay, W. M. 1902: 'Pisidia and the Lycaonian frontier', *Annual of the British School in Athens* 9, 243-73.
- Ramsay, W. M. (ed.) 1906: *Studies in the History and Art of the Eastern Provinces of the Roman Empire* (Aberdeen).
- Ramsay, W. M. 1906: 'The Tekmoreian Guest-Friends: An Anti-Christian Society on the Imperial Estates at Pisidian Antioch', in Ramsay, W. M. (ed.) 1906, 305-77.
- Ramsay, W. M. 1907: *The Cities of St Paul* (London).
- Ramsay, W. M. 1916: 'Colonia Caesaria (Pisidian Antioch) in the Augustan Age', *Journal of Roman Studies* 6, 83-134.
- Ramsay, W. M. 1917: 'Studies in the Roman Province Galatia', *Journal of Roman Studies* 7, 229-83.
- Ramsay, W. M. 1928: 'Inscriptions en langue pisidienne', in *Revue des universités du Midi*, 353.
- Ramsay, W. M. 1930: 'Res Anatolicae 3. Ecce Iterum Pisidia', *Klio* 23, 239-55.
- Rathbone, D. 1983: 'The Grain Trade and Grain Shortages in the Hellenistic East', in Garnsey, P. and Whittaker, C. R. (eds.) 1983, 45-55.
- Reece, R. 1981: 'The Third Century: Crisis or Change?', in King, A. and Henig, M. (eds.) 1981, 27-38.
- Reece, R. 1990: 'Romanization: a point of view', in Blagg, T. and Millett, M. (eds.) 1990, 30-4.
- Reger, G. 1994: *Regionalism and Change in the Economy of Independent Delos* (Berkeley, Los Angeles and Oxford).
- Renfrew, C. and Wagstaff, M. (eds.) 1982: *An Island Polity* (Cambridge).
- Renfrew, C. and Cherry, J. F. (eds.) 1986: *Peer Polity Interaction and Socio-Political Change* (Cambridge).
- Renfrew, C. and Bahn, P. 1991: *Archaeology. Theories, Methods and Practice* (London).
- Rich, J. and Wallace-Hadrill, A. (eds.), 1991: *City and Country in the Ancient World* (London).

- Rich, J. (ed.) 1992: *The City in Late Antiquity* (London).
- Rickman, G. 1980: *The Corn Supply of Ancient Rome* (Oxford).
- Rikli, M. 1943: *Das Pflanzenkleid der Mittelmeerländer I* (Bern).
- Rizakis, A. D. 1997: 'Roman Colonies in the Province of Achaia: Territories, Land and Population', in Alcock, S. E. (ed.) 1997, 15-36.
- Robert, L. 1935: 'Notes d'Épigraphie Hellénistique', *Bulletin de Correspondance Hellénique* 59, 421-37.
- Robert, L. 1937: *Études anatoliennes* (Paris).
- Robert, L. 1949: *Hellenica* 7 (Paris).
- Robert, L., and Robert, J. 1950: 'Bulletin Épigraphique', *Revue des Études Grecques* 63, 121-220.
- Robert, L. and Robert, J. 1954: *La Carie II* (Paris).
- Robert, L. 1955: *Hellenica* 10 (Paris).
- Robert, L. 1960: *Hellenica* 11-12 (Paris).
- Robert, L. 1961: 'Les Kordakia de Nicée, le combustible de Synnada et les poissons-scies. Sur des lettres d'un métropolitain de Phrygia au Xe siècle. Philologie et réalités,' *Journal des Savants*, 97-166.
- Robert, L. 1962: *Villes d'Asie Mineure* (second edition, Paris).
- Robert, L. 1966: *Documents de l'Asie Mineure méridionale* (Paris).
- Robert, L. and Robert, J. 1977: 'La persistance de la toponymie antique dans l'Anatolie, in *La toponymie antique, Actes du colloque de Strasbourg 12-14 juin 1975* (Strasbourg), 11-63; reprinted in Robert, L. 1989, 469-521.
- Robert, L. 1980: *A Travers l'Asie Mineure* (Paris).
- Robert, L. 1981: 'Documents d'Asie Mineure', *Bulletin de Correspondance Hellénique* 105, 330-60.
- Robert, L. and Robert, J. 1982: 'Bulletin Épigraphique', *Revue des Études Grecques* 95, 322-432.
- Robert, L. 1989: *Opera Minora Selecta VI* (Amsterdam).
- Roberts, N. 1990: 'Human-induced landscape change in South and Southwest Turkey

- during the later Holocene', in Bottema, S., Entjes-Nieborg, G., Van Zeist, W. (eds.) 1990, 53-67.
- Robertson, D. S. 1945: *A Handbook of Greek and Roman Architecture* (Cambridge).
- Robinson, D. M. 1926: 'Greek and Latin Inscriptions from Asia Minor', *TAPA* 57, 195-237.
- Robinson, D. H. (ed.) 1979: *The Elements of Agriculture* (15<sup>th</sup> edition, London).
- Robinson, T. H. 1999a: 'Erbinna, the 'Nereid Monument' and Xanthus', in Tsetskhladze, G. R. (ed.) 1999, 361-77.
- Robinson, T. H. 1999b: 'Ottoman Records and Classical Archaeology', in Docter, R. F., and Moormann, E. M. (eds.) 1999, 335-8.
- Robinson, T. H. 2001: 'The Decline of Urban Settlement in Pisidia - from City to Village', in Demoen, K. (ed.) 2001, 87-100.
- Robinson, T. H. forthcoming: 'Crossing Boundaries: Transhumance in the South-West Taurus in Antiquity', in Elton, H. and Reger, G., (eds.) forthcoming.
- Rockwell, P. 1993: *The Art of Stone-working* (Cambridge).
- Roller, D. W. 1987: 'Tanagra Survey Project 1985. The Site of Grimadha', in *The Annual of the British School at Athens* 82, 213-32.
- Roller, D. W. 1989a: *Tanagran Studies* 1 (Amsterdam).
- Roller, D. W. 1989b: *Tanagran Studies* 2 (Amsterdam).
- Rosenbaum, E., Huber, G., Onurkan, S. (eds.) 1967: *A Survey of Coastal Cities in Western Cilicia* (Ankara).
- Rossiter, J. 1981: 'Wine and Oil Processing at Roman Farms in Italy', *Phoenix* 35, 345-61.
- Rostovtzeff, M. 1941: *The Social and Economic History of the Hellenistic World* I, II, III (Oxford).
- Rostovtzeff, M. 1957: *The Social and Economic History of the Roman Empire* I, II (Second edition, revised by Fraser, P. M., Oxford).
- Rott, H. 1908: *Kleinasiatische Denkmäler aus Pisidien, Pamphylien, Kappadokien und Lykien* (Leipzig).
- Roueché, C. 1989: *Aphrodisias in Late Antiquity* (London).
- Roueché, C. and Smith, R. R. R. (eds.) 1996: *Aphrodisias Papers* 3 (Ann Arbor).

- Roussel, D. 1976: *Tribu et cité* (Paris).
- Rowlands, M. J. 1972: 'Defence: a factor in the organization of settlements', in Ucko, P. J., Tringham, R. and Dimbleby, G. W. (eds.) 1972, 447-62.
- Rowlands, M. J., Larsen M. and Kristiansen, K. (eds.) 1987: *Centre and Periphery in the Ancient World* (Cambridge).
- Rowley, T. 1978: *Villages in the Landscape* (London).
- Roy, J. 1996: 'Polis and Tribe in Classical Arkadia', in Hansen, M. H. and Raaflaub, K. (eds.) 1996, 107-12.
- Rumscheid, F. 1994: *Untersuchungen zur kleinasiatischen Bauornamentik des Hellenismus* 1, 2 (Mainz).
- Ruschenbusch, E. 1985: 'Die Zahl der griechischen Staaten und Arealgrösse und Bürgerzahl der 'Normalpolis'', *Zeitschrift für Papyrologie und Epigraphik* 59, 253-63.
- Ryder, M. L. 1983: *Sheep and Man* (London).
- Şahin, S. 1994: *Die Inschriften von Arykanda* (Vienna).
- Sallares, R. 1991: *The Ecology of the Ancient Greek World* (New York).
- Sams, K. G. 1986: 'Schools of Geometric Painting in Early Iron-Age Anatolia', in Akurgal, E. (ed.) 1986, 1.227-36.
- Santos Yanguas, N. 1977: 'Algunos problemas sociales en Asia Menor en la segunda mitad del siglo IV d.C.: Isaurios y Maratocuprenos', *Hispania Antiqua* 7, 351-78.
- Sartre, M. 1995: *L'Asie Mineure et l'Anatolie* (Paris).
- Schieffer, R. 1984: *Acta Conciliorum Oecumenicorum. Index Generalis Tomorum I-III, Pars Tertia* (Rome).
- Schiffer, M. B. (ed.) 1986: *Advances in Archaeological Method and Theory* 9 (London).
- Schindler, F. 1972: *Die Inschriften von Bubon (Nordlykien)* (Vienna).
- Schulz, A. 1992: 'Ariassos - eine hellenistisch-römische Stadt in Pisidien', in Schwertheim, E. (ed.) 1992, 29-42.
- Schwartz, E. 1922: *Acta Conciliorum Oecumenicorum* I, II, III (Berlin and Leipzig).
- Schwertheim, E. (ed.) 1992: *Forschungen in Pisidien* (Bonn).

- Scranton, R. L. 1941: *Greek Walls* (Cambridge, Mass.).
- Sekunda, N. V. 1998: 'Nearchus the Cretan and the Foundation of Cretopolis', *Anatolian Studies* 47, 217-23.
- Ševčenko, I. and Ševčenko, N. (eds.) 1984: *The Life of St. Nicholas of Sion* (Massachusetts).
- Shafer, R. 1950: '“Pisidian”', *American Journal of Philology* 71, 239-70.
- Shafer, R., 1963: 'Lycia, Milya, Solymoi. A new Anatolian Language', *Minos* 8, 125-9.
- Shahid, I. 1984: *Byzantium and the Arabs in the Fourth Century* (Dumbarton Oaks)
- Shanin, T. (ed.) 1971: *Peasants and Peasant Societies* (Harmondsworth).
- Shanks, M. and Tilley, C. 1987: *Social Theory and Archaeology* (Cambridge).
- Shaw, B. D. and Saller, R. P. 1981: *Economy and Society in Ancient Greece* (London).
- Shaw, B. 1984: 'Bandits in the Roman Empire', *Past and Present* 105, 3-51.
- Shaw, B. 1990: 'Bandit Highlands and Lowland Peace: The Mountains of Isauria-Cilicia', *Journal of the Economic and Social History of the Orient* 33, 199-233, 237-70.
- Shaw, B. D. 2001: 'Challenging Braudel: a new vision of the Mediterranean', *Journal of Roman Archaeology* 14, 419-53.
- Sheridan, A. and Bailey, G. (eds.) 1981: *Economic Archaeology: towards an integration of ecological and social approaches* (London).
- Sherwin-White, A. N. 1976: 'Rome, Pamphylia and Cilicia', *Journal of Roman Studies* 66, 1-14.
- Shingley, G. and Salmon, J. (eds.) 1996: *Human Landscape in the Ancient World* (London).
- Shingley, G. 1999: *The Greek World After Alexander 393-30 BC* (London).
- Skydsgaard, J. E. 1988: 'Transhumance in ancient Greece', in Whittaker, C. R. (ed.) 1988, 75-86.
- Skydsgaard, J. E. 1992: 'Agriculture in Ancient Greece', in Wells, B. (ed.) 1992, 9-12.
- Smith, D. I. 1993: 'The Nature of Karst Aquifers and their Susceptibility to Pollution', in Williams, P. W. (ed.) 1993, 41-58.
- Smith, J. M. H. (ed.) 2000: *Early Medieval Rome and the Christian West* (Leiden).

- Smith, P. E. L. 1972: 'Land-use, settlement patterns and subsistence agriculture: a demographic perspective', in Ucko, P. J., Tringham, R. and Dimbleby, G. W. (eds.) 1972, 409-25.
- Smith, R. R. R. 1991: *Hellenistic Sculpture* (London).
- Smith, T. J. 1997: 'Votive Reliefs from Balboura and its Environs', *Anatolian Studies* 47, 3-32.
- Snodgrass, A. 1980: *Archaic Greece: the Age of Experiment* (London).
- Snodgrass, A. 1987: *An Archaeology of Greece* (Berkeley, Los Angeles, London).
- Snodgrass, A. 1991: 'Archaeology and the Study of the Greek City', in Rich, J. and Wallace-Hadrill, A. (eds.) 1991, 1-23.
- Sodini, J.-P. 1995: 'Habitat de l'antiquité tardive', *Topoi* 5/1, 151-218.
- Sodini, J.-P. 1997: 'Habitat de l'antiquité tardive', *Topoi* 7/2, 435-577.
- Spratt, T. A. B. and Forbes, E. 1847: *Travels in Lycia, Milyas, and the Cibyratis* I, II (London).
- Stähler, K. 1968: 'Zu den Iphigeniereliefs in Termessos', *Archäologische Anzeiger*, 280-9.
- Stark, F. 1958: 'Alexander's march from Miletus to Phrygia', *Journal of Hellenic Studies* 78, 102-20.
- Ste Croix, G. E. M. de 1981: *The Class Struggle in the Ancient Greek World* (London).
- Sterrett, J. R. S. 1887: 'An Epigraphical Journey in Asia Minor', *Papers of the American School of Classical Studies at Athens* 2 (Boston, Damrell and Upham).
- Sterrett, J. R. S. 1888: 'The Wolfe Expedition to Asia Minor', *Papers of the American School of Classical Studies at Athens* 3 (Boston, Damrell and Upham).
- Strubbe, J. 1986: 'The Sitonia in the Cities of Asia Minor under the Principate (I)', *Epigraphica Anatolica* 10, 45-82.
- Strubbe, J. 1989: 'The Sitonia in the Cities of Asia Minor under the Principate (II)', *Epigraphica Anatolica* 13, 99-122.
- Swain, S. 1996: *Hellenism and Empire* (Oxford).
- Sweeting, M. M. 1972: *Karst Landforms* (London).
- Syme, R. 1995: *Anatolica* (Oxford).

- Szynkiewicz, S. 1989: 'Interactions between the nomadic cultures of central Asia and China in the Middle Ages', in Champion, T. C. (ed.) 1989, 151-8.
- Tainter, J. A. 1988: *The Collapse of Complex Societies* (Cambridge).
- Takeshi, Y. (ed.) 1989: *Urbanism in Islam* 1 (Tokyo).
- Tapper, N. 1977: 'Pashtun nomad women in Afghanistan', *Asian Affairs*, 163-70.
- Tapper, R. L. 1979: 'The organization of nomadic communities in pastoral societies of the Middle East', in L'Equipe écologie et anthropologie des sociétés pastorales (ed.) 1979, 95-114.
- Taşlıalan, M. 1997: 'Pisidia Antiocheia'sı 1995 yılı çalışmaları, *Müze Kurtarma Kazıları Semineri*, 8-10 Nisan 1996, 221-51.
- Tate, G. 1992: *Les campagnes de la Syrie du nord du IIe au VIIe siècle* I (Paris).
- Tate, G. 1997: 'The Syrian Countryside during the Roman Era', in Alcock, S. E. (ed.) 1997, 55-71.
- Tchernia, A. 1986: *Le Vin de l'Italie Romaine* (Rome).
- Tchernov, E. and Kolska Horwitz, L. 1990: 'Herd management in the past and its impact on the landscape of the southern Levant', in Bottema, S., Entjes-Nieborg, G., Van Zeist, W. (eds.) 1990, 207-16.
- Thirgood, J. V. 1981: *Man and the Mediterranean Forest* (London).
- Tilley, C. 1994: *A Phenomenology of Landscape* (Oxford).
- Tomlinson, R. 1992: *From Mycenae to Constantinople* (London).
- Tönnies, F. 1957: *Community and Society, Gemeinschaft und Gesellschaft* (Michigan).
- Treadgold, W. 1997: *A History of the Byzantine State and Society* (Stanford).
- Trigger, B. G. 1972: 'Determinants of Urban Growth in Pre-Industrial Societies', in Ucko, P. J., Tringham, R. and Dimbleby, G. W. (eds.) 1972, 575-600.
- Trigger, B. G. 1990: 'Monumental Architecture: A Thermodynamic Explanation of Symbolic Behaviour', *World Archaeology* 22, 119-31.
- Tsetschladze, G. R. (ed.) 1999: *Ancient Greeks, West and East* (Leiden).
- Tsuji, S. 1995: *The Survey of Early Byzantine Sites in Ölüdeniz Area (Lycia, Turkey)* (Osaka).
- Tuplin, C. 1987: 'The Administration of the Achaemenid Empire', in Carradice, I. (ed.)

1987, 109-67.

Ucko, P. J., Tringham, R. and Dimbleby, G. W. (eds.) 1972: *Man, Settlement and Urbanism* (London).

Vandeput, L. 1997: *The Architectural Decoration in Roman Asia Minor. Sagalassos: a Case Study* (Leuven).

Van der Vliet, E. H. 1977: *Strabo over Landen, Volken en Steden* (Amsterdam).

Van Neer, W. and De Cupere, B., 1993: 'First Archaeozoological Results from the Hellenistic-Roman Site of Sagalassos', in Waelkens, M. (ed.) 1993, 225-35.

Van Zeist, W., Woldring, H. and Stapert, D. 1975: 'Late Quarternary Vegetation and Climate of Southwestern Turkey', *Palaeohistoria* 17 (Rotterdam), 53-143.

Vasiliev, A. A. 1952: *History of the Byzantine Empire* (2<sup>nd</sup> English Edition, London).

Veyne, P. (ed.) 1987: *A History of Private Life* (Cambridge, Mass. and London).

Viaene, W., Waelkens, M., Ottenburgs, R. and Callebaut, K. 1997: 'An Archaeometric Study of Mortars Used at Sagalassos', in Waelkens, M. and Poblome, J. (eds.) 1997, 405-21.

Vita-Finzi, C. 1969: *The Mediterranean Valleys: Geological Changes in Historical Times* (Cambridge).

de Vries, J. 1976: *The Economy of Europe in an Age of Crisis, 1600-1700* (Cambridge).

de Vries, J. 1984: *European Urbanization 1500-1800* (London).

Vroom, J. 1998: 'Early Modern Archaeology in Central Greece: The Contrast of Artefact-Rich and Sherdless Sites', *Journal of Mediterranean Archaeology* 11, 131-64.

Wacher, J. (ed.) 1987: *The Roman World* I, II (London).

Wacher, J. 1995: 'Small Towns: then, now - and then?', in Brown, A. E. (ed.), 1995, 205-8.

Waelkens, M. 1977: 'Phrygian votive monuments and tombstones as sources of the social and economic life in Roman Antiquity', *Ancient Society* 8, 277-315.

Waelkens, M., Mitchell, S. and Owens, E. 1990: 'Sagalassos 1989', *Anatolian Studies* 40, 185-98.

Waelkens, M. 1987: 'The Adoption of Roman Building Techniques in the Architecture of Asia Minor', in Macready, S. and Thompson, F. H. (eds.) 1987, 94-105.

- Waelkens, M. (ed.) 1993: *Sagalassos I* (Leuven).
- Waelkens, M. and Poblome, J. (eds.) 1993: *Sagalassos II* (Leuven).
- Waelkens, M. and Owens, E. 1994: 'The Excavations at Sagalassos', *Anatolian Studies* 44, 169-86.
- Waelkens, M. and Poblome, J. (eds.) 1995: *Sagalassos III* (Leuven).
- Waelkens, M. and Poblome, J. (eds.) 1997: *Sagalassos IV* (Leuven).
- Waelkens, M. 1997: 'The 1996 Excavations at Sagalassos,' *XIX Kazı Sonuçları Toplantısı II*, 249-300.
- Waelkens, M., Paulissen, E., Van Haverbeke, H., Öztürk, İ., De Cupere, B., Ekinçi, H. A., Vermeesch, P.-M., Poblome, J. and Degeest, R. 1997: 'The 1994 and 1995 Surveys of the Territory of Sagalassos', in Waelkens, M. and Poblome, J. (eds.) 1997, 11-102.
- Waelkens, M. and the Sagalassos team 1997: 'Interdisciplinarity in Classical Archaeology. A Case Study: the Sagalassos Archaeological Research Project (Southwest Turkey)', in Waelkens, M. and Poblome, J. (eds.) 1997, 225-61.
- Wagstaff, J. M. 1981: 'Buried assumptions: some problems in the interpretation of the 'Younger Fill' raised by recent data from Greece', *Journal of Archaeological Science* 8, 247-64.
- Wagstaff, J. M. 1985: *The Evolution of Middle Eastern Landscapes* (London).
- Wallace-Hadrill, A. 1994: *Houses and Society in Pompeii and Herculaneum* (Princeton).
- Ward-Perkins, J. B. and Ballance, M. H 1958: 'The Caesarium at Cyrene and the Basilica at Cremna', *Papers of the British School at Rome* 26, 137-194.
- Ward-Perkins, J. B. 1981: *Roman Imperial Architecture* (London).
- Ward-Perkins, J. B. 1984: *From Classical Antiquity to the Middle Ages* (Oxford).
- Ward-Perkins, J. B. 1996: 'Urban Continuity?', in Christie, N. and Loseby, S. T. (eds.) 1996, 4-17.
- Ward-Perkins, J. B. 1999: 'Re-using the Architectural Legacy of the Past, *entre idéologie et pragmatisme*', in Brogiolo, G. P. and Ward-Perkins, B. (eds.) 1999, 225-44.
- Warner, J. L. 1994: *Elm alı-Karataş II* (Bryn Mawr).
- Wason, P. 1994: *The Archaeology of Rank* (Cambridge).

- Webb, P. A. 1996: *Hellenistic Architectural Decoration* (Madison).
- Weber, M. 1958: *The City* (transl. and ed. by Martindale, D. and Neuwirth, G., London).
- Weiss, P. 1981: 'Ein agonistisches Bema und die isopythischen Spiele von Side', *Chiron* 11, 315-4.
- Weiss, P. 1991: 'Auxe Perge. Beobachtungen zu einem bemerkenswerten städtischen Dokument des späten 3. Jahrhunderts n. Chr.', *Chiron* 21, 353-92.
- Weiss, P. 1992: 'Pisidien: eine historische Landschaft im Licht ihrer Münzprägung', in Schwertheim, E. (ed.) 1992, 143-165.
- Welles, C. B. 1934: *Royal Correspondance in the Hellenistic Period* (New Haven).
- Wells, B. (ed.) 1992: *Agriculture in Ancient Greece* (Stockholm).
- Whittaker, C. R. 1983: 'Late Roman trade and traders', in Garnsey, P., Hopkins, K. and Whittaker, C. R. (eds.) 1983, 163-80.
- Whittaker, C. R. (ed.) 1988: *Pastoral Economies in Classical Antiquity* (Cambridge).
- Whittaker, C. R. 1995: 'Do theories of the ancient city matter?', in Cornell, T.J. and Lomas, K. (eds.) 1995, 9-26.
- Whittow, M. 1990: 'Ruling the Late Roman and Early Byzantine City: A Continuous History', *Past and Present* 129, 3-29.
- Whittow, M. 1996: *The Making of Orthodox Byzantium, 600-1025* (London).
- Wiegand, T. and Schrader, H. 1904: *Priene* (Berlin).
- Wiemer, H.-U. 1997: 'Das Edikt des L. Antistius Rusticus: eine Preisregulierung als Antwort auf eine überregionale Versorgungskrise', *Anatolian Studies* 47, 195-215.
- Wilhelm, A. 1909: *Neue Beiträge zur griechischen Inschriftenkunde II* (Berlin).
- Williams, B. 1975: 'The Self and the Future', in Perry, J. (ed.) 1975, 179-98.
- Williams, P. W. (ed.) 1993: *Karst Terrains* (Cremlingen-Destedt).
- Williamson, G. M. 1999: *Culture and Identity in Lycia* (Oxford DPhil, unpublished).
- Wing, E. S. and Brown, A. B. 1979: *Paleonutrition* (New York).
- Winter, F. E. 1966: 'Notes on the military architecture in the Termessos region', *American Journal of Archaeology* 70, 127-37.

- Winter, F. E. 1971: *Greek Fortifications* (Toronto).
- Wittek, P. 1935: 'Von der byzantinischen zur türkischen Toponymie', *Byzantion* 10, 11-64.
- Wittek, P. 1934: *Das Fürstentum Mentеше* (Istanbul).
- Woloch, G. M. 1983: *Roman Cities* (Wisconsin).
- Woodward, A. M. and Ormerod, H. A., 1910: 'A Journey in South-Western Asia Minor', *The Annual of the British School at Athens* 16, 76-136.
- Woolf, G. 1994: 'Becoming Roman, Staying Greek: Culture, Identity and the Civilizing Process in the Roman East', *Proceedings of the Cambridge Philological Society* 40, 116-43.
- Woolf, G. 1996: 'Monumental Writing and the Expansion of Roman Society in the Early Empire', *Journal of Roman Studies* 86, 22-39.
- Woolf, G. 1997: 'The Roman Urbanization of the East', in Alcock, S. E. (ed.) 1997, 1-14.
- Woolf, G. 1998: *Becoming Roman. The Origins of Provincial Civilisation in Gaul* (Cambridge).
- Wormersley, D. (ed.) 1994: Gibbon E., *The History of the Decline and Fall of the Roman Empire* 1, 2, 3 (London).
- Wörrle, M. 1977: 'Epigraphische Forschungen zur Geschichte Lykiens I: Ptolemaios I. und Limyra', *Chiron* 7, 43-66.
- Wörrle, M. 1978: 'Epigraphische Forschungen zur Geschichte Lykiens II: Ptolemaios II. und Telmessos', *Chiron* 8, 201-46.
- Wörrle, M. 1979: 'Epigraphische Forschungen zur Geschichte Lykiens III: Ein hellenistischer Königsbrief aus Telmessos', *Chiron* 9, 83-111.
- Wörrle, M. 1988: *Stadt und Fest im kaiserzeitlichen Kleinasien* (Munich).
- Wurster, W. W. 1993: 'Dynast ohne Palast - Überlegungen zum Wohnbereich lykischer Feudalherren', in Borchhardt, J. and Dobesch, G. (eds.) 1993, I. 7-30.
- Wycherley, R. E. 1967: *How the Greeks built Cities* (Second edition, London).
- Yegül, F. 1992: *Baths and Bathing in Classical Antiquity* (New York and Cambridge, Mass.).
- Yoffee, N., and Cowgill, G. L. (eds.) 1988: *The Collapse of Ancient States and Civilizations* (Tucson).
- Young, R. S. 1956: 'The Campaign of 1955 at Gordion: Preliminary Report', *American Journal of Archaeology* 60, 249-66.

- Young, R.S. 1981: *Gordion Final Reports 1, Three Great Early Tumuli* (New York).
- Zahle, J. 1975: 'Archaic tumulus tombs in Central Lycia (Phellos), *Acta Archaeologica* 46 (Copenhagen), 312-50.
- Zahle, J. 1980: 'Lycian tombs and Lycian cities', in Metzger, H. (ed.) 1980, 37-48.
- Zgusta, L. 1984: *Kleinasiatische Ortsnamen* (Heidelberg).
- Zimmermann, M. 1996: 'Probus, Carus und die Räuber im Gebiet des pisidischen Termessos', *Zeitschrift für Papyrologie und Epigraphik* 110, 265-77.

1. Map of Hellenistic Pisidia with hypothetical territories marked (Mitchell 2000, fig. 58, with alterations).

2. Map of Roman Pisidia (Mitchell 2000, fig. 58, with alterations).

3. Map of Late Roman Pisidia (Mitchell 2000, fig. 58, with alterations).

4. Map of Pisidian routes with hypothetical territories of Sia and Ariassos marked (French 1992, 174, fig. 1, with alterations).

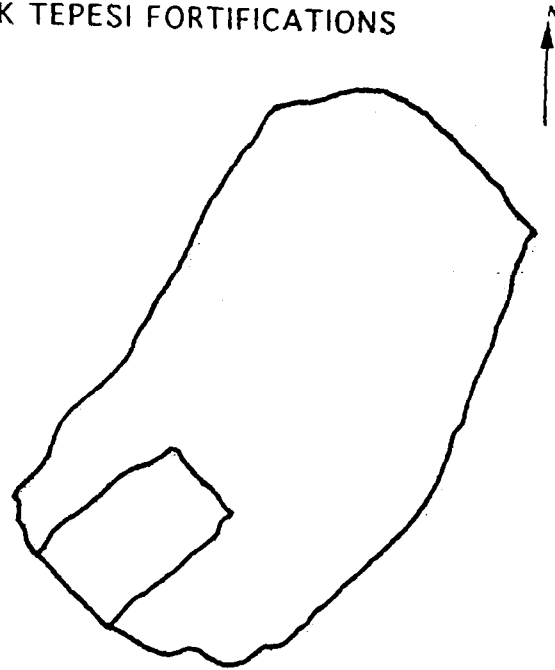
5. Sketch map of southern Pisidia (Mitchell 2000, 180, fig. 59).

6. Map of Sia and immediate environs; 1:25,000.

7. Map of Panemoteichos (Aydal, Mitchell, Robinson and Vandeput 1997, 146, fig. 3).

8. Arlık Tepesi fortifications (drawn using Trimble GPS).

ARILIK TEPESI FORTIFICATIONS



0 10m

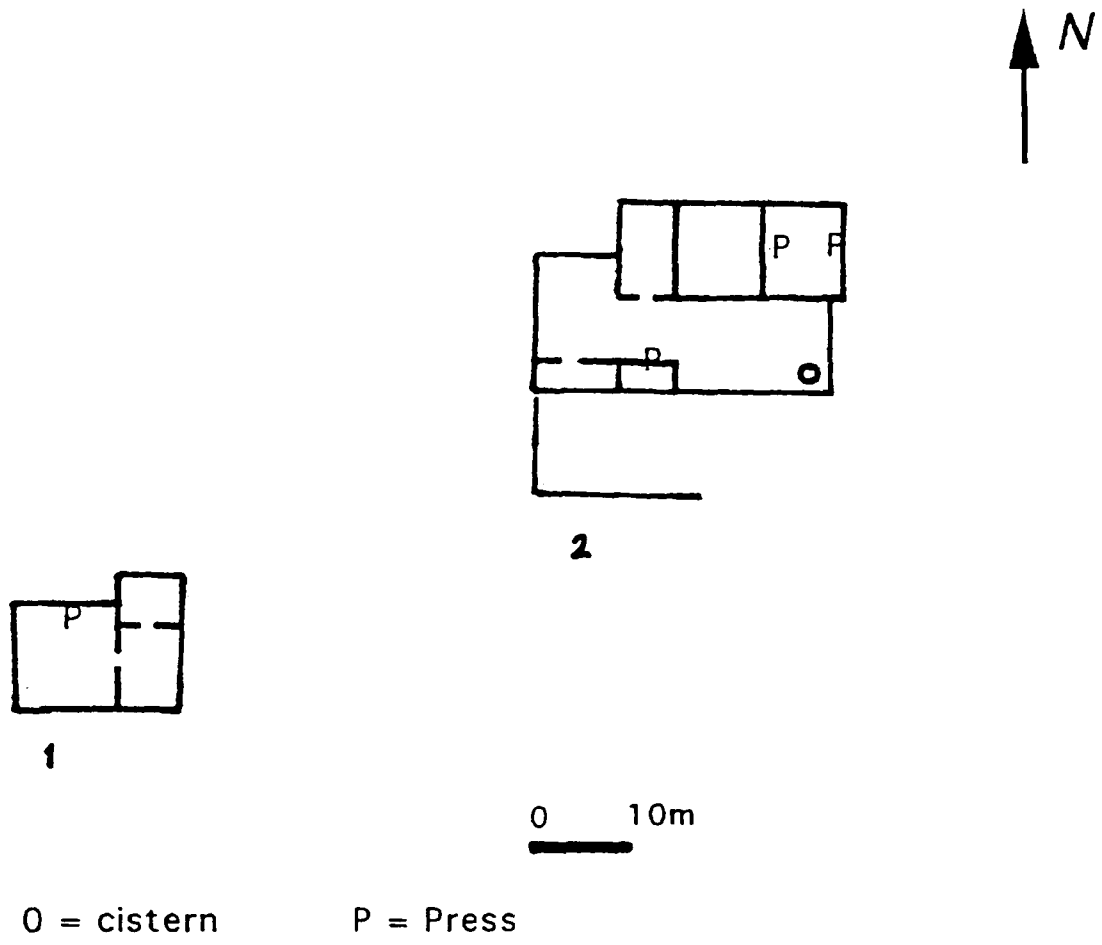
9. Map of Sia (Ayda, with alterations); 1:1,000.

10. Map of Ariasos (Ayda); 1:2,000.

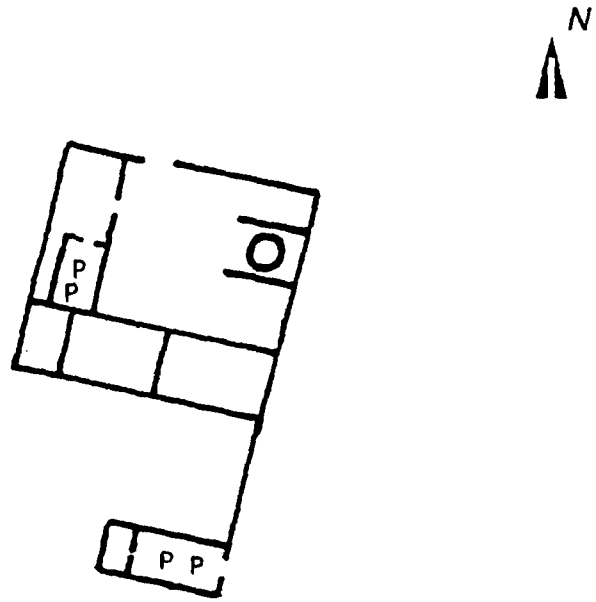
Ariasos

11. Ören Tepe fortifications (Aydal, Mitchell, Robinson and Vandeput 1997, 164, fig. 8); 1:1,000.

12. Sketch plan of first housing group in territory of Sia at Çakıraz.



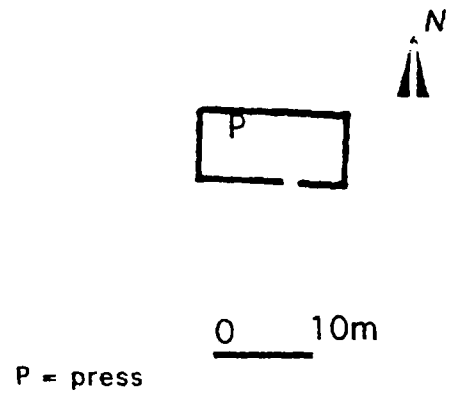
13. Sketch plan of second housing group in territory of Sia at Çakıraz.



0 10m

O = cistern p = press

14. Sketch plan of house in territory of Sia above Köletaşı basin.





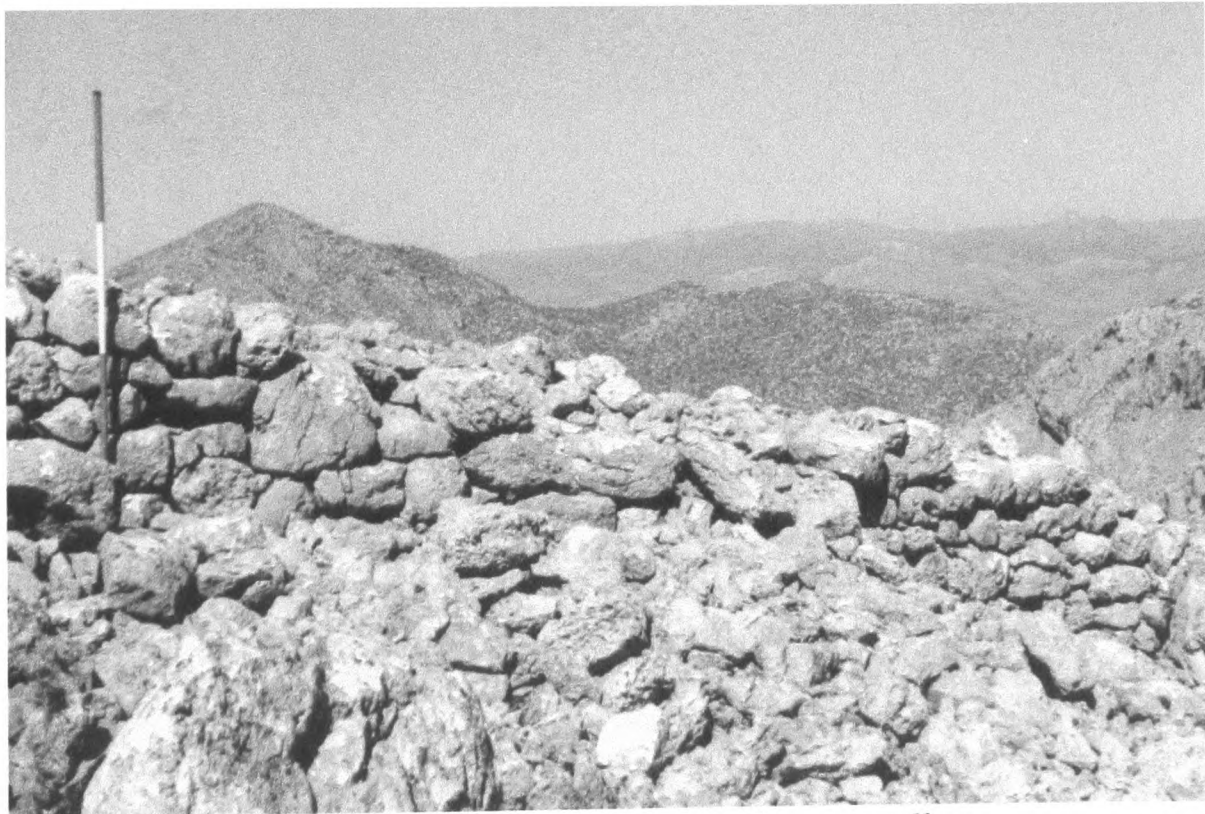
1. View from Sia to the north towards Köletaşı



2. View from Ariassos to the north, Bademağacı village in middle distance



3. Sia, house Qp3, niche (beehive?) feature



4. Panemoteichos 1, northeast wall



5. Arlık Tepesi, eastern fortification wall



6. View southeast from Sia



7. Sia, west fortification wall [A] and tower [T3]



8. Sia, fortification wall [B] between T7 and T8



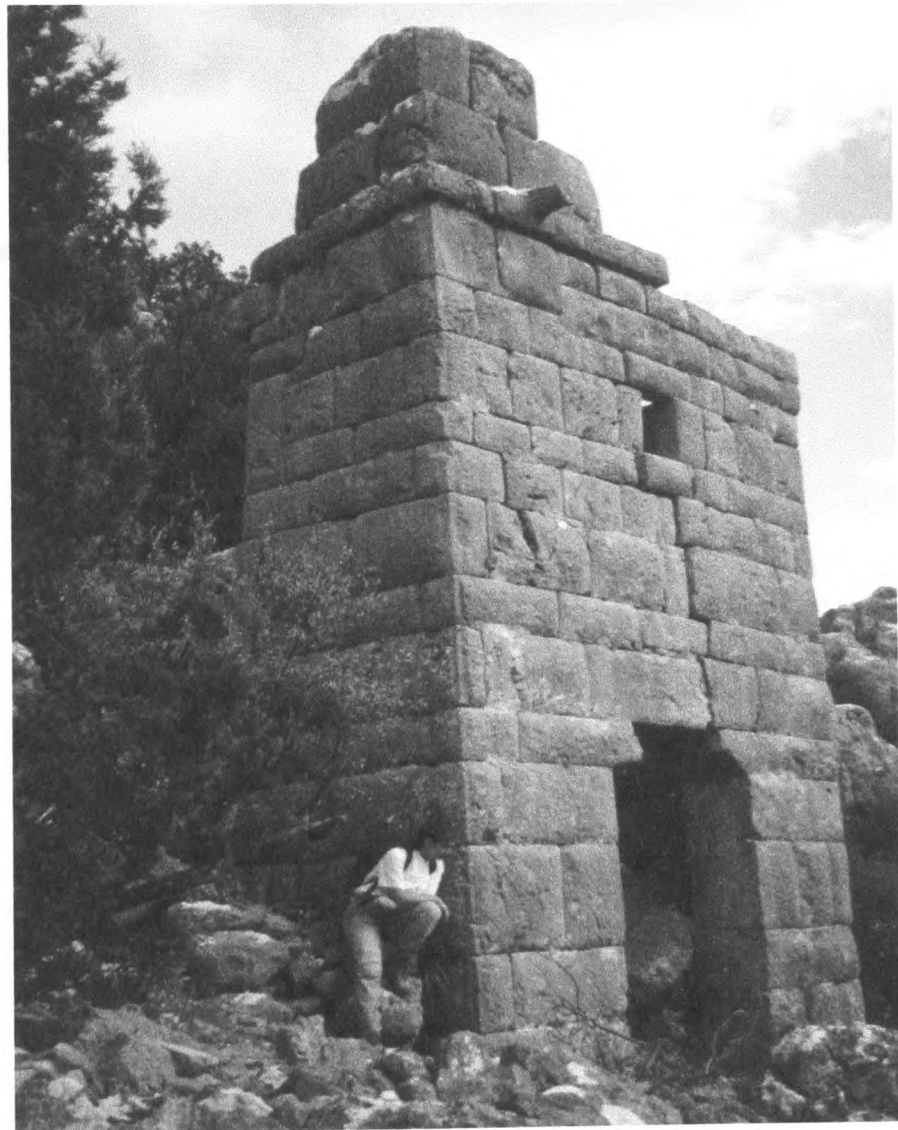
9. Sia, eastern fortification wall [C] towards T9



10. Sia, tower, T7, in fortification wall [B]



11. Sia, fortification wall [B] adjoining T7 showing repaired section



12. Güvercinlik tower



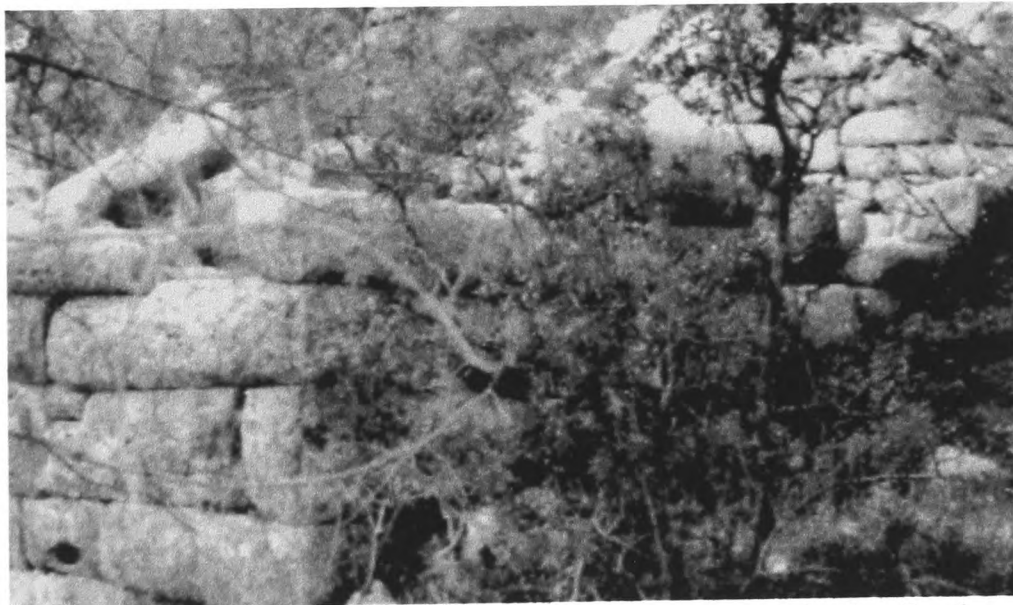
13. Sia, Bouleuterion



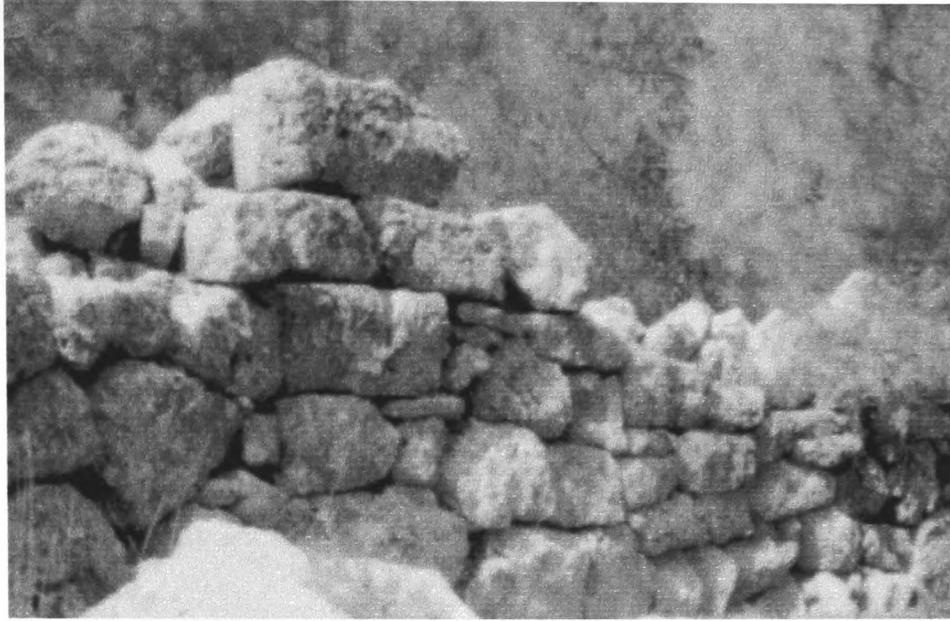
14. Melli, theatre



15. Sia, temple Rq1



16. Sia, Vr1, pulvinated masonry and corner with drafted margin



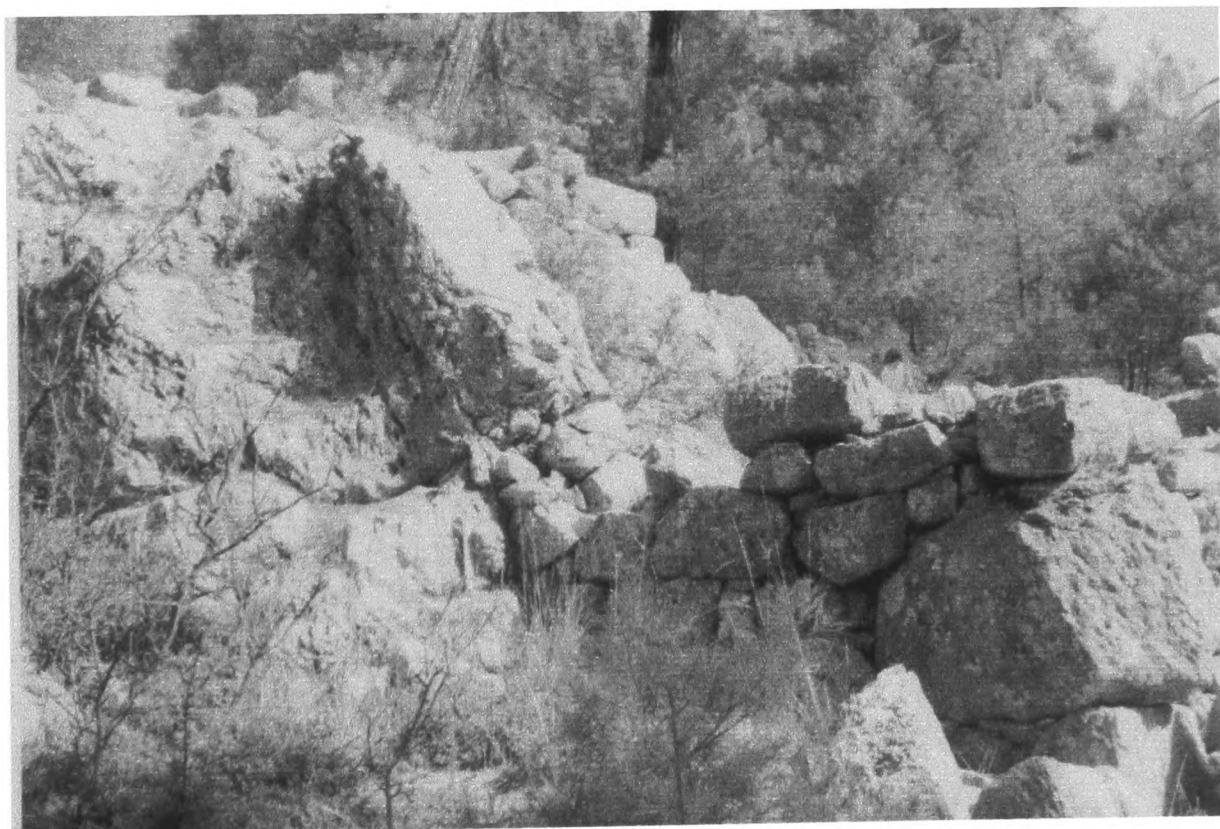
17. Sia, Vs1



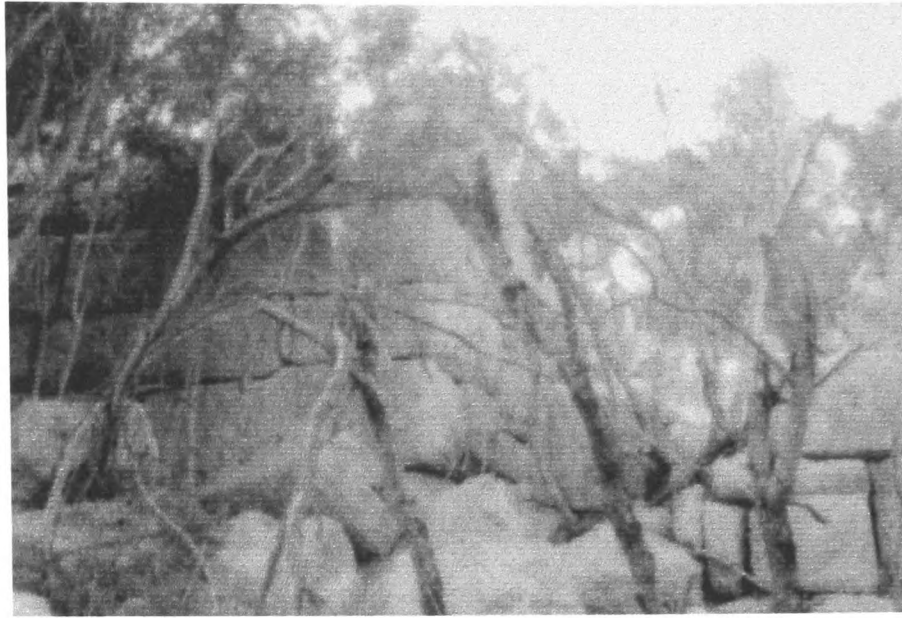
18. Bademağacı village, ruined Ottoman housing



19. Sia, wall of Vm2 adjoining Vm3 (in left corner)



20. Sia, stairs beside Tm1



21. Sia, Tt1



22. Sia, Qq1, window and doorway



23. Sia, Qq3, press weights



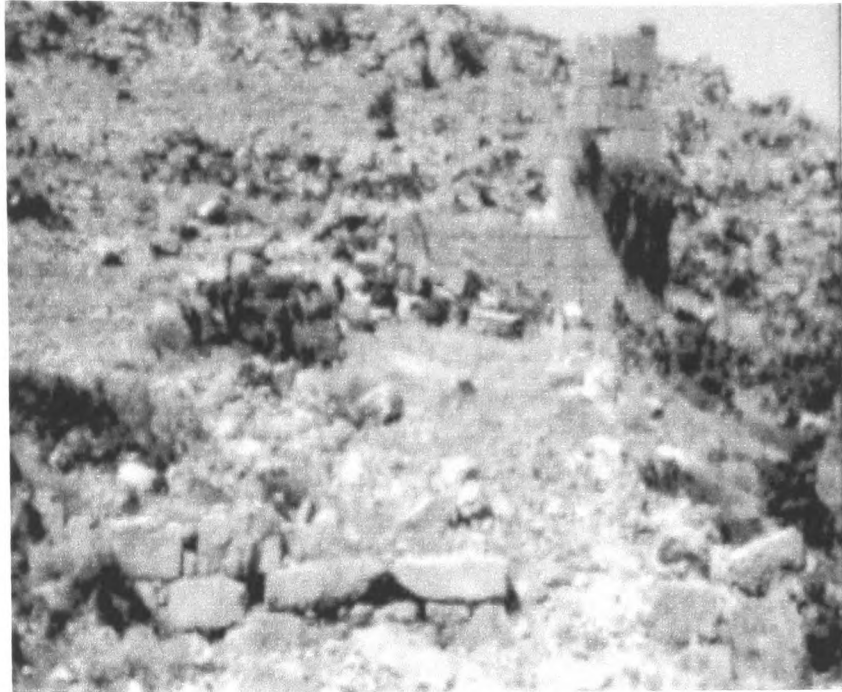
24. Ariassos, viewed from south east



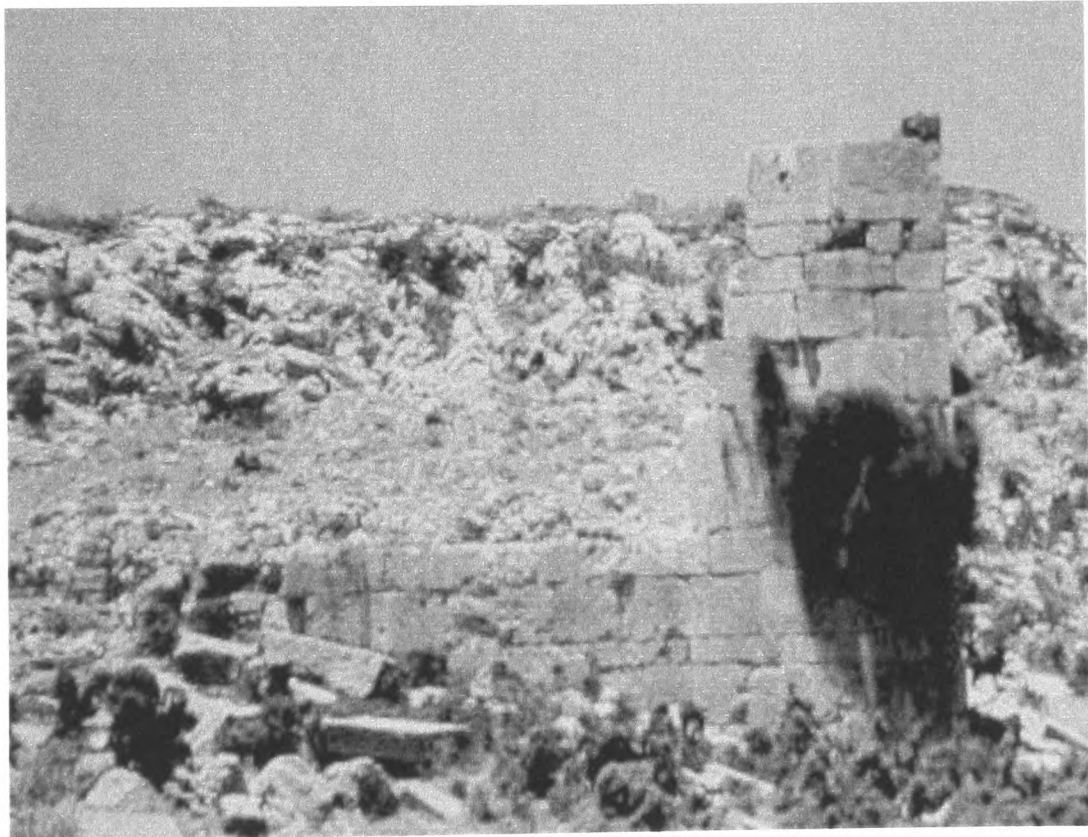
25. Ariassos, fortifications, north side



26. Ariassos, mortar in fortification wall north of house 23



27. Ariassos, house 28/29 from below



28. Ariassos, house 28 ('bastion')



29. Ariassos, steps leading into fortification wall



30. Ariassos, bouleuterion with 'prytaneion' to the left



31. Ariassos, 'prytaneion' from the north



32. Ariassos, 'terrace temple'



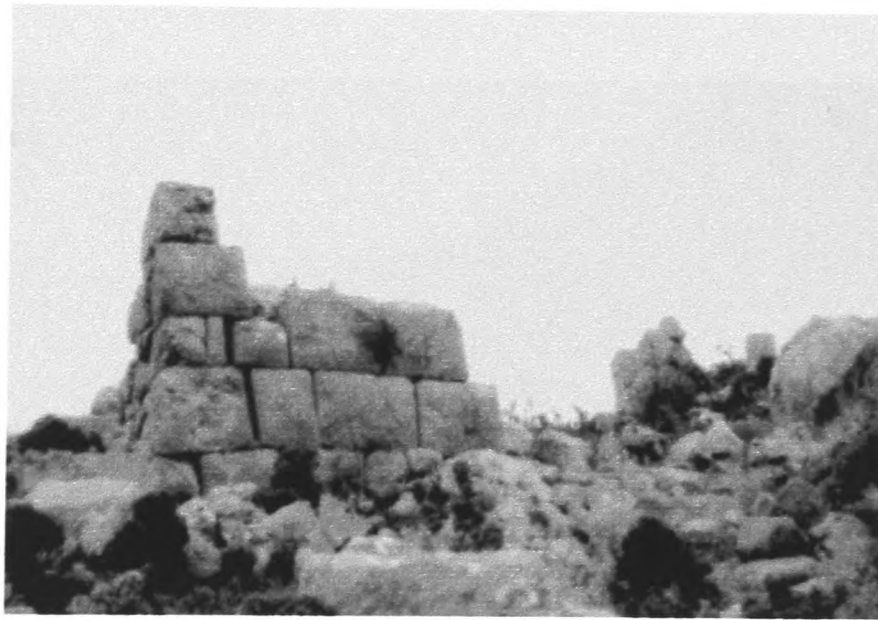
33. Ariassos, stoa



34. Ariassos, view north from theatre



35. Ariassos, house 7



36. Ariassos, house 4



37. Ariassos, house 6 photographed from house 4



38. Ariassos, house 9



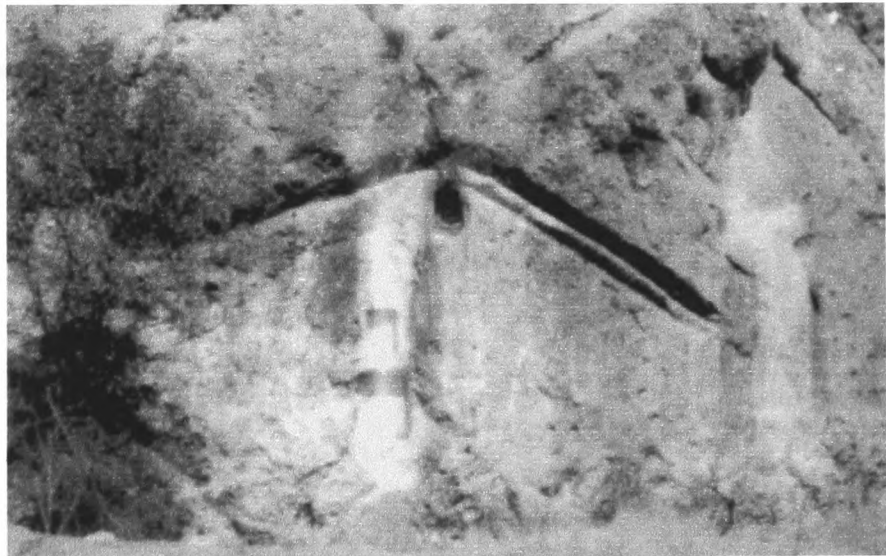
39. Ariassos, house 10



40. Ariassos, house 14



41. Ariassos, house 25



42. Ariassos, cutting in rock-face for roof



43. Ariassos, water spout in house 27



44. Ariassos, fountain house



45. Sia, bathhouse, southwest wall



46. Sia, bathhouse, room below cistern



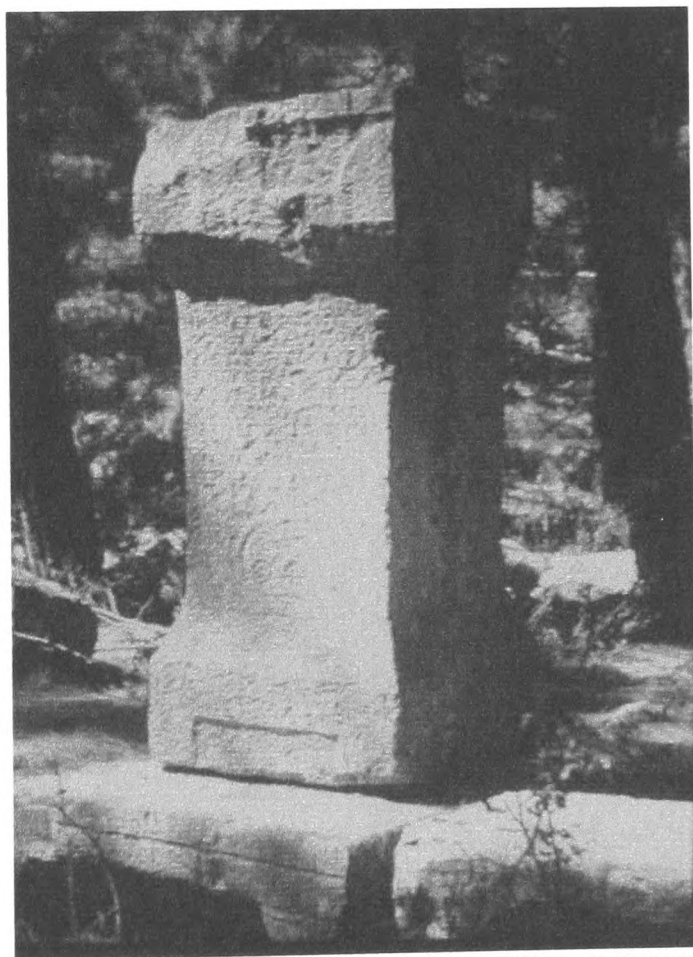
47. Sia, cistern above bathhouse



48. Sia, temples Nr1 and Nr2



49. Sia, Severan monument in agora opposite Nr2



50. Sia, pedestal with inscription (illegible) in agora



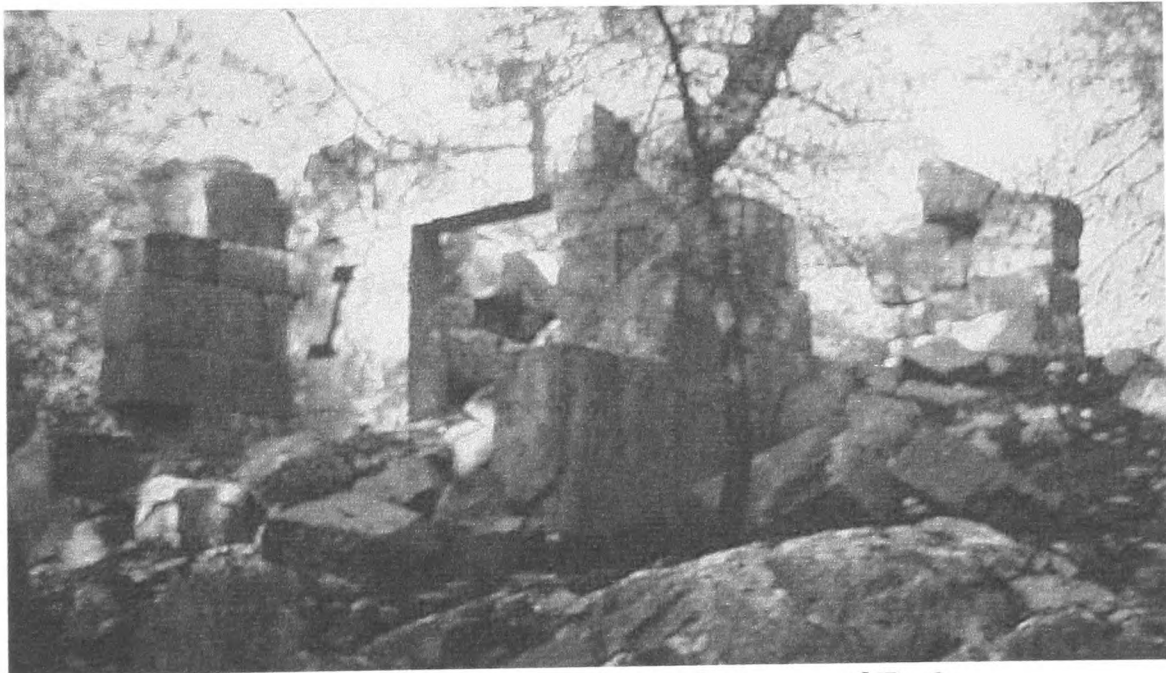
51. Sia, temple Vq1 from rear



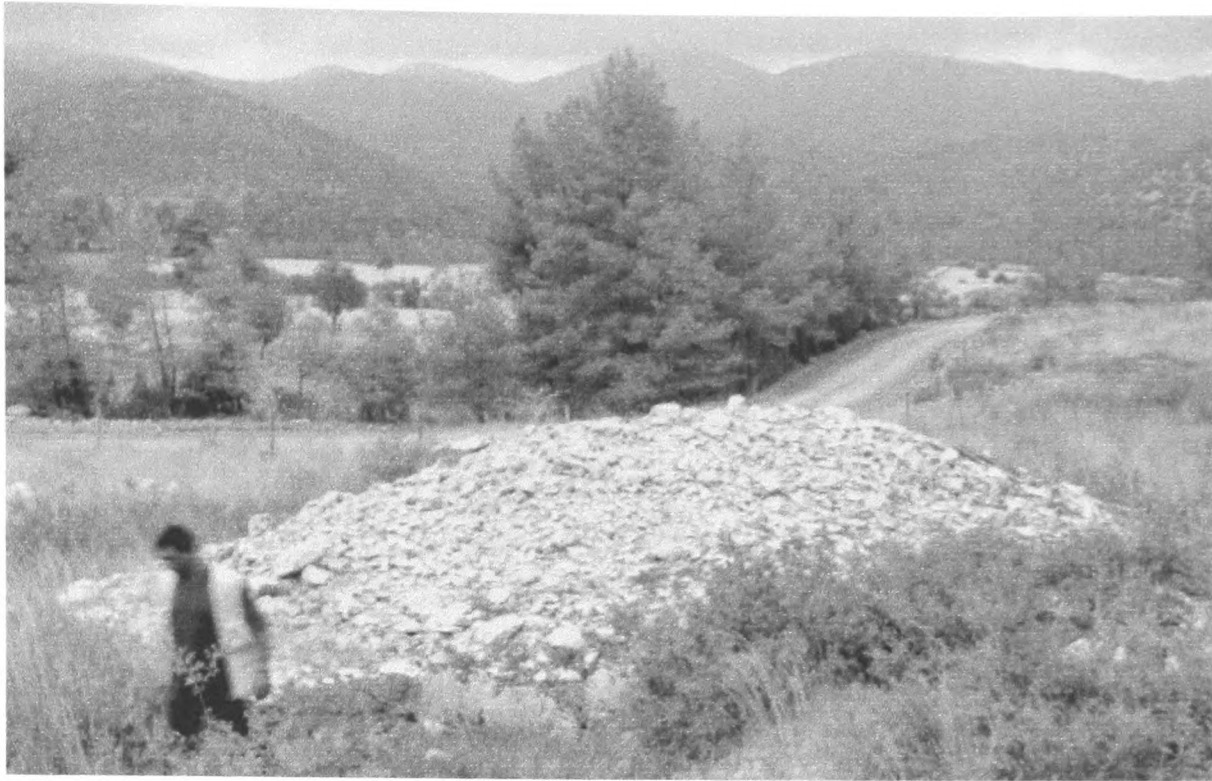
52. Sia, Sm1



53. Sia, Qn2 southeast corner from above



54. Sia, monumental tomb west of Pn2



55. Tumulus near Sia at Köletaşı



56. Ariassos, view northeast from bathhouse



57. Ariassos, monumental arch



58. Ariassos, bathhouse exedra



59. Ariassos, house 37



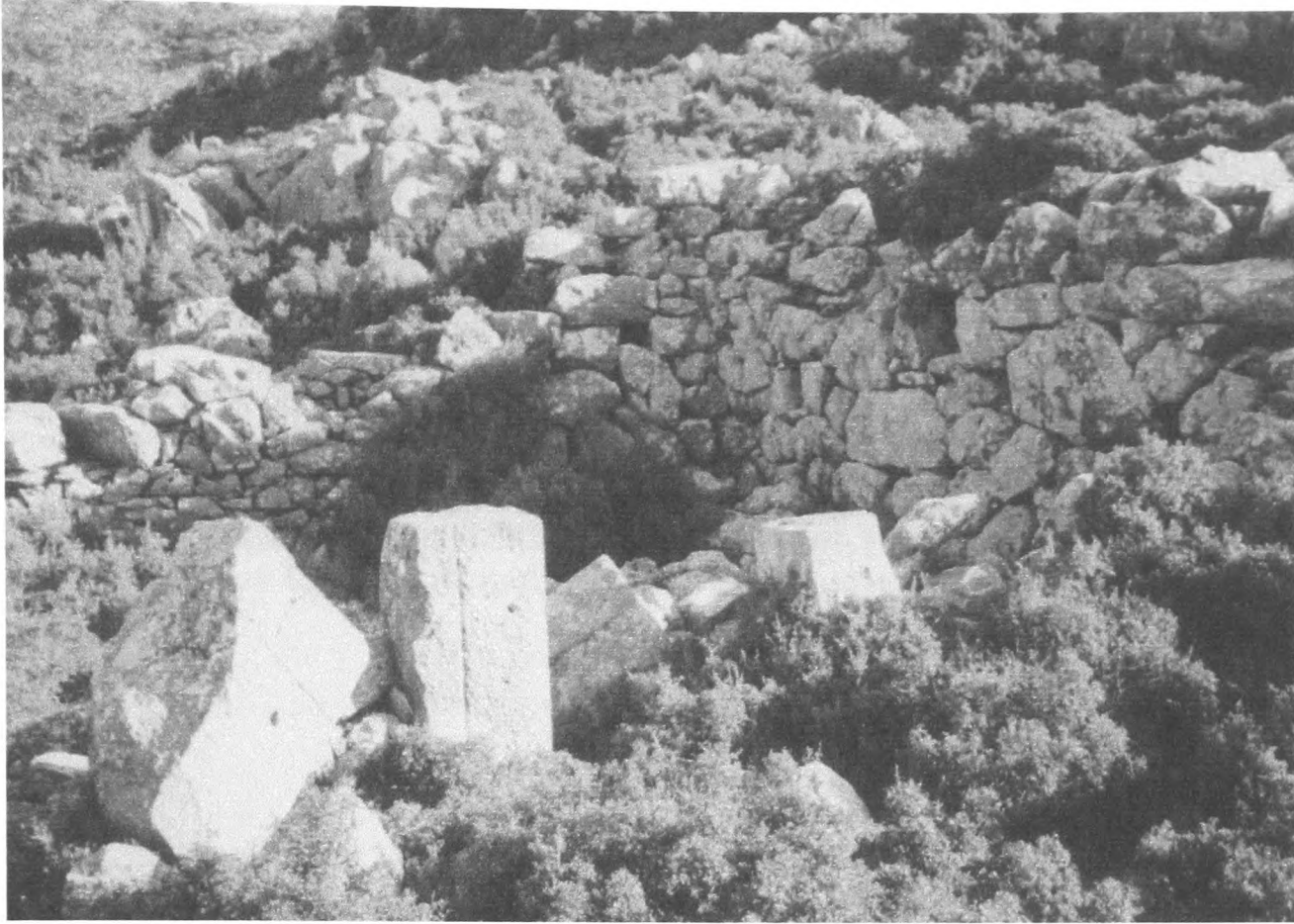
60. Ariassos, house 46



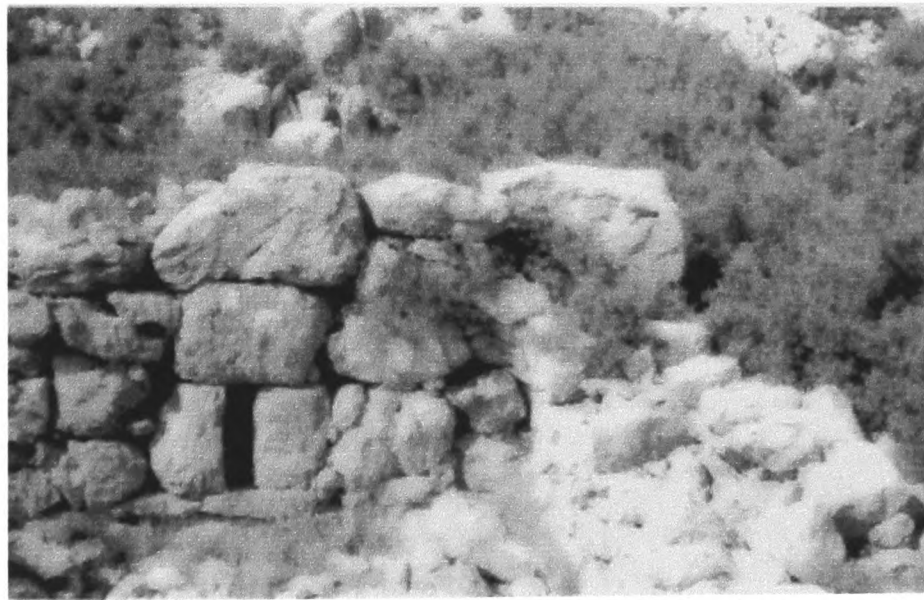
61. Ariassos, house 44



62. Ariassos, monumental tomb [ST6]



63. Sia territory housing, Çakıraz, group 1, house 2



64. Sia territory housing, Çakıraz, group 1, house 1 press, slot for beam



65. Sia territory housing, Çakıraz, group1, house 2 press



66. Fort at Ören Tepe (bottom right) opposite Panemoteichos (top left)



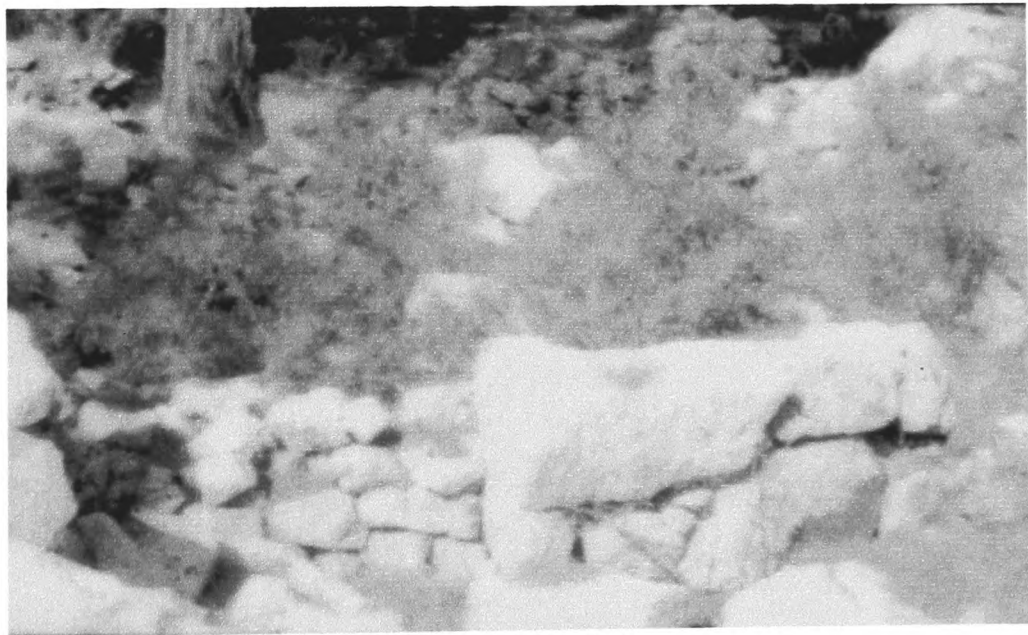
67. Sia, church Ht1 from west



68. Sia, church Rq2 apse



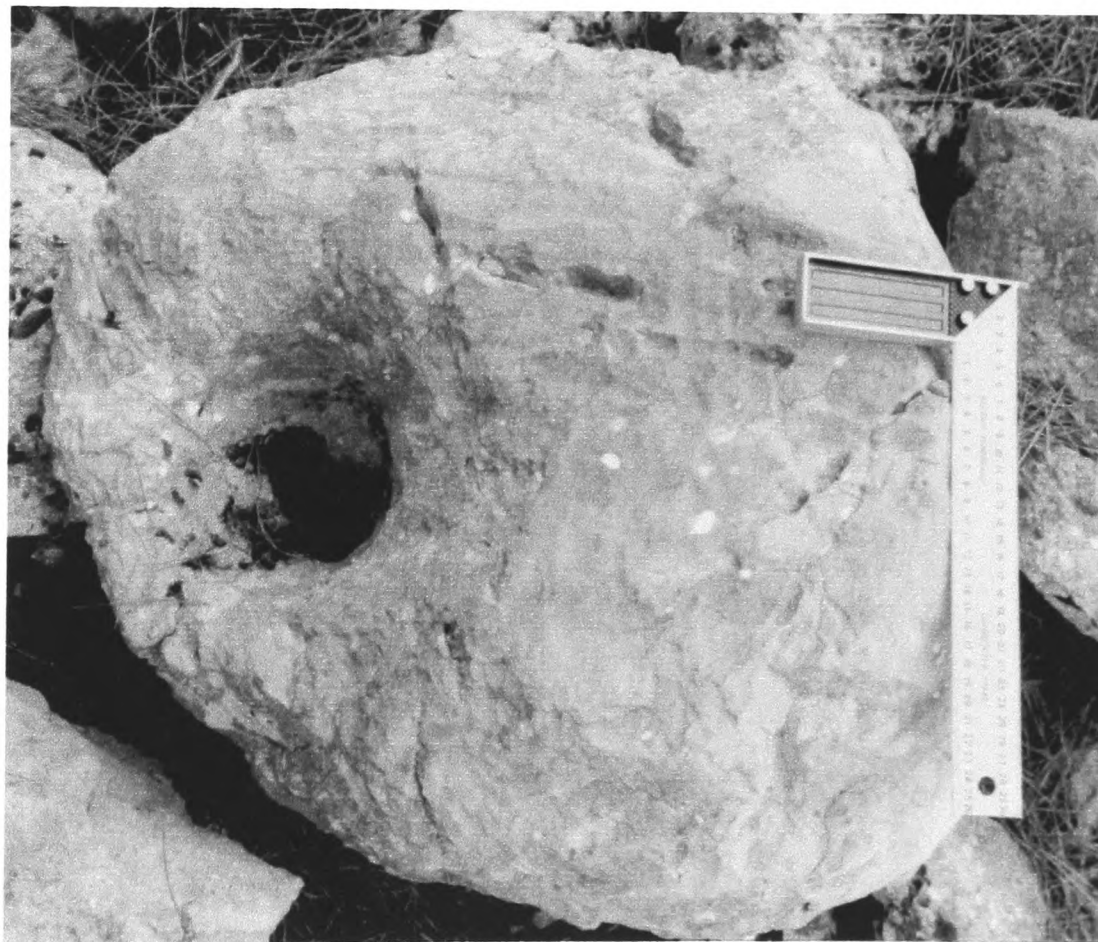
69. Sia, Ns1 filled doorway



70. Sia, Mj1 filled doorway



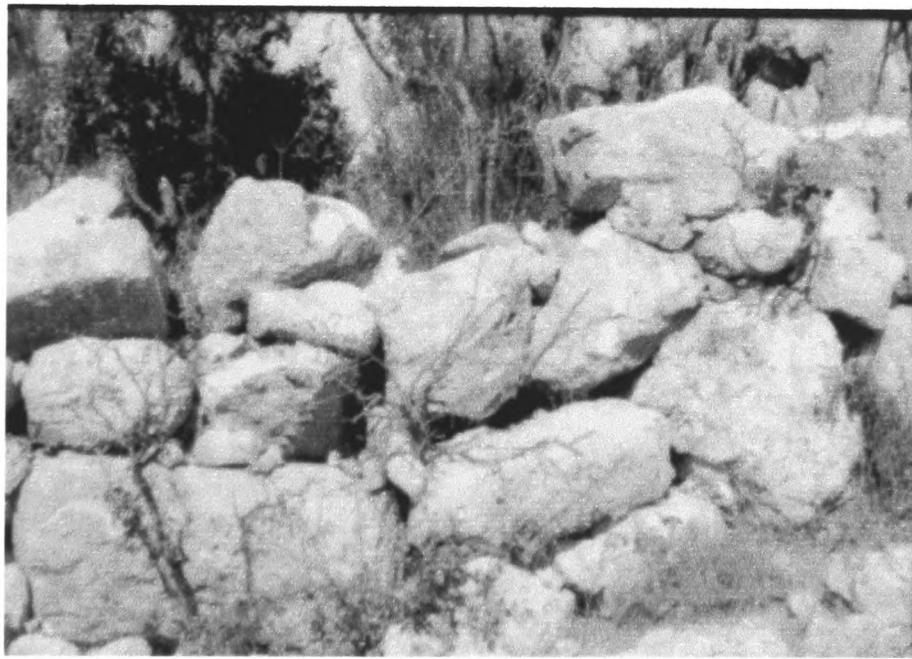
71. Sia, Mj1 press, slot for beam



72. Sia, Sm3 press weight



73. Sia, Pr2



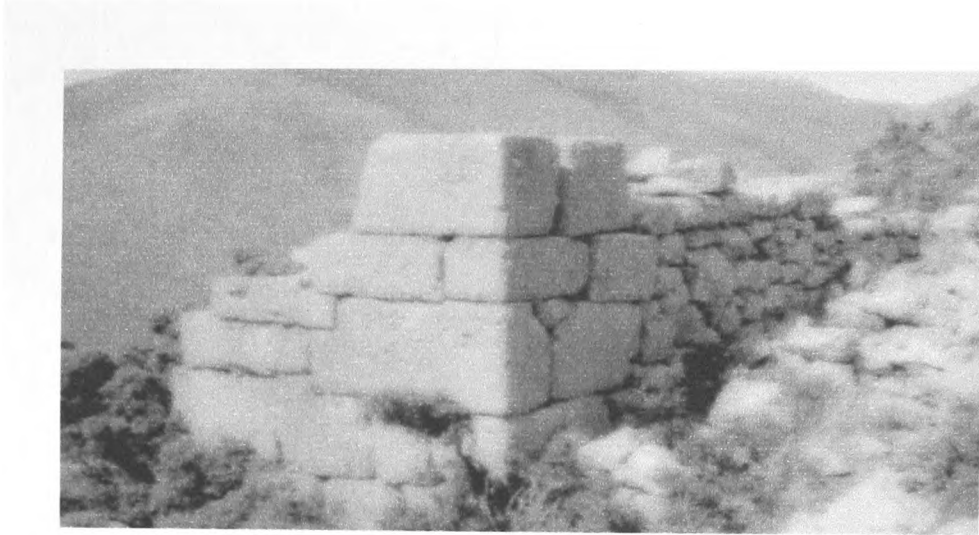
74. Sia, St2



75. Ariassos, late fortification wall near house 23



76. Ariassos, late fortification wall below house 27



77. Ariassos, southwest corner of 'chapel'



78. Ariassos, house 32



79. Lower Döşeme Boğazı, Late Roman fortified building



80. Kozağacı plain with ruined mosque built from re-used blocks