THE MEDIEVAL LANDSCAPE OF EUBOEA (NEGROPONTE): A FRAMEWORK FOR INTERPRETING THE BYZANTINE AND FRANKISH TOWERS OF GREECE

by

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ABSTRACT

Medieval ***Negroponte***, the capital of the island of Euboea, grew from 1204 to become the preeminent city in the Aegean during the 15th century and the Ottoman capital of Central Greece. This thesis, making extensive use of early cartographic evidence, and satellite imagery and telemetry, provides within a G.I.S. environment the first comprehensive study of the island's late medieval landscape. Utilising this framework, it has developed new criteria for identifying and distinguishing between Byzantine, Frankish and Ottoman rural towers and fortification systems, which can be applied throughout Greece.

Demonstrating that there was an uninterrupted tradition of tower construction for military, administrative and domestic use in the Eastern Mediterranean extending from the Classical period, it revises all current assumptions about the chronology and functions of the towers of Frankish Greece. These should not be considered as 'stand-alone', but as the defensive part of a complex of more ephemeral buildings. Interconnected networks of towers provided not only a strategic protective umbrella and a defence of last resort for the agricultural estate complex, but also an expression of display by the Byzantine elite in regions under their control.

It concludes that the period immediately after 1204 in Central Greece was one of general economic prosperity shared by all the populace and that the Greek 'medieval tower' is not a western imported feudal construct. On the contrary, there are intimations that the Norman '*great tower*' developed from Byzantine roots.

This work is dedicated

To my wife, Liana, for her unstinting support on forays onto the mountain tracks of Greece, and patience during my long hours of study and many months of absence

And in memory of Theodoros Skouras, without whose lifetime work on the fortifications and religious monuments of Euboea this thesis in its present form could not have been attempted

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It was necessary to master the basics of many languages to adequately cover the breadth of literature and cartographic evidence on towers throughout the Mediterranean, but I am indebted especially to fellow PhD researchers, Flavia Vanni and Demetris Lamprakis, for translating respectively the notes on the Werdműller(c.1660) sketch map of ***Negroponte*** from Medieval Italian and the Piri Re'is (1522) *isolario* map of Euboea from Arabic. The identification of the word 'πυργάρι' as a hitherto unidentified term plays a key part in my conclusions, and I would like to thank the late Dr Ruth Macrides and Professor Peter Mackridge at Oxford University for their help in defining its meaning. Similarly, my brother, Simon Blackler, provided valuable theoretical knowledge on the structural engineering aspects of tower construction.

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PART (A) SETTING THE SCENE

1 INTRODUCTION: PUTTING THE MEDIEVAL TOWER INTO CONTEXT

1.1 Thesis Aims

Towers constructed of rough stone and mortar, rising to a height of up to nearly 30m., were once a ubiquitous feature of the landscape of many regions of mainland Greece and the Aegean islands. The best preserved – those in the Mani in the southern Peloponnese – are a phenomenon of the Early Modern period, built in the 17th to 19th centuries. The rest are generally referred to as 'medieval' yet the provenance of the vast majority is unknown. We do not know by whom they were built, when, and why. There is a near complete lack of documentary evidence in most areas and only a few towers have survived to their full height, so diagnosis using their architectural features is very difficult.

A number of articles have been written hypothesizing various constructors – Byzantine, Frank, Venetian, Lombard, Catalan and Ottoman – and construction dates but, as some authors have themselves acknowledged, no in-depth study has ever been undertaken. The rationale for the construction of these towers is also much disputed, earlier writers tending to conclude a strategic or military role, whilst more recent contributions, based on relatively scant evidence, appear to have followed a general trend in castle studies over this period to impute an 'elite', administrative or agrarian role. [1]

Given the plethora of towers that once existed, a lack of understanding of these three questions leaves a major gap in our understanding of Byzantine, Frankish and Ottoman history – an extensive period of 1,500 years.[2] In the latter period many towers in Attica and the Peloponnese have been identified as residences of the Turkish elite, often linked to the establishment of çiftliks.[3] On the Aegean islands the Genoese network of coastal watchtowers (*vigles*) on Chios remained in use until the Ottoman annexation of the island in 1566, whilst on

[1] See **chapter 2** for a detailed discussion of the literature and, for instance, Creighton (2002) **Castles and Landscapes: Power, Community and Fortification in Medieval England**. London: Equinox.
[2] Lock(1988), for instance, writes '[the towers] *have much to contribute to our knowledge of the post-Byzantine Greek economy and society*'.
[3] A system of land tenure and exploitation established within the Ottoman Empire from the 17th century - Keyder and Tabak (eds.) (1991) **Landholding and Commercial Agriculture in the Middle East**, New York: SUNY Press, 24-25.

Naxos a process of gentrification of towers as country residences of the feudal elite developed in the 16th and 17th centuries. The period before the 15th century, however, lacks clarity and we understand little of the origin and early development of the towers. A long distance chain of towers appears to have existed in the Middle Byzantine period to give warning to Constantinople and it has been postulated that the tower on Acrocorinth had a function as a beacon, whilst we have documentary evidence of the construction of towers in Chalkidikē in northern Greece, linked to the monasteries on Mt Athos from the 10th century.[4] Yet despite such evidence most commentators have firmly positioned the construction of the towers of Central and Southern Greece in the Late Medieval period by one or other of the Latin invaders.

Even assuming this is so, lacking the rationale for tower construction, one important piece of evidence is missing in our understanding of the nature of the Latin dominion of Greece. Were towers simply functional military tools providing communication between major centres and a defensive umbrella along the coastline? Or were they a creation of the new feudal elite intent on establishing – and demonstrating - their domination of the landscape and its population, having a secondary function as administrative centres and the protection of the agrarian surplus? Alternatively, were they established primarily to provide protection for the fief-holder's tenants in the event of enemy incursion?[5] Each of these provides a different scenario for the type of relationship between the Greek populace and their Latin Overlords. Was it 'colonial' and exploitive, or a social and economic partnership? To what extent did it change and develop over time? These are the questions that this thesis ultimately aims to answer.

1.2 The island of Euboea

Conclusions reached from a topographical reconstruction of the island of Euboea will be utilized to draw inferences for Greece as a whole. When studying a general phenomenon based on a sample, however, a basic question needs to be asked: to what extent is the sample reflective of the whole? This involves an understanding of both the qualitative and quantitative features of the sample – the former to ensure that it is sufficiently similar to the whole to draw meaningful conclusions, and the latter to ensure that any conclusion reached is statistically

[4] See **chapter 7** for a discussion of these.

[5] We know, for instance, that on Genoese-held Chios in the mastic-producing villages the population even constructed their own towers for protection - Ierapetritis (2013) Watchtowers, mastic contraband and rural communities in the Aegean archipelago under Ottoman sovereignty. **The Historical Review / La Revue Historique**, 10: 219-254.

sound and not simply 'noise' or an 'outlier' unrepresentative of the corpus under study. For our purposes we must understand if the geography, population profile, economic base, political structure and history of our sample (the island) are similar to those of the Greek mainland during the period under study.

Euboea, known as ***Negroponte*** in the Late Medieval period after the name of its capital,[6] is the second largest island (after Crete) in modern Greece with over 700km. of coastline. Long and thin, appearing much like a sea-horse, it runs parallel to the eastern seabord of central Greece and on many small scale maps, due to its close proximity, is indistinguishable from the mainland, of which administratively it has historically been treated as a part.[7] Thus, its island and mainland characteristics make it reflective in many ways of Greece's extensive coastline and over 150 inhabited islands. Its agricultural base, too, is similar – most land is mountainous and only 23.9% is cultivable compared to the average for Greece of 27.5%.[8] Administratively, immediately prior to its annexation by Latin forces in 1204, it was part of the Byzantine *Thema* of Hellas, the capital of which was at Thebes to the west of the island, just 29 km. inland. At this date, although ***Negroponte*** itself was already probably a commercially based city, there is no reason to assume that the population or economy of the whole island was significantly different to the *Thema* as a whole. After 1204, however, the island's history does diverge in a number of ways from the mainland, but the essential characteristics of Latin dominion, at least during the 13th century, appear to have been similar to those of the Principality of Achaia of which it was a part (this is discussed in **chapter 4)**.

As regards the quantitative aspect, we are fortunate that 79 towers have been recorded on the island. I have also identified a further 71 potential 'tower sites' from the cartographic evidence, although many of these may have been little more than beacon sites on the top of prominent hills. Work has also previously been undertaken by both Johannes Koder (1973) and

[6] Hereinafter the island will be referred to as Euboea, whilst the capital will be called either Chalkida (its modern name) or ***Negroponte***. Its name was ***Euripus*** in the Roman period after the narrow 30m. strait, that separates it from the Greek mainland. In the Middle Byzantine period this had mutated into ***Egrippos*** (Εγριππος) and by the 12th century had become corrupted by Latin sailors and merchants into ***Negroponte*** from their interpretation of the Greek '(Στο)ν Εγριππον', which they interpreted as '*negro ponte'*, literally meaning 'black bridge' – a description of the bridge that linked the island to the mainland – see Spon (1678) **Voyage d'Italie, de Dalmatie, de Grèce, et du Levant :. fait aux années 1675 et 1676 par Jacob Spon et George Wheler..** Lyon: Antoine Cellier, 320, and a more detailed explanation in Wheler (1682) **A journey into Greece by George Wheler Esq.....** London: W. Cademan, 457.

[7] In the Frankish period (1205 – 1470) it began as part of the *Principate of Achaea* with links to the Venetian Republic which developed into full suzerainty in the late 14th century; in the Ottoman period it was the capital of the *Sançak of Egriboz,* which controlled the mainland regions of Attica and Boeotia; in the modern state of Greece it is an administrative part of *Steria Ellada.*

[8] Kolodny (1974) **La population des Iles de la Grèce**. Aix-en-Provence, 793.

Theodoros Skouras (1998 and 2003) recording surviving traces of ecclesiastical and military monuments. In total, including my own research, 301 churches, 46 monasteries (including *metochia*), and 44 fortified sites (excluding towers) probably relevant to the period under study have been identified on the island. We thus have not only a substantial dataset with which to draw statistically sound conclusions but, due to the continued use of many towers during the Ottoman occupation from 1470 to 1833, a good number have remained intact, allowing analysis of their architectural characteristics.

1.3 The Definition of '*Medieval Tower'*

The terms '*medieval tower'* or, in the 19th century, '*Venetian tower'* have tended in early travellers' descriptions or cartographic sources to be used in a very loose way. Peter Lock (1986) in his ground-breaking study carefully refers to '*free-standing towers of presumed medieval date'*, but both the words '*medieval*' and '*tower*' have too wide an interpretation to be of practical use and can mean something significantly different in Western and Eastern Europe. Theoretically we can define the Medieval period in the Eastern Mediterranean as lasting from the establishment of Constantinople in 330 A.D. until the end of the 15th century but, practically, the essential problem of this study - the general lack of documentary sources to provide construction dates – precludes this approach except as an umbrella under which to work.[9]

Likewise, trying to define the focus of study archaeologically, utilizing construction style, is only partially helpful. The use by Langdon (1995) of the term '*mortared towers'* adequately separates Classical and Hellenistic ashlar-built towers from the Late Roman (Early Byzantine) ones constructed of rough stone, rubble and mortar, but this style of construction, as does his article, includes also towers from the Ottoman period. Neither Lock nor Langdon have addressed, however, the problem that towers probably from the so-called 'Frankish' period,[10] approximately the 13th to 15th centuries, were built predominantly by races with their roots in the traditions of western Europe.[11] Thus, from the late 11th and 12th centuries, those

[9] This thesis uses the traditional periodisation of the Byzantine Empire by Ostrogorsky: Early Byzantine – 330–642 A.D.; Middle Byzantine – 642-1204 A.D., but thereafter the terms *Late Medieval*, *Frankish* or *Late Byzantine* are used interchangeably depending on the particular topic. The commencement of the Ottoman period is likewise problematic – by the end of the 14th century they had already occupied much of northern Greece and the Balkans, whilst Negroponte fell in 1470 seventeen years after Constantinople in 1453 - Ginalis (2014) **Byzantine Greece: Central Greece as a link between the Mediterranean and the Black Sea**. PhD Thesis, Oxford, 5.

[10] The term '*Frankish'* is used in a general sense within Greece to refer to peoples from western Europe speaking a Romance language essentially based on Latin. In the present work it is used interchangeably with '*Latin*'.

[11] This is discussed in detail in **chapter 7**.

immediately prior to the capture of Constantinople in 1204, Duke William of Normandy and his successors, following their successful invasion of England in 1066, built over 1,500 castles there,[12] the majority of which, at least initially, were of wooden construction,[13] a style also well-known to the Byzantines on their northern frontiers. Yet no author has mentioned such a possibility. Ottoman construction style can provide some guidance to exclude certain towers constructed after the 15th century and this is discussed in **chapter 7,** whilst an attempt is made in **chapter 5** to identify unrecorded towers, possibly built of wood, using cartographic sources, but greater accuracy cannot be achieved.

As regards the definition of 'tower' the Oxford English dictionary defines it as a '*building lofty in proportion to the size of its base, either isolated, or forming part of a castle, church, or other edifice, or of the walls of a town*'.[14] For our purposes, whilst towers linked to or within monastic estates are included in this study, ecclesiastical ones for bells or clocks are specifically excluded,[15] as are towers forming part of the external wall of a fortification or town. The monastic towers built within the confines of Mt Athos, much of whose architecture is post 1500, are referred to only where relevant. Lock(1986) used the term 'free-standing' in defining the focus of his study. This is a good starting point and is utilized in **section B** and the site gazetteer in **appendix 5** as a guiding rule but, as will be seen in **chapter 8,** is inadequate: from the very commencement of site visits substantial other construction was identified in the vicinity of many towers. A good example is the ***Vigla*** tower,[16] sited above the small town of Ptelion, the construction of which is probably dated to the 14th century when it came under Venetian control.[17] This was a strong fortification with a powerful tower, substantial buildings, cisterns and an external circuit wall, for which 'castle' is possibly a better description,[18] but this raises a fundamental conceptual problem – what is a 'castle'?

[12] Pounds (1990) **The medieval castle in England and Wales : a social and political history**. Cambridge: Cambridge University Press, 256.
[13] Higham and Barker (1992) **Timber castles**. Batsford, 46 – the authors identify 625 *mottes* and ringworks.
[14] Little, et al. (Eds.) (1986) **The Shorter Oxford English Dictionary**. Oxford. 2335.
[15] Unlike in western Europe where towers are normally an integral part of any church, there are few examples of Orthodox churches possessing one. Similarly, Ottoman prayer towers are excluded as being outside the period of study.
[16] '***Vigla***' is a term used for a coastal watchtower – see **section 1.5 below**.for the various names given to towers.
[17] See **MG1** in **appendix 7.2**. This is situated on the mainland to the north west of Euboea. Bury (1888) The Lombards and Venetians in Euboea (1340-1470). **JHS**, 9: 91-117; Koder and Hild (1976) "**Tabula imperii Byzantini. Bd. 1, Hellas und Thessalia**". Vienna, , 100.
[18] This site was visited by the author in April 2015. A tower with evidence of considerable surrounding construction but situated in Byzantine-controlled northern Greece and indications of a classical external wall built from cut-stone blocks, was visited at Krouna, Ierissos (Ref **M130** – **Appendix 6.5**).

'Castle' is a term, over the definition of which there has been substantial, often acerbic, debate, much of it after 1966, the 900th anniversary of the battle of Hastings at which the Norman Lord William defeated the Saxon King Harold of England.[19] A battle that took place over 2,000 km. away from Greece, and probably at least two centuries prior to the construction of most towers under study, may not appear immediately relevant, but the changes it set in motion were critical to Norman successes over the next two centuries and by inference, since a good proportion of the Crusaders who invaded Central Greece in late 1204 came from regions under Norman control or influence, are key to the present study.[20]

R. Allen Brown in his book *English castles*[21] defines a castle as '*a [strongly] fortified residence'* or '*residential fortification'*. He thus distinguishes it by noting its dual military and domestic nature from other types of fortification on the one hand [22] and, on the other, from unfortified manors. He then extends this to mean '*the fortified residence of a lord'*, portraying the castle as a characteristic institution of 'feudal' society,[23] emphasizing its essentially private rather than communal or public nature. As regards the architecture of a castle he identifies two principal features: a fortified enclosure – ditch, bank or palisade – and the strong residential tower ('*donjon*' or *keep*).[24] The former could not exist on its own and still be a 'castle', since it would have lost its residential element, but the latter, as construction developed from wood to stone and grew in size and strength, could. He thus arrives at the conclusion that the essence of a 'castle' is the 'great tower' – the subject of our own enquiry.

This immediately challenges the concept of the study of 'towers' separately from that of larger fortifications and appears to make it an artificial modern distinction, which contemporaries might not have recognized. It also suggests that fortifications may need to be distinguished not by their size but by their utility – private or public. Thus, deliberations of the

[19] Higham and Barker (1992) ch2, note 14.
[20] This was also a two-way process. Thus, it has been shown that the conspicuous use of banded masonry in Caernarvon castle, constructed in the late 13th century, was in direct emulation of Byzantine Constantinople – Creighton (2002) ,66. See discussion on the 'great tower' in **chapter 9**.
[21] Brown (1976) **English castles**. London: Batsford – this book had originally been published in 1954 and was substantially revised in 1976 to answer some of the criticism of his approach coming from those with a new interpretation both of the history of the period and the concept of the 'castle'.
[22] The Tudor forts along the south coast of England are for him not 'castles' because they are exclusively military. Similarly, fortifications of the Romans or Byzantines are not castles because of their essentially public nature, nor are fortified towns.
[23] Brown (1976), 25-27 - he places the roots of feudalism in the 9th and 10th centuries, and of the 'castle' in early 11th century Normandy, a dating that appears to be generally accepted.
[24] This is exemplified in the standard '*Motte* and *Bailey'* castle where a mound (*motte*) was raised above the surrounding land on the top of which was constructed a tower. To one side was an open area (*bailey*) for all the ancillary buildings (stables, kitchen, servants quarters), and the whole (*motte* and *bailey*) was surrounded by a wall and /or ditch.

Venetian Senate give instructions to '*examinare omnia fortilicia que erunt reparanda et fortificanda*'.[25]

For many years the views of Brown (1976) seem to have been generally accepted but, in more recent times, there has emerged a much wider interpretation of the term 'castle'. Pounds (1990) writes '*the tower-house became the simplest, the most functional and the most cost-effective means of defending the small man'*,[26] thus apparently breaking the conceptual link of the 'castle', if its essence is the tower, to the feudal structure. The 'license to crenellate' – an authorization by the king to construct a fortification - has also been used to support the feudal character of the castle, but its issue, especially in England, to many without any subsequent construction of a castle has suggested that it is not the building that is important but the rights linked to it – juridical and economic.

Coulson (2003), in trying to understand this private-communal dichotomy, separates metaphysically the tower (and *Motte*), as signifying lordship, from the castle, which he sees as having a much more general meaning. Among other examples he quotes a document from 1306, which describes Castle Troggy as having '*a tower newly built with a messuage'*, which contained '*130 acres of arable, 100 acres waste(uncultivated) 7 acres pasture and a grove of little oaks all pertaining to the same tower*'. For him a place may take the title 'castle' based on the status of its owner.[27] He sees the tower as the nexus *(caput*) of the tenures in Normandy, and quotes Edward I ordering his steward (*seneschal* or *bailie*) to purchase a *castellere* or *fortilicium* as a place suitable for the exercising of justice in his newly acquired holding of Quercy. Where there was no surviving castle or seigneurial building, he notes how a churchyard could also take on the mantle of a symbol of power,[28] while Creighton (2002) talks of the '*triumvirate of new castle, borough and religious house'*.[29]

But towers could also be purely functional with no connotations of lordship even if they were residential. Thus Henry III in 1263 ordered to be built in Devon, England '*a good strong building with a tower (turris) of stone in which the treasure, metals and tools for the workers of the [tin] mine may be deposited and our mine workers be able to dwell*'.[30] Juxtaposing the

[25] (1890-1900) **Documents inédits relatifs à l'histoire de la Grèce au Moyen Age**, Paris, 308, l.36 (1428).
[26] Pounds (1990), 276. He also writes that both the motte and tower-house deserve "to be subsumed under the term 'castle'" – idem, 276.
[27] Coulson (2003) **Castles in medieval society : fortresses in England, France and ireland in the central Middle Ages**. Oxford: Oxford University Press, 55-60.
[28] Coulson (2003) 89.
[29] Creighton (2002) 102 – he notes that 40 castle sites within 10 counties in England are within 50 m. of the parish church.
[30] Coulson (2003) 85.

heavily fortified Welsh and Scottish borders of England with the simple manors of central England many authors emphasise the social role of the 'castle' which adjusts its form according to the needs of its environment, its physical attributes being merely the by-product of available technology and materials.[31]

Within Greece no one to date appears to have identified the 'manor' which, together with the castle, was a hallmark of the English countryside, both confusingly described by one word – chateau – within France.[32] We must therefore study the distribution not only of the surviving towers within the Greek landscape but also that of settlements apparently lacking such a nexus or *caput* on the assumption that some may once have had one. Undoubtedly many towers have been lost from the archaeological record, but how significant is this number? Did the parish church, as noted above, act as a surrogate or was the structure of Late Medieval society within Frankish Greece very different to that in northwest Europe?

Our attempt to define 'tower' has diverted us away from Greece into a discussion on the conceptual framework surrounding the medieval castle. Whilst it is clear that there is no simple answer, it has highlighted the importance of looking at the 'tower' as part of a continuum, both in size and complexity of fortification on the one hand. and between its private and public nature on the other. This means that, in addition to the archaeological record, an understanding of the complex history of the period is key. We move on Euboea from a period of a public (communal?) structure of fortification under the Byzantine Empire up to 1204 into a feudal (private?) one under the incoming Frankish forces.[33] Yet the Lords, who came to control the island of Euboea – the base of our study – were of Lombard (North Italian) origin and it was increasingly influenced by Venice, a republican mercantilist power.[34] Each group may have influenced the role of towers in a subtly different way, and it is this very complexity which may help in understanding more generally the various roles of towers within Greece

[31] See Higham and Barket (1995) 38; Coulson (2003) 31 – 'most medieval 'castles' had been the country houses of their era'; Pounds (1990) 249 – by the end of the 13th century castles became merely 'well-protected homes'.
[32] The closest parallels might be the towers of Naxos as described bySpiliopoulou and Kotsakis (2008-2012) Οι πύργοι και οι οχυρωμένες κατοικίες των νησιών του Αιγαίου και της Πελοπόννησου (14ος-19ος αι.). Μια ιστορικό-πολιτισμική προσέγγιση με έμφαση στην περιπτώση της Νάξου. **EOA & Esperia**, 8: 207-302.
[33] This leaves aside at this point the construction by the Byzantine elite and the monasteries of towers prior to 1204 – something discussed in detail in **section C**.
[34] This is a term applied within economic history generally to the period after 1500 relative to the growth of Portugal, Spain, France and England but, as will be seen in **chapter 3**, it is also in its basic form peculiarly appropriate to the situation on the island of Euboea during the Late Medieval period.

1.4 Parallel Traditions

The above discussion is heavily focussed on the Normans and infers that the medieval towers of Greece somehow had a western European origin. The Norman 'feudal' system, however, although encompassing the indentured working man (*serf*), was essentially a contract between members of an elite warrior class who offered their military service in exchange for the rights to a particular parcel of land (the *fief*). The grant of land to soldiers within Byzantine controlled territories in exchange for service in the army does not at first sight seem dissimilar to this. The Byzantine working man (*paroikos)* was in many ways little better off: although living and working within a different political system, he still had his rights severely curtailed by elite land-owners intent on exploiting his labour within an environment of turmoil and insecurity. Recent research, too, into the archives of the monasteries of Mt Athos has uncovered documents indicating the construction of towers on the monastic estates in Macedonia from as early as the 10th century, whilst authority was given for the construction of elite towers in the same region. Given that sale contracts were not just between monasteries and ownership of estates was changing hands, we thus have clear evidence of a Byzantine 'tower' tradition. As central authority was breaking down in the late 12th century this process must have accelerated.[35]

We also see in the Iberian peninsula in the 11th century contracts for colonists along the Arab–Catalan border which prescribed their obligation to construct a tower – a building conceptually at the same time both offensive and defensive in nature.[36] The Arab invaders, organised on a tribal / extended-family basis, had been constructing circular towers on the same border in Southern Spain and along the Sicilian coast since the 8th century, whilst on the Aegean islands there is evidence that towers had been in continual use since the classical Greek period to protect the shoreline against potential enemy or pirate attack.[37]

Any discussion of the role of towers within Medieval Greece has, of necessity, to include such traditions and influences. Whilst there is *prima facie* evidence that the arrival of Western

[35] . For example, it has been postulated that the tower on Acrocorinth was the work of the emperor Leo VI in the 9th century but it could just as equally have been that of Leo Sgouros, who with his son had taken control of much of the Peloponnese and Central Greece during this period.
Ćurčić has postulated the existence of a parallel 'castle' development with the Byzantine Empire which he calls the 'citadel-palace', known by the Greek term *Kastron* or *Phrourion*. He also writes '*serious research on such complex issues of East-West relations in architecture still lies ahead'* - Ćurčić and Hadjitryphonos (eds.) (1997) **Secular medieval architecture in the Balkans, 1300-1500, and its preservation**, Thessaloniki: Aimos, 40-42.
[36] See **chapter 9** for discussion.
[37] These were known as *φρυκτωρίες* or *Vigles*. See notes in **chapter 7**, for instance, on Siphnos and Thasos.

European forces in Central Greece in 1204 probably influenced the development of towers there, such fortifications existed in the Aegean region well before this date. Thus, we must understand how the varying traditions combined, if this is what they did do, to leave the legacy of recorded sites that we now find in the region.

1.5 Methodology

It has been found during the process of research into individual localities that the terms used to describe an area or monument, or the place-name – e.g. *Mylos* (μύλος – mill), *Ampelia* (αμπέλια – vineyards) or *Kēpoi* (κήποι – gardens) - although often substantially corrupted over time,[38] provide significant evidence as to their utilization.[39] Given the many traditions for tower construction and the varying origins of the inhabitants of Greece during the Medieval period, it is not surprising that there is a rich variety of nomenclature used to describe the 'tower'. The basic Greek word found both in the contemporary sources and on modern maps is *Pyrgos* (πύργος), but it also exists in a number of permutations, including the diminutives *pyrgaki, pyrgi, pyrgiskos,* and *pyrgari*.[40]

Whilst the term *pyrgos* had a general usage, referring not only to larger fortifications but also to towers within their walls, a specific type of tower – that used as a watchtower to protect the shoreline – was the *vigla* (*bigla /βίγλα)*, a word derived from the Latin 'to keep watch'. This also has many variations and one, the *kaminovigla (καμινοβίγλα)* – literally chimney-watch – clearly denotes its role as a beacon. From documentary sources, *portolans* and *portolan charts* of the 14th century we see the use of the words *fortilicium* and *t[o]ure* to signify a fortification. Another term, *tourla*, found on 20th century Greek military maps also seems to have meant a tower or possibly a small fortification. Generally, there was considerable fluidity in the use of terms during the Late Medieval period, something noted in **section 7.1,** especially for towers outside Greece.

Other names have also been identified but in the main these appear to have been later terms. Thus, the Turkish Kule (Gk. *koulas*) was found in northern Greece from an early date and later in Ottoman-controlled Crete, whilst the Venetian *vardiola* on the islands of the Ionian Sea was

[38] The name of the village today known as *Βέλος* in central Euboea appears to have developed from *τα αμπέλια → ta abelia → τα Βελούσια → Βέλος*.

[39] Jones (2015) "Place-names in landscape archaeology". In Arnau and Reynolds (Eds.) **Detecting and Understanding Historic Landscapes**. Mantova: SAP Società Archeologica s.r.l. 209-224

[40] See **chapter 5** for a detailed investigation of the meaning of the last which does not appear in the Greek dictionary.

a development (in the 16th century?) of the *vigla*.[41] Finally, the modern Greek word *skopia,* although having an ancient root, appears to have an early modern use meaning 'lookout point' or 'sentry duty'.[42]

Understanding the 'tower' in Greece is complicated by the variety of roots of the players involved. There is both a lack of a clear 'nationality' of the combatants and a fluidity, which makes it difficult to point to an influence from any particular source. The Byzantine state at times used Norse, English, Iberian, Turkish and even Frankish mercenaries in their military in the Middle and Late Medieval periods, whilst they were often at the same time in conflict with the very state from which these soldiers came. The Franks were no different and found out to their cost at Halmyros in 1311 the dangers of employing mercenaries, when their erstwhile Catalan employees effectively dismembered the Principality of Achaia. It has therefore been necessary to research at both an intensive[43] and extensive level – the former to understand the tower within its intimate environment, the latter to comprehend the influences from an area that encompasses effectively the extent of the Roman Empire.

PART (A) plays an introductory role delineating the focus of study and investigating some of the conceptual issues involved, surveying in a general way a number of potential origins and functions of the 'tower' and the terms by which it is described. In **chapter 2** the existing literature on the Medieval towers of Greece is discussed. It should be noted that the treatment of towers as a separate subject for study is a relatively recent development not only within Greece, but throughout Europe and the Eastern Mediterranean.[44]

PART (B) looks in detail at the topography and history of our case-study, the island of Euboea.[45] It first appraises the contemporary cartographic and documentary evidence in

[41] A development of the Saxon word *warda*, which also provides the root for the English word *guard.*

[42] Given the extensive variation of descriptive terms used both by region and over time, a full listing of all terms is provided in **appendix 7.1** with an etymological derivation and probable application for each, whilst a breakdown of towers on Euboea by nomenclature is given in **chapter 5.**

[43] This is used here purely as a relative term. 'Intensive Survey' has come to mean a method of survey involving field walking by teams of people over a restricted area. My own use refers to the analysis of monuments in a relatively clearly defined geographical area both in relation to one-another and within their surrounding landscape.

[44] Lock(1986) established the foundations of their study in Greece, whilst the series of Château Gaillard conferences, commencing in 1962, provided a forum for the discussion of tower-like structures in Northwest Europe and more recently further afield – see, for instance, Pringle (1994) on the towers in the Kingdom of Jerusalem.

[45] Little archaeological research has been undertaken over the last 40 years into the medieval period compared to other epochs but a number of publications do provide information in passing – e.g Sampson (1980) Προιστορικές θέσεις και οικισμοί στην Εύβοια. **Archeion Euboikon Meleton**, ΚΓ': 90-249; Sackett et al. (1966) **Prehistoric Euboea: contributions toward a survey**. British School at Athens; Keller (1985) **Archaeological survey in southern Euboea, Greece : a reconstruction of human activity from Neolithic times through the Byzantine period**. Indiana University; Ducrey (2004) **Eretria: a guide to the ancient city**. École suisse d'archéologie en Grèce; Lemos **Lefkandi** [online]. http://lefkandi.classics.ox.ac.uk/ Oxford [Accessed 2018].

chapter 3. This work is on the margins of the cartographic visualization of landscape as we would recognize it today and advantage has been taken of the peculiar long and narrow shape of the island to utilize information from the nascent nautical *(portolan*)charts of the 13th to 15th centuries to help define both its coastal and internal topography. Reference is also made to the many accounts written by travellers to the island from the 13th to the 19th centuries, contemporary written sources, and Ottoman tax registers.

Chapter 4 establishes the historical and geographical context for a later detailed analysis of the function of towers, providing indications of points in time, which might have been conducive to their construction, whether these are military, political, economic or social in origin. The surviving recorded monuments of Euboea – major fortifications, towers, churches and monasteries – are then summarized in **chapter 5** and utilized to construct a settlement and demographic model which is tested against estimates by 17th to 19th century travellers and modern researchers.

Although this work is based on recorded monuments, much of the literature is insufficient to understand the environment of each. Thus, a prerequisite was the preparation of a detailed site gazetteer. This is included in **appendix 5**.[46] Monuments have been grouped into '*focus sites',* in order to understand their geographical and strategic setting, something achieved by a combination of site visits and the use of satellite imagery. This work is integrated using Geographical Information Systems (GIS), which provides not only the framework for all the site data but also the contours, vegetation[47] and water systems.[48] Thus it is possible to understand how monuments are grouped and related to each other, whether, for instance, they are set in a valley or on a hill-top, close to a river or the sea, on cultivable land, or along strategic communications routes.

[46] The emphasis on viewing the landscape in totality rather than focussing on individual types of monuments in a region that has never before been studied at this level has meant that a huge volume of data has had to be assembled prior to commencing analysis. As a result, in order to facilitate reading of the main text the site gazetteer and its related maps, which are larger than the main body of the thesis, have been assembled in a separate volume. It should be emphasised here that only sufficient detail to support the main body of the thesis is included. Since the sources are often vague about site location and the volume of sites is very high, it has been impossible to verify the exact location of each. For the purposes of this work, for instance, knowing that a church is in the environs of a village, tower or fortification has been sufficient

[47] Greece is generally a dry arid country with long summer periods of zero rainfall, which can vary by as much as 100% between regions only 50 km. apart. It is also very rugged and mountainous, so just marking areas over 200 metres, as many surveys have done, is totally inadequate to draw sustainable conclusions.

[48] 'Water systems' encompass rivers, both permanent and intermittent, aquaducts, springs, wells and methods of catching and conserving (cisterns) water. They are key to the establishment of a settlement or fortification - Tsouris (2012b) Οχυρωματικά έργα επί ανανεωσίμων πηγών υδάτων (9ος – 15ος αιώνας). **Byzantina Symmeikta**, 22: 293-339

The cartographic and documentary evidence is integrated with the topographic data thus generated to construct a map of the island around the beginning of the 15th century in **chapter 6**. It discusses the key towns identified. It also separates the major, secondary and tertiary fortifications of probable Byzantine origin from those newly constructed by the incoming Frankish forces and Venetians between 1204 and 1470. One of the problems faced is that a number of sites have not been securely identified: those of major importance, where there is significant disagreement amongst researchers, are discussed in **appendix 6.2.**

PART (C) builds on the foundations established in **PART (B)**, collecting together for the first time a listing of the Medieval towers in Greece, and then key similar structures from an area stretching from Northwest Europe to Africa and Asia Minor (**chapter 7**). The former is an extensive survey of all the recorded tower sites found in Greece from the literature, both on the mainland and the islands – from full excavations of tower sites through intensive and extensive surveys of whole regions – and a gazetteer of all sites identified is attached in **appendix 7.3**. The second part of the chapter does not detail individual towers but merely summarises the literature, attempting to understand relevant examples of similar construction or development processes in countries beyond Greece, from where many of the Latin conquerors originated, and the conclusions that researchers in these regions have reached. As such it should not be considered comprehensive but indicative in nature.[49]

Chapter 8 looks at the architecture of the towers under study. Addressing the challenges of dating individual towers, it investigates the basic construction methodology and materials – wood, rough stone, brick and mortar – and investigates possible regional differences and diachronic changes. It then attempts to construct a provisional typology by reference both to research on towers in regions from where the Latin invaders originated and the historical context within Greece.

Whilst previous chapters have surveyed, qualified and characterized the evidence, **chapter 9** utilises this to understand the various potential roles of towers – the ultimate focus of this thesis. It also investigates the conceptual basis of the 'Greek tower' as opposed to its western counterpart, trying to understand whether it can be judged within such a framework or whether recent literature has been unduly influenced by the ongoing debate on the concept of the 'castle' and its role in medieval society.

[49] Detailed references are given in **appendix 7.4**

There follows the outline of a new historical hypothesis for the development and role of towers in Greece in the Medieval Period. The skeleton of a more holistic approach to the concept of the tower is developed in **section 9.4** as a possible method of understanding and comparing towers within varying political structures not just in Greece but throughout Europe, North Africa and the Middle East. The chapter concludes by reviewing the implications of the conclusions of the present work on related fields of study. It questions whether we need to re-envisage the social structure and economy of Greece in the 13th to 15th centuries, speculates on the influences that led to the development of the 'great tower' in Western Europe, and finally suggests, based on findings about the ephemeral nature of even elite building in the Late Medieval period, that our approach to uncovering and understanding the built environment of this period needs to change.

2 REVIEW OF THE LITERATURE ON THE MEDIEVAL TOWERS OF GREECE

Towers in Greece, whether of perceived classical or medieval origin, had, until relatively recently, all been assumed to have a generally military or strategic function, operating as defensive positions,[50] signaling stations, lookout points and for control of the road network. It was only in two articles by John Young in 1956 about the classical and Hellenistic towers of the island of Siphnos,[51] and those in the area of Cape Sounion in Attica,[52] that the hypothesis was first mooted of their possible agrarian role.[53]

Since then archaeological excavations and surveys have continued to focus on the earlier periods but, fortunately, not to the complete exclusion of Byzantine and Frankish towers. Both the Laconian survey[54] and the Boeotian Expedition[55] have yielded significant data about the medieval period, whilst two surveys on Euboea well reflect the increasing multi-period focus of archaeological research. The first, a survey of pre-historic sites on the island by Sackett et al. (1966),[56] provides significant evidence from the medieval period, whilst a recent article by Seifried and Parkinson arising out of the SEEP project on the Paximadi peninsular, [57] close to Karystos in the south of the island, presents a table of 25 classical towers discovered in the area, of which six have some evidence of later Byzantine and/or Frankish occupation.[58]

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[50] Koder (1973) **Negroponte: Untersuchungen und Siedlungsgeschichte der Insel Euboia während der Zeit der Venezianerherrschaft**. Vienna pp. 95-96. He notes the use of towers on Euboea as providing early warning and a defence both against landward attack and pirate incursions.

[51] Young (1956a) Ancient Towers on the Island of Siphnos. **American Journal of Archaeology**, 60: 51-55

[52] Young (1956b) Studies in South Attica: Country Estates at Sounion. **Hesperia**, 25: (2): 122-146 He cited references to 38 towers on the Greek mainland and also to towers on twelve islands in the Aegean. He concluded "*It is now clear that wherever we have evidence it points to farming or other connected industries as the object of these towers' existence*".

[53] A more recent article on the excavation of towers on NW Andros, just to the south of Euboea, dated to the 4th century B.C. indicates that there is no consistency in their use during this period, some being agrarian and some military in their function (Koutsoukou and Kanellopoulos (1990) Towers From North-West Andros. **British School at Athens**, 85: 155-174). A further function of the use of classical towers as 'lock-ups' for slaves has also been suggested (Morris and Papadopoulos (2005) Greek Towers and Slaves: An Archaeology of Exploitation. **American Journal of Archaeology**, 109: 155-225). The classical towers on Thasos appear to fulfil display, defence, agrarian and maritime functions (Osborne (1986) Island Towers: The Case of Thasos. **The Annual of the British School at Athens**, 81: 167-178).

[54] Cavanagh et al. (1996) **Continuity and Change in a Greek Rural Landscape: The Laconia Survey** Vol. ii *Archaeological Data*, London: British School at Athens

[55] Bintliff and Snodgrass (1985) The Cambridge/Bradford Boeotian Expedition: The First Four Years. **Journal of Field Archaeology**, 12: 123-161

[56] Sackett et al. (1966).

[57] Seifried and Parkinson (2014) The ancient towers of the Paximadi Peninsular, Southern Euboia. **Hesperia**, 83: (2): 277-313. The authors argue that the towers had both a defensive and agricultural function and are better viewed within a '*multi-functional interpretive framework'*.

[58] Recently another survey has been published of a related area to the east of Karystos, the Bouros-Kastri region, with a further 9 tower sites - Gardner and Seifried (2016) Euboean towers and Aegean powers: insights into the Karystia's role in the ancient world. **Journal of Greek Archaeology**, 1: 149-176

The first field survey, however, to focus exclusively on post-Roman towers was described in an article by Peter Lock (1986) on the Frankish Towers of Central Greece.[59] He detailed 28 towers in all, the majority being in Boeotia and two in Attica. His work challenged the assumption that medieval towers were located for a strategic purpose. He criticised Antoine Bon (1937) for focussing merely on the three towers of Amphikleia, Haliartos and Thurion to the exclusion of other sites, [60] and for the latter's contention that their only point of interest was their proximity to the main north-south road and by inference the importance of this route. He also disagreed with the interpretation of Koder and Hild (1976) that some towers were part of a late Byzantine defensive system along the Kyfissos valley, [61] arguing that this does not explain the multitude of towers in other locations.

Discussing issues related to their location, Lock noted that only a few towers are inter-visible, that they tend to be associated with a settlement, and "*assuming that the towers are medieval in date, the feudal factor, too, must be considered as an aspect in their siting*". He also challenged the view that they are necessarily Frankish.[62] Since there has been no way of independently dating them,[63] observers have resorted to using their construction style as a guide, but roughly dressed masonry in-filled with tile slips, as he writes, was in use from the late Roman until well into the Ottoman period. Can we really conclude, however, from the archaeological evidence, as he does, that the towers were not rendered? It had been common practice over many centuries for Byzantine construction to be rendered, features on some towers indicate the possibility of a plastered finish and, if indeed their function was agrarian to store produce in a dry condition free from damp, this may have been a pre-requisite.[64]

Citing a number of written sources that appear to suggest construction during the 13th or 14th centuries, Lock proposed that the towers should been seen within a general northern

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[59] Lock (1986) The Frankish Towers of Central Greece. **The Annual of the British School at Athens**, 81: 101-123

[60] Bon (1937) Forteresses médiévales de la Grèce centrale. **Bulletin de Correspondence Hellenique**, 61: 136-208 He writes " *Leur intérêt est avant tout de révéler l'importance de la route qu'elles jalonnent et qui est, en effet, une des grandes voies de communication*".

[61] Koder and Hild (1976) p.187.

[62] Bon (1937) notes *'nous les croyons en général postérieures à 1204 et antérieures aux Turcs'.*

[63] Although nearly all medieval archives in Attica have been destroyed, this situation may be alleviated somewhat by recent advances in typing medieval ceramics (Vroom (2003) **Ceramics and society in the Aegean from the 7th to the 20th century a.c. - a case study from Boeotia, central Greece**. Leiden) Vroom has also studied a specific tower site (Vroom (1998) Medieval and Post-Medieval Pottery from a Site in Boeotia: A Case Study Example of Post-Classical Archaeology in Greece. **The Annual of the British School at Athens**, 93: 513-546)

[64]There were also a number of different types of mortar: Foss and Winfield (1986) **Byzantine Fortifications: An Introduction**. Pretoriapp.26-27. M.K. Langdon, too, specifically includes the term '*Mortared Towers'* in the title of his (1995) article[64], although did not develop the concept further. This issue is discussed in **section 8.3** on tower architecture.

European trend to construct tower-houses during this period. He thus views the towers as status symbols of the poorer knights, whose resources precluded their construction of lavish residences, their siting being defined by their owners' need to supervise and exploit their estates. This basic hypothesis he developed further in his articles on the acropolis in Athens (1987),[65] the medieval towers of Greece (1989),[66] and the towers of Euboea (1996),[67] although in his most recent article on Rhodes (2006) he divides towers into three categories, separating them according to an estate or strategic function.[68]

M. K. Langdon's (1995) catalogue of the mortared towers of Attica added further to the published corpus of medieval and Ottoman towers, covering 58 tower sites in total, two of which had already been described by Lock.[69] The towers are variously shaped, being circular, rectangular and square, and of varying dimensions from an external wall length of less than 3 metres up to over 15 metres. Some, however, such as those at *Treis Pyrgoi*, have been included without any real evidence as to their being medieval rather than Roman, and his separation of the towers into coastal and inland groups, whilst helpful, is somewhat artificial, if we consider that some coastal towers may be located close to good agricultural land, and therefore could be considered agrarian rather than strategic, whilst one inland tower atop Mt. Korydallos, as he himself notes, *'would seem to rule out any function but observation'*. In his conclusions he notes the general similarity in construction of the Attica towers and those of Boeotia catalogued by Lock.[70] The few preserved doorways indicate entry above ground level and he hypothesised that, although some towers had stairs, most would have had a simple ladder for access. As regards the question of who constructed them he offers no solution, only listing Burgundians, Catalans, Florentines and Turks (for a few) as the possible candidates. Based on the limited study of sherds found at each site he doubts any pre-Frankish origin and, agreeing with Lock, believes that historical considerations make them *'the products of a feudal model of land control'* following Frankish annexation of the territory.

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[65] Lock (1987) The Frankish Tower on the Acropolis, Athens: The Photographs of William J. Stillman. **Annual of the British School at Athens**, 11: 131-133

[66] Lock (1989) "The medieval towers of Greece: A problem in chronology and function". In Arbel, et al. (Eds.) **Special Issue: Latins and Greeks in the Eastern Mediterranean After 1204**. Mediterranean Historical Review, 4(1). 129-145

[67] Lock (1996) "The Towers of Euboea: Lombard or Venetian, agrarian or strategic". In Lock and Sanders (Eds.) **The archaeology of medieval Greece**. Oxford.

[68] Lock (2006) "Freestanding Towers in the Countryside of Rhodes". In Jeffreys (Ed.) **Byzantine Style, Religion and Civilization: In Honour of Sir Steven Runciman**. Cambridge University Press. 374-392

[69] Langdon (1995) The Mortared Towers of Central Greece: An Attic Supplement. **The Annual of the British School at Athens**, 90: 475-503

[70] This is a conclusion challenged in **chapter 9**, as is the assumption that entry was normally via a ladder.

In a more recent wide-ranging article focused on their research into the towers on Naxos[71] Spiliopoulou and Kotsakis (2012) have identified towers and fortified houses, which date from the 14th to the 19th century, in thirteen different islands and regions. They theorise that, due to the close political and feudal links between the two islands,[72] the architectural features of the towers in Naxos were introduced onto the island from Euboea in the late 14th century.[73] If they are correct, this provides us with a possible *tempus ante quem* for the construction of many of the towers on Euboea. It also places an understanding of the towers of Euboea as being critical for a more general comprehension of the role of medieval towers in Greece. [74]

Both the articles by Lock and Langdon implicitly assume that their catalogue of towers is deficient, but neither addresses this issue in their analysis. Subsequent to Lock's 1996 article on the towers of Euboea, Skouras (2003) added 24 tower sites to his catalogue of fortifications on the island, and the rate of disappearance of towers in the 20th century must have been mirrored to some extent in previous centuries, since building stone, before the advent of heavy crushing machinery and concrete, was an expensive and critical material in any construction.[75] There are, too, a multitude of references on large-scale 20th c. maps to 'Πυργάρια', 'πύργοι', 'βίγλες', 'κουλές' and 'σκοπιές' indicating the prior existence of some form of tower or look-out point.[76] Spiliopoulou and Kotsakis even argue that signal or communication points do not necessarily need to be towers - height and a strategic position are quite sufficient.[77] These ghost towers cannot be ignored just because they no longer exist and must be factored into any discussion of their role.

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[71] Spiliopoulou and Kotsakis (2008-2012) Towers are noted in Naxos, Chios, Mytilene, Andros, Amorgos, Crete, Euboea, Mt. Oros, Rhodes, Samothrace, Attica, Boeotia and the Peloponnese.

[72] They note the key administrative role that Negroponte played as the centre of Venetian power in the Aegean under the Baïlo. Further, the two islands were linked not only by a system of signal stations, but by close family ties. Nicolò dalle Carceri (1371-1383), the son of the Duchess of Naxos, Fiorenza Sanudo and the Lombard Triarch of Central Euboea, Giovanni dalle Carceri, appear to have spent much time in Negroponte.

[73] This does not exclude, however, that the original towers may have been constructed earlier and may, as proposed by Lock, be simply a product of western European feudalism.

[74] Their analysis of the Euboean towers was, however, based on an outdated catalogue of sites by Theodoros Skouras from 1974, not on his 2003 book which includes a total of 79 possible tower sites, and a book by Nikos Vasilatos, heavily criticised for its inaccuracies - Vasilatos (1992) **Κάστρα και πύργοι της Εύβοιας**. Athens; Triantafyllopoulos (1992) Ν.Γ.Βασιλάτου, Κάστρα και πύργοι της Εύβοιας. [castles and towers of Euboea] Αθήνα 1992. **Archeion Euboikon Meleton**, 163-168

[75] The whole fortress of Mantugo (modern-day Mantoudi) was dismantled reputedly to provide building stone for the Boudouri mansion (Skouras, 2003, p.380).

[76] Langdon (1995) does make some use of such references but not in a comprehensive manner. Two circular watchtowers, for instance, that he identifies on the coast of Attica are probably Byzantine based on their name. Lock (1986), on the other hand, focusses only on the surviving monuments, noting the possibility of a Byzantine dating, when remarking on the rubble and mortar construction style of the towers in his study, but fails to recognise the importance that place names on cartographic sources can play in identifying the existence, role or dating of monuments.

[77] Spiliopoulou and Kotsakis (2008-2012)

These three articles provide us with an invaluable base for the investigation of the medieval tower in Greece, but this is undertaken at the expense of a more extensive discussion of the environment within which they stand. There are on Euboea more than 300 churches and monasteries probably dating to the middle Byzantine and Frankish periods, the former being found in many cases linked to a tower site, while the latter were often themselves fortified, yet these are not factored within their discussion. What, too, is the relationship between major fortifications and towers – were the latter constructed independently of the former or was there some form of relationship, subsidiary or otherwise, between the two?

Looking at the literature in totality, two fundamental issues have not been addressed by any writer. Firstly, assuming that towers are in some way agrarian or feudal and not military or strategic, why do we see their construction in Euboea, Attica, and Boeotia but hardly at all in the Peloponnese, when all were, nominally at least, in the 13th and early 14th centuries part of the same feudal structure - the Principality of Achaia? If we accept the argument that the construction of towers was part of a general northern European tower-building trend in this period, then we would expect to find a similar number there, yet very few have, to date, been identified.[78] Secondly, although this was a key point made by Lock in his (1986) article, there does not appear to have been any serious attempt by subsequent authors to investigate the long tradition of tower building commencing in the Roman period,[79] and re-established in the Middle and Late Byzantine periods.[80] It would not be an exaggeration to talk of the existence of hundreds of towers in northern Greece and the Balkan region. This tradition, whilst not feudal in its roots, is (as noted in **chapter 1**) as strong as the Western European one. In the 10th to 12th centuries there is clear evidence of a Byzantine revival and major public works of a strategic nature. [81]

[78] Lock (1989) mentions only four towers - those at Krestena, Palaiokastro, Cosmina and Castello Franco. Spiliopoulou and Kotsakis (2008-2012) note none in their article, listing only tower houses in the Mani dating to the Ottoman period. A Recent thesis, however, identifies 18 tower sites in the northwest Peloponnese, indicating either another area with a high density of towers or possibly the lack of a concerted survey in the region as a whole. (Kourelis (2003) **Monuments in Rural Archaeology: Medieval Settlements in the Northwestern Peloponnese**. PhD, University of Pennsylvania).

[79] Biernacka-Lubanska (1982) **The Roman and Early Byzantine Fortifications of Lower Moesia and Northern Thrace**. Bibliotheca Antiqua. Warsaw.

[80] Clear examples of these are discussed in Bogdanovic (2012) "Life in a late Byzantine Tower: Examples from Northern Greece". In Johnson, et al. (Eds.) **Approaches to Byzantine Architecture and its decoration: studies in honour of Slobodan Ćurčić**. Ashgate. 187-202ș Papaggelos (2000b) περι των Πύργων της Χαλκιδικής. **Ελληνικό Πανόραμα**, 18: 134-161.

[81] In Macedonia Flora Karagianni (2001) describes the refortification of classical sites and the construction of inner defensive walls and towers in existing towns - Karagianni (2001) Οι οικισμοί στη Μακεδονία κατά τη μέση και ύστερη βυζαντινή περίοδο μέσα από τα αρχαιολογικά δεδομένα. **Mnimeio kai Periballon**, 7: 57-77

We have examples of the construction of massive free-standing elite towers in Chalkidikē and the Strymon delta, monastic towers on Mt Athos, and towers as part of estate fortifications.[82] The technology clearly existed, and such fortification was being promoted both by the Byzantine state and the church.[83] This is a point picked up again by Lock (1997) where he acknowledges the possibility that the towers in Boeotia may have their roots in '*both Burgundian and Greek society of the twelfth century'*,[84] yet the first archaeological survey of the Byzantine towers of Chalkidikē was only published three years later by Papaggelou.[85]

One role that has not been sufficiently addressed by Western European researchers is the coastal watchtower. Here again there is a Byzantine tradition that transcends that of the incoming Latins in the 13th century. Over the last 15 years professor Varelidis has supervised a plethora of student theses at the university of Peiraeus on the networks of *vigles* on many of the islands of the Aegean and Ionian seas.[86] This research indicates an unbroken tradition of coastal watchtowers to counteract the ever-present threat of pirate attack and enemy incursions throughout the Byzantine, Frankish and Ottoman periods.[87]

Whilst the architectural style of Greek Medieval towers does not seem to follow trends in Italy, it has been suggested that of a specific group – the buttressed towers of Macedonia – follows construction trends in France in the 12th and 13th centuries.[88] More recent research, however, seems to suggest that this is a Byzantine style.[89]

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[82] Smyrlis (2016) "Estate fortifications in late Byzantine Macedonia: the Athonite evidence". In Daim and Drauschke (Eds.) **Hinter den Mauern und auf dem offenen Land Leben im Byzantinischen Reich**. Mainz: Römisch-Germanischen Zentralmuseum. 189-206

[83] The tower on Akrocorinth, for instance, has been suggested to have a Byzantine origin at the turn of the 9th and 10th centuries - Rife (2008) "Leo's Peloponnesian fire-tower and the Byzantine watch-tower on Acrocorinth". In Caraher, et al. (Eds.) **Archaeology and History in Roman, Medieval and Post-medieval Greece: Studies on method and meaning in honour of Timothy E. Gregory**. Ashgate. 281-306 – although I have reservations about his conclusions. See a full discussion in **appendix 9.**

[84] Lock (1997) "The Frankish Period in Boeotia: Poblems and Perspectives". In Bintliff (Ed.) **Recent developments in the history and archaeology of central Greece : proceedings of the 6th International Boeotian Conference**. Bradford, 1997, Archeaopress

[85] Papaggelos (2000a) "Οι πύργοι της Χαλκιδικής [the towers of Chalkidike]". **The 17th International Byzantine Congress, August 3-8, 1986.** Georgetown University, Washington, D.C. 252-253; and Papaggelos (2000b).. There had been an earlier more general study of the area by Lefort (1982) **Villages de Macédoine: Notices historiques et topographiques sur la Macéoine orientale au Moyen Âge, 1 La Chaldique occidentale**. Paris.

[86] Euboea (2006), Kithnos (2010), Chios(2007 and 2016), Aigina and Spetses (2007), Syros (2011), Ionian Sea (2010), Crete(2006), Zakynthos (2006), Amorgos (2011), Cyprus (2007), Cephallonia (2007), Tinos (2006), Naxos (2005), Andros (2001).

[87] See **chapter 7** for a full listing.

[88] Ćurčić and Hadjitryphonos (1997), 42.

[89] Idem, '*Galatista tower, Halkidiki, Greece'*, 222-223.See **chapter 8.** and P. Theocharides and I. Papaggelos who in the same publication note a tower documented in the archives of the monastery of Iviron from 1104, '*bound all around by fourteen pillars*'.

A detailed study of the towers of Western Europe is generally beyond the scope of this work,[90] but it is clear that towers fulfilled a multiplicity of functions.[91] Creighton (2002) writes that the defining aspect in this period of the English castle,[92] the core of which (as noted in **chapter 1**) was the tower, was its '*truly multi-faceted nature'*, fulfilling a wide range of functions – '*military, domestic and residential, social and symbolic, administrative, economic and judicial*'.[93] In our study of the medieval towers of Greece we must be careful, therefore, not to assume that a Frankish 'feudal' fortification had a function any different to that of an Imperial Byzantine one. The political system within which they were constructed may have been different, but their use may often have been very similar.

For Euboea itself, which contains the highest density of surviving medieval towers in Greece,[94] the analysis that has been undertaken is lacking a comprehensive study of the general topography of the island, which inter-relates the fortifications with its churches and monasteries, settlements, roads, rivers, agricultural areas and geographical features. Johannes Koder (1973) in his ground-breaking book on the Frankish topography of the island attempted such, but not only was his cartographic analysis in error and his maps deficient,[95] but he treated each type of monument separately, never providing a fully integrated treatment. Whilst the catalogue of the religious and military monuments of the period by Theodoros Skouras in his two recent works (1998 and 2003) is an invaluable dataset and helps us better understand their positioning, and basic features, he unfortunately restricted himself to this, eschewing a more wide-ranging analysis. Only if we go beyond a focus on individual monuments and place the towers satisfactorily within the totality of their topographical setting, their historical environment and, as Lock so rightly notes, in their *'social and economic context'* can we truly understand their function.[96]

One final point needs to be made: whilst early authors acknowledged the difficulties of assigning constructors, roles and dates to towers, given the lack of documentary and archaeological evidence, more recent literature has tended to accept their tentative conclusions

[90] A general survey of regions outside Greece is included in **chapter 7**.
[91] Referred to variously as 'turris', 'ture', 'tureta', 'donjon', 'tour', 'motte', 'bastide', 'atalaya'
[92] He includes all types of fortification – both public (royal) and private – ranging from major fortresses down to temporary wooden mottes in his analysis.
[93] Creighton (2002), 7.
[94] This can only be stated based on the existing evidence. Many towers have disappeared without a trace even in the last forty years, a period during which there has been an active archaeological service operating in the areas studied. We have to assume that substantial numbers had already disappeared during the previous 500-year period, a time during which the stones of which they are constructed would have been a much more valuable commodity.
[95] See discussion in **chapter 3**.
[96] Lock (1989).

without challenge.[97] Yet the development of Geographical Information Systems technology now allows us precisely to understand, for instance, the placement and viewshed of each tower and the exact extent of its agricultural hinterland. Further, refinement of the classification of medieval pottery has allowed sites to be more accurately dated,[98] whilst contemporary cartographical evidence is now readily available.[99] Publication, too, of an increasing amount of the documentary records from the monasteries of Mt Athos has also provided the basis for the dating of the earliest Byzantine tower in Chalkidikē to the 10th century.[100] An article covering all the documented monastic estate towers of the area by Kostis Smyrlis (2016) potentially overturns the accepted 'Frankish' roots of the medieval towers of Greece and returns us thirty years to a prescient comment by Lock (1986) that the style of construction of the towers of Central Greece ' *does not actually conflict with [their] being built by the Franks*'.

[97] David Jacoby writes '*the medieval towers in Euboea….. functioned as administrative centres of rural estates and provided storage for the produce collected from the peasants… in any event they were clearly intended as status symbols*' - Jacoby (2001b) "The Demographic Evolution of Euboea under Latin Rule, 1205-1470". In Chrysostomides, et al. (Eds.) **The Greek Islands and the Sea. (Proceedings of the First Intl. Colloquium)**. Hellenic Institute,Royal Holloway, University of London. 131 - 179; John Bintliff notes '*The Franks ……controlled dependent villages through dense networks of towers, the residence of the knight or his estate manager…..'* - Bintliff (2015) "The spaces of dependency in Southern Greece: Landscape and tied labour from the Mycenaean era till the Middle Byzantine period". In Beltran, et al. (Eds.) **Los Espacios de la Esclavitud y La Dependencia desde la Antiguedad: Actas del xxxv colloquio del GIREA**. Universite de Franche-Comte. 255-262; whilst the recent synergistic article by Chrystalla Loizou concludes that towers '*served as an administrative centre of the fief and symbolised the status of the lord by marking his position as ruler of his domain'* - Loizou (2016) The medieval towers in the landscape of Euboea: landmarks of feudalism. **Journal of Greek Archaeology**, 1: 331-352.

[98] Vroom (2003), although the carbon14 dating of wood used in the cribwork of the walls of some towers, as proposed by Peter Lock, does not seem to have been undertaken.

[99] See, for instance, Pujades_i_Bataller (2007) **Les cartes portolanes: la representació medieval d'una mar solcada** Barcelona: Institut Cartogràfic de Catalunya, or the maps now on-line from most major libraries.

[100]**Archives de l'Athos**, (1937 ->) l'Académie des Inscriptions et Belles-Lettres et de l'Académie d'Athènes [Gabriel Millet, Paul Lemerle].

PART (B) THE LATE MEDIEVAL TOPOGRAPHY OF THE ISLAND OF EUBOEA

3 THE WRITTEN AND GRAPHICAL EVIDENCE

Little contemporary written evidence exists about the topography of the island of Euboea during the Middle and Late Medieval periods. All local censuses, legal documentation of property transactions and anything related to military installations appear to have been lost.[101] Even monastic records, unlike those for Mt Athos, appear not to have survived.[102] Our basic evidence therefore lies in the surviving archaeological monuments, which are detailed in **chapter 5**, supplemented by indirect written sources. These include minutes from various assemblies and committees of the Venetian Republic, which controlled the island indirectly or directly from 1204 to 1470, histories, papal documents, travellers' accounts and graphical evidence in the form of drawings and photographs. They are each covered in **section 3.2.** Firstly, however, an examination is made of the cartographic resources available to us.[103] Since these provide the overwhelming volume of documentary topographical evidence in the present work and this is the first time that such early cartographic resources have been used to such an extent in any topographical study in the Eastern Mediterranean, a full study of their quality and accuracy was deemed necessary.

3.1 The Cartographic Evidence

A summary of the cartographic evidence used in the present work is given in **table 3.1**. This provides a listing of the various types of maps and nautical charts (and their sources),

[101] This is in contrast to the other Venetian possessions of Corfu, Crete and Cyprus and one must ask whether there are records still to be identified in the Venetian archives.

[102] A survey of the medieval monuments by the Archbishop of Athens, a trained archaeologist and Byzantinist, makes no mention of local source documents from this period and only alludes to indirect references from the central ecclesiastical records, although this does not mean that such do not exist - Liapes (1971) **Μεσαιωνικά Μνημεία Ευβοίας [Medieval monuments of Euboea]** Athens.

[103] Two major early works of indexing and analysis of cartographic resources were consulted in the process of research - Nordenskiold (1897) **Periplus, an essay on the early history of charts and sailing directions [translated from the Swedish original by F.A. Bather]**. Stockholm: P.A.Norstedt & Sõner; and Kamal (1930) "**Monumenta Cartographica Africae et Aegypt**". Leiden, [printed for the author]. – More recently, an index of the printed maps of Greece has been published - Zacharakis (2009) **A Catalogue of printed maps of Greece 1477-1800**. Athens: Sylvia Ioannou Foundation.

which range from the present day back to the 13th century.[104] Each genre possesses its own peculiarities and there follows a detailed analysis of a number to show the way in which they were used. We are fortunate that the Late Medieval period (13th to 15th centuries), the time when, as will be seen in **chapter 7,** the majority of towers appear to have been constructed in Greece, coincides with the emergence of modern cartographic representation of the Eastern Mediterranean.

Cartographic base	Source
World Topographic Map	ESRI Corporation (Dec. 2013)
Satellite photographic and height data	Google Earth, ESRI Corporation
1: 100,000 and 1:25,000 maps	Anavasi (2002-2005)
1: 50,000 maps	Hellenic Military Geographical Service (1970 & 1988)
1:100,000 maps	British Ministry of Defence (1943)
1:200,000 maps	Greek Army (1929)
1:50,000 maps	Greek Cartographic Service (1907)
1:300,000 maps	Militar-geographisches Institut – Austria (late 19th c.)
Marine charts - Various scales	British Admiralty (1846, 1860, 1872, 1881, 1890)
Cityscapes & fortress studies	Camocio (16th c.), Coronelli (17th c.)
Military campaign sketch	Werdmüller (c. 1660)
Novae Tabulae	European cartographers (15th – 18th centuries)
Isolarii – various scales <1:500,000	Italian (15th, 16th and 17th centuries)
Portolan charts	Venice, Genoa, Pisa, Majorca (13th - 15th centuries)
Specialised data	
Extensive Survey maps	Various archaeological teams 1980 to present[105]
SRTM 90m. digital elevation data	The CGIAR Consortium for Spatial Information (accessed 23/2/2016)
Corine Land Cover 2000 Inventory	European Environmental Agency (2000)

Table 3.1 – Summary of Cartographic sources

[104] A full listing of cartographic sources utilised is given in **appendix 3.**
[105] These are summarised in **Appendix 7.2**.

Unlike the Early and Middle Byzantine periods,[106] when the surviving maps were largely symbolic,[107] and of minimal use in accurately identifying topographical features,[108] we see in this era the emergence of three new genres of map – the *portolan* chart in the 13th century,[109] and the *isolario* and *nova tabula* in the 15th and 16th centuries. The origin of the *portolan* chart has inspired much discussion and a profusion of theories over the last century since the first major work on the subject by Nordenskiold (1897), [110] so much so that two conferences have been organized over the last three years to bring together a wide spectrum of specialists from both the humanities and sciences to try to resolve the conundrum.[111]

Two publications dominate recent literature – those by Tony Campbell (1987)[112] and Ramon Pujades (2007).[113] Although there are differences in detail,[114] there appears to have emerged a general consensus that the *portolan* chart is a highly accurate representation of the Mediterranean Sea and its environs, medieval in origin with its roots in the early 13th century,

[106] The Early Byzantine period has been taken to run approximately from the foundation of Constantinople in 330 A.D. to 642 A.D. The Middle Byzantine period stretches from then until the Fourth Crusade's capture of Constantinople in 1204, and the late Byzantine Period until the fall of Constantinople in 1453.

[107] Woodward (1987) "Medieval Mappaemundi". In J.B.Harley and D.Woodward (Eds.) **The History of Cartography**. Chicago: University of Chicago. pp. 286-370

[108] This is a conclusion, it must be emphasised, based on the maps that have survived from the Early and Middle Byzantine periods but, to use a well-worn phrase, absence of evidence should not be treated as evidence of absence. See Gaspar (2015) Review of R. Nicolai (2013) A critical review of the hypothesis of a medieval origin for portolan charts. **Maps in History**, 53: 20-24.

[109] *Portolan charts* should be distinguished from *portolans* (*rutters* or pilot books) which were a set of sailing directions, describing distances between places, bearings based on the eight or sixteen points of the compass, approaches to mooring positions or harbours, and various potential marine dangers such as shoals.

[110] Nordenskiold (1897).

[111] Blackler (2017) Conference Review – First International Workshop on the Origin and Evolution of Portolan Charts - Lisbon, June 2016. **e-Perimetron** 12 (1): 37-39 [Accessed http://www.e-perimetron.org/Vol12_1.htm.

[112] Campbell (1987) "Portolan Charts from the Late ThirteenthCentury to 1500". In J.B.Harley and D.Woodward (Eds.) **The History of Cartography**. Chicago: University of Chicago. 370-463.This work is complemented by a comprehensive treatment and listing of portolan charts on his website http://www.maphistory.info/ which has been established since 1996.

[113] Pujades_i_Bataller (2007). This publication includes a CD, which contains a comprehensive database of portolan charts up to 1500. It was therefore possible to directly examine all charts.

[114] Thus, for instance, while Pujades (2007) considers that the charts were based on compass directions and therefore were predicated on the development of the compass during this period, Scott Loomer has suggested that they are based on some form of triangulation - Scott Allen Loomer (1987) 'A Cartometric Analysis of Portolan Charts: A Search for Methodology' (unpublished doctoral dissertation, Madison, University of Wisconsin) **in** Gaspar (2010) **From the Portolan Chart of the Mediterranean to the Latitude Chart of the Atlantic: Cartometric Analysis and Modelling**. PhD, Universidade Nova de Lisboa.

[115] and that it did not develop from the written *portolans* (*loggers*) extant during and before this period.[116]

Beyond this, however, there are some significant disagreements with some authors arguing that the source of the information to produce these charts is also medieval (mariners) while others theorise that the charts are based on some sort of map projection,[117] and that therefore, given our current understanding of medieval technology, a classical Greek or Roman origin is probable.[118] A recent article by Joaquim Gaspar (2018),[119] which analyzes in depth the late 12th century *Liber de Existencia Riveriarum et Forma Maris nostri Mediterranei* (considered to be the earliest written *portolan*)[120] goes some way to reconcile these differing conclusions. He notes that the recent development of geomagnetic models capable of estimating magnetic

[115] The vellum of the Carte Pisane chart has been dated with 95% confidence to between 1169 and 1270, but Pujades argues it is from much later. See Pujades i Bataller (2013) "The Pisana Chart: really a primitive portolan chart made in the 13th century?". **D'une technique à une culture: les cartes marines du XIIIe au XVIIIe siècle,**. Paris, 3 December 2013, Comite Francais de Cartographie. 17-23; and Campbell (2015a) A detailed reassessment of the Carte Pisane: A late and inferior copy, or the lone survivor from the portolan charts' formative period?'. [Accessed 12/11/2018], http://www.maphistory.info/CartePisaneMenu.html

[116] Campbell (1987), 382-383.

[117] The closeness to a Mercator projection was first researched in detail by A. Clos-Arceduc, "L'enigme des portulans: étude sur le projection et le mode de construction des cartes arhumbs du XIve et du Xve siecle," Bulletin du Comité des Travaux Historiques et Scientifiques: Section de Géographie 69 (1956): 215-31 **in** Campbell (1987), 84, n.29.

[118] The most recent is outlined in an article by Roel Nicolai based on his PhD thesis - Nicolai (2015) How old are Portolan charts really? **Maps in History**, 52: 15-24; Nicolai (2018) "The navigation data in the Compasso de Navegare: accuracy and provenance". **Second International Workshop on the Origin and Evolution of Portolan Charts, Lisbon, 7-8 June, 2018**. Using quantitative (geodetic) analysis he showed that the large portolan charts of the Mediterranean, printed on 100 x 75 cm. vellum, were constructed from smaller regional maps. He then demonstrated that these were highly accurate and closely related to a Mercator projection and drew the conclusion that, given our present knowledge of medieval technology, the portolan charts could not have had a medieval origin.He did not propose an alternative origin but believed that investigation needed to be made of a possible Greco-Roman root, clearly alluding to the Ptolemaic map produced in the 2nd century A.D.in Alexandria, Egypt, which was based on a similar scientific basis as the 16th century Mercator projection (Tsiotras (2018) "The Oldest Anonymous Scholia on Ptolemy's Geography". In Ceceña (Ed.) **Claudio Ptolomeo, Geografía (Capítulos teóricos)**. Ciudad de México: Facultad de Filosofía y Letras, Universidad Nacional Autónoma de México, . 251-279). Two responses were immediately published - by Gaspar (2015) and Campbell (2015), each respectively (although not exclusively) looking at the quantitative and historical aspects of the problem -Campbell (2015b) Review: How old are portolan charts really by Roel Nicolai (2015). **Maps in History**, 53: 25-27; Gaspar (2015).

[119] Gaspar (2018) The Liber de existencia riveriarum (c.1200) and the Birth of Nautical Cartography. **Imago Mundi**, 71: (1): 1-21.

[120] "**Liber de Existencia Riveriarum et Forma Maris nostri Mediterranei**". (1160-1200 ?). British Library, London, Cotton MS Domitian A XIII, fols. 114r–129v. This was first published by Gautier-Dalché (1995) "**Carte marine et portulan au XIIe siécle: Le "Liber de existencia riveriarum et forma maris nostri Mediterranei" (Pise, circa 1200)**". Rome, Ecole Francaise de Rome. . The dating is problematic and Pujades has argued that it is more probably dated after 1204, since it was only after this point that the Venetians had access to the Black Sea - Pujades_i_Bataller (2007), 519, n. 76. The date 1204 is a convenient turning point, but Pujades seems to have ignored the fact that Venice, by the treaty of May 1082 between it and the emperor Alexius I, was not only granted privileged commercial access to key ports around the Byzantine Empire but warehouses and harbour facilities in Constantinople itself. It appears inconceivable therefore, given the weakness of the Byzantine navy at this time, that Venetian ships had not penetrated the Black Sea during the late 11th and 12th centuries - Ostrogorsky (1957) **History of the Byzantine state [Translated from the German by Joan Hussey. With a foreword by Peter Charanis]**. New Brunswick, New Jersey, USA: Rutgers University Press, 319.

declination in earlier periods and of digital techniques of cartometric analysis have demonstrated that *portolan* charts were constructed using a *plane charting* technique.[121] Proving that the *Liber* was to some (if not to a greater) extent probably prepared from a proto-chart, he then proposes that this chart had been constructed using both compass measurements and by '*traditional astronomical methods'*.[122] He concludes that *portolans* and small regional charts or sketches probably existed in parallel prior to their merger into a full Mediterranean-wide *portolan* chart.[123] But he goes one step further, hypothesizing that the most likely scenario is that these navigational tools were combined into a single chart '*guided by the outlines on older world maps*'.

For our purposes the critical aspect of this discussion is not so much the roots of the *portolan* chart but its accuracy, and in this all parties are in agreement. The *portolan* charts achieved an accuracy that was extraordinary, given the known technology of the period, and therefore we may with confidence use them as a basis for reconstructing the topography of the island in the Late medieval period. Two caveats, however, need to be made. The first is the suggestion by Tony Campbell that, while the mainland coastline is well-delineated, island shapes are deliberate '*visual mnemonic devices'* and that in most cases - he excludes the large islands (and Euboea partially) - for the smaller islands there is no attempt at geographical accuracy.[124] We should therefore be careful in using the portolan charts to exactly position any place, although they may be treated as an accurate record of the existence of such. The second is that, although there was a formative period of development during the 13th and early 14th

[121] This is the process by which the navigational data of compass courses and distances was transferred onto the .plane of the chart even though the original measurements had been undertaken on a spherical surface – Gaspar had proven this in his PhD thesis - Gaspar (2010).

[122] His analysis compares directions noted for 153 tracks in the *Liber* with actual ones. He concludes that overall there is an approximately null variation between the two, but that there is a negative relationship between track length and accuracy – 23 shorter tracks (less than 70 miles) have a variation of two compass bearings (45°) when no long distance tracks have such – something which had similarly been found by Lanman on the *Compasso di Navigare,* a portolan dated to the late 13th c. - Lanman (1987) **On the Origin of Portolan Charts (The Hermon Dunlap Smith Center for the History of Cartography. Occasional publication no.2)**. Newberry Library). He justifies this by the inaccuracy of positioning of places or when one or both places are positioned on islands.
Here Gaspar fails to really take account of the context of the sailing instructions. Although oar-powered galleys existed, they were the exception. The vast majority of ships – and therefore portolan users - were sailing vessels, which depended on the wind as their source of power. These errors cannot therefore be looked at in simple statistical terms. When leaving port the master of a vessel, whose manoeuvrability was nothing like a modern sailing yacht, needed to take great care to identify the prevailing wind on his projected course. He needed to have enough sea room between his ship and a lee shore, BEFORE setting course for his destination. He also needed to take account of the many localised winds that exist in the Mediterranean basin, even of the currents when his average speed was little over 3 knots per hour. Sailing directions therefore need to be examined in the light of local conditions, and it is not surprising that shorter distances generate greater variation from the actual.

[123] This echoes a prescient comment by Campbell (1987, 383) that '*A belief in multiple origins unites many scholars of past and present*'.

[124] Campbell (2013) Why the artificial shapes for the smaller islands on the portolan charts (1330-1600) help to clarify their navigational use. **Comité Français de Cartographie**, 216: 47-65.

century,[125] charts after this period (based on their depiction of Euboea) show little improvement, and in many cases may be inferior copies of the original works.

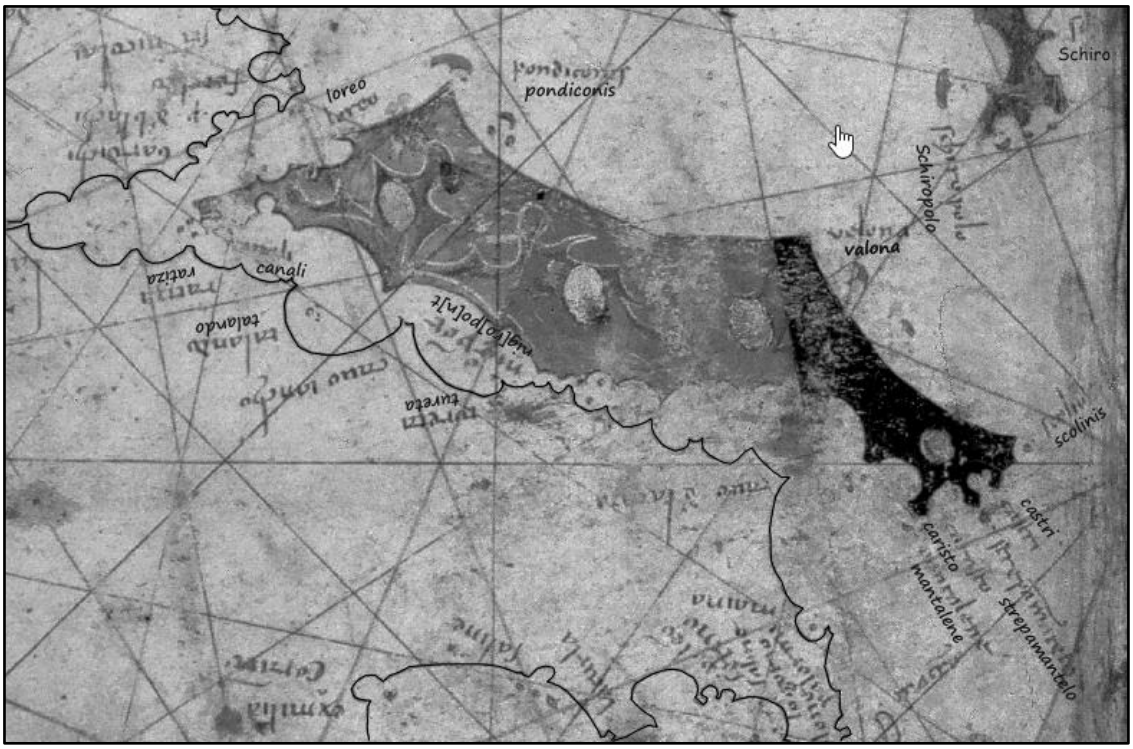


Figure 3.1 Extract depicting Euboea from map of Aegean by Petrus Vesconte (1313)[126]

A problem of the use of *portolan* charts is that most cover the whole Mediterranean and are small scale, but we are fortunate that some, such as those by Pietro Vesconte dated to the second and third decades of the 14th century were produced in Atlas form with regional maps,[127] one being a chart of the Aegean.[128] This is sufficiently large to show significant detail around

[125] Campbell notes how the ***portolan*** charts were continually updated for changing name forms and the (dis)appearance of littoral settlements - Campbell (2015b), and Campbell (1986) Census of Pre-Sixteenth-Century Portolan Charts. **Imago Mundi**, 38: 67-94.

[126] Coastline is enhanced, and place-names are annotated.

[127] The atlas format preserved the charts better but the scale improvement can be misleading since most atlases were actually only about 15cm x 30cm in size, providing four to eight double page spreads, each of 900 cm^2 in area, compared to that of a chart on a single piece of vellum of about 6,000 cm^2.

[128] Vesconte (1313) " **[Atlas nautique de la mer Méditerranée et de la mer Noire] / Petrus Vesconte de Janua fecit istas tabulas anno dni MCCCXIII** ". Bibliothèque nationale de France, CPL GE DD-687 (RES). This chart is remarkable for its accuracy. We must wait nearly 500 years until the end of the 18th century until we again see such accuracy at this scale - Heather (1797) "**A new chart of the Mediterranean Sea**". London, W. Heather & Co. Library of Congress, G5672.M4P5 1797 .H4. Although the central western section around ***Negroponte*** is not clear (not surprising given the small scale), the bearings and coastline from the south-eastern cape Capodoro (next to ***scolinis***) to Cape Kymē (***Valona***) in the centre on the Eastern seaboard, up via the Leukonēsia islands to the northeastern cape close to Pondikonēsi (***pondiconis***), then southwesterly down to Cape Lithada via the Bay of Oreoi (***loreo***) are close to reality. Similarly, the western coastline is clearly delineated, showing the complex bay opposite Aidipsos (just above ***canali***), although the Bay of Almyropotamos toward the south has been omitted.

the island's capital of ***Negroponte*** (see **figure 3.1**). Utilising 36 *portolan* charts dating from the 14th and early 15th centuries it was possible to create a map of Euboea containing 21 named points (see **map 3**). This analysis, due to be published shortly, is referred to in detail in **chapters 5** and **6**.[129]

Criticism regarding their accuracy can be made of the second contemporary cartographic genre that is used heavily in the present work – the *isolario* (book of islands). The first example of this format was created in the second decade of the 15th century by the monk, Cristoforo Buondelmonti (***figure 3.2***).[130] It possessed a short history and description of each of the islands of the Aegean together with a map. That of Euboea is relatively simple, showing little detail beyond the three key cities on the island – ***Negroponte, Oreo*** and ***Caristo –*** and what may be the small fortification of ***Rizokastro***.[131] George Tolias has noted the likelihood that Buondelmonti had taken the geographical detail he provides on each island from a *portolan* chart, and the style and accuracy of his map of Euboea supports this supposition,[132] suggesting that the isolarii reveal the existence of large scale regional maps.[133]

Additionally, Karystos Bay (***caristo***) on the southeastern peninsular has been correctly formed and oriented, but the bay at Kastri (***castri***) has been over-emphasised.

[129] Blackler (2019) Euboea during the 14th century as recorded on the portolan charts of the period [Εύβοια κατά τον 14ο αιώνα όπως έχει καταγραφεί στους χάρτες πορτολάνους αυτής της εποχής]. **Awaiting publication**,

[130] Turner (1987) Christopher Buondelmonti and the Isolario. **Terrae Incognitae, Wayne State University Press**, 19: 11-28 A cleric and member of a minor branch of a powerful Florentine family, by 1415 Buondelmonti was travelling around the Aegean with a copy of Ptolemy's ***Geographia*** for reference. Based in Rhodes, he appears to have personally charted or had first hand reports from other sea captains of most of the islands. Turner notes that there are 64 known copies of Buondelmonti's *Liber Insularum*, most produced in the period 1456 to 1480, long after his death in the mid 1430's. To make matters more complex there are also three different versions.

[131] Buondelmonti (1420) "**[Euboea and Athens] in Tractatus de insulio archipelagi**". National Maritime Museum, P/13(35R)..

[132] Tolias (2007) " Isolarii, Fifteenth to Seventeenth Century". In Woodward (Ed.) **The History of Cartography,**. Chicago. vol.3, Part 1, ch.8, 266. This map follows closely the ***portolan*** chart traditions with an over-emphasis on headlands, exclusively concave curves to indicate bays and estuaries, never using convex shapes, which might better represent the outline of a headland. Yet the overall shape Buondelmonti drew is clearly recognizable as the island. Its length and width are generally in proportion, and it is relatively easy to recognize places on the map**,** counting headlands in much the same way one might count stops on a modern subway map. As an example modern place-names have been added to his map in **figure 3.2**.

[133] These were probably akin to sketches. This point is discussed in more detail in the conclusions in **chapter 11**.



Figure 3.2 – Buondelmonti (1420) with modern towns annotated, and re-oriented to the North[134]

In 1485 a very sophisticated example, the first of what Tolias has described as the '*nautical isolario'* sub-genre,[135] was produced by a ship's captain known to us as Bartolomeo dalli Sonetti.[136] He claimed to have sailed around the Aegean on fifteen voyages measuring the islands with '*compass and divider'*.[137] His map of Euboea, drawn to a scale of approximately 1: 1,000,000, shows great detail, noting not only towns and fortifications (with an indication

[134] Buondelmonte (1420) "'**Egripos 65' in Tractus de insulis archipelagi**". National Maritime Museum, Greenwich, London, P/20.
[135] Tolias (20018), 269.
[136] Because of the rhyming style of his writing.
[137] Sonetti (c.1485) "**Negroponte [By Sonetti, Bartolommeo dalli]**". Venice. National maritime Museum, London, P/21 f.55.

of size and their vernacular name) but monasteries, rivers, capes and even shoals around the coastline (**figure 3.3** and analysis in **appendix 2.2**).[138]

Similar works were produced by the Portuguese Valentin Fernandes (1506-1510),[139] and the Ottoman admiral Piri Reis (1521).[140] Whilst the latter's initial maps seem to have been derived from Sonetti, and incorporate little annotation, his written descriptions read very much like a *portolan* and provide a valuable insight into a number of locations.[141]

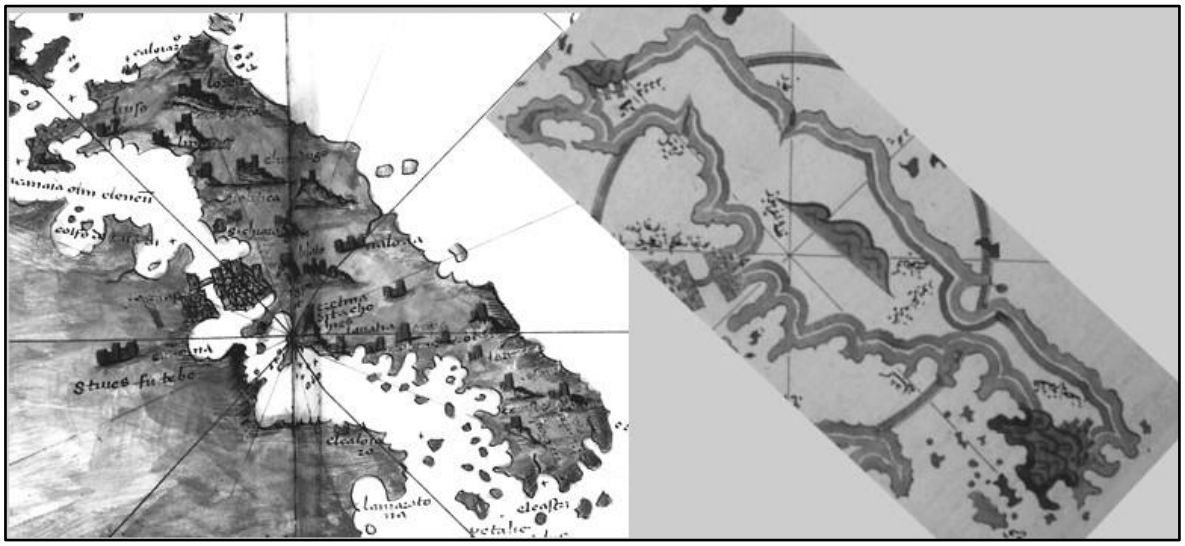


Figure 3.3 – *Negroponte* in Bartolomeo Dalli Sonetti (1485) and Piri Re;is (1521)[142]

[138] Blackler (2016) "Mapping Frankish Euboea : tracing the depiction of the island by the portolan charts and early maps from the 13th to 17th centuries". In Tankosic, et al. (Eds.) **An Island between Two Worlds: the Archaeology of Euboea from Prehistoric to Byzantine times, July 2013, Eretria**. Norwegian Institute at Athens. 653-661.

[139]Valentin Fernandes (1506-1510) "*De insulis et peregrinatione Lusitanorum*," Munich, Bayerische Staatsbibliothek, "Codex Hispanus (Lusitanus)", no. 27 in Tolias (2008), 269. This has not been used in the present work.

[140] Maps from two of his isolarii have been used in the present work: a draft version from 1521, which generally follows Sonetti, and a presentation version from 1526, which incorporates his own map of Euboea -Piri_Reis (1521) Kitab-ı Bahriye. [Accessed 15/12/2018], https://www.academia.edu/19498792/ Piri_Reis_Kitab-%C4%B1_Bahriye; Piri_Reis (1526) "**Map of the islands of Skyros and Euboea [copied in late 1600 's or early 18th century]**". Walters Art Museum, Baltimore,USA, 19195; Soucek (1992) **Piri Reis and Turkish mapmaking after Columbus**. Studies in the Khalili collection. Nour Foundation in ass. with Azimuth editions and Oxford university Press.

[141] Loupis (1999) **Ο Πιρι Ρεις, η οθωμανική χαρτογραφία και η λίμνη του Αιγαίου [Piri Reis, Ottoman Cartography and the Aegean Lake]**. Athens: Trochalia.

[142] Maps drawn from Sonetti (c.1485) in the National Maritime Museum, London, and from Piri_Reis (1521) Academia: uploaded by Yasemin Nemlioğlu Koca.

The '*isolario'* name was first promoted by the prolific miniaturist Benedetto Bordone in the early 16th century,[143] as he popularised the genre in printed form, many versions of which were developed by other cartographers over the following two centuries.[144] His maps do not appear to have been his original research but, judging by the outline of the island of Euboea, were also copied from Sonetti's work. It is unfortunate that in subsequent *isolarii,* possibly as a result of the popularity of the format and cut-throat competition or a focus on its literary aspects, there was a deterioration in quality of the depiction of the island,[145] but exceptions existed.[146]

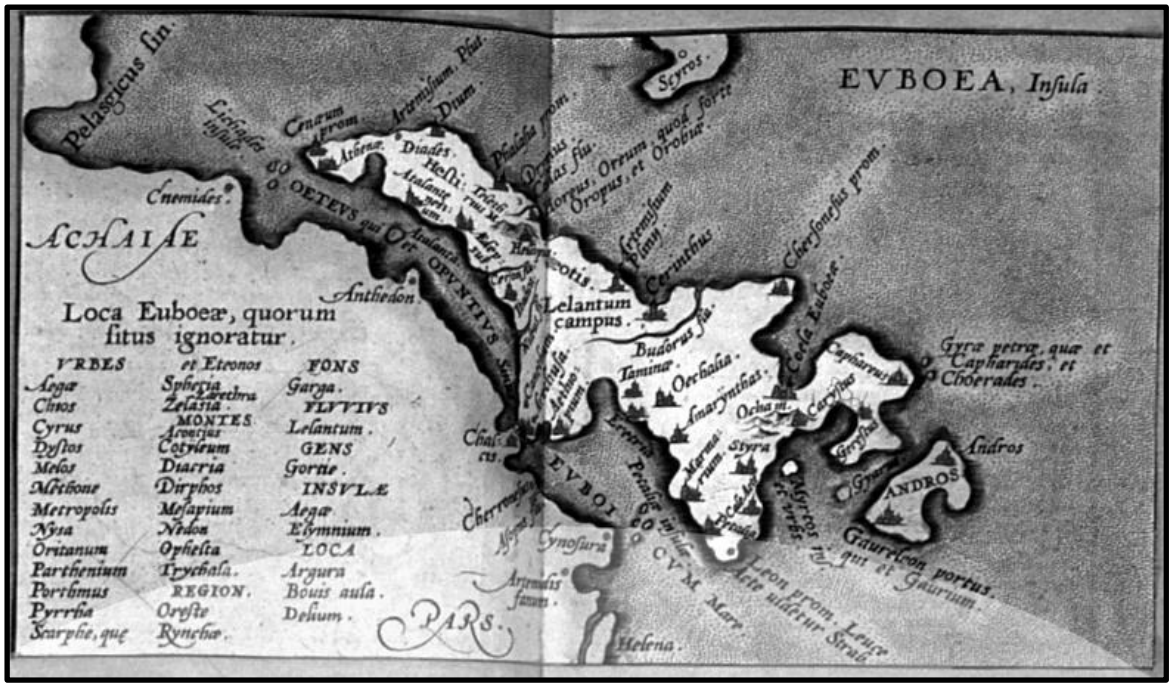


Figure 3.4 – Extract of island of Euboea from Abraham Ortelius (1584)

[143] Armstrong (1996) Benedetto Bordon, "Miniator", and Cartography in Early Sixteenth-Century Venice. **Imago Mundi**, 48: 65-92; Cachey (2010) From the Mediterranean to the World: A Note on the Italian "Book of Islands" (isolario). **California Italian Studies**, 1:

[144] Tolias (2007). See **appendix 6** for a full listing of the *isolarii* referred to in the present work.

[145] Meserve (2006) News from Negroponte: politics, popular opinion, and information exchange in the first decade of the Italian press. **Renaissance Quarterly**, 59 No.2: 440-480. See also figure 3.5. Many of the isolario maps of Euboea are included in Karakostas (1999) **Χαραακτικά της Εύβοιας, συλλογή Γιάννη Κ.Καρακώστα**. Athens: Etairia Euboikon Spoudon.

[146] Battista Agnese's map of 1554 is excellent but an enigma. Its coastline is so similar to that of Sonetti's, that either it was a copy or they both took details from a third source. This could have been a mid. 15th century *portolan* chart. Agnese was an accomplished producer of *portolan* charts and his chart of the Aegean appears to be original whilst Sonetti, as a sea captain, must also have owned one. Their coastlines are slightly different but the place-names are almost exactly the same, so more than likely Agnese's map is based both on Sonetti's and a second source - Agnese (1554-1556) "**Carta corografico-nautica de li**'**Attica e di Negroponte**". Venice. Biblioteca Nazionale Marciana, Ms.It.IV 62.; Agnese (1555a) "**Map of Aegean** ". Venice. National Maritime Museum, Greenwich, London, P/12 f.14

The third new genre are the so-called *novae tabulae*. These emerged from work undertaken using the second century A.D. Ptolemaic codex re-discovered in the late 13th century in Constantinople,[147] and translated into Latin in the early 15th century. The largest scale map available with most codices, that is relevant to the present study, is map X of Greece and the Aegean, which has insufficient detail to be of practical use in this study.[148] In 1584 the cartographer Abraham Ortelius published a series of island maps based on the Ptolemy codex, one of which was of Euboea.[149] His map (**figure 3.4**), whilst geographically incorrect as regards the coastline of the island, appears not to have been published purely for profit but as an honest academic attempt to identify names of classical sites in the Ptolemy codex since he provides a detailed list of those names he was unable to locate.[150] The *novae tabulae* were based on these classical maps but attempted to provide modern place names and geographical features utilising information from *portolan* charts, sailors, merchants and political missions but, as with the *isolario*, commercial considerations in their publication often appear to have outweighed issues of technical quality.[151]

Generally, competition was so intense that the cartographers of the period seem to have eschewed the principles of Ortelius, being more concerned about promoting their maps as something 'new' with little or no evidence for innovation.[152] This conclusion emerges very simply from studying the coastline of Euboea from some of the published maps of the period

[147] Dilke (1987) "Cartography in the Byzantine Empire". In Woodward (Ed.) **The History of Cartography**. Chicago: Universityof Chicago. pp. 258-275. This had possibly first been discovered by Maximus Planudes c. 1297. A resident of Byzantium at the end of the 13th century, he had not only restored an old copy of Strabo's ***Geography*** but had also apparently arranged for a map to be prepared from Ptolemy's instructions.

[148] One codex, Harley MS 3686 (f.36) in the British Library, provides a map of Euboea, but this is little more than a sketch and possesses no detail of value.

[149] Ortelius (1584) " ***"INSVLAR. ALIQVOT AEGAEI MARIS ANTIQVA DESCRIP, EVBOEA, Insula"***". Antwerp. Biblioteca nazionala Marciana, 68.d.11 001003,– shown at a scale of 1 : 1,250,000, size 100 x 188 mm.

[150] A number of those in his list I have now been able to identify. Whilst not generally relevant, since they are classical rather than medieval sites, some sites appear to have continued with their original name throughout the two periods.

[151] An edition of Map X of the *Geographia*, which was published by Sylvanus in 1513, for instance, shows Greece and the Aegean, and displays the coastline of Euboea in a manner remarkably similar to the portolan chart prepared by Angelino Dulcert more than 150 years earlier in 1339 - Tolias (2008) **Ιστορία της Χαρτογραφίας του Ελληνικού Χώρου 1420-1800 [History of the cartography of the area of Greece 1420-1800]**. Athens: Institouto Neoellinikon Erevnon, 52; Dulcert (1339) "**[Carte marine de la mer Baltique, de la mer du Nord, de l'océan Atlantique Est, de la mer Méditerranée, de la mer Noire et de la mer Rouge] / Hoc opus fecit angelino dulcert/ ano M CCC XXX VIIII de mense augusti/ [in civitate] maioricharum]**". Paris, Bibliotheque Nationale de France, B696.

[152] Belavilas (2004) "Aegean Sea Islands and Ports through the Isolarii of the Fifteenth and Sixteenth Centuries". **Eastern Mediterranean Cartographies**. Athens: Institute for Neohellenic research. pp.51-63. The author notes that ***Benedetto Bordone*** in his ***isolario*** of 1528 faithfully copied ***Bartolommeo dalli Sonetti***, altering the symbols and orientation of the maps '*to create the misleading impression that his was a new map'*.

– see **appendix 3.3**.[153] Few cartographers ventured outside their drafting rooms, depending in the main on second-hand reports from travelers, mariners, merchants, or military engineers and borrowing or even stealing from predecessors or competitors.[154] We must also remember that for most Italian or Northern European cartographers, even with the best of intentions and with outstanding drafting skills, it would have been difficult after the annexation of Euboea by the Ottomans in 1470 to gain access to the island.[155]

Looking in a westerly direction we know, for instance, that the Portuguese ***portolan*** charts of their discoveries were, not surprisingly, state secrets, although not very well-kept ones.[156] The same would have been the case for the Venetians, Genoese, Lombards, Catalans and Ottomans, locked in conflict in the confines of the Aegean Sea. Good maps offered a competitive commercial and military advantage.[157] A decree from a meeting of the Venetian magistracy of the 'Council of Ten" in 1460,[158] just ten years before the fall of ***Negroponte*** to the Ottomans, displays how the lack of clear geographical knowledge about their possessions was viewed as a strategic weakness, and therefore, by implication, the immense value of good maps.[159]

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[153] The corollary of this is that outside certain centres the dissemination of maps and cartographic knowledge was extremely limited. In a lecture on the early maps of Cyprus Tony Campbell refers to this deterioration in quality as 'the Darwin Paradigm' (referring to a phrase originally coined by Brian Hurley and Michael Blakemore in their article **Concepts in the History of Cartography**, (1980), Cartographica 17 No.4 , pp. 17-23) - Campbell (1994) "Cyprus: the reliability of early maps". Nicosia, Bank of Cyprus [published lecture].

[154] Belavilas (2004).

[155]Despite the loss of ***Negroponte*** in 1470 the Venetians never ceased their efforts to re-capture it. This culminated in a major expedition in 1688 following the retaking of Athens the previous year, but, despite a three- month siege of the city the Venetian troops were forced to retire. See (1976) Venice's Last Imperial Venture. **Proceedings of the American Philosophical Society**, 120: (3): pp.159-165

[156] Lach (1965) **Asia in the Making of Europe, vol.1, the Century of Discovery**. 1, Chicago: University of Chicago pp.182-3. In 1504 King Manuel II issued a decree (the *Sigilo*) forbidding the dissemination of information about navigation to the Portuguese colonies in America and the East possibly in response to a pending visit of the Venetian agent.

[157] This is also the case for the emerging Ottoman Empire. As noted above the Ottoman admiral Piri Reis (1467-1554) produced two editions of a nautical isolario (1521 and 1525/26) dedicated to Sultan Süleyman I ("The Magnificent"), which was later expanded and updated in the 17th century. These give us the key Ottoman settlements on Euboea, and the first indication of a large town at modern-day Kymē on the East coast of Euboea. This would have been the natural port for export to Constantinople of goods from the rich agricultural areas in central Euboea.

[158]MacKay The Dieci call for maps in 1460. **Academia.edu** [Accessed 21/12/2012], http://www.academia.edu/1788577/The_Dieci_call_for_maps_in_1460 .

[159] By the 17th century Venetian military map-making had become highly sophisticated in Crete as they awaited the Ottoman onslaught. Francesco Basilicata, a military engineer, produced a map of the island (1629) showing more than 1,000 villages with a complex topographical symbol system - Clutton (1982) Some Seventeenth Century Images of Crete: A Comparative Analysis of the Manuscript Maps by Francesco Basilicata and the Printed Maps by Marco Boschini. **Imago Mundi**, Vol. 34: pp. 48-65; Porfyriou (2004) "The Cartography of Crete in the First Half of the 17th Century:a Collective Work of a Generation of Engineers". **Eastern Mediterranean Cartographies**. Athens, Institute for Neohellenic Research N.H.R.F. pp. 65-92.

This is not to say that good maps were not drafted,[160] but it is necessary to comprehend both the aims of the map makers and, as Tolias(2008) notes, [161] how they approached their work. Many famous names were at the same time cartographers, copyists, miniaturists and publishers of the work of others, whether legally (***cum privilegio***) or illegally, and there was often little consistency between their maps. They also frequently issued many versions of their work during their lifetime. This could be for varying purposes such as a version of Ptolemy's ***Geographia*** or a ***nova tabula***, an updated version with new information, or simply for business reasons to publish a new compilation, for which they believed there would be market demand.[162]

Great care has therefore been taken to identify the real provenance of any map. Additionally, the general quality of work of each cartographer as regards Euboea was evaluated before any conclusions were drawn on the topographic details included in his work (a short summary is provided in **appendix 3)**.[163] Thus, maps by Mercator continued to be published

[160] Marco Boschini's isolario of 1658 was an exception to and a considerable improvement on his immediate predecessors. Apart from higher quality printing, his coastline is much more accurate, copied from Sonetti's, 200 years previously. He also includes significantly more detail, including a large number of un-named towers (if this is what the symbols signify), although only a small proportion of the ones that still exist today. He makes the mistake of including ***Protimo*** and ***Cerinto*** twice, and transfers ***Tanagra*** and ***Talando*** from the mainland. However, whilst he has got some things wrong, he patently has a number of new sources of detailed information, some of which we must take note, e.g. he notes the names of a number of islands off the southwest coast of Euboea- Boschini (1654/1658) "**Negroponte in 'LArcipelago con tutte le isole....**'". Venice, Francesco Nicolini. Bibliothèque nationale de France, CPL GE DD-2987 (6198).

[161]Tolias (2008), 19 - '*the mariner…..the mathematician and the printer do not understand the cartographic process in the same manner*' (my translation).

[162] In 1578 Gerardus Mercator, for example, published a version with corrections of the ***Geographia - Mercator (1578) "[map X , Ptolemy's Geographica]". Cologne, Gottfried von Kempen. Athens, Margarita Samourka Collection No.1251.*** In 1589 he issued his ***Atlas sive Cosmographicae meditationis,*** which included a map ***Graecia*** with good detail on Euboea - *Mercator (1589a) "**Graecia/ per Gerardum Mercatorem Cum Pivilegio**". Athens, Maragarita Samourka Collection No. 1024*- and another ***Macedonia, Epirus et Achaia,*** again including Euboea, but with different enhanced detail - Mercator (1589b) "**Macedonia, Epirus et Achaia**". Athens, Margarita Samourka Collection No.1025. There is also an undated large-scale map of Attica and the Northern part of Euboea attributed to him - Mercator (undated) "**ATTICA MAGARICA CORINTHIACA BOEOTIA PHOCIS LOCRI**". Amsterdam. Biblioteca nazionale Marciana BID 005415 . Each of these four maps is significantly different.

[163] For manuscript maps this is even more important. The ***liber insularum*** of Cristoforo Buondelmonti was hand-copied for nearly 100 years after its original issue in 1420 with the attached maps often being updated. Additionally, even though they may have added to, amended or updated the original document, copyists regularly left the original date unchanged, further undermining its usefulness as a contemporary historic source, unless its actual copying date can be accurately assessed.

Johannes Koder (1973) failed to understand this. He erroneously dated to 1420 a map printed in Legrand's (1897) translation of a Greek language version of Buondelmonti, thus undermining all his topographical analysis. Legrand himself writes that his Greek version had no maps and that the copies included in his book were from an atlas purchased in Turin by Charles Schefer and annotated in French. He notes the quality of these maps and remarks '*Faut-il en conclure que l'auteur s'est inspiré du **Liber insularum***?' Its sophisticated and "modern" look, together with annotation in French in a much later script, indicates authorship not around the beginning but most likely around the end of the 15th or beginning of the 16th centuries - Legrand (Ed.) (1897) **Description des îles de l'Archipel : première partie [by Cristoforo Buondelmonte trans. from Greek]**, Paris: Leroux.,

after his death in 1595 but, even though his maps of Euboea may appear inaccurate, a small amendment by a recognized cartographer to an original Mercator work may be a significant piece of information.[164]

Another printed format was important for the environs around ***Negroponte***. This is essentially a pictorial representation of the town (a cityscape), which also includes a large-scale depiction of the villages and surrounding mountains.[165] The prime examples of this genre are the studies by Camocio[166] in c.1572 and by Vincenzo Coronelli[167] in the late 17th century,[168] when Venice attempted to wrest back ***Negroponte*** from the Ottomans in 1688.[169] This campaign also produced by far the most important map utilised in this thesis in terms of its effect on the conclusions reached, and one that has hitherto never been analysed in any publication.[170] It is a military sketch created possibly around 1660 by Venetian spy-engineers, which provides key landmarks around ***Negroponte***, and sketches of two towers and their environs, which are still standing today. It is discussed in detail in **chapter 8**.[171]

From these early cartographic formats, we now move to the 19th century British Admiralty charts. Shortly after the final withdrawal of Ottoman forces from the island of Euboea in 1833 following the Greek war of Independence and the establishment of the modern Greek state, British naval cartographers began a 50-year program of charting the waters of the Western Aegean. These provide a valuable pre-industrial large-scale record not only of the coastal towns but also of their hinterland in the well-populated central regions of the island, showing fortifications, towers, even roads, aquaducts and a detailed plan of the fortress of ***Negroponte***. The first such chart is dated to 1846.

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[164] Mercator's works were re-published first by his son, then Jodocus Hondius, who bought the printing plates in 1604 – Tolias (2008), 494 - and in his turn by Hondius' son-in-law Johannes Janssonius well into the 17th century. Even later we see a "corrected" Mercator map by Nicolas Sanson in 1677 - Sanson (1677) "**Grèce moderne, ou partie meridionale de la Turquie en L'Europe**". Paris, chez P.Mariette. Athens, Margarita Samourka Collection No.1531.

[165] These are approximately 1: 100,000.

[166] Camocio (c. 1572) "**Citta Di Negroponte**". Venice. Athens, Margarita Samourka Collection, Tolias (2009), no. 0401.

[167] Coronelli (1689) "**Citta di Negroponte**". Bibliothèque nationale de France, ark:/12148/btv1b550061864.

[168] Navari (1995) Vincenzo Coronelli and the Iconography of the Venetian Conquest of the Morea: A Study in Illustrative Methods. **The Annual of the British School at Athens**, Vol. 90: 505-519. His drawings and maps of Negroponte and the island of Euboea are not very accurate, but since he was the official cosmographer of the Venetian republic at the time of their Greek campaigns in the late 1680's, he probably had access to official military maps and provides snippets of information unavailable from other sources.

[169] Topping (1976).

[170] Nor does it appear to have been referred to anywhere.

[171] This map was found in the papers of an Austrian general, who was around this time employed by the Venetians - "**Festung Negroponte und Umgebung [Johann Rudolf Werdmüller collection]**". (c. 1660). ETH-Bibliothek, Zurich, Ms T 76.

These charts were closely followed by 1:300,000 scale maps produced by Austrian military engineers in the late 19th century. By the early 20th century the Hellenic Military Geographical Service (HMGS) was producing 1:200,000 and 1:100,000 scale maps,[172] and full coverage of the whole country appears to have been achieved at 1:50,000 scale by the 1970's. Analysis of these latter maps, equivalent to British Ordnance Survey maps, together with modern commercially-produced trekking maps, provided invaluable evidence to identify the position of a significant number of previously unrecorded probable fortification and tower sites through a detailed analysis of place-names.

The final cartographical resources utilised are those now available in digital form. The use of Google Earth and the ESRI base maps within the ArcGIS software package facilitated desk-top analysis of geographical regions and minimized the need for site visits. To this was added land-use data from the European Environmental agency's Corine Land Cover Inventory and digital elevation data from the CGIAR Consortium for Spatial Information, in order to calculate viewsheds for individual observation points and understand possible networks.

3.2 Contemporary and Modern Documentary Sources

Although no documentary evidence from the island itself has survived, we are fortunate that from 1204 it fell within the orbit of the Venetian Republic and was transformed in 1390 into a full possession and their administrative centre for the northern Aegean. As a result, there are numerous references to the island and its fortifications in the minutes of the Venetian Assembly, its administrative committees and Senate.[173] Additionally, ***Negroponte*** became the seat of the Roman Catholic church in Latin Greece at some point after the re-establishment of the Byzantine state in Constantinople in 1261, and Papal archives provide information on its organization and negotiations with various stakeholders in the region. On the Byzantine side the letters of Michael Choniates, Orthodox Bishop of Athens in the latter years of the 12th century, provide an insight into the social and political conditions immediately prior to and after the capture of Constantinople in 1204.[174]George Akropolitēs' 'History' of the period 1203-1261,[175] and its continuation by George Pachymerēs into the first decade of the 14th

[172] Copied by the British army during World War II.
[173] These have been assembled by Tafel and Thomas (1856, 1857, 1880), Sathas (1890-1900) and Thiriet (1958, 1971).
[174] Lampros (Ed.) (1968) **[Choniates] Μιχαήλ Ακομινάτου του Χωνιάτου: τά σωζόμενα [originally published in Athens (1879)]**, Groningen: Boum's Boekhuis N.V.; Kolovou (Ed.) (2001) **[Choniates] Michaelis Choniatae Epistulae** Berlin: De Gruyter
[175] Macrides (ed.) (2007) **George Akropolites: The History**, Oxford.

century, provide only limited material of direct relevance,[176] whilst George Phrantzes[177] and Doukas[178] provide background on the 15th century..

This is in great contrast to the Latin sources, where a number of histories were published after 1204.[179] The first is *the Conquest of Constantinople* by Geoffrey de Villehardouin, the latter part of which touches on the annexation of Greece by Latin forces although Euboea is only mentioned as a stop on the voyage to Constantinople. The island, noted as ***Nigra***, is described as '*very fair, and there is on it a very good city called* ***Negrepont****'*.[180] The *Chronicle of the Morea* supplies background on the complexities of Latin rule on the mainland but is tantalizingly lacking in detail on the history of the island, except in so far as to note the occasions that the Lords of Euboea were called to aid their suzerain, the Prince of Achaia.[181]

The most important source by far is the *istoria di Romania* by Marino Sanudo Torsello, published in the early 14th century.[182] This covers the last forty years of the Latin Empire of Constantinople and the period up to 1302, and provides great detail on the conflicts within the Principate of Achaia in the 1250's and the attempt by the Byzantines to retake ***Negroponte*** in the 1270's and 1280's from which we can understand many of the key fortifications on the island during this period. For the 14th century itself Ramon Muntaner writes on the conflict with the Catalan Company.[183] Additionally, although no local documents have survived from the Frankish period, Ottoman records from immediately after their capture of ***Negroponte*** in 1470 provide important information on the economy and population. These take the form of tax registers and have been transcribed and published by Evangelia Balta.[184]

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[176] Failler (ed.) (1984-2000) **Georges Pachymérès: relations historiques**, Paris.
[177] Philippides (ed.) (1980) **[Geōrgios. Phrantzēs] The Fall of the Byzantine Empire : a chronicle, 1401-1477**, Massachusetts.
[178] Magoulias (ed.) (1975) **Doukas. Decline and fall of Byzantium to the Ottoman Turks : an annotated translation of "Historia Turco-Byzantina" 1341-1462**: Wayne State University.
[179] The prime compendium of sources for the period 1204 – 1280 is Loenertz (1978) "Les Seigneurs Terciers de Négrepont de 1205 à 1280". **Byzantina et Franco-Graeca**. Rome. 141-182
[180] Marzials (Ed.) (1908) **Memoirs of the Crusades by Villehardouin and De Joinville**, London: Everyman.Smith (ed.) (2008) **Joinville and Villehardouin: Chronicles of the Crusades**, London: Penguin.
[181] Schmitt (Ed.) (1904) **The Chronicle of Morea: edited in two parallel texts from the [Greek] MSS of Copenhagen and Paris, with introduction, critical notes and indices**, London:
[182] Probably between 1328 and 1332 - Papadopoulou (Ed.) (2000) **[[Marino-Sanudo-Torsello]] Ιστορία της Ρωμανίας; εισαγωγή, έκδοση-μετάφραση, σχόλια**, Athens: Institute of Historical Research, Department of Byzantine Studies; Papadopoulou (1996) À propos de l'Istoria di Romania de Marin Sanudo Torsello. [Accessed 18/12/2018], https://www.researchgate.net/publication/26609652_A_propos_de_lIstoria_di_Romania_de_Marin_Sanudo_Torsello/stats.
[183] Lady_Goodenough (tr.)(1920-21) **[Muntaner] The chronicle of Muntaner [publ. prior to 1336]**, Cambridge, Ontario
[184] Balta (1991) Rural and Urban Population in the Sancak of Euripos in the Early 16th Century. **Archeion Euboikon Meleton**, 56-218. Similar work has been undertaken by Kiel for Central Greece.- Kiel (1987) "Population Growth and Food Production in 16th century Athens and Attica according to the Ottoman Defters".

The early *isolario* maps of the Aegean islands were accompanied by descriptions of each's geography and a short history. But by the 17th century these had been much expanded, and other works, such as those by Pacifico (1654) and Coronelli (1695), were being published.[185] Their emphasis unfortunately is on classical references, depending very much on the first century A.D. books of Strabo and Plutarch,[186] although certain snippets of information are invaluable. Thus, for example, Coronelli provides an excellent reference list of the captains and Bailies of ***Negroponte***.[187]

In contrast to these works aimed very much at the educated upper echelons of society, a note needs to be made of the *portolans* (*rutters*) mentioned above. These, as with the *portolan* charts, were working documents providing guidance to mariners and give references not only to coastal locations on Euboea but to many towers around the Aegean. The two earliest – the '*Liber de existencia riveriarum*'[188] and '*lo compasso de navegare*',[189] dated respectively to the late 12th and 13th centuries – provide possibly the earliest post-classical geographical location of places on the island.[190] There are no early *portolans* in Greek, but those that have survived from the 16th century are transcribed in Delatte (1947).[191]

Information from travellers' accounts is a significant contributor to our evidence. From the Ottoman world we have an account by Evlya Çelebi (c.1680),[192] while the journey by Jacob Spon and George Wheler in 1675-76 around the Eastern Mediterranean provided the stimulus and template for a series of similar scientific tours by other Western Europeans in the 18th, 19th

In Bacqué-Grammont and Donzel (Eds.) **Comité International d'Études Pré-ottomanes et Ottomanes; 6th symposium, Cambridge, 1st-4th July 1984**. 115-133.

[185] Pacifico (1654) **Descrizzione del regno, et isola di Negroponte antico e moderno.....** Bayerische Staatsbibliothek, H.gr. 860-1/2; Coronelli (1695) "**Historia del regno di Negroponte, e sue isole adiacenti**". Tramontin. British Library, System number: 017900814.

[186] Hamilton and Falconer (tr.)(1854) **[Strabo] The Geography of Strabo**, London: H.G. Bohn; Dryden and Clough (tr.)(1932) **[Plutarch] The Lives of the Noble Grecians and Romans**, New York: References are not restricted to these authors.

[187] Coronelli (1695), 208-210.

[188] For a full transcription see Gautier-Dalché (1995).

[189] Motzo (1947) **Il compasso da navigare; opera italiana della metà del secolo XIII. Pref. e testo del Codice Hamilton 396**. Universita di Cagliari; "**Lo Compasso de navegare: Edizione del codice Hamilton 396 con commento linguistico e glossario**". (2011) Brussels, European Interuniversity Press. .

[190] Unfortunately no Greek language *portolans* survive from prior to the 16th century - Kretschmer (ed.) (1962) **Die italienischen Portolane des Mittelalters: ein Beitrag zur Geschichte der Kartographie und Nautik**, Hildesheim: G. Olms Jacoby (2012) "An Unpublished Medieval Portolan of the Mediterranean in Minneapolis". In Gertwagen and Jeffreys (Eds.) **Shipping, trade and crusade in the medieval Mediterranean: studies in honour of John Pryor**. Ashgate. 65-83.

[191] Delatte (1947) "Les portulans grecs". Liege, .

[192] Joseph (tr.)(c. 1680) **[Çelebi] Narrative of Travels in Europe, Asia and Africa [translated from the Turkish by the Ritter Joseph Von Hammer (1834)]**, London: The Oriental Translation Fund of Great Britain and Ireland.

and 20th centuries.[193] At one level these publications were travelogues but at another they were serious scientific endeavors to understand the archaeology, history, geography and nature of the region. Of those who visited Euboea the most important for our purposes are Bernard Randolph (1687), Colonel Leake (1835),[194] and Alexandre Buchon (1841),[195] the last of whom spent considerable time on the island, visiting it twice. But all of these men travelled around the island after its annexation by Ottoman forces in 1470. One, Benjamin of Tudela, preceded them by over four centuries, voyaging around the Mediterranean in the twelfth century.[196] His account of ***Negroponte*** is sparse unfortunately, referring only to the size of its Jewish population and that it was a *'large city on the coast'.*[197]

In the second half of the 19th century research into the island became more scientific. Descriptions of its topography and history by M.J. Girard (1851),[198] and Karl Baumeister (1864) were followed in 1904 by a fuller treatment by Fritz Geyer.[199] Unfortunately the focus of all these was the classical and pre-historic sites of the island, little mention being made of later periods. It was only in 1973 that a full topographic study of the Late Medieval monuments was undertaken. Johannes Koder in this seminal work (his PhD thesis)[200] provided the foundations for what has become a major work on the topography of the Byzantine period – the *Tabula Imperii Byzantii*.[201] Since then the forty years of fieldwork undertaken by Theodoros Skouras, a local researcher, have resulted in the publication of two Greek-language books - site gazetteers of the island's Christian monuments (1998) and fortifications (2003).[202] Information from these two works forms the skeleton of the site gazetteer in **appendix 5** with updates from recent extensive archaeological surveys, my own site visits and desk-based study using satellite photography.

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[193] Spon is even quoted frequently by Coronelli (1695) - Spon (1678). Wheler also published his own book in English - Wheler (1682). See also for other travellers - Paton (1951) **Medieval and Renaissance Visitors to Greek Lands**. American School of Classical Studies at Athens.

[194] Leake (1835) **Travels in northern Greece**. II, London: J. Rodwell , vol II: 253-267– his work is dated to 1835 but the travels were undertaken some years earlier whilst the Ottomans were still in control.

[195] Buchon (1911) "Voyage dans l'Eubée, les îles Ioniennes et les Cyclades en 1841". Paris, Jean Longnon.

[196] Asher (tr.)(1840) **The Itinerary of Rabbi Benjamin of Tudela**, London: Asher and Co.

[197] Idem, 47.

[198] Fousaras (tr.)(1964) **[Girard] Memoir sur L'île d'Eubeé (Paris, 1851) [Greek translation with comment]**, Archεion Euboikon Meleton,11: 5-135.

[199] Baumeister (1864) **Topographische Skizze der Insel Euboia**. Lübeck: Gedruckt in der Rathsbuchdruckerei; Geyer (1903) **Topographie und Geschichte der Insel Euboia / T.1, Bis zum peloponesischen Kriege**. Berlin: Berlin : Weidmann.

[200] Koder (1973).

[201] This first work focussed on the Byzantine Thema of Hellas and included Koder's studies of Euboea - Koder and Hild (1976).

[202] Skouras (1998) **Χριστιανικά μνημεία της Εύβοιας : Έντοπισμός Ιδιαιτερότητες Καταστροφές Καταγραφή**. Chalkida, Greece: Σύγχρονος Τύπος; Skouras (2003) **Ακρόπολεις - Κάστρα - Πύργοι της Εύβοιας [Acropoli - castles - Towers of Euboea]**. Chalkida, Greece: Nomarchiaki Avtodioikisi Euboias.

Finally, for the city of ***Negroponte*** especially, there are surviving drawings by Otto Stackleberg from 1841,[203] and photographic records from the late 19th century showing the city and its environs. More recent photographic work has also been undertaken by Theodoros Skouras, as part of his recording of each site for his two books. Some are included with the books, but most are now available on-line. These form an invaluable source - and in some cases for monuments since lost the only record - for research.[204]

[203] Stackelberg (1829-1834) "La Grèce. Vues Pittoresques et Topographiques". J.F. d'Ostervald, Paris, .

[204] Skouras (2018) **Archives of Euboea - ΑΡΧΕΙΟ Θ.ΣΚΟΥΡΑ [Photographs]** [online]. http://arxeiomnimon.gak.gr/browse/resource.html?tab=01&id=491161 [Accessed 18/12/2018].

4 EUBOEA – GEOPOLITICAL AND ECONOMIC BACKGROUND

4.1 The Geography of the Island

The island of Euboea stretches 180 km. south-eastwards down the eastern seaboard of continental Greece. It has been likened to a sea-horse in shape, its head snuggling into the underbelly of continental Greece and its body joined by an umbilical cord (the bridge at Chalkida, the island's capital) to the mainland opposite. However, it may be more appropriate to think of it in geographic terms not just as an appendage of the mainland but as part of the Greek archipelago – originally a mountain chain – of which the island is the most northerly extremity.[205]

10,000 years ago, when sea levels were over 100 metres lower, the northern Gulf of Euboea would have been a fresh water lake.[206] Over the following 6,000 years these rose rapidly but by the end of the third millennium BC appear to have stabilized at a level approximately 3.5 metres below those of today,[207] and thereafter have risen at a steady pace of approximately one 43illimeter per year. This suggests a sea level during the late medieval period a little less than one metre below the present day.[208] Given that the tide rises and falls each day at Chalkida by up to a metre, this difference is minimal for the purpose of our analysis. Although it is in an earthquake zone, the island has essentially retained a stable coastline over the last 1,000 years, although the silting up of river deltas has been one of the prime reasons for the decline of cities pre-eminent in classical times.[209]

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[205] To the north-east are the smaller islands of Skiathos, Skopelos and Alonissos, whilst this archipelago is all that remains of a mountain range that once extended from Thessaly in northern Greece via Volos down as far as Rhodes in the south-eastern Aegean. Its southern limits are the continental fault line that runs in an arc from Corinth down through Milos and Santorini and then eastwards towards the Turkish coast.

[206] Lambeck (1996) Sea-level change and shore-line evolution in Aegean Greece since Upper Palaeolithic time. **Antiquity**, 70: pp.588-611; Maroukian et al. (2001) "Palaeographic evolution of the Kerinthos coastal area (N.E. Evia island) during the late Holocene". **9th International Congress of the Geological Society of Greece**. Athens. 459-465

[207] Sampson (1988) **Μάνικα II : μιά πρωτοελλαδική πόλη στη Χαλκίδα, Ο πρωτοελλαδικός οικισμός και το νεκροταφείο [the early helladic settlement and cemetery]**. Athens: Δήμος Χαλκιδέων [Chalkida council], 124. Sampson notes *'the evidence indicates that 4,800 years ago the sea level was at least 4.5 m lower than today'*

[208] Evidence from the submersion of most of a Neolithic town in the northern suburbs of modern-day Chalkida seems to support this for the central region, although there appears to have been some uplift in the north of the island - Pirazzoli et al. (1999) Late Holocene Coseismic Vertical Displacements and Tsunami Deposits Near Kynos, Gulf of Euboea, Central Greece. **Phy. Chem. Earth (A),**, vol 24: (4): pp. 361-367

[209] Raban (1991) "Minoan and Canaanite harbours". In Robert Laffineur and Basch (Eds.) **"*Thalassa. L'Egée préhistorique et la mer*." Actes de la 3e Rencontre égéenne internationale de l'Université de Liège, Station de recherches sous-marines et océanographiques**. Calvi, Corse, 23-25 avril 1990, University of Liege. p. 324 Partly due to the silting up of their harbours the cities of Kerinthos and Eretria effectively disappeared after the classical period, the latter only being revived in the 19th century as a new town was laid out at the end of the Greek War of Independence on the modern shoreline, and the former now appearing as the name of a modern village

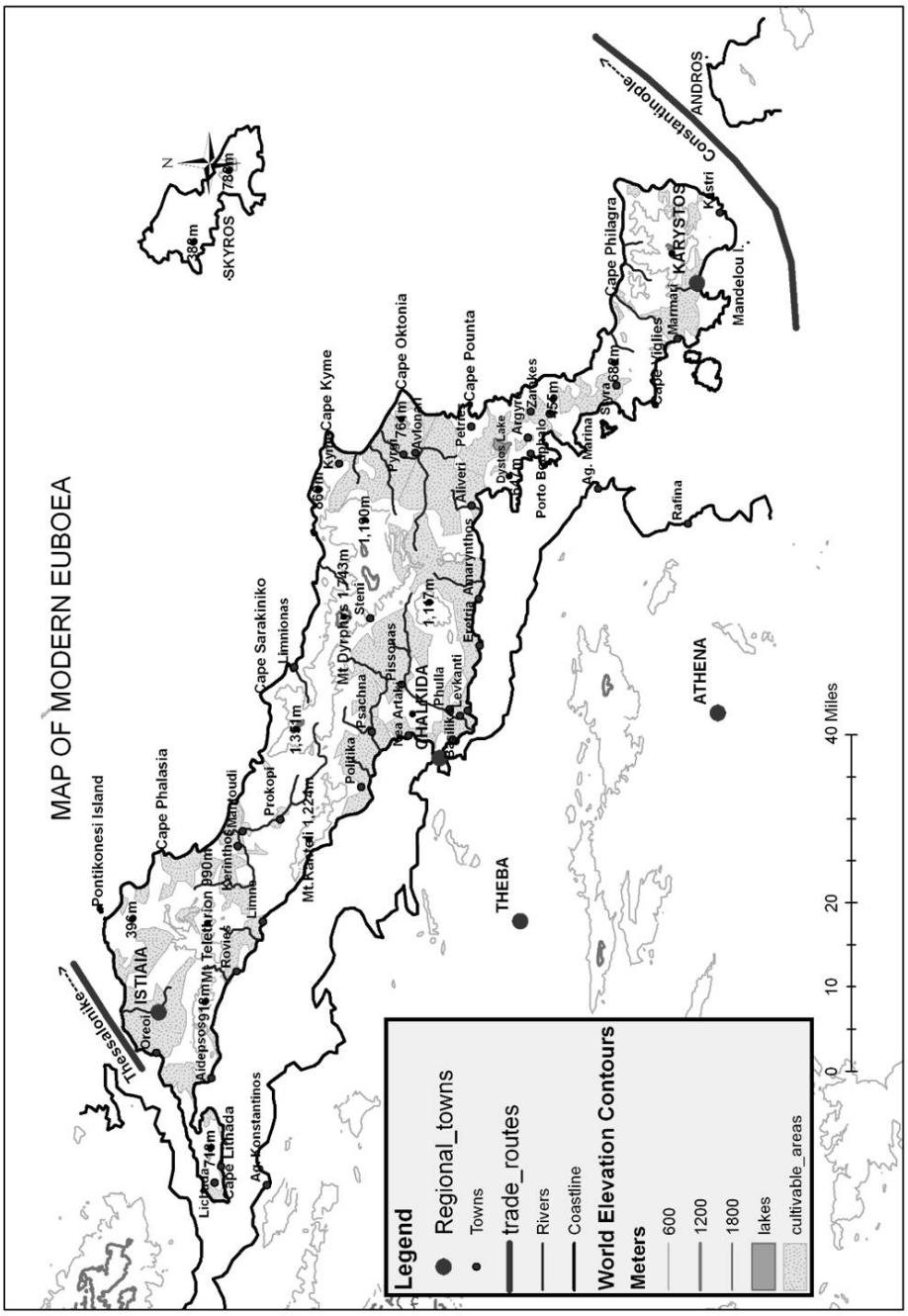


Figure 4.1 – Topographical map of modern Euboea showing mountains, rivers, cultivable areas (in mottled grey), traditional shipping lanes and towns[210]

further inland. Some erosion has also taken place on the Aegean coast around modern–day Kymē due to the combination of the heavy rainfall, harsh winter seas of the Aegean and the local rock formations - Ilia et al. (2010) "Application of a Bayesian approach in GIS based model for evaluating landslide suceptibility, Case Study Kimi area, Euboea, Greece". **12th International Congress**. Patras, Bulletin of the Geological Society of Greece. 1590-1600

[210] Agricultural areas are extrapolated from the European_Environmental_Agency (2012) "**Corine Land Cover 2012 inventory**". . All other areas are mountainous and/or afforested. Contour data drawn from "**World Contours[licensed under creative commons attribution]**". Delorme Publishing Company Inc.

The mountainous nature of the island has historically been a key feature in its local economic and political structure, something reflected in its diocesan division from the Byzantine period.[211] Even today with a modern road network it takes over four hours to drive its length. There are in effect four primary mountain ranges on the island (see **map 2**). The most northerly – that running from Mt Telethrion(969m), close to Aidēpsos, on the west coast through Mt. Xiro(990m.) and north towards Pontikonēsi island – creates a limestone barrier that effectively divides the north-western agricultural area into two. Just to the south another mountain range, commencing with Mt Kantēli (1,224m.) on the west coast and extending from Limnē in the north down to Politika, spreads eastwards until it reaches Cape Sarakiniko and the eastern shore, its south-eastern edge merging with the central mountain grouping surrounding Mt Dirphys (1,743 m).

On the south-eastern tip of the island the mountain range surrounding Mt Ochi (1,398m.) extends around Karystos up to Styra on the west coast, where the island narrows to a mere 6 kms. In many areas direct access from the sea is impossible and the mountains plunge directly into the water.[212] There are effectively five independent regions – Oreoi and Kērinthos in the north, Chalkida-Eretria and Kymē-Aliveri in the centre, and Karystos in the south – with a combined cultivable area less than 24% of that of the island,[213] for which links to the mainland opposite via a short boat passage would have been, until the construction of modern highways, easier than communication over the mountains separating them.

Figure 4.1 shows the agricultural areas of the island. A substantial part of this is covered today by olive trees, especially on the more marginal poorly watered slopes, whilst the plains are used for grain, pulse, vegetable, fruit and wine production. Animal husbandry is limited in the main to the rearing of sheep and goats, ideal for foraging off the mountain slopes contiguous to most settlements on the island. In some areas the remains of terracing are apparent, climbing up what appear to be barely economic slopes, although their dating is uncertain.[214]

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[211] During the Byzantine period Euboea was divided ecclesiastically into five dioceses – **Euripos**, **Oreos**, **Karystos**, **Porthmos**[Aliveri]. and **Aulon**[Avlonari- Kymē] - Wagner and Theurillat (2004) **Eretria: a guide to the Ancient City**. École Suisse D'Archéologie en Grèce, 52.

[212] This creates a shoreline dangerous to shipping, often a positive factor historically for the local inhabitants since they were thus protected from seaborne pirate attack. Piracy was endemic to the Aegean during this period, much of it state sponsored and undertaken both between the Latins and the Ottomans and within the ranks of the Latins against each other. This is discussed in more detail later in the chapter - Tai (2004) Restitution and the Definition of a Pirate: The Case of Sologrus de Nigro. **Mediterranean Historical Review**, 19: (2): 34-70

[213] Kolodny (1974). In the Medieval period, with a much lower level of Olive planting, swampland, more extensive forest and recent land clearance using heavy machinery, the total cultivable area could well have been much less than 20%.

[214] They can be noted especially in the Dystos area, where they huddle close to the settlements in the area. There may have been a repeating series of abandonment, re-occupation, refurbishment and development based on terraces originally constructed in classical times, although insufficient research appears to have been undertaken

For five millennia Chalkida (***Negroponte***)[215] the city which today sits astride the narrow strait that divides the island from the mainland, has been in its many re-incarnations the economic powerhouse of the island. With the two fertile plains of Psachna and the Lilas river nearby, [216] and abundant water in its hinterland even in the summer months, the city was economically and agriculturally independent. But its position on the main arterial maritime connection between northern and southern Greece gave it a strategic position which far outweighed this. Philip V of Macedon famously called Chalkida one of the three '*fetters of Greece*'.[217] Control of the island meant practical domination not only of the Eastern seaboard of Greece but also of the narrow channel between the island and Andros to the south, the prime trading route from Western Europe to the north-eastern Aegean, Byzantium, and beyond to the Black Sea. The Byzantine Emperors had clearly understood this and, it is thought, sometime between the sixth and ninth centuries,[218] facing increasing insecurity on the mainland opposite, constructed fortifications to control the strait of ***Euripos.***[219]

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to prove anything categorically. There is also a view that most terracing systems in Greece today are (post) medieval - Foxhall (1996) "Feeling the earth move: cultivation techniques on steep slopes in classical antiquity". In Shipley and Salmon (Eds.) **Human Landscapes in classical antiquity: environment and culture**. Routledge. 44-67. Some of the mountain tops, however, where soil erosion was particularly severe, may have been denuded permanently of trees by archaic and classical times as over-population led to the exploitation of the most marginal land. It is argued that much of the Greek colonization movement of the 8th-7th centuries BC. was due to over-population and land-hunger and Keith Walker notes that the Eretrian federation, which seems to have covered most of southern Euboea, was no exception.- Walker (2004) **Archaic Eretria, A political and social history from the earliest times to 490 BC**. London and New York: Routledge, 94.

[215] The classical name of the city was ***Chalkis*** [Χάλκις]. Following the Greek war of Independence it re-adopted this name in the form "***Chalkida***" [Χαλκίδα].

[216] The fertile Lelantine plain is crisscrossed with water irrigation channels. But we have to be careful not to assume that the plains were ever as productive as they appear today. Extensive drainage work and the sinking of boreholes have lowered significantly the water table in areas, which once would have been swamp. Parts of the Psachna plain, the area close to Kerinthos in the north, that to the north of Chalkida and around Eretria (one of the possible factors for its abandonment in the medieval period) were probably swamp. On the other hand, the area around Dystos, once a lake, is today little more than marshland.

There is evidence that in 1429 one of the two towers in the area was occupied by the "water superintendent" although much of the irrigation system's development may have taken place in the ensuing Ottoman period, during which was constructed a new aqueduct to take water directly into ***Negroponte*** [Chalkida] from the original Roman one, which stretched nearly 30 kms. into the foothills of Mt. Dirfis - - Reber and Schmid (2000) Zur wasserversorgung von Chalkis (Euböa). **Mitteilungen des Deutschen archäologischen Institut: Athenische Abteilung**, 115: 359-402.

[217] Dmitriev (2012) **The Greek Slogan of Freedom and Early Roman Politics in Greece**. New York: Oxford University Press.

[218] It is included in the lists of the islands of Synekdemos of Hierokles as part of the *Eparchia* of Hellas – *Synekdemos* 644-649 **in** Ragia (2011) The Geography of the Provincial Administration of the Byzantine Empire (ca. 600-1200), I.2: Apothekai of the Balkans and of the Islands of the Aegean Sea (7th-8th c.). **Byzantinoslavica**, 69: 86-113 note 74.

[219] Bakhuizen (1985) **Studies in the topography of Chalcis on Euboea: a discussion of the sources[with a contribution by M.Kiel]**. Leiden, E. J. Brill p. 97. Bakhuizen had placed this date possibly as early as the 6th century based on the foundations of the Ag. Paraskevi church, but more recent scholarship posits a later Middle Byzantine date for the fortifications up to the 9th century - KontoGiannis and Heslop (2013) "The Defenses of Middle Byzantium in Greece(7th-12th centuries): the flight to Safety in Town, countryside and Island". **Byzantium Greece: Microcosm of Empire** Birmingham, [unpublished]; For a more detailed discussion and a proposed *terminus ante quem* of early 9th century construction for the Byzantine walls - Kontogiannis (2012a)

Generally, the climate of the island is Mediterranean, but with significant variations due to its mountainous nature and its long Aegean shoreline. Temperatures in the central region range from a maximum average in the summer months of 33º C to a minimum average of 6º C in January and February. Snow on the plains is infrequent (two or three days a year, and often completely absent), although a regular annual occurrence on the upper grasslands, and the mountains over 500m. Habitually rainfall is completely lacking in the summer months from May to September, and most of the rivers dry up. Annual rainfall on the southwestern shoreline averages 407mm,[220] similar to Athens just opposite, but more than doubles on the eastern Aegean coast around Kymē to 1,071mm., and even more on the eastern slopes of Mt Dirphys.[221] Most is deposited by violent rainstorms, and it is not uncommon for river levels to rise by over two metres in the space of a few hours.[222]

Although the marble resources of Southern Euboea were developed by the Romans and Byzantines, export of marble continued into the Ottoman period,[223] and evidence has been found of lead mining in the North,[224] much of the other mineral deposits on the island have only been exploited in the last two centuries.[225] Classical sources have referred to Euboea as a

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Euripos-Negroponte- Egriboz: material culture and historical topography of Chalcis from Byzantium to the End of the Ottoman Rule. **Jahrbuch der Österreichischen Byzantinistik**, vol. 62: 29-56.

Although the strait provided some level of security for the island, it is debatable whether it was continually navigable. Its narrowness and the swift currents which change direction many times a day, a tidal phenomenon unknown elsewhere in the eastern Mediterranean, must have made passage for sailing ships very difficult. The town thus must have acted as an entrepôt with ships mooring and unloading in the sheltered Vourkos bay underneath the southern battlements. Goods would then have been transshipped overland the short distance to the northern quays - Karagiannis (2006) Tidal wave phenomenon as a lever of tourist development in Greece-Halkis case. **Revista de Turismo y Patrimonio Cultural**, vol 4, No.2: 225-234.

[220] "Concise statistical yearbook 2008". (2009) Piraeus, National Statistical Service of Greece. The climate here is more reminiscent of the Cyclades to the south and the traditional housing reflects this with flat roofs replacing the gabled pitched roofs on the longhouses further north - Aalen (1982) The Cycladic House in South Evvoia, Greece. **Vernacular Architecture**, vol 13: 5-19.

[221] Ilia et al. (2010).

[222] Ntalas (2011) Flood Boundary Delineation and Risk Management – 'Case Study River Lilas, Euboea Prefecture Greece'. **Scientific Bulletin. Series, Mathematical Modeling in Civil Engineering** [Accessed http://www.readperiodicals.com/201109/2483299381.html. A good case in point were the catastrophic floods of 2009, which gouged two-metre deep channels in the Eretria area down the mountainside and into the fields below, whilst depositing heavy boulders and rocks on the surrounding land.

[223] Chidiroglou (2010) Karystian Marble Trade in the Roman Mediterranean Region.An Overview of Old and New Data. **Bollettino di Archeologia on line/ volume speciale/ Poster Session 7** [Accessed www.archeologia.beniculturali.it/pages/pubblicazioni.html.The marble was called *marmor Karystium* or *cipollino.* The town of Marmari is thus named for the marble quarried in the area. The traveller, Bernard Randolph, mentions its export - Randolph (1687) "The present state of the islands in the archipelago, (or arches) sea of Constantinople, and gulph of Smyrna : with the islands of Candia, and Rhodes.....". Printed at the Theater in Oxford, 6.

[224] Sackett et al. He notes that slag found on the beach at Oreoi is said to come from Venetian lead mines.

[225] Magnesite was discovered in the hills to the southwest of Limnē in the mid nineteenth century, which was mined until its extraction became uneconomic. A thin seam of coal, found in the early 20th century close to Aliveri, was soon worked out, although significant deposits of lignite are known to exist to the north around Mantoudi. Substantial nickel mines exist just above Psachna and the limestone hills have provided the raw materials for cement production in both Aliveri and Chalkida.

centre of sword manufacture, and a number of iron deposits have been identified in the area around Chalkida.[226]

Significant pottery production appears to have been undertaken in the archaic and classical period based on the rich clay base of the Lelantine plain.[227] Published evidence for the medieval period suggests production only of simple wares for localized use, [228] but recent finds of tripod stilts in ***Negroponte*** may overturn this conclusion.[229]

Given the lack of land for grain production, [230] primarily the interest of the Franks appears to have been in the potential for viniculture as a cash crop. Three regions – those of the Lelantine plain (τα Αμπέλια – **CW2**), the valley of Kymē-Avlonari (τα Αμπελάκια / the bishopric of 'Ambelonensis'/Avlona) and the area around Belos (τα Βελούσια – **SC3**), where there were good water resources even in the summer months and a secure position[231] – reflect this in the topographical name "***ampelia***", meaning vineyard, which the locals still utilise today.[232] The letters of Choniates, too, provide evidence of the island as a producer of wine.[233]

The Latin incomers must have been interested in the production of Olive oil, but it is difficult to substantiate whether the production of oil on the island was one of their prime targets at this relatively early date,[234] although the Genoese Gattilusi (Gatellouzi), who ruled

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[226] Bakhuizen (1976) **Chalcis-in-Euboea, iron and Chalcidians abroad**. Studies of the Dutch Archaeological and Historical Society. 5, Leiden: Brill, 46. No secure archaeological evidence has, however, been found to substantiate exploitation, and the references may refer only to the metalworking skills which existed on the island.

[227]Pottery from Euboea produced in the 8th century BC. has been found as far away as Ischia in Southern Italy, Cyprus, and Al Mina on the coast opposite. More recently, this has been exploited for the production of roof tiles - Lane-Fox (2009) **Travelling Heroes, Greeks and their myths in the epic age of Homer**. London: Penguin Books, 141,77,107.

[228] It appears that much of the expensive glazed ware was imported - Bintliff (2012) **The Complete Archaeology of Greece, from Hunter-Gatherers to the 20th Century A.D.** Chichester: Wiley-Blackwell, 429.

[229] Kontogiannis (2012a).

[230] It was necessary at times even to import grain from Crete into Euboea. A map of the predominant soil types on the island shows that the best land (alluvial and meadow soils) were around ***Negroponte*** but absent elsewhere -Darby and *al.* (1944) "Naval Geographical IntelligenceHandbook, Greece". London,

[231] The first was sandwiched between the fortress at ***Negroponte*** [Chalkida] and the castle of ***Filla*** which overlooks the plain. The latter two were protected not only by the island's nearly impenetrable and dangerous Aegean coastline to the southeast but also by four castles - one to the east of modern Avlonari, ***Cupa*** in the centre of the island, ***Rizocastro*** on the western shore close to modern Aliveri, and that in the Dystos basin.

[232] The large village of **Βελος** [Belos], just to the north of Dystos, retains the same root, transliterated into Italian as ***abelia*** and then re-introduced into Greek in the 19th century as ***τα Βελούσια*** [ta belousia] until being 'politically corrected' to its current name in 1953.

[233] '*For what do you in Constantinople lack? Not the wheat bearing plains of Macedonia, Thrace and Thessaly, ……nor the wines of Euboea, Ptelion, Chios and Rhodes, which are pressed by us; nor the fine garments which are woven by our Theban and Corinthian fingers…' Choniates,* επιστ.50: 60-65.

[234] The Venetians made substantial investments in its production in Corfu in the 16th and 17th centuries, but this was at a much later date than their period of control of Euboea (1205 to 1470). Charalambos Gasparis believes that in Crete its cultivation, at least in the early period, was of secondary interest, arguing that Olive production was not deemed of equal importance to that of grain and wine in the early period (13th and 14th centuries) due to the lack of contracts found in the Venetian records compared to those for cereals and wine - Gasparis (1997) **Η Γη και οι Αγρότες στη Μεσαιωνική Κρήτη 13ος-14ος αι. [Land and peasants in Medieval Crete 13th-14th c.]**. Athens: Institute for Byzantine Research.

Lesbos 1394-1462, invested heavily in its production.[235] Salt, however, retained as a state monopoly by the Venetians, was clearly a strategic product. Not only do we have evidence of salt pans around ***Negroponte*** but also references in the Venetian assembly minutes.[236]

The agricultural economy appears to have been based on 'polyculture and poly-activity'[237] – Grain, wine, oil,[238] livestock and poultry are all noted by Bernard Randolph in the 17th century,[239] whilst still today on the island we can see the inter-planting of crops.[240] As regards textiles, Jacoby notes the introduction of cotton in the 14th century,[241] and Randolph writes of the production of silk during the Ottoman period in the region of Karystos.[242] Although Euboean silk is mentioned in the Venetian records, [243] it is difficult to postulate that production here was at the same rate as on the mainland opposite prior to 1470.[244] He mentions, too, that ships called in at ***Porto Buffalo*** to load acorns (*Velania or velanidia*). These may have been

Buondelmonti noted the lack of Olive trees during his travels on Crete, another Venetian colony, in 1415. According to Allaire Stallsmith '*The Venetian olive oil ministry, the **Ternaria**, enforced stringent policies regarding oil production, prices, and trade throughout the Venetian dominions.* Most likely, given the relative insecurity at this date and the 10 year period required for full production from an olive tree, it was a strategic decision by the Venetian Olive Oil ministry not to promote olive oil production on Crete - Stallsmith (2007) "One Colony, Two Mother Cities: Cretan Agriculture under Venetian and Ottoman Rule". In Davies and Davis (Eds.) **Between Venice and Istanbul: Colonial Landscapes in Early Modern Greece**. The American School of Classical Studies at Athens. 151-171.

[235] Kizos and Koulouri (2006) Agricultural landscape dynamics in the Mediterranean: Lesvos (Greece) case study using evidence from the last three centuries **Journal of environmental science and technology**, 330-442 The authors note that they were the first to introduce "*olive and vine groves for their commercial value*".

[236] These are note on the 1846 Admiralty chart and also references in Venetian Assembly minutes - Thiriet (ed.) (1971) **Déliberations des assemblées venitiennes concernant la Romanie, tome II (1364-1463))**, Paris, no. 900 (1389), no.1187 (1414)

[237] Tsougarakis and Lock (2014) **A Companion to Latin Greece**. The Netherlands: Brill. Interviews with local smallholders on Euboea suggests that this is a function of ensuring continuous work throughout the year. When not involved in tilling the fields in the Spring or Autumn or harvesting the grain (May/June), fruit (August/September), grapes (September) or olives (November/December) they usually tend a small kitchen garden, have chickens (for eggs and meat) and raise pigs for slaughter in the winter months.

[238] There was a commercium tax on oil to support the armament of the galley – Thiriet (1958) 373, 98.

[239] Randolph (1687) 1-5. To this list Leake, visiting in the early 19th century ,notes that wheat and oil are only exported when production and demand are favourable and adds wool, pitch and turpentine in small quantities - Leake (1835), vol II: 253-254.

[240] Grain in between rows of olive trees, fruit trees in amongst vineyards, and olive trees around the boundaries of fields.

[241] Tsougarakis and Lock (2014), 199. '*Cotton from Negroponte'* is mentioned in a minute of the Venetian Senate - Thiriet (ed.) (1958) **Régestes des Délibérations du Sénat de Venice concernant la Romanie**, Paris: Mouton, no. 471 (1369).

[242] '*Here is abundance of silks made, most of which is carryed to Constantinople, towards payment of their tribute, and Decimos'* - Randolph (1687), 7.

[243] Noted in a minute of the Venetian senate as an export product from ***Negroponte*** – Thiriet (1958) 384, 100.

[244] Silk produced in ***Negroponte*** is mentioned in a minute of the Venetian Senate - Thiriet (1971), no.473 (1369). The industry was so large in Boeotia that the population of silk workers was uprooted wholesale and transferred to Sicily to improve the industry there in 1147 - Jacoby (2004) Silk Economics and Cross-Cultural Artistic Interaction: Byzantium, the Muslim World, and the Christian West. **Dumbarton Oaks Papers**, 58: 197-240. See also - Rosen (2019) The silk industry of Middle Byzantine Boeotia. **Diogenes**, 7: 30-48.

for export,[245] but could also suggest, given the island's suitability for animal husbandry,[246] the existence of a substantial tanning industry – something reflected in Venetian records.[247]

Whilst the above may have been of interest for the settlers arriving from the west, the bottom line for the Venetians as a trading power, at least in the 13th century, was none of the above, but simply Euboea's position astride the East-west and north-south trade routes in the Aegean. As Philip V had appreciated 1,400 years previously, control of the island was one of the strategic keys to domination of the western Aegean and exploitation of the Greek mainland. For the Venetians it gave access not only to the manufactures of Thebes and Boeotia,[248] but was also a key staging post for their trade to the north and further east.[249]

[245] A tax on *Velania* was noted in a Venetian Assembly minute in 1415 - Thiriet (1971) no.1569.

[246] The upland plain above Psachna and around Mt Dirfis is ideal for the rearing of livestock (predominantly sheep and goats) which would have been wintered on the fields in the coastal plain, providing both efficient control of the winter vegetation and valuable fertilising of the fields. Until the introduction of mechanical cultivation after the Second World War a transhumant population, teams of workers from the upland villages, came to work in the coastal plains picking olives in the months from November to January and then hoeing and pruning the vineyards in February and March.

An idea of the potential size of this production comes from an interview (2013) with a shepherd from the peninsular of Argyro (**SC9**) just to the south of the town of Aliveri. Reflecting on his position as being one of the few surviving shepherds, he reported that in the 1970's there had been 12,500 sheep in the area – a claim supported by the number of abandoned villages on the peninsular. The area (including the southern part of lake Dystos) is approximately 5,000 hectares in size. This suggests a grazing density of 2.5 per hectare for land including meadows with good access to water – a figure that compares (according to the author's own personal experience) to an average stocking density for sheep of 5 per hectare on good pasture in the county of Devonshire in England in the 1970's (with the addition of supplements and heavy use of artificial fertilisers the stocking rate has doubled since then).

The name of the harbour - ***Porto Buffalo*** (**SC11**), which has survived into the present day, also suggests (although we have no documentary evidence) the rearing of these working animals on the shores of lake Dystos for export.

[247] Papadopoulos et al. (2016) "Valonia Oak Silvopastoral Systems in Greece". www.agforward.eu [accessed 20/01/2013], Minutes of the Venetian Senate note exports of silk, skins and acorns from ***Negroponte*** in 1378 and silk production in 1369, one from the assembly in 1397 with regard to control of prices of skin exports and another from 1400 regarding silk exports - Thiriet (1958), no.473 and 595; Thiriet (1971), no.937 and 984. The export of velania may have been a state monopoly, continuing previous Byzantine exploitation and taxing system – see discussion on general forestry exploitation in Dunn (1996) "The Control and Exploitation of the Arboreal Resources of the Late Byzantine and Frankish Aegean Region". In Cavaciocchi (Ed.) **L'uomo e la foresta : secc. XIII-XVIII : atti della "Ventisettesima settimana di studi" : 8-13 maggio 1995**. Le Monnier. 479-497.

[248] Vroom (2003) P.245. She notes that it was the main point of export for the manufactures from Thebes, the capital of the province of Hellas.

[249] Bakirtzis (2004) "The Urban Continuity and Size of Late Byzantine Thessalonike". In Talbot (Ed.) **Symposium on Late Byzantine Thessalonike(2003)**. Dumbarton Oaks. 35-64. The author notes that in the 14th century Thessalonike was attached to the Venetian commercial network, exporting grain and importing textiles via ***Negroponte***.

4.2 Military and Political History 1204 to 1470

The history of Euboea during its Latin occupation from late 1204[250] until its annexation by Ottoman forces in 1470 has been termed one of the most complex of the already complicated history of southern Greece during the late medieval period.[251] Thus the following does not attempt to be a complete history but to provide a skeletal framework within which the role of the medieval towers on the island can be understood. As an aid to understanding, a timeline of the major events during the period is provided in **Appendix 4.2.**

Although a number of Greek historians have covered the late medieval era as part of a general history of Euboea they have treated predominantly its classical past or the 19th century, and tended to focus during the Frankish period on the exploits of Licario at the head of a Byzantine army in the later years of the 13th century and the island's annexation by the Ottomans in 1470 to the detriment of a more comprehensive understanding of the events of the period. A number of 19th and 20th century English language authors have related the wider Latin involvement in the Aegean in the 13th – 15th centuries -Miller (1908), Setton (various publications in 1948, 1975 and 1976),[252] and, more recently, Lock(1995). But the most comprehensive treatment of the island in this period still remains a series of three articles by John Bury from 1886 to 1888 in the JHS. [253]

1204 – 1235 The Latin Empire and the conquest of Euboea

Latin forces under Boniface, Marquis of Montferrat, first arrived on the island in late 1204.[254] They appeared to have faced little, if any, opposition. Stunned by the sack of Constantinople earlier in the year, and the more recent reverses suffered by Leon Sgouros,[255]

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[250] Traditionally the conquest has been dated as 1205 but I have followed Lock's chronological summary, which dates it to Nov/Dec 1204 - Lock (1995) **The Franks in the Aegean, 1204-1500**. London, 310.

[251] Bury (1886) The Lombards and Venetians in Euboea (1205-1303. **JHS**, 7: 309-352; Bury (1887) The Lombards and Venetians in Euboea (1303-1340). **JHS**, 8: 194-213; Bury (1888).

[252]Setton (1948) **Catalan domination of Athens, 1311-1388**. Cambridge, Mass.: Medieval Academy of America; Setton (1975) **Athens in the Middle Ages**. London:: Variorum Reprints; Setton (1976) **The Papacy and the Levant (1204-1571). Vol.1, The thirteenth and fourteenth centuries**. Philadelphia.

[253] These can be found in Tafel and Thomas (eds.) (1856-7) Urkunden Zur Älteren Handels- und Staatsgeschichte Der Republik Venedig, vols I-III [covering the period 814-1299]; additionally, in Thiriet (1958) and Thiriet (ed.) (1971) **Déliberations des assemblées venitiennes concernant la Romanie**, vols. 1-2 (1160 - 1463), Paris.

[254] Although the crusading fleet had travelled through the port in 1203 on their way to Constantinople.

[255] After meeting the Latin forces at Thermopylae Sgouros had retreated to his stronghold at Corinth - Konti (1983) Συμβολὴ στὴν ἱστορικὴ γεωγραφία τοῦ νομοῦ Ἀργολίδας. **Byzantina Symmeikta**, 5: 169-202.

the local elite probably realized that it was better to accommodate rather than oppose the invading army. More than anywhere else in Southern Greece ***Negroponte*** was a city, whose burghers would have understood the power of the Latin forces and the opportunities that a conciliatory attitude might bring. It had been over 120 years since the Byzantine Empire had first allowed Venetian trading in the city,[256] and the Venetian siege of the city in 1171 would have been a recent memory as would the apparently friendly visit of Latin forces on their way to Constantinople in the previous year.[257] As an entrepôt for exports to the west there was much to be gained and, given the depredations of the Byzantine fiscal system and widespread exploitation by the local Byzantine elite in the late 12th century (see **section 4.3**), probably little to lose.

Boniface wasted no time in trying to ensure total control of the whole island, seemingly sufficiently satisfied with his reception that he invested Jaques D'Avesnes with the lordship of Euboea and proceeded to Corinth.[258] The latter, having constructed a small fort in the channel between Euboea and the mainland,[259] thereby controlling north-south passage along the Gulf of Euboea,[260] hastened to catch up with the main force at Corinth to support his lord in the siege of the fortress.

Very quickly, however, in 1205 D'Avesnes' hold on the island came under threat, not from local insurgents but from his overlord, Boniface, who divided up the island into three fiefs under three Lords of Verona (henceforward referred to as the Triarchs or Tercieri),[261] assigning him with the overlordship of the island. Two years later D'Avesnes died, as did Gilberto, triarch

[256] By the chrysobull of 1082 Alexios I Komnenos had granted to Venice the right of trade, free of taxes, throughout the empire, mentioning Euripos as one of the free-trade ports. This was renewed in 1126 and 1147. Suddenly Manuel I cancelled it in 1171 and confiscated all Venetian holdings in Negroponte, following which the Venetians sent a fleet and set fire to an area of the city. In 1187 a new accord was signed followed by the treaty of 1198 with Alexis III - Jacoby (2009) **Latins, Greeks and Muslims: encounters in the Eastern Mediterranean, 10th - 15th centuries**. Variorum, IX, 152-153.

[257] Magoulias (ed.) (1984) **O city of Byzantium : Annals of Niketas Choniatēs**: Wayne State University Folio 172.

[258]Memoirs of the Crusades by Villehardouin and De Joinville, 30 - While Villehardouin writes in glowing terms of the expedition's stop at ***Negroponte*** on their way to Constantinople in 1203 and that they 'took council' there, there is no further mention of the island in his chronicle. Can we presume by this lack of any further mention (he notes an attack on the island of Andros at the same time) that the annexation of ***Negroponte*** may have effectively been agreed prior to the capture of Constantinople?

[259] Magoulias (1984) Folio 610.

[260] In this way they controlled much of the sea traffic from Italy and the west to central Greece, Thessalonike and Constantinople. George Phrantzes, who provides a detailed account of his travels, mentions three occasions on which he boarded ship in ***Negroponte*** - Philippides (1980), 48,49, 54-55.

[261] These lords – Ravano dalle Carceri(Central Euboea), Gilbertus de Verona(***Caristo***) and Pegoraro dei Pegorari (North) - had all been present at the signing of the Treaty of Adrianople with Venice in the previous year. Theoretically ***Oreo*** and ***Caristo*** (also linked to the island of Aigina (Miller(1908), 45)) were not Boniface's to give, but had been assigned by the *Act of Partition* to Venice, although, quite possibly this had previously been agreed with the Republic as a way of her having allied Lombard lords on the island.

of ***Caristo***, while Pegoraro, triarch of ***Oreo***, returned home, leaving Ravano dalle Carceri, triarch of central Euboea, as sole Lord of the island. Under threat from the Latin Emperor Henry,[262] and, given Venice's special situation under the terms of the *Act of Partition*,[263] he agreed in 1219, whilst still recognizing Henry as his suzerain, to become a vassal of the republic.[264]

The first Venetian bailie was possibly appointed to ***Negroponte*** in 1211, although documentary evidence only exists from 1216.[265] The bailie, appointed for a two-year period, had in many ways greater influence than his peer, Ravano, whose sole power was soon to be divided into multiple lordships.[266] Whilst the Lord(s) had a duty to and the support of their lord,

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[262] On Boniface's death in 1207 his son and many Lombard barons had refused to do homage to the new Emperor, although following negotiations at ***Ravennika*** (modern Lamia) with a conciliatory Henry most barons eventually submitted to him – Miller (1908), 73. During this period Henry's conciliatory and unifying nature was an important aspect in the ending of the Lombard rebellion. Following their reconciliation the trust he placed in Ravano dalle Carceri was such that he visited ***Negroponte*** shortly thereafter despite warnings of threats on his life. - Longnon (ed.) (1948) **Henri de Valenciennes: histoire de l'Empereur Henri de Constantinople**, Paris, 111-117, folios 673-686; Failler (1984-2000), vol. II, vii 27, 87 - This may be one of the reasons why Ravano was allowed to divide his loyalties in 1211, and the two year period of negotiations suggests, although we have no sources to substantiate this, that the Venetians may have unofficially reached an understanding with a pragmatic Henry prior to their agreement with Ravano.

[263] The Latin forces had not annexed Euboea simply as invaders but as part of an agreement – the Act of Partition – struck between the leaders of the 4th Crusade in 1204 prior to their taking the city of Constantinople. By this the Byzantine Empire had been divided amongst the participants, each being allocated regions which he could subsequently annex - the Venetians being given 3/8 of the empire including the cities of ***Oreo*** and ***Karystos*** on Euboea and the island of Andros to the south. The Doge described himself as '*ruler of one quarter and a half a quarter of the whole Empire of Romania'* – Carile (ed.) (1969) **La cronachistica veneziana (secoli XIII-XVI) di fronte alla spartizione della Romania nel 1204 con una appendice di P. R.-J. Loenertz**, Florence, 513; Tafel and Thomas (Eds.) (1856) **Urkunden zur älteren Handels- und Staatsgeschichte der Republik Venedig : vol 1 [814-1205]**, Vienna, Tafel and Thomas (Eds.) (1856) **Urkunden zur älteren Handels- und Staatsgeschichte der Republik Venedig : vol 1 [814-1205]**, Vienna., 464-488.
The Venetians (represented by the Doge Enrico Dandolo) and Boniface had also signed a separate agreement - the *Compact of Adrianople*- by which Boniface gained territories (to be conquered) in the north and west of Greece as a vassal of Venice and a cash sum (possibly returnable) to finance his campaigns, whilst the Venetians purchased the right to Crete (thus trumping the Genoese). They also gained a commitment from Boniface to protect Venetian possessions and influence (if not indirect control) over the whole of Greece south and west of Thessalonike. The Venetians, although a republic, had thus achieved by this agreement a position in the feudal hierarchy - Muratori (1733) **Rerum italicarum scriptores; raccolta degli storici italiani dal cinquecento al millecinquecento**. 984-985; Buchon (1860) **Recherches et matériaux pour servir à une histoire de la domination française aux XIIIe, XIVe et XVe siècles dans les provinces**. Paris, 10-11; Madden (2003) **Enrico Dandolo and the rise of Venice**. Johns Hopkins University Press 183-188.

[264] Tafel and Thomas (Eds.) (1856) **Urkunden zur älteren Handels- und Staatsgeschichte der Republik Venedig : vol 2 [1205-1255]**, Vienna., 93-96, folio CCV. Ravano also promised to pay 2,100 gold *hyperperi* and a silken garment woven with gold to the Doge each year and the Venetians were to be allowed to trade wherever they wished on the island, constructing a church and warehouse in all the towns. One particular clause is important – *'Grecos autem tenebo[Ravano]in eo statu, quo domini Emmanuelis Imperatoris tempore tenebantur*' – and indicates the approach of the Venetians towards the Greeks on the island. Such a conciliatory attitude was possibly moulded by the problems of the Republic on Crete.

[265] Bury (1886) 317. This is supposition by Bury that Pietro Armandi, the Doge's ambassador, who was sent to arrange the details of the compact, actually held such a post.

[266] On the death of Ravano in 1216 the bailie intervened between the competing claims of the six claimants, dividing each of the three original fiefs into two, thus creating the six Hexarchs with the proviso that, if any should die, his partner not his heirs should inherit the lordship. ***Negroponte*** became the common capital for all the Hexarchs, who normally resided there (A document of Otho, Duke of Caristo, dated to 1250 notes it was 'fait à

the Prince of Achaia and, via him the Latin Emperor, the bailie could at any time (and many times did) call on political, economic and military support from the Serenissima to support Venetian interests and the defense of the island (and the Duchies therein). The Lords of Euboea were therefore as much clients of Venice as independent feudal lords in their own right. ***Negroponte***, too, was to become the 'Versailles' of the western Aegean, the Lords of Euboea and their knights (and often also of the Duchy of Naxos) not residing in their fiefs but (with Venetian encouragement?) congregating in the cosmopolitan centre of ***Negroponte***.

1236 – 1261 Civil war and the first attempt at Venetian Hegemony

Whilst on mainland Greece there was considerable change, the next twenty years on Euboea pass without significant incident, and we must presume a period of growth and consolidation of power of the Lombard lords and the bailie. However, in 1236 the political equilibrium was disturbed by the grant by Emperor Baldwin II of suzerainty over the Duchy of the Archipelago and Euboea to Geoffrey II, Prince of Achaia in recompense for his support in breaking a Greek blockade of Constantinople.[267] When Karantina, heir to the lordship of ***Oreo*** in the north and wife of Geoffrey's brother William, died in 1255 he claimed the triarchy, something not acceptable to either the other triarchs or Venice. Civil war ensued for three years but, whilst hostilities ceased,[268] it was only finally ended by the treaty of May 1262 which restored the status quo prior to Karantina's death and prohibited Venice from interfering in local feudal disputes.[269]

The creation of the Latin Empire appears to have inaugurated a period of peace and prosperity on Euboea, the strife between the barons and William's attempt to claim the

Aigrepont en ma maison' – Bury(1886)). Although only that part nearest the sea was under Venice's jurisdiction, the Hexarchs retaining their own judge, the bailie soon commandeered Ravano's house as his official residence and shortly thereafter introduced Venetian weights and measures onto the island.

[267] This is the dating of Bury (1886) whilst Loenertz sets it as 1240-1244. Both dates are well before the outbreak of hostilities in the 1250's - Loenertz (1978) 240, event 34. In reality the island was under the overlordship of Venice, but such a grant could be justified by the emperor as it had previously been dependent on the now defunct kingdom of Salonica (under Boniface). In itself this would not have caused a major problem, but Geoffrey was also granted land on the island and the Hexarchs were bound to provide a galley or eight knights to the service of the emperor - ,108.

[268] William had defeated the triarchs at the battle of Karydi, but was himself captured and imprisoned by the Byzantines after his defeat at Pelagonia by Michael Palaiologos, Emperor of Nicea - The Chronicle of Morea: edited in two parallel texts from the [Greek] MSS of Copenhagen and Paris, with introduction, critical notes and indices, 271-272; Macrides (2007) 361, folio 81.

[269] Tafel and Thomas (Eds.) (1857) **Urkunden zur älteren Handels- und Staatsgeschichte der Republik Venedig : Vol.3 [1256-1299]**, Vienna., CCCXLVII, 46; CCCXLIX, 51.

Lordship of ***Oreo*** being merely an outward sign of this. It was an era that Euboea was not so much threatened by pirates as a base for them. Bury(1886) notes the exploits of the triarchs Narzotto and Grapella, and that their fleet, numbering 100 ships, ranged as far as the Asia Minor coast and Syria. Gugliemo, writes Miller(1908),[270] was able to support 400 knights at his court, while Otho, Lord of Caristo, had become sufficiently rich to make a donation to the Abbey of Bellevaux.[271]

1262 – 1302 Byzantine Insurgence

The capture of Constantinople by Byzantine forces in 1261,[272] and the passage of the defeated Latin Emperor, Baldwin II, through ***Negroponte*** in 1262 ushered in a new era. Henceforward the Latins were more united against their common enemy, whilst the Venetians stood back, at least initially, from direct support for the Lords of Euboea. They looked more widely to develop their own strategic position following the hostile (in their eyes) Byzantine-Genoese treaty of Nymphaion of 1261, which opened up the Black sea to Genoese traders.[273]

In the early 1270's, a renegade knight Licario (Ikarios in the Byzantine texts) took control of and re-fortified a remote fortress called ***Anemopile*** (**S2**) on the eastern coast above Karystos. Shortly thereafter he offered it in support of the Byzantine cause, commencing raids on Euboea and the surrounding islands.[274] There followed a series of clashes as various fortresses changed hands until in 1280, with control of the towns of ***Oreo*** and ***Caristo***,[275] leading an army of

[270] Miller(1886) 103.His source for this is unknown.
[271] Hopf (1833) **Geschichtlicher von Karystos auf Euboea in dem Zeitraume von 1205-1470**. Vienna **in** Bury(1886) 331,note 1; Setton (1976) 95. This was the relic of the right hand and part of the arm of St. John, which he had received in repayment of a loan of 5,000 hyperperi given to the Latin emperor Baldwin II..
[272] Macrides (2007) 375-376, folio 85.
[273] In 1265 (ratified in 1268) a wide-ranging treaty was signed with the Emperor Michael to counter this. On the issue of aggression between the two parties it specifically excluded Euboea, where the Venetians were to be essentially neutral - Tafel and Thomas (Eds.) (1857) **Urkunden zur älteren Handels- und Staatsgeschichte der Republik Venedig : Vol.3 [1256-1299]**, Vienna. CCCLV, 69-70; CCCLVIII, 92-100. For details of the commercial aspects of the treaty see Chrysostomides (2011) **Byzantium and Venice, 1204 - 1453: collected studies**. Ashgate, III 267-356; for the Greek and Latin texts - Tafel and Thomas (Eds.) (1857) **Urkunden zur älteren Handels- und Staatsgeschichte der Republik Venedig : Vol.3 [1256-1299]**, Vienna.66-89.
[274][Marino-Sanudo-Torsello] 131, lines 22-26. Lock (1995, 319) places the commencement of this alliance in 1271 (which I follow), whilst Papadopoulou (2000, 262) believes it commenced after the battle of Demetriada in 1273.
[275] Following the capture of ***Caristo*** he was granted the island as his fief with the obligation to provide 200 knights for the Emperor's service - [Marino-Sanudo-Torsello] 135, 30-31. Failler (1984-2000) (270, folio 15) notes the capture of ***Oreo*** and ***Caristo*** as part of the general operations of the Byzantine fleet in this period but does not provide any dating.

Spanish, Sicilian and Catalan mercenaries he landed at Robies (**NE1**),[276] and attacked ***Negroponte,*** defeating Latin troops at the battle of ***Vatonta*** (**CW25** - near Nea Artaki). Upon the rapid arrival of Latin re-enforcements,[277] he was forced to raise the siege but made his base at the castle of ***Lilanto*** (***Filla***) just to the east of the city,[278] and succeeded in capturing and strengthening the defences of other fortifications throughout the island,[279] eventually controlling everything but the city itself.

Slowly over the following 15 years Venice and her allies wrested back control of the island, eventually recovering the fortress of ***Caristo*** sometime during the Venetian-Genoese war (1293-99), a date that Bury sets as 1296.[280] The 25-year conflict had left the baronies severely weakened whilst the position of the Republic as their saviour was much strengthened. By the early 1290's, until Boniface's marriage to the lady Maria, all the baronies were in female hands: their subsequent marriages must have been no little influenced by the Venetian bailie. Equally importantly, all the islands recaptured from the Byzantines, which had originally been under the overlordship of Naxos, now professed allegiance to Venice.

1303 – 1340 The Catalan threat and decline in the power of the Triarchs[281]

The arrival in Constantinople from Sicily of the Catalan Company in 1303 was to change the face of 14th century Greece. They had originally been brought by Andronikos II from Sicily to fight against the Turks, but on completion of their contract, finding no other paymaster, they plundered Asia Minor, northern Greece and Thessaly in succession over a period of seven

[276] Papadopoulou (2000, 274) believes the forces disembarked from the Byzantine fleet at ***Oreo*** in the north but this is at least three days forced march from ***Vatonda*** (Batontas, close to Chalkida) over very difficult country and would have been impossible militarily if the Venetians controlled the fortress of ***Cleisura***. Better is to follow Sanudo, who notes [the army]' *e venne un giorno sopra la citta di Negroponte'* and assume they landed at ***Robies*** **(NE1)** or possibly further south at ***Politika*** **(CN3).** This then provides a rationale for the subsequent hasty nature of the Latin foray. This may also explain why George Pachymeres notes that the army'απέβαινε περί που τους Σωρεούς' and not 'at' the town - Failler (1984-2000), 525, folio 27.

[277] Although the Venetians had renewed their treaty in 1277 with the Byzantine Emperor, they were specifically allowed 'to help and defend the island of Evripos and those in it against your majesty' – Muratori, ***Rerum Italicarum Scriptores,*** xii, 393 **in** Miller(1908) 138. This treaty was renewed again in 1285, effectively over this period excluding Euboea as a *casus belli* between Venice and the Byzantine state - Tafel and Thomas (Eds.) (1857) **Urkunden zur älteren Handels- und Staatsgeschichte der Republik Venedig : Vol.3 [1256-1299]**, Vienna. CCCLXXIX, 344.

[278] Sanudo calls the castle ***Filla***, a name that has remained until the present day - Papadopoulou(2000) 141 - yet the maps of the period (see **chapter 4**) refer to it as ***Ture*** and ***Lilanto.***

[279] He recaptured, according to Sanudo, ***Cuppa in la Vallona***, then strengthened its fortifications and those of ***Armene (Armeno),*** and ***Chiesura*** (***Cleisura),*** and of the village (***casal***) of ***Mantugo***-.This note is very important since it clearly gives a date for the construction of the fortress at ***Mantugo*** (**NE17** - modern day Mantoudi), which Buchon described on his visit in 1841 - [Marino-Sanudo-Torsello] 137.

[280] [Marino-Sanudo-Torsello] 280, note 152. Boniface inherited the castle following his marriage in 1294.

[281] For a detailed account of the Catalan period in Greece - Setton (1948).

years,[282] finally arriving in Boeotia in the spring of 1210.[283] At this point Walter, the new Duke of Athens, seized the opportunity to utilize their services to expand his dominions. This co-operation was a massive success but after a six-month campaign, when Walter tried to pay them off, they refused to give up the more than 30 castles captured on his behalf. He called for support from all the forces of Latin Greece but in the ensuing battle of Halmyros in 1311, on the mainland just opposite Euboea, their massed cavalry was wiped out (of the triarchs only Boniface of ***Caristo*** surviving)[284], leaving the way open for the Catalans to forge a new state out of the Duchies of Thebes and Athens, and threaten Euboea.[285]

The Venetian defensive preparations were massive over the next five years,[286] but insufficient to stop the attack. In March 1317 a force of 2,000 Catalan infantry and cavalry marched to ***Negroponte***, expelled Morosini, the bailie, from the city and proclaimed Alfonso Fadrique as Lord.[287] The bailie, in agreement with Cornaro, Lord of ***Oreo***, was forced to sign a truce.[288] Shortly thereafter on Boniface of Caristo's death Alfonso inherited ***Caristo*** and, despite the truce, commenced to annex the rest of the island. Venice protested to King Frederick of Sicily who, under pressure from the Pope, with whom Venice was on good terms, and realizing the antipathy to Catalan power amongst other European powers, ordered the withdrawal of Catalan forces from the island.

The conflict was finally ended by a truce in 1319, which reflects the strength of the political alliance that Venice had assembled against the Catalans. Having come close to extinction on Euboea the Republic appears to have gained everything that it had worked for over the previous century.[289] Shortly thereafter she informed the Triarchs of her intention to occupy all the towns

[282] This is described in detail by Pachymeres – Failler (1984-2000) xii-xiii.
[283] We find many notes in the Venetian assembly in the period 1300 to 1310 referring to ***Negroponte*** – '*Negrépont est tres menacé'* (1303), 1,500 hyperperi for financing of work on walls of Chalcis (1308), 2,000 hyperperi for fortifications (1309) - Thiriet (ed.) (1971a) **Déliberations des assemblées venitiennes concernant la Romanie, tome I (1160-1363)**, Paris folios 109,144,177.
[284] It should be noted that Boniface had achieved his position by marriage and was neither a Triarch nor a Hexarch.
[285] Hughes (ed.) (2006) **The Catalan expedition to the East : from the Chronicle of Ramon Muntaner**, Barcelona, 147-149.
[286] The bailie's salary was raised to attract the right candidate, forces were despatched from Crete, and naval defence bolstered in 1316 - Thiriet (1971a) Folio 251; Thiriet (1971a) Folio 363.
[287] The Catalans, lacking legitimacy, had acknowledged King Frederick of Sicily as their overlord. He had appointed as his representative in Athens Alfonso Fadrique, his bastard son, who married Marulla da Verona, daughter of Boniface, lord of ***Caristo***, immediately on his arrival in Greece - Hughes (2006) 154.
[288] Bury (1886).
[289] The Catalans were prohibited from fitting out any new ships in the Gulf of Euboea or the Saronic Gulf (off Athens), and gave up any castles held on Euboea, whilst Venice surrendered any claim to ***Armeno*** and ***Caristo*** in the south of the island, and Alfonso retained his share of the tolls on the passage of ships through ***Negroponte.*** Venice continued to maintain its fleet in the city – in 1323 we read of a fleet of forty ships which sailed from Venice to protect ***Negroponte*** - Carile (1969) 68. No.7.

and castles on the island '*as a reward for her trouble and expense'* as Miller so succinctly puts it.[290]

But Euboea was not just under threat from the mainland. Over the following fifteen years the Catalans allied with the Turkish corsairs, undertaking major raids on the islands and coastal regions of Greece. In the meantime, Venice was faced with a second war with Alfonso in 1327 and potential insurrection by the other triarchs. A surge in Turkish attacks culminated in an alliance of the Latins and Byzantines in 1331,[291] and with pressure from the Pope,[292] the Catalans signed a truce which seems to finally have put an end to the conflict,[293] although not to Turkish raids.[294] Venice now began an active campaign to consolidate its position, raising the height of the walls of ***Negroponte***, levying a 5% tax on all imports to pay for it, and imposing its legal jurisdiction over the whole island.

1341 - 1379 War with Genoa and decline of Catalan power

Setton(1948) reports generally amicable relations between the Catalans and Venetians on Euboea during the 1340's to such an extent that the bailie in support of his duties had borrowed a sum of 6,000 hyperperi in 1346 from a Catalan resident of Athens.[295] But in 1350 war broke out between Venice and Genoa. The suburbs of ***Negroponte*** were sacked by a Genoese fleet, and in the following year the northern fortress of ***Oreo*** successfully survived a two-month siege.

The war and the peace treaty of 1355 brought a major change in the character of Venetian involvement on the island. Apart from taxation adjustments,[296] the offer of Venetian citizenship was made to local citizens to reduce the tide of people leaving the island while a new quarter was constructed for the Jews in ***Negroponte***.[297] Ten years later, despite conflict erupting with

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[290] Miller (1908) **The Latins in the Levant, A history of Frankish Greece (1204-1566)**. New York: Barnes and Noble 245.
[291] In 1331 alone they are said to have captured more than 25,000 Christians. On 18th July 1331 Venice signed a five year anti-Turkish treaty in Rhodes with Andronikos III, the Knights of St.John, Bartolomeo II Ghisi, and the Duke of Naxos - [Marino-Sanudo-Torsello] 44.
[292] This was a decree by Pope John XXII for the Company to depart from Athens, accompanied by the threat of excommunication if they had not given up the Duchy within a period of five months - Setton (1948) 42.
[293] This was later renewed in 1333 and 1335. The Company agreed to cease working with the Turks, to build no forts on Euboea and to pay the Venetians damages of 5,000 hyperperi.
[294] in 1332 they plundered Euboea and the Aegean with a fleet of 380 ships and the bailie, Pietro Zeno, was forced to pay tribute to prevent the complete devastation of the island - Muratori, SRI xii, 534 and Villani x. 24 **in** Bury (1887) 211.
[295] Setton (1948) 42, note 20.
[296] The Triarchs were now made responsible for maintaining the galleys used for coastal defense, while there was remission of taxes for reconstruction of buildings destroyed by the Genoese attacks - Bury (1888) 93-94.
[297] Bury (1888), 93-94.

the Catalans again in 1363-65, the Venetians purchased the fortress of ***Caristo***, thus consolidating their power and ending Catalan involvement on the island. [298]

1380 – 1470 Growth of Ottoman power and annexation of Euboea

The capture of Thebes and the attack on Catalan Athens in 1380 by the Navarrese company,[299] and the death of the last triarch, Giorgio Ghisi, in 1385 ushered in a new chapter both on the mainland and the island. The Republic was now able to treat Euboea as a full colony but, fearful of the upkeep of the many castles, left them in the hands of minor fief-holders or rented them to new incumbents, probably retaining only ***Oreo***, ***Vallona (***with its fortresses of ***La Cupa*** and ***Potiris)*** under its direct control.[300] But on the mainland, it was now faced with the Florentine Acciajuoli family, who had taken control of the Duchy of Athens (Thebes) in 1387 and, despite Venetian efforts, Athens itself in 1405.

Three other events reflect the new role of Euboea. In 1388 an arsenal was constructed in ***Negroponte***,[301] and in 1389 the Republic temporarily closed the bridge over the strait to put pressure on Nerio Acciajuoli to give up claims on lands in the Peloponnese where Venice was now actively expanding its territories.[302] To the south in 1390 the two islands of Mykonos and Tēnos were bequeathed to the Republic and came under the aegis of the bailie.[303] The island now increasingly embraces the role of 'fortress Euboea', a base from which land and naval

[298] Thomas (ed.) (1966b) **Diplomatarium Veneto-Levantinum : sive acta et diplomata res Venetas Graecas atque Levantis illustrantia 1300-1454 [vol.2 1351-1454]**, New York: Burt Franklin 107-110, folio 64. The terms of a possible agreement had been discussed in 1351 - Thomas (1966b) 12-16, folio 6.

[299] This group of mercenaries had been assembled in Navarre by Jacob de Baux, titular Emperor of Romania, to recover his dominions - Bury (1888), 98.Their attacks drew many refugees from the mainland, who were welcomed on Euboea, as were refugees from Tenedos in 1383 following the Veneto-Genoese agreement to vacate the island – Setton (1976) 325.

Two letters written by King Pedro IV, the second just a month after the first, thank the Venetian bailie for his help and request him to allow the refugees, both Franks and Greeks, to return to their homes, when they wished, with their animals and belongings, although many were still there 18 months later - Loenertz (1970) **Byzantina et Franco-Graeca : articles parus de 1935 a 1966 reédités avec la collaboration de Peter Schreiner**. Rome 343-346.

[300] We see two fiefs being leased out - Guglielmazzo della Gronda receiving ***La Vatia*** (**CW15**), just south of Eretria, in 1408 for 29 years at an annual rental of 2,000 hyperperi, whilst Donato Giustiniani gained ***Stura*** **(SC16)**. Other fiefs were by this time disjointed: ***Larache*** (modern Lechries in central Euboea - **CW9**) belonged to Maria Sanudo as did ***Xilili*** (granted to Crusino Sommaripa - in the area of ***Vallona*** but not identified) and the northern promontory of **Litar** (**NW6** and **NW7**). Bury also mentions many other families resident in Euboea at this time – Pietro da Canale for instance obtained ***Cumi*** (**CN18**) - but unfortunately provides no source reference for these – Bury (1888).

[301] Bury (1988) 105. Substantial munitions were transferred to the city in 1399, including no less than 300 gun carriages - Thiriet (1971), folio 951.

[302] This is a good indication of the high importance of ***Negroponte*** as an entrepôt and market for goods from the mainland, and of its strategic value such that the Venetian authorities believed the closure of the bridge would throttle trade along the Attica and Boeotian coast.

[303] The leaseholder, a Venetian citizen, agreed to pay an annual rent of 1,500 hyperperi – Miller (1908) 365.

forces, in support of Venetian imperial ambitions and its Christian allies, [304] could sally to attack targets in the Aegean and on the mainland.[305] Lock's comment that at this time the Republic '*virtually operated a protectorate of Christian powers in the Aegean'* is an accurate reflection of the realities on the ground.[306]

This changing role of ***Negroponte*** seems to have brought economic benefits to the city,[307] and we see in 1410 a doubling of the annual tax on the Jewish community to 1,000 hyperperi.[308] Yet in the country Turkish raids were driving away the workforce on which the agriculturally based economy depended,[309] and military service was instated.[310] A massive naval victory over the Turks off Gallipoli in 1416 was to provide some respite for the Venetians, who even incorporated Thessalonike into their dominions in 1423, albeit only for seven years until its annexation by Turkish forces.[311]

Yet Turkish power continued to grow. In 1446 they ravaged the Morea and in 1453 Constantinople fell, leaving ***Negroponte*** as the only fortress in the Aegean capable of withstanding Turkish arms. Over the next 15 years we see many references to the island in the minutes of the Venetian assembly,[312] and some minor military successes,[313] yet on 12th July 1470 a Turkish force under Sultan Mehmed II captured ***Negroponte*** after a three-week siege.

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[304] From two peace treaties we can see the growing power of the Venetians: In 1406 they note nine territories under their control, in 1418 thirty eight - Thomas (1966b) 301-304, folio 164; 318-319, folio172.

[305] To some extent this had already been happening in previous years: the 1344 Crusader fleet had assembled at ***Negroponte***, as had a fleet under Humbert II, Dauphin of Viennois, in 1345 to relieve the besieged fortress at Smyrna. In 1350 the anti-Turkish league agreed for a fleet to assemble there but this was overtaken by the start of the Veneto-Genoese war (1350-1355), while the crusade of 1366 under Amadeo VI, the Green Count of Savoy, put into the port - Setton (1976) 197, 220.

[306] Lock (1995) 136. In 1396 after the Ottoman success at Nicopolis we see the Venetian Senate ordering Tommaso Mocenigo, of the Aegean, to protect Constantinople as best he could, but ensuring the safety of Negroponte '*et alia loca nostra'* – Setton (1976) 357.

[307] These would have arisen from the reduction in transfers of income to Venice and its expenditure locally on fortifications and pay for the troops, much of which would have been spent within the city itself.

[308] The increased money supply would have benefited the Jewish community, whose wealth was such that they had to be prohibited from buying real estate beyond the ghetto – Miller(1908) 366.

[309] In 1414 a Turkish fleet ravaged the north of the island before taking the fortress of Boudonitza on the mainland opposite. Incentives were given to any 'Albanians or other equestrian people' to settle on the island, while leases of land were now made for 29 years to provide incentives for tenants to invest - Miller(1908) 366. In 1410 the Marquis Giacomo of ***Boudonitza***, on the mainland just to the north of Euboea, [was persuaded?] to move his vassals from the surrounding countryside to his brother's lands at ***Caristo*** – Miller(1908) 372 – whilst a minute of the senate notes that a galley was to be sent with all urgency from Crete - Thiriet (1971a), Folio 1135.

[310] This was for all men over 18 years. The cost of all the military expenditure and investment was so high and income so reduced[310] that in 1415 the receipts of about 10,000 hyperperi to the Republic from ***Negroponte*** were less than expenditure and a part of the mercenary force was dismissed - Thiriet (1958), no. 1567.

[311] This also came under the aegis of the Bailie at ***Negroponte***.

[312] 15th February 1456 – *'Il est urgent un capitaine capable par assurer la défense de Negrépont en raison de l'importance de la position et du danger Ottoman'*; 9th December 1461 – the walls should be '*non solamente forte ma fortissima*'; 9th July 1462 - wheat is to be sent to the island - Thiriet (1971) no. 1522,1604,1614.

[313]Phrantzes notes how in 1466 Vettore Capello at the head of a Venetian fleet had taken the island of Imbros but was eventually repulsed from Patras, how in 1469 Niccolo da Canale seized Ainos, and describes the final capture of the city in 1470 - Philippides (1980) 88, 92-93.

The Church

The Roman church was intimately involved both in the Latin Empire and with the events leading up to the capture of Constantinople in 1204, and Pope Innocent III took immense satisfaction, as Setton notes, at the prospect of ending the schism between the churches of the east and west by conquest.[314] Although he had temporarily excommunicated the crusaders for their capture at Venetian instigation of Zara on the Croatian coast, and had forbidden the Crusaders from attacking Constantinople,[315] he and his successors were pragmatic and had much to gain, something the Venetians were quick to exploit.[316] A close relationship with the Papacy became one of the fundamental pillars on which their control of Euboea rested and, although Papal-Venetian relations were often frosty, time and again, when their hold of the island was under pressure, they utilised the political power that it gave them. [317]

[314] Setton (1976), 1. The Pope is quoted as saying that the transfer of imperial power in Constantinople was *'the Lord's doing, and it is marvellous in our eyes*' (Psalm 118:23).

[315] There is disagreement among the sources on this point, and in the Chronicle of the Morea, it is written that the Pope offered absolution for those crusaders who proceeded to Constantinople - '*άν άφησουν της Συρίας έκεινο το ταξείδι…[και].....είς την Κωνσταντινόπολιν να βάλουν τον Αλέξιον……..νά έχουσιν συμπάθειον άφεσιν άπο τις αμαρτίες τους'* - The Chronicle of Morea: edited in two parallel texts from the [Greek] MSS of Copenhagen and Paris, with introduction, critical notes and indices, 35: 483-493. For a discussion of how the various sources may be reconciled - Madden (2012) The Venetian Version of the Fourth Crusade: Memory and the Conquest of Constantinople in Medieval Venice. **Speculum**, 87.2: 311-344.

[316] *Annales Herbipolenses, ad annum 1204*: Monumenta Germaniae historica Scriptores, xvi [1859], p.12, ll.37-38 **in** Setton(1976) 21. The Venetians worked hard to ensure this, even preventing their elected candidate for the Patriarchate, Morosini a Venetian citizen, leaving Venice for Constantinople until he had sworn an oath to elect only Venetians or Venetian residents of 10 year standing into the clergy of Agia Sophia - Madden (2003) 182. The Venetians are reputed to have said in the partition negotiations '*Imperium est vestrum, nos habebimus patriarchatum*'

[317] This appears to have been a relationship of mutual dependency, and in the 14th century we see that the crusades promoted by the Papacy were absolutely dependent (as in 1203) on the services of the Venetians to transport their forces to the Levant.

On Euboea the church controlled substantial resources,[318] to which the sheer number of monasteries and church buildings bears testament.[319] Unlike in most other regions and especially in Constantinople, the Greek bishop of ***Negroponte***, Theodoros, remained in his position.[320] This relaxed attitude must have changed radically in the 1240's when Greek monks were seen as a 'fifth column',[321] especially after 1261 as the Latin states came under pressure from a resurgent Byzantine Empire and the Latin Patriarchate was transferred to ***Negroponte*** (probably in 1314), yet no trace, except in the city,[322] of Latin as opposed to Byzantine style

[318] By the agreement negotiated in 1206 the church was to receive one fifteenth of all properties conquered prior to their division amongst the Crusaders. Yet, following conflict both amongst the clergy and with the barons, the church's position was only affirmed by the second parliament at Ravennika (modern Lamia) at which Ravano, Lord of Negroponte, was present. By this concordat all the churches, monasteries and other ecclesiastical possessions were entrusted, free of all feudal services except the old Byzantine land tax (ακρόστιχον), to the Latin Patriarch of Constantinople, whilst the barons and their subjects were to pay the church tithe This concordat was not, however, signed by the Prince of Achaia, with whom Honorius III finally reached agreement only in 1223 - Tafel and Thomas (Eds.) (1856) **Urkunden zur älteren Handels- und Staatsgeschichte der Republik Venedig : vol 2 [1205-1255]**, Vienna. CLXXIII 31-34.
There were 11 sees subject to the Archbishop of Athens, four of which – ***Negroponte, Vallona, Oreo and Caristo*** – were in Euboea. These latter were subsequently to be merged into that of ***Negroponte*** - Miller (1908) 68; *Innocent III, Epp*.an.xi, 256 **in** Bury(1986) 318. There is some disagreement about whether the term *Zorconensis* applies to ***Oreo*** or the town of ***Zarakes*** (or ***Zarka***) in southern Euboea. The name, however, appears to be simply a corruption of ***Oreo*** ([στου]ς ωρεούς) ιn the same way that the medieval name ***Setines*** derives from Athena, and ***Stives*** from Thiva. Pachymerēs, too, refers to it as '*τους Σωρεούς'* - Failler (1984-2000), 525, folio 27.
[319] Over 300 churches and 46 monasteries have been identified as possibly having been constructed prior to 1470 – There were also substantial other sources of income - Pope Innocent III notes among the possessions of the church *'the markets of* ***Negroponte*** *and Athens, and the rivers*' - Miller (1908) 68-69.
[320] In Constantinople the Papal legate, Pelagius, had closed churches, imprisoned monks and pronounced the death penalty over anyone not acknowledging the Pope as 'first bishop' – a policy that Emperor Henry rescinded - Macrides (2007) 154-155, folio 17.
It does, however, follow the generally accommodating policy of Villehardouin, who even signed an agreement with the local Greeks in the Morea to respect their beliefs and local customs – Lampros, *Μιχαήλ Ακομινάτου* II, 356 **in** Miller(1908) 58. The clergy, against normal custom, were even forced to appear before secular tribunals – *Epistulae Innocenti III*, bk,viii, let.143 **in** Miller (1908) 65.
[321]'*…quod quidam monachi Greci….secreta sepe Grecis revelant…*' – E. Berger (Ed.) **Les Registres d'Innocent IV**, 1, no.657, 112-113 dated 29th April 1244 **in** Setton (1976) 419.
[322] The church of Agia Paraskevē, shows clear signs of Venetian style construction – Ioannidis (2007) **Η Τρίκλιτη Βασιλική της Αγιας Παρασκευής στη Χαλκίδα**. Athens: Indiktos; Bertolini-Cestari et al. (2007) "The Timber Roof of Hagia Paraskevi Basilica in Chalkida, Greece: Multi-Disciplinary Methodological Approaches for the Understanding of the Structural Behaviour. Analysis and Diagnosis". **From Material to Structure - Mechanical Behaviour and Failures of the Timber Structures: ICOMOS IWC - XVI International Symposium – 11th -16th November 2007**. Florence, Venice and Vicenza,

construction can be identified in the surviving monuments.[323] Even traces of the other Monastic Orders have been lost.[324]

4.3 Demographic and Economic Background

Population trends

In order to understand the Medieval landscape of Euboea we need to develop some understanding of the number and size of the settlements within it and the extent of the total population. For such no documentary evidence has survived. Our earliest estimate is that by the traveller Bernard Randolph from 1676, who notes it as being '*not above 60,000 soules, of which not above 10,000 Turks, who most live under the command of the castles at Negro Ponte and Castel Rosso'*.[325] Johannes Koder, using Randolph and comparing figures for the early 19th century and an estimate by Colonel Leake of 7,000 families,[326] believed the population in the late 14th and 15th centuries to have been between 25,000 and 50,000 with a best estimate of 40,000.[327] Buchon, who visited the island in 1841, noted that the population had once been about 100,000, but after the Greek War of Independence only 35,000 had remained.[328] David Jacoby in a more recent article on the demographic evolution of the island,[329] whilst providing great detail on the various influences on the population's composition and wealth, refrains from

[323] The influx of Lombard and Venetian settlers after 1204 would have created a need for spiritual guidance yet the merger of the four Byzantine sees of Euboea in 1222 suggests retrenchment. In 1223, because the importance and wealth of ***Negroponte*** had now increased so much *plura loca* were transferred to the See of Athens. These appear to have been properties on the mainland side of the city on the roads to Athens and Thebes - *Regesta Honorii Papae III* no.536, 3844 and 4501 **in** Setton (1976) 408, 415.
Most likely it was also a practical reflection of the difficulties of finding sufficient Latins willing to serve in the dioceses. Berard, Archbishop of Athens, had cause to write to the Pope in 1209 requesting that priests actually serve in person (Setton (1976) 408), whilst Othon de la Roche, Lord of Athens felt it necessary to write to the Pope asking that a priest serve in every castle and village with more than 12 Latin residents - Innocent III an. XIV, ep.110 **in** Setton (1976) 413.
[324] The Templars were granted land by Jacques d'Avesnes on his death - *Epistolae Innocenti III*, bk.xiii, let.146 **in** Miller (1908) 45; The Dominicans had established a convent ' Nigropotensis Lombardorum' there by 1303 - Loenertz (1970) 311; The Cruciferi also had a hospice in ***Negroponte,*** whilst the Minorites noted the city as part of their 'province of Romania' – Miller(1908) 71.
[325] Randolph (1687).
[326]Using a multiplier of four or five this would lead to a population estimate of between 28,000 and 35,000 - Leake (1835), vol. II: 254.
[327] Koder (1973) 170-171.
[328] Buchon (1911), 26-27.
[329] Jacoby (2001b).

an overall estimate of its size, and for good reason since such estimates tend to be highly variable depending on the assumptions made.[330]

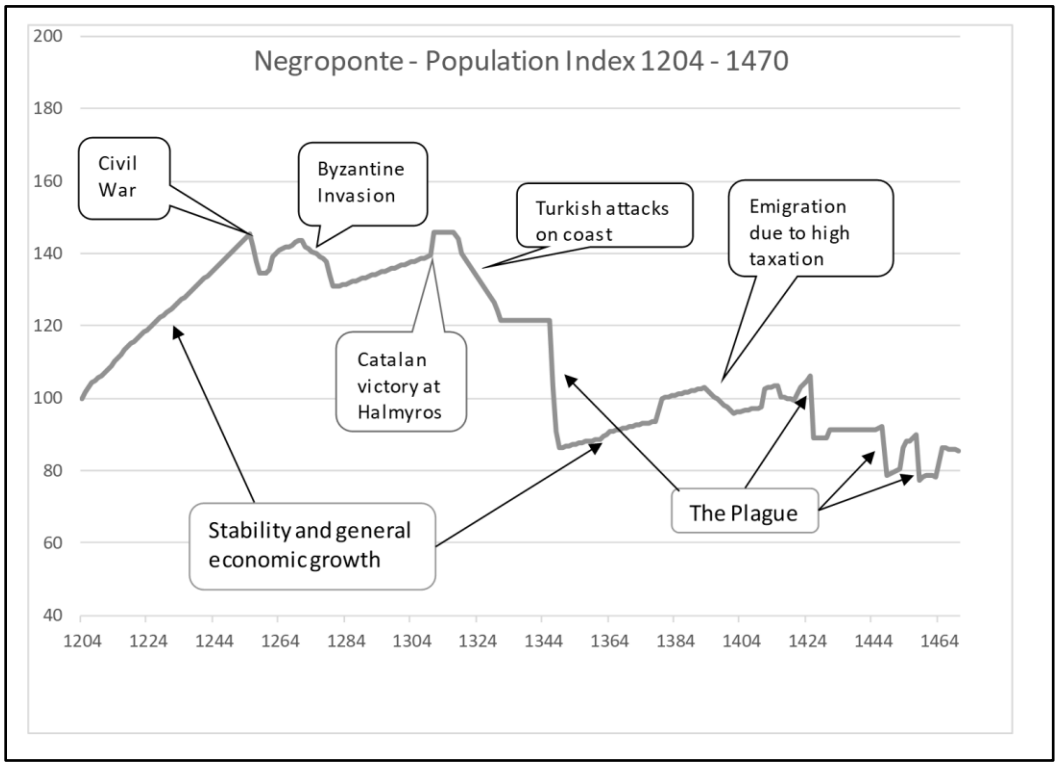


Figure 4.2 – Population index 1204 – 1470

Jacoby's article and the historical summary provided in **section 4.2** does, however, provide the basis for calculating possible changes over time and turning points, key indicators which,

[330] His own calculations in the same article amply exemplify the problem. Trying to estimate the population of ***Negroponte*** using the area of 190,000 sq.m. within the fortress's walls, he first deducts public buildings and vacant land, reaching a net figure of 180,000 sq.m. He then uses a document from 1262 restricting the surface area of houses to 49 sq.m. to arrive at a maximum number of houses of 3,600, from which, using a multiplier of four as a household size, he reaches a maximum figure of 14,500 inhabitants for the city.

He omits, however, roads from his calculation for some reason, and that the need to issue the document presumes that most existing houses were probably larger. He also ignores the requirement for stables (for the elite) and that much food preparation was actually undertaken in small outside yards. A figure of 5.3% for public and vacant land also seems very low whilst on the upside no consideration has been made of the probability of tenement buildings occupied by multiple family units, that families themselves may at times have been nearer five in size or that there were substantial suburbs, as he himself writes, to the north and east of the city. Finally, Randolph (1687, 2), who visited the city in 1676 under Ottoman domination, writes '*None but Turks and Jews live within the castle, where are very spacious houses*', contradicting the presumption of a densely inhabited fortress (although the Turks are likely to have undertaken a degree of land clearance following their capture of the city). All these factors taken together could very easily reduce (or increase) any population estimate by as much as 50%, thus making even a 'maximum' figure little more than an exercise in mathematics.

We can also compare Jacoby's estimate of the maximum number of houses with that of 1,900 provided by Eveliya Çelebi in 1667, who probably included houses both within the fortress and in the suburbs around. Using a multiplier of four we reach a population of 7,200 - Fousaras (1959) Τα "Ευβοϊκά" του Εβλια Τσελεμπή. **Archεion Euboikon Meleton**, 6: 158-161.

within an historical context, may provide an insight into the rationale for tower construction. With this approach we are concerned with creating an index (with a base of 100) without trying to establish any absolute size. A number of guidelines (**appendix 4.3**) – some general and some specific to Euboea - need to be assumed for its preparation. The resulting chart is shown in **figure 4.2** It must be re-emphasised that this should not be used for creating absolute estimates of population at any particular time – the number of variables are too high and the estimates I have made too approximate. There are, however, some clear conclusions that can be drawn despite this.

Immediately after the annexation in 1204 there appears to have been a fifty-year period of stable population growth, which was interrupted by the civil war - the war of Euboeote succession - in the 1250's, beyond which natural growth was probably offset by the effects of the Byzantine incursions.[331] The population peaked in 1311, immediately after the defeat of Latin forces by the Catalans and the influx of refugees from the mainland. The first half of the 14th century was disastrous with depredations by Turkish corsairs followed by the Plague in 1347-9 leading to over 40% reduction,[332] whilst the second half probably witnessed a slow recovery back to 1204 levels. Three bouts of the plague in the early 15th century, and the probable emigration of Latins to Italy and Greeks to Turkish controlled regions, despite immigration after the fall of Constantinople and some natural growth, most likely resulted in population dropping to 25% below late 12th century Byzantine levels, a figure reflected in the Turkish *defters* of the late 15th and 16th centuries (see **appendix 4.4** for comparable population figures of 11 settlements on Euboea)

Economic Trends

In 1204 the Euboean economy appears to have been essentially agrarian. Unlike in Thebes there was limited silk manufacture (see above), although this seems to have changed following

[331] We can compare the initial 50-year period of peace and economic growth to 1255, where I have estimated conservatively a total 45% population increase (0.8% per year from a stable starting point) with the period analysed by Evangelia Balta using data from the Ottoman *defters* from the late 15th and 16th centuries. Excluding villages which were effectively depopulated after the 1470 annexation of ***Negroponte***, the population seems to have been increasing at a rate of about 2% per year. This rate is mirrored in the 1.8% per year population increase seen on the island in the mid. 19th century (41,651 in 1839 to 73,138 in 1870) following the Greek war of Independence, when population may have fallen by greater than 50% over the 10-year period of the war.

[332] This is similar to figures reported in the Peloponnese. Records for five villages in Messenia from 1354 and 1357, immediately after the plague, indicate that the number of vacant hearths was about a third of the total, although, without knowing the figure prior to 1347, we cannot draw firm conclusions - Topping (1977) **Studies on Latin Greece, A.D.1205-1715**. London: Valorum, VIII, 68.

its annexation,[333] and definitely in the Ottoman period there was a substantial industry on the island.[334] At the same time the influx of Latins and its free-trade status for the Venetians, reconfirmed in 1209, led to its rapid growth as an entrepôt and stop-over port linking Constantinople and the west, and northern Greece with Crete and Egypt to the south, a process that must have stimulated further the local production of cash crops for export.[335] Whilst part of the wealth generated returned to Venice, a substantial amount must have remained in the local economy, financing the development of banking operations, the agricultural base,[336] manufacturing, and conspicuous consumption of products imported from the west.[337]

Much of the produce, once destined for Constantinople, after 1204 remained in the hands of the local feudal elite or was available for export - a major stimulus to the local economy.[338] To this basic scenario the Latin incomers added finance for the development of the

[333] Jacoby (2001a) "Changing Economic Patterns in Latin Romania: the Impact of the West". In Laiou and Mottahedeh (Eds.) **The Crusades from the Perspective of Byzantium and the Muslim World**. Dumbarton Oaks. 197-233 228, and Jacoby (2005) "The Production of Silk Textiles in Latin Greece". **Commercial Exchange across the Mediterranean: Byzantium, the Crusader Levant, Egypt and Italy**. Variorum. 277-306, XII:22-35. Whilst Jacoby notes in the first article above that this was most likely restricted to raw silk, the commitment made by Ravano dalle Carceri in 1209 to deliver each year a gold-interwoven samite to the Doge of Venice (as noted in the second article) indicates the local capability to produce high-quality silk cloth - Tafel and Thomas (Eds.) (1856) **Urkunden zur älteren Handels- und Staatsgeschichte der Republik Venedig : vol 2 [1205-1255]**, Vienna. II, 90. The existence of the village name '***Seta***' (site ***CW20*** -meaning silk in Italian, if this is its root) may also suggest this as the centre for the production of '*seta et sete opera*' as mentioned in a similar later agreement with the Triarch, Gilbert of Verona, in 1216 - Tafel and Thomas (Eds.) (1856) **Urkunden zur älteren Handels- und Staatsgeschichte der Republik Venedig : vol 2 [1205-1255]**, Vienna. II, 183.
We should, however, be careful not to over-emphasise the role of silk in the economy, even in Boeotia, where it has been argued that much of the growth in the 11th and 12th centuries may have been simply from exploitation of the fertile plain around Lake Copais to produce arable and pastoral products for export (using Venetian or other western transport) to Constantinople - Dunn (1995) "Historical and archaeological indicators of economic change in Middle Byzantine Boeotia and their problems". In Christopoulou (Ed.) **Β' διεθνές συνέδριο Βοιωτικών μελετών, 6-10 sept. 1992**. Etairiea Boiotikon meleton. 755-774

[334] Randolph (1687) 7. He writes '*here is abundance of silks made, most of which is carried to Constantinople'*. An unpublished manual from Florence also mentions the export of silk textiles from the island - Jacoby (2001b).

[335] Corn and millet were imported to Venice from ***Negroponte*** in 1367 – Thiriet (1971b) folio 824.

[336] Jacoby (2001b) provides evidence of various investments in irrigation in Crete under the Venetians. He also notes the cultivation of cotton on Euboea from the second half of the fourteenth century.

[337] ***Negroponte***, as a centre for the Venetians, and the Triarchs and their retinues, must have been not dissimilar to Crete or Corinth in its import of fine ceramics, luxury dress-ware and jewelry. In 1339 a law even had to be passed in Crete restricting sumptuous display - Jacoby (2001a) 232. Substantial finds of medieval jewelry have also been identified from the period - Kondyli et al. (eds.) (2014) **Sylvester Syropoulos on politics and culture in the fifteenth-century Mediterranean : themes and problems in the Memoirs, section IV** Ashgate, 108; also Kontogiannis (2015) http://www.doaks.org/research/byzantine/fellows/2014-2015/kontogiannis (downloaded 5/5/2016).

[338] Jacoby (2001a).

infrastructure,[339] transport to the markets of the West,[340] agricultural technology,[341] and new forms of contract for the exploitation of vacant land and livestock.[342]

As regards manufacturing, we have little information during the period. We do, however, possess the travelogue of Eveliya Çelebi who writes in 1668 of 80 workshops situated in the environs of the fortress, and another 426 in the suburbs to the north.[343] We know from the work of Evangelia Balta (1991) and Machiel Kiel (1997) that the population had recovered rapidly in the 16th century to early 14th century levels (see above) from its low level following the island's annexation in 1470, suggesting a strong base during the Latin period. Apart from primary products, there must also have been considerable processing of animal products from inland around the well-watered foothills of mount Dirfis (see above and ***Vumi*** – **CN18**) and to the south around ***Porto Buffalo*** (**SC11**), in which region the production of *velania* from wild oak would have supported a good-sized tanning industry, whilst there must have been significant demand for casks for the export of wine. To this we can also add the production of salt on the salt pans to the north and east of ***Negroponte***,[344] and alum.[345]

Finally, but not least, we have reports from the mid. 13th century of the wealth of the Triarchs.[346] Two – Narzotto dalle Carceri and Grapella dalle Carceri – controlled a fleet of 100 corsairs,[347] and in one raid on the coast of Asia Minor, close to Samos, are reputed to have

[339] Although the origin of the complex irrigation system in the area of the Lelantine plain to the east of Negroponte has not been documented, the survival of the position '*Potamarcho de Lilanto'* (see **CW2**) in an Italian text suggests Latin involvement in its development during the 14th and 15th centuries - (1890-1900), III,455:6-24 no. 1041(1439)

[340] The Venetian agreement with the Triarchs in 1216 allowed Venice to use its own weights and measures, much later extended to the whole of the island. This standardisation with Venetian merchants and export markets would of itself have stimulated trade - Tafel and Thomas (Eds.) (1856) **Urkunden zur älteren Handels- und Staatsgeschichte der Republik Venedig : vol 2 [1205-1255]**, Vienna., 177-178. But it was not just Venetians who exported. There is a Genoese consul recorded in ***Negroponte*** in 1236 – Jacoby (2001a)

[341]Jacoby (2014a) "The Economy of Latin Greece". In Tsougarakis and Lock (Eds.) **A Companion to Latin Greece**. The Netherlands: Brill. 255-287, 197. He suggests that Latin landowners' stewards 'possibly stimulated the diffusion of asymmetric plough-shares'. He notes also the introduction of the use of buffaloes to till heavier soils (such as that in the Lelantine plain).

[342] The traditional 29-year lease – εμφύτευση – known from the 11th and 12th centuries was slowly replaced in Crete during the 13th and 14th centuries by more flexible rental contracts. Charalambos Gasparis cites the use of contracts for 10 years or less where land was already cultivable (such as vineyards) linked to loans (*auxilium*), whilst the *soccida* was an agreement between the owner of livestock and a herdsman for a specific period - .Gasparis (1997), 143-161.

[343] Fousaras (1959), 162-163 – such exactitude suggests that the latter figure may have been taken from some form of register.

[344] Thiriet (1971b) no. 1187 (1414).

[345] Thiriet (1958) no. 984 (1400).*'Silk and alum …from Negroponte'*.

[346] This wealth can be seen also in the so-called 'Chalkis Treasure' a collection of gold and gold-plated ornaments at the Ashmolean and British Museums - McLeod Some Aspects of the Finger-Rings in the Chalcis Treasure at the British Museum. [Accessed 24/3/2019], https://www.britishmuseum.org/pdf/21%20McLeod-opt-sec.pdf; Kontogiannis (2012a).

[347] From Sanudo Torsello, who notes '*perché l'isola di Negroponte mandava ogn'anno fuori in corso a danneggiar quell d'altri ben cento legni…*' - [Marino-Sanudo-Torsello] 143.

taken a haul of 50,000 hypeperi of gems.[348] This may well be an over-estimate but it suggests the existence of a very large section of the populace, who lived partly or fully off piracy.[349] We must also not forget another conclusion from this - that there must have been a substantial shipbuilding and repairing industry on the island, not only to support this fleet but Venetian merchant vessels. In the early 1400's the Venetians also established a shipyard in ***Negroponte.***[350]

If we look at the situation from a purely theoretical economic point of view, Euboea, and especially its capital ***Negroponte,*** must have achieved substantial growth in the early 13th century driven simply by the expansion of the cash in its economy as more taxes and rents were retained locally (rather than being sent to Constantinople) and increasing speed of money circulation arising from improving financial sophistication.[351]

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[348] Bury (1886). We can compare this to the annual gross income available to Venice at the end of the 14th century of about 14,000 *hyperperi* before costs of administration were deducted or the annual valuation of labour service at 4 -5 *hyperperi* p.a.–Jacoby (2001a).

[349] There is very limited information on the crew-size of a corsair, but most are likely to have been relatively small compared to the massive galleys we find mentioned in the Byzantine or Venetian records. These latter had 100 - 110 rowers and a further complement of officers, soldiers and sailors, bringing their total manning to about 140 - 150.

Most of the *galee sottili* were probably very similar in size to the 12th century small Fatimid war galleys, the *ushāriyāt*, which had only 20 oarsmen and a similar number of sailors and marines. The small Byzantine *dromon* with one row of oars would have had a complement of about 60-70 - Bramoullé (2007) Recruiting Crews in the Fatimid Navy (909–1171). **Medieval Encounters**, 13(1): 4-31; Pryor (1988) **Geography, technology and war : studies in the maritime history of the Mediterranean, 649-1571**. Cambridge: Cambridge University Press, 64-67; Pryor et al. (2006) **The Age of the ΔΡΟΜΩΝ: The Byzantine Navy ca 500 - 1204**. Leiden: Brill, 254-263

Thus, a corsair might have had 40-60 crew. Just taking 50% of this number of ships suggests that approx. 2,500 men, and using a multiplier of four in a household, 10,000 people, equal to 20-30% of the island's population, may have lived partly or wholly off piracy in the mid. 13th century – see also Malamut (1988) **Les îles de l'empire byzantin, VIIIe-XIIe siècles**. Paris: Sorbonne, 601; Dennis (Ed.) (2010) **The Taktika of Leo VI [text, translation, and commentary]**, Washington D.C.: Dumbarton Oaks, XIX: 45-60.

[350] There was also probably a substantial fleet transhipping goods offloaded at ***Negroponte*** north to Thessaloniki. In 1359 protection was requested for these vessels against Turkish corsairs - Thiriet (1958) 359, 92.

[351] We can understand this better using the basic Fisher identity - $M \times V = P \times T$

(where M is money supply, V is velocity of circulation, P is price level, T is level of transactions/income)

Thus, if 20% taxation previously sent to Constantinople had been spent instead in the local economy, then, assuming no inflationary effect (no change in P), the level of transactions (or T - income) on the island would have increased by a similar amount.

If we then reflect that ***Negroponte*** grew as a city, and therefore the number of currency transactions grew, there may have been 20%(?) increase in the velocity of circulation, then this would also have led to 20% increase in total income.

Add to this the income from piracy noted above of a further 20%, i.e. T(new) = T(old) x 1.2 = 1.2. This provides the following:

$P \times T(new) = ((M \times 1.2) \times (V \times 1.2)) \times 1.2 = (M \times V) \times 1.2^3 = (M \times V) \times 1.73$

In a very simple way we can thus see how total income, putting aside population increase or agricultural productivity improvement, could have increased by 73% (without any change in V by 44%) in the early Frankish period (assuming no inflation in prices). Practically, the process is very much more complex, but this simple analysis does indicate how there was probably a significant improvement in income on the island after 1204 in the period up to 1255.

A similar analysis can be seen in detail in Goldstone (1984) Urbanization and Inflation: Lessons from the English Price Revolution of the Sixteenth and Seventeenth Centuries. **American Journal of Sociology**, 89: 1122-1160;

The late 13th century Byzantine incursions would have dented this positive economic picture, but the early 14th century, following Catalan invasion and Turkish corsair attacks, must have been a watershed in its economic performance. In the short term the heavy expenditure on fortifications by the Venetians (see history - **section 4.2**) would have supported the economy but the Plague of 1347 set it on a downward trend. Increasing Turkish control on the mainland in the latter part of the 14th century must have further exacerbated the situation, isolating the island and reversing the benefits of net immigration of the 13th century. By the early 15th century we see taxation increases driving away the rural population and business being put under pressure. For instance, Guglielmazzo della Gronda, who had leased ***La Vatia*** (**CW15**) in 1408 for 29 years, was unable to renew it because he had failed to pay the rental of 2,000 hyperperi, and the rental paid by Nicolo Giorgio for ***Caristo*** (**S9**) was reduced from 1,337 to 737 hyperperi in 1436.[352] Continuing outbreaks of the plague, increasing Turkish threats, the loss of Thessaloniki in 1430 and then Constantinople in 1453, and, following this, the probable emigration of the commercial elite would have further depressed trade, export opportunities and the island's ability to produce, .

In summary, whilst it is impossible to set exact figures, the general impression is that the early 13th century was a period of rapid economic growth, in which not only the total economy but *per capita* income posted substantial increases. After a period (1255 to the 1290's) in which civil war and the Byzantine invasion took its toll this growth resumed from the last decade of the century until the Catalan incursion in 1317. The next three decades, subject to continuing Catalan (initially) and Turkish attack and the plague in 1347/8, witnessed a major decline, while the latter part of the 14th century was a period of stabilisation and growth as Venice slowly took full control of the island. By the mid. 15th century, however, the island's economy was on a downward spiral and could no longer sustain the military expenditure and manpower necessary to defend it from an increasingly aggressive Ottoman empire.

reservations about this approach should be noted in Mayhew (1995) Population, Money Supply, and the Velocity of Circulation in England, 1300-1700. **The Economic History Review**, 48: (2): 238-257. See also Reynolds (tr.)(1985) **[Braudel] Civilization and Capitalism I5th - I8th Century - vol.1: The Structures of Everyday Life**, chapter 7, 368.

[352] Bury (1888) 104.

5 MONUMENTAL ARCHAEOLOGY AND DEMOGRAPHY

5.1 Aims and Methodology

The aims of the archaeological survey are twofold. Firstly, to assemble, qualify and characterize the more than 500 surviving monuments on the island from the Byzantine and Frankish periods as the basis for the identification in **chapter 6** of historical names shown on the 14th - 16th century charts and maps with places on the ground, and the construction of a map for the Late Medieval period; secondly, to provide the database for testing the various theories about the role, construction-date and builders of the medieval towers in Greece in **chapters 8 and 9**.

The achievement of such aims in the past has been hampered by the difficulty of organising the very large dataset of geographical information, and archaeological evidence in order to analyse the inter-relationships between them. Each monument type has therefore tended to be addressed in isolation, or generalisations used for the geographical framework within which it is situated.[353] Fortunately, over the last twenty years the development of digital mapping has allowed a much more comprehensive treatment to be undertaken.[354]

The large size of Euboea and the relative paucity of data from the Byzantine and Frankish periods prevented the use of large-scale maps and a base scale of 1:50,000 was set. **Google Earth** and **ArcGIS** satellite imagery of most areas was available in sufficient definition to help identify many monuments, thus reducing the need for many time-consuming site visits, where only their existence (i.e. churches) not their features required study. These were overlaid with the HMGS (1970 and 1988) series of maps.[355] Additionally, apart from the height data available from Google Earth, an elevation database (90m. x 90m.) was downloaded from **CGIAR-CSI.**[356] These two sources provided the possibility to cross-check against the height data

[353] Often in older studies heights above sea level over 500 metres (or similar) are shown to separate lowland areas from perceived mountainous regions yet, when looking at viewsheds of particular monuments, this is wholly inadequate.

[354] A recent article, for instance, details a comprehensive GIS study of field enclosures, terraces, trackways and buildings of the post-medieval landscape based on 1: 5,000 scale maps produced in the 1960's on the island of Kythera based on maps from the *Hellenic Military Geographical Service (hereafter HMGS)* - Bevan et al. (2003) A Digital mediterranean Countryside: GIS approaches to the Spatial Structure of the Post-Medieval landscape on Kythera(Greece). **Archeologia e Calcolatori**, 217-236.

[355] These maps, issued over a number of years, needed to be geo-corrected from their GGRS co-ordinate system to WGS 1984 base.

[356] **SRTM 90m. Digital Elevation Data** [online]. http://srtm.csi.cgiar.org/ The CGIAR Consortium for Spatial Information [Accessed 23 February 2016]. Two databases were downloaded in TIFF format – **srtm_41_04** (Northern Greece) and **srtm_41_05** (Southern Greece) and then imported into the ArcGIS system. For more

provided in the sources (see below), and were also invaluable for view-shed studies and definition of networks of watchtowers and beacons at a later stage in the research (see **chapter 9**).

The island has been split into seven regions (see **table 5.1** and **figure 5.1**) for the purpose of analysis. This is for two reasons. Firstly, each region has particular geographical features, which require it to be treated somewhat differently from the rest.[357] Secondly, the size of the island precludes a general detailed survey without a large survey team.

Region		**Key Towns**
Northwest	NW	Lichada, Istiaia, Aidēpsos
Northeast	NE	Mantoudi, Prokopi, Limnē
Central north	CN	Psachna, Stenē, Politika
Central west	CW	Chalkida, Nea Artakē, Basiliko, Eretria, Amarynthos
Central east	CE	Kymē, Avlonari, Aliveri
South central	SC	Dystos, Krieza, Petries, Zarakes, Styra
Southeast	S	Marmari, Karystos

Table 5.1 Regional Divisions

Thus, a top-level survey was undertaken of all seven regions, positioning recorded fortifications and ecclesiastical monuments on the master GIS map (see **chapter 6**),[358] and then, according to their distribution, '*focus sites'* were established. These may be a proxy for centres of population or of military/strategic installations or both.[359] Visits were undertaken in

accurate viewshed and line-of sight analysis 30m. x 30m. databases are now being developed but were not freely available at the time of study. The 90m. x 90m. definition level was, however, felt to be a good compromise between the need for accuracy and the size of area under study

[357] Sackett et al. (1966) divided the island into 5 regions, but the Politika-Psachna-Dirfis region appears to be separate both geographically and administratively from the Chalkis-Eretria region. For similar reasons the Dystos-Petries-Styra region has been treated independently of Aliveri-Kymē (to the north) and Karystos (to the south).

[358] This was based primarily on Theodoros Skouras' 1998 and 2003 publications on churches, monasteries and fortifications, the Sackett (1966) survey of prehistoric sites, which includes many references to later periods, and the Koder (1973) study of the medieval topography of the island.

[359] Such *focus sites* may be defined by a tower or castle, tower and related church(s), as two or more churches or a monastery. Individual churches (often referred to as 'field churches') unrelated to anything else, although they may be indicators of a settlement, have not been treated as such since historically many appear to have been constructed in the countryside with no reference to a village or fortification (although see **conclusions - chapter 11**). Each *focus site* has been allocated a name – normally that of the most important settlement - and a unique reference number – e.g. **NE4** is focus site no.4 in the **N**orth **E**ast region.

all regions to tower sites judged from the literature to be of exceptional interest, and to many ecclesiastical sites and major fortifications. In the area around Chalkida (***Negroponte***), where there is both a large density of medieval sites and there exist a number of early relatively large-scale maps, a more detailed survey was undertaken.

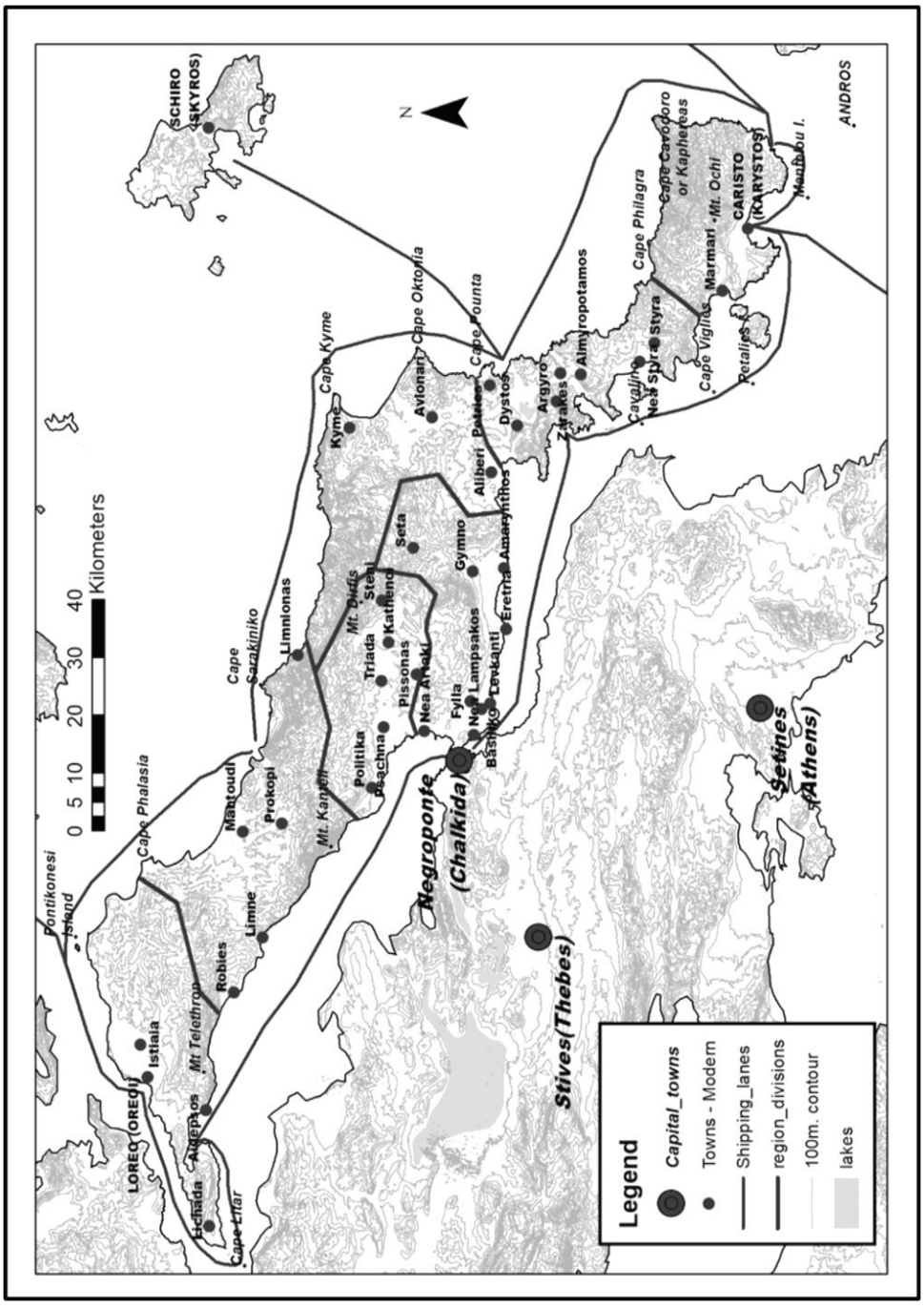


Figure 5.1 – Euboea Regions and Primary Towns

For a few tower sites, where these might aid an understanding of the tower and its environs, sketches were prepared.[360] Use was also made of digitized index cards (up to 2008) provided by the 23rd Ephorate of Byzantine Antiquities based in Chalkida.[361] A number of churches have been added, which have been identified on my own site visits and from more recent publications. A study of the various 19th and 20th century maps has also revealed the existence of many other possible tower and fortification sites through their name (Πυργάρι, Πυργί, Βίγλα, Καστρί, Σκοπιά, Τούρλα).

5.2 The site Gazetteer (**Appendix 5**)

The gazetteer gives first a general description of each *focus site*, outlining its geographical situation, agriculture and strategic position, if relevant. [362] This is followed by reference to any known medieval names that have been found in early maps - *portolan* charts, *isolario* maps, and 16th/17th century printed maps - or other contemporary documents.[363] There follows a listing of all monuments.

Place-names use a standardized transliteration system from Greek into Latin letters, as noted in **Appendix 1.1**.[364] After the description of each monument, and relevant architectural details,[365] references are then provided to the literature.[366]

All known tower sites on the island are listed. They are divided into three categories of decreasing certainty. The majority are *'recorded'* towers which still exist, albeit often the only

[360] These sketches should not be treated as fully accurate since they were not undertaken by detailed survey for which no license has been received by the local Ephoria. They are a combination of satellite imagery and observation during the author's site visits.
[361] My thanks to Nikos Kontoiannis of the 23rd Ephorate for the provision of this data.
[362] Using this method, a number of settlement sites may not have been identified because in many cases construction of houses from wood or mud brick (see **chapter 9**) may mean that the archaeological evidence of such has now completely disappeared.
[363] These may range from private contracts to the proceedings of the Venetian Assembly, or personal letters and histories of the period such as that by Marino Sanudo Torsello.
[364] Where names have a recognised transliteration into Latin characters these do not follow exactly the transliteration system. Thus, Ιωάννης becomes Ioannis, and Γεώργιος becomes Georgιos. Greek authors' transliterated names are those found in the literature and may differ from the rules in **Appendix1.**
[365] Since often there are difficulties in translation of Greek architectural terms into English and vice-versa, these follow Kalopissi-Verti and Panayotidi-Kesisoglou (Eds.) (2010) **Multilingual Illustrated Dictionary of Byzantine Architecture and Sculpture Terminology**. Crete University press.
[366] A substantial number of churches have been studied in detail by specialists (e.g. Orlandos, Farantos, Papabasileiou, Themelis), who have published in Greek language journals, and the A.Deltio. provides reports on many monuments, the results of excavations, and important information as part of monument restorations by the local ephoria.
Most photographs included are from my site visits, but a few monuments have now disappeared and, where necessary, I have attached photographs from the Skouras archives publicly available on the internet at the Greek *General State Archives* site - http://arxeiomnimon.gak.gr/about/index.html.

trace is their foundation stones, or have been formally reported in the literature. In a second category are '*possible*' towers, which are indicated by a name (e.g. *Tourla, Vigla, Pyrgari, Skopia*) found on a map although, it should be noted, without separate corroboration their dating cannot be fixed. In a third category are towers, which are '*hypothetical'* only. These few are usually noted due to an apparent 'hole' in an otherwise obvious network of towers, or where two or more churches and the general geography indicate the probable presence of a fortification or settlement of some type.[367]

Skouras (2003) and Lock (1996)'s tower reference numbers are provided. Where the site is clear or has been visited, GPS co-ordinates are provided as is height above sea level. External dimensions of walls, their thickness, and surviving height are noted as are the surviving architectural features.[368] The extent to which towers have clear views to other strategic positions is also discussed.

All identified medieval fortifications are listed, but Prehistoric, Classical, Hellenistic and Roman fortifications generally only if there is evidence that they were occupied in the medieval period. Other fortifications which have been found, where there is insufficient information to make any judgement, have merely been noted and codified on the map separately.[369] The description of ecclesiastical properties – monasteries and churches – is much curtailed. In most cases this is limited to some guidelines as to their location, a few comments from Skouras' 1998 publication, an estimate of the date, and references to any detailed surveys that have been undertaken of the site.

5.3 The Results of the Survey

The following provides a short summary of the results of the island-level survey. It looks at the key features of the monuments identified, thus providing the basis for the analysis in later chapters.

[367] An example of such is the surmised existence of a tower in the village of Triada, which not only possesses churches dated to the middle Byzantine and later periods but is situated in the middle of a rich agricultural plain on a raised hill, half of which is now given over to the Kriezotis mansion and gardens. This was built in the middle of the 19th century and would most likely have made use of stones from any pre-existing building, which might have existed on the site, in much the same way as stones from the old fortification reported by Buchon (1841) at Prokopi in the northeast region were used to build the Boudouris mansion.

[368] Number of floors, stonework, mortaring, doors, windows / arrow slits, post-holes, lateral re-enforcement, vaulting, crenellations, stepped construction, scarping / battering.

[369] Here we suffer from the fact that so little survey work has been undertaken of the major fortifications. These are all coded 'C' in the same way within the analysis, since there is insufficient data to distinguish between Archaic, Classical, Hellenistic or Roman, often the simple name '***Kastri***' (***Καστρί)*** or '***Ochyron***' ('***Οχυρον***) on a map being the only evidence.

5.3.1 Towers

Of the '*recorded*' towers summarized in **table 5.2** only 12 (of which one is probably Ottoman) have survived to their full height and 7 to more than two storeys - and these probably due to their maintenance and continued utilisation during the Ottoman period.[370] They are usually situated in villages and were most likely used by Ottoman administrators or military personnel.[371] A few surviving towers also show the comforts of modern living with latrines or fireplace installed, although whether a retrofit or not is unclear.[372]

The '*possible'* towers fall into two main categories – those which have an essentially Greek name for 'tower' (*Pyrgari, Pyrgaki, Pyrgi, Palaiopyrgos*)[373] and those which have a perceived etymologically Romance source (*Tourla, Tourlo, Tourli, Tourlaki*).[374] This category is almost exclusively found as the name of a hill or hill-top (most usually with the name '*Pyrgari*' for which no dictionary definition has been identified) although a number of recorded towers and even villages (e.g. Skountéri (***CN22***), which is also called ***Pyrgos***) have similar names. The HMGS (1988) map also refers to the castle at Fylla (**CW4**) as '*Pyrgari*'.

[370] The tower at ***Baileleka*** (**CN12**) close to modern Psachna, which is an area of strong seismic activity, exhibits at least three stages of construction (or repair?).

[371] One tower, the northern of the twin towers in Mytikas (**CW2**), clearly illustrates this. Possibly reconstructed in the ottoman period on the foundations of an earlier tower as a clock-tower with a clock and a small observation window on each face at third floor level, it probably performed both a religious and administrative role - the former for setting the Moslem times of prayer and the latter possibly to control the irrigation system in the Lelantine plain. These openings also show signs of having been hastily blocked up with the later addition of castellation, suggesting the conversion of the tower to military use at some stage – probably at the end of the 18th or early 19th centuries.There is another such tower in the city of Chalkida, and many throughout the Balkans - Salemi (2002) Το Ρολόϊ της Χαλκίδας [The Chalkida Clock]. **Archeion Euboikon Meleton**, ΛΔ': 63-84

[372] The architectural features of these towers are discussed in detail in **chapter 9.**

[373] The village of Pyrgos (**CE28**) once possessed a tower, which has now been demolished.

[374] An example of a recorded tower with the name '*tourla'* can be found at Kourounia **(CE26)**. The name may have come to mean simply a 'pile of stones' or a stone outcrop of which there are many on the island due to its mountainous nature. 'Tourla' is also referred to as something circular with a pointed top.- Babiniotis (Ed.) (1998) **Λεξικό της νέας Ελληνικής γλώσσας**. Athens, Kentro Lexilogias EPE.. The word *'tourla'* probably referring to a tower was also identified on the island of Tinos.

Type of Tower[375]	Code	Prior to 1470	Ottoman period[376]
Recorded			
Disappeared	**99**	25	2
Foundations only	**0**	13	1
Walls > 1 metre	**1**	8	-
Walls > 4 metres	**4**	13	1
Walls > 2 storeys	**10**	7	-
Walls – Complete	**15**	11	1
Total recorded		**77**	**5**
Possible – on a map	**55**	**57**	**-**
Hypothetical	**77**	**8**	**-**
TOTAL TOWER SITES		**142**	**5**

Table 5.2 – Tower sites on Euboea

Visits have been made to a number of *possible* sites. While no evidence has been found to confirm that any stone construction previously existed there, neither do the hills visited have rock outcrops to suggest that this is the derivation of their name. The plentiful supply of wood in the mountainous areas probably meant that only a simple wooden building or tower once existed in these positions,[377] something suggested by the existence of such a wooden watchtower on the island of Sapienza just to the south of the Venetian fortress of Modon in the

[375] Numbers in parentheses indicate the coding used in the GIS database.
[376] Probable. The Drosini tower and the clock tower in Chalkida have been excluded. Another – that at Skepaste (Skouras no.121) - has also been excluded because of the lack of evidence that it was actually a tower, Drakotourla (NE27) appears by its name to have a classical (or earlier?) origin
[377] The example of ***Pyrgari*** (**CE32**) to the north of the village of Seta amply illustrates this point. This is a rounded well-wooded hill at a height of 1,175m., just below which to the northwest are signs of substantial terracing (undated) and probable shepherds' huts. Immediately to the west is a higher rocky outcrop (1,420m.) that, if this were the definition, could easily be called '*Pyrgari*' yet it bears the name '*Portaris*'. It would have been very easy for locals to have removed the stones from any tower at the site to construct their own dwellings as has been done in many villages, but the explanation possibly lies in the fact that the height of the hill and its remoteness does not require the expensive construction of a stone tower. In this particular case there are clear views to the north and south, thus any observation point in this position would have linked settlements on the Eastern Aegean shoreline with those on the west of the island.
The majority of the hundreds of motte and bailey castles constructed in England following the Norman invasion of 1066 were also similarly made of wood. Only, once Norman control had been consolidated, was reconstruction (of a minority) undertaken with stone and mortar – an expensive and time-consuming process - Creighton (2002), 67,93.

Peloponnese, and also by Spiliopoulou and Kotsakis in their article on the towers of the Aegean.[378] Given that the term '*Pyrgari*' is not used at all to refer to towers within a settlement or agricultural-type environment (as opposed to '*Pyrgaki*', '*Pyrgi*' and '*Palaiopyrgos*' which are), we are thus led to the conclusion that the best translation may be simply 'beacon', something explored in detail in the section on tower types in **chapter 8**.

As regards the Romance terms these appear to be corruptions of the word '*tore*' or '*ture*' seen on *portolan* charts in the early 14th century as meaning some form of small visible fortified point.[379] They appear both as names of recorded towers and as beacons, as defined above. Thus, the tower at Parthenoi (**CW18**) is called '*Tourli*', but the term is used interchangeably with '*Kastellaki'* by the residents of Mistros (**CN24**) to refer to the fortification to the east of the village.

The term '*Vigla*' or '*Bigla*' (Βίγλα) is only used three times on the island – once for a known tower to the east of Karystos (Aetos - **S11**), on the HMGS (1988) map on the north coast to the west of Oreoi (Agios Nikolaos – **NW4**), and on a promontory in the south of the island, Cape Vigla (**SC20**). In each case these were positions that overlooked the sea close to recognized major ports known from antiquity. This is similar to the term's usage on Chios, in Venetian Messenia and on the mainland opposite Oreoi at Ptelion.[380] George Wheler in the late 17th century notes on his travels a '*Bigla-castro, which signifies a watchtower'*.[381] The evidence, both archaeological and documentary, thus suggests the most appropriate translation of this term as 'coastal watchtower'.

'*Skopies*' (Σκοπιές) appears once as the name of a hill (Zarakes - **SC10**) overlooking the Aegean close to the Dystos lake and another time near the village of Achladi on the coast in an area called Fragkakē (**NE7**). It is a term from the Greek 'σκοπεύω' commonly used today to mean 'watch' or 'guard duty'. It appears therefore to be an alternative form of 'vigla' and Maria Arakadaki uses it in exactly this way in her catalogue of watchtowers in Kastellania, Crete.[382] Given the apparent changing descriptive terms over time it is enticing to use the naming of towers to provide a basis for dating them but, except for '*Pyrgari'*, no evidence could be found for this.[383]

[378] Spiliopoulou and Kotsakis (2008-2012), Spiliopoulou and Kotsakis (2008-2012)
[379] See **chapter 6** for the identification of the terms with surviving monuments.
[380] The term is also used on a number of other Aegean and Ionian islands – see **section 7.1** for details.
[381] Wheler (1682), 335.
[382] Arakadaki (1989) Κατάλογος Σκοπιών στην Καστελλανία Μεραμπέλλου. **Kritika Chronika**, ΚΗ΄-ΚΘ΄: 62
[383] The term '*Pyrgos*' (Πύργος) is a word used since antiquity and could therefore suggest towers or fortifications of the classical Greek, Roman or Byzantine periods; the term '*Vigla*' (*Bigla* / Βίγλα) seems to have its roots in the

Tower Name	Recorded	Possible
Pyrgari / Pirgere / Pyrgaria	-	13
Pyrgaki(a)	1	8
Pyrgos / Pyrgi	2	7
Palaiopyrgos / Paliopyrgari	-	3
Subtotal – Greek language	**3**	**31**
Tourla / Tourli / Tourlo / Tourlos	2	21
Tourlaki	-	1
Subtotal – Romance source	**2**	**22**
***Vigla / Bigla* – Byzantine / Latin**	**1**	2
***Skopia / Skopies* –**	**-**	2
Kastellaki(a)	**1**	1
Kastri/ Kastro	**2**	-
TOTAL	**9**	**58**

Table 5.3 – Tower Names

Byzantine *Kaminobigla* (Καμινοβίγλα – fire-tower) and the Roman '*vigilia'* (watch), intimating both a Byzantine dating and its use as a beacon; the term '*Tourla*' is clearly Medieval Italian, indicating a post-1204 dating. The evidence suggests, however, that many times the names were used interchangeably, thus the Genoese used the term '*Vigla*' for the towers they constructed on Chios in the 14th century and '*Pyrgos*' was still being used in the 19th century for towers constructed in the Mani region of the Peloponnese. Only '*Tourla*' may suggest a late medieval date, but the concentration of the name around the village of Seta (**CW19**) could simply reflect a high population of immigrant Italians in the area.

: 5.3.2 Ecclesiastical Properties

The prime source for ecclesiastical properties is Skouras' (1998) publication on the Christian monuments of Euboea. This is a listing of any site known to him that has or once had a church or monastery dated up to the early part of the 19th century. The first challenge was to assess its reliability as a source: does it cover the whole of the island? How accurate is the dating? To what extent do the surviving monuments reflect the Late Medieval situation?

As regards the first, its comprehensiveness, there is no objective measure, since we cannot compare the density of early ecclesiastical sites with modern settlements. It was only possible, once the sites had been plotted on the GIS base map, to undertake a visual check to see that the most remote areas were included. I concluded that not only had Skouras visited all areas, but – once I myself had understood the difficulties of access to many – that probably the remoter areas were even over-reflected in the database: Ottoman clearance of Latin churches and construction of mosques in key town centres, and rapid uncontrolled construction in many of the larger towns in the 19th and 20th centuries have probably destroyed many sites in the large centres of population.[384]

In most cases the date of original construction of the churches and monasteries listed is unknown. A number, if they are still substantially in their original form, can be dated by their architecture and some by contemporary documents, but the majority have now been subsumed into or under new churches and are therefore effectively un-dateable.[385]

To understand the survival rate and Skouras' thoroughness we can study the churches of the area around the town of Limnē in the north of the island. In 1999 the local church authority published a booklet listing all the 38 churches and chapels in the diocese.[386] Skouras (1998) notes seven early churches in the area,[387] of which two may be from the Ottoman period, thus

[384] He reported reading, although without remembering the reference, that there had once existed 992 Byzantine and post-Byzantine churches on Euboea - 110 Parish churches (ενοριακές) and 882 chapels (παρεκκλησίες). His own listing covers 400 sites, thus suggesting that a large number have gone unreported - Skouras (1998) 5-6. I have also been unable to find this reference. The way it is expressed - noting parish churches and chapels - may indicate, however, an ecclesiastical source.

[385] This is not a problem peculiar to Greece. In a study of Anglo-Saxon towers on churches in England, the replacement of older Saxon churches by larger newer ones was given as the main reason for their disappearance. The author notes ' *there were at least 9 churches in the Saxon borough of Lewes, none of which is mentioned in the Domesday book, and not one of which exists today'* - Fisher (1969) **Anglo-Saxon towers : an architectural and historical study**. Newton Abbot: David & Charles, 13.

[386] Apostolou and Fafouti (1999) **Εκκλησίες και Εξωκλήσια της Λίμνης και της περιοχής της [churches and chapels of region of Limni]**. Limni: Ιέρος Νάος Γέννηση του Θεοτόκου'.

[387] Excluding Galataki Monastery, which is treated as a separate 'focus site'.

leaving five churches most probably constructed prior to 1470. The booklet, however, notes 16 churches (**table 5.5)** that are prior to the 20th century and possibly Byzantine or Frankish, but only seven of these (including Skouras' five) are included in the site gazetteer. Only three churches can be clearly ascribed to the Byzantine period.

We are concerned, however, not just with the dating of any individual church. More important is the density of medieval churches in any one location as a proxy indicator of the existence and size of a settlement and the general level of its population, thereby understanding its importance (see **section 5.2.4** below).

Name	Gazetteer	Booklet dating[388]	Skouras dating	Probability %
Zoodochos Pēgēs - Panagitsa	NE2	Early Christian	Early Christian	100%
Panagia – Agia Anna		Foundations older than 16th century		20%
Koimēsē tis Theotokou - Kalograies		Foundations older than 1638		20%
Agios Iōannēs - Katounia		Middle Byzantine name[389]		20%
Agios Nikolaos	NE2	Reconstructed, cross-in square.		60%
Koimēsē tis Theotokou 'enniamera'	NE2	11th century or Ottoman	12th century	100%
Agios Geōrgios		Old foundations (?)		30%
Agios Meletios		Old foundations (?)		30%
Agios Konstantinos		Old foundations (?)		30%
Agios Athanasios (Brōmopodi)		Replaced older church		30%
Agios Geōrgios (Marantza)	NE2	Dated by old ruin close-by	Late-Byz.	50%
Profētēs Ēlias kai Elissaios	NE2	Byzantine cross-in -square architecture, just below 'Kastria'		70%
Agia Paraskevē – 'Alōnia'		Folklore indicates existence of an older church with the same name		20%
Ypapantē tou Iēsou Christou - Adrali	NE2	Follows Skouras	Late Byz.	50%
Askētērio Osiou Christodoulou	NE2	11th century cave church	11th century	100%
Askētērio Agiou Andrea (cave ch.)		Follows Skouras	13th or 17th century	50%
TOTAL PROBABLE CHURCHES[390]	**7**			**7.8**

Table 5.4 – Listing of possible 'pre-1470' churches in the area of Limnē (NE2)

[388] The authors of the booklet do not say exactly how they date the 'old foundations'
[389] Saint's name – personal communication from Archie Dunn, Birmingham
[390] This is calculated by treating 100% probability as '1', thus, 50% probability = 1 x 50/100 = 0.5

With this in mind, the issue of dating can be approached and tested in a statistical manner. Rather than allocating each church to 'pre-1470' or 'post-1470'[391], using the scant evidence available and the opinion of the researchers, we can allocate it with a probability (the last column in **table 5.4)** of its having been constructed 'pre-1470'**.** Summing the probabilities provides the probable existence of 7.8 churches in the area that can be dated as 'pre-1470'. Given the size of the sample used, this is not significantly different to the seven churches noted in the site gazetteer. In this manner we can see that, whilst an exact dating of any individual church can be challenged, the total picture based on this sample may be considered as representative of the most probable situation.[392]

We can also look at the evidence provided us by the Camocio (1572)[393] drawing of ***Negroponte*** which, although produced in the late 16th century, well after its annexation by the Ottomans, was probably based on engineer's drawings made in the 15th century, since it shows no minarets or mosques but only Christian churches – and these in a stylized western European way with towers and steeples. This shows twelve churches, yet Skouras records only six from the period that have survived in the modern-day city. Skouras' contention that he has recorded only about 50% of the ecclesiastical sites that once existed is therefore supported directly by contemporary evidence.[394]

Churches

Probable Date	Number
Early Christian / Byzantine	21
Middle Byzantine	77
Frankish (1204-1470)	53
Probably Ottoman	7
Undated	143
TOTAL	**301**

Table 5.5 – Recorded Churches on Euboea

[391] Approximately equivalent to 'Post-Byzantine' or 'Post-Medieval'.
[392] In a number of *focus sites* there are only two churches noted. If, for example, they have a probability of 20% and 40% of being 'pre-1470' then there is a total probability of 60% of there being at least one 'pre 1470' church in the area.
[393] Camocio (c. 1572)
[394] It is also quite possible that Camocio only included the prime district / parish churches and omitted any smaller chapels or private churches, suggesting an even smaller survival rate, at least in the cities.

Table 5.5 summarises the probable dating of the early churches identified in the site gazetteer, 143 (47%) of which remain undated. Strangely, given the Latin domination of the island for nearly three centuries and its hosting of the Latin Archbishop for most of this time only one church – that of ***San Marco*** (now Agia Paraskevē) in Chalkida exhibits clear Western European architectural influence in its construction.[395] This may be simply that Greek stonemasons were employed or could indicate the highly concentrated nature of the Latins in ***Negroponte,*** and that their influence only extended beyond the major towns in a military way (via the towers and fortifications?), The majority of churches are concentrated in the central region, as we would expect since this is where the best land is situated and where there is the highest rainfall around Mt Dirfis (1,743m.). No significant difference in location was identified between those of the Early and Middle Byzantine periods and those in the Frankish period. Nor were any particular concentrations of architectural type identified.

Monasteries

Dating	Number
Early Christian/Byzantine	1 [396]
Middle Byzantine	17
Frankish (1204-1470)	13
Undated	11
Probably Ottoman	4
TOTAL	**46**

Table 5.6 – Recorded Monasteries on Euboea

In total 46 monastic sites have been noted. Some are the central monastery, others a *metochi* (monastic estate). As with the churches, most of the monastic properties cannot be dated with any certainty. Documentary evidence is limited and, while certain can be clearly dated by their architecture, many have inscriptions and frescoes from the Ottoman period, the

[395] This conclusion may change following the publication of work by Flavia Vanni of her PhD thesis at the University of Birmingham, although it may also reflect action by the Ottomans to replace western churches (whose congregation was no more) with their own mosques, whilst leaving any Greek Orthodox ones for political reasons untouched, these in their turn being replaced in the 19th century by Greek orthodox churches.
[396] The monastery has been documented from 1183 but it is thought to have been built over an earlier church.

former being the date of renovation (rather than construction) and the latter often being new frescoes painted over an older base. No particular geographical concentration could be identified, although their location tended to be in the more remote and mountainous regions of the island. These are summarized by dating category in **table 5.6.**[397]

5.3.3 Large Fortifications

64 large fortifications have been identified on the island. Of these 21 were either undated or occupied only until the Roman period, whilst 37 were either still in use or constructed in the Middle Byzantine period. Seven fortifications were probably constructed in the Frankish period.

Group	ALL	Undated	EH-C-R-LR	MB	F
Roman and prior only	11		11		
Unknown date	10	10			
Sub-total	**21**	**10**	**11**	**-**	**-**
Roman to Middle Byzantine	8		8	8	
Roman to Frank	13		13	13	13
Middle Byzantine to Frank	16			16	16
Frankish only	7				7
Sub-total	**44**	**-**	**21**	**37**	**36**
TOTAL in operation	**65**	**10**	**32**	**37**	**36**[398]

Table 5.7 – Fortifications in operation by period[399]

[397] Although the architecture of most monastic churches is unknown, of those that have been studied the vast majority (75%) are cross-vaulted (σταυρεπίστεγο) in design and 75% of these were built in the 13th or 14th century. Two – Agios Georgios ARMA (**CW10**) and Agios Nikolaos Galataki (**NE20**) appear to have been constructed in the 12th century.

[398] A total of 27 '*fortified settlements'* was noted in a recent article by Kalamara (2016) "The settlements of the Middle and Late Byzantine period in Euboea". In Tankosic, et al. (Eds.) **An Island between Two Worlds: the Archaeology of Euboea from Prehistoric to Byzantine times, July 2013, Eretria**. Norwegian Institute at Athens. 536-558. My own analysis in **chapter 6** separates fortifications (which may not be normally inhabited) and settlements (which may not be fortified) so the two figures are not directly comparable.

[399] **EH**= Early Helladic, **C**= Classical, **R**=Roman, **LR**=Late Roman, **MB** = Middle Byzantine **F** = Frankish (1204 – 1470).

So little survey work has been undertaken of these fortifications that dating of a number is more speculative than conclusive, and any general conclusions can only be tentative. My own survey work has covered 30%. of the sites. The division between 'fortification' and 'tower' is also one of interpretation, thus the tower at Kamaritsa (**CN4**) is termed by the Admiralty (1846) chart as '*Ruined fortress'* and the tower at Dystos **(SC6**) was probably constructed within an older Byzantine fortification.

The island appears to have been well-covered by Byzantine fortifications prior to 1204. It was probably only in the latter part of the 13th century – after the War of Euboeote succession in the 1250's,[400] and the Byzantine incursions in the 1270's and 1280's[401] - that major investment was made in strengthening them. This is a feature I will return to when investigating the strategic / military role of towers in **chapter 9.**

5.3.4 Settlements and Demography

In an extensive survey such as this we are unable to obtain detailed archaeological evidence on settlement location such as that amassed during the many years' operation of the Boeotia Survey.[402] The integration of the various surviving monuments with the limited documentary and cartographic evidence does, however, allow us to reconstruct the probable settlement structure during the period. Prime amongst these are the churches, which not only served the spiritual needs of the local population but also acted as its nexus,[403] and monasteries, which by their constitution create a settlement.[404] We are able, therefore, to utilize the location of churches and monasteries as a proxy to help us identify probable settlements. Taking this logic one stage further we can potentially define the size of each settlement according to the number of churches it possesses and their size. This line of thought is developed into a model in **appendix 5.4**, which appears to correctly identify settlements but cannot be relied upon to

[400] ***Negroponte*** at this point seems to have been weakly fortified and was overrun relatively easily by each side in the conflict. By the 1280's it was able to withstand the Byzantine attack but was abandoned in 1317 by the Triarchs and Venetians in the face of the Catalan invasion of the island.
[401] See **chapter 4**.
[402] Bintliff (2007) "Current Research on the Settlement of Boeotia in the Medieval and Early Modern Era: The Boeotia Village History Project". In Fittschen (Ed.) **Historische Landeskunde and Epigraphik in Griechenland**. Münster: Scriptorium. 217-227
[403] This a point strongly argued for the churches in the Kingdom of Jerusalem by Ellenblum (1998) **Frankish Rural Settlement in the Latin Kingdom of Jerusalem**. Cambridge, 116.
[404] Most monasteries today have either been abandoned or are occupied by very few monks or nuns. For food, clothing and technical support they are dependent on nearby villages or towns, but in the Medieval Period they would have mostly been self-contained communities, attracting itinerant masons, technical trades and seasonal workers for the surrounding land holdings. Such workers and their families would have had their abodes outside the walls, effectively creating a settlement, many of which have survived into the modern era.

estimate the population of individual smaller ones, probably because the variability of settlement size is too high to be represented by a single variable.

For Euboea as a whole the model generates 215 settlements with a theoretical total population of 69,812 for the island (see **table 5.8**), a figure consistent with that in the late 19th century of 73,138 and the estimates discussed in **section 4.3**,[405] The number of settlements also compares well to 570 found on Crete in the same period.[406] It thus appears to provide a good base for the preparation of a map of the late medieval topography of the island in **chapter 6**.

Settlement size	No. of Settlements	Population
90 persons	**87**	7,920
180 persons	**57**	10,260
270 persons	**25**	6,750
360 persons	**8**	2,880
650 persons	**18**	11,700
780 persons	**3**	2,340
910 persons	**8**	7,280
>1,000 persons	**6**	7,670
***Loreo* [Oreoi]**	**1**	**2,000**
***Castel Rosso* [Karystos]**	**1**	**2,432**
***Negroponte* [Chalkida]**	**1**	**8,580**
Total	**215**	**69,812**

Table 5.8 - Settlement Population Estimates[407]

[405]. At this point, 40 years after the cessation of hostilities following the Greek war of Independence, the population, without the effect of conflict or a major plague outbreak and before improvements in health care and industrialisation, had probably recovered to its long -term norm level. Actual pre-industrial 19th century population figures were: **1839** – 41,651, **1850** – 52,794, **1870** – 73,138 - Marsellos and Kardoula Συντομος γεωργοοικονομική μελέτη του Νομού Ευβοίας. **Archeion Euboikon Meleton**, Ε': **1879** – 81742 - Kolodny (1974)

[406] Euboea (size - 3,684 sq.km.) has a similar topography to Crete (size – 8,336 sq.km.). For the number of settlements: Gasparis (2001) Από τη βυζαντινή στη βενετική τούρμα (Κρήτη, 13ος-14ος αι.). **Byzantina Symmeikta**, 14: 167-228

[407] It should be noted that this is purely a theoretical figure to prove the validity of the settlement model and should not be used as the basis for the estimate of population on the island at any particular date.

6 A 15th-CENTURY MAP BASED ON THE EVIDENCE

This chapter utilizes the evidence from **chapters 3, 4** and **5** to re-create the probable topography of the island in the early 15th century. It achieves this through matching the archaeological evidence with contemporary cartographic and documentary sources, travelers' accounts and early modern charts and maps. Where these are insufficient it draws inferences from the historical events and trends outlined in **chapter 4.** Many places on the ground can be matched to historical records and these are detailed in the site gazetteer in **appendix 5.2**. Significant identification problems are discussed in detail in **appendix 6.2.**

6.1 Methodology of Construction of the GIS master map

The base map utilised is the '*World Topographic Map'* provided by the ESRI Corporation based on a WGS 1984 co-ordinate system onto which was loaded an elevation database from CGIAR.[408] This was overlaid with a raster map[409] – the HMGS (1988) 1:50,000 series utilising the GGRS 1987 co-ordinate system – geo-corrected to the WGS1984 base.[410] Older maps with varying scales from the 20th and 19th centuries were then overlaid and compared to this base. Of these the British Admiralty series of charts from 1846, which showed not only the island but also in large scale the area around the Euripos Strait, opposite Chalkida, provided the best and most detailed cartographic evidence.

The early 16th to 18th century printed *isolarii* and their maps provided place names but the geographical accuracy of most was found to be insufficient for them to be relied on as a credible source.[411] The 15th-century manuscript map of Euboea from the *isolario* of Bartolomeo Dalli Sonetti (1485) was, however, immensely useful providing not only a relatively accurate chart but also a sophisticated symbol system to define the size and type of settlement / fortification. The earliest cartographical sources to be used were the *portolan* charts of the 14th and 15th centuries. Notwithstanding their usually small scale (1:1,000,000), it was possible to achieve a relatively accurate identification of place-names by consolidating the information of 31 charts

[408] SRTM 90m. Digital Elevation Data .
[409] The raster map was created by digitally photographing each paper-based map. This creates a matrix of pixels, which can then be imported into the ArcGIS program.
[410] Hellenic_Military_Geographical_Service (1988) "**Cartographic / Analogical Topographic Maps 1:50.000**". Athens.
[411] This is analysed in detail in **chapter 3.1.**

together.[412] The HMGS (1970 and 1988) series of maps define well land contours, roads, churches, monasteries and, to a limited extent, areas and monuments of archaeological interest. Rivers are delineated clearly showing stretches of intermittent flow and those that run continuously throughout the year.

In the GIS, a coastline layer was created based on these maps, adjusted for likely changes since the medieval period. Because of the island's mountainous nature, much of its length is defined by mountain slopes descending steeply and directly into the sea (see **chapter 4.1**), most of the over 700 km. of which has suffered little erosion except for two small areas of soft sandstone close to Aidēpsos in the northwest and Kymē in the East.[413] The flat flood plains, however, cannot be assumed to have existed in their present form 600 years ago. Silt from the frequent extreme floods that are a feature of the weather pattern around the island has extended the seashore in a number of places. Similarly, areas which may have been swamp, bog or wetland have in recent years become prime agricultural land as a result of gradual aggradation,[414] deliberate drainage or through a lowering of the water table due to over-extraction of borehole water for irrigation.

Rivers, identifying those with both intermittent and continuous flow, have been extracted to create a further layer because, within a relatively arid country such as Greece, where periods of extended drought during the summer months are not uncommon, they were historically key to the establishment of settlements. Away from the flat flood plains, where water levels were relatively close to the surface and wells could be sunk, they also defined areas of high agricultural productivity, since the existence of water, prior to the availability of cheap borehole resources in the 20th century, was a prerequisite for the development of viniculture, one of the prime export commodities of Euboea during the late medieval period (see **chapter 4**).

The maps further provide information of potential historical interest in the names they give to certain features. Possible regions of vineyards can be identified in this way (Αμπελόνα, αμπέλια, βέλος, βελώνα, αυλώνα) as can the sites of old towers (as discussed in **chapter 5**),

[412] Blackler (2019)See **appendix 6.1** for a table of place-names identified on *portolan* charts and a summary on **map 3**.
[413] Ilia et al. (2010).
[414] Dunn (1992) The Exploitation and Control of Woodland and Scrubland in the Byzantine World. **Byzantine and Modern Greek Studies**, 16: 235-298 He refers to a study by Bottema of Lake Volve in central Macedonia (S.Bottema (1982), 'Palynological investigations in Greece with special reference to pollen as an indicator of human activity', Palaeohistoria 24, 281) He notes that the *'decline in arboreal pollen-values is from a peak at ca.2.30metres, presumably a 'post-Black Death' phenomenon; preceded by a trough at ca.3metres, presumably reflecting a 'pre-Black Death' productive and demographic peak'*; This indicates that, in areas susceptible to frequent flooding, sedimentation from the date of the Black death (1347), may have raised land levels by 2-3 metres until the present day.

many now dismantled for their building stones (πυργί, πυργάρι, πυργάρια, βίγλες, σκοπιές).[415] This complements local folklore, which is a rich source of information, but names have to be treated very carefully and many have undergone multiple changes since the middle ages being corrupted from Byzantine Greek to Latin to Turkish, then re-assuming Greek names after independence.[416]

The first comprehensive maps of the island were those produced to a scale of 1:300,000 by the *militär-geographisches Institut* of Austria in the late 19th century.[417] These appear to have provided the base for the Greek staff maps produced to the same scale, a 1914 version of which I have also used as reference.[418] Additionally, immediately prior to the First World War Greek staff maps of parts of the island were produced to a scale of 1:50,000. Their legend includes symbols for Venetian towers and archaeological sites, yet in many cases known monuments are missing. They do, however, provide guidance on cultivated areas and the extent of forestry. An overlay was then made of British Admiralty charts from the early 19th century, as a guide to the existence of places at this period prior to major changes in population, agriculture, housing and the road network in the late 19th and the 20th centuries.[419] Given the peculiar long and narrow geography of Euboea with its mountainous spine, these charts provide an invaluable record of the island.

[415] This follows extensive use of such work in the UK - Jones (2015)

[416] Demertzis (1964) Συλλογή τοπονυμίων της νήσου Εύβοιας [Collection of place-names of Euboea]. **Archeion Euboikon Meleton**, 174-251. Further change followed the establishment of many new towns by refugees from Asia Minor in 1921 (e.g. Νέα Αρτάρκη, Νέα Λάμψακος) and then subsequent "political" corrections *(*e.g. *Βαθιά* to *Αμάρυνθος*, and *τα Βελούσια* to *Βέλος*) later in the 20th century

[417] , A copy of which was published in London in 1885.The publisher is given as Sifton Praed and Co.Ltd. - the Map House.

[418] The configuration of the three maps that make up Euboea is exactly the same on both the Austrian and Greek maps.

[419] Most are of a relatively small scale, but a number were published of the harbours of the Aegean and one (Chart 861) provides a large-scale map of the fortress of Chalkida with an internal layout of the buildings and the road network within the Lelantine plain.
Survey work in the Aegean commenced in 1825 under the supervision of Richard Copeland, who even brought his wife over to Greece and settled on Euboea. His place was then taken by Thomas Graves in 1836. Their work over 25 years, although aimed at producing maritime charts focussed on the sea and the shoreline, provided good detail on topography (Settlements, towers, roads, and rivers) up to 10 kilometres inland - Fisher (1989) "Aegean Seas through English Eyes". **The Cartography of the Shores and Islands of Greece: Proceedings of the IMGS Seventh International Symposium**. The Society for Hellenic Cartography. 63-74

6.2 The Early 15th century Map – Key Features

6.2.1 Settlements

Seven key towns emerge, each with a major fortress (see **Map 6.1 and table 6.1**). Three – ***Loreo, Cleisura***[420]and ***Caristo***- appear to have been the capitals of the three *Triarchs* appointed under Jacques d'Avennes by Boniface, Marquis of Montferrat, in 1205, whilst ***Negroponte*** was a city common to them all.[421] It is to be presumed that initially Pegoraro dei Pegorari possessed the northern region (*terzeiro del rio* – my **northwest** region)[422] with his capital at ***Loreo* (NW9)**, Gilbertus de Verona had all the river valleys which converged on ***Mantugo*** (modern Mantoudi (**NE17**)[423] – my **northeast** region) down to the fortress of ***Cleisura***, while the southerly third (my **south** and **south -central** regions), allocated to Ravano dale Carceri, included ***Caristo* (S10)**, [424] the fortress of ***Larmeno* (SC17**) and probably ***Stura* (SC16)**,

Unknown, however, is the ownership of the rich agricultural areas around ***Negroponte*** - the plain of Psachna running up to the foothills of Mt. Dirfis to the northeast (with the fortress of Kastri), and the Lelantine plain to the east down to *La vatia* (modern Amarynthos – **CW15**). We also do not know who controlled the sixth major centre, ***Valona,***[425] an area to the northeast of ***Protimo*** close to modern Avlonari (**CE1**) with its bishopric and the fortress of ***La Cuppa***.[426]

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[420] The isolated nature of this fortress probably meant that its role was assumed by ***Mantugo*** and Sanudo Torsello notes how Licario fortified *'il casale de* Mantucho' in the 1270's - [Marino-Sanudo-Torsello], 127,l 3.

[421]There appears to have been considerable change over time. Bury (1886), discussing the early years after 1204, simply divides the island into three - the north, the centre and the south. but this seems inadequate. The complex process of inheritance, marriage and Venetian encroachment would have quickly complicated the situation. Koder in an alternative interpretation notes in the 14th century the *Terzeiro del Rio* (Lichada peninsular, Oreoi, Istiaia, Aidepsos), the *Terzeiro della Clissura* (Mantoudi, Prokopē, Limnē and Robies) and the *Terzero di Caristo* (Karystos, Filagra, Silosa, Styra, Dystos up to Aliberi) whilst the rich plains of Psachna, the Lilas river around ***Negroponte*** and the area of ***Valona*** appeared to have come under Venetian control - Koder (1973) 67-68.

[422] This is also referred to as the *terceiro de Verona* (*tercerius vocatus de Verona*) - Thiriet (1958), 697.

[423] The fortress constructed there in the 1280's (see **chapter 4**) had probably replaced ***Cleisura*** (**NE24**) by the 15th century. Buchon (1841) describes its huge size with two enceintes, and one seemingly Byzantine church within.

[424] It should be noted that from the 1270's ***Caristo*** was under Byzantine control for nearly twenty years, and by the mid-1290's it had been recovered by Lord Boniface of Verona, who was not a Triarch but had gained the fortress through marriage. Later in the 15th century it was rented out to the Giustiniani brothers by the Venetians, who had taken formal control of the island in 1390 – see **chapter 4.**

[425] Exactly what place this referred to is debatable – see **section 6.3** for discussion.

[426] The modern village of Episkopē **(CE18**), judging from its name, may have been the seat of the bishop. In the early 13th century the bishopric is referred to as '*ambelonensis*', a name which was subsequently corrupted to '*Avelona*' - Bury (1886) note 4 - *'Episcopatum . . .Abelonensem, Zorconesem, Caristiensem* (Inn. Ep. xi. 256).

Region	Medieval Name (1)	Modern name	Site	Ident.	Sonetti Size (2)	Agnese size (1)[427]	(2)[428]
North-West	***Loreo (A)***	**ŌREOI - Xerochoroi**	NW9/10	Good	2	3	2
	Caloiaro	Island + Neos Pyrgos(?)	NW8	Good	1	-	-
	Litada	Lichada	NW6	Good	1	1	1
	Gra[n]lutra	Gialtra - Kastelli	NW7	Probable	-	-	-
	Dipso	Aidēpsos	NW1	Probable	2	2	2
	Colochita	Mēlies (?)	NW13	*	1	3	3
North-East	***[El] Mandugo***	**MANTOUDI (14th c.)**	NE17	Good	2	2	2
	Limene	Limnē	NE2	Good	1	1+1	1+1
	Argalia	Agkali	NE8	Probable	-	-	-
	-	Galataki Monastery	NE20	Probable	1	1	1
	Cleisura(A)	**KLEISURA (13th c.)**	NE24	Good	1	-	-
Central North	***Politica***	Politika	CN3	Good	1	1	2
	S. Chiara	?Nerotribia / ?Dafnē	CN1	Probable	1	1	1
	Holorita[429]	**KASTRI** - Psachna area	CN5	*	2	-	-
	-	Kastella	CN6	-	-	-	-
	-	Kathenoi	CN27	-	-	-	-
	-	Fēges	CN12	-	-	-	-
	Vumi	Bounoi	CN18	Probable	-	1	1?
	-	Triada	CN13	-	-	1	-
Central West	***Negroponte (A)***	**CHALKIDA**	CW1	Good	**	**	**
	Vatonda	Batonta	CW26	Good	-	-	-
	Il Trocco	Dokos	CW3	Probable	2	1	2
	Lilanto-Afrat-Filla	Mytikas, Afrati & Fylla	CW2/4	Probable	3	2	1
	Chochies	Eretria	CW12	Good	1	2	1+1
	La Vatia	Amarynthos-Gymno	CW15	Good	2	1	1+1
	Leriche	Lechres	CW9	Good	-	-	-
Central East	***Valona (A)***	**OXILITHOS** (2)	CE25	*	3	2	3+1+
	CUPA	Brysē - Episkopē	CE17/18	Probable	2	1	1
	Valona(?)	Chania / Avlonari	CE10	-	-	2	1
	-	Paliokastri/ Panagia	CE8/9	*	-	-	2?
	-	Agios Georgios	CE3		-	-	-
	-	Agios Loukas	CE2	-	-	-	-
	Protimo	Aliberi & Karabos	CE1	Good	-	2	1
	Potiris/ P.Petries	Petries/Ag.Apostoloi	SC5	*	2	2+2	1+2
	Graspilea	Oktonia	CE13	*	1	1	1
South Central	***Disto***	Dystos basin	SC6	Probable	-	-	-
	Porto Buffalo	Porto Buffalo[430]	SC11	Good	-	-	-
	Larmeno	**ARMENO**- Styra	SC17	Good	1	2	2
	Lastura	Styra	SC16	Good	1	2	1
South	***Caristo (A)***	**KASTEL ROSSO** area	S10	Good	1	2	1
	Fillagre/Anemopylae	Filagra - Iannitsi	S2	*		2	-
	Kastri/ P.Caristo	Kastri	S7	Good	-	-	-
	Platanistos	Platanistos/Elleniko	S13	Good	-	-	-
	Silosa	Capodoro	S3	Good	-	-	-
?	***Cumi / P.Cumi***	?Giannitsi /?Oxilithos	S2/CE26	*	1	2	2

Table 6.1 - Euboea Major Settlements

(1) '-' indicates no medieval name found; (AAAA) = key town. For a number of places no medieval name could be identified. Thus '***Valona***' is shown in the centre of five towns of varying sizes on the Agnese (1555) chart, none of which we can identify with any certainty.

[427] Agnese (1554-1556)

[428] Agnese (1555b) "**[negroponte p/12 folio 18]**". Venice. National Maritime Museum, Greenwich, London, P/12, f.18

[429] ***Holorita*** probably included both the fortified town of ***Kastelli*** on the plain and the mountain fortress of ***Kastri***. Its name hypothetically derives from the particular shape of the local hills which are known as Koulouriada (meaning 'bun' in Greek). The fortress of ***Cleisura*** just to the north appears to have had a purely military function.

[430] This includes the large inland village of Argyro (**SC9**) and the offshore island (**SC11**).

(2) As per analysis of town symbols in Sonetti (1485) *isolario* map: 1= 1 tower, 2= 2 towers, 3=3 towers, **= special treatment (see **appendix 6.2**). Indications on Agnese maps are approximate only.

Koder suggests that all these were controlled by Venice, quoting the existence of the *Capitaneus Avalone*.[431] The appointment in 1216 of a *Bailo,* a relatively high-level official, may support his conjecture. More probably, at least part was originally owned by Jacques d'Avennes, and upon his death was divided up amongst the *Hexarchs,* thus providing justification for such a division,[432] and only in the late 14th century did they come into the direct possession of Venice.

The secondary settlements are more difficult to define.[433] These are included in **table 6.1** indicating both their modern and probable 15th century names. Those for which there is some doubt as to their medieval name are noted with '*'or 'probable' and are discussed in detail in **appendix 6.2.** Settlements surmised from the large number of medieval period churches found in their vicinity may not be mentioned simply because they are inland and insufficiently known by the sailors who drew the maps. [434] Thus '***Turetta***' on the early 14th century *portolan* charts and '***Lilanto***' on the 15th and 16th century *isolario* maps appear as a landmark to have referred to the castle of ***Filla*** noted by Sanudo[435] but probably included (in the mariners' minds) the villages of ***Lilando***, ***Afrati*** and ***Fylla*** (and even ***Basiliko***). Similarly, ***Disto*** noted on the Coronelli (1688) map was probably not a town but an area covering the modern villages of Dystos (**SC6**), Koskina (**SC7**), Koutoumoulas **(SC3)** and the now-deserted settlement, just to the south, in the valley around the homonymous fortification and lake. Others take their name from the local port: thus, ***Porto Buffalo*** was known by sailors, but the major settlements were on an offshore island (**SC11**) and two kilometres inland at Argyro (**SC9**).[436]

[431] Koder (1973) 68.
[432] See **chapter 4.**
[433] I have deliberately not used the word '*town*' to define these, since this tends to suggest other things, of which in most cases we have no knowledge (e.g. a market, assizes, legal independence). It is better to think of them simply as centres of population, whether open or fortified, ecclesiastical or lay, private or public. Pari Kalamara in an excellent recent article on the fortifications and fortified towns of the island noted that '*there has never been a systematic study of any of them [settlements]'*, although concludes that '*Euboea appears to experience an intense residential development during Frankish rule'* - Kalamara (2015) "The Settlements of the Middle and Late Byzantine period in Euboea (paper presented at Merton College, Oxford, 18 May 2015]". Unpublished,
[434] Thus one, Triada, may have been a thriving Middle Byzantine town but declined in the later medieval period. Another, ***Vumi*** (Bounoi – **CN18**), probably developed during the Frankish period.
[435] [Marino-Sanudo-Torsello], 141.
[436] This appears to have been fortified and well built-up with a number of churches according to Skouras' account. Such a location seems strange in a late medieval context but may have been a trading post established by western merchants during the Ottoman period. Both sides wanted to trade, but the strategic nature of Euboea to the Ottomans as their capital of the region (the Sançak of Egriboz) may have prevented the establishment of a trading post on-shore.

6.2.2 Fortifications

The possible fortifications during the Middle Byzantine period are shown in **table 6.3**, most of which have been dated on minimal evidence.[437] Certain may have been abandoned during the Byzantine period and re-occupied by the Franks, an indication of which may be the existence of a simple tower in the centre of a much larger fortified area.

Region	Major Fortresses	Secondary Fortifications
North-West	***Loreo*** [NW9]	***San Giorgio*** [Lichada-NW6] (1) [Gialtra-NW7] [Kastri -Gouves-NW15] ***Colochita***?[Melies-Paliokastro NW13](7)
North-East	***Cleisura*** [NE24]	***Limene*** [Kastria-NE2] [Palaiochori/Robies-NE1] [Kastri-Stefaniou -NE4] [Kotsikia-NE26] * [Prasidi – NE7] * ***Argalia*** [Agkali -NE8] ***Cerinto*** [Kērinthos-NE12] **[**Fylakion-Strofylia-NE10] [Pēlion-NE21]
Central North	***Kastri*** [Psachna-CN5]	[Profitis Elias-CN7] [Castelli/tourla-CN24]
Central West	***Negroponte*** [CW1]	***Il Trocco*** [Dokos-CW3] ***Filla-Lilanto*** [CW4] ***Chochies*** [Eretria-CW12] ***Leriche*** [Lechres-CW9] **[**Kastro(Manikia)-CW21]
Central East	***Cupa*** [Brysē-CE17]	**[**Kastro-Ag. Georgios -CE32] ***Graspilea*** [Oktonia-CE13] [Kastri-Potamia-CE27] [Palaiokastri-CE8]
South Central	***Armeno*** [SC17]	***Potiris (3) = Disto?*** [SC6] (5) [Rizokastro -SC2] (4)
South	***Caristo*** [S10]	[Skouasi -S1] (2) ***Filagra*** [S2] (2) ***Silosa*** [S3] ***Kastri*** [S7] ***Platanea*** [S13]

Table 6.2 – Possible Fortifications in the Middle Byzantine period

(1) Assuming that the extensive walling around the tower indicates a minor fortification
(2) ***Filagra* (S2*)*** possibly replaced Skouasi **(S1)** in the Middle Byzantine period.
(3) The location of ***Potiris*** is unknown and may have only been Frankish – see **appendix 6.2**.
(4) Rizokastro is presumed Byzantine. Although unlikely, it could also have been ***Potiris.***
(5) ***Disto*** could have been ***Potiris.***
(6) '*' possibly earlier than Middle Byzantine period and then abandoned
(7) […] indicates modern name.

[437] It is hoped that this analysis may act as a framework for future research.

The preponderance of smaller fortifications in the north and south of the island may be because of the susceptibility of these regions to attack but could be due to an organised defensive system in the central region. [438] One particular feature of the Limnē-Mantoudi area in the northeast region requires further research. There is a clear line of fortifications stretching from the western to the eastern coast.[439] The origins of this appear to be classical but occupation in the Medieval period has been identified for some.

Cleisura (**NE24**) has been noted as the major Byzantine fortress in the northeast of the island during the Middle Byzantine period - it was both re-fortified by the invading Byzantine forces under Licario in the 1280's and shortly thereafter retaken by the Venetians (see **chapter 4**). It is, however, very inaccessible, and the administrative centre of the region was probably at ***Mantugo*** **(NE17)**, where Buchon (1841), describing it as a '*château franc*' with multiple towers, found the remains of a (seemingly) Byzantine church within its walls.[440] The mention of it by Sanudo Torsello in his history of the period as a '*casale*' (village) suggests, however, that it was originally much smaller, and that the massive fortifications described by Buchon were undertaken in the late 13th century to secure control of the area immediately after the expulsion of the Byzantines from the north of the island. ***Mandugo*** thus appears to have eclipsed ***Cleisura*** in the later Frankish period as we find it mentioned on nearly all the maps of the 15th to 17th centuries but no reference to ***Cleisura***.

[438] It is also possible that some fortifications have been recorded as towers. See, for example, the tower of Kamaritsa, (**CN4**) which early British Admiralty maps show as '*Venetian Fortress'* – see **appendix 6.2.**
There is the possibility that during the 9th century the south-eastern part of the island was overrun by Arab forces as far as the fortress of ***Cupa*** at which point there is a natural defensible line of mountains to protect areas to the north and west. Four possible fortifications stretch in a line from the east to the west coast – Agios Georgios (**CE32**), Kastri-Potamia (**CE27**), ***Cupa*** (**CE17**), and Kastri- Parthenoi (**CW18**). If correct, this would have been after the Arab capture of Crete in 836. Evidence for such is the existence of a simply-fortified hill (a site-visit clearly showed the walls had been dismantled) called Sarakiniko (Saracen), immediately to the southwest of the almost impregnable ***Cupa*** fortress, which guarded the main route to the west of the island. Another etymological clue to the extent of the possible Arab incursion is the similarly named Cape Sarakiniko in a remote inaccessible area on the forbidding Aegean shore to the East of the classical fortress of Pēlion (**NE21**), which may have had continued occupation into the Middle Byzantine period – Sackett (1966). This area seems from satellite imagery to have offered a safe anchorage, but it is so remote that it would have been both prohibitive to use it as a base for land forces and for Byzantine forces to attempt to garrison it, although Skouras reports that a tower (undated) once existed on the cape – Skouras no.120 (**NE29**).

[439] Limnē (**NE2**), Kastri-Stefaniou (**NE4**), Fylakion (**NE10**), Kastri-Strofylia (**NE10**), Cerinto (**NE12**). The line is interspersed with two towers – tourla (Kechries-**NE6**) and Strofylia (**NE10**).

[440] All trace has now disappeared with extensive late 19th century construction and mining in the area.

Region	Major Fortresses	Secondary fortifications and fortified towns
North-West		***Gra[n] lutra*** [Kastelli - NW7]
North-East	***Mantugo*** [NE17]	
Central North		K**astella** [CN6] ***Vumi*** [CN18]
Central West		
Central East		
South Central		***Porto Buffalo [SC11]***
South		Bourtzi [Karystos – S9] [Matzafierza- S4][441]

Table 6.3 – probable New Frankish Fortifications[442]

As regards other Frankish fortification works on the island (see **table 6.3**), there are very few compared to the castle construction program undertaken in the *Morea* during the Frankish period.[443] ***Negroponte***, the capital, had a succession of improvements to its walls, and the classical fortifications of Kotsikia (**NE26**) and Basilika (**NW17**) had towers constructed within them (if these were not Byzantine), The only completely new major fortification, that can be verified, was the *Bourtzi* protecting the harbour (**S9**) at Karystos, constructed in the late 14th or 15th centuries.[444] ***Castel Rosso*** (**S10**), further inland, was possibly constructed in the 13th century over a pre-existing Byzantine fortification. [445]

Over a period of 265 years of Frankish, Lombard and Venetian occupation many fortifications probably fell into disuse. Thus, we have a decision from the *Cancellari Secreta* of the Venetian Republic, which notes that there were only eleven *castra* garrisoned by the Venetians in 1430.[446] Koder proposed a possible list of these, but my own research suggests that a number may be in error – see **table 6.4** and **map 6.**

[441] This has only been included based on its clearly Italian name – further research is required to confirm this conclusion.

[442] ***Caristo*** [S10], Palaiokastri (CE8), and ***Graspilea*** [Oktōnia]-(**CE13)** have been treated as having been established in the middle Byzantine period, but could also be completely new Frankish construction. ***Vumi*** [CN18] has been included here as Frankish but there is limited evidence of external fortification.

[443] Bon (1969) **La Morée Franque, Recherches historiques, topographiques et archéologiques sur la principauté d'Achaïe (1205-1430)**. Paris, 689-691, and Kontogiannis (2012c) "Οι οχυρώσεις της Μεσσηνίας: από το Βυζάντιο στο νεώτερο Ελληνικό κράτος". In Xanthaki-Karamanou, et al. (Eds.) **Μεσσηνία: Συμβολές στην ιστορία και στον πολιτισμό της**. Athens: Εκδόσεις Παπαζήση. 285-328.

[444] Although Bernard Randolph in 1676 relates a story of how it was constructed by a Turk, this was probably an upgrading or renovation – see **S9** for details

[445] Although some form of Byzantine fortification possibly existed here, the Frankish fortifications have wiped out all trace of them - Tsiompikou (2012) "Castel Rosso Καρύστου. Το Κάστρο και ο οικισμός; τα νέα στοιχεία της έρευνας". In Damoulos (Ed.) **Η Οχυρωματική Αρχιτεκτονική στο Αιγαίο και ο Μεσαιωνικός Οικισμός του Αναβάτου Χίου, 26-28 September 2008**. Chios. 549-559.

[446] Sathas (1890-1900), III, 391 no.970, 25 July 1430, ll. 33.35.

Four fortified settlements have been noted – ***Gra[n] Lutra*** (**NW7**) in the Lichada peninsular, Kastella (**CN6**) close to modern Psachna, ***Vumi*** (**CN18**) and a fortified island just off the coast of ***Porto Buffalo*** (**SC11**), although the last could have developed during the Ottoman period after 1470. There were probably others but the program of destruction of town walls in the 19th century has most likely destroyed any trace.[447]

Koder Proposal [448]	**Revised List**	**Notes**
Litada	***Gra[n]gialtra(Castelli)***	My identification of the medieval name
Lipso	-	No evidence of any major fortification in the vicinity nor any need.
Loreo	***Loreo***	Classical, Mid Byzantine and Frank
Mandugo	***Mandugo***	First fortified in 1280's by Byzantines
Cleisura	-	***Cleisura*** was probably replaced by ***Mandugo*** but remained in use as a beacon point.
	Vumi	The base for a central strategic reserve? – See also Skounteri (**CN22**)
Holorita	***Holorita***	Today known as '*Kastri'* (**CN5**)
Lilanto/Filla	***Lilanto/Filla/turetta***	Assuming these are the same
La Vatia	***La Vatia***	This has not been identified securely[449],– see **CW15**
La Cuppa	***La Cuppa***	Noted in a 1426 document.[450]
	Potiris (Disto/Petries***?)***	Noted in above document
Larmena	***Larmena***	Mid Byzantine and Frank[451]
Caristo	***Caristo***	***Castel Rosso*** **(S10*)*** and its port replaced classical ***Kastri*** (**S7**)

Table 6.4 – Probable Venetian garrisoned fortifications in 15th century

[447] The massive walls of Chalkida (***Negroponte***) are a good example of this. Except for a few metres preserved in the walls of the modern military base, nothing else exists today.
[448] Koder's spellings are used - Koder (1973) 67.
[449] The density of towers and settlement in the area of modern Amarynthos suggests it had existed and had possibly be based on the massive tower (20 x 20m.) at Anō Batheiaidentified by Skouras (2003). Since its position could not be identified with any certainty it has not been included in the fortifications listing in **table 5.7**
[450] *'…capetanarie l un di qual stava in un castel de comun dito* ***la Coppa*** *et altro in un castel de comun dito* ***Potiris****…*.'- Decision by *Cancellaria Secreta* -: Sathas (1890-1900) III, 309, ll. 13-14.
[451] Kalamara (2016).

6.2.3 Harbours

The island of Euboea has over 700 kms of coastline, 76% is mountainous and even today it takes more than four hours to travel by car from cape Lichada in the northwest to cape Capodoro in the south. Few good roads existed during the Medieval period and in 1841 Alexandre Buchon noted that even the short 7 kms route from Oreoi to Istiaia over flat plain was not passable by wheeled transport.[452] It is logical, therefore, that the primary mode of transport of both people and goods over anything more than a short trip to the local market would have been by sea. The island is also long and slim and its maximum width, despite its size, is only 35 kms. Settlements thus cluster along the coast, although only recently have they been built actually on the shoreline, normally being situated in a defensible position within sight of it. A further factor is that the island, lying on the crossroads of the main sea lanes from Constantinople to the west and from Thessaloniki to the southern Aegean, provided a protected route north along its western shore for shipping that otherwise could not attempt the Aegean crossing. The location of harbours or beaching points is therefore an important topographical feature.

Some harbours can simply be identified from the *portolan* charts of the 14th – 16th centuries, the Italian *portolans* published by Kretschmer[453] and the Greek ones of the 16th century assembled by Délatte.[454] Others are hypothesised from the positioning of fortifications, towers and settlements since little archaeological evidence has survived of their existence, most probably having been little more than a simple wooden jetty or even a sheltered steeply-inclined beach to allow easy approach for boats. These are shown on **map 5**.

The prime port on the island was that of ***Negroponte***, which had two harbours – north in the small bay overlooked by today's so-called '*Kokkino Spiti*'[455] and south in the '*Bourkos*' bay.[456] The passage between the island and mainland was so narrow that larger ships would have needed to offload their goods in one or other of these.

[452] '*… par une route qu'il serait fort aisé de render carossable*.' - Buchon (1911), 58
[453] Kretschmer (1962).
[454] Delatte (1947).
[455] This can be seen in the drawing from the early 19th century - Stackelberg (1829-1834).
[456] Koder (1973), 85-86.

6.2.4 The Road Networks

The next topographical feature to be added was the road system, for which we have no evidence from the early cartographic sources. Without extensive excavation no absolute identifications of roads can be made.[457] Probable primary routes have been intimated from the travel notes of Buchon, who visited the island in 1841,[458] by the positioning of monuments (especially fortifications), towns and villages, and by examination of modern roads and topography via satellite imagery. The mountainous nature of the island restricts the possible permutations and, given that the mode of transport - horse, mule, donkey or foot with minimal use of wheeled transport - appears to have changed little until the introduction of motor transport in the early 20th century,[459] we can also feel some confidence in using 19th century roads, as noted on the British Admiralty (1846) chart, [460] and late 19th century Austrian maps, as a framework. No attempt has been made to draw a full network and only roads that appear obvious have been noted.

6.2.5 Review of Map

Studying the map of Euboea in its totality, we can clearly see how its natural geographical division into seven regions seems to have resulted during the Middle Byzantine period in seven military districts based on the major fortresses, which all continued in use into the Frankish period, only ***Mantugo*** probably replacing ***Cleisura***. As a cartographic representation of the

[457] Koder has researched the existence of a few routes in a general way - Koder (1973) 40-41 - but the attempt by Koder and Hild to map these is at too small a scale to be useful for our purpose**s** - Koder and Hild (1976), 99-100. The only other work on route delineation is that by Keller and Holm, but this is focussed on the classical period and restricted to two promontories close to Karystos, which appear to have been generally deserted during the Late Medieval period - Keller and Holm (2010) Ancient Land Routes on the Paximadi Peninsula, Karystos, Euboea. **Mediterranean Archaeology and Archaeometry**, 10: (3): 1-9.

[458] Buchon (1911) 38 and 69-70. Writing in 1841, he noted the poor state of the road from Oreoi to Istaia in the north of the island – a simple journey of 7km. over a flat plain – whilst his journey from Prokopi (**NE18**) to ***Negroponte*** on horseback, took a whole day.

[459] Avramea (2002) "Land and Sea Communications, Fourth–Fifteenth Centuries". In Laiou (Ed.) **The Economic History of Byzantium From the Seventh through the Fifteenth Century**. Washington D.C: Dumbarton Oaks. 57-90. She emphasises the general permanence of the communications network (as opposed to the urban structure) within the Byzantine Empire until the 15th century, and we have no technological reason to suppose that this changed during the Ottoman era.

Haldon, writing on roads and communication in the Byzantine Empire, notes that wheeled transport had effectively ceased in the 6th century, to be replaced by pack animals. Old Roman 6.5m. wide roads (Via Egnatia and Sebaste) had also been reduced at this time to 3.5m. Depending on the terrain he concluded that large forces could move between 11 and 30 km. per day, Cavalry at 65-80km per day, whilst infantry could march between 3.2 and 4.8km. per hour – Haldon (2006) "Roads and Communications in the Byzantine Empire: wagons, horses, and supplies". In Pryor (Ed.) **Logistics and Warfare in the Age of the Crusades**. Sydney, 30 Sept. to 4 Oct. 2002, Ashgate.

[460] British_Admiralty (1846-47) "**Talanta Channel and the western part of the Euripo Channel -Graves, T.**".

historical topography of the period it appears to be sufficiently comprehensive for use as a base for understanding towers within their environment. Settlements and smaller fortifications have a logical placement relative to their immediate hinterland (water sources and agricultural land) and relate back to what little evidence we have of total population levels. The one feature where our base may be lacking is the delineation of the road network but, since heavy freight and long-distance travel was probably by sea, this may not be so important. Equally, given the mountainous nature of the island, any error in the definition of the extent of cultivable land is relatively insignificant. Thus, overall, we can be confident that any conclusions generated regarding the towers on the island in **section (C)** based on the topographic structure generated should be relatively secure.

SECTION (C) – THE MEDIEVAL TOWERS OF GREECE: A RE-INTERPRETATION OF THEIR ROLE

As discussed in **chapter 2**, a variety of roles have been posited for the medieval towers to be found within Greece. Most conclusions are based on relatively limited data from one particular region, and there is considerable disagreement among authors. Whilst the topography of the island of Euboea, as the basis for undertaking detailed analysis of the various hypotheses, has been reconstructed in **section (B),** on its own this is insufficient. Such a study cannot be undertaken without first comprehending what we are searching for and putting the evidence from the island into context. It is unlikely that any beacon or tower network in Greece existed in isolation. It is equally improbable that the construction of elite towers - if this is what they were – developed independently of traditions and trends elsewhere. On the one hand prior to 1204 the region had been an integral part of the Byzantine Empire; on the other the incoming Latin forces, assembled from throughout Western Europe (although predominantly Frank) had brought their own traditions with them. Yet both had a common inheritance – the military structure of the Roman Empire. Each, too, must have been influenced by external elements - the Latins by their Germanic and Viking ancestry and the Byzantines by their contacts and conflict with the Abbasid caliphate.

The next two chapters pull together firstly all the recorded towers in Greece, from the massive monastic towers in the region of Mt. Athos (Agio Oros) to the *vardiolas* of Venetian Cephalonia and the *vigles* of Genoese Chios, then discuss the relevant evidence from other regions of Europe and the Mediterranean basin– this latter not in any comprehensive way but, it is believed, representative of the varying traditions found elsewhere.

7 THE CORPUS OF MEDIEVAL TOWERS IN GREECE AND BEYOND

7.1 The Intensive and Extensive Surveys in Greece

Over the past forty years, after little previous focus on the towers of the medieval period in Greece, an ever-widening literature has developed. This has taken two forms. The first is that of articles which list and analyse towers specifically as discussed in **chapter 3**.[461] The second corpus of literature has emerged from the multitude of multi-disciplinary extensive and intensive archaeological surveys in the Mediterranean basin, the first of which to be published on a site in Greece was that by the University of Minnesota Messenia Expedition (UMME) in 1972.[462] Initially their focus was on the pre-historic and classical periods and the UMME report included only a few pages on the medieval period. But by 1986 Peter Lock, a member of the Cambridge/Bradford Boeotia Project, had sufficient data available to publish his ground-breaking article on the Frankish towers of Central Greece. In the mid 1990's, as the dating of medieval ceramics became more exact, the huge volumes of medieval sherds being collected began to produce fruitful results.[463] Although the excavation and publication of individual towers is an extremely rare occurrence,[464] a number of towers have recently been re-furbished by the local archaeological service on Euboea and these provide a valuable insight.[465]

The following draws on published data from both groups. Unfortunately, the publication of many surveys has been intermittent with reports appearing in a plethora of articles and journals, some over ten years after the original survey. The concise approach of the Regional Survey of the Southern Argolid published in 1994 with its analysis of each period and a comprehensive listing of primary sites identified is generally lacking for most surveys. Most

[461] For instance, Lock (1986, and Langdon (1995) on central Greece and Attica; for Crete Arakadaki (1989); for Macedonia Smyrlis (2016) and Papaggelos (2000b); on coastal watchtowers Vournous and Kizis (2001) "Οι βίγλες της Χίου [The watchtowers of Chios]". **Conference on Communication and Transportation in the Pre-industrial Period, 11th Symposium on History and Art, 23-26 July 1998, Monemvasia Castle, Greece**. Athens. 52.

[462] For a full listing of all the surveys noted see **appendix 7**.

[463] See for example - Vroom (1998); Vroom (2003).

[464] Apart from notes in the *Archaiologiko Deltio*: see for example Gerstel et al. (2003) A Late Medieval Settlement at Panakton. **Hesperia**, 72: (2): 147-234; Zekos (2006) "Ο λεγόμενος πύργος της Απολλωνίας και ο κτήτωρ του". In Karadedos (Ed.) **ΔΩΡΟΝ, τιμητικός τόμος στον καθηγητή Νικο Νικονάνο**. Thessaloniki. 57-67.

[465] Exceptionally a full article is published. See for instance - Salemi (2002); Angeli and Stylianou (2012) "Αποκατάσταση του μεσαιωνικού πύργου στο Βασιλικό Ευβοίας". In Damoulos (Ed.) **Η Οχυρωματική Αρχιτεκτονική στο Αιγαίο και ο Μεσαιωνικός Οικισμός του Αναβάτου Χίου, 26-28 September 2008**. Chios. 41-48.

databases, too, are still not available on-line, and, even if they are, web links are often broken, so comparison of data is at best difficult. Geographical information System (GIS) data is an integral part of some more recent surveys, but for the vast majority we are dependent on simple sketch maps to locate the towers.[466]

This chapter provides a general overview of the various regions and comments on a number of regional characteristics. Except for Macedonia, where evidence on Byzantine estate fortifications warrants a more in-depth analysis, it does not go into detail but provides a framework within which analysis will be undertaken in **chapter 8** on the architectural features and typology of towers, and in **chapter 9** on their varying possible roles.

Figure 7.1 is a map of all the major relevant surveys in Greece and the Aegean. Details of these (including acronyms used) and other lesser studies are given in **Appendix 7.2**,[467] which provides a summary of all the possible medieval tower sites identified together with the total number of towers in each survey (in brackets). For this purpose, towers identified by the authors as certainly classical or Ottoman have been excluded.[468] The tower houses in the Mani too have no mention,[469] whilst towers with a dubious record or clearly different architecture or specialized use are noted but excluded.[470]

[466] No published GIS survey of towers in any region under study was identified, but one recent work does provide the basis for undertaking this - Farinetti (2009) **Boeotian landscapes. A GIS-based study for the reconstruction and interpretation of the archaeological datasets of ancient Boeotia**. PhD, Leiden University. See for comparison the most recent published information on towers and settlements for the same region - Bintliff (2007).
[467] Full references to each survey can be found listed separately in the bibliography.
[468] Although the Ottoman period commences within the 14th century for a number of areas of Northern and central Greece, for Southern Greece Ottoman control only commenced in the mid/late 15th century. It should also be noted that the excellent preservation of certain towers must indicate their continued use into the Ottoman period. Further, Ottoman style construction, rough stones and tile slips with mortar bonding, cannot often be clearly distinguished from Frankish or Byzantine.
[469] Whilst the concept for their construction may have come from elsewhere or an earlier period, these have been dated to the 17th – 19th centuries. Dimakopoulos (1987) "Πύργοι: οι οχυρές κατοικίες της προεπαναστατικής Πελοποννήσου,". **Πρακτικά του Γ' Διεθνούς Συνέδριου Πελοποννησιακών Σπουδών. Καλαμάτα, 8-15 Σεπτεμβριου 1985**. Athens. 277-365, and Spiliopoulou and Kotsakis (2008-2012)), 73. Towers are also noted in the French army maps prepared between 1829 and 1832 – Saitas (1999) "La documentation cartographique des trois péninsules méridionales du Péloponnèse élaborée par l'armée Française (1829-183". In Bourguet, et al. (Eds.) **Enquêtes en Méditerranée: les expéditions françaises d'Egypte, Morée et d'Algérie, 8-10 juin 1995**. 105-130
[470] Langdon (1995) titles his article '*The mortared towers of Central Greece: an Attic Supplement'* and by so doing includes towers which appear to have been Early or Middle Byzantine by their circular design and coastal location, although the continued construction of circular coastal watchtowers (*vigles)* in the late medieval period and beyond may allow a later date. Five classical towers from the SEEP survey in Southern Euboea also have signs of occupation during the Frankish period, although they were clearly constructed at an earlier date. Recorded bell and clock towers are also excluded from the listing.

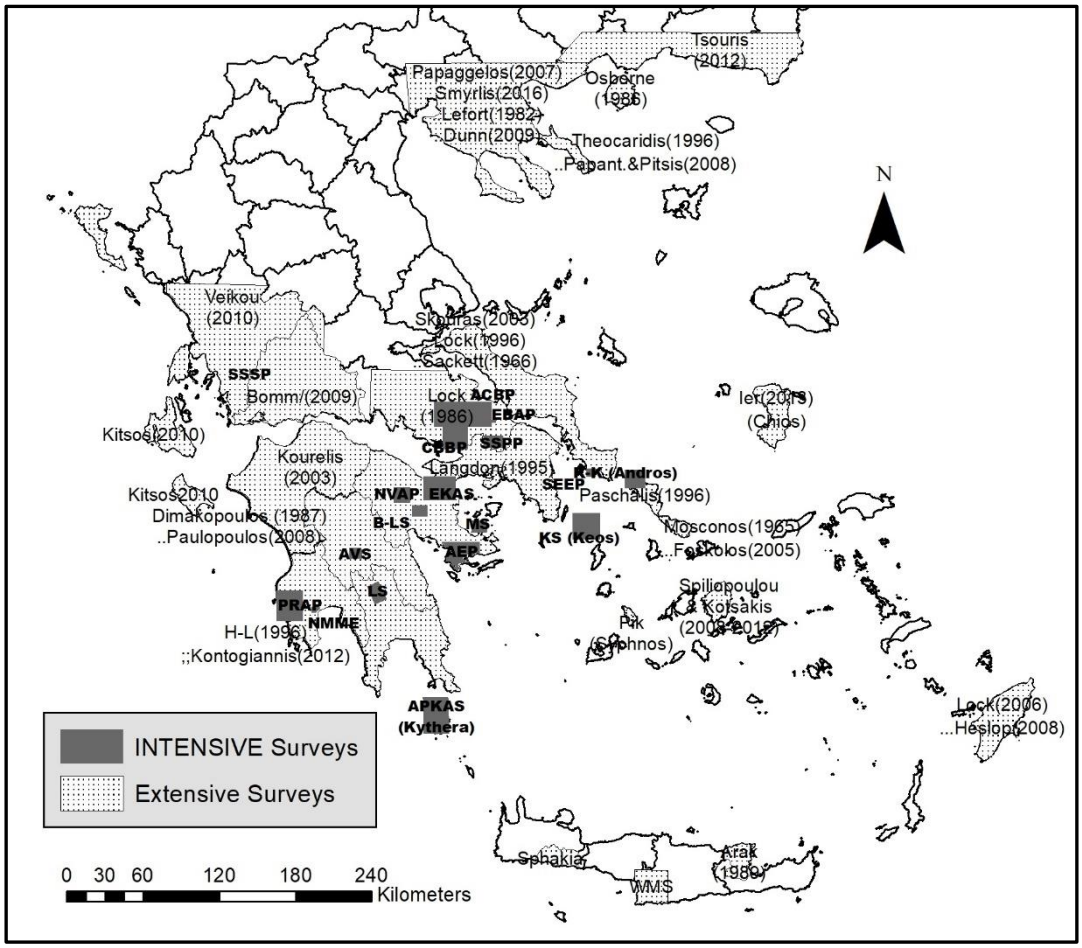


Figure 7.1 – Map of Extensive and intensive surveys in Greece with finds from the Late Medieval period

7.2 The Evidence from the Surveys

A summary of the tower-like buildings from all the surveys studied is given in **table 7.1** below, whilst a short description is provided of the evidence from each region mentioned in **Appendix 7.3**. The intensity and focus of surveys differs substantially and this is reflected in the reported data such that, while a number of regions appear to have a very high density of towers, others appear to lack any. Thus Lock (1986) notes 23 towers in Boeotia, yet just to the north in Thessaly and in regions to the west of Macedonia, none have been recorded. Likewise, in the Peloponnese and Crete extensive surveys covering pockets of these regions have identified substantial numbers of medieval towers, while there is an apparent lack in other areas. In 1975 Skouras identified 55 medieval towers on Euboea, yet by 2003 he was able to note 77, whilst my own research suggests that there are a further 57 possible 'tower' and beacon

sites on the island. The relative density of towers in each region, in which little survey work has been undertaken, should thus be treated with extreme caution.[471]

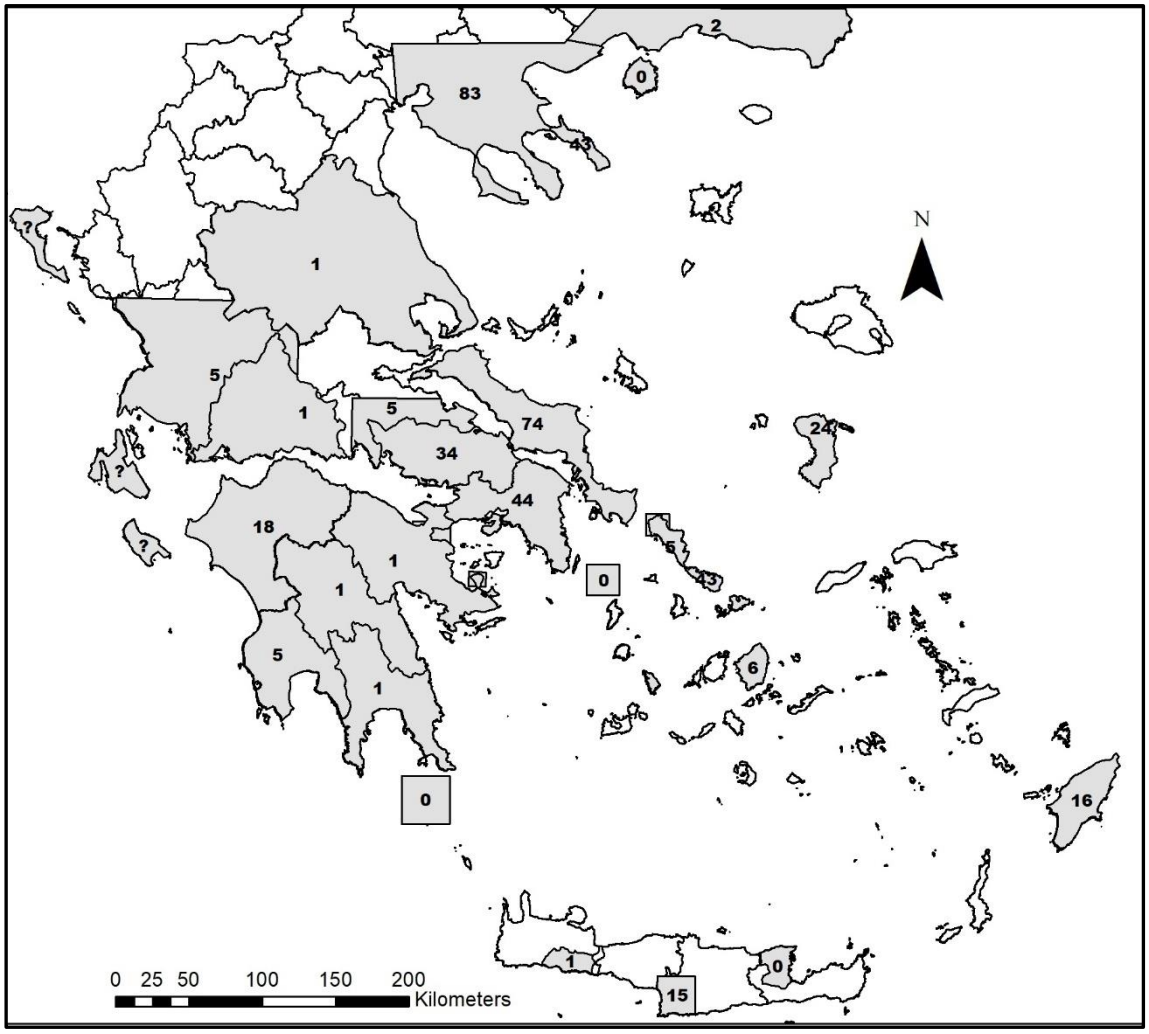


Figure 7.2 – Map of medieval towers recorded in Greece[472]

[471] The Southern Euboea Exploration project (SEEP) has identified 25 classical towers in the relatively small area of the Paximadi peninsula, yet there is no record of other such towers on Euboea. This cannot mean that there were none, simply that no intensive survey has been undertaken elsewhere on the island in an area sufficiently unaffected by modern development to enable the identification of others. As an example, taking the hypothesis for the island of Thasos on tower siting proposed in Osborne(1986), which is supported by the SEEP results, one would expect to find a number of towers in the environs of classical Eretria beyond a 3 kilometre walking radius from the town.

[472] See **appendix 6.5** for detail. Certain towers may not appear on detailed maps because their exact position is not clear. Possible tower sites identified by me on Euboea (71), and in Attica (2) and Boeotia (4) identified from names on cartographic sources have not been included. It is estimated that significant numbers are still to be identified in the rest of Greece using this methodology.43 monastic towers have been identified on Mt Athos but these are not included in the analysis. Only one tower (Ptelion) has been found in Thessaly but no extended survey could be found for this region. For the Ionian islands no medieval towers have been formally recorded, but many of those assumed to be Ottoman period (post 1500) may be earlier. Some, for instance, are mentioned in the 1264

Density comparisons between fully-surveyed and little-surveyed areas is a fruitless task and, even if direct comparison may be made between areas that have been surveyed as in **table 7.1**, allowance must be made for the variability of the thoroughness of the surveyors' work and the level of urbanization of many areas in the 19th and 20th centuries. This latter is especially important for the two conurbations of Athens and Theesaloniki, where modern development is likely to suppress the number of 'tower' finds. Notwithstanding such caveats, it appears that the surveys of eastern Macedonia, Boeotia, Attica, Achaea and the islands of Chios, Naxos and Rhodes are sufficiently thorough to undertake a meaningful comparative analysis.[473]

One clear conclusion that can be drawn from the data in **table 7.1** is that, while nearly 400 tower sites have been identified from the middle and late medieval periods, this number is dwarfed by the potential number of tower-like structures constructed during both the earlier classical and Hellenistic Greek[474] and the later Ottoman periods,[475] the former sometimes being continuously utilized into, or re-occupied in, the medieval period while during the latter period the incoming Turkish elite appear to have maintained, at least on Euboea, the towers they inherited.[476]

praktikon of Cephalonia - Tzannetatos (Ed.) (1965) **Το Πρακτικόν της Λατινικής Επισκοπής Κέφαλληνίας του 1264 και η Επιτομή του**, Athens:

[473] Surveys have also been undertaken in Crete but insufficient data is publicly available to include at a detailed level.

[474] On just the small Paximadi peninsular in southern Euboea 25 probable towers have been recorded by the SEEP intensive survey of the area - Seifried and Parkinson (2014). Whilst this may be a special case, even a relatively low-level extrapolation to the rest of the island would suggest a number well in excess of the medieval towers recorded to date.

[475] Ottoman towers are recorded continuously by the various travellers to Greece in the 17th to 19th centuries, whilst Dimakopoulos (1987) reports estimates of more than 800 towers in the area of the Mani in the Peloponnese alone and has identified over 150 elsewhere, quite a number of which may have been refurbished medieval towers - Leake (1830) **Travels in the Morea**. 1-3, London; Dimakopoulos (1987), 278.

[476] See for example the two towers at Mytikas in the Lelantine plain (**CW2**) or that at Bailelekas (**CN11**) close to Psachna in the site gazetteer.

Region	Medieval towers	Density per 100 sq.kms	Regional Area sq.Kms	Classical & Roman towers	Ottoman period towers
Euboea	77	1.85	4,167	25	5
Attica	44	1.16	3,808	>5	>20
Andros	5	1.32	379	4	
Amorgos	1	0.83	121		1
Chios	24	2.85	842		>46
Keos	0	0.00	132	>100	
Naxos	6	1.40	430		63
Rhodes	16	1.14	1,401		7
Samos	1	0.21	477		>1
Santorini	1	1.32	76		6
Siphnos	0	0.00	74	>57	1
Syros	0	0.00	84		24
Thasos	0	0.00	379	30	
Tinos	43	21.83	197		
Mytilene	0	0.00	1,636		>20
Others	1	0.03	3,276		
Aegean Sea - TOTAL	98	1.03	**9,504**	>200	>150
Boeotia (C. Greece)	34	1.15	2,952		
Thessaly	1	0.01	14,037		
Macedonia, Thrace, Epirus, Aetolia	83	0.20	42,041		
Central Greece - other	5	0.06	8,430		
Epirus Vetus / Aetolo-acarnania	6	0.04	14,664		(?)
Elis-Achaia	18	0.31	5,888		30
Argolis-Corinthia	1	0.02	4,443	12	20
Arcadia	1	0.02	4,418		>30
Laconia	1	0.03	3,636		>30
Messenia	5	0.17	2,990		>400
The Peloponnese - TOTAL	26	0.12	**21,375**		>500
Crete	16	0.19	8,336	2	>100
Corfu (Kerkyra)	?	0.00	641		2
Cephalonia	?	0.00	904		126
Lefkada	?	0.00	356		21
Zakynthos	?	0.00	406		>2
Ionian Sea - TOTAL	0	0.00	**2,307**		149
Total	**390**	0.32	**123,191**		

Table 7.1 – Summary of towers recorded in Greece[477]

These towers performed a key role in the 1821 Greek revolution against the Turks, which may be one reason so few have survived to the present, except in very specific regions. Thus, the two areas with the highest survival rate of complete towers constructed of rough stone, tile in-slips and mortar are Euboea, the capital of Ottoman Greece, and the Mani, one of the centres of greatest Greek resistance. It is surprising that tower density in the rest of the Peloponnese is

[477] Whilst the total of recorded medieval towers (approximately from 330 to 1470 A.D.) is comprehensive, that for the Classical/Roman and Ottoman periods should be viewed as a minimum only. '?' indicates their probable existence but with insufficient information to give any estimate. A blank indicates lack of information. '>' has been used to indicate that the total number is most likely well above the number recorded. For Tinos all towers have been treated as medieval, but site visits to a few suggested they were classical in origin with ashlar stonework at their base and rough stone bound with mortar for the higher levels.

so low but it may be that some towers identified as Ottoman by Dimakopoulos (1987) are actually much earlier and that many of the settlements in Kourelis(2003) once possessed a tower. Simply, as with many churches, the evidence has been subsumed under later structures.[478]

Generally, the medieval towers identified are square or rectangular but coastal towers, often referred to on the maps as *vigla* (βίγλα), are more often circular. This is the case of the dense network of coastal watchtowers on Chios, in Venetian Messenia, on Rhodes and in Attica. But tower design was also developing, and on the Venetian-controlled Ionian islands we see the development in the 16th century (possibly earlier) of a network of octagonal coastal *vardiolas* (literally guard-houses) with a sophisticated military signalling and support system. Such networks also appear to have existed on Venetian Crete, but the published research there is insufficiently advanced to discuss in detail within the present work

7.3 The Byzantine Tradition

For most regions there is very little documentary evidence but, exceptionally, in Macedonia and around Chakidikē many surviving towers were owned by Monasteries within Mt. Athos (Agio Oros) and can be formally dated by documents from their archives. Smyrlis (2016) has recently published a detailed gazetteer of these, dating the earliest recorded at Diabripou (**M29**) to the late 10th century, when it was already being referred to as '*paliopyrgos*' (old tower) thus allowing potentially an even earlier possible dating. He further dates six towers to prior to the 13th century, the period before the Frankish annexation of Greece, and in so doing provides prima facie evidence that there were probably Middle Byzantine towers in other regions of Greece. **Table 7.2** provides an analysis by probable construction date of 78 recorded monastic towers both on Mt Athos and in the wider area of northern Greece.

[478] Dimakopoulos (1987), 290-293. See **appendix 7.3**. Another centre of resistance was Lala in the western Peloponnese - Finlay (1861) **History of the Greek revolution**. Edinburgh: W. Blackwood and Sons, London, 46.

	Monastery	10th century	11th century	12th century	13th century	14th century	15th century
1	**Megistē Lavra**	Morfonous	Tsimiskē *	Preaulaka(M39)		Oxynon.1(M9) Oxynon.2(M10) Loroton((M8) Rosaion(M11) Hermeleia(M19) Katodaimones(M35) Prinarion(M45)	
2	**Batopedi**		Metamorfōseōs*	Kolitsou Prosphorion(M40)	Eladiaba(M30)	Komanitze(M1) Skoteinon(M2) Galikos(M3) Kalokairides(M4) Raphalion(M5) Ag.Mamas1&2(M16&17) Hermeleia(M20) Semalton(M43) Zabernikeia(M44)	
3	**Ibērōn**	Palaios Pyrgos (M29)	Ēg. Evthēmios* Bolbos(M7) Kamena(M25)	Pyrgos Libyzasda(M26) Koutsaki(M31) Preaulaka(38)			
4	**Chelandariou**		Ag. Geōrgiou* Ag. Sabba(Typikariou) Ag. Evthymiou	Agiou Sabba* Kalitsa Zygou(M41)	Milutin Metamorfōseōs Preaulaka (M36)	Ag. Basileiou Ag. Akindynou	Arbanitikos
5	**Dionysiou**						Nēfōnos* Mariskin(M14)
6	**Koutloumousiou**				Anapavsias	Pyrgos* Megas Pyrgos*	Kaliagras
7	**Pantokratoros**		Falakrou			Megas Pyrgos*	Fakēnou
8	**Xēropotamou**				Pyrgos*	Hierissos(M33)	Hermeleia(M21)
9	**Zōgrafou**		Pyrgos		Mauronio t'Aloni(M34)		Arsana
10	**Docheiariou**					Hermelia(M18) Mariana(M22a) Rebenikeia(M28)	Olynthos(M22b) Perigardikeia(M27)
11	**Karakallou**					Hierissos(M32)	
12	**Filotheou**						
13	**Simōnos Petras**		Dafnodocheiariou			Pyrgos*	
14	**Ag. Pavlou**					Abramitai(M6)	Paralias Neas Skētēs
15	**Stavronokēta**						
16	**Xenofōntas**				Ag. Filippou	Stomion.1(M12) Stomion.2(M13) Sibre(M15) Neakitou.1&2(M24&25)	
17	**Grēgoriou**						
18	**Esfigmenou**					Preaulaka(M37)	
19	**Ag. Panteleēmonos**		Katsarē				Thessalonikeōs?
20	**Kastamonitou**		Ag. Ypatiou				
21	**Prōtaton**						
78	**TOTAL**	**2**	**13**	**10**	**8**	**33**	**12**

Table 7.2 - Recorded Towers in Northern Greece[479]

One of the problems of such a table is that it is based predominantly on the surviving documents from the Mt Athos monasteries, the survival rates of which reduce substantially prior to the 13th century.[480] This not only skews the data to the more recent centuries, since document survival rates prior to the 13th century are very low, but over-emphasises the monastic role in tower construction, as we have no notarial documents from lay sources of the

[479] A reference number indicates an estate tower based on Smyrlis (2016), '*' indicates towers within the monastery walls. All other towers are on the Mt Athos peninsula. Information from Papantoniou and Pitsis (2008) **Η αρχιτεκτονική του Αγιου Ορους - πύργοι και αρσανάδες**. UG Dissertation, University of Patras; The remains of a number of towers have been found elsewhere, e.g in the Strymon valley, but, since these cannot be dated with any certainty, they have not been included.

[480] Smyrlis (2016). Thus, a survey of Macedonian villages probably omits many towers because there is neither a documentary nor an archaeological record. For instance, in Bolbos two towers are mentioned of which only one is recorded (**M7**) and the other is noted as probably Byzantine. Was this also owned by the Ivērōn monastery or is its ownership secular? - Lefort (1982)

period. As a way of correcting for the dating skew a study was undertaken of references to previous notarial documents as recorded in the *Actes de l'Athos*. The results of this are shown in **table 7.3**. Then the 45 documented towers in Smyrlis (2016) were plotted with and without a 'document survival rate' adjustment (**figure 7.3)**.

	10th century		11th century		12th century		13th century		14th century	
	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)
Total Documents										
Batopedi	1	1	29	8			21	9		
Ivērōn	36	8	64	14	24	4	34	9	86	22
Chelandariou					8	2	23	7	46	14
Docheiariou			1	1	17	4				
Xenofōntas			17	2						
Total	**37**	**9**	**111**	**25**	**49**	**10**	**78**	**25**	**132**	**36**
Surviving Documents										
Batopedi	0		1				4			
Ivērōn	1		18		5		25		40	
Chelandariou					3		9		24	
Docheiariou			0		6					
Xenofōntas			2							
Total	**1**		**21**		**14**		**38**		**64**	
Survival rate	**3%**		**19%**		**29%**		**49%**		**48%**	

((a) = referenced documents, (b) = documents from monastic archives)

Table 7.3 - Survival rates of reference documents in *Archives de l'Athos*[481]

Whilst it must be emphasised that this is a purely theoretical exercise, this simple study suggests that the Smyrlis (2016) research probably under-reports the actual number of towers constructed in the region during this period by a factor of two, even without reflecting the near complete lack of surviving records of non-monastic tower construction.[482] The underlying impression, however, does not change – more towers were constructed in the early 14th century than all the other periods combined, a conclusion, which ties in very closely with the known aggressive actions of the Catalan Company and Ottoman forces by land and sea at this time, and the limited evidence from excavated sites in Central Greece.[483]

[481] In total 105 published documents were studied from five monastic archives. A blank indicates that no documents were found or have been published for this period. Referenced documents amounted to 403, whilst 138 surviving documents were identified

[482] This figure is reflected in the conclusion of Skouras(1998) of the less than 40% survival rate of medieval churches on Euboea,[482] and my own etymological research of 'tower' related place-names on modern maps of the island, which has increased the number of possible 'tower' sites by more than 60%.

[483] See, for instance, Gerstel et al. (2003).

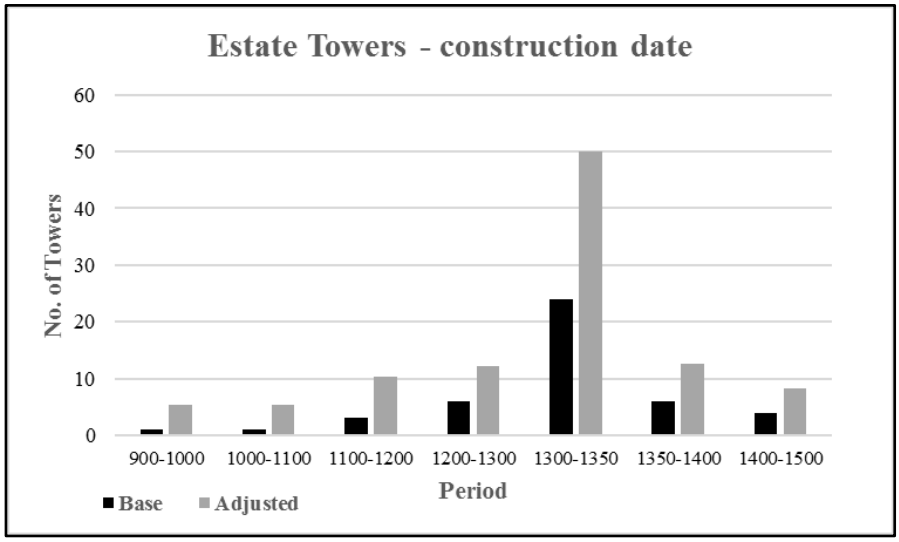


Figure 7.3 - Bar chart of tower construction dates[484]

[484] Base data from Smyrlis(2016) and ***Archives de l'Athos.*** The 10th century sample was too small to be valid so the 11th century survival rate was used. For the 15th century the 14th century rate was used. These are the latest dates of construction, since the documentary evidence notes their existence at this date.

7.4 Summary of Evidence beyond Greece

Medieval towers are not just a Greek phenomenon but are to be found throughout northern Europe and the Mediterranean basin. Although a full survey of such is beyond the scope of the present study, the evidence they provide cannot be ignored. The Western and Eastern Roman Empires bequeathed a legacy of fortifications and military strategy to the Later Medieval period, whilst the Germanic tribes in the north and the Arabs to the south moulded this inheritance to their own needs.

There is a danger, too, of considering the invading Latin forces of the early 13th century as a unity. The Greeks referred to them generally as 'Franks' but their membership derives from throughout north and western Europe.[485] Apart from opportunists of obvious Italian origin – Genoese, Pisans, Venetians – who had been acting independently within the Aegean in the centuries immediately prior, the participants of the Fourth Crusade probably included Anglo-Normans from the British Isles, other Italians and detachments from the Iberian peninsula[486]. These latter became even more important as central mainland Greece in the 14th century came under the control of first the Catalans and then the Navarrese Company. We must also not forget that foreign mercenaries from Northern Europe had been serving for centuries in the Varangian guard, and that their appointment and subsequent retirement would have facilitated the dissemination of military concepts throughout Europe.[487]

Appendix 7.4 provides a short survey of each region, with no pretensions to being comprehensive, providing examples of the varying traditions that developed in parallel during the Middle and later Medieval period, and to which reference will be made in subsequent chapters. Recognising this caveat, some general trends are, however, clear. From the 9th century in north-western Europe, and lesser so further south, the '*motte and bailey'* emerged as a type of fortification wherever areas of plain were colonised (whether internal or external). The tower appears to have been a military tool, which had continued in use from the late Roman period and we see it being utilised on the coastal regions around the Mediterranean basin. In the late

[485] This would have also been the case for the settlers who followed the Frankish annexation of Greece. A listing of 130 settlers during the late 12th century in the Kingdom of Jerusalem, while having a majority from various parts of Southern France, also included Catalans, Italians and a substantial number from other parts of the Latin East (although strangely not from England or Germany) - Ellenblum (1998), 75-77.

[486] The Genoese had already absorbed Pisa by this date and did not partake in the Fourth Crusade, but established an independent presence in the Eastern Aegean, their main focus being the island of Chios.

[487] One of the most famous of these was Harald, King of Norway, who made his fortune in the Guard and was defeated and killed by the Saxon King Harold at the battle of Stamford Bridge in 1066.

10th century it was added to the '*motte and bailey'* configuration and quickly became the essential feature of what became known as the '*castel*' in north-western Europe.

At this point there seem to have been two divergent trends that developed. On the one hand in areas under Norman domination or influence the 'tower' became the symbol of the newly-emergent feudal class, as represented by the aspiration of the *nouveaux riches* to obtain a 'license to castellate', even if there was no military or security logic for such, the tower acting as the centre (caput) of their country estate. On the other in the '*marches*' or border areas and further south in Italy, the Iberian Peninsula, the Kingdom of Jerusalem or regions where there was considerable social instability and insecurity, the tower-house (*turris, maison forte, casa forte, koulas* or *atalaya*) became a practical tool for people of all classes to protect themselves, whether on a private or communal basis.

In parallel to this, especially in southern regions under previous Arab or Byzantine control, the free-standing tower, in conjunction with the 'communal' major fortification, continued to be used as a military tool for border and coastal security or communication. Additionally, within Italy, where new republican-style governments were evolving and there was a lack of central control, the emerging merchant and professional classes began to build towers within an urban environment.

No clear architectural trends in tower construction have been identified, except the move from wooden to stone fortification from the 10th to the 13th centuries - even this to a certain extent being dependent on the availability of local materials - and in the 13th to 15th centuries apparent competition between owners to construct ever higher towers for symbolic rather than practical reasons. Distinctions can, however, be made between geographical areas: in the littoral regions of the Mediterranean, possibly those subject to an Arab influence, the circular tower was much more in evidence as a military tool, as was ground (rather than first or second floor) level entry – a possible link to pre-existing Roman era fortification.

Surprisingly, too, the Crusader towers of the Kingdom of Jerusalem have little in common with either towers in Greece or much of North-western Europe, being squat and massively engineered in comparison to the generally tall and svelte towers found elsewhere. Notwithstanding particular architectural traits, in most regions we find commentators noting the existence of support buildings, of stone and wooden construction, a chapel in the immediate vicinity, and a light external enceinte around towers (sometimes termed '*chemise*'), or the link of 'solar towers' to other major constructions such as 'halls', stables and warehousing.

Finally, and most importantly for the present study, a multiplicity of functions has been identified for towers. These possessed a strategic, administrative, residential, defensive and elite rationale, sometimes being exclusively for one purpose but more often combining a variety. In undertaking our detailed analysis of the function of towers in Euboea and Greece in **chapter 9** therefore, whilst a primary role may be attached to one particular tower, the presumption should be that it not only had at least one secondary role but that roles were not static and probably changed over time in response to evolving political, social, commercial and technical developments.

8 THE MEDIEVAL TOWERS: ARCHITECTURAL FEATURES AND TYPOLOGY

This chapter commences by trying to define what distinguishes the 390 towers, which have been identified within Greece as probably Byzantine or Frankish, from the general corpus of towers whose construction stretches from the classical through Roman periods, into the Ottoman and early modern era. Its primary target, however, is to use architectural features to characterize the towers and categorise them into distinct groupings. A summary of the various types identified is provided in **table 8.2**. It should be emphasised that this is an artificial framework. The typology is also to some extent multi-dimensional so some towers may exist within two or more groups. But, notwithstanding these *caveats*, it does allow us to highlight specific architectural features and trends, and in so doing aid in the achievement of the ultimate goal of this thesis, an understanding of the practical roles of the medieval tower in Greece

8.1 The distinguishing features of the Medieval Tower

Although the transitional period is one of centuries the basic difference between towers of the classical, Hellenistic, and Early Roman periods and those of the Late Roman and Byzantine (after the establishment of Constantinople in 330 A.D) appears to be the ending of construction using finely cut ashlar blocks and its replacement by less labour intensive and stronger building techniques whose structural integrity was provided by the use of mortar.[488] This follows the logic of Langdon(1995) who used the term '*mortared*' to differentiate his study of the medieval towers of Attica. Thus, the towers of Thasos, Siphnos, Sounion, and the Paximadi region in southern Euboea are clearly outside our period of study,[489] yet, since they have not been excavated, a number of the towers in Attica noted by Langdon, especially those thought of as watchtowers, may be either Late Roman or Byzantine.[490]

Another possible distinction suggested by Foss (1986) is the use of internal wooden cribwork with both horizontal stringers and crossbeams protected '*with a heavy surface rendering of lime'*, an example of which he describes at Tokat, the Byzantine *Dazinion*. This

[488]Kourelis (2003), 199.
[489] discussed by Osborne (1986), Young (1956), and Seifreid and Parkinson(2014) respectively.
[490] See, for instance, the discussion on 'πυργάρι'.

possessed regular lines of rough-cut stones, flat on the outside, reinforced with cribwork.[491] Apart from this, Classical and Roman towers most often had their doorway at ground-floor level,[492] something that may also act as a possible indicator separating them from later towers.

Looking at the end of the medieval era we are faced with a considerably more difficult problem. Not only was there no significant change in construction techniques as we move towards the Ottoman and early modern era, but the use of a label such as 'Ottoman' rather than 'Byzantine' or 'Frank' is dependent on when a particular territory was annexed - a period stretching from the 14th to 16th centuries, putting aside any Venetian re-conquests in the 17th century. Somewhat unsatisfactorily, the Frankish period has here therefore been defined as ending in 1500.

Some separation of these two periods, however, can be achieved if we use two features identified by Dimakopoulos(1987) in a study of towers in the Peloponnese immediately prior to 1821.[493] He noted that Ottoman period towers were distinguished, firstly, by the use of a different mortar – harder, more brittle and slightly pinkish, presumably the use of a greater percentage of ground tiles rather than simply tile in-slips – and, secondly, by the ashlar quoins on their corners rather than the roughly worked stone found in the Frankish period.[494] The pinkish colour has not been identified on Euboea as of particular significance,[495] but the northern tower at Mytikas (**CW2**) demonstrates clearly the quoining distinction (see **plate 8.1**).[496] Langdon (1989) also notes quoining on the Dangla tower (**M42**) at Markopoulo in Attica (although utilising mainly re-used marble blocks) which he dates by Ottoman period sherds found at the same site.

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[491] His photograph of the walls suggests that the lime has been washed away over the centuries, leading to the rotting of the wood - Foss and Winfield (1986), 18-19, 27. This basic stonework construction he notes as having been described by Vitruvius as *Opus Incertum*. We also need to take care that we are not studying a much later building, since cribwork was also used extensively in the early modern period, but with wood on the external stone face (rather than hidden) designed for covering with rendering - see **plate 8.2** for an example.

[492] Young (1956a); Lawrence (1979) **Greek Aims in Fortification**. Oxford, 189.

[493] Dimakopoulos (1987). This was re-confirmed in a later study of 127 sites in the northwest Peloponnese - Kourelis (2003), 200. In each case we should be careful to draw major conclusions since there is a high probability based on the conclusions of the present work that Middle or Late Byzantine towers have been misdated due to lack of evidence.

[494] See also Kourelis (2003), 200.

[495] This may be a feature inherited from the Byzantines, since what appears to have been a cistern in the castle at Filla (**CW4**) has a reddish mortar. Similar colouring has also been identified on the mortar of 11th century towers on Mt Athos - Androudis (2012) "Three early shallow-butressed towers of the monastery of Chilandar, on Mount Athos". **International Symposium of Byzantologists: Nis and Byzantium X 3-5 June 2011**. 291-304.

[496] This can also clearly be seen on 17th / 18th - century buildings in the region – see for instance Noula-Karpeti and Androudis (2016) "Ο Πύργος Καραμίχου: ένα τυπικό οθωμανικό πυργόσπιτο στην καρδιά των Φαρσάλων [The Tower of Karamichos: a typical Ottoman residential tower in the heart of Pharsala]". **Τα Φάρσαλα και η ευρύτερη περιοχή τους: ιστορικά και αρχαιολογικά δεδομένα απο τους προιστορικούς έως τους νεωτέρους χρόνους, 1-3 Νοε 2013**. Δήμος Φρασάλων και Εφορεία Αρχαιοτήτων Λάρισας. 257-272.



Plate 8.1 – Quoining detail – Mytikas north tower (CW2)

8.2 Free-standing or part of a complex?

One particular feature - the extent to which towers are free-standing constructions, which is as much about their intimate environment as the towers' own architecture – must be understood yet has been little addressed.[497] In the Late Roman East a plethora of towers have been identified as components of building complexes,[498] while in the medieval period others stood within villages or on estates in Macedonia.[499]

A good example of such misinterpretation is the (probably) late medieval tower at Kamaritsa (**CN4**). Both Lock (1996) and Skouras (2003) treat it as a stand-alone tower, yet in the (1846) Admiralty chart it is referred to as '*Ruined Fortress'*,[500] indicating that at this time there were substantial external walls around the tower. A site-visit not only confirmed such a conclusion but also noted the existence of an old irrigation channel within twenty metres of the

[497] Although Langdon (1995) notes only that the area around some towers in Attica '*would have included subsidiary structures related to agricultural activity and domestic needs*', Athanasios Vionis in a recent article writes '*Frankish Greece was dotted with castles, forts and free-standing towers'* -Vionis (2014) The archaeology of landscape and material culture in Late Byzantine Frankish Greece. **Journal of the Netherlands Institute at Athens**, 20: (1): 313-346. Maria Georgopoulou, writing recently on the landscape of Medieval Greece, merely notes *'Free standing towers…have been a recognisable feature of the landscape but their primary function is still debated'* - Georgopoulou (2014) "The Landscape of medieval Greece". In Tsougarakis and Lock (Eds.) **A Companion to Latin Greece**. The Netherlands: Brill. 327-368. -

[498] Decker (2006) Towers, Refuges, and Fortified Farms in the Late Roman East. **Liber Annuus**, 56: 499-520.

[499] See, for instance, the estates, villages and towers of Bolbos - Lefort (1982), 43; also the towers in the monasteries on Mt Athos - Papazôtos (1988) "Recherches topographiques au Mont-Athos". In Ahrweiler (Ed.) **Géographie historique du monde méditerranéen**. 149-178 and

[500] British_Admiralty (1860) "**The Town and Strait of Euripo: the ancient Chalcis and Euripus [A.L.Mansell, E.W.Brooker - H.M.S.Firefly]**".

site. A survey of the wider area identified a modern concrete irrigation channel, which appeared to have replaced the original channel, and which neighbours confirmed had continuous flowing water throughout the summer months, used to irrigate the plain below. A 'simple tower' thus takes on not only strategic military importance but also a potentially agrarian role, and even an administrative one as it overlooks what appears to have been the main road linking Kastella (**CN6**) and Politika (**CN3**) during the Medieval period and the crossroads from where another road led north to Agios (**CN28**).



Figure 8.1 – The twin towers of Mytikas: Werdmüller (C.1660) sketch[501]

Another factor suggesting that most towers are part of some form of complex is that invariably they are accompanied by a chapel, but the near complete lack of other surviving buildings around many towers is perplexing. The sites may simply have been abandoned,[502] but there appears to be an alternative explanation for the existence of certain apparently free-standing towers. We are fortunate that not only do both the so-called 'twin towers' of Mytikas in the Lelantine plain (**CW2**), presumed by all writers to be stand-alone, still exist to their full height but, uniquely for Greece, an accurate sketch of them within their original immediate surroundings has also survived from the 17th century.[503] This shows that the two towers were

[501] Extract from the collection of Hans Rudolf Werdmüller – see below.

[502] Kourelis, noting in his study of the hilltop medieval settlements of the northwest Peloponnese that they '*were abandoned by the seventeenth century before an entirely new system of inhabitation came into being'*, provides a possible rationale for this, and we find sites in Macedonia, Boeotia and Euboea that may have suffered a similar fate - Kourelis (2003), vii. For Macedonia see Bogdanovic (2012).

[503] The annotated sketch, presumably undertaken by Venetian spies in c.1660 in preparation for their subsequent attack on ***Negroponte*** in 1688, is in the collection of Johann Rudolf Werdmüller, a Swiss military officer in the employ of the Venetians in the mid. 17th century. The sketch covers the fortress of ***Negroponte***, the extra-mural town to the north, and the Lelantine plain to the east. It is annotated in detail with a note on the bronze cannon and manning of the *bourtzi* at the entrance to the channel, that leads to the city, and has clearly been undertaken by a military engineer / spy. It does not appear complete but shows the key features (towers, aqueducts, villages) necessary for campaign orders - Festung Negroponte und Umgebung [Johann Rudolf Werdmüller collection] (c. 1660). (Thanks to Flavia Vanni for kindly interpreting the somewhat difficult handwriting and 17th century Italian).
A peculiarity of the northernmost of the two towers is that it appears to have once been a clock-tower with a tiled roof, probably – judging from the crescent over the roof on the sketch - part of some type of religious establishment, but at some time, possibly during the long ten-year conflict of the Greek war of Independence, the openings both for the four clock faces and small windows on each side at second storey level were blocked-in and rough battlements retro-fitted.

originally part of a substantial complex and were attached to two-storey halls significantly larger than themselves, the northernmost with a tiny chapel, which still exists today, with a settlement – the village of Mytikas - at the base of the two hills on which they stand (**Figure 8.1**).[504]. As will be seen in **chapter 9** it is quite possible that the hall preceded the tower in each case



Plate 8.2 – Ruined building in the Lelantine plain showing mud-brick and rubble and wood re-enforcement

The disappearance of these halls is most probably a function of the relative fragility of their construction materials – possibly rendered mud-brick or wood, which very quickly deteriorate once the roof collapses (see the ruins of a probable 19th c. building in **plate 8.2),** a style of construction disparagingly noted by the traveller Bernard Randolph in 1687.[505] Such explanations provide a good basis for no longer treating towers in Central Greece as

[504] Although the towers are drawn as part of the total building complex, it is clear from an examination of their walls that the '*hall type'* buildings were actually constructed independently and never directly joined to the towers. Between the two structures there was probably a drawbridge – *scala levitiza* - similar to that noted by Lock (1986) in an inventory of the Christiania estate tower in the Morea owned by Nicolas Acciaiuoli.

[505] Randolph notes '*Most of the houses are very mean, being made of red earth, dryed in the Sun'* - Randolph (1687), 5. This point is also made by Kourelis(2003). He found that while the tower and church of each settlement he surveyed were constructed of stone, the residential buildings were of much inferior construction. Theocharides has also found a similar constructional characteristic in residential building of the 16th century of the Mt Athos monasteries which '*to a large extent uses wooden and wooden lath constructions'* - Theocharides (1996) "Recent research into Athonite monastic architecture, tenth - sixteenth centuries". In Bryer and Cunningham (Eds.) **Mount Athos and Byzantine monasticism : papers from the twenty-eighth Spring Symposium of Byzantine Studies, Birmingham, March 1994**. Varorium. 205-221. A caveat must be added to this statement that styles and construction materials differ between areas. Thus in the northwest Peloponnese stone appears to have been the preferred construction material in the mountainous areas, whilst on the plains mud-brick is found - Kourelis (2003), 173-203

In the UK it has been noted '*it is perhaps this mixed [including wood] tradition of building material which has fostered the idea of a free-standing tower'* - Lott (2002) "Seigneurial Hierarchy and medieval buildings in Westmoreland". In Meirion-Jones, et al. (Eds.) **The Seigneurial Residence in Western Europe AD c800-1600**. BAR International Series 1088. 101.

independent structures but as a central or secondary building within a much larger complex, something already recognised by writers on estate towers in Macedonia.

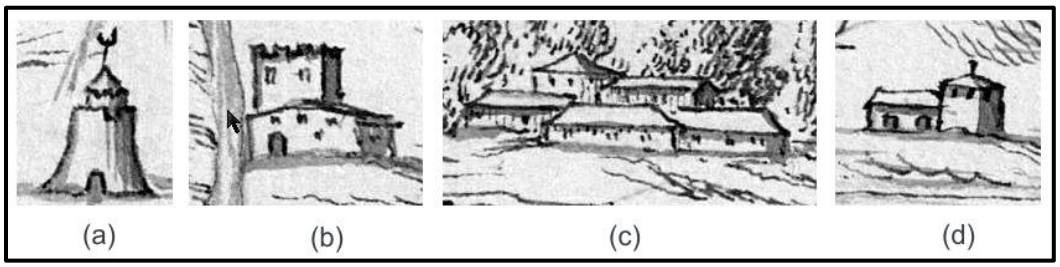


Figure 8.2 – Towers in the Lelantine plain: Werdmüller (C.1660) sketch

Four other tower-like structures are shown on the plain in the sketch (**Fig. 8.2**) – the Ottoman *bourtzi* on the coast **(a),** the foundations of which still survive today; a roofed tower with attached hall set within a village environment **(c)** which, given the existence of the early Agios Nikolaos church (although undated) in this location (**CW6)**, is probably from prior to the Ottoman period; a large crenellated tower **(b)** attached to a two-storey hall;[506] a roofed tower **(d),** attached to a more modest single-storey hall, which may be Ottoman from the crescent (?) over it.

The archaeological evidence from the NW Peloponnese, where Kourelis notes that '*each village contains a citadel with a tower that had no domestic use'*,[507] and from towers on Naxos,[508] and Macedonia, which are surrounded by ancillary buildings, is abundant. If we combine this with the above near-contemporary sketch, which shows six towers only one of which is independent of any other structure - this with a clear military role and a probable Ottoman, not Frankish construction - we are led to the conclusion that towers generally were not free-standing unless they had a clear military role.[509]

[506] This also bears an uncanny resemblance to a western Roman Catholic church with its tower and hall configuration. The position is today occupied by a large Orthodox church and cemetery.
[507] Kourelis (2003), 214.
[508] Spiliopoulou and Kotsakis (2008-2012). They note that apart from the existence of a church *'around the towers there were nearly always olive mills, ovens, stables and a press*'.
[509] Given that battlements were retrofitted to the northern tower in Mytikas, it is quite possible (although without other evidence it must remain a theory) that the ancillary buildings surrounding or attached to many towers were deliberately demolished as Ottoman forces were put on a war footing during the Greek War of Independence in the 1820's, thus creating the myth of the 'free-standing' tower.

site	Name	environs
CN11	Bailelekas	circuit wall noted by Lock(1996)
CN12	Feges	high point of castle(?)
CN17	Kato Stene	indications of building around
-CN18	Vumi	on edge of village with traces of enceinte
CN19	Pissonas(Mostra)	in centre of village, possible external wall
CN20	Gides-Amphithea(1)	in centre of village, next to church
CN21	Gides-Amphithea)(2)	next to old church
CN22	Skounteri	in area with 3 new churches, village close-by
CN23	Mistros	indication of light circuit wall
CN27	Kathenoi	in centre of village, close to church
CN3	Politika	in centre of village, close to church
CN4	Kamaritsa	possible castle (?)
CN7	Karaouli	On road
CN8	Karaouli-Barka	Overlooking harbour, indications of large site
CW14	Gymno	in village next to church
CW15	Batheia(Limpounari)	circuit wall recorded
CW2	Mytikas(N)	Werdmüller (1660) sketch shows other building
CW2	Mytikas(S)	Werdmüller (1660) sketch shows other building
CW23	Tracheli	In village
CW5	Basiliko	in centre of village
CW6	Levkanti	other walls around, church close-by

Table 8.1 – Environs of towers in CW and CN regions

Because of the fundamental importance of this conclusion, a study was made of all the towers visited in the central-west and central-north regions of Euboea, where there were sufficient remains to draw a conclusion - see **table 8.1**. It is apparent that, except for one tower (**CN7**), which controls movement along the old road northwards from Batontas (**CW26**) to Castella (**CN6**),[510] no tower may be considered completely free-standing.

Essentially the tower seems to have been the defensive element of a much larger complex, which may or may not have had a light circuit wall (*chemise)*,[511] a feature clearly delineated at one of the few excavated tower sites, that at the 14th / 15th century village of Panakton (**B14**).[512]

[510] Even this may have had other buildings around it originally, destroyed by modern agriculture.

[511] In Attica-Boeotia Kontogiannis seems to erroneously note the lack of any evidence of a circuit wall around towers, despite the evidence from Panakton, Klimataria and the Mesogia (new Athens airport) – see Loizou (2016) Furthermore, the two sites visited by me – Haliartos (**B6**) and Panorion (**B16**) - both had a flattish area surrounding them, suggesting the existence at some time of other wooden or mud-brick buildings around which the existence of a light wall (of stone or wood?) is not improbable - Kontogiannis (2012b) "Ανιχνεύοντας την Καταλανική Βοιωτία: η Αμύντικη οργάνωση τού Δουκάτου των Αθηνών κατά τον 14ο αιώνα [Searching for Catalan Boeotia: the defensive organisation of the Duke of Athens]". **Η Καταλανο-αραγωνική κυριαρχία στον ελλιινικόχώρο [the Catalan-Aragonese dominance of the Greek country]**. Athens: Cervantes Institute. 67-109.

[512] Gerstel et al. (2003).

Such a conclusion was also noted in **chapter 7** for sites studied in Western Europe,[513] and suggests a similarity between the Greek towers under study and the 'solar' towers of northwest Europe and Italy – a point developed later in this chapter.[514]

8.3 Construction materials

Construction materials, and the lack or abundance of such in the immediate locality, in a period where transport was expensive would have defined architectural design. In heavily afforested regions wood is the natural construction material, in flat flood plains adobe brick is probably the material of choice,[515] and in arid mountainous regions stone. But even stone varies significantly: in an age without heavy crushing equipment its workability would have been an important cost consideration.[516]. On the island of Euboea certain areas have relatively easily-broken limestone rock, whilst towards the south (in Marmari) there are areas of hard marble and in the region of Karystos there is the well-known Karystos Stone, which resembles slate in its workability. In other areas river stone has also clearly been used for tower construction.

The second material of importance is lime to make mortar. This would have been required not only for binding the stones, rubble and tile slips together, but also for facing of cisterns and external rendering. Not only is it expensive - probably ten times the cost of sand,[517] the other

[513] Pamela Marshall, writing on the towers of western Europe, concludes that they were probably attached to other buildings, noting that the notion of a self-contained dwelling is essentially modern while the norm in the Middle Ages was a cluster of buildings - Marshall (2002) "The Great Tower as Residence". In Meirion-Jones, et al. (Eds.) **The Seigneurial Residence in Western Europe AD c800-1600**. BAR International Series 1088; Beryl Lott notes ' *often…there is evidence that the attached hall was originally of timber'* - Lott (2002). In Ireland T.E. McNeill writes how there is evidence of manorial estates but not generally of the manors, many of which were of simple timber frame construction surrounded by a collection of other buildings – he quotes a document from 1303 listing '*two chambers, two stables, a granary and a bakehouse*' - Mcneill (2002) "The Gap below the Castle in Ireland". In Meirion-Jones, et al. (Eds.) **The Seigneurial Residence in Western Europe AD c.800-1600**. BAR international series , 1088. 45-50

[514] See, for example, the towers in San Gimignano in Central Italy where '*access to the only upper compartment that reaches to the top of the tower is almost always realized through the adjacent palace'*- Ceccarini (1988) **S. Gimignano: In Fatti pincipali della storia urbanistica**. San Gimignano, Italy, 28.

[515] There is evidence that even towers could be built of adobe brick. A monastic tower, possibly originally an estate tower, is noted as constructed of such in 1339 - Smyrlis (2016), note 9.

[516] See Janet Delaine for an attempt at estimating various types of construction materials and methods in the Roman period - DeLaine (2001) "Bricks and Mortar: Exploring the economics of building techniques at Rome and Ostia". In Mattingly and Salmon (Eds.) **Economies beyond Agriculture in the classical world**. London: Routledge. 230-268

[517] Chamorro-Trenado (2009) The Construction of the Saint Felix Church Tower in Girona, during the Fourteenth Century: Workers, Materials and Equipment. **Third International Congress on Construction History, Brandenburg University of Technology Cottbus, Germany , 20th-24th May 2009** [Accessed 15/4/2017], http://www.bma.arch.unige.it/internos/PDF/CONSTRUCTION_HISTORY_2009/VOL1/Chamorro-Trenado-Miquel_layouted.pdf.

basic constituent of mortar – but it requires both technical skill and time.[518] Lock (1986 and 1989) does not find any evidence for the external plastering of tower walls. However, rendering of buildings was well-known during the Byzantine period.[519] Clear evidence of this also survives in the names of towers variously called *Levkospyrgos* or *Aspropyrgos* (both meaning white tower)[520] Most towers examined also have a considerable number of put-log holes and many have evidence of cribwork, neither of which their builders were likely to have left open - both to protect them from the weather and to prevent their use by a potential attacker.

Lime render is a relatively fragile substance although, if properly maintained, can not only self-repair if slightly damaged but last for a long time.[521] However, once water enters between it and the wall it is protecting, it deteriorates rapidly as does the pointing between stone or brickwork. It is therefore not surprising that the surviving towers do not appear to have been rendered. Seven hundred years of heavy rains interspersed with cracking caused by contraction during winter freezing and expansion in summer temperatures of over 40^{o} C. will have stripped any external walls of all their plaster. Two cisterns, which have been surveyed (sites **CN5** and **NE24**), where not just simple mortar but much stronger hydraulic mortar must have been used,[522] are today completely bare of mortar – **plate 8.3 -** except for an area in a protected corner, thus demonstrating exactly this process. In contrast to this the towers on Venetian-controlled Crete, Naxos, and Andros, and in Palestine, some constructed in the Late medieval period, and many in continuous occupation until relatively recently, are nearly all rendered.[523]

[518] Slaking, the process of mixing lime with water, may be required for six months for an especially good lime - Margahlia et al. (2013) The Maturation Time Factor in Lime Putty Quality. **Journal of Materials in Civil Engineering**, 25, 10:

[519] Foss and Winfield (1986) 26-27. See also the description of Ankara - Lawrence (1983) A Skeletal History of Byzantine Fortification. **The Annual of the British School at Athens**, 78: 171-227.

[520] *Aspropyrgos* is a well-known area in Attica, whilst the round tower in Thessalonike is called *Levkospyrgos*.

[521] Mortar sets by coming into contact with carbon dioxide, so effectively has an outer shell which, when broken, will then reform within the section exposed to air. The use of a pozzolan (named after the *pozzolana* volcanic ash used in the original Roman lime mix) such as fired brick dust increases its strength and hastens setting time. For this reason, Byzantine stone construction includes tile fragments inset between roughly worked stone.

[522] Veikou (2012) **Byzantine Epirus - a topography of transformation : settlements of the Seventh-Twelfth Centuries in Southern Epirus and Aetoloacarnania, Greece**. Leiden

[523] For Naxos - Kalabros and Andreakos (2006) **Ενετικές οχυρώσεις στη Νάξο**. ATEI Peiraeus, 55; for Crete - Giapitsoglou (2012) "Πύργοι - οχυρές κατοικίες του νόμου Ρεθύμνου". In Damoulos (Ed.) **Η οχυρωματική αρχιτεκτονική στο Αιγαίο και ο μεσαιωνικός οικισμός του Αναβάτου Χίου, 26-28 September 2008**. Chios. 175-186, also Noula-Karpeti and Androudis (2016).

Andrew Petersen writing on the medieval tower of Burj al-Farah (no exact date known) close to Nablus in Palestine, notes '*The lime mortar has survived remarkably well on this side, except for the two or three courses at the base of the wall and the upper four courses at the top*.' - Petersen (2016) "Medieval Towers in Syria and Palestine". In Sinibaldi, et al. (Eds.) **Crusader Landscapes in the Medieval Levant: the Archaeology and History of the Latin East**. University of Wales Press. 187-206.





Cleisura (NE24) **(b) Kastri (CN5)[524]**

Plate 8.3 - Two cisterns showing deterioration of rendering

A closer study also reveals the existence on many towers of an indent of 5 -15 cms. at a height between 0.6 to 1.0m. Lock(1986) believed this to have been an *euthyntirio* (levelling course) but, whilst for classical dry-stone construction with ashlar blocks this was a necessity, the use of rough stone and mortar does not require such exactitude.[525] More probable is that, knowing that non-hydraulic lime mortar will draw in water if it is in contact with damp ground, thus leading to rapid deterioration,[526] the tower builders deliberately introduced an indent to allow commencement of rendering above the point at which ground moisture could affect it. In this way they provided the base for a flush vertical wall, although it is probable, given the expense of rendering, that many were never actually completed in this way. This potentially provides a diagnostic feature for distinguishing such towers from others. Unfortunately, reported tower surveys are insufficiently detailed in most cases to help us, although Langdon(1995) provides photographs of three towers in Attica where there was a clear levelling course at the base,[527] thus distinguishing the levelling course from this style of indent. Site visits to the towers on Euboea, whose walls survive above a metre, could not, however, establish any pattern.

[524] Original render can be seen bottom right of picture.
[525] Since many are only approximately level with rough uncut stone, even if the indent may have been used for this, not only would it have been necessary to provide an exact rendered line but the practicalities of mortaring joints, where excess mortar or tile/stone fragments fall continuously to the base of the wall, would have required repeated cleaning to have been of any use.
[526] See **plate 9.4** which is a photograph of a modern building (less than 20 years old) where there are clear indications of exactly this process in the rendering due to poor insulation of the wall from the ground. There is a line to which damp has risen on the right of the corner, while to the left the render has begun to flake off.
[527] Ninoi (**A16**), Koula (**A34**), and Dangla (**A42**).



Plate 8.4 - Base of modern house in Greece showing rising damp to 60 cm., and deterioration of render after 20 years (on the far left) due to inadequate damp course.

Tile in-slips, given the relatively small scale of towers, were most likely the waste from abandoned or old buildings and may only have required transport. Thus, unless they had to be manufactured from scratch, this was a relatively low-cost item. Only in the case of elite towers in Macedonia,[528] Chios and the northern Balkans do we see the extensive use of fired bricks in the construction of towers and defensive walls, both as facing and, laid cross-wise, as structural re-enforcement. This seems to follow the widespread use of brickwork in elite Byzantine construction – something generally lacking both in Middle Byzantine ***Epirus Vetus,***[529] just to the west, and in the towers and fortifications in Central and Southern Greece.[530]

Elite Byzantine residences at ***Mistra,*** constructed in the Peloponnese in the 13th and 14th centuries, also display extensive use of brickwork,[531] as in the central-north region on Euboea do a number of middle Byzantine churches whilst it is lacking in those from the Late Byzantine period.[532] No medieval towers have been identified on Euboea with any form of structural or decorative brickwork, seemingly providing evidence against Byzantine involvement in the towers' construction. However, the fortifications at ***Cleisura*** **(NE24)** and ***Filla*** **(CW4)**, which

[528] Bogdanovic (2012)

[529] In ***Epirus Vetus*** Veikou(2012), surveying the settlements of the 7th to 12th centuries found no evidence of the construction of buildings in brick in the province - all such buildings were dated to the Roman period. She also identified a move from mixed stone and brick masonry (*opus mixtum*) in the Early Byzantine period to rubble masonry (*opus incertum*) in the Middle Byzantine period, a construction system mentioned in a 10th century text as '*ideal for the building of fortifications'* - Veikou (2012) 106, note 194 – *Maurice, Strategikon,δ',35-36, p.348.*

[530] Despite the fact that the Lelantine plain in central Euboea had provided clay for the manufacture of pottery and tiles from Archaic times and it has been the centre of a substantial brick and tile industry in the last two hundred years. Pottery from the area has been identified as far away as Ischia in Italy and the Lebanon (Lane-Fox (2009) 160-161).

[531] Ćurčić and Hadjitryphonos (1997), 214-215. This is noted as part of a discussion on another 'typical Byzantine residence in the form of a tower' at Karytaina.

[532] Fine brickwork can be seen in the churches at Attali (**CN14**, 10th – 11th c.), at Triada (**CN13**, 1050-1150) and at the monastery of Agios Georgos ARMA (**CW10** - 1141), yet two churches at Bounoi (**CN18**), whose cross-vaulted style may place them in the late Byzantine period (1205-1470) are constructed of stone, plastered internally and have no sign of the use of brickwork even around windows or doors.

we know were re-fortified by the Byzantine general Licarios in the 1280's also show no sign of the use of structural or architectural brickwork,[533] although the latter has neat horizontally placed tile in-slips. We must conclude that brickwork, being a relatively expensive material requiring manufacturing skills and facilities for its production, was not used in functional fortifications in this period where easily worked stone was available, as on Euboea.[534] It can therefore be used as a defining feature of elite Byzantine construction in the late period, where possibly imitation of styles in use in Constantinople defined the status of the owner, yet not as a factor distinguishing Byzantine from Frankish or Venetian secular or military construction in Southern Greece in our period of study.

The availability of lumber for structural beams to support each of the floors would have played a significant part in the exact size of a tower.[535] Most likely a stock was assembled prior to commencement of construction and, depending on type, length and diameter of the wood, final dimensions of the tower were adjusted accordingly. Thus, even if a central power had ordained building specifications, as the Knights of St. John are known to have done on the island of Rhodes,[536] local variations are likely to have emerged.

No mention has been made by any writer of the possible existence of wooden towers yet, given the ready availability of wood on Euboea, construction using such material should not be excluded. We have clear evidence from Anna Comnenna, writing in the early 12th century, of the use of wooden towers in the Northern Balkans by the military,[537] and also in the 10th century *Praktika* of Leo VI to defend a river crossing.[538] Higham and Barker (1995) argue that the choice of wood or stone construction material was often dependent simply on their availability.[539] Thus, while most of the castles constructed in Norman England up to the end of the 12th century were originally of wood, it is rare to find them in Greece or Spain,[540] whilst

[533] See **chapter 2**.
[534] This may also have been the case in ***Epirus Vetus*** – see above
[535] In England 14th -c. sources, for instance, indicate that timber beams in excess of 9m. in length were unusual. - Wyeth (2018) Medieval Timber Motte Towers. **Medieval Archaeology**, 62.1: 135-156. In Southern Greece the availability of such timber in most lowland areas was likely to have been even more restricted. We have evidence , for instance, of the shipping and taxation of lumber from the southern Balkans to the Aegean, and an Ottoman ban on exports from Anatolia by the Christians - Dunn (1992).
[536] Lock (2006)
[537] '*In some places he had trenches dug; and in others towers erected made of wood; also wherever the site permitted he ordered small forts to be constructed of bricks or stone'* - Dawes (tr.)(1928) **The Alexiad of the Princess Anna Comnena : being the history of the reign of her father, Alexius I, Emperor of the Romans, 1081-1118 A.D.**, London: IX.1.
[538] The Taktika of Leo VI [text, translation, and commentary], 394, constitution 19:271-286; see also Haldon (Ed.) (2014) **A critical commentary on the Taktika of Leo VI**, Washington, D.C.: Dumbarton Oaks., 409-410.
[539] Higham and Barker (1992), 47. See also for a more recent analysis Wyeth (2018).
[540] For Spain see Higham and Barker (1992),79. This is discussed in detail in **chapter 7**. In Greece this may simply be due to the lack of research into the archaeology of the medieval period compared to that in western Europe.

still further south in the Kingdom of Jerusalem, where good wood was at a premium, massive stone vaulting appears to have been used exclusively. More importantly, we have evidence of Venetian construction of a tower in wood in the 14th century on the island of Sapienza,[541] and their possible use of wood for one at the salt pans of Corfu in the early 15th century.[542] It is therefore not surprising that many probable tower sites *(pyrgaria* and *tourla*) identified on maps of Euboea on the top of afforested mountains, if they had been of wooden construction, have no surviving remains,

Niketas Choniates notes how, immediately the Latin forces arrived in ***Negroponte*** in the autumn of 1204, they constructed a fort in the centre of the strait.[543] This could have been little more than a good-sized tower judging from the 19th century photographs of its successor (see **plate 9.1**). But, to construct such a tower of stone and mortar within a relatively short time over the winter months, would have been an impossible task. Apart from the probable lack of availability of slaked mortar in time, the construction would simply not have dried sufficiently for anything more than the foundations and base courses to have been completed.[544] Above this a wooden palisade was probably erected. We have many examples of similar such wooden towers and forts constructed in western Europe.[545]

[541] This is an island about 2 km. south of the fortress of Modon in the Peloponnese. Lionardio Frescobaldi Gucci, who arrived in Modon in 1384, writes of the garrisoning of a wooden tower on the top of the mountain. The same tower was also noted by Buondelmonti (1415?) '*to keep guard and signal to Modon'* - Gertwagen (2000) "Venetian Modon and its Port, 1358-1500". In Cowan (Ed.) **Mediterranean urban culture, 1400-1700** Exeter: University of Exeter Press. 125-150.

[542] Facing pressure by the Albanian Prince Jonas in 1401 to control the salt pans at Saïata, Corfu, which belonged to Venice, they ordered the new bailie to '*construct a tower of wood and, better, of stone to protect the salt workers'*- Thiriet (1958), II, no. 1029 (1401); Sathas (1890-1900), II, 45-46.

[543] Magoulias (1984), folio 610.

[544] A minimum of six months is necessary for lime mortar *'to take on some consistency……in walls of medium thickness the final set can be figured in years'* - Fitchen (1961) **The Construction of Gothic Cathedrals: a study of medieval vault erection**. London: The University of Chicago Press Ltd. Appendix G, 262-265.

[545] A similar logic can be seen in the construction of a tower on the top of a motte at Totnes in Devon, England by Judhael, a subordinate of Duke William in 1068 (see **appendix 7.4**) during his campaign of conquest. Needing to construct rapidly a secure position, he had laid stone and mortar foundations of 3.5m. down to bedrock and then raised a wooden tower on top of this. Subsequently the tower was replaced by a stone and mortar shell keep in the 14th century, much as the Venetians probably constructed the strong fort in the centre of the Euripos strait in the 14th / 15th century on the foundations of the original tower.

8.4 Architectural Features

Certain features need to be discussed separately. They do not define a particular type (as does scarping or buttresses) but may be used in conjunction with other features to define the date or constructor of a tower. The first of these is vaulting. Whilst there are signs of such at battlement level on many surviving towers, clearly this was to provide a level fighting platform or a base for a signal beacon. A few, however, have vaulting at ground floor level, a feature which is evident on Byzantine towers in Southern Macedonia,[546] and fortification towers constructed in the Middle and Late Byzantine periods.[547] On two Euboean towers the vaulting is so massive that it is the only feature that has survived intact - Skounteri (**CN22**) and Gides (**CN20**) – whilst one close-by at Kato Steni (**CN17**) has an indication of vaulting on one surviving wall. These three towers form a group in the interior of the island, a region (see **chapter 5**), which appears to have had a substantial population during the Middle Byzantine period.

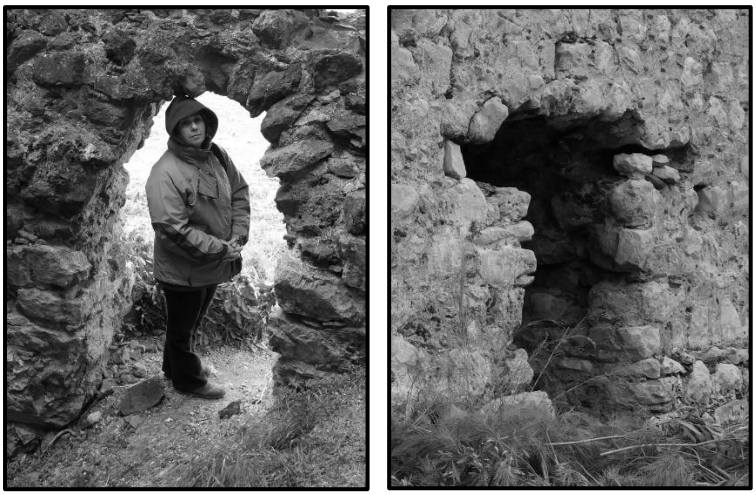
Other 'elite' towers can be found with ground floor vaulting in Byzantine controlled Eastern Macedonia and Mt. Athos, their height and construction quality being similar, if not superior, to the Acropolis tower (**A31**).[548] Ground floor vaulting is also possessed by the tower of the so-called Tekfur Saray '*citadel-palace'* complex in Constantinople built sometime in the 13th or 14th century.[549] Unfortunately insufficient evidence exists for Attica, Boeotia and other parts of Southern Greece to make any comparison with these areas.

The existence of wooden cribwork to provide lateral support in Byzantine fortification has been noted by Foss (1986),[550] who demonstrated that it predates its later use on Ottoman period construction.[551] It seems to have been a double line of lateral beams linked together by transverse short timbers binding the external and internal stone facing together. Such a scheme can be seen on a wall of the tower at Mistros (**CN24**), which has been partially demolished. It

[546] Ćurčić and Hadjitryphonos (1997), 213-239.
[547] Foss and Winfield (1986), 29. Vaulting at ground floor level is also noted as usual in Boeotia by Kontogiannis (2012b).
[548] Ćurčić and Hadjitryphonos (1997), 216-219. Examples are the Kaletsi tower (**M110**), that of King Milutin, Mariana (**M22A**) and Karakala (**M32**).
[549] There is much argument as to its dating since no documentary records have survived – see Ćurčić and Hadjitryphonos (1997), 39-40.
[550] Foss and Winfield (1986), 28-29 and 240.
[551] This is also noted in Lawrence (1983). Its appearance as the rendering is washed away has also been noted on the towers in the Mani in the Peloponnese - Pasiopoulou and Eliopoulos (2011) **Μανιάτικα Πυργόσπιτα: Προβλήματα αναστήλωσης και διαχείρισης της επαναχρήσης τους**. Τεχνολογικό Εκπαιδευτικό Ιδρυμα Πειραια

is also apparent on other towers where there are regularly spaced holes normally about a metre apart vertically and horizontally, often taken as putlog holes.

Entry to the towers appears almost always to have been at first or second floor. For a few towers an entrance has now been made at ground floor level, but three – Bailolekas (**CN11**), Skounteri (**CN22**) and Farakla (**NE13**) - may have had an original ground floor entry as indicated by the pattern of the stones around the first, and a space for a lintel and a possible stone relieving arch on the latter, although it is difficult to distinguish if these are retrofits or original – see **plate 8.5**. Exactly how entry was made above ground floor and between floors is not certain, although wooden stairs and ladders have been postulated. The conclusion above, however, that most towers were adjacent to or surrounded by other buildings of inferior quality that have not survived, suggests that entry was most likely direct above ground level across a drawbridge from these ancillary buildings.[552]



(a) Bailolekas (CN11) **(b) Skountéri (CN22)**

Plate 8.5 – Examples of Ground floor door entry

A number of different opening configurations have been noted. The first floor seems to have been exclusively defensive and there was either no opening or merely an arrow slit positioned approximately centrally on each wall. One tower, Mistros (**CN24**), has a

[552] This would appear much more effective than the alternative: access to the tower by heavily armed men, children or females in the dress of the period, climbing up a ladder in the event of sudden attack, and would have been slow and fraught with difficulty. Lock (1986) also rejects the ladder and suggests a wooden stairway as being the most likely.

configuration not seen elsewhere – the arrow slits on two adjacent sides are angled to look at a particular point across the valley (This is discussed in detail in **appendix 9.6)**. Above this level is normally the door entry and remains of corbels to support an external balcony have survived on a few towers. Large windows exist only on the third or fourth floors, where there is also an opening for a latrine.

Various types of finishing of openings – whether doors or windows – have been noted. Most are very basic stonework and little care has been noted in their construction. They vary from a simple rough stone lintel to ones of wood with a relieving arch of stone or brick, to dressed cut-stone arches – both rounded and slightly pointed.[553]. Insufficient examples were identified of cut-stone arches to be certain about the dating but the general impression is that the latter are linked to Byzantine elite construction in Macedonia, and Late Venetian/Catalan (14^{th} /15^{th} centuries) or Ottoman construction in central Greece, a point corroborated by Ćurčić and Hadjitryphonos (1997), who see Gothic influence on church construction reaching the Balkan Peninsula in the early 14^{th} century.[554] Thus, rough stone surrounds are found on arrow slits on Bailelekas (**CN11 -** Middle Byzantine?) and Mystros (**CN24** – Middle Byzantine / 13^{th} c.?) whilst apparently later (elite?) towers at Haliartos(**B6**), Mytikas (**CW2**), Belos (**SC3**), Politika (**CN3**), and Basiliko (**CW5**) possess cut-stone surrounds, some with rounded, some with slightly pointed arches, although lacking any consistency.



(a) Mytikas south (CW2) (b) Nea Fokia (M118)

Plate 8.6 - Crenellation types: (a) Italian/Venetian (b) Byzantine

[553] The pointed arch and arrow slit Pringle (1974) notes as being introduced into Italy in the 12^{th} century from the Crusader lands.

[554] Ćurčić and Hadjitryphonos (1997), 48-49. They also note '*one of the leitmotifs of Ottoman architecture in the Balkans during the second half of the fifteenth century is the co-existence of round and slightly pointed arches'*.

The last architectural feature of note is the crenellation style (for those towers that did not have a roof). On Euboea the inverted chevron style merlon,[555] an apparent hallmark of Italian fortification,[556] can still be seen on those few towers that have survived to their full height;[557] while on clearly non-Venetian fortifications such as those on the monastic tower at Galataki (**NE20**) they do not exist.[558]

Type	Name	Notes
A	**Watchtowers**	**Circular, polygonal**
A1	Small circular <5m.	*Pyrgari* (Πυργάρι) – Byzantine(?), hilltop position
A2	Large circular	*Vigla* (βίγλα) – coastal, predominantlyVenetian/Genoese
A3	Domed -single storey	*Skopia, Guardia, Vardiola, Tourē* – post 14th century
B	**Hall Towers**	**Large – wall length greater than 9.5m.**
B1	Standard	Defined only by size, plain stonework
B2	Integrated	Brick vaulting, integrated stairwell, Byzantine (?)
B3	Buttressed	Structural or 'faux' external pillar supports, Macedonian
B4	Scarped	Walls angled outwards at base
C	**Solar Towers**	**Tall >10m., walls +/- 8m., 3-5 storeys, part of complex**
C1	Quadrangular	Byzantine (?) with re-used components
C2	Coursed-stone	Rows of rough cut equally-sized stones
C3	Random stonework	Rough-cut stone, simple openings
C4	Colonial	Random stonework, dressed-stone architectural features
C5	Ottoman	Quoined cut-stone corners and pinkish (?) masonry
D	**Tower House/Mansion**	**Squat <10m. height, 2 /3 (?) storeys, fortified, residential**
D1	Byzantine	11th – 15th centuries
D2	Mansion	14th – 17th centuries, light walls, windows, 'faux' merlons

Table 8.2 – Provisional tower typology for Continental and Insular Greece

[555] Such crenels Lock(1996) refers to as'bifurcated', a style he notes as 'north Italian'

[556] Multilingual Illustrated Dictionary of Byzantine Architecture and Sculpture Terminology (2010). An example of the type 1 'Byzantine' style (although not called this) is given as the shipyard fortress (Αρσανάς) of Karakalos monastery on Mt.Athos. Strangely the tower at Robies (Euboea – **NE1**) is given as an example of the type 2 Venetian style yet chevron crenellations could not be seen on my own site visit, and the tower at Robies cannot be assigned exclusively to the Venetians, since its initial construction may have taken place in the 13th century and there are what appear to be substantial later additions and alterations. The chevron style can also be seen in 19th century photographs and drawings of the tower in the Euripos strait (before its demolition), and on a number of fortifications built on Venetian Naxos in the 15th century and later, but on these the merlons are generally less than half the length of the crenel - Mylonas and Siafla (2005) **Οχυρωματικά έργα - Δίκτυο Αμυντικής Οργάνωσης στη Νάξο**. UG Thesis, TEI Peiraia..

[557] Mytikas (**CW2**), Basiliko (**CW5**), Politika (**CN3**), Avlonari (**CE10**), Tracheli (**CW23**), Karabos (**SC1**), and Belos (**SC3**). Access could not be gained internally to the towers at Mytikas, Kaddi, Avlonari, Karabos and Tracheli, so these may also have possessed latrines and fireplaces.

[558] Neither was it seen by me on two towers in Bologna and the fourteen surviving towers in San Gimignano in Central Italy, nor noted by Pringle (1974) in Tuscania. This suggests (alhough the sample is small) that the style was probably exclusively Venetian and was not used in other areas of Italy.

In Macedonia one tower, that at Nea Fokia (**M118**), a presumed Byzantine era construction built in 1408, still possesses its merlons, which are a simple rectangular design found in Constantinople, with stone slabs laid lengthwise on top at an approximate 45^{o} angle above the outside and inside faces, creating a roof-like effect **(see plate 8.6 (b))**.[559] Neither crenellation style has been identified elsewhere in Crete or Central Greece, where all major fortifications reviewed (including Venetian Methone and Corone) have simple rectangular merlons.

8.5 Type (A) - Circular Watchtowers

It would have been convenient if certain configurations were restricted to specific eras. Practically, however, we find circular and quadrangular towers constructed in all periods. On Euboea, of the towers identified by the SEEP project some Classical and Hellenistic ones are quadrangular, although most are circular, whilst Roman towers are all square. On Siphnos all towers are circular, and on Thasos we find a mixture of the two. In the Medieval Period, however, structural geometry provides the first distinguishing feature to define a type – the watchtower (**Type A** in **table 8.2**), which began as a circular construction and developed into a squat polygonal structure as technology (primarily the introduction of gunpowder) and military tactics changed.

This tower grouping appears to have its roots in the *Fryktories* (φρυκτορίες) of classical and Hellenistic Greece.[560] During the Byzantine period such towers began to be referred to as Kaminovigli (καμινοβίγλια), literally meaning beacon-watch. Archaeological evidence, such as that in the Paximadi peninsula and on Siphnos, suggests that many classical towers continued in use throughout late antiquity even into the Frankish period.[561] Whilst the classical towers were built completely of ashlar blocks or with foundations of cut stone and then mud-brick upper courses,[562] the Byzantine towers are distinguished by their construction using rougher stone in-filled with tile slips bound together by mortar. The Middle Byzantine and late medieval towers generally had their entrance above the ground floor.

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[559] Part of Theophilus' sea walls in Constantinople - Foss and Winfield (1986), plate 33. See also Lawrence (1983).

[560] Complete examples can still be seen on the islands of Thasos, Siphnos and Andros - Bon (1930) Les Ruines antiques dans l'ile de Thasos et en particulier les tours helleniques. **BCH**, 54: 147-194; Ashton and Pantazoglou (1991) **Siphnos ancient towers B.C**. Athens: Eptalofos; Koutsoukou and Kanellopoulos (1990).

[561] Seifried and Parkinson (2014) found circular Classical and square Roman towers (**S8**) with ceramics from the Late Medieval period on the coast of the Paximadi peninsula in southern Euboea, whilst on the island of Siphnos a number of circular classical towers show signs of later repair and occupation, something also seen on my visit to the island of Tinos - Seifried and Parkinson (2014); Ashton and Pantazoglou (1991).

[562] Morris (2001) The Towers of Ancient Leukas: Results of a Topographic Survey, 1991-1992. **Hesperia**, 70 (3): 285-347.

The first distinct group identified is the '*pyrgari'* (**type A1**). Langdon (1995) notes two such towers on the Attica coast.[563] A detailed survey of HMGS (1970) and (1988) maps of Euboea identified thirteen sites with the name '*Pyrgari'*, all located in a similar elevated position close to the coast, whilst a further four have been identified in eastern Boeotia (two inland) and Attica.[564] Although the word '*pyrgari'* appears to mean 'small tower' or 'beacon',[565] no reference to it could be found in any dictionary (ancient, medieval or modern)[566] and the only recorded use is as a place-name (twice) in an audit of the holdings of the Bishop of Cephalonia in 1264.[567]

The two towers in Attica measure 3.79m. and 5.2m. in diameter (0.85m. thick walls) and were probably about two storeys high originally, with entry raised slightly above ground level.[568] Their construction style of rough-cut stones bonded with mortar allows a Middle Byzantine dating. Its relatively early use as a place-name in Cephalonia, coupled with the existence of similar towers on Rhodes,[569] and outside Greece in the Iberian peninsula and along the coast of Palestine as early as the 10th century re-enforces such a conclusion, indicating that

[563] These are at Cape Kalamos at a height of 133m.(**A9**) and northwest of Ramnous at a height of 110m.(**A8**). They survive to a height of 3.20 and 2.45m. respectively. One has an internal diameter of 2.19m., the other 3.5m. and the walls of both are about 0.80 to 0.90m. thick. They are constructed of 'flattish slabs' on the exterior, smaller less regular stones on the interior, with a rubble and mortar base - Langdon (1995).

[564] The latter survey due to the limits of time available was not comprehensive and research on HMGS(1970) maps of other regions has not been undertaken, but the presumption is that *pyrgaria* will most probably also be found in other littoral regions.

[565] Thanks for further etymological research to Dr Ruth Macrides of Birmingham University and Professor Peter Mackridge at Oxford University, who suggested 'πυργάρι' is probably a diminutive form of 'πύργος' – a conclusion which supports the archaeological and cartographic evidence.

[566] This includes the most comprehensive lexicon of this era, which is still under compilation - Kriaras (Ed.) (1968-) **Λεξικό της μεσαιωνικής ελληνικής δημώδους γραμματείας, 1100-1669**. Thessalonikē..

[567] Το Πρακτικόν της Λατινικής Επισκοπής Κεφαλληνίας του 1264 και η Επιτομή του - In the *praktikon* 'Τά Πυργάρια', 812. In the abstract: 'ἀπό τόν Πυργάριον', 24r: l 17. This is the only known documentary use of the term 'Πυργάρι' and its use at this early date as a place-name suggests a Byzantine rather than Frankish root – not mentioned in the latest medieval Greek lexikon - Λεξικό της μεσαιωνικής ελληνικής δημώδους γραμματείας, 1100-1669 (1968-)

[568] Although they probably had a flat observation platform, on which there may have stood the base for a beacon, there is insufficient evidence to understand whether the parapet was crenelated. It is also quite possible that, although the surviving towers are of stone and mortar, many on high mountains were simple wooden or dry-stone constructions built to protect the sentry on duty, the beacon fire being close-by on the ground and have thus disappeared over time.

The constructions at many perceived tower sites may not even have been such, but simply a shelter from the weather. See, for instance, Kritikos and Maroulis (2007) – the authors note the existence of simple dry-stone watchtowers, called *bastounes*, on Cephalonia from the Byzantine period (also found in the Mani). A visit to the strategic hills above Argyro (**SC9**) known as *Pyrgaria* did not turn up any evidence, since wind turbines have now been erected where any watchtower may have stood, but a dry-stone shepherd's hut nearby, sufficient to protect one or two men from the weather, provided an idea of the simple shelter probably provided for a sentry.

[569] Similar towers have been identified on Rhodes (Ag. Minas - **R1**, Cape Vigli – **R6**). That at Cape Vigli (**R6**) stood to a height of 5 metres with a diameter of 3.8 metres. It had no room but was a solid structure with a plain parapet and a surveillance platform, on which a signal fire was presumably lit. At its base there remain a few dressed stones which Lock (2006) notes as being the remains of a glacis (scarp).

this may have been a Mediterranean-wide phenomenon with possible roots back into the Roman period.[570]



Plate 8.7 - Interior of the *Pyrgari* at Kalamos (A9)

During the Frankish period a new type of coastal watchtower developed - the *Vigla* (*Bigla*, βίγλα – **type A2**) greater in size and strength with space for the sentries to reside.[571] Two such circular medieval towers survive on the coast of Messenia in the Peloponnese, which appear to have been linked to the Venetian fortresses at Modon and Corone.[572] Another (**R11**), slightly smaller, on the island of Rhodes has been dated to the latter 15th century.[573]

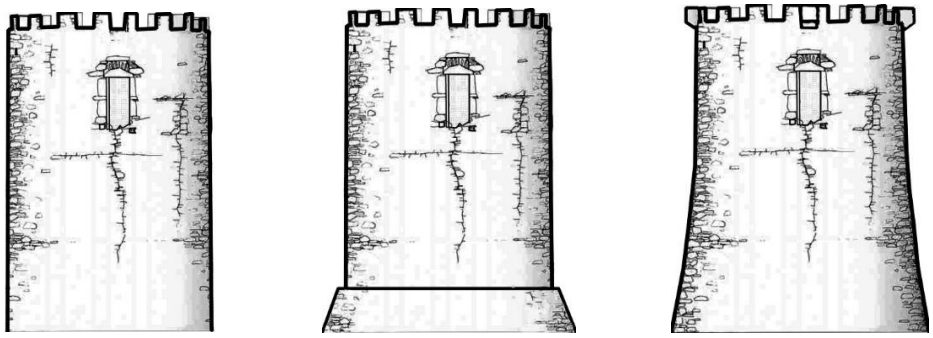
[570] Arab documentary sources from the 10th century note such towers - called *Atalayas*, 4.5m. in diameter and 10m. high - on the Iberian peninsula, protecting the Arab border around Andalucia against the Christian states to the north. The author, Ibn Hayyan, notes the campaign of Abdarrahman III of 936-937. Among other things he spent time '*reparando y consolidando las fortalezas, torres y atalayas dañadas con excelente* construcción'. In the historian's mind there was clearly a distinction between forts, towers and watchtowers at this date. These towers seem to have been built about 4-5km. apart - Malanana (2016) "Alquerías, almunias, torres y atalayas en el cigarral toledano andalusí". In Santos and MOrin_de_Pablos (Eds.) **Torres, cigarrales y trincheras: el Cigarral de Menores**. Madrid: Audema. 203-228. A similar network of watch-stations (*ribâts*) interspersed with towers (*mihrâses*) stretched along the coast of Palestine (see **chapter 7** and **appendix**).

[571] I have used the term '*vigla'* to distinguish them since this was generally how they were referred to during the Frankish period but, as noted above, this term originally derives from the Middle Byzantine period. The term *vigla* was also used sometimes in a more general way. A good example is the ***Bigla*** fortification close to Ptelion, on the coast just to the north of Euboea, probably constructed by the Venetians immediately after the area came under their control in 1322. This is now called *Bigla* but it was originally viewed as a *castrum* and the remains of other buildings, cisterns, and an external enceinte can be seen on site - '*Veneti habent unum castrum….'* Koder and Hild (1976), 241.

[572] See **Appendix 5.3** for a discussion; Korōnē / ***Coron*** (Memi–**P6**) and Methōnē / ***Modon*** (Loutsa, Phoinikountas – **P6**). Also noted in Kontogiannis(2012).

[573] Rising to a height of approximately 7 metres with a reinforced base, this tower stands on Rhodes on a shale cliff overlooking the sea. It has an external diameter of 5.8 metres with entry at a height of 2.4 metres, at which point the walls are only 0.5 metres thick and the external diameter 4.9 metres. Construction is of well-dressed and coursed limestone blocks. The rooms at ground and first floor have a vaulted ceiling in beehive style and remains of crenellation can still be seen. Dated by a marble escutcheon with coat of arms of Pierre d'Abusson (Grand Master 1476-1503) - Lock (2006).

On Chios we have both archaeological and documentary evidence of a series of circular towers around the coast, which possibly originally numbered more than fifty. Many survive today in their original form. They were most likely constructed in the 14th and 15th centuries during the Genoese occupation of the island (1346 – 1566), although certain may be dated to prior periods of Byzantine and Venetian occupation.[574]



(1) (2) (3)

Figure 8.3 - Development of Vigla Architecture[575]

Figure 8.3 indicates the general architectural development over time. Tower (1) is reminiscent of the **type A1** *Pyrgari*. This appears to have been later re-enforced by the addition of a scarp at ground level (2) as seen on the Trachili tower (**C5**) on Chios and the Phoinikounta tower (**P5**) in Messenia. This eventually led to the development of a completely new concept (Pachi tower (**C3**) on Chios - **plate 8.8**). It had an increasingly inclining scarp at its base and no ground floor (or a small sealed cellar) making undermining of its walls nearly impossible in a short space of time.[576]

[574] Ierapetritis (2013).
[575] My own interpretation based on an original sketch of Pachi vigla, Chios (**C3)** by Psaltachis(2008).
[576] Entry and residence for the guards was on the first floor with a vaulted ceiling supporting the platform at rampart level. Further, four machicolations, set equidistantly around the tower with one directly over the entrance allowed the defenders to attack potential assailants without exposing themselves to enemy fire. On the opposite side from the entrance two or more loopholes provided a 360º view for the defenders.

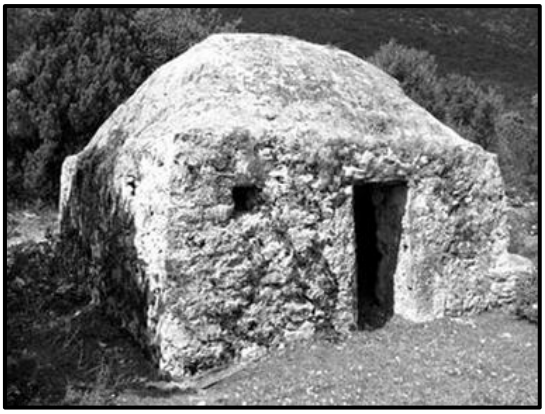


Plate 8.8 Pachi tower, Cape Pirgos (C3) – Chios

From the 15th century general tactics appear to have changed and we see the emergence in Venetian-controlled areas of the domed watchtower (**type A3**).[577] Designed to be both cheaper and inconspicuous with a smaller diameter, a height of less than 4 metres and a strong stone and mortar conical roof, it reflected the introduction of firearms. It may even have been conceived in certain positions to be effectively invisible from the sea or by land-based spotters.[578] The surviving examples come from the 16th and 17th centuries but it was probable that their development commenced much earlier.

[577] No examples of small circular Ottoman towers have been identified, although there is a circular tower-like fortification on Euboea - *Bourtzi* (**CW6 – see above**) which, with a diameter of over 16m., was designed as a gun emplacement – as noted in the annotations on the Werdmüller (c.1660) sketch.

[578] A large network of similar (circular and square) fortifications has been identified on Cephalonia, constructed between 1540 and 1571, the organisation of 129 of which is included in a report from 1584. Already in 1264 there existed a network of watchtowers on the island as noted in an audit undertaken at this date but their exact architecture is unknown - ASV, Relazioni B.83, Hieron.Tiepolo, 8-11 **in** Moschopoulou (1985) **Η ιστορία της Κεφαλονιάς [The History of Cephalonia]**. Athens; Το Πρακτικόν της Λατινικής Επισκοπής Κέφαλληνίας του 1264 και η Επιτομή του Five watchtowers are noted.





(a) Skinia, Crete[579] **(b) Koutsoupia *vardiola*, Cephalonia (16th c.)[580]**

Plate 8.9 – Examples of Domed watchtowers (type A3)

8.6 Type (B) - Hall Towers

Whilst structural geometry has helped to separate out the group of circular watchtowers, the dimensions of quadrangular towers can be utilised to segment them. We are fortunate that not only do we have considerable data in Greece from various articles on the floorplans of towers,[581] but comparative data is also available for other countries. Following an approach taken by Thompson (1991) a listing is given in **table 8.3** of 18 towers with external walls longer than 9.5m.[582]. The rationale for using such a division arises from my own experience of constructing traditional stone houses. Using wood for cross-beams in floors and roofs there exists a point at which construction suddenly becomes 'complex' requiring both the skills of an engineer rather than a skilled tradesman and heavy lifting machinery, the technical aspects of which are discussed in detail in **appendix 8.1.**[583].

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[579] Vigla at Yialou Kefali, Skinia, Crete - http://www.kastra.eu/castleen.php?kastro=skinias. This is approximately 3.90m. in diameter with a wall 0.6m. thick and a single floor. It is constructed of rough stones and mortar, rendered internally and externally with a corbelled dome - Arakadaki (2012) "Πύργος ακτοφρουράς της ύστερης βενετοκρατίας απο τις βόρειες ακτές της Κρήτης". In Damoulos (Ed.) **Η Οχυρωματική Αρχιτεκτονική στο Αιγαίο και ο Μεσαιωνικός Οικισμός του Αναβάτου Χίου, 26-28 September 2008**. Chios. 127-136.

[580] http://www.kastra.eu/castleen.php?kastro=koutsoup. On the island of Zakynthos eight like-sized structures, both circular and square, have been identified, whilst a Venetian document notes 21 *vigles* constructed around the coast of the island of Levkada. Both these latter networks are thought to have been built after 1485. There existed on the island of Kerkyra (Corfu) an unknown number of tower-like fortifications, called *tourē,* generally sited in the mountains close to villages, which may have been similar but further details and their role are unknown - Kitsos (2010) **Οι βίγλες του Ιόνιου πέλαγους**. UG Dissertation, ATEI Peiraeus.

[581] Especially Lock (1986), (1996), (2006); Langdon (1995); Papaggelos (2000b).

[582] This list must be considered indicative only since there are substantial numbers of recorded towers whose dimensions are not known and, apart from Thebes, Libadeia and Davleia, the present study does not include the towers / donjons within the larger fortifications in Greece or monastic towers from within the Mt Athos enclave except on an exceptional basis to explain architectural forms.

[583] This follows an analysis of 89 stone towers by Thompson (1991) in the United Kingdom up to 1216, which divided them into three basic types. The first – *Hall Keeps* – defines rectangular towers with internal dimensions

Tower Name	Ref.	Type	Walls (m.)	Comments
Robies, Euboea	NE1	B1/D2	9.50 x 15.0	as measured by Lock(1986), later additions
Bounoi (*Vumi)*, Euboea	CN18	B1	10.2 x 10.2	Elite residence in a settlement with 7 Late Medieval churches
Reitoi, Attica	A2	B1	8.8 x 12.5	Close to Eleusis, where early Byzantine sherds have been recorded
Agia Marina, Salamis	A48	B1	6.5 x 15.2	0.5 km. from town of Kakē Bigla [584]
Lilaia, Phokis	B24	B1	7.6 x 13.3	Similar to Melissochori
St. Omer, **Thebes**	B41	B1	13.6 x 16.0	Late 13th c., part of major fortification [585]
Dotia, Chios	C47	B4	14.3 x 15.7	Early 14th c.(?), Byzantine estate
Batheia, Euboea	CW15	B(?)	20.0 x 20.0	Noted by Skouras(2003), now lost
Melissochoroi, Boeotia	B12	B1	11.3 x 11.2	Old settlement,vaulting on ground floorc[586]
Amartos, Rhodes	R3		10.0x 10.8	link to monastery – no crenellation
Dhimilia, Rhodes	R7		10.0 x 11.0	in a village in an inland location
Keos	AS14	B1	10.5 x 12.5	unworked roughly coursed stones
Kastro Franco,Peloponnese	P16	B1(?)	10.5 x 10.8	Close to old *Castella*, Peloponnese
Pyrgodikeia, Macedonia	M27	B1(?)	9.8 x 9.8	before 1409, estate fortification
Koutsaki, Macedonia	M31	B1	10.0 x 10.0	1259-79, estate fortification
Agios Basileios, Macedonia	M101	B3	9.5 x 11.5	14thc., buttressed tower
Galatista, Macedonia	M102	B3	10.0 x 12.0	Before 12th c., buttressed tower.[587]
Apollonia, Macedonia	M107	B2	10.0 x 11.2	14thc.Estate tower, coastal, outbuildings.[588]

Table 8.3 - Examples of 'Hall' type towers in Greece[589]

This has important economic implications, defining the point at which a building moves from a simple functional cheap construction to one with greater (elite) pretensions. One tower – Mistros (**CN24**) - which has dimensions (9.2 x 9.4 m.) just below my cut-off point of 9.5m.,

greater than 10m. (my **type B**), the second (24 towers)– *solar keeps* – defines rectangular towers with internal dimensions less than 10m. **(my type C),** whilst the third encompasses circular and polygonal structures, which are not of direct relevance. Thompson's 10m internal wall length cut-off point, however, appears artificially high and some towers are unjustifiably excluded. Setting the minimum internal wall length as 7m (effective external minimum 9.5 m.) for a tower to be considered in the '*hall keep'* category still allows a substantial reception hall of 49 sq. m. Since most towers under study have a height in the range 15 to 20m. and appear to have had a ground floor plus three others, this provides 196 sq. m. of total space, well above that of many towers Thompson defines as '*hall keeps*', the smallest of which, Craigie in Strathclyde, because it has two storeys, is only 98 sq.m. - Thompson (1991) **The rise of the castle**. Cambridge: Cambridge University Press, 64-66.

[584] There are two phases of construction, the earlier with neat stonework and wooden cribwork, which may suggest an Early / Middle Byzantine dating.

[585] For an architectural drawing see Ifo_Studio (2020) **'St Omer' Tower, Thebes, Greece** [online]. https://www.ifostudio.com/saint-omer [Accessed 9/3/2020].

[586] The two chambers and vaulting at ground level set this apart from other towers in Boeotia, and one might even speculate an earlier Middle Byzantine dating

[587] Papaggelos (2000b).

[588] Estate fortification probably constructed by Arsenios Tzamplakon around 1333-1355 - Zekos (2006).

[589] External wall measurements are provided only. To this list could be added the tower (15 x 15 m.) constructed by Emperor Kantakouzenos in Thrace at Pythion 1331-1341, but it size and linkage to another smaller tower as part of a wider fortified area puts it outside the present study. Treating it as an independent tower it would logically be in the 'integrated' **type B2** grouping - **Hellenic World heritage Monuments: Pythion** [online]. http://odysseus.culture.gr/h/2/gh251.jsp?obj_id=1607 ΟΔΥΣΣΕΥΣ [Accessed 10/3/2020

clearly demonstrates this issue. The Engineer responsible, probably recognizing the risks, installed larger (0.30 x 0.30 cm) holes for three massive cross beam supports at first floor level, whilst on most smaller towers (8 x 8 m.) the post holes are normally only about 0.15 x 0.15 cm., 25% of the size[590]

The hall tower is thus defined essentially by its size (both internal space and height), something which reflects the economic standing of its owner. But such towers also have a more complex internal finish with – in Byzantine areas – substantial use of brickwork, use of spolia from older buildings and superior door and window surrounds, fitments which spill over into the later 'colonial' type *solar* towers (see below) in the late 14th century.

Further Sub-division of 'Hall Towers

Apart from being large constructions the 'hall' tower category needs to be broken down into a further three types. The first of these (**type B2**) – termed the '*integrated*'[591] (or '*Kaletsi*') style – is distinguished by the essential features of the homonymous tower of Kolitsou (**M110**) on Mt Athos, the first phase of which was possibly constructed in the 13th century. It measures 10.30m. x 13.10m. and stands to a height of 19m. with five floors.

[590] There is the possibility that the Mistros tower was militarily important and therefore extra support was judged necessary – see discussion in **chapter 9** as to its role.
[591] The term *'integrated'* is used to reflect the fact that the stairwell is integrated into the thickness of the wall.



Plate 8.10 – Thebes, St Omer tower (B41)[592]

Externally it is of plain construction, but internally possessed sophisticated features with brick vaulted rooms, a spiral stairway *integrated* into the walls, latrines and a chapel on the top floor. The upper floors, lofty and with large windows, were clearly designed to be inhabited and there is a notable lack of machicolations, although arrow slits were built into the lower levels.[593] This is a model imitated by a series of towers from the 14th to 16th centuries of which the Mariana tower is a good example (see illustration below)[594]

[592] This tower clearly exhibits its elite status, not just its size but the very careful squared external stonework and internal vaulting.

[593] Theocharides notes two construction phases, the second of which he dates to the late 14th or 15th centuries, whilst the first, he speculates could have been 13th century - P. Theocharides, 'Tower of Kaletzi (Kolitsou), Mt Athos, Greece' **in** Ćurčić and Hadjitryphonos (1997), 218-219.

[594] For example, the monastery of Karakalou **(M32 –** 1328-1356?), The arches of which make a similar use of banded *voussoirs,* as do those of the buttressed tower of Ag. Sabbas; the tower of Orestes in Serres (**M108 –** 1350); and at Mariana (**M22A** – c 1373) - Bogdanovic (2012);

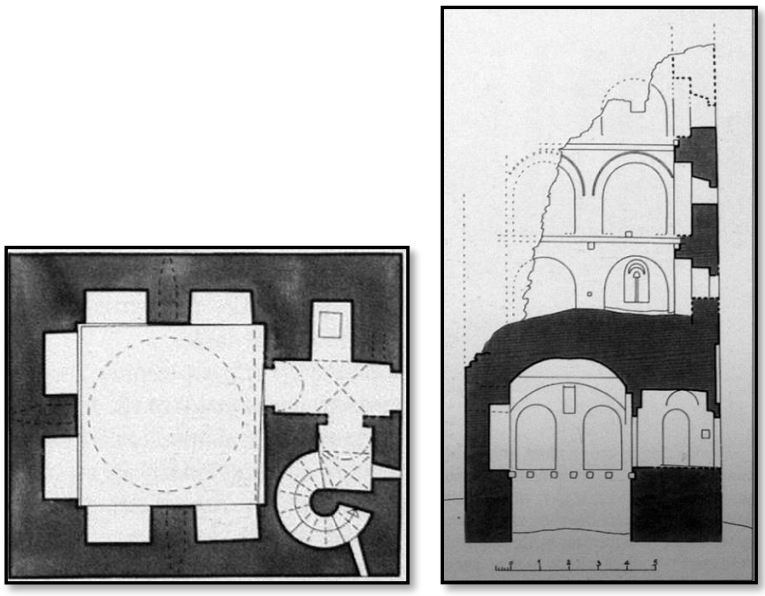


Figure 8.4 – Ground-plan and cross-section of Mariana tower (M22A)[595]



Plate 8.11 – External view, brickwork and vaulting of Mariana tower (M22A)

One particular style of construction that has been much discussed by scholars is the *buttressed* tower -**type (B3**), the distinguishing feature of which is the massive buttressing on its outer walls. This is a style of tower found within Greece only in Macedonia.[596] Ćurčić (1981) believed it to be of Frankish origin,[597] but Theocharides (1996) suggested its roots may be in

[595] Drawn from P. Theocharides, '*Tower, Mariana, Greece'* **in** Ćurčić and Hadjitryphonos (1997), 220-221.
[596] There is also a similar tower in Bulgaria – Neli Chaneva-Dechevska, '*Khrelo's tower, Rial monastery, Bulgaria*' **in** Ćurčić and Hadjitryphonos (1997), 234-235.
[597] Ćurčić (1981) "Pyrgos-Stl'p-Donjon. A Western Fortification Concept on Mount Athos and Its Sources". **Byzantine Studies Conference**. 21-22. For a detailed discussion of various types of towers in France see Séraphin (2006) Les tours féodales du Quercy. **Archéologie du Midi médiéval. Résidences aristocratiques, résidences du pouvoir entre Loire et Pyrénées, Xe-XVe siècles**, 4: (4): 127-138. For a detailed study of an early 11th c.

Southern Italy.[598] More recently, however, this has been challenged by Androudis (2012), who believes that the style is exclusively Byzantine and probably related to contemporary fortification walls reinforced with shallow buttresses.[599]



Plate 8.12 - Galatista tower (M102), west and north views[600]

My own research supports this conclusion. The recent publication by Alessandra Ricci of a monastic tower at Satyros close to Constantinople (**fig. 8.6**) indicates that the first such towers probably originated in the second half of the ninth century.[601] The roots, however, of buttressing can be seen not only on Byzantine fortifications, but also within an estate context three centuries earlier in Byzantine Palestine, where Hirschfeld (1997) identifies a farmstead (**figure 8.5**) surrounded by such buttressed walls.

tower - Impey and Lorans (1998) Langeais, Indre-Et-Loire. An Archaeological and Historical Study of the Early Donjon and its Environs. **Journal of the British Archaeological Association**, 151: (1): 43-106

[598] Theocharides (1996); see also Theocharides (2001a) "Observations on the Byzantine Buttressed Towers of Macedonia". In Burke; and Scott (Eds.) **Byzantine Macedonia : identity, image and history : papers from the Melbourne Conference July 1995**. 20-27. Supported by Zekos (1998) "Βυζαντινοί πύργοι στο κάτω τμήμα της κοιλάδας του Στρυμόνα". **Οι Σέρρες και η περιοχή τους από την αρχαία στη μεταβυζαντινή κοινωνία: 29 September-3 October 1993, Thessalonike**. 311-338

[599] Androudis (2012); He notes also a *praktikon*, that mentions a document from the monastery of Iviron, dated 1104, which refers to '*a tower …bound all around by fourteen pillars'* in the area of Bolbos. This is discussed further in **chapter 9**. See also Androudis (2001) Ερειπωμένος βυζαντινός πύργος στο Άγιον Όρος/ A deserted byzantine tower on Mount Athos. **Makedonika**, 32: 355-363.

[600] Dated to 12th c. by Papaggelos (2000) and to the 14th century by Bogdanovic (2012).

[601] The tower is contemporary with the monastery, which was probably built by Ignatios between 867-877. It is 6.5m. square - Ricci (2012) "Left Behind: Small Sized Objects from the Middle Byzantine Monastic Complex of Satyros (Küçükyali, Istanbul)". In Böhlendorf-Arslan and Ricci (Eds.) **Byzantine Small Finds in Archaeological Contexts Workshop: Istanbul, 2-4 June, 2008**. Deutsche Archäologische Institut Istanbul. 147-162.

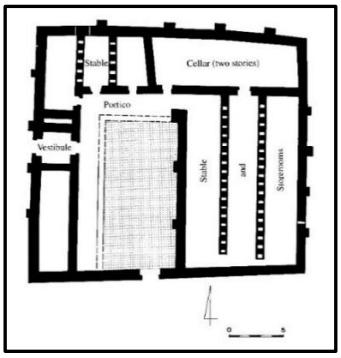


Figure 8.5 - Example of early buttressing - Ramat Hanadiv, Palestine[602]

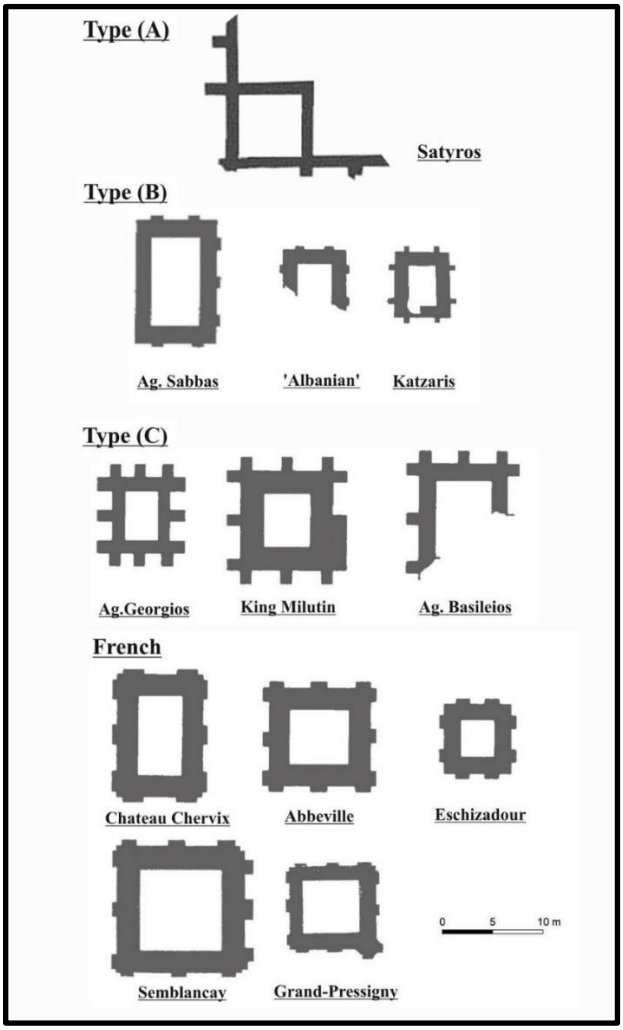


Figure 8.6 – Floorplans of Buttressed towers[603]

[602] Dated to 6th-century or earlier - Hirschfeld (1997) Farms and Villages in Byzantine Palestine. **Dumbarton Oaks Papers**, 51: 33-71, fig.20.

[603] Based on drawings in Ricci (2008); Theocharides (2001a); Androudis (2012); Chatelain (1973) **Donjons romans des pays de l'Ouest. Étude comparative sur les donjons quadrangulaires de la France de l'Ouest**. Paris: Picard **in** Lorans (2014) "Les tours-maîtresses des 11e et 12e siècles". In Zadora-Rio (Ed.) **Atlas Archéologique de Touraine, Supplément à la Revue Archéologique du Centre de la France**. Tours: FERACF; Ćurčić and Hadjitryphonos (1997).

Another tower, at the monastery of Katzarēs (Katsaris) on Mt. Athos with two buttresses on each side (**fig. 8.7**), possibly dated as early as the 10th century, is noted by Giros (1992) and Papazotos (1998).[604] Both towers are dated well before any buttressed towers in France,[605] even possibly before the emergence of the '*donjon*' in northwest Europe, a point discussed further in **chapter 9**.

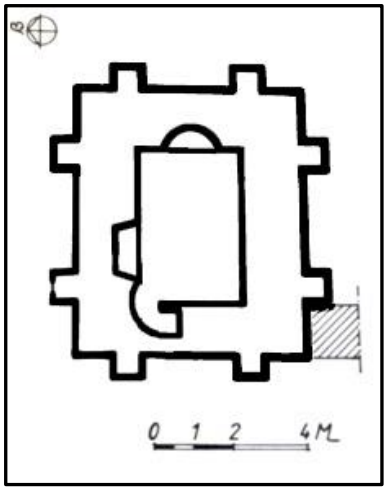


Figure 8.7 - Katzarēs tower, Mt. Athos[606]

Theocharides created three sub-divisions of buttressed tower types – shallow (A), deep (B), and towers with buttresses only on the corners (C).[607] The last Androudis considers an evolution of the former ones,[608] but the Satyros tower noted above from the 9th century suggests that the evolution probably began with his type (C) tower (see **figure 8.6** for sketches of ground-plans) and architecturally this seems more logical with an increasing complexity as buttresses, from being simply to provide greater structural strength, become more for display and to support a larger room (ηλιακόν) on the uppermost storey. Adjusting this, the grouping and dating then becomes :-

[604]Giros (1992b) Remarques sur l'architecture monastique en Macédoine orientale. **Bulletin de Correspondance Hellénique**, 116: 409-443; Papazôtos (1988).
[605] A listing in the article by Seraphim(2006) of nearly 150 towers from the Quercy region in France from the 10th to 15th centuries includes seven square buttressed towers, but the earliest dated is only from the 11th century.
[606] This is one of the earliest established monasteries on Mt. Athos, and its first mention is in 985 - Papazôtos (1988). Dated to 11th or 12th century by Androudis (2012), fig. 10.
[607] Theocharides (2001a).
[608] Androudis (2012).

Type	Description	Dating
(A)	Buttresses only on corners	9th – 10th (?) c.
(B)	Shallow buttresses	10th (?) - 12th c.
(C)	Deep, more extensive buttresses	13th – 15th c.

Table 8.4 – Proposed new dating for Byzantine Buttressed Towers

A distinctive feature of some towers on Mt Athos is the extensive scarping at their base – **type (B3).** Possibly the earliest such tower identified is that at the *metochi* of Vatopedi at Prosphorion -1253/54.[609] No examples have been found in Central Greece but a similar style large rectangular scarped tower, surrounded by traces of other buildings and a light enceinte, is to be found on Chios at Dotia **(C47).**[610] It was probably constructed in the Byzantine period prior to its occupation by the Genoese in the 14th century.[611]

This appears to have been a general trend in fortification to protect the foundations of walls against mining,[612] but it also made the tower much stronger, as we have already seen for the circular *vigles* of the Genoese and Venetians constructed around the same period.[613] Its roots,

[609] The fact that the two landward walls are vertical and the positioning of windows within the scarp combined with the way the stones are laid around one window may suggest that this is a later addition. There is also some doubt as to the dating of this tower. A metochi of Vatopedi monastery existed in this position in 1018 - Papaggelos (2000b); Smyrlis (2016); Androudis (2014) "Οι βυζαντινοί πύργοι των αγιορειτικών μετοχίων της Χαλκιδικής/ The byzantine towers of the athonite metochia of Halkidiki". **Η εξακτίνωση του Αγιου Ορους στον Ορθόδοξο κόσμο: τα μετόχια / Mt Athos spreading the light to the Orthodox world: the Metochia, Thessaloniki 21-23 November 2014**. 387-408387-408

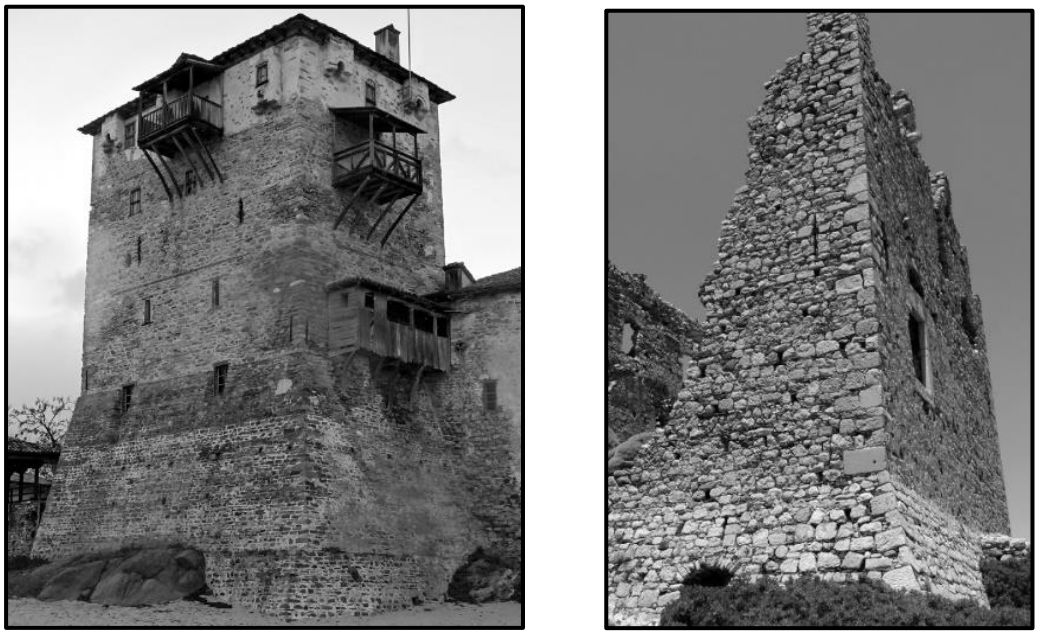
[610] Smith (1962) **The architecture of Chios: subsidiary buildings, implements, and crafts**. London: A Tiranti, plate 223. See also Ρηγάκης and Αμπού Νίτζεμ (2013) **Η αμυντική οχύρωση της Χίου και η επίδραση της στην κοινωνική ζωή και εξέλιξη του νησιού. Πύργοι και πυργοκτίσματα**. UG Thesis, ATEI Peiraeus. This is rectangular, measuring 14.28m. x 15.70m. and rises to a height of 18m. There were entrances on the ground and first floors but the two did not communicate with each other. All floors were double-vaulted with two chambers and windows on ground and first, but arrow slits in the basement. Its dating is not documented but it is presumed to have been one of the four Byzantine fortifications found on the island in 1346 when it came under the control of the Genoese. The authors do not exclude a dating for the tower of the 13th century.

[611] Such a tower is also to be found at Manasija monastery in Serbia Built in 1408 and known as the 'despot's tower', it is square in plan with sides of 14.6m (20m. at the base). Entrance is at a height of 10.65m. from which a stairway probably led to the ground. The basement did not have cisterns as expected but was probably for storage of grain. The crenels are of rectangular shape with machicolations all around the tower.- Gordana Simić, '*Donjon, Manasija Monastery, Yugoslavia'* **in** Ćurčić and Hadjitryphonos (1997), 236-239.

[612] This should be understood in the context of the *longue durée* as a re-adoption of a traditional defensive form, since the use of scarping (noted in earlier periods as *glacis*) was not a new invention. See, for instance, Kerratin pyrgos (Butler, Princeton Expedition, II.B., ill.82)**.in** Decker (2006).This tower in Central Syria, dated by inscription to 509/510, was about 12m. square with 1.8m. thick walls, slit windows and a 3m. glacis at its base. Another tower about 20kms away bears an inscription with its date (551) and states that the structure is a 'tower of refuge'. For other such examples - Hirschfeld (1997).

[613] Apart from the coastal watchtowers, the Venetians also strengthened the original walls of the Modone (Methone) fortress with scarping - Kontogiannis and Aggeiopoulou (2006) "The Venetian city of Modone in SW Peloponnese: the archaeological evidence". In Gustin, et al. (Eds.) **The Heritage of the Serenissima: the presentation of the architectural and archaeological remains of the Venetian Republic, Proceedings of the International Conference Izola - Venezia 4 - 9.11.2005**. Annales Mediterranea, Koper. 221-228.

however, as with the buttressed towers, can be traced back much earlier to towers in Byzantine Palestine. Hirschfeld (1998) notes a good number in the region dating from the 4th to the 6th centuries (see example in **figure 8.8**).



(a) Prosforion, Mt Athos (M40) **(b) Dotia, Chios (C47)**

Plate 8.13 – Examples of Scarped Towers

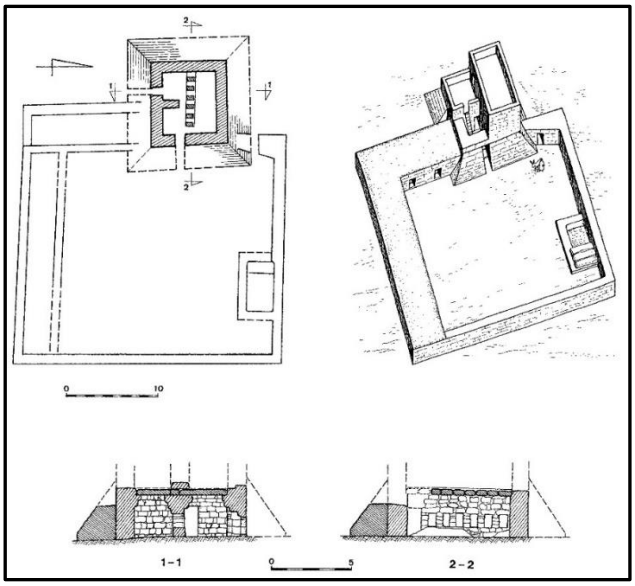


Figure 8.8 – Plan and sections of a farmstead at Rujum el-Qasr, Palestine[614]

[614] Source: Hirschfeld (1997), fig. 37.

8.7 Type (C) – 'Solar' Towers

The essence of this category is that the *solar* tower is not stand-alone but, as noted in **section 8.2**, functions as an integral part of a complex of other buildings. It is generally quadrangular, smaller than our 9.5m. cut-off external wall length for hall towers, providing security and a possible residence, but has insufficient space to function in a communal manner.

A statistical investigation was undertaken of the extent to which this corpus of towers is homogenous, key measurable features being height, wall length, wall thickness, and whether they are essentially rectangular or square (See **appendix 8.2**). The general indication is that, whilst the towers of Boeotia and Euboea are square (factor >93%) the towers of Attica are rectangular (factor 69%) and, with a high standard deviation of wall length (1.84 m.), are not built to any 'standard' specification. The latter also possess relatively thin walls of only 1.05m. compared to 1.58m. in Boeotia and, we may conclude, are more residential than defensive in character.[615]

As regards absolute size, the average 'footprint' of solar towers in Greece, ranging from 43.1 to 62.9 sq.m., shows no pattern. Generally, they are similar to those in Italy but significantly different to the Greek (134.9 sq.m.) and UK hall towers and those in the Kingdom of Jerusalem, whose walls are massively thick – a probable indication of a primary and continuous military role against a well-armed and sophisticated Arab enemy.

Most towers are in ruins, so it is not possible to use height for statistical analysis, but merely to provide general examples. **Table 8.5** shows towers where one or more walls have survived to their full height (or where the height was measured prior to their ruin or destruction). No quadrangular medieval towers have survived to their full height in Boeotia, Crete and on the Aegean islands (except Rhodes), and few in Attica and the Peloponnese. The majority of towers in the list possess three or four floors, and their height is in the 15 to 18 metre band.[616] An exception is the tower on the Acropolis in Athens, which appears to have been over 25m. and was probably constructed by the Florentine Acciajuoli as an elite residence, and reflects the architecture of those found in nearby San Gimignano (see **plate 10.6**).[617]

[615] This may be due to the fact that the towers identified are not medieval but Ottoman in origin, although three probable Ottoman towers have already been excluded from the sample.
[616] Insufficient data exists for towers probably dated prior to 1500 to include the Peloponnese, Crete, Naxos and Rhodes and other Aegean or Ionian Sea islands in this table.
[617] No formal height measurement has been made. This has been closely studied by Lock (1987) based on photographs taken prior to its demolishment in 1874, and sketches from the 15th – 18th centuries He notes especially the consistency and quantity of re-used classical blocks. This, together with its height and ground floor entrance (also possessed by the Markopoulo (**A40**) and St Omer (B40) towers) set it apart from the other towers

Ref.	Region	Name	Wall A length	Wall B length	Height
CN3	Euboea	Politika	6.00	6.20	15.00
CN22	Euboea	Skounteri	8.00	8.00	16.00+
CW2	Euboea	Mytikas(S)	6.95	7.45	18.00
CW2	Euboea	Mytikas(N)	6.10	6.15	18.00
CW5	Euboea	Basiliko	8.20	8.40	17.50
SC1	Euboea	Aliveri	7.55	7.60	15.00
SC3	Euboea	Belos	6.70	7.10	15.00
CE10	Euboea	Avlonari	7.95	7.95	15??
CE22	Euboea	Kaddi	6.50	6.50	12.00
SC6	Euboea	Dystos	6.80	6.80	14.00
A31	Attica	Athens Acropolis	7.78	8.69	25.90
A40	Attica	Markopoulo	5.42	9.52	13.00
A16	Attica	Ninoi(Marathona)	3.86	5.84	12.00
R14	Rhodes	Pirgos	9.00	9.00	20.00
R7	Rhodes	Dhimilia	10.00	11.00	16.00+
P21	Peloponnese	Karytaina	4.80	4.80	12.00[618]
M10	Agio Oros	King Milutin	9.60	9.60	21.00
M11	Agio Oros	Koletsou (Kaletsi)	10.30	13.10	19.00
M3	Macedonia	Mariana	7.30	8.80	20.00+

Table 8.5 – Quadrangular towers in Greece of which the original height can be surmised (measurements in metres)

of southern Greece. Its builder is unknown but Chaucer in *The Knight's Tale* notes a Duke of Athens and his '*grete tour'*, thus dating it prior to 1382, a timeframe that fits with the the Florentine Acciajuoli - Lock (1987)

[618] This is on its lower side. The higher side has a mere 5.5 metre height.

Type (C1) – The Quadrangular Byzantine tower

The essential distinguishing feature of this group is their use of re-used components (ashlar blocks, column drums, marble lintels and doorframes) looted from older ruined buildings, a feature seen in many Middle Byzantine fortifications, although it should be noted that this is not something exclusive to this group.[619] Additionally, there is a use of brickwork in a number for relieving arches, vaulting and decoration. Whilst this suggests an earlier dating it is not a reliable indicator.[620] In Latin-controlled regions, however, it may distinguish Byzantine from Latin construction and therefore we can provisionally attribute such towers to the Midddle Byzantine period. We do not have documentary confirmation of the construction of towers in Central Greece during the Middle Byzantine period, but four sites provide possible archaeological evidence.

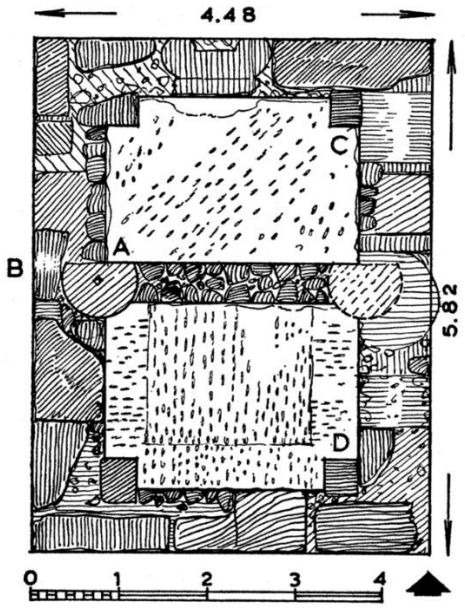


Figure 8.9 – Plan of Marathon tower (A8)[621]

. The first was excavated by E. Vanderpool (1966) and is in the northeast of the plain of Marathon in Attica (next to the Panagia Mesoporitissa church, just four metres above sea level– **A18**).[622] This measures 4.48m. x 5.82m. and survives to about a metre above ground level. Its

[619] It can also be seen, for example, at the katholikon (1141) of the monastery of Agios Georgos ARMA (**CW10**) where extensive use of spolia from an older church and temple have been incorporated into both the structure and the walls - Liapes (1971), 38-60; Koder (1973), 148-150.

[620] Thus, two towers in Chalkidikē – Pirgadikia (**M27**) and Koutsaki (**M31**) in Ierissos - make extensive use of spolia from nearby ancient Akanthos but are dated to the 14th and 13th century respectively.

[621] Drawn by J. Travlos **in** Vanderpool (1966).

[622] Vanderpool (1966) A Monument to the Battle of Marathon. **Hesperia: The Journal of the American School of Classical Studies at Athens**, 35: (2): 93-106. The tower had two rooms at ground floor level. These are blind so presumably they were for storage and entry was at first floor level. Stone blocks were up to 1.5m long and the fragments of five column drums were also included in the wall. There was stucco coating on the walls, at places

foundations are of rubble and mortar whilst the walls are constructed of re-used ancient blocks and columns. Vanderpool dates it to the 11th / 12th century by the sgraffito ware he found with continued use into the 15th century based on a late 14th century Venetian coin find

The second is on Euboea next to the sea on a small promontory (**CN8 -** Duo Bounoi) 8kms. north of Chalkida (**CW1**), equidistant between it and Kastri (**CN5**) and just to the southwest of the Karaouli-Barka harbour tower site (**CN8**). This probable tower which is buried under a metre of rubble and earth only came to light because treasure hunters had used heavy machinery to excavate its centre (and two nearby tombs), but this did provide access to the massive re-used squared foundation stones and fragments of the rubble and mortar walls. Sherds in the area from multiple periods suggest occupation through the Byzantine and Frankish periods.[623]

The third is the tower of Bailelekas (**CN11**). This is in a very strategic position and would have controlled access from the western coast into the rich upland plain around the towns of Triada (**CN13**) and ***Vumi*** / Bounoi (**CN18**). It has at least two phases of construction and the first on the ground level utilises much spolia for quoining. If it is Middle Byzantine - and not **type C2** below – then it was probably constructed as both an administrative (to collect taxes) and defensive tower, protecting the area against insurgency from corsairs, even from Venetian attack.[624]

preserved in three coats. Because of its position in the plain the foundations go very deep and the excavators, although digging down to 2 m. in places, did not reach their base. The sterility of the silt below a thin layer of humus suggested to them, however, that land levels had changed little since the tower's construction. See also Langdon (1995), tower 18.

[623] This must be treated as provisional. It was the conclusion of my colleague, Georgos Karachalios, who had shown me the site, having found it as a teenager many years ago. While not an archaeologist he is a professional sculptor and has good knowledge of ceramics from earlier periods. No other mention of this site has been found in the literature. See **Appendix 5.2** - site gazetteer for details.

[624] For instance, in 1171 Venetian forces had laid siege to ***Negroponte.***



Plate 8.14 - Bailelekas tower (CN11): first phase with quoining

The last example of a tower in this category is the tower at Thisbē / Kastorion in Boeotia (**B21**). This Classical-Hellenistic tower was reconstructed in a Medieval Byzantine masonry using squared spolia and rough-cut stones set in neat lines with horizontal tile in-slips. Vaulting has also been inserted internally on the ground floor.[625] Nothing survives above first floor level. Archie Dunn has suggested that this was probably used for the administrative control of Murex dye production in the region.[626] If so, its use was very similar to that posited for Bailelekas **(CN11)** above.

[625] Presumably to support a fighting platform, since there are no indications from fallen stonework that the tower had been much taller than its present height. Holes for beams to support a floor at approximately 3 m. height just below where the vaulting begins were also identified. Strangely, the south internal support wall did not reach down to the floor but ended about a metre above ground. This may suggest another floor at this level below which there had originally been a cistern.

[626]Dunn (awaiting publication - Dec 2019) "The Control and Exploitation of the Resources of the Aegean Littoral in the Byzantine Era". In Theodoropoulou (Ed.) **Harvesting the sea: Aegean societies and marine animals in context**. Springer. Dunn adds the caveat that the tower may also be Frankish, but the neat insertion of horizontal tile in-slips is not seen on other Frankish towers in Central Greece (they are normally randomly placed), but rather reflects stonework seen on Middle Byzantine churches and the fortification walls of ***Filla*** **(CW4)** noted above. Additionally, whilst squared blocks were used on the east, south and west walls, the builders on the north wall used rows of roughly cut stones similar to **type (C2)** below. Could this suggest that there were two phases of reconstruction – one Middle Byzantine and one Frankish in the early 13th century?



(a) South side **(b) North side**

Plate 8.15 – Thisbē (B21), Boeotia, showing stonework detail[627]

Type C2 - The quadrangular coursed-stone tower

The key features of this type are construction using neat rows of rough stones of approximately equal size (about 0.25 – 0.30m.) in-filled with tile slips and stone fragments, some bonding with timber cribwork, and the lack of recognisable quoining. It is something noted on Middle Byzantine military construction of fortress walls,[628] and is a simple construction technique requiring the minimum of artisanal skills which, given the need for only tile fragments and not the production of expensive new bricks, could be used to rapidly construct a fortification. Because of its rough finish and exposed cribwork beams (where installed) it was also probably designed to have a protective shell coat applied (see **plate 8.16**).

Although similarities to this basic design could be found in Macedonia, none of the towers visited there exactly adhere to this specification. On Euboea eight towers fit this description well,[629] as do three in Boeotia.[630] Other fortifications have similar stonework but rough

[627] For general site survey see Dunn (2016) The Survey of Thisve (Byzantine Kastorion and Multi-period Complex of Sites): 2007–2009. 33 [Accessed 8/5/2019], https://www.doaks.org/research/support-for-research/project-grants/reports/2008-2009/dunn.

[628] See for comparison Foss and Winfield (1986), fig.28.; This also appears very similar to the type 4 masonry in Veikou, which she dates to the 9th to 11th centuries, but the tile in-slips are randomly placed rather than horizontal and much less apparent - Veikou (2012), 115-116, 143-155.

[629]Such were found generally throughout the island – examples are Bounoi (***Vumi*** – **CN18**), Aidipsos (***Lipso*** – **NW2**), Baïlelekas (lower phases)· (**CN11**), Karaouli (**CN8**), Mistros (**CN24**), Farakla (**NE13**), Skounteri (**CN22**), Lechries (***Leriche*** – **CW9**).

[630] Parorion (**B16**), Hypsilanti (**B8**) and the central tower at the Livadeia fortress in Boeotia dated to the early 13th century by Mamaloukos There may be more – these have been identified from the published literature and a few site visits in 2016 - Mamaloukos (2012) Παρατηρήσεις στην οικοδομική ιστορία και την αρχιτεκτονική των

quoining on the corners,[631] whilst for some the coursing was so poor that they could be considered a transition phase to a more random stonework style with heavier use of mortar, as seen on later dated towers (see **type (C3)** below).[632]



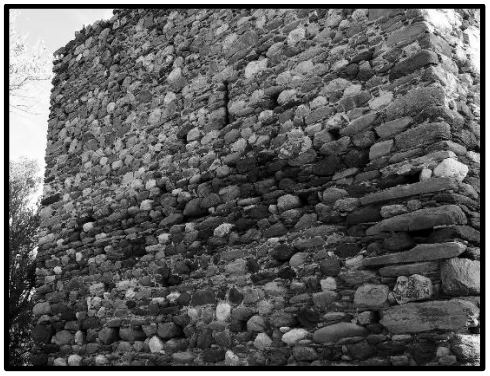
(a) Agia Paraskeve (NW2)



(b) Farakla (NE13)



(c) Karaouli (CN8)



(d) Mistros (CN14)

Plate 8.16 - Coursed Stonework examples on Euboea

Stavros Mamaloukos has compared the central tower and walls of the Livadeia fortress to other dateable buildings in Boeotia and proposes that this style can be dated to the 13th century – possibly the first half if we assume the central citadel was constructed immediately after the

οχυρώσεων του κάστρου της Λιβαδειάς. **Δελτίον Χριστιανικής Αρχαιολογικής Εταιρείας**, 33: 7-20. See also Kontogiannis (2012b).

[631] Gymno **(CW14**) on Euboea, Haliartos (**B6**) (using re-used blocks?), and the Byzantine (?) tower at Dotia (**C47**) on Chios built before 1346 - Smith (1962), 117.

[632] There is a clear impression of coursing and use of slim stone inserts to level up work on the tower at Mystros (**CN24**), which also possesses clear Byzantine style cribwork, but I was unable to adequately display this in a photograph.

Frankish annexation of the area in 1204.[633] But it could also be Byzantine, and the Franks were simply copying the construction method using local master craftsmen already skilled in the style.[634] Androudis(2012), for instance, notes that the lower (probably earlier) part of the Agios Sabbas tower on Mt. Athos, which is dated to about 1200, was built with '*well carved stones*' in contrast to the later '*irregularly placed stones and mortar'*.

Type (C3) – Random stonework towers

It appears that by the late 13th century there was a move to generally random stonework, although never completely without coursing.[635] Often it is very difficult to categorise a particular construction, but the impression is that the neatness and attention to detail of earlier work is slowly lost (although not impairing the strength of the final work) while lacking the refinements of dressed-stone door, window and arrow slit surrounds, which we see later.[636] On Euboea this is possibly a function of the general instability of the period from the mid-13th century (the need for rapid construction of fortifications at minimum cost) commencing with the civil war of the 1250's, through the Byzantine invasions of the 1270's and 1280's, and culminating in the Catalan and Arab corsair incursions in the early 14th century. The renovation of the two fortresses of ***Filla*** **(CW4)** and ***Cleisura*** **(NE24)** by the Byzantine general Licario in this period were both undertaken using random stonework, the former with a heavy use of neatly placed tile in-slips (usually horizontal), the latter, high on a mountain, lacking the use of tiles completely.[637]

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[633] Mamaloukos (2012). See plate 7 showing the central tower and neat coursed stonework - the window appears to be a later addition.

[634]

[635] The random stonework method simply has stones of varying sizes fitted together in-filled with tile and stone fragments – a scheme that is less impressive but probably stronger in that it reduces both the possibility of cracking along building lines and cheaper because it minimizes labour for stone dressing.
Veikou (2012) defines this as her type 3, noting that the mortar usually covers the joints and a substantial part of the external surface. She notes, too, that it was a technique in use in Epirus in the 9th to 11th centuries, and the lack of similarity of construction styles between Epirus and Eastern Central Greece. This agrees with my own findings - in Euboea and Central Greece this technique appears to have been introduced much later, and to have superceded the coursed stonework technique.- Veikou (2012), 114-115, 153.
In practise, a stonemason will construct in rows anyway, since he will periodically raise his scaffolding in line with the level of the work in hand. The essential difference may be that procurement of stones was more standardised under type **(C2)** and workers at the stone quarry were provided with a form to work to, This, however, was judged more wasteful in terms of the material and the labour required to extract it from the quarry and stone size ceased to be important.

[636] This is in stark contrast to the central tower (donjon) of the fortress at Thebes probably constructed by the Flemish Nicolas II Saint-Omer (1258-1294), whose architecture can compare to any contemporary towers being constructed in Western Europe at this time.

[637] There is also a possibility that coursed stonework continued in use in Italy after the Byzantine withdrawal and was then re-introduced into Central Greece in the 13th century. During a visit by the author to San Gimignano, a well-preserved medieval hill town in central Italy, it was noted that the style of construction used on areas of the





(a) Kato Steni (CN17) **(b) Ptelion (MG1)[638]**

Plate 8.17 - Random stonework with tile in-slips





(a) *Cleisura* (NE24) **(b) *Filla* (CW4)**

Plate 8.18 - Walls from Byzantine re-fortification in 1280's

A similar style of construction seems to be reflected in Central Greece. Two inter-visible towers – at Panakton (**B14**) and Pyli (**B29**) situated on the borders of Attica and Boeotia - have been excavated. Simple structures, built with stones of various sizes with tile in-slips but no quoining, they are approximately square, the first being roughly coursed, the second with

town walls changed. The base was of coursed stonework, while above this the random stonework technique was used. These walls have been dated to 1214-1263. Most of the town had been established in the 10th cemtury but by 1315 after a bout of the plague the town fell into decline.

[638] There appear to have been two phases of construction. There is a slightly discernible line at about 4 metres height. Below this there is generally coursed stonework, whilst above this level both stone size and alignment is random.

random stonework.[639] The Panakton village was occupied for about 100 years, probably commencing in the early 14th century,[640] essentially the era of Catalan occupation, making these two towers contemporary with similar Euboean towers, and the majority of towers constructed in Macedonia.[641]

Type (C4) – 'Colonial' Towers

It is around the late 14th century that this type of tower, which has survived so well,[642] seems to have made its first appearance, although we have no absolute dating of any tower. This was a period of economic recovery and consolidation of Venetian power on Euboea (1390), alliance with the Catalans in Central Greece and, subsequently, the Navarrese (1386) - a period of new 'colonial' waves of settlement, and it is this term that seems to best describe these towers They are generally to be found in or close to a settlement at about the highest point, and nearly all in Euboea and Boeotia are approximately square.[643] Their stonework is neat but not exactly coursed. While the corners are well-finished but usually not quoined, most openings were surrounded with dressed stone (often now missing).

Entry was at first or second storey level and probably via a bridge from an attached hall (see **section 8.2**) or possibly ι, while windows on the second and third floors were of a good size with arrow slits below. At each floor the walls reduced in thickness to accommodate the base for the floor joists, but only the floor at battlement level was vaulted. All those that have survived to their full height have battlements (Merlons were a mixture of rectangular and chevron style)[644] but there are indications from the Werdmuller (c.1660) sketch that many may have had simple roofs.

[639] That at Panakton, which only survives to a low height, measures 6.64 x 6.69m., is re-enforced at the corners with re-used ancient blocks and is said to have once had a vaulted ground floor - Gerstel et al. (2003).They are thus similar to many of the towers on Euboea, something established by statistical analysis earlier in this chapter.
[640] Gerstel et al. (2003).
[641] If, indeed, the Catalans constructed these towers then the basic concept, even design, may have transferred from Macedonia where they were resident for a number of years prior to their victory over the Franks in 1311.
[642] The fact that the towers have survived in such good condition only on Euboea is surprising, but this is probably due to their continued utilisation throughout the Ottoman period, during which they were probably repaired and re-pointed many times.
[643] Prime examples on Euboea are Avlonari(**CE12**), Basiliko(**CW5**), Politika(**CN3**), Belos**(SC3),** Kaddi (**CE22**), Tracheli (**CW23**).
[644] The chevron merlon was imitated in the Duchy of Naxos to the south.





(a) Boeotia, Haliartos (B6) **(b) Euboea, Mytikas south (CW2)**

Plate 8.19 – Colonial-style Towers

They are also defined by their fittings – generally a latrine, sometimes a fireplace and in one case - Basiliko **(CW5)** - a small chapel. No evidence of such sophisticated fittings could be found on any of the more rudimentary towers.[645] The impression is that the later 14th c. introduced a general gentrification of the 'tower' as Venetian power and influence grew on Euboea, and the Catalans consolidated their position in Central Greece, although we should not forget that the St. Omer tower (**type B1**) at Thebes was built in the late 13th century. This was a feature that was emerging in parallel in Macedonia, where residency in towers was already well-established on Mt. Athos and the surrounding region in the late 13th c. See, for instance, the examples of other **type B** towers in **table 8.3**. These were much more impressive and complex structures than any surviving tower built by the Latins in Central Greece, and the question must be asked as to the direction of influence, there being a seeming attempt at upgrading functional towers by the Latins in imitation(?) of Byzantine prototypes, while their primary residence was, as noted in **section 8.2**, probably the hall, archaeological traces of which have effectively disappeared.

[645] The existence of a fireplace may also suggest a later date for the tower at Panagia (**B13**) which the lack of pottery finds prior to the 13th century indicates as a Latin construction. See Lock(1986) and Vroom (1998), who notes that J.I.Bintliff believes the existence of a fireplace is simply a function of its location and exposure to the weather, a supposition which appears strange given my own experience of the generally cold winter months of January to March in Central Greece.

Type (C5) – Ottoman towers

Ottoman-period towers are outside the scope of this study. Their identifying features of cut-stone quoining and slightly pinkish masonry have already been discussed in **section 8.2** and this group is only included for completeness.[646] There are many towers, which can be designated 'Ottoman' based on documentary evidence – especially the monastic and estate towers mentioned in the Mt. Athos archives - although often we do not know if they had been built on the foundations of an older tower. There is also a well-established group of Ottoman clock towers, such as that in Chalkida,[647] which can definitely be excluded from the Late Byzantine period, although a 14th or 15th century dating, when certain areas were already under Ottoman control, is possible.

As regards the circular *White Tower* in Thessalonikē, there is sufficient evidence to place it in the 16th century from an inscription that once existed over its gate.[648] On the other hand, a good number of articles on different regions of Greece have designated towers as Ottoman, when the evidence is not definitive.[649] In Crete, although studies on individual areas and tower types have been undertaken, no comprehensive work seems to have been done for the island as a whole that correctly reflects the balance between the Ottoman and Venetian legacies.

[646] Raised mortar pointing was also considered as a possible Ottoman feature but no sign of this was identified on any towers studied.
[647] Salemi (2002).
[648] Kiel "A note on the exact date of construction of the White Tower of Thessaloniki". **Studies on the Ottoman Architecture of the Balkans: a legacy in stone**. Variorum. See also Braun (1983) Δυο τουρκικοί πύργοι της Θεσσαλονίκης, [Two Turkish towers in Thessalonike]. **Makedonika**, 23: 1-24.
[649] Langdon(1995), relying on his 'mortared' definition in Attica, avoids this pitfall But Dimakopoulos (1987) notes many towers in the Peloponnese as centres of Ottoman estates, when some may (as on Euboea) have originally been Frankish, and Paulopoulos (2008) in his review of towers and tower houses in the Mani (Peloponnese) may have misinterpreted constructions with a possible origin in the Late Medieval period - Paulopoulos (2008) **Πύργοι και οχυρές κατοικίες στην Πελοπόννησο, 15ος-19ος αιώνας [Towers and fortified residences in the Peloponnese : 15th-19th century]**. Athens.



(a) Zarnata Fortress tower[650] **(b) Krouna, Ierissos (M130)**[651] **(c) Mytikas north (CW2)**

Plate 8.20 – Ottoman period cut-stone quoining

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8.8 Type (D) – The Tower House / Mansion

Bouras (1983), commenting that our knowledge of the degree of security offered by the Byzantine house is uncertain and that the archaeological record is limited, notes how squat houses outside city walls seem to have been commonplace in the 11th and 12th centuries, although, as we have seen, in exposed coastal and border locations towers or village walls were being constructed for protection. [652] This essentially defines the form of the **type (D1)** Byzantine fortified house.

Moutsopoulos (1997) has provided a study of a two-storey tower [house] at Karytaina (**P21**), which he dates to the 15th century and is, he believes, similar in size and structure to many at the Byzantine centre of Mystra.[653] Internally it measures 4.80m. x 4.80m. on the first floor with a barrel-vaulted ceiling, above which the flat roof was castellated. Backing onto a hillside, the first-floor entrance was slightly elevated above the ground. From a small ante-chamber stairs led up to the roof and down to the blind storage area below, which was plastered with Byzantine-style crushed-brick hydraulic mortar.[654]

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[650] Situated in the Mani within the Peloponnese - Chapman (2011b) Mani: a guide and history - Zarnata. [Accessed 14/5/2017], http://www.zorbas.de/maniguide/zarnata.html.

[651] Situated on the narrow isthmus of Mt. Athos. This was originally constructed in the 14th century but the cut-stone quoining seems the result of a later repair judging from the roughly worked cornerstones above.

[652] As an example, he displays a reconstruction of a two-storey house in Longanikos in the Peloponnese, approx. 5m. wide with a ground-floor doorway, that appears to have been blocked up -.Bouras (1983) Houses in Byzantium. **Δελτίον ΧΑΕ 11 (1982-1983), Περίοδος Δ**, 1-26. Also presented as a paper at the Spring Symposium of Byzantine Studies, at the University of Birmingham, March 26, 1983.

[653] Moutsopoulos, N., '*Tower of Karytaina, Greece'* **in** Ćurčić and Hadjitryphonos (1997), 214-215.

[654] He refers to it as '*Kourasani'*.

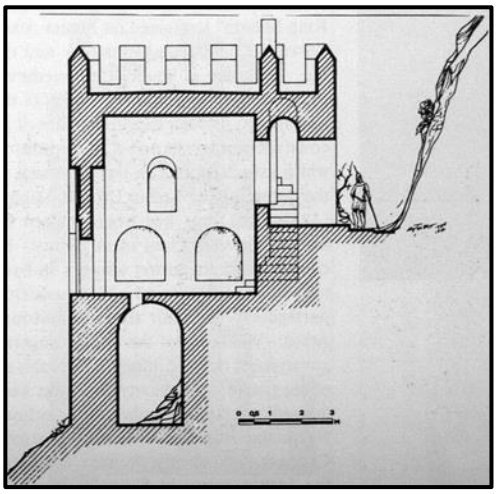


Figure 8.10 - Karytaina tower cross-section[655]

Construction included sophisticated brickwork both for structural integrity and display, which mirrors that found on much more substantial buildings in Mystra, and in the larger Byzantine **type (B2)** towers in Macedonia described above. He notes a fireplace but, surprisingly, makes no mention of a latrine. The basic 1.5 level structure of the house is very similar to many houses still found today in outlying villages on Euboea and throughout Greece,[656] the differences being that their roof is normally tiled, their walls of rendered mud-brick and, rather than a sealed basement, the lower storey has a simple door and is used for storage of implements and farm produce or stabling of animals at night.[657]

Taking these commentaries from two specialists in the field of secular architecture in Greece, we can possibly argue for the emergence of a Byzantine domestic 'fortifying' tradition reflecting the increasing insecurity of the Late Medieval period in Greece developing in parallel to the more severe tower architecture. However, the slim evidence provided is insufficient to draw any clear conclusion:: the house in Karytaina might be an outlier in statistical terms, although Moutsopoulos sees similarity in other structures at Byzantine Mystra, or it may be a process of display similar to the Latin mansion towers (**type D2**) found on the Aegean islands or others found in Western Europe.[658]

[655] Drawn from Moutsopoulos, N., '*Tower of Karytaina, Greece'* **in** Ćurčić and Hadjitryphonos (1997), 215.
[656] See examples in Cooper et al. (2002) **Houses of the Morea. Vernacular Architecture in the Northwestern Peloponnese (1205-1955)**. Athens: Melissa.
[657] Such dwelling styles were also identified at the settlement of Geraki researched by Sigalos (2004); Bintliff (2012), 422-423.
[658] See, for instance the tower houses of Ireland - Mcneill (2002).

A tower house may exist on Euboea – east of Pournos (**CN23**) – although only two walls from the ground floor now remain, one being adjacent to a small church, and it is undated. This building, set in the side of a hill with a limited viewshed, appears to have had no strategic or administrative rationale for its existence and can only have had a residential or estate function.[659] No other examples have been identified.

Type D2 – The Mansion Tower

The mansion tower is defined by its relative fragility and attempt at display. It emerges first in the late 14th century on the island of Naxos, the centre of the Venetian-controlled Duchy of the Aegean.[660] Spiliopoulou and Kotsakis (2008-2012) refer to the type as tower-houses or mansions with a tower-like form (*πύργοι, πυργόσπιτα, πυργοειδείς επαύλεις*).[661] Most of the surviving examples are from the Ottoman period but an early example – that of ***Della Rocca*** in the village of Kourounochōri,– still survives intact (**Plate 8.21**). Documentary evidence, its construction style and imposing siting on a rise just above the medieval village, which probably grew around it, indicate a dating in the late 14th century.[662]



Plate 8.21 – Della Rocca tower, Naxos (AS26)[663]

[659] Because the tower house, if it was such, may also have been from the Turkish period, it has not been shown in the tower listing in appendix 7.
[660] It included Naxos, Paros and all the Cyclades (except Mykonos and Tinos). See **chapter 3** for its links to Euboea.
[661] Spiliopoulou and Kotsakis (2008-2012). See also Kalabros and Andreakos (2006).
[662] The dating is based on a report that Nicolo dalle Carceri had left the tower to go hunting just before his assassination in 1383 - Α. Καραλής (tr.) (1878) **R. SAULGER, Ἱστορία τῶν ἀρχαίων Δουκῶν καὶ λοιπῶν ἡγεμόνων τοῦ Αἰγαίου Πελάγους, Paris 1698**,'Εκδόσεις Πατρίς, ἐν Ἑρμουπόλει. **in** Spiliopoulou and Kotsakis (2008-2012), note 17.
[663] 10.5 x 10.5 m., Kourounochori - Spiliopoulou and Kotsakis (2008-2012).

The authors suggest its defensive character as a refuge.[664] This conclusion, however, is reached when comparing the tower primarily with other towers on the island, many of which in the 16th and 17th centuries were little more than mansions (of one or two storeys). These stand in stark contrast to the military functionality of most towers in Central Greece, Euboea, Macedonia and the early 14th century Byzantine towers on Chios. Its tiny 'faux' chevron merlons, also seen on other Naxos towers, appear more affectation than functional - a display and celebration of its western ownership. The ***Della Rocca*** tower, rather, despite its embellishments, appears to be a transitional phase in tower development linking the austere towers of the 10th to early 14th centuries to the tower houses and mansions of the Ottoman period.

The mansion tower was not, however, just a product of Venetian Naxos. There are also versions on Chios, which remained under Genoese control from 1346 until 1566.[665] On Samos a tower, said to have been constructed by the Cretan Nikolaos Sarakinē in 1577 and donated to the Patmos monastery in 1602, although after the late medieval period, provides a good example of the style.[666] On Crete thirteen towers, dated to the 16/17th centuries, which appear to be a development of this type have been identified in the Mesara region. They are without castellation, measure approximately 5 x 10m. with a blind basement and two floors and have entry on the first floor (see **plate 8.22**). The two examples provided by Watrous, et al. (1997) both appear to be rendered on the outside, as are many on Naxos.

[664] They note that it probably once had an enveloping external perimeter wall with a small tower on each of its corners and cite its blind ground floor and entry on the first floor (with access by ladder to the second), machicolations on each side and crenellation.
[665] Ierapetritis (2013), 231 – the author includes a copy of a drawing from 1631 by F.Lupazzolo, which shows a tower with windows on each floor in the centre of the Kallimasia community.
[666] . Measuring 6.50 x 13m. with three storeys it possessed chevron merlons on the battlements - Kienast (1998) "Ο πύργος του Σαρακίνη στη Σάμο". **Η Σάμος από τα Βυζαντινά χρόνια μέχρι σήμερα**. Samos. 143-149.



Plate 8.22– 17/18th c. house in W. Mesara, Crete[667]



Plate 8.23 – Robies tower, Euboea (NE1)[668]

To what extent this type existed in the 15th century or earlier is difficult to say. On Euboea the best example is the tower at Robies (**NE1**), which appears to have developed from a core *solar* tower constructed in the 13th c. into an Ottoman period mansion house.

[667] Source: Watrous et al. (1997) A Survey of the Western Mesara Plain in Crete: Preliminary Report of the 1984, 1986, and 1987 Field Seasons. **Hesperia**, 62: (2): 191-248, plate55.
[668] The original tower can be seen in the background, the floors above ground having been re-built at some point, with two new extensions added at a later stage.

9 CONCLUSIONS AND IMPLICATIONS FOR RELATED FIELDS OF STUDY

9.1 Reviewing the Evidence

The 'inherited wisdom' of the past thirty years has presented the medieval tower in Greece as a creation of the 13th century - the centre of an agricultural estate within a Western European feudal tradition - imbuing it with a sense of display and control over the indigenous Greek population.[669] This is essentially a colonial model, reflecting trends in colonial and castle studies elsewhere.[670] Such an approach has ignored not only the extensive use of towers around the littoral regions of the Mediterranean Sea[671] but, more importantly, has not addressed the archaeological and documentary evidence for the existence of towers within Greece from as early as the 10th century - well before the annexation of Constantinople by Latin forces in 1204.[672]

Looking beyond architectural styles into the methods and materials of tower construction, the main body of research in the present work has striven to understand the tower's development within the context of the political, military and economic history of the island of Euboea. The identification of a spy-engineer's sketch map from the 17th century, which shows two surviving towers close to the capital ***Negroponte***, provides a breakthrough in our understanding of the tower.[673] No longer should we consider it as a stand-alone monument, but as part of a much larger complex of buildings, one – the hall – even over-shadowing it. The tower's construction from stone whilst other buildings - even sometimes the related church - were probably of wood or mudbrick faced with mortar has created a false impression in the archaeological record, as has the fact that some towers were also probably of wooden construction.[674]

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[669] See, for instance, the most recent article by Loizou (2016), also Sigalos '*Regardless of their precise function they [towers] should be treated as major symbols of status and prestige, indicating with their height and fortified nature the superiority and authority of the owner*' - Sigalos and Eleftherios (2004) **Housing in medieval and post-medieval Greece / Eleftherios Sigalos**. Oxford: Oxford : Archaeopress

[670] '*the architectural output that shaped the public, official landscape of Latin Greece ….. can be best understood in colonial terms.'* - Georgopoulou (2014).

[671] See **chapter 7.**

[672] See **chapter 7** and, for instance, Smyrlis (2016).

[673] See **chapter 8**.

[674] For analysis of similar materials on Mt Athos see Giros (1992a) Remarques sur l'architecture monastique en Macédoine orientale. **Bulletin de Correspondance Hellénique**, 116: (1): 409-443.

Having demonstrated in **chapter 8** that the tower pre-dates the arrival of Latin forces in Greece, that it cannot be treated as simply a Latin feudal imposition on the Greek countryside and that there are a multiplicity of designs, **section 9.2** in this concluding chapter addresses its various purported roles, focussing firstly on that of communication, something generally dismissed by recent writers. The following section then brings all this evidence together to postulate a new framework for the development of the medieval tower in Greece.

Section 9.4 develops a tentative new conceptual basis for understanding the tower, both as an individual artefact and within a wider landscape. The chapter ends by examining the implications of the new evidence identified and conclusions reached in the present work for related fields of study: redefinition of the so-called *Frankokratia*, consideration of Byzantine influences on the development of the Norman 'great tower', and the need for a revised approach to research into the Late Medieval built environment. Discussion of these issues in detail is beyond the remit of the present thesis but does throw up directions for future research.

9.2 The Various Roles of Towers

> *'…all building of pretty well any age contains in its design an element of display. But that display should seldom be considered the complete reason for construction…….any close examination of the design of individual great towers reveals that almost every one is a unique building. Very few fall into categories……'*
>
> The Myth of the Keep, Philip Dixon[675]

9.2.1 Understanding functionality

It is not only in Greece that there is a problem of understanding the role of the tower: in Western Europe sixty years after the publication of the provocative book, *English castles*, by R. Allen Brown there is still a vociferous debate over its function (and that of the 'castle') within France and Norman-held England. The weight of opinion in recent years appears to prioritise its symbolic role and that of display within an administrative/judicial/agricultural environment,

[675] Dixon (2002) "The myth of the keep". In Meirion-Jones, et al. (Eds.) **The Seigneurial Residence in Western Europe AD c800–1600**. Oxford: BAR International Series 1088. 9-13.

rather than a defensive military function,[676] a trend followed in recent publications on towers in Greece,[677] yet the case is by no means fully proven.[678]

The discussion on architectural features of towers and their typology in **chapter 8** demonstrated that not only do towers have many forms, but that these forms are often defined by the role that they play in the countryside. There are clear intimations that *pyrgaria* and *Vigles* (**Type A**) were constructed for a purely functional military/strategic role, whilst at the other extreme in the late 14th and 15th centuries the '*hall tower'* (**type B**) with its residential characteristics merged into the *mansion-tower* **(type D)**, the prime roles of which were essentially 'display' and 'residence'**.** What is evident, however, is that the intended role of a tower and its practical function are often very different. There is also a diachronic metamorphosis as the circumstances both of its owner (or new owner) and the local and regional environment change. Radical re-interpretations have also occurred when new understandings of the local landscape have emerged. In Samaria, for instance, thousands of towers considered markers or elite constructions were suddenly realized to be simply for storage of grapes and wine as local agriculture and trade came to be better understood.[679]

This section follows the methodological precepts laid out in **chapter 1** – that we must look at the whole picture, avoiding a focus on individual monuments. Thus, rather than studying each of the possible roles of towers in a serial process, having first analysed the role of the watchtower or beacon, which must be considered primarily within a regional context, it takes an area just to the north of ***Negroponte*** and studies the function(s) each of the nine local towers fulfilled over time, looking both at the historical context and their hinterland. The various purported roles of the tower in Greece are summarised in **table 9.1**, dividing them between a public and private function. These should not be considered mutually exclusive. As will be seen a tower can be both public defensive and private agricultural, each role not diminishing but enhancing the other.

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[676] Lorans (2014) – she writes 'Aujourd'hui, les chercheurs qui les étudient insistent sur la fonction ostentatoire et symbolique de ces hautes tours plus que sur leur capacité défensive'; Marshall (2002).

[677] *' …..meant to be status symbols or to serve as administrative bases and provide storage for resources.'* - Jacoby (2001a). – *'….the towers served as an administrative centre of the fief and symbolised the status of the lord by marking his position as ruler of his domain.*'- Loizou (2016).

[678] See, for instance, Platt (2007) Revisionism in Castle Studies: A Caution. **Medieval Archaeology**, 51: (1): 83-102; and Vionis (2014). He notes that *'towers* [in Byzantine areas] *served as guard posts, landmarks, and storage units of agricultural revenues.*'

[679] Dar (1986) **landscape and pattern. An archaeological Survey of Samaria 800 BCE. to 636 CE.** Oxford: BAR International Series. 88-125

PUBLIC	PRIVATE
Watchtower /beacon	Estate Centre administration
Defensive / offensive	Defensive
Marker	Marker
Administrative (roads /ports)	Control of estate and workers
Display (Prestige)	Display (Prestige)
Tax Collection	Residential
Prison[680]	Agricultural

Table 9.1 – Purported roles of towers

9.2.2 Beacon Networks

Beacons are an essentially military communications tool of international character developed, not just over centuries but millennia, primarily along the littoral seaboard of the Mediterranean basin, but also along the German border of the Roman Empire, and on both sides of the English Channel in the Late Medieval period. They depend on height to ensure visibility out to sea or over the surrounding countryside, and for inter-communication between themselves and the central base. Their organisation is complex and requires a strong central power (or inter-community agreements) for them to be effective.[681]

In **Appendix 7.4** a network to warn Constantinople of impending Arab attack in Cilicia and a possible chain of towers in the Peloponnese in the 9th century are described. Archaeological evidence exists of a beacon tower as an extension of the fortress at Monembasia in southern Greece, one on Rhodes,[682] and another in North Africa.[683] At a more tactical level watchtowers (καμινοβίγλες) were in use to watch for enemy movement on the borders with the Arabs in Syria.[684] The Arabs themselves also established their own networks along the North

[680] Included for completeness, although this has only been proposed for towers of the Classical and Hellenistic period - Morris and Papadopoulos (2005).

[681] Thus, for instance, the old Roman networks along the Rhine-Danube borders of the empire broke down after the 6th century as the empire itself broke up - Southern (1990) Signals versus Illumination on Roman Frontiers. **Britannia**, 21: 233-242. This is also a point made about the Mamluks in North Africa during the 13th and 14th centuries, when comparing them to the Abbasids and Franks. The Mamluk centralised power allowed a much better organisation of forces providing a fine balance between frontier forces and their field army, something that we also see reflected in the Venetian organisation of Cephalonia in the 16th/17th centuries. - Raphael (2011) **Muslim Fortresses in the Levant: between Crusaders and Mongols**. Routledge, 208.

[682] Heslop (2008) "The Search for the Defensive System of the Knights in Southern Rhodes". In Upton-Ward (Ed.) **The Military Orders, 4: On Land and by Sea**. Ashgate. 189-200.

[683] A wall extension had been deliberately constructed with a tower at its end at the fortress and monastery of Qal'at Sim'an in the 10th century. A similar extension had been constructed at Monembasia possibly in the 8th or 9th centuries - Lawrence (1983).

[684] '*Πέρι Παράδρομης πολέμου του Κύρου Νικηφόρου του Βασιλεώς'* **in** Hase (Ed.) (1828) **Leonis Diaconi Caloënsis Historiae libri decem. et liber De Velitatione Bellica Nicephori Augusti**, Bonn: Corpus scriptorum historiae Byzantinae 185, folio 375

African shore, and the Normans and Franks on both sides of the English Channel used fire signals to warn of an approaching enemy.[685]

Bon's suggestion (1937), supported by Koder and Hild (1976), of a communication network along the Kifissos river in Boeotia,[686] and the identification of a chain of towers linking western Euboea to the Aegean coast by Johannes Koder has been challenged by recent writers,[687] who believe that there is little inter-visibility between towers, yet no rigorous study has been undertaken to prove or disprove their existence. Initially, researchers were forced to make observations in the field,[688] but recent advances in Geographical Information Systems (GIS) now obviate the need for this.[689]

Effective viewing distance is also an issue rarely addressed in the literature. In the Aegean visibility, even in the summer months, is limited by the high atmospheric humidity and dust

[685] Coulson (2003), 264. He notes documentary evidence that beacons were to be set up '*as is usual'* in 14th century France under threat of English attack.

[686] This had first been suggested by Colonel Leake in 1835, who had written that the towers in Boeotia '*seem to have been intended for communication by signal'* - Leake (1835), 144.

[687] Koder (1972) "Zum Festungssystem Euboias während der Zeit der Venezianerherrschaft". **Actes du IIe Congrès international des études du sud-est européen Athènes, 1970**. Athens. 441-447. For an opposite view see Lock (1996).

[688] A number of errors have been noted in the literature suggesting inter-visibility when there is not and vice-versa. Interpreting line-of-sight for an observer at 15m. height and object of observation at 15 m. height from ground level, when the researcher (2 m. height) is looking to a point on a distant hill (<15 m. height) is very difficult, and nearly impossible without sophisticated instruments if the object of observation is beyond the immediate hill in view The author has also been personally misled many times on field trips, when using traditional contour maps, often having to correct conclusions on return to base.

[689] Problems still occur, however. The present study uses elevation data with an accuracy based on 90m. x 90m. squares. Within an open plain this is quite sufficient, but as the land becomes more mountainous the possibility that there is a significant spike or dip within this area increases. Various interpretation programs are available within the GIS software to mitigate this, which may make landscape visualisation more accurate (the ArcGIS program offers various digital elevation models (DEM), one of the most commonly used of which is the triangulated irregular network - TIN). It was felt, however, that, since the height (or lack) of tree cover (up to 20m. height?) on any intervening hill is also unknown, as is the actual height of each tower since few have survived to their full height, such transformations of the raw data only added a further level of complexity and may not necessarily have improved accuracy. A standard height above ground of 10m. was assumed both for viewer and viewed but, where there was some doubt as to inter-visibility, this height was increased and reduced to check for possible errors. A similar study of inter-visibility was undertaken along a length of Hadrian's wall in Scotland, for which a height of 10m. was used – Lindsay (2006) **To what extent can a GIS intervisibility study contribute to our understanding of the Gask Frontier System?** BA Archaeology, University of Durham.
For a discussion on DEM's: Conolly and Lake (2006) **Geographical Information Systems and Archaeology**. Cambridge, 100-103. For greater accuracy 30m. x 30m. elevation data would be preferable, but it was found that the long distances involved in the chains of beacons under study created, even with 90m. x 90m. data, an overload on the author's computer processing capacity. Assuming, however, that the maximum incline of any area is 15% then there is a maximum potential for error of 13.5m., whilst tree cover, which we can only guess at this date, may be over 20m. in height. See also a discussion on a GIS project on the island of Rhodes, where similar problems were encountered: Zafiris and Brokou (2002) "GIS and Space Analysis in the Study of the Hospitallers' Fortifications in the Dodecanese". In Burenhult and Arvidsson (Eds.) **Archaeological Informatics: Pushing The Envelope. Computer Applications and Quantitative Methods in Archaeology. Proceedings of the 29th Conference, Gotland, April 2001**. Archaeopress, Oxford. 149-156.

levels.[690] This issue is analysed in detail in **appendix 9.1**. It concludes that effective viewing distance for a defensive network, where a high level of reliability is required, is limited to 17 kilometres. Additionally, the size of fire required beyond this for night-time signalling – of diameter greater than 4 metres – precludes the use of a tower: there is simply insufficient space on its upper platform. Thus, the lack of towers on hills – especially for longer-distance communication - cannot be used as an argument against the use of towers as part of beacon networks,[691] and it is not surprising that we find towers in generally lowland or valley locations where, if they are used as beacons, their height is a necessity to project above the surrounding tree cover, other buildings and local land undulations.[692]

The importance of the effectiveness of a communication system can be seen in a GIS study undertaken of the Hospitallers fortifications in the Dodekanese, centred on Rhodes. Their ability to track potential attackers and a rapid response by their fleet seems to have been the key to their success against Turkish incursions.[693] In a similar manner a study of the Byzantine fortifications of Thrace from the 9th to 15th centuries concluded that, whatever the strength of the fortifications '*the best defence of the coast was provided by a well-trained, war-ready and sufficiently numerous force of soldiers'.*[694] Given the general lack of resources to continuously garrison every coastal and border fortification this could only have been provided by a central strategic reserve, the effectiveness of which would have been dependent on an early-warning system.

During the Middle Byzantine period three long distance beacon networks with a focus on Thebes, the administrative centre of the *thema* of Hellas, can be identified in Central Greece and Euboea.[695] Their role appears to have been to warn against Arab incursions in the 9th to 10th centuries, that is, until Crete was reconquered in 961 :-

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[690] Dust clouds blown from as far as the Sahara by strong southerly winds are a common feature of the weather pattern in the summer months.

[691] Thus the argument by Lock(1986) of no inter-visibility between the two towers at Pirgos (**B17**) and Thurion(**B22**) would fall away if a sentry was stationed on the hill of the Hellenistic citadel at Orchomenos that lies in between, since he would not only have been able to view both, but the relatively short distance would have meant that any summer heat haze would not have prevented his signal being seen.

[692] A corollary of this is that the use of the tower at Acrocorinth for long-distance communication postulated by Rife is unfeasible. More probable is that a fire was lit somewhere within the fortress, which is very high, and that the role of the tower needs to be re-examined - Rife (2008).

[693] Zafiris and Brokou (2002). See also Heslop (2008).

[694] Tsouris (2012a) "Η αμυντική οργάνωση των Θρακικών και Μακεδονικών ακτών απο το 9ο μέχρι το 15ο αιώνα". In Damoulos (Ed.) **Η Οχυρωματική Αρχιτεκτονική στο Αιγαίο και ο Μεσαιωνικός Οικισμός του Αναβάτου Χίου, 26-28 September 2008**. Chios. 561-588.

[695] See **appendix 9.1** and **map 9.1** for full details. There were probably also networks towards the northwest, where one *pyrgari* has been identified, and around the Gulf of Corinth, but these remain to be researched in detail. For similar networks in Anatolia: Haldon, John (2013) "Information and War: Some comments on Defensive

- From Cape Phalasia on the north-eastern coast of Euboea via ***Cleisura***
- From the eastern (Aegean) seabord of Euboea over Mt Dirfis (Koder's hypothesis) then across to watchpoints on the mainland
- From Naxos via a chain of islands to Andros, up the western coast of Euboea, joining with a chain around ***Disto,*** then across to the mainland[696]

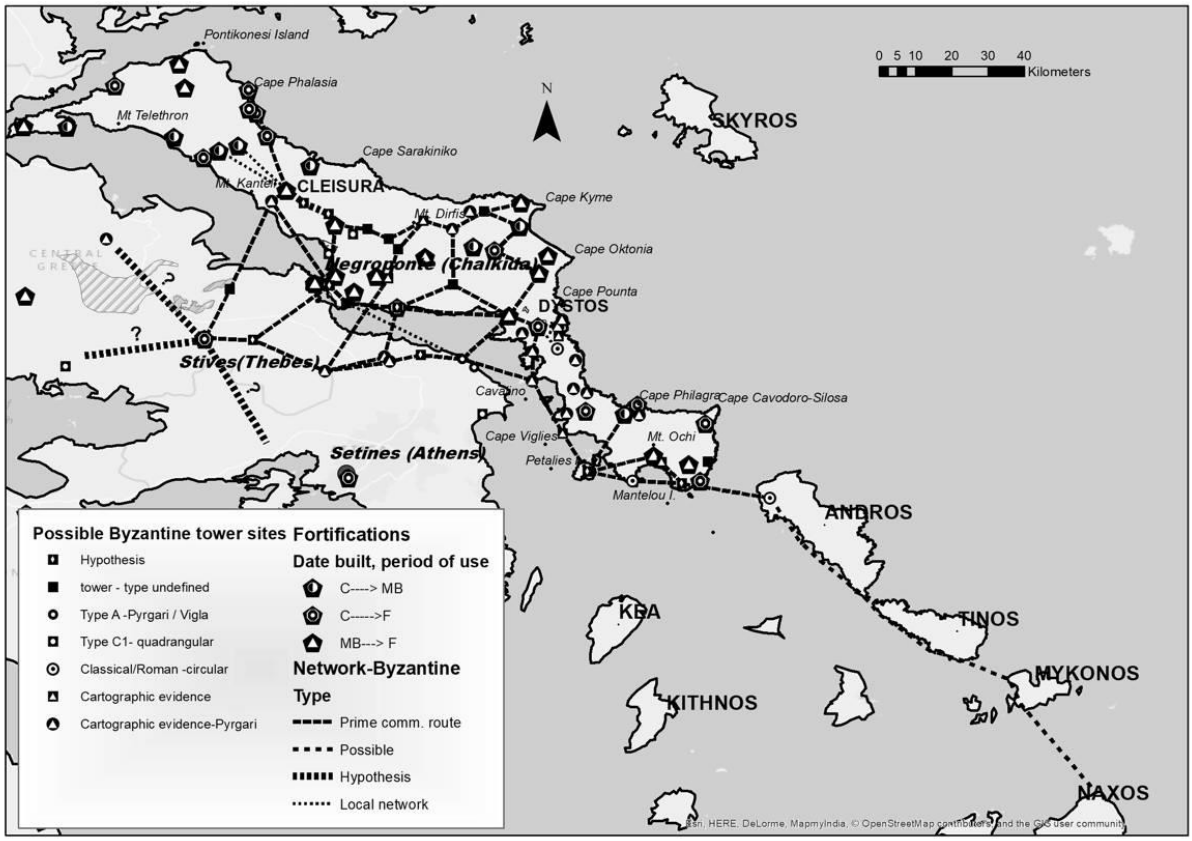


Figure 9.1 – Middle Byzantine Networks

Additionally, two localised defensive networks, which appear to be protecting the rich central agricultural core of the island, can also be distinguished.

Strategy and Information in the middle byzantine Period (ca. A.D. 660–1025)". In Sarantis, A. & Christie, N.J. (Eds.) **War and Warfare in Late Antiquity: Current Perspectives**. Brill. 373-397.

[696] This may have commenced at the fortress of Apaliro on Naxos, which is known to have existed from the Middle Byzantine period: Crow, Jim, Turner, Sam and Vionis, A. (2011) Characterizing the Historic Landscapes of Naxos. **Journal of Mediterranean Archaeology**, 24.1: 111-137.

- Controlling southerly approaches around the classical and medieval fortress of ***Dystos*** **(SC7),** which is encircled by seven watchtowers on the surrounding mountains (**map 9.2**).
- Controlling the northern approaches centred on the probable (Justinianic?) refuge fortress of ***Cleisura*** **(NE24).** This is linked to an apparent line of fortifications stretching from the eastern to western coasts of the island (**map 9.3**).

It is clear from documentary evidence that networks of beacons also existed during the Late Medieval period. In 1264 a review was undertaken of the ecclesiastical estates on Cephalonia by the Latin Archbishop, which made reference to many watchtower-related names including the only early documentary use of '*pyrgari*'.[697] In its ultimate form in the 16th century we have documents detailing a sophisticated Venetian network on the island, noting the planned construction of 126 watchtowers and the personnel and resources necessary to maintain it.[698] The best surviving defensive network is that of over 50 watchtowers established by the Genoese in the 14th century on Chios.[699] Following my own survey,[700] a probable communications network linking the Venetian fortresses of ***Modon*** and ***Coron*** in Messenia has also been identified.

As regards Euboea, in the early 15th century John II Crispo (1418-1433), the Duke of Naxos, was requested to resume his agreement to provide forewarning to the Venetians on the island of approaching Turkish corsairs.[701] This message would probably have followed the original Byzantine chain of beacons via Venetian-controlled Mykonos, Tinos and Andros, and then a series of beacons on the west coast of Euboea (**figure 9.1**) up to ***Negroponte***.[702]

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[697] Το Πρακτικόν της Λατινικής Επισκοπής Κέφαλληνίας του 1264 και η Επιτομή του. In the *praktikon* 'από το βιγλατ[όριον], l 121; 'χωράφιον του Βιγλατορίου', l 150; 'της Βυγλός του Ἀνεμοδουρίου', l 377; 'χωράφιον της Βυγλός', l 387; Τά Πυργάρια', 812; 'του Πυργαρίου', 814; 'τό καταράχιν των Βυγλών', l 951. In the abstract: 'στην Βίγλα στό Ἀνεμοδουρίον', 15v: l 21; 'χωράφι τὴς Βίγλας', 13v: l 15; 'στο Βιγλάτο', 19r: l 2; 'στα Βιγλατόρια', 15r: l 1; 'ἀπό τόν Πυργάριον', 24r: l 17.

[698] Apart from research by Arakadaki (1989) on Crete there is a series of dissertations supervised by professor Varelidis at ATEI Peiraeus - Kritikos and Maroulis (2007) **Βίγλες - βαρδιόλες Κεφαλονιάς**. UG Dissertation, ATEI Peiraeus, 88-90. Networks of Venetian towers have also been identified on Crete -; Mastorakis and Manolis (2006) **Φρυκτωρίες στην Κρήτη - αποτύπωση-χωροθέτηση**. UG Dissertation, TEI Peiraeus – and other Aegean islands.- Kitsos (2010); Mylonas and Siafla (2005); Stamatopoulou et al. (2007) **Βίγλες - Βιγλατόρες στο Αιγαίο: η περίπτωση της Σκιάθου**. UG, TEI Peiraia.

[699] see **appendix 9.1** and type **A2** towers in **chapter 8.**

[700] This entailed both desk research and visits to the sites. See **appendix 9.5**. Certain towers had already been identified by Nikos Kontogiannis but their links had not been fully specified - Kontogiannis (2012c)

[701] Thiriet (1958) II, no.2184 (3rd March 1430). (1890-1900), III: 372. This notes the use of beacons and that the Duke had stopped such warning as a result of his peace agreement with the Turks.

[702] The islands of, Tinos, Mykonos and Andros stand between the two and were all linked to Venice (the first two under the control of the Ghisi family from 1207 and directly under the control of the bailie of ***Negroponte*** in 1392, the last under Marino Dandolo and his successors - Thiriet (1959) **La Romanie vénitienne au Moyen Age : le**

Evidence of a watchtower tax (*vigliatiko*) also suggests that in this period there was a comprehensive network of beacons throughout the island.[703] In order to prove this, using GIS. a study was undertaken of the line-of-sight linkages between all recorded towers,[704] tower and beacon sites identified from maps,[705] and probable Venetian garrisoned fortifications (11 – **table 6.4**). **Map 9.4** shows all the towers and larger fortifications that have been identified in central Euboea, and where there is line-of-sight between them. A core chain of towers emerges linking ***Mantugo*** (**NE17**) in the north with ***Disto*** (**SC6**) in the south. At its centre, just south of ***Vumi*** (Bounoi), lies the tower of ***Skountéri*** (**CN22**), the name of which seems to derive from the Italian '*escuderia*' meaning 'stables',[706] suggesting that this was the centre for a strategic reserve. This is further re-enforced by the existence 2.8 kilometres distant (in the village of Mistros (**CW23**), where troops were probably barracked) of a tower whose first-floor arrow slits have been skewed to allow recognition of a complex signal from the direction of the ***Skountéri*** tower. A full analysis of this and possible ancillary networks is outlined in **appendix 9.1.**

développement et l'exploitation du domaine colonial vénitien (XIIe-XVe siècles) PhD, Paris: Université de Paris. 360 & 397; Thiriet (1958), no.1637, 19 Jan 1417; Vasilopoulos (2015) **Λατινοκρατία στην Ανδρο: κάστρα, πύργοι, εκκλησίες και φεούδα**. Andros, Greece, 19-22; Miller (1908), 365. This therefore pre-supposes that a network of coastal beacons ran up the length of each, in order to signal up to Euboea. A document from 1621 describes the network that existed on Tinos at this date (first referred to in 1561).There existed 35 permanent watchpoints manned by villagers in each region, with two paid guards on three bays and a company of 60 Albanians on a fourth, and 11 bays during the summer months with two guards each -Moschonas (1965-66) Η οργάνωσις των ακτοφρουρών της Τήνου υπο του Βενέτου Συνδίκου Ιερωνύμου Da Lezze (1621). **Ἐπετηρὶς Ἑταιρείας Κυκλαδικῶν Μελετῶν**, 5: 668-687A.

[703] (1890-1900), 125-127 – This document, dated 4 Februaury 1415, provides an answer to the embassy from the island requesting help following Turkish attacks on the northern areas of '*Lepso, Litada, Lalutra, Similes [?], et altri luogi e caxali'* in which 1,500 inhabitants had been captured. Apart from ordering ships to be sent for the area's protection it also exempted the affected towns for five years from various taxes – *'...sint exempti et absoluti per quinquennium ab angariis et datiis infrascriptis, videlicet a capinicho et **vigliatico**....'.*

[704] As per Skouras (2003) – see **chapter 5**.

[705] See **table 5.2**.

[706] This word may also form the base for the English *'squad',* a small military unit. There is a possible alternative derivation from σκουντέριος, meaning literally 'shield bearer' and used in a ceremonial role at court (Kazhdan, et al. (Eds.) (1991) **The Oxford dictionary of Byzantium**. Oxford. 1913), but this is only first mentioned in the 14th century. It is thus unlikely, since at this date the island was already under Latin control. However, if such a term had been in use at an earlier date, then two possible explanations emerge. The title could have been bestowed on the Byzantine General Licarios in the 1270's and 1280's (he had been a member of the imperial guard and was later to receive the title 'doux') and possibly he had made his operational base here when laying siege to ***Negroponte***, an obvious position since it allowed him with a relatively small force to react to any sudden foray from the city north or south. Alternatively, it was a much older term used in the Middle Byzantine period to refer to a central Byzantine strategic reserve based here, thus providing further support for the existence of a Byzantine defensive network on the island.

9.2.3 A Case Study: The Psachna plain in Central Euboea

The Psachna plain (**Map 9.5**) just north of ***Negroponte*** with its light alluvial soil is one of the best agricultural areas on the island. Two crops per year are possible, since it is one of the few areas with a continuously flowing river, the Bailelekas, a name (the Bailo's stream) which may derive from the area's ownership by the Venetians at some point. On the west it is bounded by the Gulf of Euboea and to the east lies an extensive upland plain and the large town of ***Vumi*** (Bounoi – **CN18**) with its six medieval(?) churches in the foothills of Dirfis mountain (1,743 m.). In the immediate area there are nine towers, 17 churches, two monasteries, the fortress of Kastri (***Holorita***? – **CN5**), the fortified town of Kastella (**CN6**), two other undated fortifications, and the settlement of ***Vatonda*** (**CW26**), close to which the Byzantine general Licarios defeated the Lombard Lords in the 1270's.[707] It appears to have been continuously occupied during both the Middle Byzantine and Frankish periods and thus provides a representative area for understanding the roles and inter-relationships of the medieval tower. The nine towers are summarised in **table 9.2**.

Site	No.	Name	Remains	Comments
CN7	158	Karaouli	4 m.	Control of road traffic
CN8	159	Paragali	unidentified	Estate tower (?), Ottoman (?), 1 church
CN8	156	Karaouli-Barka	foundation	Control of harbour – now silted up
CN8	206	DuoBounoi	foundation	Bigla(?), (MB?), control of salt pans, (?) church
CN11	135	Bailelekas	15 m.	(MB?) Control of east-west movement, 3 churches
CN12	140	Fēges	foundation	Estate tower – 4 churches (2 MB)
CN12	270	Triada	Hypothesis	Estate tower – monastery, 5 churches (2 MB)
CN19	111	Pissonas	12 m.	Estate tower, control of aqueduct, 1 church (MB)
CN6	64	Kastella	lost	Estate tower – monasteriy, 1 church

Table 9.2 – Towers in the Psachna area

Of the nine towers four appear to have had a clear communal function – Duobounoi as a Bigla to control shipping approaching from the west and to protect the salt pans,[708] Bailelekas to control (and tax?)[709] the probable heavy east-west traffic of goods and people at the gap in

[707] Paliokastro **(CN2**), a probable Roman era fort on the coast, and Profitis Elias (**CN7**), a possible Justinianic era refuge fortification, as was most probably Kastri (**CN5**) originally

[708] A Venetian Assembly minute confirms its local production as *'salt from Negroponte'*- Thiriet (1971), no.1 187 (1414). A tower was used on Corfu by the Venetians to protect their salt workings there - Thiriet (1958), I, no.850 (1394) - and a tower at Nea Lampsakos (4 km. southeast of Negroponte, **CW6**) possibly controlled the salt pans noted on a chart along the coast west of the village - British_Admiralty (1860)
Similarly, the tower at Thisbē / Kastorion in Boeotia (**B21**) appears to have been used to control Byzantine state Murex production (see **chapter 8**) – A. Dunn (personal communication).

[709] Such a role is also seen for a tower, whose ownership was in dispute between the Venetians and Giuglielmo Sanudo of ***Negroponte***. It was especially useful, as noted in the minute of the Senate, for collecting the *commercium* (customs duties): Thiriet (1958) I, no.371 (1361). The Venetians had undertaken repairs to the '*couverture, escalier et barbicane'* of the tower. Unfortunately, the minute does not note if this was an internal or

the hills that separates the Psachna plain from the higher land to the east;[710] Karaouli-Barka to superintend the harbour (now silted up)[711] and Karaouli to control north-south movement along the road around the marshes. Two towers may be seen in a monastic estate context – Kastella and Triada, although the existence of the latter is only hypothetical.[712] Paragali, judging by its location name and setting – close to a water source yet away from the marshes - may have been an Ottoman çiftlik.[713] The positioning and plan of Fēges, built on a hill above the settlement with an integral church, is suggestive of a Frankish estate tower, but the role of that at Pissonas is difficult to define.[714]

These last two towers do, however, have two things in common: they have clearly been positioned as a marker set atop a prominent hill, and each has signs of a possible light circuit wall. In this context an observation by Lock (1986) is significant. He notes two types of tower – those over 15 m. with a ground floor plus at least three storeys above, and a second group with no more than three storeys in total, entrance at first floor level and a height less than 15m. The latter may relate to an original defensive rationale for their construction, since further height was simply superfluous to their role as a refuge. This suggests that the taller towers – such as those at Athens **(A33),** Haliartos (**B6**) and Hypsilanti (**B8**), and on Euboea at Mytikas

external stairs, or its location – either this or possibly Levkanti (**CW6**), a tower which was first noted by Skouras (2003, no.83) and is situated conveniently for ships off-loading at Levkanti, thus avoiding the dangerous shoals and narrows in the approaches to Negroponte, especially in the event of adverse northerly winds. My own visit noted its location on a low knoll next to the church of Agios Georgios 50m. away and suggestions of other buildings in the area, although most now over-built by modern construction. The beach, which shelves rapidly, would have been good for most smaller boats. It is close to the site of an ancient settlement, Xeropolis, which dates back to the second and first millennia B.C. - http://lefkandi.classics.ox.ac.uk/settlement.html.

[710] Two towers close to the Strymon river crossing at Amphipolis, it has been postulated (Zekos (1998)), had a similar function – to collect the 'ποριάτικο' – although, given their position some way from the main road and with one not close to the river there is some dispute about this – A. Dunn (personal communication).

[711] Similarly, the towers at ***Protimo*** harbour (Karabos, **SC1**) close to Aliveri and the *bourtzi* (**S9**) on the shore at Karystos were there both to protect and administer - Ntafi (2017) "Η κεντρική Εύβοια στο τέλος της αρχαιότητας. Ένα σύνολο αγγείων από τον υστερορωμαικό και πρωροβυζαντινό οικισμό στις εγκαταστάσεις της ΔΕΗ Αλιβερίου". In Tankosic, et al. (Eds.) **An Island between Two Worlds: the Archaeology of Euboea from Prehistoric to Byzantine times, July 2013, Eretria**. Norwegian Institute at Athens. 469-492.
One existed at Naupaktos, which was in need of repair - Thiriet (1958), II, no. 1172. Another may have existed in the harbour of Candia, where an officer is termed '*capitaine de la tour du môle*' - Thiriet (1958) II, no 1336 (1408). Instructions were also given for the repair of '*the harbour tower'* at ***Negroponte***, presumably (but not necessarily) that in the centre of the Euripos strait - Thiriet (1958) II, no.1534 (1414).Lock (1986) notes others at Livadostro, Antikirra and Kirra. [711] Langdon (1995) identifies a number of coastal towers in Attica. He notes two at the entrance to the harbour at Peiraeus: one square built over an older circular one and a circular tower standing on the other side between which a chain was suspended.

[712] See **CN12** in **appendix 5** for details.

[713] Its exact position is called *Baïram Aga*.

[714] An early church attests to the settlement's existence in the Middle Byzantine period, whilst its proximity to the 27 km. aqueduct supplying ***Negroponte*** with water provides a potential communal role from as early as the Roman period, yet the tower itself has suffered many interventions and may be Ottoman, and there is plenty of good agricultural land in the vicinity to suggest an estate role.

(**CW2**), Belos (**SC3**), Avlonari (**CE10**) and at Politika (**CN3**), just to the west of the area under study – were also, as Lock succinctly writes, about '*seigneurial pretensions'*.[715] Their dressed stone window and door surrounds, and enhanced facilities, including domestic comforts, re-enforce their identification as part of a 'colonial' type (**type C4**), the construction of which, whilst having a basic military rationale, was also about elite display and marking the owner's possession of the fief.

What is somewhat surprising is that all towers, whatever their role, have line-of-sight to another tower or major fortification, and that this is true for ALL of the towers on the island. There is thus a prima facie case for arguing that all had some form of communication role, not just those identified as a direct part of the beacon network in **section 9.2.2**. This is a point analysed in detail in **section 9.4.** where a possible conceptual framework is developed.

It has already been demonstrated in **chapter 8** that, at least in the Lelantine plain, *solar*-type towers (**type C**) were not generally used as domestic residences, except possibly for sleep at night as halls existed alongside the towers. Although the evidence is limited, there is nothing to indicate that the use of estate towers in this area, all of which were probably **type (C)** was any different.

One secure conclusion does emerge from the analysis of the area: five towers are found in an estate context in the centre of good agricultural land, whilst four have a communal role. This, linked to their inter-visibility, overturns the prevalent view that towers had only a minimal strategic function but still does not adequately define their primary function. To understand this, we need to integrate the archaeological evidence with the written record. Euboea unfortunately cannot supply this – no local written evidence has survived from this period. Peter Lock has made good use of the Venetian archives but since his original article in 1986 substantial evidence has emerged from the monastic archives of Mt. Athos. This is the focus of the following section.

9.2.4 The agricultural and defensive roles

Over the last twenty years Greek researchers have used a combination of the archives of Mt Athos and the archaeological record in Macedonia to provide the foundations for a new

[715] Lock's justification of crenellation for such a reason may be correct for the type (A) tower, but there was probably originally a real perceived defensive role in the shorter type (B) tower.

understanding of the medieval towers in northern Greece.[716] The most important conclusion to be drawn from this literature is the recognition that towers existed in a monastic estate context from as early as the 10th century - prior to the conquest of Constantinople in 1204 and the arrival of Latin forces in Central Greece.

The origins of agricultural and defensive roles within both lay and monastic contexts can, however, be found at a much earlier date in Byzantine North Africa in the 6th century, where Belisarius did not reconstruct the old Roman walls of many towns after his re-conquest but followed a different defensive strategy. Thus, Sufetula (Sbeitla), an unwalled town, contained a fort and on its approaches five residential towers, which varied in size up to 20m. square with two or three floors.[717] This was a natural extension of the refuge fortifications developed under Justinian (r.527-565) but, whereas most were constructed to repel a well-organised and sophisticated enemy the tower may have been deemed quite sufficient (or even more effective?) to repel possible sudden attack by small groups of extremely mobile local tribesmen,[718] a type of enemy not dissimilar to the Turkish corsairs faced by both the Byzantines and Latins in the Aegean.[719]

Decker (2006), in providing a review of the surviving tower structures in the region, describes how towers (mostly private) were vital features of the agricultural landscape along the Levantine coast, having both a domestic and a security function.[720] One tower already noted **(figure 8.**5), in a corner of the 9th century monastic complex of *Satyros* (Küçükyalı, southeast

[716] Theocharides (1996, 2001), Papaggelos (2000), Smyrlis (2016) and Zekos (1998).

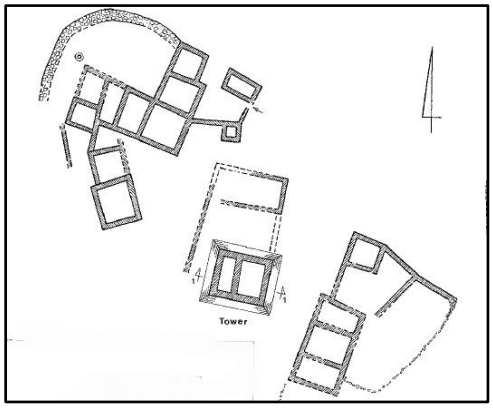
[717] Lawrence (1983), note 44. See also Pringle (1981) **The defence of Byzantine Africa from Justinian to the Arab conquest: an account of the military history and archaeology of the African provinces in the sixth and seventh centuries, Volumes 1-2**. Oxford: B.A.R.

[718] An inscription on the Lassus tower constructed in 551 in central Syria states that it was a '*tower of refuge'*- Decker (2006). Gibbon, incredulous at the number of 600 quoted by Procopius, even speculated that most Justinianic fortification works were simply towers - Gibbon (1776-1789) **The History Of The Decline And Fall Of The Roman Empire**. Strahan & Cadell, London, XL: part IV. Archaeological research in Cyrenaica (E. Libya) has shown that '*almost every hill-top was surmounted by a fort or tower in visual communication with a score of other towers'* - Goodchild (1953) The Roman and Byzantine Limes in Cyrenaica. **The Journal of Roman Studies**, 65-76. Around the town of Boreum, for instance, the ruins of twelve have been identified within a radius of 5 km - Lawrence (1983), 192. In the Late Roman East the tower of two or three stories, MacMullen writes, '*was one of the most common forms a building could take'*- MacMullen R. (1963) *Soldier and Civilian in the Later Roman Empire,* Cambridge Mass., 141 in Decker (2006), note 1.

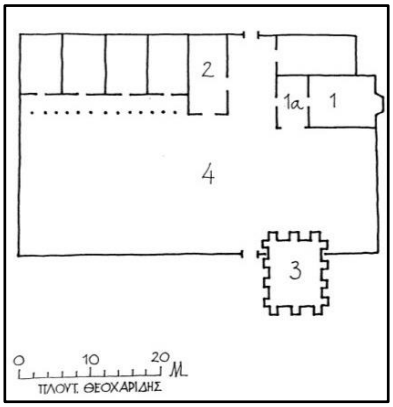
[719] Idem, sections 6 and 11. We must also not forget that in the late 7th century the Arab fleet undertook continuous raiding in the Aegean, plundering Rhodes in 653, until their defeat in 688. The attacks became even more intense following their annexation of Crete (late 820's to 961.They raided, for instance, Negroponte in c. 880 and Thessaloniki in 904.

[720] The 10th century was also one of re-conquest, the empire stretching as far south as Syria and Palestine, where Decker records the 6th century combined hall and tower house and fortified farmsteads of the region -Decker (2006); Decker (2009) **Tilling the Hateful Earth: Agricultural Production and Trade in the Late Antique East**. Oxford, 36-61. Goodchild (1953) even suggests that the Roman frontier towers were the prototype of the mud-brick towers of the Coptic monasteries of Egypt.

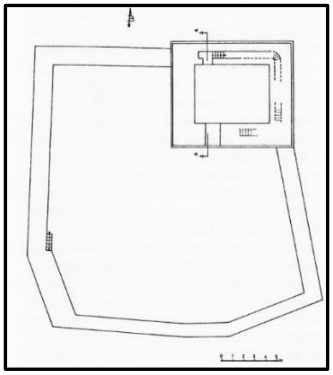
of Istanbul), provides a link between the above and the development in the same period of defensive towers on Mt Athos built by monks with roots in Bythinia, Anatolia.[721] Such towers seem to represent a natural process of tower development in the Byzantine Empire in regions of insecurity.[722]



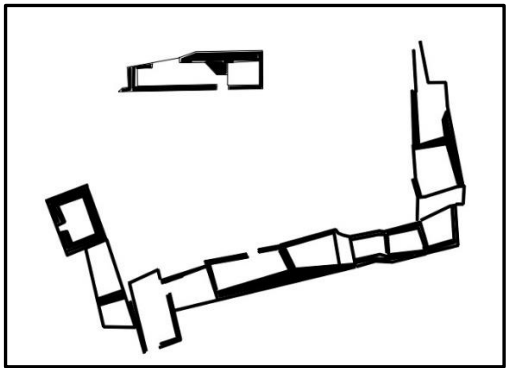
(a) Naʃal Sa'adon Fortified farm[723] 6th century(?)



(b) Reconstruction of Iviron metochi (1104)[724]



(c) Apollonia Tower, Thrace[725]



(d) Klimataria estate centre, Boeotia[726]

Figure 9.2 Towers and estate centres

[721] Archives de l'Athos (1975) VII, Prōtaton, VII, 17-29.

[722] The tower had become a habitual component of monasteries in N. Africa long before the 9th century. The Copts at Wadi Natrun, for instance, had used a removable bridge '*high above ground'* to separate one from its surroundings - Lawrence (1983) 227.

[723] Hirschfeld (1997), fig. 61. This is a comprehensive survey covering thousands of sites. The tower appears to be at the centre of a hamlet/village and is of superior quality construction to other buildings in the vicinity. It measures 7.4 x 8.6m., is scarped and has one internal dividing wall.

[724] See Iviron II reference below - Reconstruction by P. Theocharides in Androudis (2018-2019) Οι βυζαντινοί πύργοι της Χαλκιδικής: ιστορικές και αρχαιολογικές μαρτυρίες*. **Byzantiaka**, 35: 281-323, fig. 5.

[725] Walls 11.2 x 10.0 m., height c.20m. Dated by archaeological evidence no earlier than Palaeologan era (1261 - >) by Bakirtzis (1983). Seen in an estate context and dated by Zekos to 1333–1355 based on documentary records - Zekos (2006), although as military by Dadaki (2012) **Πύργος Απολλονίας** [online]. http://odysseus.culture.gr/h/2/gh251.jsp?obj_id=1809 ΟΔΥΣΣΕΥΣ [Accessed 12/4/2020].

[726] Extracted from Sigalos and Eleftherios (2004), 202. The tower is to the west. To the north and west there were other structures (stables?). This is termed a '*Crusader estate'* (ie. After 1204) by Bintiff (2012, 421), although no full survey report appears to have been published.

The earliest recorded towers built in the wider region around Mt Athos are from the 10th century:[727] the archives attest to their role using the terms '*καστέλιον', 'Βίγλα'*, and '*φρούριον*'.[728] One tower, that at Prosphorion (**M40**), is noted (1197-98) as having been built '*for the whole community'*.[729] Another, the '*kastelion tou Panakos'* was donated in the early 12th century by the emperor to the Pantokrator monastery of Constantinople.[730] In Central Greece the Middle Byzantine tower in the plain of Marathon (**A18**),[731] was clearly not a coastal watchtower, although close to the sea, and probably fulfilled a similar defensive role as part of an estate, a role which it continued into the Frankish era. A *praktikon* dated to 1104, provides a full description of an agricultural estate (μετόχι) of the Iviron monastery in Macedonia :-[732]

> *A church with a tiled roof built of mud-bricks (πλινθόκτιστος) rendered with mortar (ασβεστόχριστος), its narthex with a thatched roof (χορτόσκεπος); a light surrounding wall of wooden planks and mud-brick; mud-brick thatched houses; a two-storey hall/solarium (ηλιακός) with tiled roof; kitchen; cookhouse; store; stables and hay store; and a five-storey tower with a vaulted upper ceiling, tiled roof and buttressed with fourteen pillars (πινσῶν δεκατεσσάρων) used for grain storage (εἰς ρωγούς).*[733]

Most significant is that the tower and the church (in part) were both of superior construction to the rest of the buildings.[734] It is only these that we usually find today in the surviving archaeological record. Based on this evidence the Byzantine and Frankish estate

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[727] The earliest is Diabripou (**M29**) dated to the late 10th century, when it was already being referred to as 'paliopyrgos' (old tower) thus allowing potentially an even earlier possible dating – see **section 7.2**.

[728] There is a 'καστέλιον' noted in a description of the Libyzasda estate (**M26**) dated to before 1104. This had been owned by the Iviron monastery since the 10th century - Archives de l'Athos (1990) XVI, Iviron II, no. 52, 184-185. Generally, this term was used for Early Byzantine rural fortifications well before this period: Dunn, A. (2004) Continuity and Change in the Macedonian Countryside from Gallienus to Justinian. **Late Antique Archaeology**, 2(1): 535-558.

[729] '…δια την κοινήν πάντων επειδή είς βίγλας αρμόζει ο τοιούτος πύργος…' - Archives de l'Athos (2019) XXIII, Vatopedi III, no.213, lines 8ff.

[730] This was a donation of a small, multi-towered rural fortress: Dunn, A. (1990) "The Byzantine Topography of Southeastern Macedonia: a contribution". **À la mémoire de D. Lazaridi. Cité et territoire en Macédoine et Thrace antiques. Actes du colloque archéologique, Kavala 9-11 mai 1986. Μνήμη Δ. Λαζαρίδη. Πόλις και Χώρα στην Αρχαία Μακεδονία και Θράκη. Πρακτικά αρχαιολογικού συνεδρίου, Καβάλα 9-11 Μαΐου 1986 (1990)**. Recherches Franco-Helléniques 307-331. [personal communication].

[731] See **chapter 8.** This is presumed from the excavator's evidence at the time, but this was before a much clearer medieval ceramic framework had been developed for Central Greece.

[732] Archives de l'Athos (1990) Actes d'Iviron II, 241, no. 52 (1104). My summary of the original. See also Giros (1992a).

[733]This essentially describes a rectangular buttressed tower with four buttresses on one side and three on the other. The use of *'solarium*' here as a translation should not be confused with the western use of '*solar tower',* and the **solar type (C).**

[734] Architecturally, the Naḥal Sa'adon tower (**fig.9,1(a)**-6th c,?) is also similar, with an internal dividing wall, to the Marathon tower (11th /12th c.), the only other example of which in Central Greece is found at the possible Byzantine central tower of Rizokastro (**SC2**) on Euboea.

centres cannot essentially be distinguished from one another. Each has a tower, a church, and a two-storey 'hall' of lesser quality construction. However, two features relative to their immediate environs may help us separate them: the first (now not apparent in most sites) is that the Byzantine ηλιακός and domestic quarters (see examples in **fig. 9.2**)[735] were independent of the tower, whilst the Frankish hall, as dicussed in **chapter 8**, was probably linked in some way to to its adjoining tower. Secondly, the Byzantine tower is most often set into the wall of any *enceinte*, whilst the Frankish tower is generally located centrally within the enclosed space.[736] This observation may suggest that the Klimataria estate tower (**fig.9.2 (d)**) which is also rectangular (Byzantine **type C1?**), not square like other towers in Boeotia, is not Frankish as Bintliff (2012) assumes, but a response by its estate owner to the breakdown of Byzantine central authority and increased lawlessness in the latter part of the 12th century.[737]

Another important issue is the Iviron tower's reported use for storage of grain, and that of another for wine,[738] both of which have been used as evidence to suggest that towers had an agricultural function.[739] The tower, however, is wholly inappropriate for general agricultural use, which requires substantially more space, as attested by the numerous ancillary buildings noted in the *praktikon*, and with first or second floor access would have been exceptionally labour-intensive to fill and evacuate. It should be considered rather as a secure place for storage of wealth in kind, the upper floors possibly for residence,[740] and to secure survival in the event of a siege, protecting seed-corn for the following season. From the estate owner's point of view,

[735] Despite sometimes being referred to as a *donjon* or *keep* with all the connotations this brings, Lawrence argues that the tower at Philippi was built by Nicephoros Phokas and is purely military in concept - Lawrence (1983), 226, but see my own comments in **section 9.5.2**. It is approximately 12m. x 12m. with walls 3m. thick and surviving height of 12m. with four floors. Its doorway opens 1,5m, above the present ground level into the domed ground floor. There is limited light which only enters the rooms via arrow slits in the circular staircase set in the wall in a manner similar to the integrated **type (B2)** tower

[736] For an exception see Sahyun below (**figure 9.6**).

[737] For a detailed discussion see Herrin (1975) Realities of Byzantine Provincial Government: Hellas and Peloponnesos, 1180-1205. **Dumbarton Oaks Papers**, 29: 253-284

[738] The tower at Agios Panteleimon on Mt. Athos was attacked by Catalans in 1307 and the monks put out a fire at its base by pouring wine over it - Lock (1989), note 17.

[739] John H. Young first positied the agricultural role of towers during the Classical and Roman periods. Quoting a 4th century BC. text he suggested the '*pyrgos*' was both a farm building and refuge and how, when raiders attacked the property, they broke open the gate and attacked the owner's family who were lunching in the courtyard *(aulē*), took his furniture (which was in the *oikia*) and his sheep (and a shepherd), but the other women-servants were spared because they closed up the *pyrgos* , '*where they live and work*' - [Demosthenes] XLVII, paragraphs 53-57 **in** Young (1956b). For the use of Byzantine towers as grain silos see Zekos (1998).

[740] The residential role should be considered as one subject to local circumstances. The estate superintendents (*metochiaroi* or *pronoetai*), whose role is outlined in detail by the *typika* of the Mt Athos monasteries, resided on the estate, possibly in the tower, if there was one. This was also the case if there was a lay manager (also for female monasteries where a eunuch priest might have the role) and whether the estate was worked directly by the monastery or leased out to *paroikoi* - Smyrlis (2000) "The Management of Monastic Estates: The Evidence of the Typika". **New Insights into Byzantine Monasticism: The Evidence of the Byzantine Monastic Foundation Documents, Dumbarton Oaks Colloquium, 3-4 March 2000**. Dumbarton Oaks Papers. 245-261.

however, his most valuable agricultural asset was his human capital and, similarly, for attacking corsairs or mounted Arab raiders on the southern Byzantine borders their most valuable and easy-to-transport booty. This is essentially a defensive function.

The actions of the serf or freeman were prescribed to different extents, yet we see time and again occasions where he 'voted with his feet', fleeing military threat or excess taxation,[741] or being enticed to a new region. In essence, within a predominantly agricultural economy the means of fulfilling his basic need – survival - was land,[742] which does not appear during the Late Medieval period in the region under study to have been in short supply. In fact, the opposite was the case. There was a surfeit of cultivable land, while manpower seems to have been the limiting productive factor, especially in the 14th century after the depredations by Turkish corsairs and the Plague of 1347.[743] Landowners were therefore competing for a limited pool of labour.[744] We find repeated requests by the feudal lords of Athens and Thebes for the return of their 'subjects' who had fled to Euboea following warfare on the mainland, whilst the Venetians in the early 15th century cancelled the ecclesiastical tithe because, apart from the increasing danger of Turkish attack, excess taxation was driving people to emigrate to the mainland.[745]

[741] See **chapter 4;** Jacoby (2014b) "Peasant Mobility across the Venetian, Frankish and Byzantine Borders in Latin Romania, Thirteenth-Fifteenth Centuries". **Travellers, Merchants and Settlers in the Eastern Mediterranean, 11th-14th Centuries**. Farnham:].In 1425 the Venetian Senate authorised the bailie of Negroponte to 'recevoir dans l'île les quelques trois cents familles d'Albanais, originaires du duché d'Athènes ou d'ailleurs, qui désirent s'y établir' - Thiriet (1958), no.1985, 22may 1425.

[742] Utilising Maslow's *hierarchy of needs,* which posits that the basic priority of any man is survival - food and shelter- we can to some extent understand his frame of mind. Beyond these he notes physiological needs (food, water, shelter), safety and security (health, employment, property, family and social stability), love and belonging, self-esteem, and self-actualisation - Maslow (1943) A Theory of Human Motivation. **Psychological Review**, 50: 370-396.

[743] This is demonstrated in the 13th-14th century by the significant decrease in dateable pottery from sites in the region of Tanagra in Boeotia - Vionis (2012) **A Crusader, Ottoman, and Early Modern Aegean Archaeology: Built Environment and Domestic material Culture in the Medieval and Post-medieval Cyclades, Greece (13th-20th centuries)**. Leiden University Press, 34-35.

[744] Specific examples have been noted in **chapter 4**, but Moschopoulou succinctly sums up the general lack of manpower within the Venetian Empire – 'οι τεράστιες ανάγκες σε ανθρώπινο δυναμικό για την διατήρηση του εμπορικού και πολεμικού στόλου, την καλλιέργια της γης και τη στρατιωτική επάνδρωση των απομακρυσμένων αποικιών' - Moschopoulou (1985).

[745] In 1402 supplicants from the island in Venice claimed that 1,000 families had left to escape excess taxation - Thiriet (1958) no.1041, 34.

There was thus a great incentive for landowners to provide fortified sanctuary for their tenants.[746] On Chios villagers even requested to build their own tower.[747] The first towers on Naxos were constructed in the 14th century, probably following attacks by Turkish corsairs,[748] and in Chalkidiki more towers seem to have been built in the first half of the same century,[749] a period of substantial unrest there,[750] than during the rest of the 300-year Late Medieval period.[751]

There is, as yet, no archaeological evidence firmly dating towers in central Greece to the early 13th century. The little secure archaeological data we have – that at Panagia[752] and Panakton[753] in Boeotia – suggests a late 13th or early 14th century dating, If the latter, then the constructors were probably the Catalan Company. The immediate catalyst for this may have been the Company's insecure position within a hostile territory immediately after their victory at Halmyros in 1311, but their experience of the Byzantine towers, which they had encountered during their two year sojourn in Kassandreia and, as we have seen in **chapter 7**, of those in their Iberian homeland on the borderlands with the Arab lands to the south, suggests in Boeotia a defensive character of the towers (against both incursors and their recently subjugated people).

In the early 15th century the Venetians, too, considered the construction of a tower at the entrance to the Kassandreia peninsula.[754] Shortly before, defensive tower-building seems to have become Venetian state policy on Euboea, and in 1402 a decision of the Senate noted that

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[746] A study of villages in Macedonia has shown how village populations can vary according to the level of security. We have documentary evidence of two, Ovelos and Dovrovikeia, being deserted '*because of the Turkish attack'* in the mid.14th century. Domains of the Lavra monastery in the period 1300-1321 gained substantial population, it is thought, because during the occupation of Kassandreia by the Catalans the monastery received the protection of the King of Aragon, James II, in 1308. In 1341 the monastery of Iviron insisted on its right to re-establish its *paroikoi* (who had fled elsewhere) on their lands - Laiou-Thomadakis (1977) **Peasant Society in the Late Byzantine Empire: A Social and Demographic Study**. Princeton, 233-261.

[747] See **appendix 7.4.**

[748] The siting of most of the 69 towers and tower-like structures identified on the island appears to have been away from the coast at the centre of settlements, providing a protective umbrella for the inhabitants - Spiliopoulou and Kotsakis (2008-2012)

[749] The estate and village of Preaulaka (**M38)** had been completely destroyed by Corsair attack, and a tower was constructed there for security (c.1170-1183/4) - Archives de l'Athos (1990) XVI, Iviron II, 9, summary no. 145.

[750] We see a similar proliferation of towers in Sicily to protect the cane plantations and energy resources in the 14th century as a reaction to incursions by Arab corsairs - Comba (1986) "Tours et Maisons Fortes dans les campagnes médiévales Italiennes: état present des recherches". In Bur (Ed.) **La Maison forte au Moyen Age : actes de la Table ronde de Nancy-Pont-à-Mousson des 31 mai-3 juin 1984**. Editions du Centre national de la recherche scientifique 317-339.

[751] See **chapter 7.**

[752] Vroom (1998).

[753] Gerstel et al. (2003).

[754] This was during the short period (1423-1430) when Thessaloniki came under Venetian control and their ambassadors had requested the re-fortification of the peninsula. A middle Byzantine wall with extensive towers already existed, part of which still survives, so the reference may be to this: Thiriet (1958) II, no.1995 (1425)

'*fortified dwellings'* should be constructed to protect the population from the Turks.[755] Thus, following this ordnance estate owners may have built a strong defensive tower as a refuge next to their existing (un or semi-fortified?) hall. This would then explain the construction of the unidentified tower at Li Zeppi immediately afterwards in 1403 by Nicolo Venier,[756] and might also account for the general lack of facilities (latrines, fireplace etc.) even in most 'colonial' (**type C4**) towers, their functional architecture, similarity (with very minor differentiation), and even the chevrons on their crenels![757]

In certain exposed areas a notable lack of towers, counter-intuitively, re-enforces our focus on the defensive nature of the tower. In the region around the fortress of Dystos (**SC6**) – see **Map 9.4** – the defensive system seems to have been based on a strong central fortification supported by a ring of watchtowers/beacons (*pyrgaria*), essentially an extension of the earlier Byzantine defensive system. Of the twelve probable settlements identified in the area (apart from three fortifications)[758] only four have a surviving tower, of which two, it can be argued, have a primary coastal defensive or administrative function - Protimo (**CE1**) and Karabos(**SC1**) - and may be Byzantine in origin,[759] and one is a pre-existing classical tower (Zarka – **SC10.1**). The only tower whose construction is probably completely Frankish in inspiration is Belos (**SC3** - type **C4** 'colonial'), and even this can be argued to have had a primary military role.[760] Thus, it is quite possible that no estate tower existed in the area up until the mid. 14th century.

[755] *'Il importe que les vilains sachent où se mettre en securité lors des descentes turques…….Le Regimen de Negrépont fera ériger des demeures bien fortifiés pour y recevoir serfs et vilains'*. In addition each villain was to have a bow and 40 arrows and to train regularly - Thiriet (1958), II, no.1041. Lock(1996) wondered whether these were towers or if there is some other smaller construction type, as yet unidentified, that once existed on the island. The former explanation appears the most likely from the fact noted in **chapter 8** that most towers were not originally free-standing but seem to have been an adjunct to a much larger building.

[756] Bury (1888); see also Lock (1996). Jacoby (2001a). In Crete, for instance, the landowner Lombardo requested state funding to construct a defensive tower to enhance his security - D. Jacoby (2001a), 210.

[757] Such a conclusion would amend that of Lock (1996) for whom restoration of towers in this period by the Venetians was a mere paper exercise, and who concluded *'what there is surviving of the towers of Euboea today is probably mainly fourteenth century in date and north Italian in inspiration'*. My own conclusions on tower dating generally support his but give a much greater role to a Venetian involvement in the late 13th and early 14th century, and separate out the 'colonial' type (possibly constructed in the late 14th / early 15th century)– most of those that have survived to their full height - from the general corpus of towers.

[758] The dating of these is difficult since no detailed excavation work has been undertaken at any. The Dystos fortification still retains a central (Frankish?) tower and an outer classical wall around the hill with one gateway of dressed stone blocks still intact, but might have been abandoned in the intervening period. The Rizokastro fortification has been assumed to have originated in the Middle Byzantine period but could be only Frankish.

[759] See **section 9.4** below.

[760] It overlooks the central fortification in the Dystos valley (**SC8**) and the extensive area running north to Avlonari (**CE10**), for which it would have provided a valuable link, and also possesses a number of secondary defensive features. By its (**C4**) typology it was probably only constructed in the late 14th or early 15th centuries - see **appendix 5.2.6**

It appears, therefore, that it was not the 'tower' but the 'hall' that was probably the primary agricultural, administrative and domestic building in most cases. The estate owner or his bailie lived and held court on the first floor, whilst the ground level would have been allocated for farm animals and general agricultural equipment and produce, much as can be seen today in many houses that still survive from the 19th century in the more remote villages on Euboea.[761] Construction would have been of wood, mud-brick, cob or dry-stone (bonded with earth), faced with mortar or lime-wash or a combination of both, roofing generally of thatch (for warmth in winter and coolness in summer) or bamboo, rarely tiled – all materials which quickly deteriorate without regular maintenance and, once the roof decays, leave a minimal archaeological footprint.[762]

9.2.5 An Offensive function

Having concluded in the previous section that the primary role of the agricultural tower was its defensive function the following studies the ability of towers to project power, a role little discussed since the tower is essentially static, yet we have seen in the Welsh Marches in England and the southern Catalan border in the Iberian peninsula that they could perform an essential function within a process of expansion.[763]

[761] Often traditional houses are built at 90° to the slope. The upper floor of two rooms extends outwards from the slope such that the downhill one becomes effectively a first floor with a basement below in which produce is stored and animals are stabled Although no writer has explained why this configuration of ground floor for the animals and first for domestic quarters exists, its practicality is clear. Apart from simply animal access and security – whether draft or for milk and meat they were critical to a family's survival – farm animals generate substantial heat and thus would have provided very primitive but effective under-floor heating during the cold winter months.
[762] This mirrors many of the buildings shown in the '*Mappa della campagna Romana al tempo di Paolo III di Eufrosino della Volpaia del 1547*' **in** Montanari (2014) Torri campagna Romana: sistemi di comunicazione e segnalazione. [Accessed 4/1/2017], http://www.fondazioneproposta.it/museo/in-soccorso-di-gondor/.
[763] See **chapter 8.**



Plate 9.1 – Detail of tower and bridge at *Negroponte* in 1887[764]

One tower that has been ignored by nearly all writers except as an extension of the ***Negroponte*** fortress is that constructed in the winter of 1204 / 5 in the middle of the Euripos strait. This was the first action of the Frankish invaders on their arrival: the value of the tower as a military tool was clearly appreciated by their leader Boniface, Marquis of Montferrat. Although, unlike at Thebes, we have no mention in any historical document of a surrender by the city of ***Negroponte*** nor any aggressive actions towards its citizens or those in the surrounding countryside by the Frankish forces, this tower clearly possessed an offensive function to display to the inhabitants of the island Frankish dominion over their territory. It allowed a small garrison to control access by foot to and from the island and monitor all maritime trade up and down the gulf of Euboea,[765] threatening major harm to the local economy if it were ever to enforce an embargo on the markets in the city.

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9.2.6 The 'Feudal' Argument – Display and Domestic use

Now that the inter-visibility of towers has been proven and its agricultural role explained,[766] a primarily private defensive estate role for towers, rather than one of control,

[764] Extract from Bauer (1787) **The Bridge and Castle, coming from the harbour of Negropont**. Oxford: Bodleian Library, MS Sherard 408 (122). This was its ultimate form as constructed by the Venetians and reconstructed by the Ottomans after their annexation of ***Negroponte*** in 1470, but the original Frankish tower of 1205 was probably a very simple structure of wood and stone.

[765] Similarly, the Venetian tower at Loutsa (**P301**) in the Peloponnese, whilst probably acting as a beacon, projected Venetian power over the area and essentially controlled all shipping approaching the shore to the west, as did their tower at Ptēlion to the north of Euboea.

[766] At least on Euboea. Considerable further research will be necessary to prove or otherwise the existence of internal communication networks within Boeotia and Attica. There may be a *prima facie* case that they existed but only a full reconstruction of the Late medieval topography will suffice for this.

appears to best fit the historical context. Can we identify beyond this, however, two functions most associated with the supposed feudal role of many towers – those of 'display' and 'residence'?

All construction, as is noted in the quotation from Phillip Dixon at the beginning of this chapter, contains in some way an element of display, and the mere existence of a tower makes a statement. Yet the 'display' tower, in the form that it has survived in Italy,[767] or Northwest Europe - to differentiate its owner from his peers - is nowhere in evidence in Euboea or Boeotia, either in the countryside or constructed by the merchant and commercial classes in an urban setting.[768]

This is despite the fact that the Lombard lords of Euboea were extremely rich in the 13th century - so much so that Otho, Lord of Caristo, had the resources to effectively write off a loan of 5,000 *hyperperi* to Baldwin, the Latin Emperor.[769] Such riches must have been reflected in the wealth of at least some of the lesser elite. However, statistically, within Central Greece we find such architectural differentiation only in Attica, where the De La Roche family were much more aligned to the Frankish (Norman) Morea than to the Italian states, yet even there, compared to towers in Western Europe differences are relatively slight.[770] The seeming standardization of tower design in Euboea and Boeotia compared to Attica – square rather than rectangular – may even suggest some form of state direction by the Venetians and Catalans as on Rhodes and Chios.[771] Substantial wealth was probably repatriated to Italy and France, but

[767] An influx of the military and merchant elite from Northern and Central Italy is observed during the period under study, yet no tower (except possibly that on the Acropolis of Athens, now demolished) shows any sign of the architectural features of the surviving towers of the city states in Italy. The study by Pringle (1974) of the towers in Tuscania, and my own visits to San Gimignano (sometimes described as 'the Manhattan of medieval Italy') and Bologna indicate that their style and construction materials are completely different to anything we find in Greece - 'Palazzo del Podesta, Loggia, Teatro', 50 **in** Ceccarini (1988). In Venice no private towers were identified on my visit and none are apparent in a woodcut from 1500 except the massive one in St Mark's square and others which appear to be church bell towers: Barbari (1500) **Bird's eye view of Venice. Woodcut printed from six blocks on six sheets of joined paper**.The British Museum, 1895,0122.1192-1197. This was only a short visit so the conclusion cannot be absolute. It may, however, be due to the peculiar topography of Venice's location on low-lying islands, the geology of which may have precluded the construction of tall buildings, except at very high cost. Their absence also in Venetian ***Negroponte*** may intimate that there was a general prohibition of their construction within city limits in Venetian-controlled territories.

[768] See the site gazetteer in **appendix 5** for the lack of even one tower in an urban setting.

[769] See **chapter 4**. This wealth was probably one of the reasons behind the war of Euboeote succession in the late 1250's.

[770] See **chapter 7**. The corollary of this is that any future research into the surviving footprint of towers in the Peloponnese should identify the Attic rectangular configuration, and a large standard deviation in the external measurements of towers.

[771] A reply to a delegation from the citizens of Negroponte included the item that their only obligations were to '*garrison and service their fief*' thus suggesting some form of state involvement in defence of the individual fiefs - Thiriet (1958) II, no.1475 (1413)..

the *'display'* tower's near complete absence in Central Greece means that we must look elsewhere for how the local elite exhibited its wealth.

In other regions of Greece, however, this was not the case. The mansion towers of the Latin feudal rulers of Naxos and Andros have already been discussed, but most were constructed post 15th century.[772] Much earlier on Chios, in the early 14th century, first the Byzantines, and later the shareholders of the Genoese Mahona company, built massive hall and mansion towers (**types B** and **D**), around which the houses of the *masticochoria* huddled for safety.[773] In Byzantine-controlled Macedonia towers linked to the process of *adelphaton*, the buttressed and integrated (**type B**) towers constructed by the elite, and those at the centre of monastic estates for the use of the lay or clerical superintendent, in addition to 'display', exhibit clear signs of domestic use over and above any other role they may have possessed.[774]

The conclusion we must reach is that this process of increasing display and domestication of the essentially defensive tower was not introduced by the incoming western feudal conquerors in the early 13th century. But, judging from the example of the buttressed tower at the Iviron *metochi* (see above) constructed by the Byzantine clerical elite at least two centuries before the earliest securely-dated Frankish towers in Greece,[775] the Latin colonists, especially those in the second colonial wave in the 14th century, merely adapted a well-established Byzantine architectural concept to their own needs. It is imperative therefore to rewrite the history of the development of 'the tower' in Greece. This is undertaken in the following section.

[772] Nikos Vasilopoulos, emphasising the vertical hierarchy (compared to Venetian Euboea) with which the feudal system was instituted on Andros, writes 'Ο πύργος που χτίζεται ως προς τις διαστάσεις, το ύψος κ.λπ. είναι πάντοτε ανάλογος του πλούτου του άρχοντα….' - Vasilopoulos (2015), 49. Spiliopoulou and Kotsakis (2008-2012) note how most towers on Naxos were constructed after 1500 and were used as summer residences by the feudal elite, who generally resided in their townhouses. Such a scenario might be compared to Ireland, where it is argued the tower-houses constructed in the 14th and 15th centuries, well after the English colonisation, were an exhibition of social status within a period of relative peace - Mcneill (2002)

[773] See **chapter 7.**

[774] Idem, but note that within the monasteries on Mt Athos and on Euboea towers, whether on the walls of monastic compounds or free-standing, were not used as residences, there being separate blocks of cells for the monks.

[775] probably similar in style to the Galatista tower - **figure 8.5**.

9.3 A New Historical Framework

The tower as a concept in Greece has its roots in the Classical and Hellenistic periods as a watchtower and the centre of a country estate or farm. It survived the Roman period, changing form from predominantly circular to quadrangular but still performing essentially a similar function.[776] By the 6th century A.D. it had become more sophisticated with a more extensive functionality. At its smallest it was a simple outpost for a single soldier to stand guard and watch for enemy movement, whilst the largest examples were constructed by Belisarius in Byzantine North Africa to combat a highly mobile lightly armed mounted enemy.[777] In between, the lowly farm or estate owner constructed a fortified house (or tower) to protect himself against a similar enemy in regions of unrest on the fluid southern and Eastern borders of the Byzantine empire.[778] Such uses spurred monastic communities to construct towers, on the one hand to protect themselves but on the other they provided the ideal platform for the ascetic monk to withdraw from human contact and draw close to God.[779]

It is not surprising then that it was the newly established monasteries on Mt Athos that probably established their use in Northern Greece, possibly as early as the 9th century, although our first documented monastic and estate (*metochi*) towers come from the 10th.[780] Away from the border regions the construction of a 'military' tower was strictly controlled and a state function but, despite this,[781] the monasteries were allowed to build towers to protect their estates. Soon towers were being constructed by the elite both as a retreat in their retirement as part of the institution of *adelphaton*, and on their estates.[782] The increasing breakdown of Byzantine central authority in the late 12th century, allowing warlords such as Leon Sgouros at Acrocorinth to establish themselves, probably drew in the church to fill the security vacuum

[776] See detailed analysis of such towers on Euboea in Seifried (2016) "Situating the Paximadi towers in the Classical and Roman landscapes". In Tankosic, et al. (Eds.) **An Island between Two Worlds: the Archaeology of Euboea from Prehistoric to Byzantine times, July 2013, Eretria**. Norwegian Institute at Athens. 431-440.
[777] This was true of both northern and southern borders. For those in the south: Zitterkopf and Sidebotham (1989) Stations and Towers on the Quseir-Nile Road. **The Journal of Egyptian Archaeology**, 75 155-189; Pringle (1981)
[778] See, for instance, Goodchild (1953).
[779] Petersen (2016)
[780] See the so-called 'Tzimiskes' tower in **section 9.5**. The estate tower is referred to as *'old tower'* - Smyrlis (2016).
[781] See, for instance, the construction of various imperial defensive towers in **section 9.5**.
[782] See **chapter 8**. The *typikon* of Gregorios Pakourianos provides evidence of fortifications already in private hands by the end of the 11th century - Gautier (1984) "Le typikon du sébaste Grégoire Pakourianos". Revue des études byzantines , 42: 5-145, , ll263-273.

left in more remote regions by an increasingly isolated inward-looking Constantinople,[783] and promoted both monastic and lay construction.[784]

In 1204, therefore, there was already a well-established tradition of tower construction in Northern Greece and the provinces of Anatolia.[785] But the incoming Latin forces by this time also possessed their own practice of tower building. In the 10th and 11th centuries, following the breakdown of the Carolingian empire, a castral revolution had taken place in Western Europe. A mounted elite emerged as the new rulers, the nexus of their power being the 'great tower' ('*keep*' or '*donjon*'), war becoming primarily a process of siege and counter-siege.[786] During the century after the first crusade of 1096, that established the Kingdom of Jerusalem, towers became a key feature of the Crusaders' country estates.[787] Their massively strong walls and generally squat appearance, however, set them apart from both towers in Central Greece, and those found in France and Italy, and was probably a local feature designed to counteract a sophisticated Arab enemy.[788]

It was a countryside sparsely dotted with towers that the incoming Latin conquerors traversed as they marched westwards through Thrace and Macedonia in 1204. A century later the Catalan Company, with their own tradition of frontier and coastal towers in the Iberian Peninsula, would have encountered (and understood the value of) a much greater concentration during their three-year sojourn pillaging the region, but few were probably found in Central Greece at the beginning of the 13th century by the incoming Lombard lords and their retinues. Despite their experience of the urban tower no evidence exists that such towers were ever constructed within ***Negroponte***, nor do any architectural influences appear to have been imported from Italy into Greece.[789]

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[783] See **chapter 4** and Herrin (1972) **The social and economic structure of Central Greece in the late twelfth century**. PhD Thesis, University of Birmingham. the end of the 11th c. 8

[784] After the retaking of Constantinople in 1261 there was a further major surge in tower construction in Macedonia.

[785] See below in **section 9.5.2.**

[786] Coulson (2003), 29-30.

[787] Petersen (2016).

[788] I speculate that we are looking at parallel development of tower architectur in this period in each of these regions, since Coulson notes '*imposing as it was, the stone 'great tower' was scarce in England, little commoner in France….until the late twelfth century'* - Coulson (2003), 18. See section below.

[789] Lock (1996) used the clock tower in ***Negroponte*** to suggest their existence there but this tower has been conclusively proven to be Ottoman. The stonework in Italy is significantly different and there is no facing stone used in construction (or 'rustication') seen on towers in Greece. Whilst barrel vaulting at ground and battlement level is identified on a few, the standardised street level entry on most Italian towers is not evident in Greece – based on my own studies in San Gimignano, Bologna and Venice. For towers in Tuscania - Pringle (1974) A Group of Medieval Towers in Tuscania. **Papers of the British School at Rome**, 42: 179-223.

The new Latin overlords in the period up to 1261 appear to have focussed rather on repairing pre-existing Byzantine fortifications or constructing new castles in strategic positions.[790] In Central Greece and the Aegean Islands they faced little opposition and there was little need for defensive fortification. In fact, they were the aggressors as fleets of Lombard corsairs ravaged the Eastern Aegean coastline from their bases on Euboea. The civil war of the 1250's in the Principality of Achaia, the retaking of Constantinople in 1261, and the establishment of Byzantine Mistra brought this expansionary period to an abrupt end. Suddenly not only were the Byzantines in control of the north but were also planted amongst the Latins in the central Peloponnese.

Thus, began a period of minor conflicts, both between petty lords, many of whom were Greek archontes absorbed into the new Latin social structure, and with the increasingly active Arab corsairs by sea and Turkish forces by land. This was played out within a wider Mediterranean conflict that pitted the Moslem and Christian worlds against each other and attempts at maritime hegemony by the city states of Italy,[791] the Angevins of southern France and Sicily, and the Crown of Aragon (Catalonia). Most military action appears to have taken the form of skirmishes, minor clashes in which the aims of the incursor were more tactical - the taking of booty, primarily slaves - than strategic. It is within this context that we can identify the need for communities to protect themselves or for the estate owner to protect his tenants or lose them at a time when, despite apparently good demographic growth, land was plentiful but human resources were at a premium., something further exacerbated by the plague of 1347/48 which killed upwards of 30% of the population.[792]

In Macedonia records from Mt Athos in this period document a massive growth in tower construction on monastic estates to attract new tenants, and protect existing ones and, by inference, their 'wealth'.[793] On Chios the Genoese Mahona company constructed a network of circular coastal towers to safeguard the island following an attack by the Venetians in 1351.[794] By the early 15th century the Venetians themselves had issued a decree promoting the

[790] On Euboea no new fortifications are noted in this period, the first new one probably being that constructed by the Byzantine general Licarios in the 1280's at ***Mantugo*** (Mantoudi)..
[791] Primarily Venice and Genoa but including Amalfi, Pisa, Florence.
[792] During the 14th century the return of labourers was a continuous source of contention between the Venetians on Euboea and their neighbours in Central Greece.
[793] See **figure 7.3** showing construction dates of estate towers constructed by the Mt Athos monasteries.
[794] Ierapetritis (2013). See also Ralli (tr.)(1913) **[Vlastos] A History of the island of Chios A.D.70-1822 [translated from the second part of Dr. Vlastos' work entitled 'Xiaka']**, London: J. Davy and Sons, 25-26. The island was annexed by the Ottomans in 1566.

construction of '*fortified dwellings'* (ie. towers) in each settlement on Euboea to protect the population, suggesting their use to guard industrial resources elsewhere.[795]

In contrast to Western Europe and Italy there is sparse evidence of towers being for overt display or residence in Latin-controlled regions up to the 15th century, although in Byzantine Macedonia this is possibly attested as early as the 12th century.[796] A process of gentrification seems to have developed apace in the late 14th century as Byzantine and Latin estate owners (or master tenants) enhanced the tower's functional architecture for display purposes. Whilst in Macedonia Byzantine elite construction was clearly for display (viz. buttressing, monograms and decorative brickwork),[797] in Central Greece we observe merely dressed stone being added to window and door openings but little else, [798] although in the Aegean islands after 1500 the mansion tower is much in evidence on Naxos and Chios.

It has been argued that the relatively thin walls of towers meant that they could not have withstood any serious military attack: however, they were not designed for such. Rather, privately-constructed Frankish towers were positioned so as to link into a core chain(s) of early warning beacons and fortified points, creating a defensive umbrella and last refuge for the local populace (who even sometimes constructed their own towers),[799] whilst minimising the economic cost for the central power of maintaining a military presence in the area.

By the 15th century this umbrella had evolved into a sophisticated military structure, at least in Venetian and Genoese controlled areas, the roots of which can be found in the 9th and 10th centuries as Byzantine forces resisted mounted attack on their southern borders in Anatolia and seaborne incursions in the Aegean by Arab corsairs based in Crete.[800] By the 16th century the watchtower (*Vigla*) had evolved into the *Vardiola* of Venetian Cephalonia, a pill-box type structure designed for the new era of gunpowder. In parallel the defensive tower, taking inspiration from the imperial Byzantine towers constructed from the 10th century and Frankish donjons of the Kingdom of Jerusalem,[801] was re-modelled by the Ottomans into towers such as

[795] Another decree suggested the construction of a wooden tower to protect the salt pans in Corfu and a stone one if resources allowed - see **chapter 8**.
[796] See discussion in **chapter 8**, and the above 1104 mention of a buttressed tower in the *metochi* of Iviron Monastery; also, for examples of archaeological evidence of towers for residence and display in Macedonia see Bogdanovic (2012). She also notes a marble inscription (11th century?) which acknowledged the foundation of a tower by a '*despotes Leon of Athens, who was also a synkellos and a rhaiktor'*.
[797] Bogdanovic (2012). The buttressing also provided support for the top storey ηλιακός seen on towers on Mt Athos.
[798] Such towers have survived on Euboea at Politika, Basiliko, Belos, Avlonari, which possess latrines, chimneys and one (Basiliko) even a small chapel.
[799] See **chapter 7** for towers on Chios built by the local population.
[800] See **appendix 7** for detailed description of Byzantine and Venetian networks.
[801] See **section 9.5** below.

the 'white tower' in Thessaloniki and the *Koulas* of Crete.[802] At a lower level the Ottoman elite continued to use the existing towers around their Southern Greek capital of ***Negroponte*** (thus ensuring their survival to the present day) and developed the tower house, a ubiquitous feature of 18th century Greece.[803]

Secondary functions, because much of the time there was minimal direct military threat,[804] have often appeared as primary. The tower might act as the nexus (marker) of an estate, as a *solar* for the landlord or administrator to sleep at night, as strongholds for the collection of taxes, to control entry to harbours, to monitor movement along the roads and for storage of agricultural produce (wealth in kind). But its essence was as a defence of last resort against lightly armed skirmishers of all types attacking by land and sea.

9.4 Towards a Conceptual Model

In trying to solve the question of the role of the medieval tower in Greece we have of necessity become embroiled in a much wider debate within castle studies. The 19th and early 20th century approach was to view the castle as an essentially military tool, but from the 1970's Charles Coulson provided the leadership for the so-called 'revisionist' school, members of which rejected the essential military role of the castle.[805] For 30 years there developed an increasing belief that the castle was about something other than defense. In 2007 Colin Platt took issue with this, suggesting that, while a castle may have had many secondary roles, its essence was its military function, however minor this may have been.[806] This elicited an immediate response from Creighton and Liddiard, who argued that the bipolar military vs functional argument had been closed, was not relevant any longer and that castle studies must look beyond it to a new approach, although without specifying what this might be.[807]

[802] *Koulas* is the general name used for towers in the Ottoman period, but those in Crete stand out for their massive structure, more akin to a fort than a simple tower. The 'white tower' has been dated to 1536: Kiel (1990).
[803] The northerly tower in Mytikas (**CW2**) even had castellations retrofitted, judging from its image in the Werdműller sketch plan (c.1660) in which it is shown with a tiled roof.
[804] Points of military action tend to be conflated in this period, although from the early 14th century there was increasing Turkish aggression throughout Greece and the Aegean. See **chapter 4**.
[805] This is fully outlined in Coulson (2003)
[806] Platt (2007).
[807] Creighton and Liddiard (2008) Fighting Yesterday's Battle: Beyond War or Status in Castle Studies. Ibid.52: 161-169.

In 2002 Creighton had provided a new framework for the study of the castle within England,[808] and in a 2012 book he aimed to describe the origins and development of the early castle in Europe.[809] Going beyond the traditional parochial barriers he thus extended the study of western medieval fortifications to an international level.[810] Yet his work suffers from one basic flaw. Whilst he describes castles as far east as Lithuania, he fails to address the thousand years of fortification development in the Byzantine Eastern Roman Empire[811] and, as yet, there appears never to have been a work on fortification that encompasses a truly pan-European treatment.

Adding a Byzantine aspect to the discussion of the tower, with some hesitation given the seemingly entrenched positions of many writers, I propose a tentative conceptual multi-dimensional framework for viewing the 'tower' (and by extension the 'castle', if we accept that the tower, whatever its other roles, is the essence of the castle as discussed in **chapter 1)**. This starts from the presumption expounded by both Platt on the one side and accepted by Creighton and Lilliard on the other that all castles have a defensive element. In trying to define the role of any one tower we need to therefore look at the continuum not between defensive and other functional roles, but that between utilitarian functionality and display. At one extreme the tower has an operational role, whether strategic, defensive, administrative or domestic; at the other extreme a tower is purely for display, falling within the definition of the English '*folly*'.[812]

A second dimension can be defined simply as size. The tower on the acropolis in Athens,[813] the Byzantine imperial towers,[814] certain monastic towers on Mt. Athos, the St Omer tower in Thebes and those in the centre of the *mastichochoria* on Chios are completely different in nature to the small estate tower or coastal *vigla*. They form a tower group that is more aligned to what might be termed a 'major fortification', *castle* or, in Venetian terminology, a *fortilicium*.

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[808] Creighton (2002).
[809] Creighton (2012) **Early European castles : aristocracy and authority, AD 800-1200**. London: Bloomsbury.
[810] This is possibly a simplification of the situation. Over the last thirty years the series of *Chateau Gaillard* conferences has attempted to research the medieval fortification in Western Europe and has touched on the Kingdom of Jerusalem, but few papers have attempted to provide an overall framework. Similarly, Coulson (2003, 16-18) juxtaposes the wooden castles the Crusaders had left in the 11th century with those in the Byzantine empire – '*unequalled in excellence in the west'* - yet does not look further back for influences on the emergence of the 'great tower'.
[811] Reference has been made, for example, to the role of the members of the imperial Varangian Guard in disseminating military technology in both an easterly and westerly direction - Benedikz (ed.) (1978) **The Varangians of Byzantium : an aspect of Byzantine military history [by Sigfús Blöndal]**, Cambridge: CUP.
[812] The 'folly' is defined as *'a costly ornamental building with no practical purpose, especially a tower or mock-Gothic ruin built in a large garden or park'* – Oxford English Dictionary (2006), 680.
[813] Tanoulas(1997) dates the tower on the Acropolis to Antonio I Acciaiuli (1403-1435).
[814] See below in **section 9.5**.

This approach can be extended further to a third dimension. We have touched a number of times on ownership, contrasting Byzantine towers belonging to the state, which might be defined as 'public' or 'communal',[815] with the 'private' estate towers of the lay or clerical elite. Again, there is a continuum. Many towers, as we have seen on Euboea, undoubtedly formed part of an organized defensive network, and were under the overall control of the state, yet they were also in private ownership.

This three-dimensional conceptual framework is displayed in graphical form in **figure 9.3**.[816] Using it we may be able to study towers as a corpus, differentiate regional tower variations, and better understand their social function. The role of the tower was evolving both in the West and the East in the 11th and 12th centuries. Byzantine landlords, whether lay or clerical, were attempting to usurp the rights of the 'paroikos' (and the emperors tried to protect him and re-assert the balance of power), just as the warlords in Western Europe imposed their will over the 'serf'. By utilising such a framework we can begin to discuss the feudal and communal role of the tower independent of systems of governance and a presumption that somehow the 'residential tower' was a Norman invention.

[815] A western tower constructed by a king or purchased by him as the embodiment of the state can also be considered 'communal'.

[816] All towers, from within any political system can be positioned within this cube. Attaching a simple 1 – 9 grading system, different types can be identified. The English 'folly' - small, private and purely for display - might be coded 111, the Ottoman *koulas* as constructed on Crete – large, functional and public - might be 999 and the Byzantine *pyrgari* – small, functional and public – might be 199.

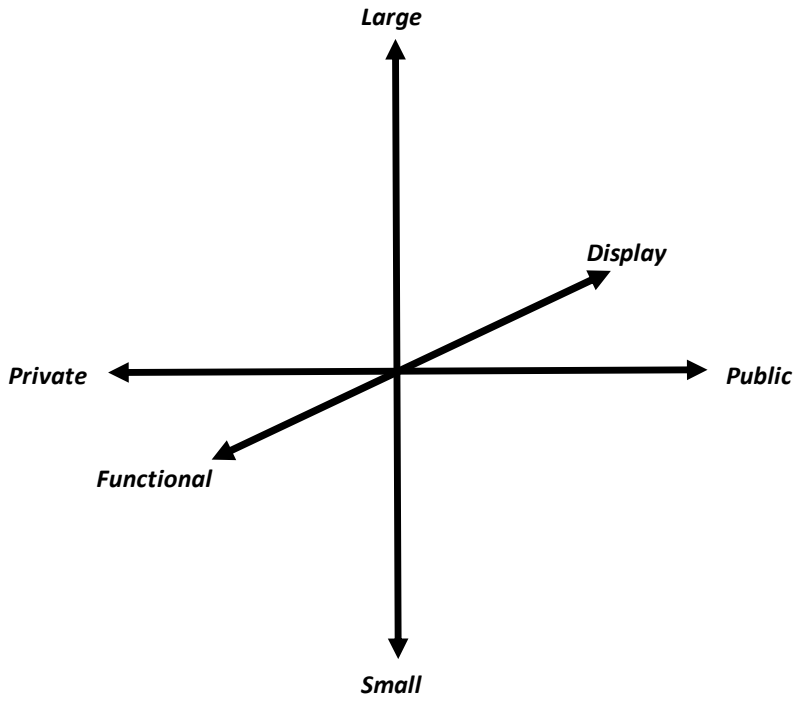


Figure 9.3 - Framework for defining a tower

It would also be a mistake to presume that the tower existed independently of its hinterland. As noted above all towers recorded on Euboea had line-of-sight to another tower or major fortification. Assuming they communicated with one another, what was the nature of this connection? To understand this relationship, we can profitably study the probable core Venetian communication chain on the island, much of which was most likely adopted from a pre-existing Byzantine one. This stretched from Dystos (***Disto)*** in the south to ***Cleisura*** and Mantoudi (***Mantugo***) in the north with a strategic reserve stationed at Skountéri close to the major fortified town of Bounoi (***Vumi***) – see **appendix 9.1**. Using the analogy of the modern electricity network of wind turbines on the island allows us to conceptualise the network and allocate three distinct communication functions to each tower :-

- The **generator**, which equated to a watchpoint (*pyrgari/Bigla/skopia*) from which sentries, having identified approaching corsairs., would send a message into the network
- The **transmitter**, whose role was to pass on the signal received from a local watchpoint or another transmitter along the core communication chain.

- The **receptor**, which 'consumed' the warning signal, only being alerted of danger, but not passing on the signal.

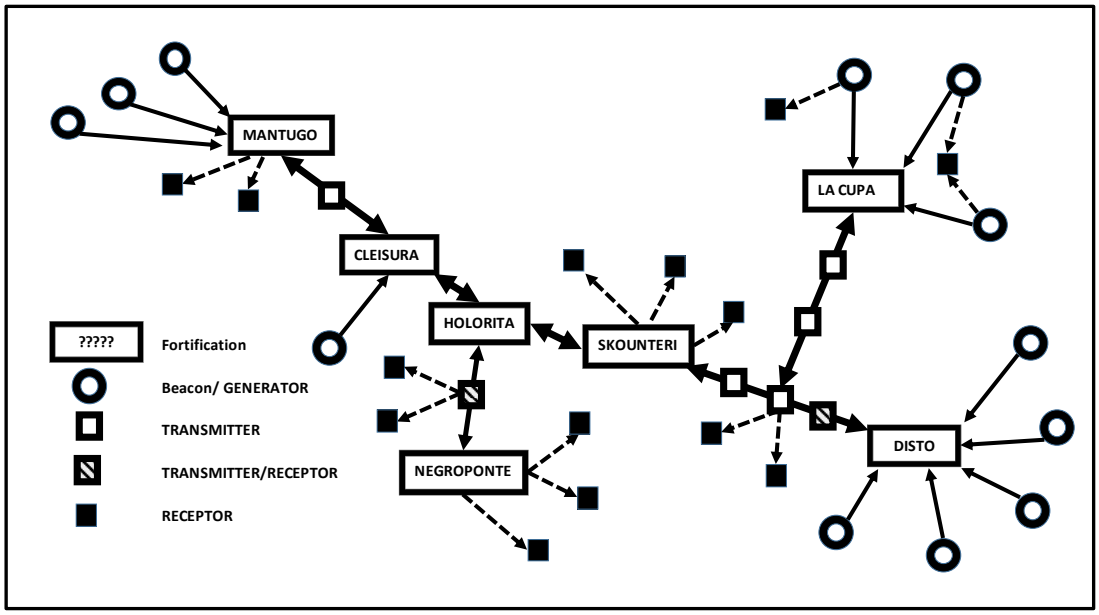


Figure 9.4 – Schematic of Central Byzantine / Venetian network on Euboea

Many towers have only one role, but roles are not mutually exclusive, and it is quite possible for a tower in a strategic position within a well-populated region to fulfil all three. The network is drawn in **figure 9.4** in a schematic way.[817] Arrows show the direction of information flow. The full network can be viewed in **map 9.1**.

It dramatically highlights the way in which the Byzantines seem to have originally fortified the central region of the island, creating an effective wall of forts and watchpoints at two points (northwest and southeast) where the coast-to-coast distance is less than 15 kms.[818] The primary chain also appears to have been carefully planned, being (with minor deviations) an approximate straight line, with branches to the eastern and western coastlines. It covers five

[817] This approach is similar to the Beck(1933) London Underground map. For clarity, not all nodes and towers have been included, nor are distances or directions geographically accurate. Arrows show the general direction of communication, which in the central east-west core is bi-directional. Dotted lines indicate that communication terminates at node. Generators can also transmit direct to a receptor, effectively creating a local defensive network. Skountéri (the position of the central reserve) and ***Vumi*** (the nearby fortified town) have been treated notionally as one unit.

[818] I have highlighted in the north the links between ***Mantugo*** (Mantoudi) and a defensive line of fortified points, but this fortification was probably only constructed in the 1280's following the Byzantine invasion. Previously the Byzantine network would have linked the refuge fortress of ***Cleisura*** with these defensive nodes either directly or in poor weather indirectly via a probable beacon point at Mantoudi.

major fortifications (***Disto, Cupa, Holorita Cleisura***) and ***Vumi***, possibly the most populous town apart from ***Negroponte***, while the 'receptor' towers all had a view to at least one node of the network. The existence of other more localised communication chains is also possible, although the evidence is insufficient to clearly delineate them.

The clustering of towers in the cultivable regions is also apparent, especially those in the Lelantine plain. Since this is the only region for which we have an early map (Werdműller, 1660), this suggests that there once existed substantially more in other areas. It would be wrong, however, to presume that there was some sort of master plan in tower construction. The central Byzantine communication network (later adopted by the Venetians) linking the major fortresses seems to have been planned but others probably developed in a haphazard fashion, and the location of the *receptor* estate tower was primarily defined by the topography of the estate, not its position in the network.

9.5 Implications for Related Fields of Study

9.5.1 Re-envisaging the *Frankokratia*

> *'…on the Greek Mainland Byzantine villages provided the base level of the feudal pyramid…….with the parasitical Westerners locating their controlling towers nearby.'*[819]

It is beyond the ambit of the present work to discuss in any detail the structure of society within Latin held and Byzantine lands in the Late Medieval period. But it would also be an omission to ignore the implications of this work's most important conclusion – that the essence of the Greek medieval tower is its defensive function, and that it is not simply an imported western feudal construct designed to impress and control the local population,[820] although this may have also been in the minds of some tower builders.

Towers were built in northern Greece by the Monasteries of Mt Athos to protect their tenants; the Genoese allowed, if not encouraged, their villagers to build defensive towers and the Venetians on Euboea advised their tenants in the early 15th century to construct 'fortified dwellings' to protect themselves. Couple this with the ongoing threat from Turkish corsairs, independent pirates and other Latin states,[821] and the improved economic situation of the Greek archontes in the 13th century as onerous Byzantine taxation, which transferred cash from the *theme* of *Hellas* to support consumption in Constantinople, was replaced by taxes in the main recycled into the local economy (e.g. the *vigliatiko*), and one must question the prevalent negative view of the period of Latin domination of Greece.

The word '*Frankokratia*' encompasses this in Greek texts, tending to be linked in people's minds with the term '*Turkokratia*' – both of which appear to have been invented in the 19th century as part of the narrative of the creation of the modern Greek state, each seeing Greece as being enslaved to a foreign power and contrasting this to the period after 1830.[822] Western

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[819] Bintliff (2012), 421.

[820] *'Sources and parallels from Western Europe whence the occupants and the design originated, indicate that these towers housed knights….*' - Bintliff (2012), 421

[821] This protective umbrella was to be used on the smaller Aegean islands in the 16th century by the Ottomans to protect themselves against Christian corsairs - Kiel (2007) "The Smaller Aegean Islands in the 16th - 18th centuries according to the Ottoman Administrative Documents". In Davies and Davis (Eds.) **Between Venice and Istanbul : colonial landscapes in early modern Greece**. Hesperia, supplement 40. 35-54.

[822] Millas (2006) Tourkokratia: History and the Image of Turks in Greek Literature. **South European Society & Politics**, 11: (1): 47-60.

commentators (see quotation above) in recent years have tended to complement this view with their focus on the imposition of a western feudal and colonial structure.[823] Exploitation of the peasant clearly existed, but the question that really needs to be answered is whether exploitation by the Byzantine state of its provinces (for our purposes the *theme* of Hellas) prior to 1204 was greater or less than what followed.[824] At least, as regards security, our conclusion on the defensive role of the tower and its associated network suggests that local taxation was well spent. If we are to believe the letters of Michael Choniates, Bishop of Athens, this was not the case under the Byzantine administration immediately prior to 1204.[825]

Increased agricultural specialisation, improved financial instruments, opportunities for export of cash crops and peace provided the base for the local Greek *archontes* to prosper in Central Greece during the 13th century,[826] even being absorbed into the new feudal structure.[827] Landlords, however, were competing for a limited labour resource - even more so after the plague of 1347-8.[828] This and the thriving economy would have enhanced the peasants'

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[823] '*Those towers ……. functioned as residences of the Frankish feudal nobility or their bailiffs, and as storage centres of agricultural revenues, and were destined to watch over and control the dependent village and its taxed inhabitants'* -Vionis (2014); '…..*meant to be status symbols or to serve as administrative bases and provide storage for resources'* – Jacoby (2001a), 211; Loizou (2016)

[824] This presumes a separation of 'Greece', or the *themata* that make up modern Greece, from Constantinople and the central Byzantine state.

[825] Michael Choniates reports how the two naval taxes of the πλωϊμοι (for sailors) and the κατεργοκτίσια (for ships) were levied three times in one year on Athens (but not on richer Thebes, which was exempt), yet there was no naval presence in the area to protect them even against the pirates established on the island of Aigina, within sight of Athens: Choniates I, 308 and II, 106-107.

[826] See **chapter 4**, and Georgopoulou (2014). She writes '*The greater number of Orthodox village churches in the later 13th century also suggest that Latin rule created the economic conditions that allowed for their flourishing';* Jacoby (2014a). We also see growth in the northwest Peloponnese in this period – Kourelis(2018). Similarly, investment in new monasteries and churches reflects recent scholarship indicating both demographic and economic improvement during the period of Venetian occupation in Cyprus (1473-1571), which historiography has not treated well - Papacostas (2016) Building Activity and Material Culture in Venetian Cyprus: an evaluationof the Evidence. **Επετηρίδα του Κέντρου Επιστημονικών Ερευνών**, XXXVIII: 191-207

[827] This symbiosis of the two groups is reflected in the *Assizes of Romania*, a document outlining feudal relationships in the Latin East: Gasparis (2014) "Land and Landowners in the Greek Territories under Latin Dominion, 13th - 14th Centuries". In Tsougarakis and Lock (Eds.) **A Companion to Latin Greece**. The Netherlands: Brill. 73-113. In areas under Catalan control in the 14th century the *Customs of Barcelona* were followed - Papadia-Lala ibid."Society, Administration and Identities in Latin Greece". In Tsangarakis and Lock (Eds.). 114-144; see also Jacoby (1973) The Encounter of Two Societies: Western Conquerors and Byzantines in the Peloponnesus after the Fourth Crusade. **The American Historical Review,**, 78: (4): 873-906 for a detailed analysis and examples of this process in the Peloponnese. We do not know details of what happened within Attica and Boeotia under Otho de la Roche.

On Euboea a Greek (Leone Cucudato – Κουκούδης) is identified as having leased the village of Lipso (Aidipsos – **NW2**) from 1408 to 1410 and another, Marcolino Agapito, claimed to be the owner (and builder?) of a tower on his estate in the Lelantine plain close to ***Negroponte***. This may be one of those identified in the Werdmůller (1660) sketch map: Jacoby (2001b); Sathas (1890-1900), vol. III, 216 no.776.

[828] There is extensive documentary evidence of movement of peasants between Latin Territories, whether for economic or security reasons - Jacoby (2014b). In Cyprus the price of slaves doubled following the outbreak of plague there: Papacostas (2018) "Manuscript Notes and the Black Death in Rural Cyprus". In Shawcross and Toth (Eds.) **Reading in the Byzantine empire and beyond**. Cambridge: C.U.P. 133-155. Similarly, in England day-wages increased by over 80% from the 1340's to the 1350's: Clark (2007) The Long March of History: Farm

bargaining power and also improved their economic welfare.[829] On Euboea the Latin takeover was bloodless and the ultimate feudal-vassalic power,[830] the Venetian Republic, was supportive of the rights of the Greek population.[831] The legal position of the Byzantine peasant (*paroikos)* was, however, much diminished: he now became a fully dependent peasant subject to restrictions on the location of his abode, marriage and inheritance, although there may, at least initially, have been a practical continuation of the Byzantine system.[832] A reduction of political rights and, by implication, income and living standards is the change emphasized by most commentators, when discussing the role of towers, yet the above seems to reflect an alternative narrative - one of a growing economy,[833] within which the scarcity of labour enhanced the peasant's position. Additionally, no tower in Central Greece has been securely dated to the early 13th century,[834] the period when the incoming Latins under an 'exploitation' scenario

Wages, Population, and Economic Growth, England1209-1869. **The Economic History Review, New Series**, 60: (1): 97-135

[829] See **chapter 4** and Jacoby (2014b).

[830] This term is used to distinguish the Western European feudal system from a simple feudal relationship – see Wickham (1994) **Land and Power: Studies in Italian and European Social History, 400-1200**. London: British School at Rome, 7-42.

[831] The agreement between the Venetians and Ravano dalle Carceri in 1209 refers to '*Magnates Greci'* as their subjects, so the Byzantine *archontes* undoubtedly formed part of the new structure. He also promised to maintain his Greek subjects in the status they had enjoyed under Manuel I *(Grecos autem tenebo in eo statu, quo domini Emanuelis imperatoris tempore tenebantur)*. George Akropolites also writes that the Emperor Henry '*behaved graciously to the Romans…and ranked many of them amongst his magnates…while the common populace he treated as his own people'*. Both these contemporary sources suggest therefore a general accommodation between the conquerors and conquered. As regards Euboea, however, this Venetian strategy should not be seen as altruism, but simply one of trying to effectively neuter the Triarchs, while keeping the populace under control: Tafel and Thomas (Eds.) (1856) **Urkunden zur älteren Handels- und Staatsgeschichte der Republik Venedig : vol 1 [814-1205]**, Vienna., 92&95, 178; Macrides (2007) 152, folio 16; see also Setton (1976), 407, note 7.

[832]Jacoby, citing loan agreements to two villages made in 1225, sheds some light on the possible situation on Euboea and concludes that the villagers were '*villeins*' within the new feudal structure but that the Latin term, derived from the Greek *kouratoros,* used to describe the village representatives, suggests a practical continuation of the Byzantine social structure into the Frankish period and that twenty years after the island's annexation the villages still retained a strong cohesion. These are loan agreements of 30 and 70 hyperperi respectively between Gherardo Ferrario, a resident of ***Negroponte***, and two apparently related villages – ***Monomeri*** and ***Longi*** – which Jacoby suggests were somewhere in the Lelas river valley (to the east of ***Negroponte***). The loans were given in April in the names of the village representatives, noted as '*curatuli* and *baillivi*', to be repaid in October of the same year and were guaranteed by their lord. He notes, further, that Byzantine village communities have been identified operating as legal bodies defending their inhabitants' rights in terms of their land, water resources and taxation. He also separates the role of *curatores* from that of village elders. Given that the average size of villages was probably less than 100 (approximately 20-25 families) this may be a distinction that in practise did not exist - Jacoby (2001b); Jacoby (2009), X, 239-252. See also Jacoby (2003) "New Evidence on the Greek Peasantry in Latin Romania". In Dendrinos, et al. (Eds.) **Porphyrogenita : essays on the history and literature of Byzantium and the Latin East in honour of Julian Chrysostomides**. Aldershot: Ashgate, 239-252.

[833] Similar growth has also been identified elsewhere in the archaeological record. See, for instance, the Sphakia survey on Crete - Nixon, Lucia, et al. (2009).

[834] See, for instance, Gerstel et al. (2003) on Panakton, but Gerstel only excavated the settlement and notes '*Future investigation of the tower may clarify its original function'.* The estate centre discovered at Klimmataria in Boeotia has been termed 'Crusader' -Bintliff(2012), 421 - and has been referred to in a number of publications, but I have been unable to locate any formal dating to the early 13th century. A tower at Askra- Zaratova - Vroom (1998), Bintliff (2012), 421 – is dated to the 13th century by surface finds but without greater precision - Bintliff (1996) The archaeological survey of the Valley of the Muses and its significance for Boeotian History. **Recherches et**

would have been most likely to build their towers (except the tower in the Euripos strait at ***Negroponte***)– to overawe the populace and protect the new overlord from revolt - and all commentators on Central Greece ignore the existence of Byzantine towers prior to 1204.[835]

The war of Euboeote succession in 1255 probably reflects the thriving economy on the island at all levels of society. William de Vilhardouin, by laying claim to the northern third, was simply trying to gain his share of this wealth. If there was exploitation (and this has not been proven) it was not so much a division between the incoming Latins and the local Greeks (although the Greek archontes were excluded from the upper political levels) as an increasing disparity between the labouring class and the rent-extracting rich landowners – whether Latin or Greek.[836] This is a process, as we have seen, that had already been under way in the Byzantine Empire in the 11th and 12th centuries.[837] The intimations are that the Latin conquest merely accelerated this process. We must conclude that the present state of our knowledge about the 13th century is still insufficient to draw any generalized conclusion about the welfare of the Greek peasant in Central Greece immediately after 1204 but, judging by the evidence in the present work, it should be considered in a more positive than negative light.

Rencontres, 7: 193-210.. Another estate centre with tower has recently been excavated at Spata, close to Athens, which has been dated from the 11th to the 13th century - Γκινη-Τσοφοπουλου (2001) "Μεσόγεια" από την επικράτηση του χριστιανισμού έως την οθωμανική κατάκτηση". In Αικατερινίδης (Ed.) **Μεσογαία. Ιστορία και πολιτισμός των Μεσογείων Αττικής**. Athens: **in** Pallis (2014) Τοπογραφικά του αθηναϊκού πεδίου κατά τη μέση βυζαντινή περίοδο (9ος-12ος αιώνα). **Byzantina Symmeikta**, 23: 105-182.

[835] The insecurity of the latter years of the 12th century, as witnessed by Michael Choniates, who wrote a memorandum (υπομνηστικόν) to Alexios III about the situation (Choniates, I, 307-311), would most likely have promoted a greater level of local defence and tower construction in the region (especially on the church estates).

[836] This is reflected in a recent paper by Kalopissi-Verti who argues for an 'osmosis' of the Latin and Greek cultures in the 13th century in Central Greece based on an analysis of aspects of the material culture - Kalopissi-Verti (2007) "Relations between East and West in the Lordship of Athens and Thebes after 1204: archaeological and artistic evidence". In Edbury and Kalopissi-Verti (Eds.) **Archaeology and the Crusades,**. Athens. 1-33. Similarly, Sally McKee shows from notarial documents that there were diminishing distinguishing features between Latins and Greeks in 14th century Crete - McKee (2000) **Uncommon dominion : Venetian Crete and the myth of ethnic purity**. Philadelphia University of Pennsylvania Press. In Cyprus Benjamin Arbel has suggested that the division was between the urban and rural populations - Arbel (1989) "The Cypriot nobility from the Fouteenth to the Sixteenth Century: a new Interpretation". In Arbel, et al. (Eds.) **Latins and Greeks in the Eastern Mediterranean**. Routledge. 175-197.

[837] The monetisation of military service without a concomitant provision of a local military presence in the *thema* of Hellas and the granting of *pronoia* without practical service in the administration was enriching the central patrician families, whilst impoverishing the provinces - Herrin (1975). At the same time senor administrators and generals such as Gregory Pakourianos were able to construct ['…σύν τοῖς παρ'ἐμοῦ κτισθεῖσιν ἐν αὐτῶ δυσὶ κάστροις,…' (2:273)], own and donate fortifications, estates and their people (οἱ άνθρωποί μου - there is some dispute as to the exact meaning of this term) - Gautier (1984). This process has been interpreted as feudalisation but, whilst change was underway in the 12th century it could only be considered feudal from the late 13th and 14th centuries - Jacoby (1973);Ostrogorsky (1957), 371-372.

9.5.2 The source of the '*Great Tower*': West or East?

'Langeais (Indre-et-Loire)……is usually regarded as the first keep, built by Fulk [the Black, Count of Anjou, 970-1040] in 994, ……essentially a first-floor hall'[838]

M. W. Thompson (1991), in discussing the roots of the keep (or great tower) in 10th century France, peremptorily dismisses the Roman signal tower as a superfluous *deus ex machina*. He is probably correct yet, in so doing, he also never considered possible influences from the Byzantine Eastern Roman Empire. Until now, with the general presumption in the non-Greek literature that the medieval tower in Greece was of Western European origin,[839] there has never been any basis for investigating such a supposition. The identification in the present work, however, of a continuous tradition of tower construction in the Eastern Mediterranean means that this now needs to be considered as a real possibility.

Apart from Norsemen serving from the middle of the 9th century in the Imperial guard and Norman mercenaries defending Byzantine southern Italy in the early 11th century,[840] even rising to senior positions in the east,[841] there was a continuous movement of pilgrims from Western Europe to the Holy Lands. Duke Robert, father of Duke William of Normandy, made a pilgrimage to Jerusalem in 1035.[842] More importantly, Fulk the Black , whose many military constructions included Langeais, the earliest supposed keep (see quote above), made the pilgrimage four times. There was thus considerable movement of elite westerners to the Byzantine east at a time when Byzantine power was at its height in the late 10th and early 11th centuries.[843]

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[838] Thompson (1991), 36-37.
[839] Although early articles such as Lock (1986) and Langdon (1995) were very careful not to rule out a possible Byzantine origin.
[840] Benedikz (1978), 32-33, 51.
[841] Possibly in low numbers during the expansionist late10th century but their relatively low profile meant that they were not recorded by the chroniclers of the period: Shepard (1993) "The Uses of the Franks in Eleventh-century Byzantium". In Chibnall (Ed.) **Anglo-Norman Studies XV: proceedings of the Battle Conference 1992**. The Boydell Press. 275-305; Theotokis (2012) Rus, Varangian and Frankish mercenaries in the service of the Byzantine Emperors (9th-11th c.): Numbers, Organisation and Battle Tactics in the operational theatres of Asia Minor and the Balkans. **Byzantina Symmeikta**, 22: 125-156.
[842] Sartore (2013) Eleventh- and Twelfth-Century Similarities in the Norman Influence, Contact and "Conquests" of Sicily, Southern Italy and England. **Al-Masāq**, 25: (2): 184 - 203.
[843] Bachrach (1993) **Fulk Nerra, the Neo-Roman Consul 987-1040: A Political Biography of the Angevin count**. University of California, 25.

Much work has been undertaken analysing northwestern European and Byzantine influences on Crusader castles from the 12th century,[844] but what little is apparent on the tower treats it as an import from the West.[845] Military figures such as Fulk cannot have failed to be impressed by the towers that they encountered. Significantly, in his challenging book on the castles of northwest Europe Charles Coulson emphasises this point, writing '*West-East contacts were long established but the flow of influence was very much de haut en bas, from South-East to North-West',*[846] yet more recent work by authors such as Oliver Creighton have failed to address the possible formative influences from Byzantium on the development of early castles in western Europe.[847]

Apart from towers on fortification walls as at Constantinople and Antioch, there are numerous examples of towers they might have seen on their travels (see **figure 9.7**).[848] A tower at Philippi (**figure 9.5**), whose construction Lawrence(1983) has assigned to the late 10th century by Emperor Nicephoros Phokas (although this dating is insecure),[849] provides one possible example of an early Byzantine 'great tower' possessing both a defensive and potentially residential function and similarity to my **type B2**. The so-called 'Tzimiskes' tower on Mt Athos also possessed strong imperial links – the foundation of the Great Lavra monastery (963) had first been funded by the emperor Nicephoros Phokas (963-969),[850] and later building by his successor John Tzimiskes (969-976).[851] Another tower has also been assigned to

[844] Piana (2015) "Crusader Fortifications: beween Tradition and Innovation". In Boas (Ed.) **The Crusader World**. Routledge. 437-459: the author accepts other author's opinions that Ćurčić and Hadjitryphonos (1997);
[845] An exception is that by Pringle (1994b) Towers in Crusader Palestine. **Chateau Gaillard**, 16: 335-350; Pringle (1994a) **Churches, Castles and Landscape in the Frankish East**. Farnham.
[846] Coulson (2003), 17. See literary review in chapter 1.
[847] Creighton (2012).
[848] For a summary of secular Byzantine fortification architecture see Dunn, A. (1996) "Secular Architecture: Fortifications, c.313-800 and 800-1453". **The Dictionary of Art**. Macmillan-Grove, 553-556. He notes residential tower construction in Syria and North Africa in the 6th century under the Emperor Justinian, and the building of citadels and smaller tetrapyrgia during the period of Byzantine expansion in the 9th to 11th centuries.
[849] The dating to 963 is based on an inscription when the fortress was renovated, but Archie Dunn (private communication) has thrown some doubt on this and believes, based on its architecture that it is later. The tower, positioned at the highest point of the site, measured approx. 12m. square with walls of 3m. thickness allowing an internal area of 36 sq.m. on the ground floor, which is domed. A winding stairwell built into one wall leads up to the first floor set on the dome and two further floors, whose wooden support beams rested on shelves as the walls reduced in thickness, allowing substantial extra space at these levels. Lawrence argues that the lack of light at the lower levels precludes its residential use but a blind ground floor, and arrow slits at first and possibly second floor level are normal for most of the medieval towers studied, and the probable >50 sq.m. space for an ηλιακόν on the third floor would have provided good residential and reception space.
[850] Other similar contemporary structures of about the same size and construction style (rough stone and mortar and limited brickwork) are the Voukoleon palace built by Nicephoros Phokas and the now-demolished Velissarios tower in Constantinople: Voyadjis (1996) "The 'Tzimiskes' tower of the Great Lavra Monastery". In Bryer and Cunningham (Eds.) **Mount Athos and Byzantine monasticism : papers from the twenty-eighth Spring Symposium of Byzantine Studies, Birmingham, March 1994**. , Variorum. 198-203
[851] This tower measures 14 x 11.5 m. and rises to a height of 26 m. It has four levels and a basement with access through a small door 11 m. above the ground, probably via a retractable stairs. The external walls are of plain grey

Tzimiskes – that of Sahyun (Saône) in Syria, which he captured in 975. Measuring approx. 32 x 40 m. with an apparent shallow buttress on one side, this is a massive construction (**figure 9.6**).[852] As the key stronghold set in the centre of a much larger fortress, it is very similar to the 'standard' European 'great tower', and provides a clear model for imitation by western visitors.[853]

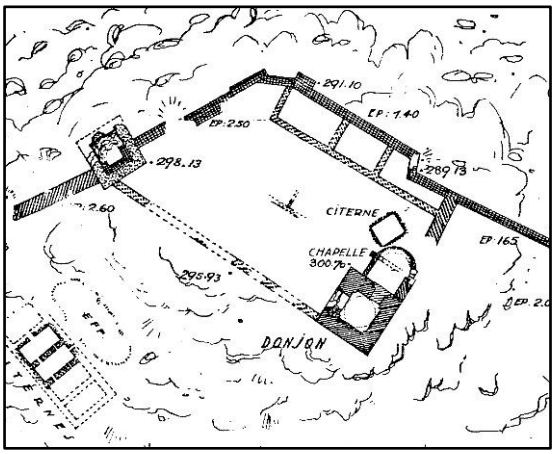


Figure 9.5 - 'Phokas' tower at Philippi[854]

limestone. The first two floors are lit by narrow slits, whilst the upper floor was completed (renovated?) in the 16th century and possesses domestic accommodation and a small chapel. The thick bricks used for the window lintels and a niche on the second floor are securely dated to the Middle Byzantine period and the initial building was possibly constructed in the 10th century: Voyadjis (1996); see also Theocharides (2001b) "Restoration of the 'TZIMISKI' tower in the monastery of Megisti Lavra on Mount Athos". In Nomikos (Ed.) **Restoration-Rehabilitation of Monuments and Historical Buildings in Northern Greece**. Ergon IV. The author notes the tower was possibly constructed in the 11th century

[852] Possibly on the other sides also but these are now destroyed in the centre.

[853] Similar central fortified towers, such as those at Yahyali (Cappadocia) and Kotylaion/Kutahya (Prygia) existed much earlier: Dunn, A. (1996) "Secular Architecture: Fortifications, c.313-800 and 800-1453". **The Dictionary of Art**. Macmillan-Grove. Also small forts used as look-outs, many of which must have had a similar appearance, are noted throughout Asia Minor: Haldon (2013).

[854] Lawrence (1983), fig.16 (extr.).

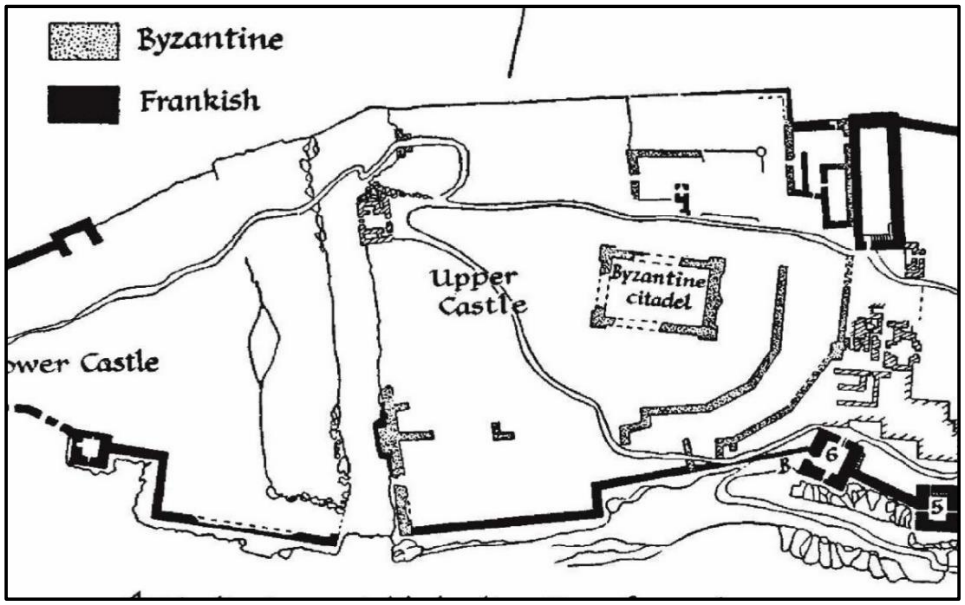
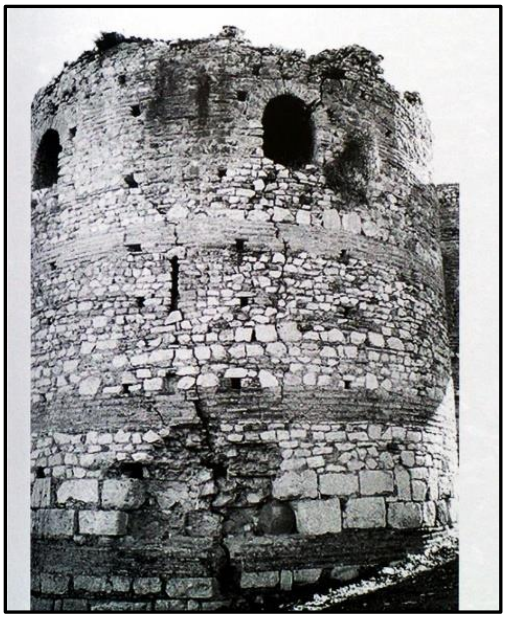


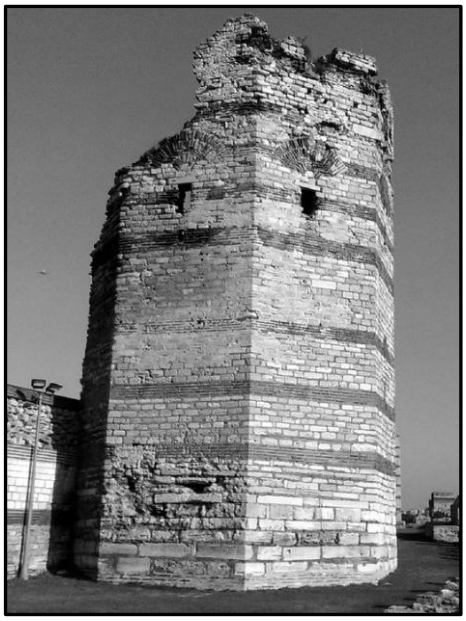
Figure 9.6 - Sahyun (Saône) Castle[855]

Kenyon and Thompson (1994) have posited that the English word '*keep*' derives from the French '*la kype'* used in 1375-76 to describe the tower at Guines in the Pas de Calais, France.[856] In 1402 this was also referred to as '*la Cupe'*, a term which has its roots in the Latin '*cupa*' meaning basket or barrel. They suggest that this was used by English soldiers to describe the banded masonry on the tower, a style that is strongly Byzantine.[857] If so, the usage probably dates from much earlier as a slightly disparaging way for early western travellers to describe the barrel-like fortification towers they encountered in the Eastern Mediterranean (see examples in **figure 9.7**). On Euboea one fortress is even referred to as *'La Cuppa'* by the historian Marino Sanudo Torsello in the early 14th century,[858] suggesting that the term was already well-established a century earlier.

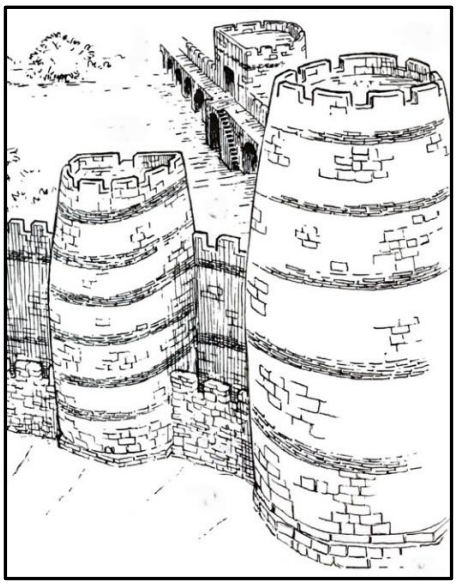
[855] Lawrence (1983). full description: Smail (1995) **Crusading Warfare, 1097-1193**. 2nd edition. Cambridge, 236-243. Drawing extracted from figure 6.
[856] Kenyon and Thompson (1994) The Origin of the word 'keep'. **Medieval Archaeology**, 38: 175-176; see also the support for this derivation in Dixon (2002).
[857] The Theodosian walls of Constantinople are a perfect example of this architectural style with their brick banding. Many of their towers were octagonal and are very 'barrel-like' in their appearance.
[858] There are a number of variations – *cupa, cupha*; See **focus site (CE17);** Papadopoulou (1996)



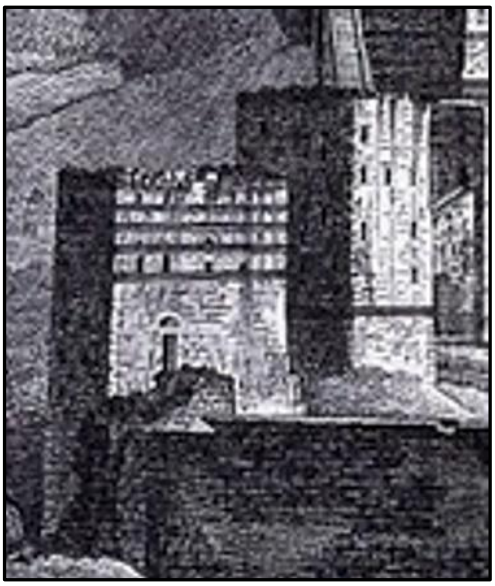
(a) Circular tower, Nikopolis



b) Octagonal tower, Constantinople



(c) Kutahya towers, Anatolia



(d) Antioch walls and towers

Figure 9.7 – Examples of Byzantine banded masonry towers[859]

In discussing the buttressed towers (**type B3**) of Macedonia Slobodan Ćurčić has highlighted the supposed links between these and similar towers constructed in France in the 12th and 13th centuries.[860] The international literature has generally supported evolution from a

[859] (a) Circular tower at Nikopolis, Epirus: extract from Veikou (2012); (b) Drawing of Octagonal tower in Constantinople: extract from Lawrence (1983); (c) Drawing of Kűtahya tower, Anatolia: extract from Foss (1983); (d) extract from an engraving by M. Piquenot, after L.F.Cassas (1798).
[860] Ćurčić and Hadjitryphonos (1997).

Norman model, but work by Ploutarchos Theocharides has challenged this, dating the first buttressed towers on Mt Athos to about 1000.[861] Outside the monastic enclave we have already discussed in detail the Iviron *metochi* noted in a *praktikon* of 1104 with its tower of fourteen buttresses (**figure 9.2**). The style seems to have its roots in Byzantine fortification methodology of the period, re-enforcing city walls with buttresses.[862] The Satyros tower (**figure 8.9**)) from close to Constantinople offers a late 9th century example of the possible evolution of such towers, that at Sahyun (**figure 9.6**) an illustration from the 10th century, and travel by Western elite pilgrims to the Eastern Mediterranean provides a simple conduit by which the style emerged in France prior to the first Crusade in 1095.[863] Seeming links to both an aristocratic and ecclesiastical image in a far advanced Imperial 'Roman' polity, something Philip Dixon calls the search for '*Romanitas*',[864] provided the incentive for its imitation and adoption by western warlords of the period.

Further speculation is beyond the remit of the present work. But the combined evidence of elite pilgrimage, Norman service in the Byzantine army, etymological usage, the emergence of the buttressed tower and the banded tower design of Guines, even the dating of the first keep to the late 10th century when Byzantine power was at its height, do present a *prima facie* case of some form of influence for the concept of the keep from a Byzantine prototype, that cannot be ignored.

[861] Theocharides (1996).
[862] Androudis (2018-2019); Zekos (1998).
[863] The transfer of influence in the opposite direction cannot be substantiated in this way. There were no Byzantine pilgrimages to the north, nor Byzantines serving in Western armies.
[864] Dixon (2002). The author provides examples of the monumental buildings of classical Rome and the 10th and 11th century churches of the Byzantine Empire, but fails to make the link with Byzantine fortifications.

9.5.3 Mud-brick mansions: the need for a new approach to understanding the Late Medieval built environment

> *'We are…. more historians of the literati and glitterati than true social historians. If we are truly interested in past societies, we must try harder to understand how the majority lived.'*[865]

As the building blocks of the present work were analysed and assembled issues emerged as regards methodology, materials, construction technology and the use of sources which have implications for the conclusions of many of the surveys noted in **chapter 7**. Individually, certain are of little consequence but, taken as a whole. they suggest that our approach to researching and interpreting the Frankish and, to a lesser extent, the Middle Byzantine periods in Greece needs adjustment.

From Monumentality to Utility

Chapter 8 challenged the apparent 'presumption' that elite buildings were constructed of stone and mortar. Neither Lock (1986) and Langdon (1995) nor, more recently, Bintliff (2012), Vionis (2014) and Loizou (2016), presuming the tower to be residential, have considered it as only one part (and possibly even a secondary one) of a much larger assemblage. Yet five towers were noted on the Werdműller (1660) sketch map of the Lelantine plain close to ***Negroponte***, each attached to a two-storey hall, none of which have survived.

Recently Guy Sanders has criticized the approach of focussing on elite structures to the detriment of buildings of the poor based on more fragile construction,[866] but even he, schooled in Roman and classical monuments, may not have considered the possibility that in the Late Medieval period many elite buildings may have been ephemeral. Moving down the social scale to the houses of the peasant class, we appear also to have been mesmerized by the condescending descriptions of early western travellers towards their '*mean*' mud-brick

[865] Sanders (2014) "Landlords and Tenants: Sharecroppers and Subsistence Farming in Corinthian Historical Context". In Friesen, et al. (Eds.) **Corinth in Contrast: Studies in Inequality**. Brill.
[866] Sanders (2014)

houses.[867] Yet the cob-wall construction of much medieval building in northwestern European villages was little different,[868] and for a very good reason apart from economy: earth and thatch possess a much lower thermal conductivity than stone and tiling,[869] keeping buildings naturally warm in winter and cool in summer.

The move from ashlar masonry construction to the use of rough field stone set in mortar provides the image of an apparent deterioration in construction quality. Yet not only is this functionally similar,[870] but the slight indent towards the base of most towers studied on Euboea suggests that they were once rendered,[871] a finish that would have given buildings a 'modern', even 'elite', look in a medieval context, but for stone and earth walls or mud-brick it was also a preferred feature to protect them from the sporadic deluges, which are a feature of the rainfall pattern of Central Greece. Judging from the description above of the early 12th-century estate centre of Iviron monastery only one building, (the tower) – not even the church or the solarium - out of probably more than twenty was constructed of stone. Yet modern researchers see mud-brick as an inferior construction material. A recent article by Kostis Kourelis exemplifies this when he writes *'…any auxiliary spaces would likely have been constructed of mud brick'*, the assumption being that houses were probably built of stone.[872]

[867] Construction varies between regions and even localised areas (ie. in the plain or on the side of a hill) between rough-cut stone bonded with earth and mudbrick, although this is a conclusion based generally on surviving houses from the Ottoman period: Sigalos and Eleftherios (2004), 61.

[868] The surviving remains of buildings from the 18th and 19th centuries (?), for instance, on my father's farm in the county of Devon, England – a water mill, barns, livestock shelters and cottages – all indicate their cob and dry-stone style rendered construction roofed in thatch (replaced by corrugated iron and asbestos in the 20th century), the only surviving stone and mortar structure being the fireplace and chimney of one house. For an analysis of buildings in the Midlands region of England: Dyer, C. (1986) English Peasant buildings in the later Middle Ages. **Medieval Archaeology**, 30: 19-45.

[869] Greenspec (2020) **Building Physics: Thermal Mass** [online]. http://www.greenspec.co.uk/building-design/thermal-mass/ [Accessed 28/3/2020].

[870] The strength of a wall depends on both its tensile and compressive strength. So many factors affect these that study of each individual structure seems from the literature to be as important as a particular style. Factors include stone type, mortar type and thickness, cross and linear jointing, the skill of the mason. However, whether construction is of ashlar or roughly-worked field stone does not seem to affect its basic strength, other things being equal. See, for instance: Garcia et al. (2012) Experimental study of traditional stone masonry under compressive load and comparison of results with design codes. **Materials and Structures**, 45: 995-1006; Roca et al. (2010) Structural Analysis of Masonry Historical Constructions. Classical and Advanced Approaches. **Archives of Computational Methods in Engineering**, 17: (3): 299-325.

[871] See **chapter 8:** Lock (1986) uses the classical architectural term 'euthynterio' (levelling course) to describe it, but it is simply a gap of about 60 cm. that protects render from rising damp. Modern brick walls always include a 'damp course' for the same reason.

[872] Kourelis (2018) "Zaraka Surrounded: The Archaeology of Settlements in the Peloponnesian Countryside*". In Campbell, S. (Ed.) **The Cistercian Monastery of Zaraka, Greece**. Western Michigan University, Kalamazoo. 193-213.

Based on this, our ability to easily identify the archaeological remains of elite building, whether clerical or secular, in the period under study is severely restricted.[873] Intensive survey using surface potsherd finds is one approach but even this has its acknowledged problems.[874] We are reduced effectively, like medievalists in Scandinavia or pre-historians, to excavation to identify collections of postholes.[875] The fact that, of 1,500 fortifications built by Duke William of Normandy during his conquest of England in the late 11th century, only a small proportion were in stone should give notice to students of the Late Medieval period in Greece that we must think 'outside the box' when considering the topography of the Late Medieval period.[876]

A Focus on the Total Landscape

In order to compensate for the general lack of archaeological survey and documentary sources on Euboea the present work has taken a 'landscape' approach. Fragmentary evidence on churches as proxies for settlements, and etymological indications from names on cartographic resources from the 14th to the present day to identify possible tower and beacon sites, were integrated using Geographical Information Systems (GIS) and satellite telemetry to recreate the probable Late Medieval landscape of the island.[877] In this process over sixty hitherto unidentified tower sites – some even in well-surveyed Boeotia - were located,[878] thus allowing not only analysis of the functionality of the Greek tower in the present work, but potentially providing a fertile base for future study of the economy and social structure of Euboea during the Byzantine and Frankish periods

[873] Survival rates of mud-brick buildings are so low that Kourelis references only three in the whole of the Peloponnese -one at Pylos and two at Nichoria : Idem (2008). This was also seen as a problem in the Turkish period in researching the Methana peninsula: 'Turkish and Modern Methana' *in* Mee and Forbes (1997) **A rough and rocky place : the landscape and settlement history of the Methana Peninsula, Greece : results of the Methana Survey Project sponsored by the British School at Athens and the University of Liverpool**. Liverpool: Liverpool University Press, 3: 101-111. In England houses of the 13th century built of cob or wood seemed to have had a life of about 70 to 100 years: Dyer (1986)..

[874] Certain sites, for instance, where there is conspicuous architecture, lack artefacts: 'Survey Methodology' ***in***, Mee and Forbes (1997) 3: 33-41; Vionis (2017) Understanding settlements in Byzantine Greece: New data and approaches for Boeotia, sixth to thirteenth centuries. **Dumbarton Oaks Papers**, 71: 127-173, note 16.

[875] The identification of an elite timber-structured building measuring 50 x 13.8 metres from the Protogeometric period (c.1050-900 B.C.) at Levkanti on Euboea has fundamentally changed views on the Greek dark ages: Lemos – '**Lefkandi'.**

[876] For wooden castles: Higham and Barker (1992); Creighton (2002), 8.

[877] Much of this data has been from local historians and antiquarians outside the academic field. I have continuously been surprised, as I visited local libraries and bookshops in the various regions of Greece and Italy, at the number of self-published books and pamphlets that have never been distributed beyond their immediate vicinity.

[878] A caveat should be made here that the sites in Boeotia may simply have not been published.

Such a result suggests that the conclusions of even the pioneering intensive survey processes developed in Greece over the last forty years may be unduly skewed by the lack of incorporation of information from areas outside their immediate focus of research,[879] or subsumed by modern conurbations or development and that we need to create innovative approaches to correct for this imbalance. It also indicates that desk-based study, utilising satellite telemetry and imaging, now allows us to flesh out reference works such as the *Tabula Imperii Byzantini* with the commitment of major resources on the ground on only an exceptional basis.[880]

In this regard the identification of a probable Byzantine chain of beacons running from the east coast of Boeotia almost directly to Thebes warrants special attention. GIS viewshed analysis in combination with the use of place-names from modern maps enabled the identification of its probable route not over, but through, the mountains, even without site visits. By adding such networks (see **appendix 9.2**) to topographic analysis of ecclesiastical centres and settlements in Central Greece,[881] we may begin to understand the topographic interrelationships and administrative functioning not only of the *thema* of Hellas, but also of the following Frankish period, in a much more nuanced way.[882]

In a similar manner Guy Sanders has used agricultural data from the 19th and early 20th century to understand the colonisation of Roman Corinth without resorting to theoretical agricultural production multipliers.[883] It has been suggested, for instance, that wealth in the medieval period is not always represented in material remains but may be reflected in livestock owned by the estate owner or villagers – something that cannot be identified through archaeology, livestock stands being ephemeral parts of the landscape.[884] Without the work by

[879] Significant new methodology is being utilised with exceptional results in recent surveys, which helps in classical sites, but may not be relevant to the medieval and more recent periods. See, for instance, Bintliff (2016) Leiden Ancient Cities of Boeotia Project: the April and August 2016 seasons. **Teiresias**, 46: (2): 1-10

[880] The T.I.B. has already made a start on this by digitising analogue volumes, but this database, lacking the use of readable PDF's leaves much to be desired - **Tabula Imperii Byzantini** [online]. https://tib.oeaw.ac.at/index.php?seite=digtib Austrian Academy of Science [Accessed 28/3/2020]. See also the results of work on Naxos using a process called 'Historic Landscape Characterisation': Crow et Al. (2011).

[881] For GIS analysis see Emeri Farinetti maps in Vionis (2017). For a more general settlement study: Rosen (2018) **The Economic Fate of Urban Settlements in Rhomanian Boeotia, Thessaly and Western Macedonia (783-1204)**. PhD, University of Birmingham. For an early diachronic study in the Peloponnese: Runnels and Andel (1987) The Evolution of Settlement in the Southern Argolid, Greece: An Economic Explanation. **Hesperia**, 56: 303-334

[882] Vionis (2017).

[883] Sanders (2014).

[884] Idem. 68. See also **chapter 4** and my comments on sheep stocking levels in the mid-20th century in southern Euboea around the Dystos lake. A poor retired farmer, who related how his brother had been tragically killed by agricultural wardens protecting crops, measured his progress from labourer in terms of the number of his flock of sheep and the quantity of olive trees he had the right to cultivate, effectively 'owning' them even though he did not own the underlying land (a common situation on Euboea).

Machiel Kiel on the Ottoman defters of the 15th and 16th centuries we would know nothing of the flocks of sheep of the Albanian villages of Boeotia, and therefore their real level of wealth.[885] Like much of the Balkan peninsula over 70% of Euboea is uncultivable, yet this does not mean it is non-agricultural (see, for instance, Dunn(1996)).[886] Its arboreal wealth existed historically, and was recognized by contemporary writers,[887] as a huge latent economic resource, the historical exploitation and parameters of which GIS software has the potential to unlock.

Villages perched on the foothills of mountainous areas are often considered marginal and, by inference, poorer than those in the plains, which are the prime focus of mechanized modern agriculture. But, considered in an industrial context before the exploitation of coal, their hinterland would have provided a key energy resource (wood and water-power) for many medieval production processes. Further, at least on Euboea, transhumant processes until the early 20th century were bi-directional – shepherds moving to mountain pastures in the summer and highland labouring gangs descending to pick olives and till lowland arable land in the winter,[888] indicating a level of inter-dependency of settlements and a more complex economic structure than the simple nucleated village most often proposed.[889]

A 'regressive' approach to topographic analysis of the Late medieval period?

In studying the Late Byzantine (Frankish) period in Greece, rather than moving forward from the Middle Byzantine period, we may more profitably move backwards from the present day– or at least from 19th century and Ottoman Greece,[890] for which there is much statistical

[885] Kiel (1997) "The Rise and Decline of Turkish Boeotia, 15th - 19th century". In Bintliff (Ed.) **Recent Developments in the History and Archaeology of Central Greece : proceedings of the 6th International Boeotian Conference**. BAR International Series, 666.

[886] In a similar vein, my own agricultural experience and an interview with a Greek shepherd from ***Disto*** in central Euboea about his childhood in the 1960's allowed me to recognize the potential historical level of sheep rearing on its surrounding mountains, an approach which, while not new, seems to have been rarely used in recent surveys.

[887] Euboea was noted as a good source for wood to support a proposed Crusade in the early 14th century by Marino Sanudo Torsello: Lock (tr.)(2011) **[Torsello] The book of the secrets of the faithful of the cross - Liber secretorum fidelium crucis**, Ashgate, 117.

[888] Thanks to Panagiotis Sevilias and Christos and Haroula Mountrichas for providing information on how their families cultivated the fields prior to the advent of tractors in the latter 20th century.

[889] The role of the 'itinerant' tradesman (blacksmith, stonemason, carpenter etc.) and that of the regional fair is also little addressed in the literature.

[890] Dunn, A. (2009) "Byzantine and Ottoman maritime traffic in the estuary of the Strymon: Between environment, state, and market". In Bintliff, J.L. & Stöger, H. (Eds.) **Medieval and Post-Medieval Greece. The Corfu Papers**. Oxford. 15-31.

and cartographic evidence to be exploited (prior to massive development in the latter part of the 20th century).[891]

Given the apparent fragile ephemeral nature of the built environment in these eras (apart from fortifications and to a lesser extent churches) and their relative closeness in time to the present day, there is a need to study much more carefully recently-constructed village and town churches many of which, even those built in the 20th century, retain traces of the older churches they supersede,[892] and which Theodoros Skouras through discussion with the local population has so well exploited for Euboea.[893] Many so-called *'field'* churches on the island have also been found during research in the present work to have a relevance to Late Medieval settlement location, which classicists may rightly have ignored, and need to be re-interpreted.

This is not a new approach,[894] It also does not obviate the need for detailed excavation or survey – without such, lacking documentary sources, we cannot absolutely date, for instance, the towers in the present study – but does allow us to take advantage of substantial sources of information from post-medieval sources, which many recent multi-period survey reports seem to have only touched upon, their prime focus ending in the Middle Byzantine period.

Demography, Economy and Social Display

Whilst studies in fortification tend to look at architectural trends in a purely military/political framework,[895] the conclusions reached in the present work are dependent in part on the interpretation of demographic and economic trends. In the 13th century these latter appear to have been very positive yet, apart from some church construction, no monumental buildings have survived on Euboea from after 1204. We must ask how the rich spent their money. Some was undoubtably repatriated but for the rest we must resort to speculation.

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[891] This process, termed 'regression', involves excluding certain dateable features from a map to reveal what once existed beneath: Chapman (2011a) **Landscape Archaeology and GIS**. The History Press, 90. See also Dunn, A. (2005) **The interaction of secular public institutions and provincial communities in the political and economic spheres in Late Antique Aegean Macedonia**. PhD, University of Birmingham, ch.10 'Configurations of the pre-modern landscapes of Aegean Macedonia…….', 50-100.

[892] Although he only surveyed churches prior to the 20th century, this approach is well-illustrated in Theodore Koukoulis' 'Catalogue of churches' **in** Mee and Forbes (1997), chapter 12, 211-256.

[893] Skouras (1998).

[894] See, for instance, Arnau (2015) "Detecting and Understanding Historic Landscapes: Approaches, Methods and Beneficiaries". In Arnau and Reynolds (Eds.) **Detecting and Understanding Historic Landscapes**. Mantova: SAP Società Archeologica s.r.l. 7-18; also, for use of place-names: Jones (2015).

[895] See Lawrence (1979 and 1983). In Greece this is compounded by the fact that many such monographs are undertaken by architectural students, such as those used in the present work produced by students of Professor Varelides at Peiraeus University.

In Crete the authorities acted to reduce conspicuous display. A hoard of jewelry discovered in Chalkida possibly indicates similar personal display of wealth on Euboea.[896] If we add to this the extensive use of wood for construction by Venetian residents of Constantinople,[897] and examples of elite residences in the Lelantine plain built of mud-brick (or possibly stone bonded with mud) faced with mortar, then we must assume that money was probably invested not so much in the construction as the finishing and fittings of these buildings. Was this a reflection simply of insecurity and therefore a wish not to invest in 'bricks and mortar' but transportable goods? Alternatively, are we looking at the first indications of a new 'consumerism' emerging, where display takes on a more personal aspect and even elite buildings are ephemeral?

In essence, all of the above suggest that we must consider the Late Medieval period in the Eastern Mediterranean qualitatively different to its predecessors. We must eschew a focus on monumental archaeology in favour of a greater understanding from a practical point of view (by reference to early modern sources and databases, social and economic trends, and agricultural and commercial practices) of the total landscape, its *inter* and *intra*-connections, and the emerging class of people who lived and worked within it.

[896] Kontogiannis, Nikos and Orfanou, Vana (2019) "The Chalcis Treasure: A 14th -15th Century Hoard from Euboea, Greece – First Thoughts and Preliminary Results". In Bosselmann-Ruickbie, A. (Ed.) **New Research on Late Byzantine Goldsmiths' Works (13th - 15th Centuries) [Neue Forschungen zur spätbyzantinischen Goldschmiedekunst (13.-15. Jahrhundert)]: Mainz, 29 to 30 October 2015**. 115 127.
[897] Jacoby (2014).

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THE MEDIEVAL LANDSCAPE OF EUBOEA (NEGROPONTE): A FRAMEWORK FOR INTERPRETING THE BYZANTINE AND FRANKISH TOWERS OF GREECE

VOLUME (2)

APPENDIX 1

1.1 – Listing of transliterations of Greek to Latin Characters

Greek Character	Latin Character	Notes
Α	A	
Β	B	Pronounced 'V'
Γ	G	Many texts use 'Y' as in ***Ayios***. 'ΓΚ' is treated as 'G'
Δ	D	'dh' is often used to imitate the soft pronunciation
Ε	E	
Ζ	Z	
Η	Ē	Or 'ē' in miniscule form
Θ	TH	
Ι	I	
Κ	K	
Λ	L	
Μ	M	
Ν	N	
Ξ	X	
Ο	O	
Π	P	
Ρ	R	
Σ	S	
Τ	T	
Υ	Y / U / V	Usually 'U' but may vary according to pronunciation
Φ	F	Sometimes in texts transliterated as 'PH'
Χ	CH	Sometimes in texts the 'C' is elided or 'Kh' is used
Ψ	PS	
Ω	Ō	Or 'ō' in miniscule form
ΜΠ	MP	'B̲' if appears at beginning of word
ΝΤ	NT	'D̲' if appears at beginning of word
ΓΓ	NG	
ΑΥ	AV	
ΑΙ	AI	
ΕΙ	EI	
ΟΙ	OI	Except 'Euboea' which is always used for 'Εύβοια'
ΟΥ	OU	

Table A1.1 – Listing of transliteration of Greek to Latin Characters

NOTES:

1. An attempt has been made to directly transliterate where possible because of the need to understand possible corruptions of words over time from the classical through the medieval into the modern Greek period.
2. Authors' names are written as they are recorded in the literature.
3. Many saints' names are transcribed based on common usage.
4. Placenames of major well-known towns use the English form e.g. Athens, Thebes

1.2 Codification of Geographical Regions

(A) Euboea

Region	Code	Key Towns
Northwest	NW	Lichada, Istiaia, Aidēpsos
Northeast	NE	Mantoudi, Prokopi, Limnē
Central north	CN	Psachna, Stenē, Politika
Central west	CW	Chalkida, Nea Artakē, Basiliko, Eretria, Amarynthos
Central east	CE	Kymē, Avlonari, Aliveri
South central	SC	Dystos, Krieza, Petries, Zarakes, Styra
South	S	Marmari, Karystos

(B) Rest of Greece

Region	Code	Notes – Key Areas / Islands
Attica	A	
Aegean	AS	Amorgos, Keos, Kythera, Samothrake, Syros
Andros	AN	
Boeotia	B	
Central Greece	CG	Excluding Boeotia
Chios	C	
Crete	CR	
Epirus	E	
Macedonia	M	Halkidiki, Strymon valley
Naxos	N	
The Peloponnese	P	Laconia, Arkadia, Achaia, Messenia
Rhodes	R	
Tinos	T	
Thessaly	TH	

Table A1.2 – Codification of Geographical regions

APPENDIX 2 EARLY CARTOGRAPHIC SOURCES

2.1 Index of *Portolan* charts

Author / Document_name	Date	Location	Institution	Reference Number	Pujades No.
Lo compasso di navigare	13th c.	Berlin	Library of the Prussian State	code Hamilton 396	
Carte Pisane	13th c.	Paris	BnF Cartes et Plans	B 1118	C1
Cortona chart	beg. 14th c.	Cortona	Bib. Accad. Etrusca	[Port. 105]	C2
Vesconte, Pietro	1311*	Florence	Arch. di Stato	C.N. 1	C3
Vesconte, Pietro	1313*	Paris	BnF Cartes et Plans	DD 687	A1
Vesconte, Pietro	1318*	Venice	Civico Museo (Correr)	Port. 28	A2
Vesconte, Pietro	1318*	Vienna	Öst NB	MS 594	A3
Vesconte, Pietro	132[1]	Vatican	Biblioteca	Pal.Lat.1362A	A4
Vesconte, Pietro	c.1321	Lyons	Bibliothèque de la ville	MS 175	A5
Anon.Venetian	c.1321	Vatican	Biblioteca	Vat.Lat. 2972	A6
Vesconte, Perrino	1321*	Zurich	Zentralbib.	R.P.4	A7
Anon. Genoese	1300-25	Florence	Bib. Riccard	3827	C4
Anon.Venetian	c.1325	London	British Library	Add MS 27376*	A8
Vesconte, Perrino	1327*	Florence	Bib.Medicea-Laur.	Med.Palat.248	C5
Carignano (destroyed)	c.1327	Florence	Arch. di Stato	C.N. 2	C6
Dalorto/Dulceti	1330*	Florence	Prince Corsini		C7
Dulceti	1339*	Paris	BnF Cartes et Plans	B 696	C8
Dulceti / Anon.Majorca	1339-50	London	British Library	Add MS 25691	C9a
Anon. Genoese	1325-50	(Amsterdam)	(Nico Israel)		C9b
Anon. Genoese	c.1325-50	Paris	BnF Manuscrits	MS. Lat. 4850	A9
Anon. Genoese	1325-50	Washington	Library of Congress, G&M	Ristow-Skelton 3	A10
Anon. Genoese	mid 14th c.	Paris	BnF Manuscrits	MS. Ital. 1704	C11
Pizzigano, F.	1367*	Parma	Arch.di Stato Bib.Pal.	Ms.Parm.1612	C13
Pizzigano, F.	1373-83	Milan	Biblioteca Ambrosiana	SP10, 29 (SP II.2)	A10
Catalan Atlas	c.1375	Paris	BnF Manuscrits	MS. Esp. 30	C16
Soler, Guillem	c.1385	Paris	BnF Cartes et Plans	B 1131	C14
Soler, Guillem	1385*	Florence	Arch. di Stato	C.N. 3	C17
Anon. Majorcan	1375-1400	Venice	Biblioteca Naz. Marciana	It.IV, 1912 (10057)	C15
Anon.Majorcan	1375-1400	Naples	Bib.Naz.Vitt.Eman.III	MS XII. D102	C19
Anon. Venetian	1375-1400	Venice	Civico Museo (Correr)	MC Port. 30	C21
Anon.Majorcan	end 14th	Paris	BnF Cartes et Plans	AA 751	C22
Anon. Venetian	end 14th	London	The National Archives	MPB 1/38	C24
Corbitis Atlas - Venetian	end 14th /beg. 15th	Venice	Biblioteca Naz. Marciana	It.VI, 213 (5982)	C11
Pinelli Anon. Venetian(F.Cesanis)	end 14th / beg. 15th c.	London	British Library	Add MS 19510	a12
Beccari, F.	1403*	New Haven	Yale Univ. Lib., Beinecke	Art Object 1980.158	C25
A. de Virga	1409*	Paris	BnF Cartes et Plans	D 7900	C27
Anon.Venetian (A. de. Virga?)	beg. 15th c.	Venice	Civico Museo (Correr)	Port. 40	C28

Table A2.1- 14th and early 15th century portolan charts used in thesis

(Note: '*lo compasso*', the first item, is a written *portolan*)

APPENDIX 3 LATER CARTOGRAPHIC SOURCES

3.1 The accuracy of the 1485 Manuscript Isolario of Bartolomeo Dalli Sonetti

Bartolomeo Dalli Sonnetti's **isolario,**[898] which was published c. 1485, was the first literary example of what Tolias calls the '*nautical isolario*' genre.[899] As a sea captain and seasoned mariner, trained in the skills of navigation, and claiming to have personally visited the Aegean fifteen times, he produced what can be termed the first modern map of the island.[900] Because it is sufficiently comprehensive and was published only fifteen years after the Ottoman annexation of the island, it is used as our cartographic base map.[901]

One question that immediately arises is why Sonetti decided to undertake what must have been a very time-consuming and expensive venture. The rationale for Buondelmonti's **Liber insularum** had been very clear. As a member of a minor branch of a leading Florentine family, apart from wanting to develop his education and learn Greek, he had a commission to purchase rare manuscripts on behalf of Cardinal Jordano Orsini, to whom he dedicated his original work in 1420. He thus appears to have been somewhat financially independent and can be relied upon as a good witness.[902]

For Sonetti the rationale is much less clear. To travel around the Aegean fifteen times just on a whim to create a new version of Buondelmonti's work in rhyming verse seems improbable. He was initially probably only a crew member, and later combined work trading between the islands, or between the Aegean and the Adriatic, with his hobby. His roots are unclear, but he does not appear to have been a member of a leading Venetian family nor a rich merchant so we must look to a possible sponsor elsewhere.[903] This could have been a publishing house, looking to exploit the success of Buondelmonti's work in a printed version as had Martellus,[904] but many of these at this time were themselves drowning in red ink as cut-throat competition in the Italian printing bubble led them to financial ruin.[905]

We can also look to the Venetian Republic as a possible sponsor. It is known that in 1460 the **Dieci**, the secretive 'Council of Ten', had ordered maps to be drawn up of the Venetian possessions.[906] The loss of ***Negroponte*** in 1470 had become a *cause célèbre* in the immediate

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[898] Sonetti (c.1485) "**Negroponte [By Sonetti, Bartolommeo dalli]**". Venice. National maritime Museum, London, P/21 f.55. Although the dating of the manuscript versions seems to be c.1485 there is a hypothesis that they may be much later in the early sixteenth century - Mason (2014) Towards dating the manuscript versions of the Isolario of Bartolommeo da li Sonetti. [Accessed 18/12/2018], https://www.academia.edu/7134651/Towards_dating_the_manuscript_versions_of_the_Isolario_of_Bartolommeo_da_li_Sonetti.

[899] Tolias (2007) " Isolarii, Fifteenth to Seventeenth Century". In Woodward (Ed.) **The History of Cartography,**. Chicago. vol.3, Part 1, ch.8.

[900] Goff (1972) "**Isolario / [by] Bartolommeo dalli Sonetti. With an introduction by Frederick R. Goff.**". Amsterdam, Theatrum Orbis Terrarum ltd. p. V.

[901] It can be shown that a number of the leading cartographers of the 16th and 17th centuries also based their maps on that of Sonetti.

[902] Turner (1987) Christopher Buondelmonti and the Isolario. **Terrae Incognitae, Wayne State University Press**, 19: 11-28.

[903] Goff (1972), V-VIII.

[904] Tolias (2007), 267.

[905] The printing industry bubble in Italy had burst in 1472-3 - Meserve (2006) News from Negroponte: politics, popular opinion, and information exchange in the first decade of the Italian press. **Renaissance Quarterly**, 59 No.2: 440-480

[906] MacKay The Dieci call for maps in 1460. **Academia.edu** [Accessed 21/12/2012], http://www.academia.edu/1788577/The_Dieci_call_for_maps_in_1460 .

aftermath of its annexation,[907] and the Venetians were to make repeated attempts to recapture it over the following 200 years.[908] It would not have been beyond the realms of imagination for them to have commissioned a seasoned ship's captain to undertake such a task under cover of updating Buondelmonti's work, many copies of which were already in existence.

Detailed maps obtained as a result of the 1460 order have never been discovered, but Sonetti's work is so comprehensive and accurate in many ways that it must have drawn on much more detailed maps. For a work of sonnets, the inclusion of rivers, where water could be obtained (whilst excluding those that dry up in the summer)[909] or shoals, which for the average reader would have been irrelevant, seems somewhat improbable. Sonetti, too, dedicated his work to Giovanni Mocenigo, Doge of Venice 1475-85 - clear evidence of his close relationship with the state.[910]

The city of ***Negroponte***, too, is presented in Sonetti's map of Euboea in a completely new way. It dwarfs the towns of Thebes and Athens and, in fact, any other town on any of the other island maps, including Crete, the other key Venetian possession in the Aegean. Sonetti appears to have deliberately distorted and magnified the environs of ***Negroponte***. This could have been simply artistic license or a desire to show the strait in detail, but a more sinister view is that this was deliberate state-sponsored propaganda. The authorities needed the support of the public and by deliberately over-emphasizing the importance of ***Negroponte***, they possibly hoped to win over public opinion for military ventures against it. So here we have a prima facie case for state sponsorship of Sonetti, either directly or indirectly, further re-enforcing our treatment of the map as based on an accurate survey of the island. But, in order to make best use of the information it provides, we need first to understand not only its level of accuracy but also its deficiencies. Key points to note about its construction are:-

1. Orientation: It includes the sixteen points of the compass in *portolan* style and is oriented to the North. The general bearings of the island's landmass are correct, and its relation to the mainland to the north and west, and the island of Andros to the southeast are correct.

2. Coastline: Generally, the coastline is recognizable (see **figure A3.1**), although the eastern Aegean shoreline does not accurately reflect the 325^0 bearing from Cavodoro (also known as cape *Xilophay* (boat eater), *silofa*, or *silosa*) to Cape Kimi and the more westerly 295^0 bearing from there to Pondiconisi. It is drawn much straighter with a differential of only 10^0 (compared to the actual 30^0) between the two at 317^0 and 307^0 respectively.

The Lithada (also sometimes noted as Lichada) peninsula is well delineated, showing the deep bay opposite Aidēpsos, and the bearing from there to cape ***Mantelo*** - close to Karystos in the south - at 120^0 approximates that of modern maps. Headlands tend to reflect the *portolan* tradition of treating them as points with concave bays in between, although the larger ones are

[907] Meserve (2006).
[908] Topping (1976) Venice's Last Imperial Venture. **Proceedings of the American Philosophical Society**, 120: (3): pp.159-165.
[909] Such as the Lilas river, the widest on the island, which can reach a depth of over 4 metres in the winter months when flooding, whilst it is completely dry in the summer months - Ntalas (2011) Flood Boundary Delineation and Risk Management - Case Study River Lilas, Euboea Prefecture, Greece. **Mathematical Modeling in Civil Engineering**,
[910] We must be careful, however, of drawing too much import from such a dedication, since it may simply have been a way of ensuring copyright of his work.

shown as a convex curve.[911] It is obvious from points of style such as this that Sonetti drew heavily on an existing *portolan* chart for some of his information.

The bays on the western shoreline are all over-emphasised and, as noted above, magnified around the area of ***Negroponte.***[912] This does not significantly distort our image of the island but, in many ways allows the provision of greater detail in the highly populated central area,[913] providing pilots with a much larger scale chart of the dangerous narrow strait leading up to ***Negroponte***.

Finally, ***Castri*** bay in the south is much magnified. This is also to be expected since the port was traditionally the key stopping-off point on the route from the west to Constantinople, not only just for provisions and to await favourable weather, but also to find news of pirates in the Aegean area.[914]

3. Islets and shoals: Euboea is surrounded by a large number of small islands and islets. In the northeast Sonetti correctly notes ***Pondiconisi***, which has retained its name to modern times, even being translated into *Rati* (Rat) island on one map.[915] All the islands to the south of the western coastline between Chalkida and Karystos are mapped, although their positioning is somewhat haphazard, and many are much smaller in reality. Seven shoals are well noted, delineated using '+' symbols, clearly displaying his mapmaking skills and priorities. The two around Agios Nikolaos just to the south of ***Negroponte*** (also called Bourtzi by the local population today after the later Ottoman fort constructed there), and that just off Cape Lithada in the northwest, are clear features on modern nautical maps.[916]

4. Internal Geographical features These are nearly completely missing. No mountain range is delineated, unlike Buondelmonti, who had noted these in some detail even naming ***Mt. Caphareus*** (probably Mt Dirfis which rises to a height of 1,743 metres). Hills are not shown except in so far as they affect the positioning of towns and fortifications, e.g. ***Lila[n]to*** (modern Phylla) and ***Caristo*** (Karystos) are shown on hills while ***Politica*** (Politika) and ***Mantougo*** (Mantoudi), which are on lower ground, are not.

[911] Other clues can be found in the treatment of shoals (see section below) and his insistence on including all place-names within the coastline, even if this meant compromising the accurate positioning of these places - see note on ***Chumi***.

[912] Interestingly nearly all later cartographers follow a similar policy, over-emphasising the environs around the bridge, although this may be simply that Sonetti's map was their original source.

[913] This has been a perennial problem for cartographers, who today often provide a cut-out map of an area of special interest at a larger scale to facilitate understanding.

[914] Randolph (1687) "The present state of the islands in the archipelago, (or arches) sea of Constantinople, and gulph of Smyrna : with the islands of Candia, and Rhodes.....". Printed at the Theater in Oxford [NEGROPONTE p.6]

[915] The Greek word for mouse is 'pondiki' (ποντίκι).

[916] Elias (2007) "**Greece, Sea Guide - Evvoia, Sporades, Northern mainland**". Athens, Eagle Ray Publications.
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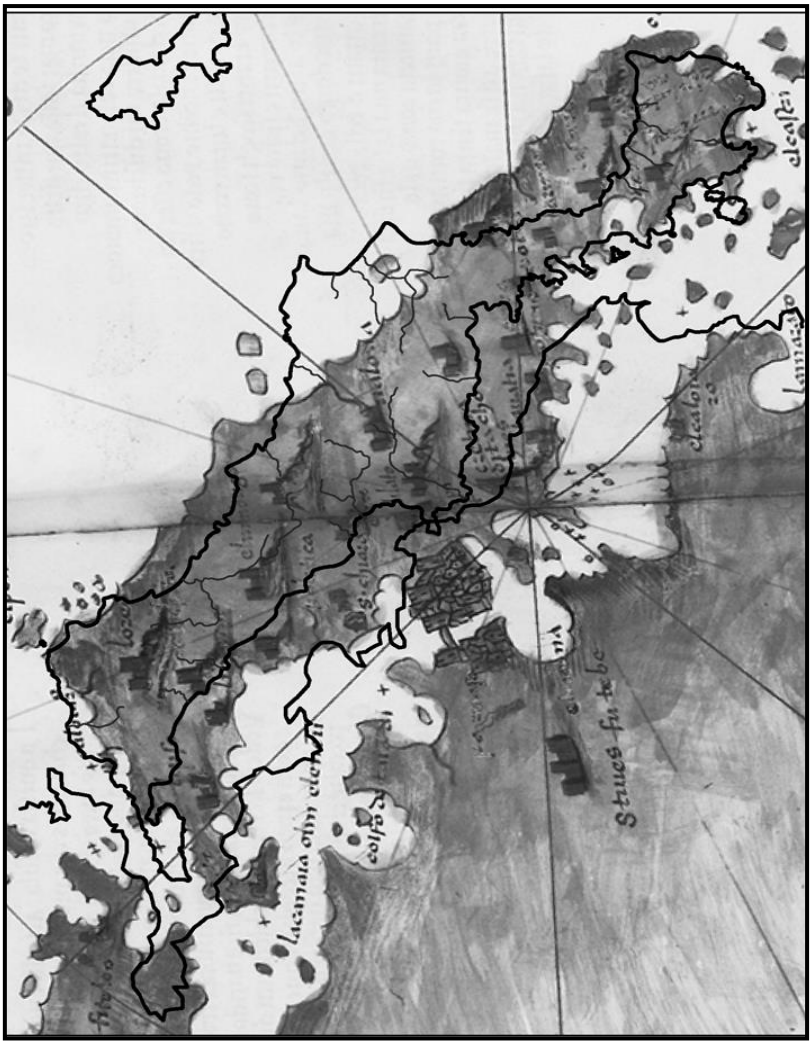


Figure A3.1 -The Sonnetti (1485) map overlaid with the actual coastline[917]

5. Roads: these, as to be expected,[918] are not noted at all. In effect we are looking here through the eyes of a mariner, who had rarely, if at all, ventured inland. At least for the Aegean during the late medieval period the motorways of commerce were the sea, and on a mountainous island such as Euboea transport by land would have been slow and difficult, and in many areas well-nigh impossible. Those roads that have survived into the 20th century were little more than goat tracks, and sometimes in the plains they had the dual function of roads and irrigation channels, such as in the Lilantio plain just east of ***Negroponte***.

6. Regional Capitals: ***Negroponte*** is a vignette showing the main town and its fortifications on the island stretching into the Bourkos inlet, the bridge protected by a tower and a smaller settlement on the mainland. The city dwarfs the other two regional centres of Athens and Thebes, which are shown simply as three-turreted settlements little bigger than the

[917] The two key co-ordinates used for this overlay were the headland opposite Pondiconisi island in the north and the southern tip of Karystos Bay in the south. By using different co-ordinates the comparison would appear slightly different.

[918] It was only much later in the large-scale topographical studies of Camocio and Coronelli that we see any roads noted on maps of the period. In fact, very few existed and even as late as 1841 we have Alexandre Buchon complaining about the lack of roads passable by coach between the port of Oreoi on the north coast and the substantial (2,5000 inhabitants) town of Istiaia (Xerochori) - Buchon (1911) "Voyage dans l'Eubée, les îles Ioniennes et les Cyclades en 1841". Paris, Jean Longnon

town of ***Valona*** on the central eastern coast (see below). It is difficult to know whether this was reality at the time, public perception, artistic license or propaganda (see also discussion above), reflected in the continuous attempts by the Venetians to recapture the fortress until their final siege failed in 1688. Either way, after their annexation of the city in 1470 the Ottomans established it as their administrative centre for the region. It was therefore most likely more important both strategically and economically than any other city in the region during the latter half of the 15th century.

7. Rivers: these are shown in blue but are purely symbolic, and do not extend beyond the river mouth. They appear, too, to have been included only if they flow throughout the year[919] – a key feature for mariners to replenish their water supplies. Significantly, the Lilas river close to ***Negroponte***, potentially the largest river on the island, which can rise to a depth of over 5 metres and floods sporadically during the winter months but is dry in the summer, is missing as are others with a similar flow pattern close to ***Cochies*** (Eretria) and ***La Vatia*** (Amarynthos). Since rivers (and fresh water) would have been important features for a mariner we can use them to help us identify towns and harbours. The best-fit are listed below with the modern town/hamlet closest to their mouth (clockwise):-

River	Medieval town/place	Modern place (* closest)
Kremasta	***Loreo***	Oreoi
Xerias	-	Pevki
Dafnorema or Boudōros	***Cerinto***	Kērinthos
Manikiotis	***La Valona***	Kymē
Glavkos	***Stura***	Opp. Styra (E. coast)
Various options	-	Between Karystos and Cavodoro
Rigias	***Caristo***	Karystos
Skostē	***S. Chiara ?***	Dafnē (W. of Politika)
No name	***Limene***	Katounia (just S. of Limnē)

Table A3.1 – Rivers and contiguous places

8. Settlement Symbology: A symbol system (coloured red) has been used to indicate the differing topographic importance of settlements. These are divided into three types – with one, two or three turrets – reflecting, it appears, their importance/size. ***Valona***, for instance, known to be the administrative centre for the rich central farmland stretching from Aliveri to Kimē, is second in size only to ***Negroponte*** and nearly as large as Thebes. Another symbol that appears

[919] Anavasi (2004) "**Map of Northern Evia 1:100,000**". Athens.

like a two-turret town, but much smaller and is called ***caloiaro***, is probably a monastery on the island of Nisiotissa just off modern day Oreoi.[920]

A 'house' symbol has been used to depict a place called ***S[anta]. Chiara***[921], probably again a monastery close to ***Politica***[922] It needs to be asked why it was so important to note it on the map with its own individual symbol? Apart from ***S[anta]. Chiara*** there is nothing to distinguish between settlement types - towns, castles, towers and monasteries all appear the same - nor why Sonetti chose to note these and not others. Was it simply an expression of their importance, were these all places recorded in some way in Venetian administrative documents or can we surmise that the possession of walls was a defining factor?[923] The treatment of what is possibly the **Galataki** monastery (an un-named place on the coast north of ***Politica***), which we know was fortified (and still has a tower today), in the same way as other settlements – but not like ***S[anta]. Chiara*** - tends to support the last conclusion.

9. Settlement location accuracy: Sonetti's failure to delineate the Dirfis mountain range in the centre of the island led him to a number of topographical errors. He identified correctly the latitude of ***Valona*** – slightly north of ***Negroponte*** - and situated it on the river Manikiotis that runs northeast into the Aegean from there.[924] But, as a sailor, he failed to realize that the castle of ***Cupa*** was close-by.[925] His over-emphasis of the ***Negroponte*** environs then necessitated the compression of the western coastline down to ***Protimo*** (modern-day Aliveri). Generally, the placement of other towns appears accurate and most can be readily identified. Those under dispute are discussed in detail in **appendix 6.3**.

This analysis so far has focused on the Bartolomeo Dalli Sonnetti map dated to 1485 in the National Maritime Museum, London. This is hand-drawn with a green wash to delineate the land area, over-painted in symbolic form with places coloured in red, rivers in blue and labeled in black. Two other hand-drawn maps (in Brussels and Venice),[926] one coloured printed map, and forty-seven printed maps, based apparently on the same base-map, have also been identified.[927] The former are both inferior in quality to the London map, but in different ways. The Brussels map (**figure (b)** below) whilst stylistically better, is missing some places and place-names in a way that suggests it may have been copied from the London map (**figure A2.2** below). The Venetian one is much rougher, and the artwork simplistic (**figure A2.4** below). The coastline is rounded, and places are in draft form - not at all standardized - as though the cartographer was experimenting. Significantly, this is the only map to include ***P[orto].Potries,*** putting it correctly on the east coast, and the delineation of ***Valona*** with a sketchy vignette -

[920] This will be discussed in detail later since there has been considerable confusion about the position of medieval Oreoi, and some maps actually include two – one being called ***oreo*** and the other ***loreo***.
[921] There is also a church called ***Santa Clara*** to the west of ***Negroponte*** on the map of Camocio (1572).
[922] Sonetti also uses a similar symbol for ***S. ches[?]o*** on Samos and ***S.chizolo*** on Kithira He also repeats the name ***caloiaro*** on the mainland to the south as '***el caloiaro'***, possibly a point of call for ships before approaching the strait of ***Negroponte***.
[923] This could be true if, as I surmised above, Sonetti had some form of collaboration with the Venetian authorities.
[924] This in itself is quite an achievement, since most people today, based on the road network, would assume modern Kymē and Avlonari are south of Chalkida, and once again reminds us that medieval concepts of space, direction and time were often quite alien to our own today
[925] Assuming that the positions of ***Cupa*** and ***Potiri*** have been correctly identified. There has been considerable discussion in the literature with many different opinions, many related to the apparent similarity in Greek of the two names - both meaning 'cup'. This is addressed in detail in **appendix 6.2**.
[926] Bruxelles: BR.CP. 17874 (7379) probably dated to 1478-1485, discussed in Bracke (2001) Une note sur l'Isolario de Bartolomeo da li Sonetti dans le manuscrit de Bruxelles, BR, CP, 17874 (7379). **Imago Mundi**, 125-129; Venice: Biblioteca nacionala Marciana It.IX 188 (6286).
[927] References for all printed Sonetti maps can be found in Goff (1972).

something reflected in Piri Reis (1421) – which makes it the most comprehensive of all three, even suggesting that it may have been the earliest.[928]

The mostly uncoloured wood-cut prints are generally inferior. Most are lacking place-names and those with annotations, which appear by the ink colour and the writing style to be a later addition, differ from the 1485 version. They are also oriented to fit the page, with north being approximately at 225º, or 135º for a two-page spread. The use of symbols, too, has been developed further on these latter maps to delineate hills on which settlements stand with a simple convex curve. ***Limene*** and ***s.chiara*** have been omitted from two maps possibly dated to c. 1486-1494. More importantly, Athens (***Setines***) has been omitted from the 1532 map - another sign of its diminution in importance over the 52 years following the annexation of ***Negroponte*** or a simple copying omission?



Figure A3.2 - Sonetti, London [extr.]

The Sonetti (1485) map, despite its faults, thus appears to be an accurate first-hand delineation of the island. The lack of names for certain settlements raises some questions but this may be a copyist's omission (see **appendix 6.2** for analysis of toponymic problems). The fact that certain places were placed on hills and symbol size varied (with one, two or three turrets and ***Valona*** as a vignette) clearly indicates more than a passing knowledge of their existence.

[928] Unfortunately, I was unable to see the original on my visit to the Biblioteca nazionala Marciana, only old film being available, so the extract does not reflect well against the other two maps and many features are hazy.

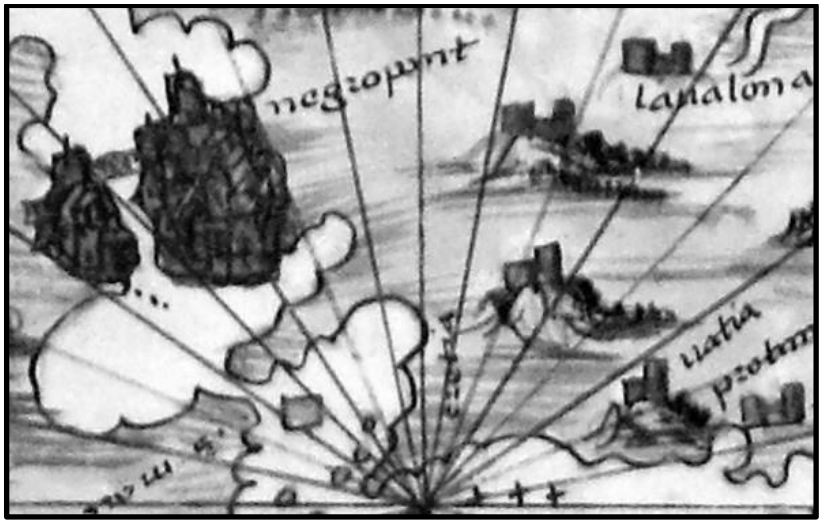


Figure A3.3 – Sonetti, Brussels[extr.]

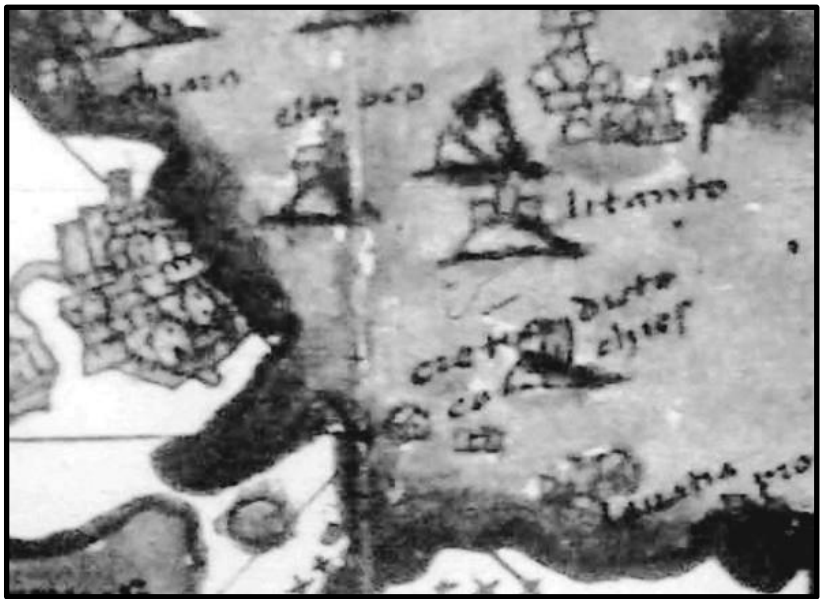


Figure A3.4 – Venice, Sonetti [extr.]

Various features of style, as noted above, demonstrate that Sonetti must have been very familiar with *portolan* charts yet, strangely, his bearings of the eastern coastline are incorrect, when we know that even *portolans* charts from the early 14th century, such as that by Vesconte(1313), had correctly plotted them. This is even stranger when we can see that the various capes along the coast are correctly indicated. The only possible explanation, coupled with the lack of place-names on the eastern Aegean shore, appears to be that Sonetti never sailed the whole length of the long 150 kilometre coast in one voyage, either because there was no commercial gain in doing so or simply because it was too dangerous. He thus never realised his error.

Notwithstanding the above, his map is a major advance on that of any of his predecessors and can be considered in cartographic terms the first modern map of the island. It was so innovative that it was not to be bettered until the late 18th century.

3.2 *Isolario* maps

1. **Agnese, Battista**
   Printed - Agnese (1554-1556); Agnese (1555b)
   Closely based on Sonetti, these two maps are very accurate with rhumb lines very much like a *portolan* chart.

2. **Bordone, Benedetto**
   Printed - Bordone (1528); Bordone (1547)
   Simplified versions of Sonetti. The second is a poor copy of the first – e.g. '***politica***' becomes '***polirica***' and the river close to ***oreo*** disappears. No new information. Not used.

3. **Boschini, Marco**
   Printed - Boschini (1658); Boschini (1654/1658); Boschini (1650?); Dapper (1688)
   Three versions of Euboea have been identified – one that Zacharakis dates possibly to 1650 (no.644) and appears to have been copied (but in a larger format) by Dapper (1688), and two others dated to 1658 (BnF and Genoa) that are very similar but have subtle differences. One novel feature is that he introduces a large number of secondary fortifications/settlements to the map, although un-named. Generally accurate.

4. **Buondelmonti, Cristoforo**
   Manuscript - Christopher Buondelmonte (1420); Buondelmonti (1420a); Buondelmonti (1420b); Cristoforo Buondelmonte (1465 - 1475)
   Few names on the maps. Oriented southeast. The capes shown appear like they came from a *portolan* chart and reflect the actual geography of the island in a formalised way. All map copies are hand drawn and vary in accuracy, but with an apparent trend over time to increasingly emphasise ***Negroponte*** as they diminish Thebes and Athens. There exists the possibility that one of the later copies has a more informative map of Euboea, but to date none has been identified.

5. **Camocio, Giovanni Francesco**
   Printed - Camocio, 1568); Camocio (c. 1575)
   There were a number of printed versions of Camocio's work, but all have a similar delineation of Euboea. The general shape of the island mimics Sonetti, although much of the coastline is substantially different. Settlements are inaccurately placed, and some names are completely wrong. Judging by the excellent vignettes of towns artwork took priority over cartographic accuracy. One name is intriguing – ***Ponico*** in the position of Aidipsos in the north.

6. **Martellus, Henricus**
   Manuscript - Martellus (1436-1450); Martellus (1490)
   The first is not strictly an isolario but includes islands with Ptolemaic geo-references, one of which is Euboea (with a small *portolan* style map). The second has a good map of the island, again in a *portolan* style, similar to Buondelmonti. Oriented to the northeast, it shows four towns – ***Negroponte*** and ***Oreo*** (as *otheo*) are named, the third appears to be ***Caristo*** and the fourth (a much smaller vignette) is difficult to identify. It is the only isolario map to clearly show the cultivated areas of the island – north close to Aidipsos,

around the centre, and four small plains in the south of the island. The general outline is recognisable as are the main capes and bays.

7. Franco, Giacomo

Printed - Franco (1597)

Little accuracy. Not used.

8. Millo, Antonio

Manuscript - Milo (1590);Millo (1590a); Millo (1590b)

Three maps were examined – two in the Biblioteca nazionala Marciana, Venice, and one at the National Maritime Museum, London. Oriented approximately to the southeast their outline is reminiscent of Sonetti but more formalised. ***Negroponte*** city was drawn differently on each and there was little accuracy or consistency between the maps either in terms of places shown or names. Not used.

9. Piri Reis

Manuscript - Piri_Reis (1521); Piri_Reis (1526); [see also Loupis (1999) in note below]

These maps form part of Tolias (2008)' '*nautical isolario'* sub-genre. The geographical outline of the first edition (1521) is derived from Sonetti (1485), but the second (1525/26), generally more accurate, seems to be an original work by Piri Reis. The places shown result principally from the Ottoman occupation of the island after 1470, but Piri Reis' written descriptions are very helpful in understanding a few pre-existing places around the coast.[929]

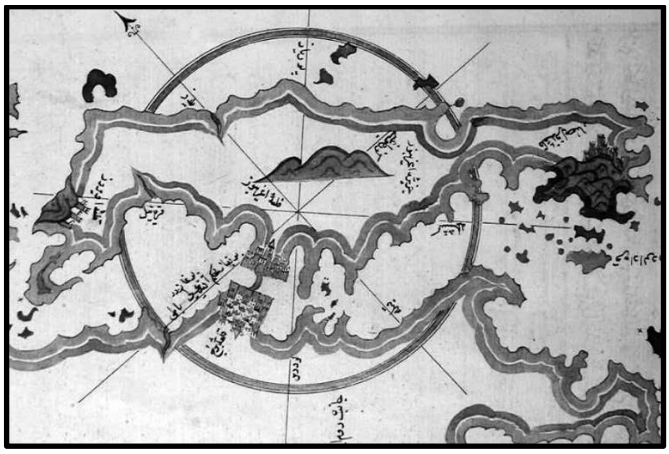


Figure A3.5 - Piri_Reis (1521), Edition (a)

[929] The translation from Arabic into Greek of the first edition, which survives in 23 copies, has been used as the basis of research, although the annotations on the map of Euboea of the second edition, which survives in 10 copies, was also translated - Loupis (1999) **Ο Πιρι Ρεις, η οθωμανική χαρτογραφία και η λίμνη του Αιγαίου [Piri Reis, Ottoman Cartography and the Aegean Lake]**. Athens: Trochalia, 62-63 and 185-193. Thanks to Demetris Lamprakis for his help in the translation of the Walters Art Museum copy of the second edition. A note should be made here, however, that, since all these are manuscript copies, there is likely to be further information that can be gleaned from a comparison between them, as with the Sonetti study in **appendix 3.1.** A simple comparison between two copies of the first edition (1521) – that in Loupis and another uploaded to academia.edu by Y. Nemlioglu Koca (edition (a) above) - indicated significant variations in the maps.

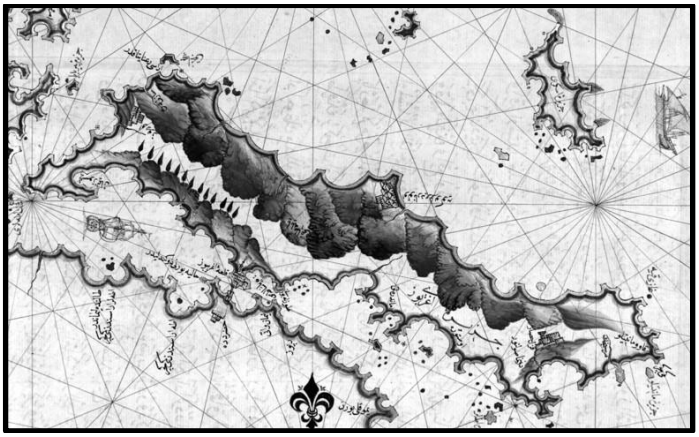


Figure A3.6 - Piri_Reis (1525/26), Edition (b)

10. Piacenza, Francesco

Printed - Piacenza (1688)

Piacenza had been hired by the Duke of Modena to travel the Aegean and make a description and map of it, but his map, including classical place-names predominantly, is more fiction than fact. Not used.

11. Porcacchi, Thomaso

Printed - Porcacchi (1576)

The outline of the island seems to have been loosely based on Sonetti, and the way the coastline is done suggests that the artist was simply trying to create something a little different. Most places are correctly positioned but there are some glaring errors with two towns called '***Lipso***', ***Loreo*** moved to the east coast, and ***Lilanto*** in the centre of the island. Not used.

12. Rosaccio, Gioseppe

Printed - Rosaccio (1598)

This outline of the island is from Camocio (1568), but names and positions of towns are well mixed up – e.g. with two each of '***Loreo***' and '***Lipso***', and ***Politica*** omitted. Not used.

13. Sonetti, Bartolomeo dalli

[Manuscript maps - see **appendix 3.1** above**:** Bartolommeo da li Sonetti (1477-1485); Bartolommeo da li Sonetti (c.1485); Bartolommeo da li Sonetti (1485b)
Coloured print - Bartolommeo da li Sonetti (1485a)]

Printed - Bartolommeo dali Sonetti (1485 c.), Bartolommeo dalli Sonetti (1486-94); Bartolommeo dali Sonetti (1532). See discussion above.

3.3 Printed Maps 1471 – 1800

The following is a selection of printed maps consulted, noting the most important as regards their treatment of the topography of Euboea.[930] The delineation of the island in these varies so much, not even following a process of development as the *isolarii* do, that extracts of each genre have been included for reference purposes only. Many cartographers simply copied from others and these have not been included, unless they have a contribution to make.

1. Claudius Ptolemaeus

Ptolemaeus (1478); Ptolemaeus (1513); Ptolemaeus (1511)

A series of printed editions of the *Geographia* were published commencing in 1477, map X displaying Greece. Most maps focussed on the classical place-names and are of little interest for defining the medieval topography of Euboea. The wood-cut edition published in Rome in 1478 provides an archetypal coastal outline used by many later publications, whilst another slightly more accurate one was issued in Venice in 1511. The 1513 edition is the first attempt at a modern map. It includes a large-scale map of Crete but unfortunately little more than a sketch of Euboea.



Figure A3.7 - Ptolemaeus (1478}, Rome [extr.]

[930] For a complete list see - Zacharakis (2009) **A Catalogue of printed maps of Greece 1477-1800**. Athens: Sylvia Ioannou Foundation; Zacharakis (2016) "A catalogue of printed maps of Greece 1477-1800 :. annex : addenda delenda & errata photo annex". Athens, Istros Art Editions.



Figure A3.8 - Ptolemaeus (1511), Venice [extr.]

2. Gastaldi, Giacomo

Gastaldi, 1548); Gastaldi (1545-1550?)

Two different outlines of Euboea have been identified. The first is an early small-scale version from 1548. The second is much more precise. The coastal outline, however, is poor, but generally the place-names appear to be correct. This was a map much copied by later cartographers.



Figure A3.9 - Gastaldi (1548), Nova Tavola [extr.]



Figure A3.10 - Gastaldi (1545-1550?) [extr.]

3. Ortelius, A.

Ortelius (1609)

Although Ortelius is well known for his *Theatrum Orbis Terrarum* (1570), which included a map of Euboea from Gastaldi, from 1584 a series of publications of '*Archipelagi Insularum Aliquot Descr.'* were issued. These included a map of the island, the outline of which was based roughly on Sonetti (1485), but also has a close similarity to the Legrand (1897) map (16th c.?) based on the proximity and shape of the three islands ***Sciro, Sciropoulo*** and ***Scanda***. The best delineation of the island appears to have been in the 1609 edition.



Figure A3.11 - Ortelius (1609) [extr.]

4. Mercator, Gerard

Mercator (1589a); Mercator (1589b)

Mercator's attention to detail (although clearly lacking good source material) is demonstrated in his two maps of the island from 1589. The first, which seems to have been based on Gastaldi, has a much-improved coastal outline but more errors on place-names. The second follows the first but with more detail and even more mistakes. Not used.



Figure A3.12 - Mercator (1589a) [extr.]



Figure A3.13 - Mercator (1589b) [extr.]

5. Hondius, Henricus and Jansonnius, Jan

Hondius (1630?)

These two partners expanded and republished Mercator's (1595) atlas after his death. This is the largest scale map of Euboea that exists for this period and shows the northern half of the island. It has a reasonable approximation of the coastline, but unfortunately is focussed on classical sites. The mention of *Eretria nova* to the northwest of *Eretria vetus* is intriguing.



Figure A3.14 - Hondius (1630?) [extr.]

6. Cantelli, Giacomo

Cantelli (1685)

This is a mixture of classical and medieval place-names (of little accuracy) set within a coastline that may have been based on Mercator. Not used.



Figure A3.15 - Cantelli (1685) [extr.]

7. Coronelli Vincenzo

Coronelli (1687)

Coronelli, as the official cosmographer of Venice during their attack on Ottoman Greece 1686-1688, should have drawn more accurate maps of the island, but they are generally rough, often overshadowed by the surrounding artwork. Names are a mixture of medieval and classical. His large map of Euboea is included in a number of publications. Euboea's shape is reminiscent of Sonetti (1485) but the eastern coast, approximating a straight line, seems to have been completely unknown to him. The mistaken spelling '***polirica***' suggests his map was partly taken from Bordone (1547). Some place-names are original and correct (e.g. ***porto buffalo*** and ***disto***, although in the wrong location).



Figure A3.16 - Coronelli (1687) [extr.]

8. Albrizi, Girolamo

Albrizi (1713); Albrizzi (1729).

The coastline seems to have been drawn from Gastaldi (1548), but the author tries to include new information about the city of ***Negroponte***. Unfortunately, his location accuracy is poor. Not used.



Figure A3.17 - Albrizi (1729) [extr.]

9. Heather, William

Heather (1797)

Dedicated to Admiral Nelson, this is a nautical chart of the Mediterranean Sea. It is a reasonable approximation of the island at this scale with soundings in the Gulf of Euboea, but unfortunately at too small a scale to be useful.

10. Legrand, (1897)

, **Description des îles de l'Archipel : première partie [by Cristoforo Buondelmonte trans. from Greek]**, 1897)

This map was included in Legrand's (1897) translation of the Greek version of Buondelmonti's *isolario*. It is annotated in French. Generally, it follows the coastline of Sonetti (1485) but with the addition of many islands and coastal detail that is incorrect. Koder (1973) used it as a base map for his topographic analysis, erroneously attributing it to Buondelmonti when it was more probably published in the 16th century. No attribution was identified by Zacharakis (2009) no.3889.



Figure A3.18 - Map of Euboea in Legrand (1897)

Cityscapes

Attempts by a number of authors have been made to reconstruct the fortress of ***Negroponte.*** The most recent, and possibly most comprehensive, is that by Pierre Mackay (2014).[931] But commencing in the 16th century cartographers published both plans and cityscapes of the fortress and its environs.

11. Camocio, Giovanni Francesco

Camocio (c. 1572)
Although the coastline is over-emphasised, it is generally accurate. The city, however, apart from the moat and towers bears little resemblance to reality. Churches are given steeples and westernised, as is the tower in the centre of the strait. Despite this, the map is full of very important detail. The number of churches noted, possibly drawing on ecclesiastical documentary sources, suggests substantial residential areas outside the city walls.

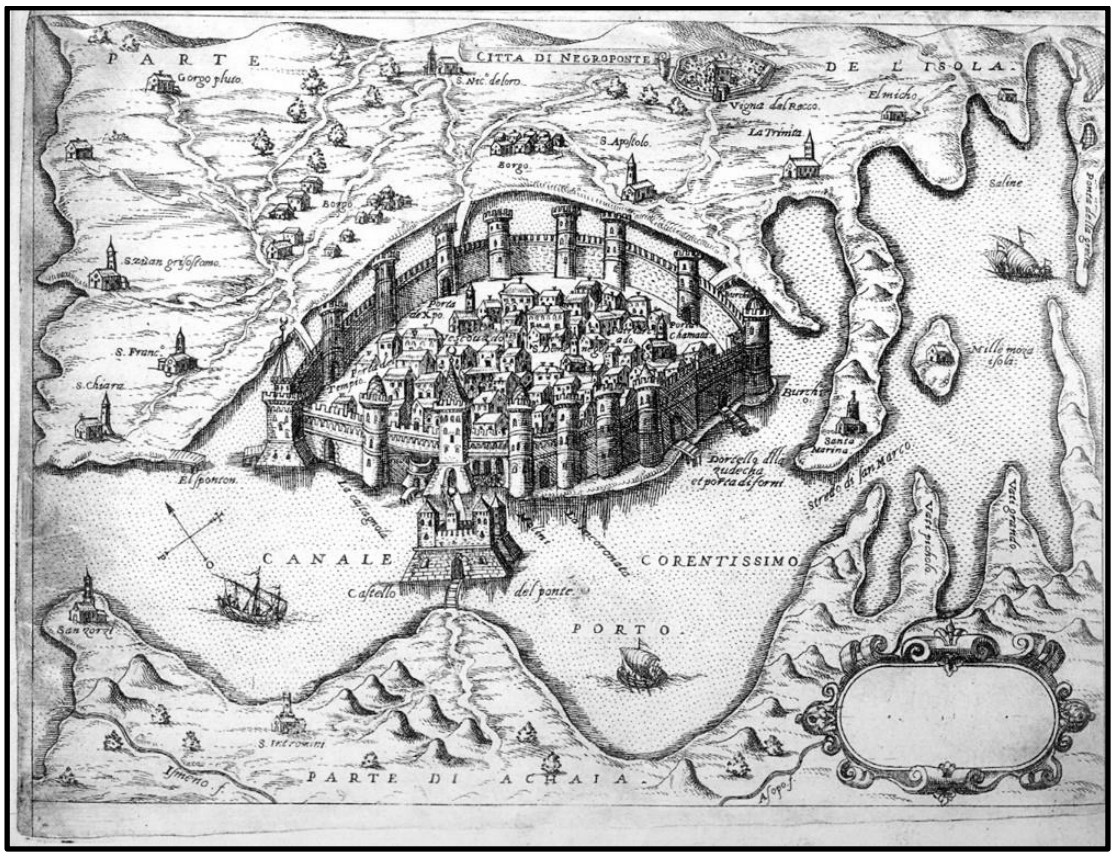


Figure A3.19 - Camocio (1572)

[931] MacKay (2014b) "**Negropont**". University of Washington Research Works, http://hdl.handle.net/1773/24960.

12. Coronelli, Marco Vincenzo

Coronelli (1708).

Coronelli produced studies of the city in many different publications. Most were formalised westernised views, but some seem to have been based on military sketches of the landscape. These are invaluable for understanding the environs of ***Negroponte***. Shown below is one plan view of the area which provides a vignette of the city, roads, the town (***burgo***) in great detail outside the city walls and a settlement (probably modern Drosia) to the west on the mainland.

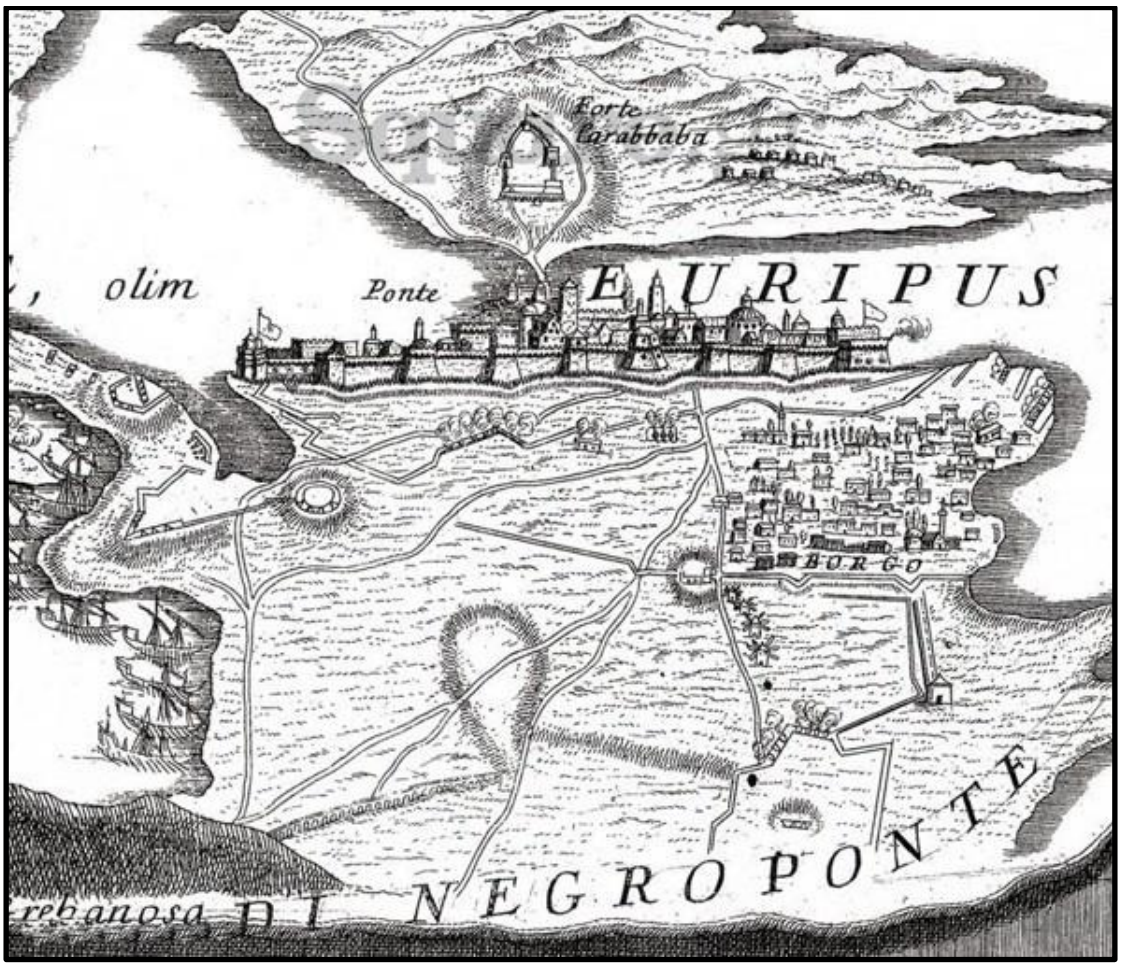


Figure A3.20 - Coronelli (1708) [extr.]

13. Werdmüller, Johann Rudolf

, "**Festung Negroponte und Umgebung [Johann Rudolf Werdmüller collection]**", c. 1660)

This is both the most accurate and the most important map as regards the conclusions of this thesis. It has survived due to its storage in the archives of General Werdmüller (1614 – 1677), a military officer in the employ of the Venetians in the mid. 17th century, 30 years before their failed attempt to retake ***Negroponte*** from the Ottomans in 1688.[932]

[932] Thanks to Flavia Vanni, for her help in translating the notes written in Italian.

It notes with military precision the key features of the fortress of ***Negroponte*** and its environs, providing some distances in terms of cannon ball or musket range. The walls and key buildings are drawn such that we can still recognise them today, showing three mosques within the city and the converted Cistercian church (today Agia Paraskevē). We can also see the new and old Roman aquaducts, and two towers in the area of Mytikas (to the east) as they were originally constructed.

It was probably sketched by a Venetian spy/engineer from hills on the mainland to the southwest of the area drawn since, while the city and a village in the Lelantine plain to the east are well-detailed, behind it the roads and aquaduct are only approximate, the village of Dokos (just behind the central section of aquaduct) not being shown at all.

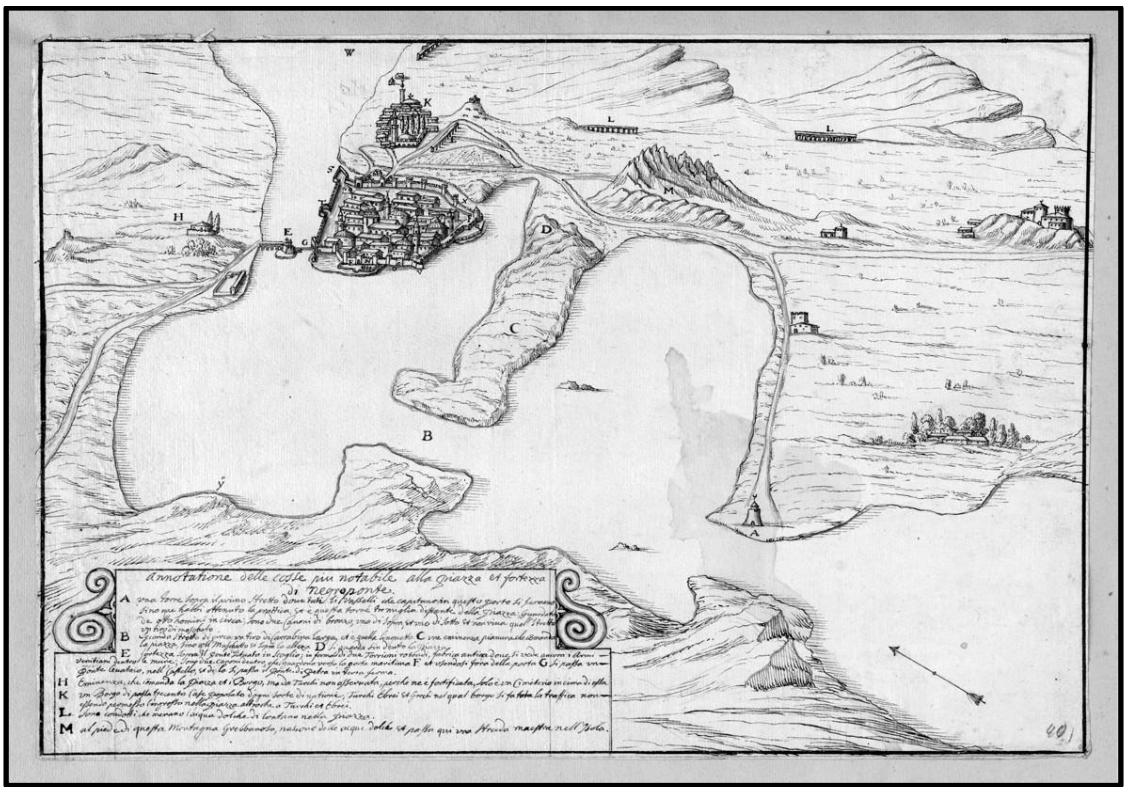


Figure A3.21 - Werdmüller (c.1660)

APPENDIX 4 HISTORICAL TABLES

4.1 Definition of periods

Problems arise in trying to define exact periods both from late antiquity into the Byzantine period and in the late medieval period when Frank and late Byzantine periods run in parallel. The Ottoman conquest (and loss at times) of various parts of Greece and the Aegean also complicates the definition of an Ottoman period. The following have therefore been used in the text.

Classical/Hellenistic	To 200 BC.	
Roman	200 BC. - 330	
Byzantine		
Early	330 – 642	
Middle	642 – 1204	(Capture of Constantinople by Fourth Crusade)
Late	1204 – 1453	(Capture of Constantinople by Ottomans)
Frankish	1204 – 1470	(Capture of Euboea by Ottomans)
Late Frankish	1470 - 1714	
Ottoman	1470 – 1833	
Medieval	330 - 1500	

4.2 Historical Timeline[933]

Year	Euboea	General
880	Arab fleet attacks ***Negroponte***	
904		Arab fleet sacks Thessaloniki
908		Byzantine admiral Hymerius defeats Arab fleet
961		Crete recaptured by Byzantine forces
1028		Arab fleet attacks Cyclades but is defeated
1082	Treaty includes Euboea	Treaty with Byzantium grants trading rights to Venetians in Byzantine Empire
1124-25		Doge of Venice, Domenico Michiel, attacks Euboea, Andros and Aegean islands
1126		New Venice-Byzantine treaty exempting Venice from taxes in the empire (renewed in 1148)
1147		Roger of Sicily ravages Central Greece and Euboea
1155		Defeat of Byzantine fleet off Euboea
1157	Naval expedition by William I of Sicily against Euboea	
1171	Siege of ***Negroponte*** by the Venetians	
1179		Renewal of trading rights of Venetians in Byzantine empire
1185		Norman attack on Thessaloniki and Aegean islands
1198		Andros and Karystos become a small *thema* (Alexius III chrysobull, nov. 1198)
1199		Treaty with Alexios III granted commercial privileges in many ports including those of Euboea
1203, May 24		Fleet carrying forces of the 4th Crusade to Constantinople stops in Euboea
1204 Mar		Signature of Act of Partition, by which Venice is allocated 3/8 of the empire including ***Oreo*** and ***Caristo*** on Euboea
1204		Sacking of Constantinople
1204 Aug		Compact of Adrianople
Late 1204	Annexation of ***Negroponte***	

[933] Base information on general historical events in the Eastern Mediterranean is drawn from Papadopoulou (Ed.) (2000) **[[Marino-Sanudo-Torsello]] Ιστορία της Ρωμανίας; εισαγωγή, έκδοση-μετάφραση, σχόλια**, Athens: Institute of Historical Research, Department of Byzantine Studies; and Lock (1995) **The Franks in the Aegean, 1204-1500**. London.

Year	Euboea	General
1209	Ravano Dalle Carceri acknowledges Venice as his suzerain and as their vassal for ***Oreo*** and ***Caristo***	Villehardouin signs agreement with Venice
1211	Venice possibly appoints first Bailie	
1216	Ravano dalle Carceri dies. Bailie divides three baronies in two, thus creating Hexarchs. Venetian weights and measures introduced	
1236	Emperor Baldwin II grants suzerainty over Euboea to Geoffrey II, prince of Achaia	
1240's	Manuel, Despot of Salonika, allies himself to Triarchs of Euboea	
1246	William Villehardouin marries Carantina, baroness (triarch) of ***Oreo***	
1255	Carantina dies and William claims barony	
1255	War of Euboeote succession. ***Negroponte*** changes hands three times	
1256-70		1st Venetian-Genoese war
1256	William wins battle at ***Oreo***	
1258	Triarchs imprisoned by William	William defeats Guy de la Roche at Karydi
1259		Byzantines defeat Latin forces at Pelagonia. William imprisoned. Thebes sacked.
1260	Duke of Athens returns from France and releases Triarchs	
1261	Emperor Baldwin passes through ***Negroponte***	Byzantine forces retake Constantinople – end of Latin Empire
1261		Genoese-Byzantine Treaty of Nymphaion
1262	End of war of Euboeote succession with promise that walls of ***Negroponte*** to be razed – never realised	William Villehardouin grants to Gugliemo of Verona, a Triarch, overlordship over Euboea and Athens
1262	Increase of Venetian quarter in ***Negroponte***	
1264	First mention of Licario – base at ***Anemopylae –*** commences land and sea campaign on behalf of Byzantines	
1265		Venetian-Byzantine treaty – Venetians exempt from tax in the Empire
1267		Treaty of Viterbo allies all Latin forces
1268		Venetian-Byzantine treaty ratified by Doge for five years
1272/3		Victory of Latins at Neopatras

Year	Euboea	General
1273(?)	Lords of Euboea and Venetians defeated at naval battle off Demetrias. Byzantines take ***Oreo***	
1275-77(?)	Capture and refortification of fortresses of ***Armeno, Cuppa and Cleisura*** by Licario	Licario in a series of raids captures Skopelos, Skyros, Skiathos, Amorgos
1276(?)	Dreux de Beaumont, Captain General of Morea, fails against ***Oreo*** but Villehardouin retakes ***Cuppa***	
1277(?)	Licario takes ***Caristo*** after 2-year siege.	Venetian-Byzantine treaty renewed but with the right for Venice to defend Euboea
1278/9(?)	Venetians under bailie Morosini capture the castles of ***Cleisura*** and ***Argalia***	Licario later takes Kythera, Kea, Astypalaia, Santorini and Lemnos after 3 year siege
1280(?)	Triarchs defeated and captured by Licario at battle of ***Batonta. Negroponte*** under siege. Bailie re-enforced ***Negroponte***. Licario raised siege, established base at ***Lilanto*** and re-captured ***Cuppa*** and ***Cleisura.***	
1281		Treaty of Orvieto between Charles of Anjou, Venice and the Pope
1285		10-year Venice-Byzantine treaty signed
1292		Andros plundered by Catalan admiral Roger De Lluna
1294-1299		2nd Venetian-Genoese war
1295/6	Boniface of Verona recovers ***Larmena*** and ***Caristo***, thus ending 20-year Byzantine incursion into Euboea	
1304	Jews forced to pay for a wall around Venetian quarter in ***Negroponte***	
1311	Latins of Athens take refuge in ***Negroponte***	Battle of ***Halmyros*** – Catalan forces decimate Latin army and set up base in ***Thebes*** and ***Athens***
1312-16	The Catalan, Don Alfonso Frederique captures ***Caristo*** and ***Larmena***	General Catalan attacks on areas of Central Greece not already in their hands
1314	Titular Latin Patriarchate united with bishopric of ***Negroponte***	
1317	Catalans with Turkish mercenaries attack ***Negroponte***. Fleet sent from Venice	
1319	Truce between Venetian Bailie and Catalans	
1320		The Triarch Bartolomeo II Ghisi captured by Byzantines at battle of St. George

Year	Euboea	General
1321	Venetian-Catalan truce renewed	
1331	Catalan-Venetian treaty recognises Catalans but excludes them from Aegean ports	
1332		Umur Pasha, Emir of Aydin, attacks Gallipoli and Euboea. 5-year anti-Turkish treaty of Christian states
1344		Minor naval victory by Latins over Umur Pasha off Edremit
1347	Plague on Euboea	Plague spreads across Mediterranean
1351	Genoese fleet of 62 ships fails to take ***Oreo***, but captures ***Caristo***	
1350-55	Genoese attack and burn suburbs of ***Negroponte***	3rd Venetian-Genoese war
1362-64	Catalan-Venetian conflict over ownership of ***Caristo***.	
1364		Turkish fleet of 35 galleys burnt off Megara by Christian alliance
1365-66	Venetian purchase of ***Caristo*** confirmed following peace with Catalans	
1367		Outbreak of the plague in Attica
1367-81		4th Venetian-Genoese war
1379		Navarese Company captures Thebes and Livadeia
1380	Navarrese Company takes Corfu, Thebes, threatens Euboea	
1383	Transfer of 2,000 refugees from island of Tenedos to Euboea	
1387	Turkish attacks on Euboea	
1388	Venetian Senate orders heightening of walls of ***Negroponte***	
1390		Venetian-Navarrese treaty
1392-94		Thessaly conquered by Turks
1394		Bailie sends troops to garrison Athens at request of its Governor, Matteo de Montona
1396 / 97		Crusader army defeated at battle of Nikopolis by Ottomans, who then sacked Argos and Athens
1402		Turks defeated by Timur the Lame at battle of Ankara
1404		Suleiman-Venice-Genoa-Byzantines-Duke of Naxos treaty against Timur the Lame
1414	***Edipso*** destroyed by Turkish pirate incursion	Boudonitza captured by Turks

Year	Euboea	General
1416		Venetian victory over Turkish fleet and peace treaty signed between the two
1423	Venetians favourable to Hospitaller move to Euboea but never realised	
1423-30		Venetians garrison Thessaloniki
1446		Turks ravage the Morea
1453		Mehmet II takes Constantinople
1458	Plague hits ***Negroponte***	
1460		Athens annexed by Turks ending Latin rule in central Greece
1463-79		1st Turko-Venetian war
1470	Ottoman forces annex ***Negroponte*** and Euboea, and make it their capital of southern Greece	

4.3 Key Factors affecting population change from 1204 to 1470

The first stage in preparing the population index **(figure 4.1)** for this period was to identify the factors that might have influenced it positively or negatively. Subsequently, the impact of these were quantified and accumulated in **section 4.4** below. Certain are of a general nature and can be inferred from studies in other regions and time periods. Others are specific to the region and are reflected in Venetian Assembly minutes and histories of the period.

- **The Latin annexation led to minimal disruption of the agricultural economy and the peasants in the country areas**

This is reflected in the agreement between Ravano dalle Carceri (see above) to maintain the Greeks in their prior position and the generally positive welcome for the Crusaders on their journey to Constantinople in 1203.[934]

- **Periods of peace and war tend to lead to population increases and reductions**[935]

As confidence grows and marriage takes place at an earlier age, there is a resulting increase in the number of child-bearing years. If occurring immediately after a period of desolation (military or disease) there is also a process of 'catch-up'.[936]

- **Short conflicts while leading to a temporary hiatus, are quickly adjusted for**.[937]

[934] See also Jacoby (2001a) "Changing Economic Patterns in Latin Romania: the Impact of the West". In Laiou and Mottahedeh (Eds.) **The Crusades from the Perspective of Byzantium and the Muslim World**. Dumbarton Oaks. 197-233, 197-233.

[935] Turchin (2005) Dynamical Feedbacks between Population Growth and Sociopolitical Instability in Agrarian States. **Structure and Dynamics, University of Connecticut**,

[936] Kiel (1999) "The Ottoman Imperial Registers: Central Greece and Northern Bulgaria in the 15th-19th century; the Demographic Development of the Two Areas Compared". In Bintliff and Sbonias (Eds.) **The archaeology of the Mediterranean landscapes: vol.1 Reconstructing past population trends in Mediterranean Europe (3000 BC - AD 1800]**. Oxford: Oxbow. 195-218.

[937] Jacoby (2001b) "The Demographic Evolution of Euboea under Latin Rule, 1205-1470". In Chrysostomides, et al. (Eds.) **The Greek Islands and the Sea. (Proceedings of the First Intl. Colloquium)**. Hellenic Institute,Royal Holloway, University of London. 131 - 179 137-138.

This is especially relevant to the civil war in the 1250's, whilst the period of Byzantine incursions in the 1270's and 1280's would have had a long-term negative impact on population.

• **Permanent insecurity leads to smaller family size and emigration.**
The Catalan victory at Halmyros in 1311, and Turkish corsair and continental attacks in the 14th /15th centuries are clearly reflected in population movements both from and to Euboea, and the depopulation of continental Greece in the late 14th century.[938]

• **Economic growth will not only tend to stimulate local population growth but also immigration, and vice-versa**. [939]
See, for instance, the effect of commercial activity on the population of Medieval England.[940]

• **Prior to 1204 *Negroponte* was a relatively small city compared to Thebes and Athens**[941]
This is something reflected in the cartographic evidence of the period.[942]

• **Prior to 1204 the Venetian involvement in *Negroponte* was low**
Documentary evidence on Venetian involvement in the city of ***Negroponte*** only commences in the early 13th century after the Latin annexation. This is also reflected in the relative size of the two Jewish communities recorded by Benjamin of Tudela in c. 1160.[943]

• **The plague of 1347/48 and subsequent bouts led to significant population reduction**
We can see the effects of this in numerous Venetian Assembly minutes.[944] It is also reflected in evidence from the previous outbreaks in 541-750 within the Byzantine empire[945]

• **New technology promotes population growth**[946]
Venetian and Latin involvement brought new opportunities for manufacture (direct access to export markets for silk and wine), investment (financing of land improvement and capital-intensive crops) and the introduction of new technology into the agricultural economy.

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[938] Bintliff (2012) **The Complete Archaeology of Greece, from Hunter-Gatherers to the 20th Century A.D.** Chichester: Wiley-Blackwell, 416-417.

[939] Kiel notes that population growth had been high throughout Europe in the 11th to 13th centuries but that in the first half of the 14th century it had started to stagnate due to a probable reduction in family size, a natural reaction to the increasing lack of agricultural land. The corollary to this is that the introduction of new technology, reducing the apparent land shortage, will increase family size and promote population growth - Kiel (1997) "The Rise and Decline of Turkish Boeotia, 15th - 19th century". In Bintliff (Ed.) **Recent Developments in the History and Archaeology of Central Greece : proceedings of the 6th International Boeotian Conference**. BAR International Series, 666, 315-339.

[940] Langdon and Masschaele (2006) Commercial Activity and Population Growth in Medieval England. **Past & Present**, 190: 35-81.

[941] Jacoby (2001b) 138. He writes 'There is good reason to believe that the absence of evidence ….. reflects the limited function of Euripos in the framework of Western trade and shipping before the Fourth Crusade'.

[942] Blackler (2016) "Mapping Frankish Euboea : tracing the depiction of the island by the portolan charts and early maps from the 13th to 17th centuries". In Tankosic, et al. (Eds.) **An Island between Two Worlds: the Archaeology of Euboea from Prehistoric to Byzantine times, July 2013, Eretria**. Norwegian Institute at Athens. 653-661.

[943] Jacoby (2009) **Latins, Greeks and Muslims: encounters in the Eastern Mediterranean, 10th - 15th centuries**. Variorum IX, 151-189. He notes.

[944] A minute of 1363 notes how the population in ***Negroponte*** has recovered and that the local population will now pay for the upkeep of the galley - Thiriet (ed.) (1958) **Régestes des Délibérations du Sénat de Venice concernant la Romanie**, Paris: Mouton, no.407 (1363).

[945] Little (ed.) (2007) **Plague and the End of Antiquity: The Pandemic of 541–750**, Cambridge: CUP

[946] Galor and Weil (2000) Population, Technology, and Growth: From Malthusian Stagnation to the DemographicTransition and beyond. **The American Economic Review**, 90: (4): 806-828

Appendix 4.4 Key Factors and Events incorporated into the Population model

Base change factors	Years	Change % p.a.
Natural population growth	1204-1255 1261-1271 1283-1311 1350-1415	0.5% 0.5% 0.25% 0.25%
Latin Immigration / emigration	1204-1255 1256 1262 1264-1269 1311 1362-1364 1431 1453	0.3 - 1% -2.0% 3.0% -0.1 - 0.3% -1.0% -0.5% 2.0% 5.0%
Short-term warfare	1256-1258 1279-1280 1311 1318-1319 1379 – 1380 1411 1426-1430	-1.0 – 3.0% -2.0% 5.0% -1.0 – 2.0% 2.0% 5.0% 1.0%
Long-term warfare	1271-1280	-0.5 / -1.0%
Turkish Corsairs	1319-1331 1416 1417-1422 1423-1430	-1.0 - -2.0% -3.0% -0.3% -1.0%
The Plague	1347-1349 1426 1448 1458	-30.0% -15.0% -15.0% -15.0%

Table A4.1- Population change factors

It should be emphasised here that ALL the above are very approximate estimates based on my own interpretation of the data and the historical sources. Small changes over a long period, such as the 0.5% natural population growth assumed up to 1255, can significantly affect the results. In a similar way estimates of losses from the plague are very large changes relevant to one year. Demographic data in England for the intial plague indicate major variations in mortality between villages from under 20% up to over 50%. This analysis should therefore not be used to estimate population levels at any particular date, but simply to identify turning points – and even this may over or under-emphasise particular points in time.

Appendix 4.5 The figures from the Ottoman Defters

Using the Ottoman registers (defters) for the late 15th and 16th centuries Machiel Kiel records a rapid recovery of the population in Central Greece in the peaceful conditions during the century following the Ottoman occupation, but thereafter a decline in the late 16th and 17th centuries. [947]

	Villages (Reference)	1474	Before 1529
Dokos	**CW3**	6	134
Vassilikos (Basilikos)	**CW5**	17	107
Fila	**CW4**	18	95
Afrat (Afrati)	**CW4**	33	61
Sub-total		**74**	**397**
A. Todor	**NW10**	41	78
Lisada (Lichada)	**NW1**	152	273
Milez (Milies)	**NW13**	67	219
Monokarya	**NW12**	28	25
Vunuz (Bounoi)	**CN18**	93	272
Oroz (Oreoi)	**NW9**	157	211
Ikslrohor (Karystos)	**S10**	59	169
Sub-total		**597**	**1,247**
TOTAL		**671**	**1,644**

Table A4.2 - Comparison of families in 11 villages on Euboea[948]

[947] Kiel (1997) 338. The four Boeotian villages provided as an example record a tripling of their size in the period from 1466 to 1540. In the Kaza of Atalanti (Talanda), just opposite Euboean Limnē, during the same period the number of families grew by 136% from 738 to 1749 - Kiel (1999) 203.

[948] Exact date of second census unclear. Source: Balta (1991) Rural and Urban Population in the Sancak of Euripos in the Early 16th Century. **Archeion Euboikon Meleton**, 56-218, table 9.

Balta reports a near tripling of the number of households in Thebes from 1466 to 1570.[949] Similar growth, however, in eleven villages on Euboea between 1474 and the third decade of the 16th century, as she herself recognises, appears misleading. The probable reason is that in 1474 (the date of the first defter) the population still reflected the result of the massacre and enslavement in 1470 of much of the population of many villages, especially those close to ***Negroponte***, where their inhabitants would have taken refuge. Excluding these four villages (Dokos, Vassilikos, Fila, Afrat) the numbers appear to have doubled between 1474 and the second census, reflecting a return to a population level similar to our estimate of that on Latin-occupied Euboea in the early 14th century.

[949] Balta (1991). She compares the population as reflected in three sets of Turkish *defters* – those from 1474, immediately after the Turkish occupation of the island, early in the 16th century – before 1528, and from 1570. For Thebes the number of households (excluding bachelors and widows) increased from 487 (1466) to 1,068 (prior to 1529) to 1,437 (1570). This compares to a figure she reports from J, Spon of *'three or four thousand people'* and an estimate by Eveliya Celebi of 2,500 households in the 17th century.

Appendix 5 Euboea - Site Gazetteer

5.1 General Notes

The following provides a detailed listing of the dataset used in the analysis within the main body of the thesis. Each monument or piece of evidence is referenced, where written literature exists.[950] Otherwise it is the result of the author's own research and site visits. Because of the high number of monuments noted, only a few have been described in detail. For most churches, verification of their possible or probable existence during the Late Medieval period was sufficient.

The skeleton of the gazetteer depends on the two works by Theodoros Skouras (1998 and 2003). The translation of these from the Greek original and listing in a formal structure is the first time the medieval monuments of Euboea have been presented in this way. In addition, references are provided to all Koder-Hild (1976) and Lock (1996) entries, and literature on individual monuments (e.g. Farantos and Orlandos). Given the minimal research that has been undertaken into the island's medieval fortifications (whether Byzantine or Frankish),[951] their presentation as a corpus has presented many difficulties, the existence of some being recorded for the first time.[952] My conclusions on these are often therefore based on scant evidence and should be treated with great care.

The gazetteer has been broken down into seven regions as explained in **chapter 5**. In reading it reference should also be made to the maps section, the approach to which is also discussed in this introduction

5.1.1. Northwest – Oreoi, Aidipsos, Istiaia
5.1.2. Northeast – Basilika, Mantoudi, Limnē
5.1.3. Central-North – Psachna, Stenē
5.1.4. Central-West – Chalkida, Basiliko, Eretria, Amarynthos
5.1.5. Central-East – Kyme, Aliberi
5.1.6. South-Central – Krieza, Styra, Marmari
5.1.7. South - Karystos

Each site listing provides

- A general description of the site and hinterland
- Its medieval name(s), if known and references on early maps[953]
- Towers
- Fortifications – major and minor
- Churches
- Monasteries

[950] Both Skouras (1998 and 2003) and Koder-Hild (1976) provide many references in their works, but only a selection of those judged the most important is included.

[951] Exceptions are the articles by Demetris Triantafyllopoulos and the recent work on the fortresses and walled towns of Euboea by Pari Kalamara (2016) "The settlements of the Middle and Late Byzantine period in Euboea". In Tankosic, et al. (Eds.) **An Island between Two Worlds: the Archaeology of Euboea from Prehistoric to Byzantine times, July 2013, Eretria**. Norwegian Institute at Athens. 536-558.

[952] These are usually identified by the name of a hill from 20th century 1:50,000 maps and are undated, their inclusion only being undertaken in order to make the gazetteer as comprehensive as possible. Certain fortifications, which are clearly Archaic, Classical, Hellenistic or Roman period (e.g Levkanti, ancient Eretria and Chalkida) have been ignored.

[953] See chapter 3 for *portolan* charts.

If a particular type of monument is not mentioned this means that no evidence of such was found in the site under discussion. Features such as aqueducts, marshland, and rivers are noted on an exceptional basis. For previously recorded towers Skouras (2003) and Lock (1996) references are given, as are GPS co-ordinates where their position is known exactly. For new tower sites identified or hypothesised a number '2xx' is given as reference.

Where appropriate (especially in the north-central region and around ***Negroponte***) sketch diagrams are given. These should be considered indicative only, since no license to undertake detailed site surveys has been obtained from the local ephoria and are based on satellite imagery and the author's site visits only. In a few cases maps and previously published ground plans of monuments are also included.

An attempt has been made to date monuments wherever possible, but many churches and monasteries are simply noted as 'undated'. No tower has been accurately dated. Some probable Ottoman period churches are included since they may lie on the foundations of older ones, although there is usually little evidence of such, except the environment in which they are located.[954]

Maps

Full colour maps are available in the maps section to aid reference to identification of each focus site. Using the HMGS (1970 and 1988) 1:50,000 map series,[955] rivers have been divided into intermittently (with a dotted line) and permanently flowing. Areas of forestry and scrub are shown according to the European Corine Land Use data for 2012. Consideration had been given to trying to adjust this for the Late Medieval period, but the mountainous nature of the island (over 75%) suggested that little fundamental change has occurred since that time in the land under cultivation.[956] It was concluded that any attempt to adjust, without a comprehensive study beyond the remit of the present work, would simply corrupt good data with very little benefit. Land use on the margins should therefore be treated with some circumspection.

A tower within a fortification is treated as part of the fortification, thus the towers in Rizokastro **(SC2**) and Cleisura (**NE24**) are not described separately. There is, however, the suspicion at many tower sites that there was originally a substantial wall around them, which may raise them to the level of a small fortification (see, for instance, Kamaritsa – **CN4**).

No charts or maps of the Late Medieval period show roads. However, evidence exists from 17th – 19th century Venetian spies and travellers, and British Admiralty charts from the early 19th century prior to industrialisation. These are shown in a red continuous line on the maps. Other roads (in a red dotted line) have been hypothesised from the topography, later maps and the location of monuments. They should be treated as indicative only and by no means accurate or comprehensive.

Consideration was given to adding an indication of type to each tower. Since, as explained in **chapter 8**, a typology has been developed more as a framework than a clear delineation system, certain towers may overlap types, roles may change over time, and the surviving remains of most towers are little more than foundations, it was felt best to simply describe each one. For the detailed maps (see **section 7.5.1-** tower listing) certain types are noted but not on a comprehensive basis.

[954] For example, a cemetery or tower, both of which proved to be good indicators of settlement location.

[955] Hellenic_Military_Geographical_Service (1970) "**Cartographic / Analogical Topographic Maps 1:50.000**". Athens.

[956] Areas of swamp which have now been drained being an exception. That around ***Negroponte*** (Chalkida) and Dystos lake are shown on the maps.

5.2 Site Gazetteer

5.2.1 Northwest Region

Site: NW1 **Aidēpsos**

General
This settlement together with **Loutra Aidēpsou,** the spa town by the sea just to the south, effectively form one conurbation today. The town is mentioned by Hierocles (533-535).[957] Both Koder and Skouras believe that the medieval settlement was at Agia Paraskeve, just to the south, where there are the remains of a medieval tower, but practically, given the nearly 200 metre difference in height and the distance from the lowland agricultural areas at Aidēpsos, this seems unlikely. Bury (1888) relates how, sometime after 1385, the town was given to the widow of Nicolo dalle Carceri, Petronella Jocco, and came into the hands of Crusino Sommaripa in 1442.
Koder (1973) 112; Skouras(2003) 39; Bury (1888); Koder-Hild (1976) 118.

Medieval Name
lipso / ***ed[i]pso:*** 13th c. – Lipisso (Venice)[958]; 14th c. – ***lipiso, lipisico:*** *portolan* charts;[959] 15th c. – ***Lipso***: Sonetti(1485); 16th c. – ***lipzos:*** Piri Re'is(1522), ***lipsa / Lipso/liso:*** Ortelius (1584), Gastaldi (1545-1550?), Porcacchi(1576), 17th c. – ***Adepso:*** Boschini (1650?).
The earliest map to refer to the settlement is the 1318 *portolan chart* of Pietro Vesconte, repeated in four other charts by him up to 1325. These use the names ***Lipiso*** and ***Lipisico***, an obvious contraction of '*L[a Aid]ipso'*. The *isolario* of Bartolomeo Dalli Sonetti (1485) names it ***Lipso***, noting two settlements, possibly the village and the spa town to the south, whilst Piri Re'is (1522) calls it ***Lipzos***. Gastaldi and Porcacchi note the name twice, thus re-confirming the Sonetti *isolario.*

Agios Nikolaos
This is within the village. Measuring externally 14.50 x 8.60m. it is a three-aisled (τρίκλιτη) church with a semi-circular apse, two rows of columns supporting a vaulted roof and a rectangular narthex. Dated to 13th century by Farantos.
Skouras(1998) 89; Farantos (1977) 145.

Three Ottoman period churches (not included in analysis)
Agios Ioannis – ruin: small church to south of village. **Agios Loukas – ruin: t**o the southeast of the village, this is today just a pile of stones. Undated but probably 17th century or later. **Agios Konstantinos - ruin: s**outheast of the village, the walls still stand to a height of 0.3 to 2.0m. A single knave church with a semi-circular apse, it measures externally 8.0m. x 4.50m. Undated but probably 16th or 17th century.
Skouras (1998) 89; Farantos (1977) 152-154.

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[957] Honigman (Ed.) (1939) **[Hierokles] Le Synekdemos d' Hiérocles et l'Opuscule géographique de Georges de Chypre**, Brussels: Editions de l'institut de philologie et d'histoire orientales et slaves, 644.10.
[958] This is noted as a place in the minutes of the Venetian assembly regarding pirate attacks around the island-Tafel and Thomas (Eds.) (1857) **Urkunden zur älteren Handels- und Staatsgeschichte der Republik Venedig : Vol.3 [1256-1299]**, Vienna., 113.
[959] 14th century references are from *portolan* charts – see **appendix 3**.

Site: NW2 **Agia Paraskevē (Aidēpsos)**

General
The site is in a valley enclosed by hills on three sides and overlooks the plain of Agios to the north. Its position is strategic at what is today a crossroads, and the tower may have originally been sited with a view to controlling travel in the area. Both Skouras and Koder identify the site with medieval ***Lipiso*** but the fact that it is hidden from the sea suggests that mariners would not have noted it and that their reference is to the village of Aidēpsos (and possibly another now lost tower) and/or **Thermēs** monastery (modern-day Loutra Aidēpsou).
Koder (1973) 112; Skouras (2003) 39.

Medieval Name
See notes in **NW1** above.

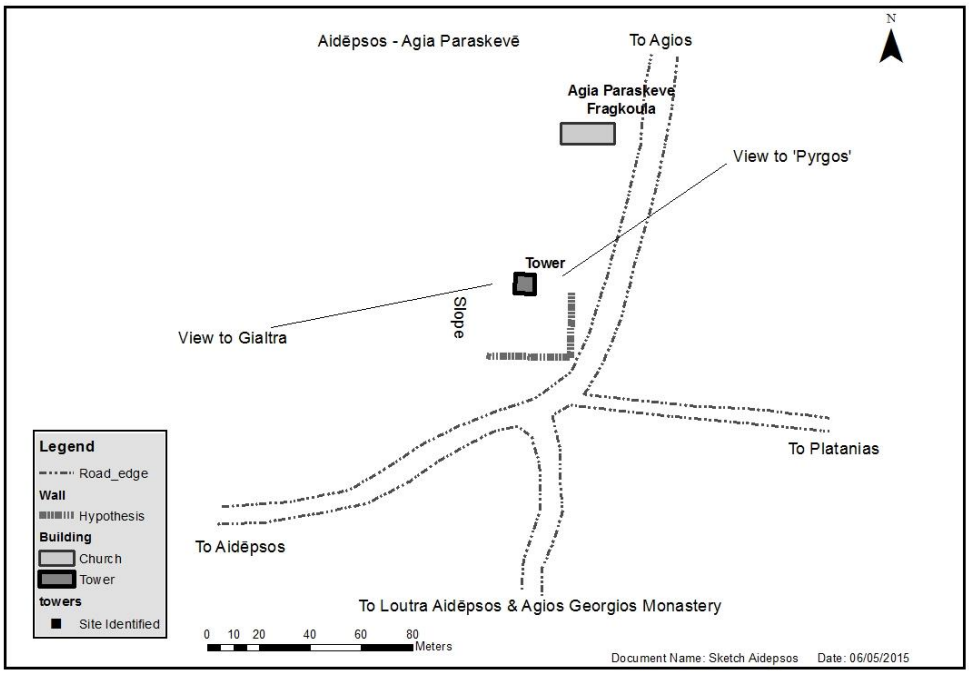


Figure A5.1 – Agia Paraskevē tower and church

Tower (38.52.519, 023.03.608, height 202m.) Skouras no.7, Lock no.1.
This is situated 2 km. to the east of Aidēpsos in an enclosed position looking northeast up a valley with a restricted view between the hills to the sea in the west and towards Pteleos to the north. It is clearly located to overlook the agricultural area to the north and possibly the roads leading to the south and west, since just to the southwest there is a hill much more appropriate as a strategic lookout point. It measures 6.6m. x 7.0m. with walls of 1.0m. thickness and stands to a surviving height of 4.5m. (although the surrounding ground may be higher than the original surface level). Half of the south wall has collapsed. Traces of an indent and slightly different stonework were seen on the southeast side just above ground level, but whether this was simply foundation stones, or the remains of a previous construction could not be discerned.
Holes exist for both transverse and possible lateral wooden tie-beams within the walls. The entrance appears to have been above the surviving wall height, at least on the first floor. The stonework is rough, set in approximate rows in-filled with rubble, lime mortar and tile slips. The internal walls are very clean and show no indication of vaulting, although neat holes have been set and re-enforced at regular intervals on the wall, presumably for supporting floor beams or a ladder. There is also a series of holes opposite each other equidistant from each wall, indicating a possible dividing wall. The overall impression is of a functional building.

Although hidden from the sea to the southwest it has a direct view west over the bay to the (possibly fortified) settlement of Gialtra-Castelli (**NW7** - 7.5 kms), probably noted on the early maps as '***Gran Lutra***' (literally 'the baths' to denote the thermal springs in the vicinity). It also has a view to the northeast towards a tower at Agios (**NW19**), denoted on the map as 'Pyrgos' (Πύργος - 4.2 km.), and may have functioned as a node in a chain of watchtowers stretching from Cape Lichada to the Aegean coast, parallel to the north coast of the island. Koder-Hild question whether it may have been Turkish.
Koder(1973) 112; Skouras(2003) 39; Farantos (1972) 141; idem(1977) 155-157; Koder and Hild (1976) 118; **Colour Plate 10.11.**

Agia Paraskevē Frangkoula church - ruin (38.52.519, 023.03.608, height 202m.)
This small church is described by Farantos as being 150m. from the new church, but the old wall he notes must have been cleared. The modern church of the same name next to the tower may have been constructed over an earlier one. One can only assume that by the name '*Frangkoula*' it was contemporary with the tower.
Skouras (1998) 68-9; Farantos (1977) 154-155.

Agia Kyriakē church
No trace could be found of the ruins of this church, which Skouras notes. Next to the site old worked stones had been piled up with a sign that they are the property of the monastery of Agios Georgios, which is situated 5kms to the east. Not included - undated.
Skouras (1998) 68-69.

Agios Nikolaos church
A 15-minute walk north of the tower, this church, measuring externally 7.40 x 3.8m. with a semi-circular apse, has been dated to the 14th century.
Farantos (1977) 155 - 158.

Site: NW3 Loutra Aidēpsou

General
Although the town has been occupied at least since the classical period and been noted for its hot springs, the present built area is essentially modern. Skouras mentions six church ruins in the wider region (see **NW1, NW2,** and **NW4**) although there is only the monastery and one church in the immediate area.

Medieval Name
See notes in **NW1** above. In the 1846-7 British Admiralty survey by Captain Graves and H.M.S. Volage (publ. 1890) ***Cape Therma*** is noted and '*ruins*' are indicated in the area. *'Thermes'* means literally 'hot' so confirming the rationale for its existence.

Thermes Monastery
The name is noted in the 19th century but is thereafter lost. Skouras writes that it was destroyed in the 15th century. Possibly from the Byzantine period but no confirmed source.
Skouras (1998) 70.

Agia Aikaterinē church - ruin
Only a small part of one wall remains, although Skouras on his visit was able to identify a column, which appeared to be in its original position. Undated.
Skouras (1998) 89.

Site: NW4 **Agios Nikolaos (Aidēpsos)**

General
This is an area to the west of Agios (**NW19**) and north of Aidēpsos (**NW1**) centred on a low ridge (100m. height) to the north of which is a small cultivated plain (approx. 1 x 2 km.), and to the south a much larger agricultural area. The two churches lie on this ridge and any settlement probably lay on the saddle of the ridge.

Medieval name - No mention found

Possible 'Vigla' coastal watchtower – no.204
The place-name '*Vigla*' is noted close to the north coast on the *1:50,000 Greek Staff map (1907*) indicating the likely positioning of a coastal watchtower here. It has a clear view to the northeast to Neos Pyrgos (**NW8** – 4.7km.), to the east to Agios (**NW19** – 7km.), and to the southeast to Agia Paraskevē (**NW2** – 6.1km.).

Theotokos church - ruin
This church is situated in the area of Marathias (or Monodendri) southeast of the *Vigla* hill and west of the village of Agios. Although a ruin, parts of its walls still stand to their full height. Farantos has undertaken a detailed study of its architecture. The structure is divided into two sections - one with a single aisle and the other with three - with a total floorplan area of 8.3m. x 3.7m. He dates it with some reservation to the 14th century, based on similarities of its size, architecture, construction material and methods with other Palaiologan churches.
Koder(1973) 155-7; Farantos (1971) 203-214; Triantafyllopoulos(1974) 242; Skouras (1998) 69.

Agios Nikolaos church – ruin
3.5 kms to the west of Agios, this small church (internally 2.40m. x 5.70m.) with a semi-circular apse stands on a slight rise. Farantos dates it probably to the 14th century.
Farantos (1977) 155-158; Skouras (1998) 57.

NOTE: these two churches do not seem to have any direct link with the *Vigla* hill from which they are distant 2.5 kms. and are simply indications of possible settlement in the area.

Site: NW5 **Agios Georgios Monastery (Aidēpsos)**

General
The monastery is situated at a height of 450m. above the village of Ēlia, east of Aidēpsos, Documentary evidence indicates its construction well before 1727, but whether it had been established prior to the Ottoman period is unknown. Two portolan charts from the 14th century (see below) may indicate a very early date. The modern settlement is 3 kms. to the southwest.

Medieval name
Two portolan charts from the 14th century may have a reference to the monastery. ***Sa. zorzi*** is noted on a Venetian chart of unknown authorship dated to the beginning of the 15th century, and a chart by Guillem Soler (1385) notes ***S. Giorgo***, The handwriting on the latter is, however, very poor and my interpretation may be suspect. This is located somewhere to the southeast of Aidēpsos and north of Politika.
The bay below the monastery is called '*Ορμός Μοναστηριού'* (Monastery Bay) on the HMGS (1988) map, so clearly it has been seen by sailors as a landmark. In fact, sailing north from Chalkida with a good north-easterly wind, after an initial northerly bearing tacking towards ***Politika,*** a settlement which is also noted on all larger scale charts from the 14th century until the present, ships would have taken a direct bearing north-west on the monastery.
The charts may, however, have intended to refer to another Agios Giorgios monastery on the Lichada peninsular (**NW6**), just to the west, which was also well-known to mariners. Whilst this possibility

exists, unlike later printed charts of the 16th and 17th centuries, the early *portolan* charts, drafted by practising mariners, have been shown to be generally accurate. There is thus *prima facie* evidence for the existence of a monastery with this name in this position at an early date.

The Monastery
The monastery has been much studied in the literature. Many Ottoman period or modern repairs and renovations make its dating difficult. The most important indicator, which may justify a relatively early date (13th/14th century) for its establishment, is the cross-vaulted (σταυροεπίστεγη) architectural style of the monastery's chapel.
Skouras(1998) 113; Farantos (1979) 58-63.

Site: NW6 Agios Georgios (Lichada)

General
The Lichada peninsula is the north-western tip of the island. It is a key navigation point with dangerous shoals to the west and was noted continuously on all charts and maps from the 14th century on. There are remains of a classical fortification in the northwest,[960] but (apart from Gialtra-***Castelli*** to the east – see **NW7**) the primary medieval settlement appears to have grown up at Lichada around the Agios Georgios monastery, which has given its name to the modern fishing port.

Medieval Name
S. Gorgio(?), Sa Zorzi, Cavo di caique, cavo d[e[Litar, Canali, Litar: **14th c.** – on *portolan* charts; **15th c.** l***a lita / la litada / [p.] litra:*** Sonetti (various 1485 - 1532)***;*** **16th c. -**maps problematic
Agios Georgios is mentioned on the earliest *portolan* charts from the 14th century, which also refer to the area simply by the name of the cape in various ways. In the *isolairo* of Sonetti (1485) it takes the form ***Litar***. Thereafter cartographers had limited access to the area, since it was under Ottoman domination, and mistakes and confusion abound (see discussion in **section 6.1**).

Tower (38.51.031, 022.52.031, height 266m.) Skouras no.89.
This tower is situated to the northeast of the modern village on a high point which provides clear views out over the sea to the west and south over the Gulf of Euboea. Its role appears to have been both defensive and strategic, but exactly how communication was achieved over the mountains to the north and east could not be identified. Only a beacon atop Mt. Xerosoubala (738m.) would have sufficed to communicate with Gialtra-Castelli, unless there were originally other watchtowers stretching along the southern coast. There is, however, direct line-of-sight with the tower of Robies (**NE1**), so clear warning of enemy ships approaching the Gulf of Euboea could be given to the more southerly regions of Euboea. Only the eastern wall of the tower has survived to a height of just over 4 metres. Constructed of stone and mortar in-filled with tile slips, it appears similar in style to the tower at Agia Paraskevē (Aidēpsos) – **NW2**. The remains of other walls were identified in the underbrush surrounding the tower, although whether these were from other buildings, a circuit wall (or both) was unclear.
Skouras (2003) 79; Kalamara (2016), **Colour plate 10.11(b).**

Agios Georgios Monastery
This is at a height of 160m., close to the modern village of Lichada. All that remains is a church with a vaulted ceiling topped with tiles. Above the entrance, Skouras writes, was an 'επιγραφή' (inscription or notice) which, according to him reads '*το παλαιόν τούτο μοναστήριον (710μ.χ.) ανεκαινισθεί…'* [this old monastery (710A.D) was renovated….]. and outside he found the base of a column. He could not, however, find out who had written it nor any reference to the monument in the literature.
Skouras (2003) 137.

[960] Sackett et al. (1966) **Prehistoric Euboea: contributions toward a survey**. British School at Athens, 37. No other remains of a settlement or church has been found in the vicinity so we must assume that during the middle Byzantine period it had been vacated.

Agios Blasēs - ruin
This church is to the north of the modern village of Lichada in a position overlooking the homonymous gulf. Only the circular apse and parts of the north and south walls to a height of 1.1m. remain. These have been well-constructed with squared blocks in-filled with tiles. Farantos believes this is possibly the chapel of the monastery of Agios Ioannis Kalabytos referred to by Themelis, since there are indications of other buildings in the vicinity. He dates it to within the 12th century.
Skouras (1998) 137; Farantos (1977) 135-140; Themelis (1965) 152.

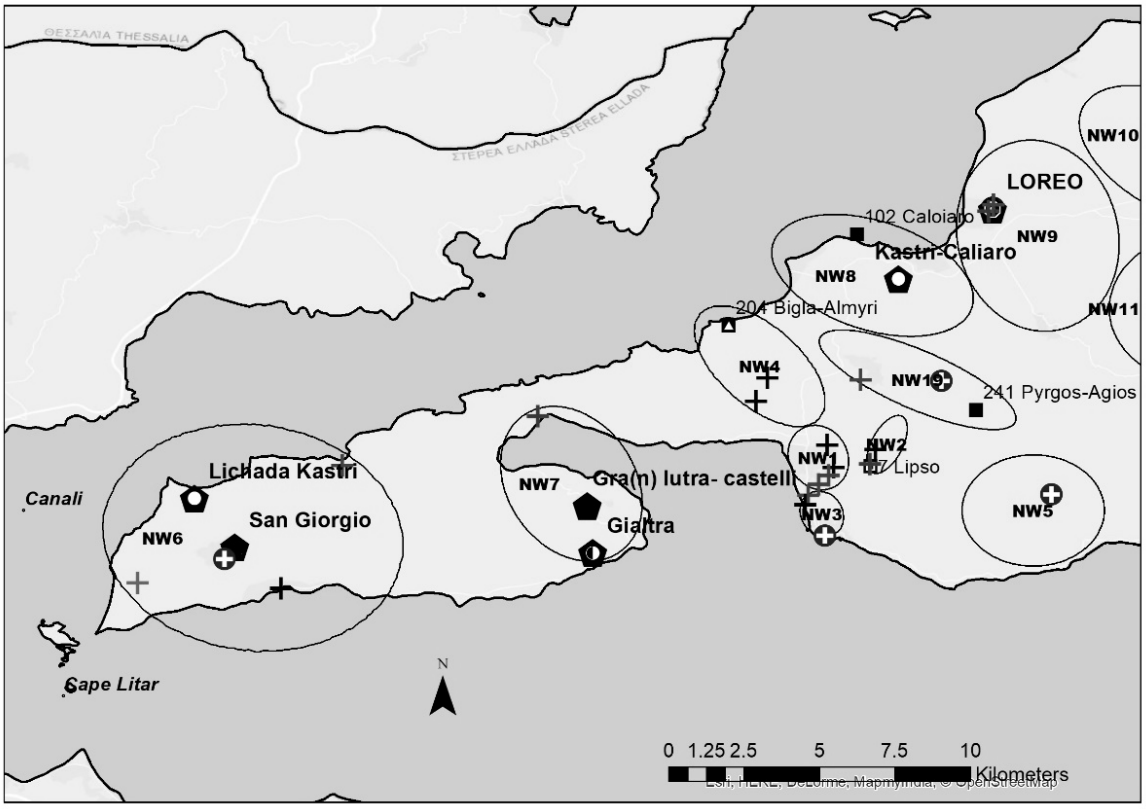


Figure A5.2 - Map of the Lichada Peninsular

Agios Nikolaos
A new church has now been constructed over the ruins of the old one in the port of Agios Georgios. Undated.
Skouras (1998) 61.

Ag. Konstantinos and Elenē Church
This is to the southwest of the village of Lichada and is constructed on the foundations of an ancient temple, suggesting an Early Byzantine dating.
Skouras (1998) 124.

Other Churches - Skouras notes that he had information about three other old churches in the area, but he was not able to find them!
Skouras (1998) 138.

Site: NW7 **Gialtra -Castelli (Lichada)**

General
Situated opposite Loutra Aidēpsou, Gialtra is today a village with an economy based on agriculture and the summer houses constructed in its vicinity; It is more than likely that in the medieval period this was a small fortified town (hence the alternative name of ***Castelli***), which provided a safe anchorage prior to sailing around the cape on to Oreoi. It is known to have existed from the classical period.[961] No remains exist of any tower or old church, but traces of medieval fortification have been identified in the centre of the village.[962] It has direct view to the tower at Agia Paraskevē (**NW2**) so may have played a part in the strategic defence of the north-western region of Euboea. Three other small settlements have been identified in the area. Additionally, the existence of the name '*Gregolimano*' suggests the possible existence of another settlement 5 kms. along the coast to the west.[963]
Koder and Hild (1976) 204-205.

Medieval Name
lalita / ***lalitada***: **13th c.** – [De]litalde;[964] 14th c. - ***litari, litar, s. giorgio, Sa. zorzi:*** *portolan* charts; **15th c.** –l***a lita / la litada / [p.] litra:*** Sonetti (various 1485 - 1532) ***lalutra –*** Venice;[965] **16th c**. – ***litar:*** Porcacchi (1576) & Camocio (c.1570)***, Lita: Millo (1590a), C. Litar:*** Agnese (1554), ***Lalita: Bordone (1528)*** & Porcacchi (1576) ; **17th c.** – ***Litar*** / ***P. Calos:*** Boschini (1658).
The many names appear to have been a confusion between *Lithada*, probably referring to the massive rocky mountain on the peninsula[966] – corrupted to ***Litar,*** and *Loutra* (λούτρα) meaning baths referring to the hot springs below the classical fortification to the south. Permutations of these names were then applied interchangeably to three separate settlements in the Gialtra area – the prime one is the fortified settlement, the secondary the hot springs and the third the harbour - and modern Lichada **(NW6**) discussed above – see **appendix 6.2** for discussion.

***Castelli / Gra[n] lutra* - fortified settlement**
The name most probably once referred to a walled town (similar to ***Kastella*** - **CN6**) the remains of which have been found in the centre of the modern village,[967] and any early church has been built-over by the new village church.

***P. Litra* - harbour settlement**
This was probably on the southern shore of an enclosed bay just to the north of ***Castelli***. There appears to have been a separate harbour protected aginst the northeast wind at ***Gregolimano*** just to the west. The Agios Georgios harbour (**NW6**) is probably more modern, but we have no base for dating it.

***Lalutra* - Fortification / possible tower** (Height 60m.) Skouras no.36
There are the remains of a classical fortification just to the west of modern Loutra Gialtrōn on a natural acropolis. It has very good views over the Euboean gulf to the south and towards Aidēpsos to the east, but not to the tower at Agia Paraskevē (**NW1**), nor to the village of Gialtra to the north or to the west. Sackett notes that it is referred to by locals as '*Tourla*' indicating not only a possible tower here, but also its probable continued use into the Frankish period. Sackett identified sherds of all periods spread over the area between the two villages indicating a substantial settlement in the area.
Skouras (2003) 54-55; Sackett (1966) 38-39.

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961 Sackett et al. (1966) 37
962 Kalamara (2016).
963 This name means literally 'northeast wind harbour', *Gregos* being the name for northeast on the *portolans* of the period. This was clearly a refuge since the main harbour is very exposed to such a wind.
964 This is noted in a Venetian judgement on piracy in the area in 1276 - Tafel and Thomas (Eds.) (1857) **Urkunden zur älteren Handels- und Staatsgeschichte der Republik Venedig : Vol.3 [1256-1299]**, Vienna. 220.
965 (1890-1900) **Documents inédits relatifs à l'histoire de la Grèce au Moyen Age**, Paris, III, 125, line 23.
966 Lithos (λίθος) means 'rock' in Greek.
967 Kalamara (2016).

Agios Taxiarchēs church
The ruins of a small, probably Frankish period, church, Agios Taxiarchēs, 7 km to the north of Gialtra on the northern shore of Gialtra bay has been described in detail by Farantos. It measures 3.70 x 5.70 m. externally with a hexagonal apse and tiny narthex. Skouras reports that it has now been replaced by a modern church. This may indicate the site of a wayside inn or (now lost) military control point and small settlement on the road from Aidēpsos to Castella since there is little land of any agricultural value in the vicinity.
Skouras (1998) 94; Farantos (1977) 142 - 144.

Site: NW8 **Neos Pyrgos (Oreoi)**

General
This is a settlement just to the southwest of Oreoi (**NW9**). Although the name apparently indicates the existence of some form of tower in the area, the village is actually the creation of refugees from Asia Minor in 1921. There are, however, two possible monuments of medieval origin in the vicinity. The first is what appears to be a tower on a small offshore islet called '***Nisiotissa***', whilst the second is a hill called '***Kastri***' just to the west of the village.

Medieval name – see below

***Nisiotissa* –** Skouras no.102, Lock no.3
Remains of Panagia church exist on the islet together with what appears to be a tower. Although one hypothesis identifies it as a windmill, the rocky nature of the islet seems to preclude this, but the function of the tower – whether defensive as part of a monastery (Philippson) or as a watchtower (Koder) at the western entrance to the bay of Oreoi – is debatable. Lock believes it is a tower and has a direct link with the harbour but is not linked to any wider defensive network along the north Euboea coast. Triantafyllopoulos, however, arguing that the existence of the larger fortification of ***Kastri*** just a kilometre away negates any strategic or local reason for its existence, veers towards a probable ecclesiastical function.
The manuscript map of Sonetti (1485) clearly notes the island of ***Caloiaro*** just offshore from Oreoi. There is no other in the area, so this must be ***Nisiotissa,*** thus providing support for Triantafyllopoulos' contention. Not only does the name appear to be a latinised version of the Greek word 'kalogero' (καλόγερο), which means *Monk* and by extension *monastery*,[968] but Sonetti also notes another place with the name ***Caloiaro,*** in the area of modern-day Rhamnous on the coast of Attica, where it is known there was a monastery and a good natural harbour.[969]
Skouras (2003) 87; Lock (1996); Triantafyllopoulos (1974) 237; Koder(1973) 111; Philippson (1951) 573,575,742; Sackett(1966) 41; Koder and Hild (1976) 162.

Kastri – Skouras no.87
To the west of Neos Pyrgos there is a hill called Kastri (Καστρί). Although Skouras could find nothing on his site visit due to the thick vegetation in the area, Sackett (1966) identified Roman and medieval sherds on the headland below. He also noted that slag, '*said to come from Venetian lead mines'*, had been found on the beach.[970]

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[968] The name is a common one in the Aegean, and Koutelakis (2008), writing on the derivation of the names on a number of the Aegean islands, notes fourteen places with the name '**Kalogero**' -Koutelakis (2008) **Αιγαιο και Χάρτες με Ανατρεπτική Ματιά [The Aegean and Maps from a Radical viewpoint]**. Athens: Editions Erinni.
[969] (2005) "**Map of Southern Evia and Eastern Attica 1:100,000**". Athens. There are ruins in the area dating from the classical period. This is a natural stopover for ships travelling up from Karystos to ***Negroponte***
[970] He provides no reference for this assertion.

The name **'Kastri'** is not mentioned on any medieval maps. However, Sonetti (1485) uses a two-tower symbol to denote ***Caloiaro***, thus indicating a substantial fortified settlement. The Nisiotissa islet does not appear sufficiently substantial to justify such a treatment so possibly mariners treated both places as one. Insufficient evidence to include in analysis.
Skouras (2003) 87; Sackett (1966) 41.

Site: NW9 **Oreoi**

General
This was the capital of the northern Terciero or Triarchy of Euboea, which was established in 1205 following the annexation of the island by Latin forces when Bonifacio, Marquis of Montferrat, divided the island into three fiefs. There existed a fortress here from late antiquity throughout the Byzantine period. It was also used by Licarios as his initial base when he invaded the island in the early 1270's at the head of a Byzantine army.[971]
Koder-Hild (1976) 228.

Medieval Name
Loreo, Oreo: **14th c**. – ***Loreo, P. Loreo, oreo, loiro, lorio, loredo:*** *Portolan* charts, ***lo Reo***: Venetian Senate;[972] **15th c.** – ***Oreo:*** Buondelmonti (1465-1475)[973], ***loreo:*** Sonetti (1485), *portolan* charts; **16th c.** – ***Loreo*** (Gastaldi, Porcacchi (1576), Ortelius (1584 publ.1609)[974].
The general consensus of the maps is that the name was ***[l]oreo*** reflecting a continuation of the classical **Ōreoi** (***Ωρεοι***) although the exact location is not absolutely clear. Koder cites the existence of a Byzantine church, just outside of what appears to be the fortification, on a small rise slightly to the north of the present-day town (see **Fortress** below) to suggest that this was ***Oreo***, providing a number of references for Byzantine remains.
The maps of the late 15th and 16th centuries, however, when the island was under Ottoman occupation, generally indicate the position of ***Loreo*** much further inland. It may be that initially the Lombard triarchs, also having under their tutelage the islands of Skopelos and Skiathos, garrisoned Oreoi, as did the Venetians in the 14th c., requiring it as a secure port on the route north. But, immediately following the Ottoman annexation in 1470, when there was no external threat, the administrative centre (and over time the commercial one) moved to Istiaia, it being centred on the rich agricultural plain.

Fortress (38.57.064, 23.05.743, height 30m.) Skouras no.160.
Situated on a low hill this is one kilometre from the sea and six from modern-day Istiaia to the east. It measures approximately 160 x 160 m. and encloses an area of two hectares. Skouras (2003) noted that its remains have been so well cleared by the locals to build their own houses that little has remained to use as evidence, and minimal formal excavation appears to have been undertaken of the area.
We are fortunate to have an excellent witness of its original state. Alexandre Buchon visited the area on 20th May 1841. His travelogue describes in detail the ruins that he found on the hill. He notes not only that the classical walls constructed of cut stone could still be seen nearly all around the hill, but also four square towers which he assigns to the Franks. He found too the ruins of a church in the centre[975]. Traces of the towers and church have now disappeared, but parts of the south wall can still be seen with Byzantine/Frankish construction appearing above the cut stonework of a classical fortress.
(**Plates NW9.1,2**) Theodoros I Skouras (2003) 120; Buchon (1911) 35-39; Koder (1973) 110; Sackett (1966) 40.

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[971] See **chapter 4**.
[972] Thiriet (1958) 381, 100.
[973] Buondelmonte (1465 - 1475) "**Euboia olim Nigroponte nunc in Liber Insularum Arcipelagi [Document cartographique manuscrit]**". Bibliotheque nationale de France, 4824.
[974] Ortelius (1609) "**Archipelagi Insularum Aliquot Descrip.**". Antwerp. Barry Lawrence Ruderman, #47026.
[975] He recognises these by the use of mortared joints. He was also able to purchase in the village coins issued by the principality of the Morea and the Duke of Athens, and from classical *Istiaia*.

Agios Basileios Church - ruin
This church was just below the ramparts of the fortress and had been half covered by earth that had fallen from the side when Skouras visited. He noted the semi-circular apse. It has been dated to the late Byzantine period by Daux (1956). A new church has now been constructed on the foundations of the old one.
Skouras (1998) 199; Sackett (1974) 141.

Site: NW10 **Istiaia**

General
The modern town, the regional administrative centre, is situated seven kilometres east of the port of Oreoi in a wide agricultural plain on the banks of the river Xēropotamo (literally 'dry river'), which appears to take its name from the fact that, whilst it floods in the winter with waters from the mountain range to the east, similar to the Lilas river close to Chalkida, it runs dry in the summer. There are no recorded remains of fortifications in the immediate area and it may have been little more than a ford in the river during the medieval period.
Koder and Hild (1976) 172.

Medieval name
Possibly – ***Oreo*** (see **NW9**)
The town adopted the classical name of ***Istiaia*** in the early 20th century. It had been known previously by the name Xērochorion. Strabo's *Geography* intimates that there was some interchangeability between the names of classical ***Oreoi*** and ***Istiaia***. If so, modern Istiaia, as we know it, could also have been referred to as ***Oreo*** in the medieval period. Either way, by the time of Buchon's visit in 1841 Oreoi was merely a small seaside village whilst further inland Xērochorion had become a substantial town of 2,500 people. [976]

Agios Nikolaos Church
Situated inside the town this is a cruciform(τρικόγχος) style church dated by Demetrokallis, based on the wall frescoes, to the post-Byzantine period (although possibly painted over an earlier fresco).
Skouras (1998) 115; Demetrokallis (1986).[977]

Agios Taxiarchēs Church
Based on archaeological remains built into the new church Ch. Themelis (1968) dates it to the 12th century. Skouras notes that Themelis refers to this as both a church and a monastery.
Skouras(1998) 116; Ch. Themelis (1970). Koder and Hild (1976) 268.

Two other churches, possibly late Byzantine, once existed in the area – **Agios Gen. Ioannis Prodromos** and **Agia Aikaterini**. A monastery, **Panagia Ntiniou**, first mentioned in 1593, once existed close to the town.
Skouras (1998) 116., C. Themelis (1965)

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[976] Hamilton and Falconer (tr.)**[Strabo] The Geography of Strabo**, London: H.G. Bohn Book X .ch.1.4. Strabo writes ' *Some writers say that the Oreitae had a city of their own, but because the Ellopians were making war on them they migrated and took up their abode with the Histiaeans; and that, although they became one city, they used both names, just as the same city is called both Lacedaemon and Sparta'.*
[977] Demetrokallis G. (1986) **ο Αγιος Νικολάος Ιστιαίας Ευβοίας,** Athens **in** Skouras(1998) .

Site: NW11 **Kamaria**

General
This village is 8 kilometres southeast of Istiaia. Skouras notes the existence of a tower close-by but provides little further information.

Medieval name – none identified

Tower (height 120m.) Skouras no. 58
According to Skouras only a few stones survive of the tower, which had existed on a small rise close to the village at a height of 120 metres. In its position has been constructed a water reservoir.
Skouras (2003) 86.

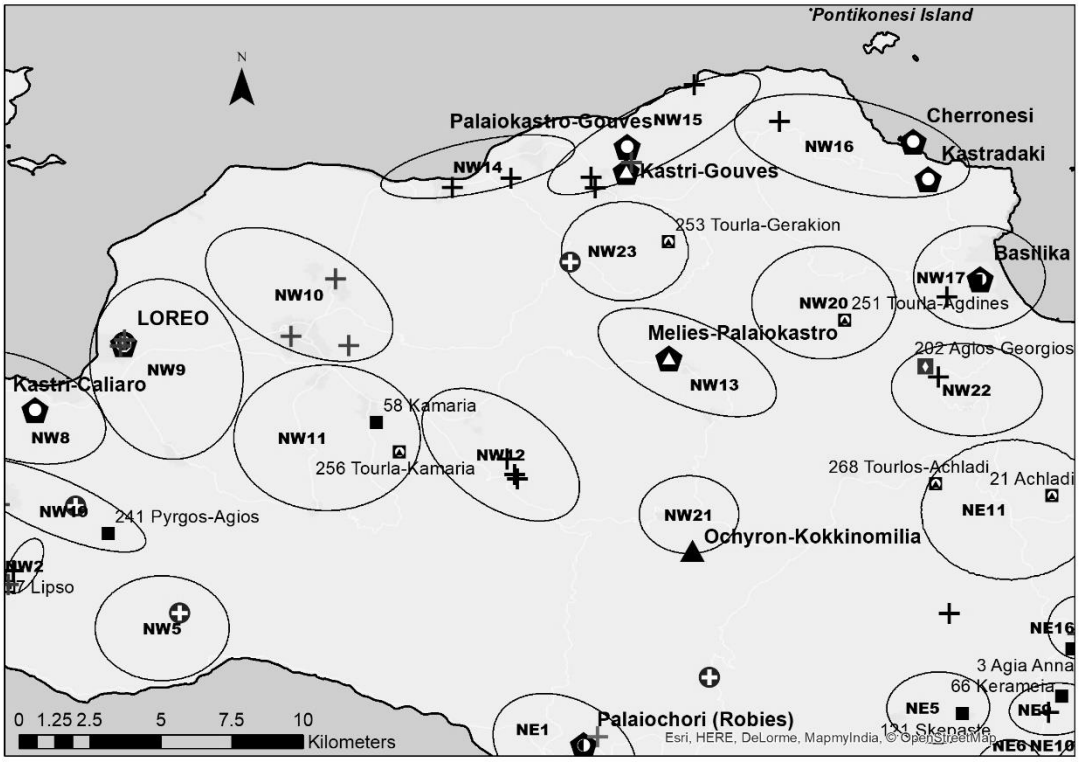


Figure A5.3 – Map of Northern Euboea

Site: NW12 **Boutas (Istiaia)**

General
Situated in an inland valley, the village is on the main route south. The ruins of three churches indicate a substantial population in the area. However, all have now disappeared, and we only have Skouras' record of their existence. Interestingly, a tower situated on a hill just to the northeast (height 315m.) would have been in an ideal position to communicate both with the tower at Kamaria to the northwest and southeast to Ochyron.
Skouras (1998) 91.

Medieval Name – none found

Agios Nikolaos church – now lost
It had existed southeast of the village towards the cemetery. Undated.

Agia Marina church – now lost
It had been to the north of the village. Undated.

Panagitsa Church – now lost
It had been southeast of the village but had disappeared on Skouras' last visit. Undated.

Site: NW13 **Mēlies**

General
The village of Mēlies is situated in a strategic position equidistant between Kamaria (to the west), Kastri-Gouves (to the north) and Basilika on the coast to the east.

Medieval name
None has been found but there exists the possibility that this is the ***Colochita*** noted by Sonetti (1485), Agnese (1554) and Boschini (1658) in the north of the island, since no other fortification seems to fit its location (see **appendix 6.2**).

Paliokastro fortification (height 490m.) Skouras no.97
Skouras notes this as being to the northwest of the village in a position called by the villagers '*Paliokastro*', although no mention of it is made on the HMGS (1970) map. Only the foundations remain of the walls and buildings within. It has a clear view to Kamaria (**NW11**) to the west and Kastri–Gouves (**NW15**) to the north and to a hill called *Tourla* in direct communication line to Basilika **(NW17**) on the east coast.
Given its population (**table A4.2**) and location this is thought to have been the position of the place on the Sonetti (c.1485) map called ***Colochita* –** see **chapter 6** and **appendix 6.**
Skouras (2003) 83.

Site: NW14 **Pevkē – Artemisio**

General
Artemisio, overlooking the northern shores of the island just to the east of Oreoi, is well known as the location of a major sea battle between the Greek and Persian fleets in the 5th century B.C. Today the modern town of Pevkē has grown up on the sea shore.
Koder and Hild (1976) 126.

Medieval Name
No mention was found of either place on portolan charts or maps in the 15th century. Ortelius (1584), however, notes its position accurately on a map of certain Aegean islands with place-names from the classical period.

Agios Iannis church (in village of Asmēnion to the west) – now disappeared
Skouras notes that on his visit to the site in 1977 tilling of the area had cleared any trace of the church. Undated.
Skouras (1998) 80.

Panagia Church (Artemisio)
Skouras notes that this is approximately 1.5 km west of the village on the road to Istiaia at a height of 70 metres close to a new church. It is a small church of rectangular shape with a tiled roof, a square apse which rises to the height of the roof, and a good number of wall paintings. Undated.
Skouras (1998) 79-80.

Agia Paraskevē Church (Artemisio)
Late or post Byzantine church – now renovated. Undated.
Skouras (1998) 80.

NW15 Castri-Gouves

General
The village of Gouves is situated 2 km. south of the coast in a narrow valley about 0.5 km. wide, straddling a river which leads into the plain to the east of Artemisio. To the east there lies a ridge, which rises to 190m. on the other side of which is the hamlet of Kastri. Although the three churches identified in the area and the name of 'Kastri' indicate the existence of a substantial community here no medieval tower or fortification has been identified in the area.

Medieval Name - none identified

Palaiokastro – Skouras no.40
This is 1 km. from the shore on a small hill at a height of 60m (as noted by Skouras). He mentions no medieval remains, most of the area having been ploughed up, although substantial quantities of sherds. Both the name and location suggest a classical period fortification. He erroneously notes that it has line of sight to Mēlies (**NW13**) but this is blocked by the ridge at Kastri.
Skouras (2003) 57.

Kastri – Skouras no.65
This hamlet is further inland from Palaiokastro. Although situated at a height of 107m. the low hills close to the shore screen it to a certain extent from view from the sea. The ridge above with a height of 190m. is an ideal position from which to survey the channel between the island and Trikeri on the mainland to the north. It also has a direct view to Mēlies (**NW13**), 7 km. to the south, and Tourla (**NW20**), 4.5km. to the southeast. Although we may suppose the existence of some sort of fortification from the name of the village and the Byzantine church, without further fieldwork this cannot be confirmed.
Skouras (2003) 70.

Gennēsē Theotokou church
This is situated in the hamlet of Kastri. Skouras notes it as Byzantine based on Bellaras (1989). Completely renovated.
Skouras(1998) 96; Bellaras (2000) 112,192.

Drosini Tower – Skouras no. 41, Lock no. 2
This is not a medieval tower. It was constructed by the Turk Ibrahim Aga just after 1800. A detailed analysis of the tower has been undertaken by Androudis(2007). He notes that it is constructed of rough field and river stones in-filled with rubble, bound together by ceramic in-slips and mortar. The corners are quoined with cut stone. The walls rise vertically with no battering and, unlike towers of earlier periods, do not reduce in thickness as they rise, remaining at approximately 1,0m. compared to towers of the late medieval era, which were generally between 1.2 to 1,5 m. thick at ground level.
Wooden beams run internally laterally along the walls providing structural and anti-seismic strength, and cross-beams stretch from the internal to the external faces. The pointing is flush with the stonework
Skouras(2003) 58; Androudis (2007b).

Taxiarchēs Church
Complete ruin. Undated.
Skouras (1998) 97; Drosinis (1940)[978] 100.

[978] Drosinis (1940) Σκόρπια φύλλα της ζωής μου, Athens **in** Skouras(1998) 97.

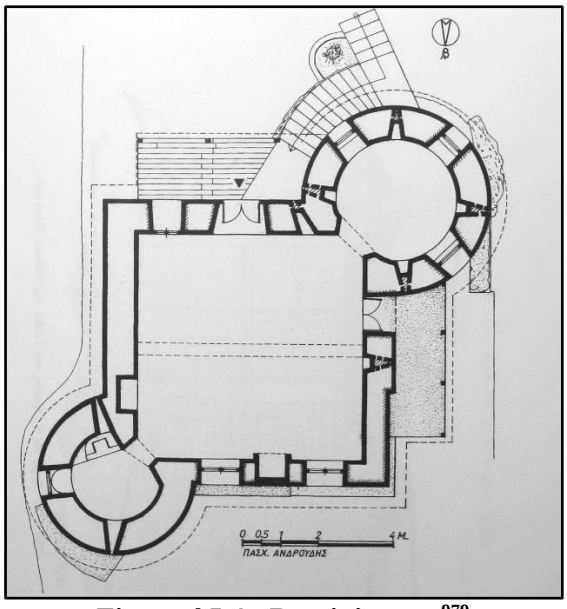


Figure A5.4 - Drosini tower[979]

Episkopē church
Close to the above church, this was also in ruins when Themelis visited it in 1965. Undated.
Skouras (1998) 97; Themelis (1965).

Site: NW16 **Neso - Ellēnika**

General
This is a fertile plain of 2.5 x 1 km. surrounded by high hills, divided by a small ridge which rises to 80 m. It looks north to ***Pontikonisi*** island. Two apparently classical fortifications exist in the area, but no references to medieval remains either of a tower or a church could be found. This may imply that during the middle and late medieval periods the area, being remote and effectively cut off from immediate support from elsewhere, was too exposed to potential pirate attacks and was abandoned.

Medieval Name
Neso: 15th c. – **Sonetti** (1485 - text only); **16th c.** - no mention, **17th c.** - Boschini (1658)[980] Coronelli (1687)[981]
Gounaropoulos (1930):102 - places the position of classical *Nysa* (noted in Pliny as ***Nesos***) as being at Ellēnika. It appears that there existed a place called ***Neso*** from a very early date, since Ortelius (1584) notes on his classical map of Euboea in his list of *'loca Euboeae, quorum situs ignoratur'* the place-name '*Nysa*', a close likeness.
Neso as with ***Cerinto*** is only noted by Sonetti (1485) in his text and not on the map. He writes '*Cerinto, neso, oreo'* and then moves on to another group of places further south. This may confirm that ***Neso*** is somewhere between ***Cerinto*** (**NE12**) and ***Oreo*** (**NW9**). Its placement by Boschini (1654/1658) just to the northwest of ***Cerinto*** and northeast of ***Limene*** (NE2) entices us to believe this. Yet Boschini, despite the apparent detail on his map, is a poor witness and makes many mistakes elsewhere.
One geographical feature of the Cherronēsi Fortification is that it is constructed, as its name in Greek implies, on a promontory. A simple shortening of the name over time to nēsi (νησί in Greek means

[979] According to Androudis(2007).
[980] Boschini (1658) "**Negroponte in 'LArcipelago con tutte le isole....'**". Venice. Biblioteca universitaria di Genova, IT-GE0038.
[981] Coronelli (1687) "**Isola di Negroponte in Description Geographique de la Moree**". Venice. Biblioteca nazionala Marciana,203.d.23 008038.

island) and then corrupted to 'neso' would appear a logical development, providing further support for the identification of Ellēnika with ***Neso.***

Kastradaki Fortification – Skouras no.47
Situated on a low ridge (30 m. height) in the centre of the plain, up to three lines of stonework are still visible of this classical fortification.
Skouras (2003) 61; Gounaropoulos (1930) 112; Philippson (1951) 577, 742; Sackett (1966) 42.

Cherronēsi Fortification – Skouras no.48
A classical fortification situated on the small promontory.
Skouras (2003)61-62; Philippson (1951) 577,742; Sackett (1966) 42.

Agios Georgios church
Situated in the village of Agriobotano, local folklore suggests that the original church has probably now been built over by the new one. Undated.
Skouras (1998) 67.

Site: NW17 **Basilika**

General
This is a plain measuring 2 x 2 km. interspersed with low-lying hills with limited agricultural potential. It leads down to a 3km. long beach on the north-eastern coast of the island and lies on the modern road linking the north to central Euboea. As a strategic position it is important, controlling the eastern coast, but there is little to protect in this region. Immediately south an 8km. wide band of mountainous forest (rising to nearly 1,000m.) stretches from the eastern shore over the Telethrion mountain range to the Agios Georgios monastery (**NW5**) on the west coast.

Medieval Name
None identified but it is possible that, given the lack of medieval remains at Ellēnika (**NW16**) just to the north, this could have been referred to as ***Neso*** in the Late Medieval period and thus have been included in his written *isolario* by Sonetti (1485) but have been omitted from the map because he was unsure as to its exact position.

Episkopē Church (Paliokklēsia)
A ruined church in the village over which has now been constructed a new one. Undated.
Does the name suggest the existence of a bishopric here at some point?
Skouras (1998) 88.

Tower – Skouras no.22, Lock no.4
This is located on a hill between the modern village and the sea within an older fortification (see below). Both Skouras and Sackett note it at a height of 220m. but this seems mistaken since the hill rises to only just over 100m. The tower lies in the area of a fortification called *Paliaokastri* on the HMGS (1970) map, where it has a view over the whole bay. It has direct line of sight to Agdines-Tourla (**NW20**). It survives to a height of two metres. Lock sets it in a 'harbour' context. There is a small fishing village, Psaropouli, just to the north, but there is little to export from this area and a harbour tower (as Karabos (**SC1)** or Karaouli-Barka **(CN8)**), would most likely be in the harbour area to protect any ships moored there.
Skouras (1998) 47. Lock (1986).

Palaiokastri
This appears to have been an Early Helladic / Classical fortified site. The scatter of sherds suggests a large settlement of almost a square kilometre, but Sackett does not mention Roman finds. Without further evidence we must conclude that the site was probably abandoned in preference for a safer one

inland at the modern village and then re-occupied in the Frankish period, when the inland beacon site at Agdines-Tourla was possibly also established for communication to the west.
Sackett (1966) 42. Skouras (1998) 47.

Site: NW18 **Agriobotano**

General
This is a remote village surrounded by forest at the northernmost tip of the island at a height of 160m. It may have had no strategic use except as a place on the road between Gouves (**NW15**) and Ellenika (**NW16**), with neither of which it had a clear line of sight. Two old churches are in the vicinity – one on the seashore and one in the village.

Medieval name - None found

Agios Nikolaos Church
This is situated on the seashore to the west of the village. On the foundations a new church has been built. It is noted on map HMGS (1977) no.35. Undated.
Skouras (1998) 68.

Other churches
Three other churches are noted by Skouras in the area – Agios Georgios (now disappeared), Zōodochos Pēgēs (1.5km. west of the village, now overbuilt) and Agios Ioannis Prodromos (ruin on the seashore) - but with insufficient detail to judge their relevance or date.
Papademetriou (1982)[982] 10,116,120; Skouras (1998) 67-68.

Site: NW19 **Agios (Aidēpsos)**

General
This is a village (formally a 'κοινότητα') to the north of Aidēpsos and southwest of Istiaia. It is situated in a wide plain between the river ***Pyrgorrema*** (as noted on the 1:50,000 Greek Staff map (1907) but not named on the HMGS (1970) map) and the river ***Kremasta***.

Medieval name
In the *1846-7 British Admiralty survey* by Captain Graves and H.M.S. Volage (publ.1890) Agios is mentioned, indicating its general importance in the early 19th century, but no earlier map reference could be found.

Tower no. 241
There is the indication from '***Pyrgorrema***' (see above), meaning 'tower stream' that a tower once existed in the village or its vicinity. The most obvious position is a hill 3 kms. to the southeast of the village, which is noted as ***'Pyrgos'*** on both the *Greek Staff (1907)* and *HMGS (1970)* maps. This has a clear view northwest over the plain to the sea, to the west to Agia Paraskevē (**NW2**) and northeast to ***Kastri*** - Neos Pyrgos (**NW8**).

Panagia church or Palaiomonasteri - ruin
Skouras enigmatically notes this as the ruins of a Byzantine church 'a few kilometres outside the village towards the mountain'. The most likely direction is the mountain to the south-east in the direction of Pyrgos (see above). This is said by the locals to have been the chapel of a monastery. Its situation close to Pyrgos would further support the prior existence of a tower in the area.

[982] D.Papademetriou (1982) το Αγριοβότανο της Εύβοιας, Athens **in** Skouras(1998)

Skouras (1998) 57; Papapostolou (1977) 74.[983]

Agios Demetrios church - ruin
Orlandos studied this church closely and dated it to the 12th century, but little now remains. It possibly has two phases of construction, the second in the 14th century but the evidence is inconclusive.
A. Orlandos (1951a) 168; Koder (1973) 155; Triantafyllopoulos (1974) 242; Farantos (1970) 208; Skouras (1998) 57; Koder and Hild (1976) 169.

Agios Nikolaos church - ruin
It is south of the village just north of the Agia Paraskevē church (**NW2**). Undated.
Skouras(1998) 57; Farantos (1977) 155.

Site: NW20 **Agdines - Tourla**

General
The village is situated between Mēlies (**NW13**) to the southwest and Vasilika (**NW17**) to the northeast on the Aegean shore. No churches or other monuments have been noted in its environs. The HMGS (1970) map notes Tourla (see below) 3.5km. to the east.

Medieval name
None found

Tourla – possible beacon no.251
This is the name of a hill with a height of 489m. noted on the HMGS (1970) map. It is not only approximately equidistant between Mēlies (**NW13**), 6.5km., and Vasilika (**NW17**), 5km., but is exactly in a straight line between the two. The name intimates the existence of a medieval tower in the area, but there are no references to its existence.

Site: NW21 **Kokkinomilia**

General
This village stands on the main road linking the town of Istiaia (**NW10**) with Mantoudi (**NE17**). To the south there is a 10 km. band of mountainous afforested area restricting visual communication to Robies (**NE1**).

Medieval Name - None found.

Ochyron fortification
This name is noted on the HMGS (1970) map on a peak of 797m. two kilometres south-east of the village and close to a road. Such a name (*όχυρον* meaning 'fortification' in Greek) would usually indicate the existence of some form of ancient fortification, but it is not mentioned in the survey of Sackett (1966) nor by Skouras (2003). It has line-of-sight eastwards, approximately following the central road to a tower at Achladi (**NE11**), northwest to the tower at Kamaria (**NW11**), and also to the fortification of Palaiokastro (Mēlies – **NW13**) to the north. To the south Mt. Telethrion prevents visibility but there is a road that runs down the narrow gorge to Robies (**NE1**) on the coast.

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[983] T. Papapostolou (1977) Μυθοι, θρύλοι, παραδόσεις, Athens **in** Skouras (1998).

NW22 **Pappades**

General
This village lies in a small valley on the road linking Vasilika (**NW7**) with Achladi (**NE21**) to the south.

Medieval Name - None found

Possible Tower no. 202
This tower is purely hypothetical since it is required to link the two towers of Tourla (**NW20**) and Achladi **(NE21**). Its existence is possibly supported by the road which passes close-by and the church of Agios Georgios which, lacking any hamlet nearby, does not appear to have any other rationale for its existence.

NW23 **Gerakiou (Istiaia)**

General
This is an isolated village at a height of 230m. set in amongst the mountains to the east of Istiaia

Medieval name – none found

Tourla Possible Tower no.253
This is shown on the HMGS (1970) map to the east of the village.

Agia Elenē Monastery
The ruins of the monastery were found in 1972. The church appears to have been built over an early Christian basilica. Dated to the 13th or 14th century.
A. Delt. (1972) 27, 371; Skouras(1998) 94.

Appendix 5.2.2 Northeast Region

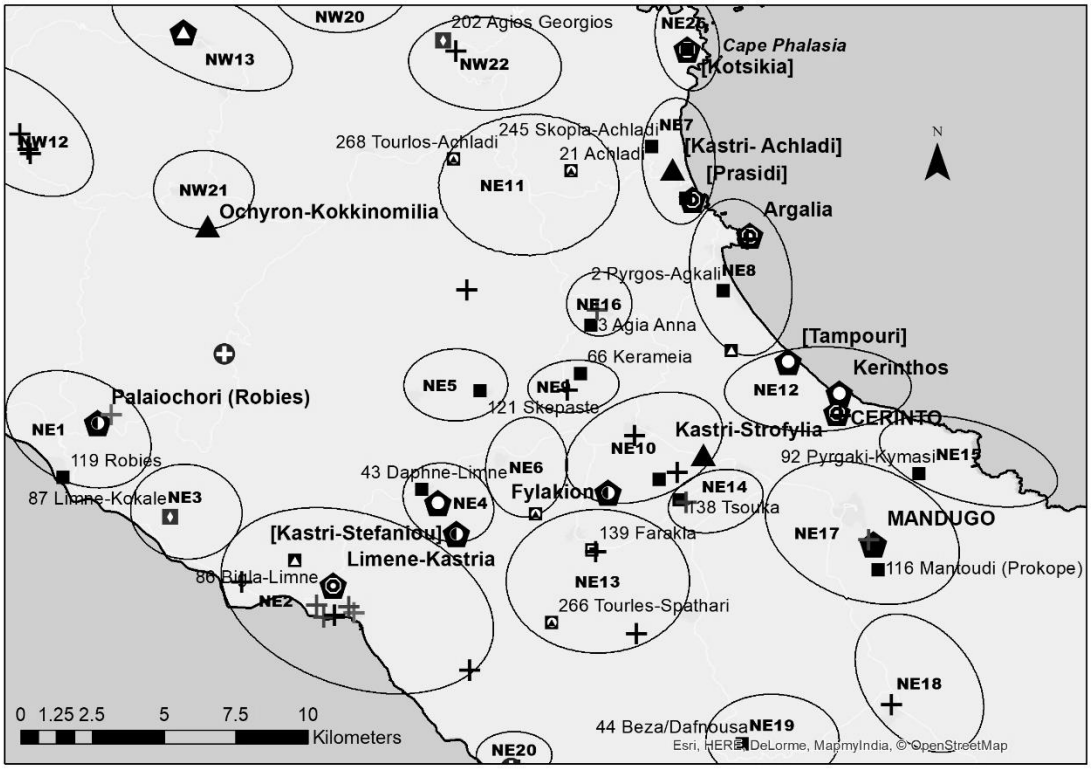


Figure A5.5 Northeast Euboea

Site: NE1 Robies

General
This is today a seaside village with summer houses. Close to the centre there stands one of the largest towers on the island. The harbour according to Lock (1996) was probably used by William De Villehardouin in 1256-7 as a base for his campaigns in support of his claim to the barony of Oreoi.
Koder and Hild (1976) 252.

Medieval Name - None identified

Tower (023.13.864, 38.48.461, height 10m.) - Skouras no. 119, Lock no. 5
This tower with its later additions resembles the tower houses / mansions on Naxos from the 16th/17th centuries. Lock notes its base as 15 x 9.5 m. with vaulting on the 1st floor. A closer look at the west side, however, indicates that the original structure, rising blind to about 8m., may have been only 6 x 9.5 m. This rectangular base makes it similar in floorplan to a number of towers on the mainland and in the Peloponnese, thus substantiating its possible construction by William De Villehardouin in 1256-7 as noted by Lock. Sackett, however, thought the first three courses of stones may be earlier. Possibly Middle Byzantine.
The rest of the structure appears to be later reconstruction or additions - the first floor, for instance, is set slightly within the ground floor wall, and is unlike any other tower on the island, whilst the quoining on the two corners of the southern annex may indicate construction of this section during the Ottoman period.
Skouras (2003) 96; Lock (1996); Koder (1973) 114; Sackett (1966) 46.

Agios Georgios Church - ruin
This is to the northeast of Robies close to the village of Palaiochōrion, also often referred to as 'Agiannakos', the name of the area. According to Koder's description Triantafyllopoulos believes that it is a cross-in-square (two columned with three arches) type and suggests it was originally an early Byzantine basilica. [984]
Skouras (1998) 166; Koder (1973) 114; Triantafyllopoulos (1974) 239; Sackett (1966) 48-49.

Agiannakos Fortification
Sackett notes the remains of a substantial fortified area to the northeast of Robies, finding sherds from the Neolithic through Roman into the medieval period in the general area. Skouras also found the remains of walls and stone construction. Coupled with the Early Byzantine dating of the Agios Georgios church, this suggests a substantial Byzantine settlement in the area.
Sackett (1966) 47-48; Skouras (2003) 96; Koder (1973) 114.

Metamorphōsē Sōtēros Church
This church is today in the monastery of Ossios David Gerontos, constructed in the 16th century, but the church shows indications of being Byzantine.
Koder and Hild (1976) 219.

Site: NE2 **Limnē**

General
Limnē is a seaside town, most of the built area of which is the result of construction during the 18th and 19th centuries as Limnē established itself as one of the major centres of merchant shipping in the Ottoman empire, and the subsequent discovery in the early 19th century of magnesite, a mineral used in furnace bricks. Historically, it appears that the site was occupied throughout the Christian era. It was most probably the port for export of the produce of the rich farmland inland, since, although there is good access to these areas from the Aegean coast to the east, the risk of bad weather and pirate attack along this long ill-protected coastline was always present. Seven medieval era churches have been identified in the area, of which five are within the town.

Medieval name
Limene: 15th c – *limene:* Sonetti (1485); **16th c – *Limene / Limne***: Gastaldi; **17th c – *Limine:*** Boschini (1650?), ***Limint/Limen*:** Coronelli (1687)
The first documentary mention of the name Limnē is in 1256 - to *Nicola di Limine*.[985] The name 'Elymnium' is mentioned on a 1584 classical map of Euboea by Ortelius in a list of classical places he could not find, although he refers to it as an 'insula'. The possible identification of ***limene*** with ancient *Ελύμνιον* is still subject to much discussion - Triantafyllopoulos (1974).

Bigla (Papatlakka) tower – Skouras no.86
This is situated on the peak of a hill known as 'Papatlakka' or 'vigla', just to the northwest of Limne. It is square with walls 8.6m. long, which have survived to a height of 1 – 1.20 m. It has line-of-sight to Robies (**NE1**), and Kastria (see below).
Skouras (2003) 78.

Agios Georgios Church (ruin)
This is 5 kms southeast of Limnē in an area called Marantza. It survives to a height of 0.5 to 2.0 metres. Skouras calls it post-Byzantine but may mean the Frankish period by this.
Skouras(1998) 136; Apostolou and Fafouti (1999) 44-45.

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[984] 'σταυροειδής εγγεγραμμένος του δικιόνιου τύπου, τριάψιδος, με πλινθοπερίκλειστη τοιχοδομία'
[985] Koder and Hild (1976) 203; Tafel and Thomas (Eds.) (1857) **Urkunden zur älteren Handels- und Staatsgeschichte der Republik Venedig : Vol.3 [1256-1299]**, Vienna. 6, 12 (no.331).

Zoodochos Pēgēs Church
This church has a mosaic floor built over the site of Roman baths and a Byzantine sculpture representing a baptism was found in the precinct in 1940. It is dated as early Christian.
Skouras (1998) 132; Sackett (1966) 49; A. Delt. (1966) 21, 238; Triantafyllopoulos (1974) 236; Apostolou and Fafouti (1999) 17-18.

Agios Nikolaos Church
Small cros-in-square church with eight-sided dome re-constructed in 1879. This lies in the centre of the town close to the main Panagia church. Original undated.
Apostolou and Fafouti (1999) 31.

Koimēsē tēs Theotokou 'enniamera' Church
Situated within the town, Bellaras writes that the original church on this site had been constructed in the 12th century; Apostolou and Fafouti in the 11th but with a possibility of an Ottoman dating
Skouras (1998) 134; Apostolou and Fafouti (1999) 31-32.

Ypopantē tou Iēsou Christou – Adrali - Church
This church stands 6 km. east of the town and 3km. north of the Katounia beach. It was constructed on the foundations of an older one.
Skouras (1998) 134; Apostolou and Fafouti (1999) 55-56

Profētēs Ēlias kai Elissaios church
Situated on the first peak of a small hill that rises to Kastria. Re-built in 1953, this is a cross-in-square style church. Probably linked to fortification – Middle Byzantine.
Apostolou and Fafouti (1999) 46-47.

Cave church of Osios Christodoulos (Patmios)
This cave is to be found to the west of the beach. It was the refuge of Osios Christodoulos after the disastrous Arab attack on the island of Patmos at the end of the 10th / beginning of 11th centuries.
Skouras (1998) 134; Apostolou and Fafouti (1999) 63-64.

Kastria – Skouras no.84
This is at a height of 120m. The name indicates the existence of more than one fortification. It may be that this is both a classical and medieval fortification. Skouras reports seeing a large number of ashlar blocks in the area, whilst Bellaras (2000) has hypothesised that Licarios, when he invaded the island in the early 1270's at the head of a Byzantine army, brought with him settlers from Skopelos and Limnos, who constructed a second fortification in the area. Whether a medieval fortification was built over a classical one or a second was built, the accumulation of sherds in the area found by Sackett indicate a probable continuous occupation of the area of Limnē from the Neolithic period.
Skouras (2003) 77; Bellaras (2000) 82; Sackett (1966) 49. Koder (1973) 114.

Cape Iannitsa
This place, just to the west of the town is noted as ***Partivento/ Spartivento*** on the 16th century *portolans*. There is a good river – a reason for noting it on the *portolan* – and some shelter to the west of the cape. The existence of cultivable land suggests there may have been a settlement here, but no evidence has survived.
Delatte (1947) 225.16; Koder and Hild (1976) 232.

Site: NE3 **Kokala (Limnē)**

General
This is a hill with dense maquis, situated six kilometres along the coast northwest of Limnē. It is outside the agricultural area, and appears to have been a spot chosen only for its strategic importance. Skouras and the locals call it Kokalē, but the HMGS (1970) map notes it as 'Kokala'.

Medieval Name - None found

Possible Tower - Skouras no.87
Skouras indirectly notes this tower: he had not seen it himself but was relying for information on a friend, Demetris Apostolou-Elymnios. My own discussions with the latter, who has now retired as curator of the local museum, indicated that there was substantial stonework on the top of the hill representative of a good-sized settlement, but he did not actually find a tower. There are no other references to the possible tower.
If it exists it is most likely that the tower is situated at trigonometric point height 223m. on the HMGS (1970) map. Such difficulty of access suggests that this tower had no agricultural or feudal function but was purely sited to provide a defensive line along the Limnē – Rovies coast, thus protecting the agricultural area in its hinterland.
Skouras (2003) 78.

Site: NE4 **Daphnē - Mandanika**

General
This village, recently renamed Daphnē, is on the main road from Limnē to Kērinthos. Just to the southwest there is a small hill called 'Kastri'. The land slopes gently down towards the southeast. No medieval church has been identified, but two classical period fortifications exist in the area, one of which was possibly still in use during the Middle Byzantine period. (see **chapter 6** for discussion).

Medieval Name - None found

Tower – Skouras no. 43, Lock no.6
Skouras reported the existence of a tower in a position west of the village at a height of 195m., which he wrote was 9 x 9 m. in dimensions, but Lock is unsure of ite existence.
Skouras (2003) 59.

Kastro fortification
Sackett (1966) mentions a circular wall identified on the summit of a hill called 'Kastro' to the west of the village. Protogeomettric to Classical sherds were found but, unlike at many other sites, he makes no mention of medieval occupation. He notes that in 1939 other masonry and architectural remains were identified 'at the road cutting', which have since disappeared.
Sackett (1966) 46.

Kastri-Stefaniou Fortification
A hill called ***'kastri'*** (height 255m.) is shown on the HMGS (1970) map two kilometres southeast of the village. From satellite photographs it appears to have a circular wall. Classical sherds and remains of buildings were identified by Sackett in 1964. This is the last in a line of four fortifications running east-west from above Limnē (**NE2**) to the Aegean coast. It has line-of-sight not only to Mantoudi (**NE17**) but also Cleisura (**NE24**). The two probable roads from Limnē eastwards also pass around the hill on which it stands. Thus, although we have no firm evidence, it is presumed this was still in operation in the Middle Byzantine period.
Sackett (1966) 46; Philippson (1951) 743.

Site: NE5 **Skepastē**

General
This is a village just above the road leading from Limnē (**NE2**) eastwards to Mantoudi (**NE17**). It does not appear to be surrounded by good agricultural land but has a high concentration of olive cultivation. This may suggest a village that grew during the Ottoman period.

Medieval Name - None found

Tower – Skouras no.121
Skouras notes the remains of a Venetian tower in the location 'Ελληνες' at a height of 250m., any trace of which cultivators have now destroyed. He then describes some cut-stone blocks that he found in the area and questions his own identification of the tower, suggesting it may actually be some other more ancient structure. The fact that in the surrounding area there are much more suitable higher (up to 400 m,) locations for a tower suggests that this may be correct, if indeed its role was as a beacon and not agricultural.
Skouras (2003) 97.

Un-named Church – ruin
Skouras notes an old church close to the village, which may have been called Agia Paraskevē. Insufficient information exists on the church and it has not been included.
Skouras (1998) 168.

Site: NE6 **Kechries (Kechriai)**

General
The village is set in rolling countryside at a height of 150m in an area surrounded by mountains to the north and west. To the north a large watershed provides water throughout the year in many small streams which drain into the Nēleus river in the plain towards Kria Vrysi (**NE12**) in the southeast.

Medieval Name - None found

Tourla possible Tower no. 257
This appears on the HMGS (1970) map on a low hill which rises to 170m. No mention has been made of it by any other author. Its position, however, is very strategic as it lies above what must have been the medieval route which wound along the line of the river down to Kērinthos- Kria Vrysi (**NE12**) on the eastern Aegean shore. It also has clear views west towards ***Kastri*** (**NE4** - Daphnē) and the pass at the village of Myrtias from which the road follows the river down to Limnē on the west coast.

Churches - None identified

Site: NE7 **Fragkakē**

General
This seaside village lies on the eastern shore of the island, fronting onto a 3km. long beach. To the south the hamlet of Prasidi overlooks a small sheltered cove. A road leads up to the village and tower of Achladi (**NE11**) to the west. The area appears to have been settled since the classical period.

Medieval name
None identified except that the name 'Fragkakē' possibly reflects the establishment of a new settlement here by the Franks.

Kastri Fortification
A hill just to the north of the village is called 'Kastri' on the HMGS (1970) map. No other reference could be found to it.

Skopia Possible Tower no. 245
This is noted on the HMGS (1970) map northwest of Kastri. Skouras notes in his description of the Prasidi tower (see below) the existence of another, described by Settas, in the position 'Pyrgi': could it have been here?
Settas (1977).

Prasidi Tower - Skouras no.73
This once existed according to local reports on a hill, which rises to a height of 90m., towards the south of the beach. Skouras could only identify sherds and a few broken stones scattered around the area when he visited.
Skouras (2003) 73.

Classical Fortification - Skouras no.74
This is noted by Skouras as on the same hill as the tower. The existence of the tower suggests possible occupation in the Byzantine period, but it is too close to the fortification at Acalia to the southeast (noted on old maps) and does not seem to have any strategic logic. Intermittent occupation assumed.
Skouras (2003) 73.

Site: NE8 **Agia Anna**

General
This coastal area with its 8km. long beach is generally referred to today as Agia Anna after the village set five kms. inland. The name of the village at its northernmost point is actually Agkali on the HMGS (1970) map, above which on a small promontory is set the church of Agios Basileios. One km. to the south is the hamlet of Pyrgos. Further south another hill called 'Pyrgos' arises above the beach. The Boudouros river, beyond which lies the classical fortification of Kērinthos, marks the southernmost tip of the beach. The area has little agricultural significance but would have been an important part of any defensive network to secure the safety of the rich river basins to the south and west.

Medieval name
Argalia: **13th c.** – ***Argalium***: Venice[986]; **14**th c. – ***Argalia***: Marino Sanudo; **17th** c. – ***Acalia***: Boschini (1654/1658), Coronelli (1687)
Whilst the name seems to link to Agkali, Boschini places it much farther southeast. Marino Sanudo notes the recapture of ***Castello dall'Argalia*** by the Venetian bailie in 1278/9 (see **chapter 4**). It is also noted in a listing of pirate attacks in the Venetian claim for recompense in 1277
Triantafyllopoulos (1974); [Marino-Sanudo-Torsello] (2000) 147;; Koder and Hild (1976) 125.

Pyrgos tower – Skouras no.2
Skouras identified the remains of this close to the beach on a small rise of 20m. He found, however, only a few small sections amongst the thick vegetation, insufficient to define its size.
Skouras (2003) 36; Settas (1977).

Pyrgos (Hill) possible tower no.244
This hill and its small settlement are equidistant from the tower of Pyrgos and the fortification at Kērinthos (**NE12**) to the south. It is noted on the HMGS (1970) map but no mention could be found elsewhere. Given the length of the beach and its susceptibility to attack it would have been logical to have placed another tower in this position.

[986] Tafel and Thomas (1857) 214.

Agios Basileios Church
This church stands on the promontory just north of Agkali. It has recently been renovated and the locals report that it is constructed in the position of an older original church.
Skouras (1998) 58.

Fortification (Argalia?) Skouras no.4
Skouras found the remains of a fortification on the promontory close to the church. It is possible that this was the fortification noted on a number of maps. Skouras thought it to be classical, but the existence of a church in the same area, often linked to the existence of a medieval fortification elsewhere, may suggest that this was also in use in the medieval period. It is necessary as a link in the network of forts and towers along the eastern coast and, although location in a slightly higher position would have provided a greater viewshed out to sea, only at this position is there a clear view north to the tower and fortified area at Fragkakē.
Skouras (1998) 58. Sackett (1966) 45. Koder (1973) 111.

Site: NE9 **Kerameia**

General
This small village stands at a height of 230m. southwest of Agia Anna (**NE16**), and on the southern slope of the Kantyli mountain range with a small fertile valley that stretches to the south towards Strofylia (**NE10**).

Medieval name - None found

Tower – Skouras no.66
The tower was reported by Settas, but Skouras could find no sign of it on his visit to the area, nor did the locals appear to know anything about its existence. This appears to be neither a strategic position nor the centre of a large settlement. If it had existed the most likely position would have been on a hill rising to 290m. just to the north of the village, from where it has a view north to the tower at Palaiobryse (**NE16**).
Skouras (2003) 70; Settas (1977).

Prophētēs Ēlias Church
Skouras notes that the church is at a height of 220m. indicating its position slightly to the south of the village. It has now been renovated and the old templon (which Skouras found discarded on his visit) replaced. Undated.
Skouras (1998) 124.

Site: NE10 **Strofylia**

General
This is a large village in the centre of a good agricultural area through which runs a tributary of the Nēleus river. It also lies on the modern road leading northwest from the Boudouros river plain. There are no old churches in the village and the original village may have been in the position of Agioi Anargyroi church, which lies next to a track that was possibly the original route north.

Medieval Name
None found, although the name of the hill, ***'Levachi'***, where the tower is positioned appears to have a Latin rather than Greek origin.

Fylakion Fortification (38.48.145, 023.24.79) – Skouras no.130
Skouros notes a fortification on a low hill of 190m with classical period walls to east and west, where he also found signs of medieval occupation. His instructions as to its position are vague, but Sackett confirms it as being on a ridge running north-south, just to the southwest of the village. There is a trig point of 191m. on the HMGS (1970) map close-by and the hill is called 'Fylakion' (roughly translated as 'guard post'), indicating some form of fortification there. Our own visit was inconclusive due to the very thick undergrowth, but we found what appeared to be a short length of wall about 1.2m. thick just at the point where the land declines steeply. Elsewhere piles of rocks indicated the possible existence of other buildings in the area, although tile sherds were not seen on the ground.
Skouras (2003) 102; Sackett (1966) 46.

Kastri
This hill, noted as *'Kastri'*, trig point 211m. on the HMGS (1970) map, lies between Kerinthos (**NE12)** and Strofylia, a few hundred metres to the north of the modern road. It is unreported by Skouras. It is a key point for communicating between Kerinthos in the east and Kastri-Stefaniou (**NE4**) to the west. This line also follows approximately the line of the road between the Aegean coast and Limnē (**NE2**) on the western coast. Undated.

Tower (38.48.467, 023.25.086, height 198m.) - Skouras no.131
Skouras reports the existence of this tower on a hill called ***Levachi*** to the south of the village. The stones had already been taken away before his visit, but a colleague had photographed the position prior to this. Our own visit confirmed this situation. The position is very open and although the views are good in all directions, the tower would not have been easily defendable. Although the surrounding area is today heavily cultivated, clumps of trees indicate that this may not have historically been the case.
Skouras (2003) 102**.**

Agioi Anargyroi church (38.48.560, 023.25.440, height 111m.)
This church lies in a protected position on a road just to the east of the tower surrounded by lush vegetation with running water even at the end of summer. Its architecture and large size (14 x 6 m.) set it apart from other churches in the area, with high quality carved window and door surrounds and an apparent vaulted roof, although this has now been covered externally with tiles and internally by a rounded wooden ceiling. The low height of the side door suggests an early date. The finish and size of the church indicates a large and rich congregation (or local lord) and, although the area around has been cleared, there was most likely a settlement in this position at some point.
No literature identified.

Five ruined churches
Agia Kyriakē, Agios Athanasios, Koimēsēs Theotokos, Panagia, Agios Nikolaos. Settas reports all these as being ruins close to Strofylia without noting their position. This indicates the prior existence of a substantial population in the area, although without any indication of date.
Settas (1964) 37; Skouras (1998) 170.

Site: NE11 **Achladi**

General
This village at a height of 250m. lies in a small enclosed valley with wooded hills around. It appears to have limited economic and strategic value, except as a link to the Aegean shore at Frangkaki (**NE7**) to the east.

Medieval Name - None found

Two Possible towers – Skouras no. 21, no.268
Skouras found one tower at a height of 330m. on a hill close to the village. Settas noted a tower in the position 'Pyrgi', but this could not be identified by Skouras. There is also the name '*Tourlos*' on the HMGS (1970) map to the west of the village. Could it have been in this position? Otherwise it may have been mixed up with one or other of the fortifications around Fragkaki (**NE7**) to the east of the village.
Settas (1977), Skouras (2003) 46-47.

Site: NE12 **Kria Bryse**

General
This is a 6 km. wide plain into which drains the river Boudouros, although the existence of a sand bar now prevents it reaching the sea. Much of it is also covered by a shallow lake. Drainage has made a proportion of the land cultivable today but in the medieval period much was most likely marshland. On the shoreline, just at the mouth of the river lies the fortification of ***Kastri***. Two other fortifications lie nearby, one of which may have been ancient Kērinthos (the modern village, originally called ***Skyloianni***, is 5 kms. inland). In 1841 Alexandre Buchon found a harbour here but this has long since silted up.[987]

Medieval Name
Cerinto: **15th c. –** ***Cerinto*****:** Bartolommeo da li Sonetti (c.1485); **16th c**. – ***Cerinthus***: Ortelius (1584), Mercator (undated); **17th c. –** ***Cerinthus***: Hondius (1630?)
Sonetti writes **'*Cerinto, Neso, Oreo'*** in his text, thus linking these three northern Euboean places, but he (or his copyist) omitted to note its position on his map. Ortelius notes it on a larger scale map of classical places in approximately this position. Hondius copies Mercator.

Kastri – Skouras no.77
This classical fortification stands on the seashore on a low rise at 23m. height. It can be clearly seen from the south end of the beach just next to the river. A rectangular building with a long wall survives. Massive stones at a slightly lower level indicate another length of wall overlooking the river.
Skouras (2003) 74; Sackett (1966) 43-44.

Profētēs Ēlias Fortification (38.49.655,023.28.419, height 64m.) **–** Skouras no.76
A classical fortification, this stands on a slightly higher hill,[988] 700m. inland of ***Kastri***. Buchon surveyed the site in 1841 and, finding the remains of classical walls and roads within the fortification, believed it to be ancient Kērinthos.
Although Sackett makes no mention of medieval finds (not surprising since a large area has been cleared for a car park) the possible existence of a church here, a harbour (see above), and the clear views to Acalia(**NE8**), Zoodochos Pigi(**NE14**), and Mantoudi(**NE17**), the key medieval fortification in the area to the south, suggest that this may have possessed some form of medieval fortification or look-out point.
Buchon (1911) 63; Skouras (2003) 74; Sackett (1966) 43-44.

Tampouri Fortification – Skouras no.78
This, another probable classical fortification, is about a kilometre to the northwest of ***Kastri*** on the other side of the Boudouros river on a small hill that Skouras calls 'Tampouri', although the HMGS (1970) map names it 'Agrilios'.
Skouras (2003) 74; Sackett (1966) 44.

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[987] Buchon (1911) 63.
[988] Sackett notes it as 80m. high. He also believes that this site may have been the main classical settlement, being better protected from the open sea than ***Kastri***. Unfortunately, unlike in other locations, he makes no mention of the medieval remains in the area.

Profētēs Ēlias Church
This church stands on the top of the long ridge. It appears modern, but investigation of the apse internally revealed a very thick wall and a tiny window, completely at odds with the rest of the construction, suggesting this had been part of a much older building on the same site. Undated.

Site: NE13 **Farakla**

General
The village lies in a small valley alongside the river Nēleus on the road from the west to Mantoudi (**NE17**) via Zoodochos Pigi (**NE14**). There is good agricultural land to the south.
Koder and Hild (1976) 238.

Medieval Name - None found

Tower (38.47.090, 023.23.029, height 62m.)- Skouras no.139, Lock no.7
This is to be found just to the south of the village close to the Agios Demetrios church, which is today in the village cemetery. It survives to a height of 6m. and stands on a flat platform including the church and cemetery, which is slightly raised on two sides above the declining ground. It appears to have been deliberately positioned at a lower height than the village in order to have clear views down the wide fertile valley to Zoodochos Pigi (**NE14**), and to the south and west, but could also indicate the original site of the village as do many cemeteries.

Exceptionally on Euboea the tower is rectangular and measures 6.00 x 7.80 m. The walls are of varying thickness (1.35 to 1.60m.) indicating it may have been reconstructed at some point. It is blind on the ground floor and entry must have been above the first floor (holes indicate beams for a wooden floor at this height), where there are arrow slits with internal rounded arches on each wall. The whole tower is today covered with ivy making it impossible to distinguish further external features above the ground floor. Externally, as on a number of other towers there is a small 0.10 indent at a height of approximately 0.60m. above the ground, whilst the corners are of rough-cut stone with no sign of quoining. The rectangular configuration, thick walls, rounded arches and early dating of the church alongside may suggest a pre- Frankish dating.
Skouras (2003) 106; Koder (1973) 114; Philippson (1951) 742; **colour plate 10.12(a).**

Agios Demetrios Church
This is now the cemetery church. It has been completely renovated, but Skouras found a small trace of what he thought to be the original Byzantine church.
Skouras (1998) 175.

Archangelos Gabriel
Situated close to what may have been the main road south, the A. Delt. describes the church's style as a three-aisled basilica (τρίκλιτη βασιλική) but that its original form may have been cross-in-square (σταυροειδής εγγεγραμμένος). It is provisionally dated to the 11th century.
A. Delt (1988) 43, 96; Skouras (1998) 168.

Tourles possible tower – no.266
This lies on a small road 2.9 km. southwest of the village in the foothills of Mt Kandyli. The HMGS (1970) map indicates the name '*tourles*'. It has line-of-sight to Mantoudi (**NE17**) in the east, Strofylia (**NE10**) to the north and to Daphne (**NE4**) to the northwest.

Site: NE14 **Zoodochos Pigi - Tsouka**

General
The village of Zoodochos Pigi, otherwise known as Tsouka, lies on the main road 5 km. from Mantoudi (**NE17**) on the edge of the valley by the river Nēleus. It possesses good fertile land and would have been a key point on the road linking the west and east of the island.
Koder and Hild (1976) 279.

Medieval Name - None found.

Tower (38.48.029,023.25.543, height 67m.) – Skouras no.138, Lock no. 8
This stands within the village at a height of 67m. close to Agios Ioannis Prodromos church. Other buildings have been built contiguous to it. Rather than being situated higher up the mountain it has clearly been sited with a view to have clear sight down towards Kymasi (**NE15**).
It measures 9.60 x 9.10m. and survives to a height of 8m. at the northwest corner with walls from 1.20 – 1.4- m. thick at the base, reducing in the upper floors, except the northern wall built into the side of the hill which is only 0.90m. This provides an internal space of 6.80 x 7.00m. The ground floor is blind (although on the north side Lock noted the possible later addition of a door), and the southeast corner appears to have been cut into recently to facilitate access to the church. The rough stonework at the base may be Frankish, but the upper floor appears to have been rebuilt. It is neater and has quoining on the corners, possibly suggesting Ottoman reconstruction. The tower also seems to have been rendered externally at some point.
Skouras (2003) 106; Koder (1973) 115; **colour plate 10.12(b).**

Agios Ioannis Prodromos Church
This cross-vaulted church lies close to the tower to the west of the village. It originally possessed wall frescoes, but these have more recently been painted over. It is dated to the 14th century.
Skouras (1998) 174; Demetrokallis (1983) 271; Triantafyllopoulos (1974) 241; Koder (1973) 163.

Site: NE15 **Fourni - Kymasi (Mantoudi)**

General
This is a narrow flood plain, into which flows the Kymasi river. It is bounded by Mt. Gerobouni (height 351m.) to the north and to the south by a massive range of afforested impenetrable mountains stretching 10kms. along the Aegean coast southeast as far as Pilion (**NE21**). To the east is the bay of Mantoudi and its modern harbour.

Medieval name - None found.

Tower – (38.48.487, 023.29.925, height 75m.) - Skouras no.92, Lock no.9
This stands on the southern slope of Mt. Gerobouni above the church of Agioi Apostoloi. The position is called 'Pyrgaki' by the locals. Initially the location appears strange for a coastal watchtower, since it does not have a clear view to the northeast out to sea, which is blocked by the mountain. However, in this position it has direct line-of-sight to Krya Bryse (**NE12**), Mantoudi (**NE17**), and Zoodochos Pēgē (**NE14**), whilst also overlooking all the sea area to the east. It is thus in a strategic position for linking the towers along the coast to the northwest with ones further inland.
Its base dimensions are 8.20 x 8.20 metres, whilst the walls are 1.40 m. thick and survive to a height of up to 3m. It also possesses an indent of 0.10 m. at a height of 0.60m. approximately, as many other towers. Foundations of an outer wall could be identified, running 20 to 28m. from the tower, around the summit of the hill. To the east there exists a small plateau area suitable for limited agriculture. In a slightly lower position to the southeast a large (100 x 20 m.) area had been walled in which, since we saw no sign of other walls internally, was probably used for stock-holding of animals grazing on the mountain.

Buchon visited the site in 1841. He found the approach difficult across a wide marsh (today farmland) and describes the ascent as taking half an hour.[989]
Skouras (2003) 80; Buchon (1911) 61-62.

Church (?)
It is unknown whether there was an older church in the position of Agioi Apostoloi, which lies just at the foot of the hill where the tower is. Logically, given the riverside position and the surrounding meadows this would have been a perfect place for a settlement.

Site: NE16 **Palaiobrysē (Agia Anna)**

General
The village of Agia Anna stands at a height of approximately 300m., on the road south from Achladi (**NE11**), 5 kms inland from the beach that today takes its name. Settas noted a number of towers in the area, but Skouras could find only one remembered by the locals - at the small hamlet of Palaiobrysē.

Medieval name - None found

Tower – Skouras no.3
Whilst the locals believed the tower had existed in the hamlet of Palaiobrysē just to the southwest of Agia Anna, Skouras could find no trace of it on his visit. There is clear line-of-sight from this position to the fortification of Argalia and the tower at Pyrgos (**NE8**) close to the beach. It also looks south to the fortifications of ***Fylakion*** and ***Kastri*** noted close to Strofylia (**NE10**)
Skouras (2003) 37, Settas (1977).

Agia Anna Church
This Byzantine church, which had given its name to the village, had been at a height of 290m. in the centre of the village. In 1960 its foundations were dug up and a new church constructed in its place.
Skouras (1998) 58.

Site: NE17 **Mantoudi (Mantoudia)**

General
Mantoudi is today a small town. It lies in a very strategic position at the confluence of three rivers (Nēleus, Kēreus, and Kymasi) and a good-sized agricultural plain. These also form the basis for the prime road link between north and central Euboea. The classical fortified area appears to have been at Krya Brysē (**NE12**) on the coast to the east, whilst the key medieval fortress, probably constructed by the Byzantines under the general Licario in the 1280's, was just to the south of the modern town. The fact that virtually all the cartographical sources note its position is a clear indication of its importance.
Koder and Hild (1976) 212.

Medieval Name
El Mandugo / Mandugo*: 14th c.** – ***Manducho: Marino Sanudo;[990] **15th c.** – **El *mandugo***: Sonetti (1485); **16th/17th c**. – ***Mandugo*:** all
All the early cartographical sources use the same spelling of ***Mandugo*** and their positioning is generally in the same region. Buchon, notes that ***Mandugo*** (he incorrectly assumed it to be classical ***Kērinthos***) is to be found on a hill to the right of the road north just before the town of modern-day Mantoudi,

[989] He noted walls 7 feet thick, each side being 35 to 36 feet long, surviving to a height of 12 -15 feet
[990] 'il casal de Manducho' - [Marino-Sanudo-Torsello] 137,line 3.

which has retained the essence of the medieval name. The area in which it is situated is today called Palaiochora (Παλαιοχώρα).
Interestingly this is not 'palaiochorio' or 'palaiochoria', well-used names found throughout the island, which mean 'old village(s)'. The word 'chora' on the Greek islands is normally used to refer to an island's capital or main town. Thus, assuming that the 'i' was not simply elided in the local vernacular, we can translate it as 'old civic centre', re-enforcing Buchon's identification of the location as correct.[991]

Fortress– Skouras no.93
Since all surface trace of the fortress has now disappeared, for its identification and description we are wholly dependent on Buchon, who visited the site on 25th May 1841.[992] Sometime later all the remaining stones from the fortifications were taken for the construction of the nearby Boudouris mansion. It is probably noted on the HMGS (1988) map as 'Pyrgos' (see **NE18** below). Neither Koder nor Skouras found any trace of remains so, as Triantafyllopoulos writes, only excavation will absolutely confirm its location.
Buchon, describing it as a 'château franc', noted its medieval towers (recognised by the stones and mortar construction) and long perimeter walls, encompassing nearly the whole of the summit of the hill, and running down to present–day Mantoudi. One square tower was still standing,[993] and he discerned an internal door with a rounded top. Some walls were still preserved to a height of 15 to 20 feet, and he described a 'double enceinte' which stretched to the base of the hill. He noted that the foundations had no trace of Hellenistic construction. The architecture of the church (see below) may suggest, however, an initial Byzantine phase for the fortress.
Buchon (1911) 60-63; Skouras (2003) 81; Koder (1973) 33,67,116; Triantafyllopoulos (1974).

Churches
Buchon describes a small church in the centre of the fortress, the walls of which, he believed, were constructed on the foundations of an ancient temple. There were a considerable number of ancient architectural remains – a column embedded in the wall, fragments of marble columns, and massive ashlar blocks – features suggestive of an Early to Middle Byzantine church. No other medieval churches have been identified in the area.
Buchon (1911) 61.

Agios Archaggelos Monastery
Koder has identified a document which notes 'monasterium Sancti Archangeli situm in loco qui dicitur Maduvium'. Triantafyllopoulos suggests this is Mantoudi, but the monastery has never been found.
Koder (1973) 142; Triantafyllopoulos (1974).

Site: NE18 **Prokopi**

General
This village lies on the modern road north to Mantoudi (**NE17**) beside the river as the valley widens to 2 km. after the canyon at ***Cleisura*** (**NE24**). The well-watered land and easily tillable soil would have provided a good agricultural base.

Medieval name
None found

[991] Demetris Apostolou-Elymnios, ex curator of the Limnē museum, also informed me that the name 'Mantoudia' arose from the existence of a number of settlements on the hill.
[992] Buchon (1911).60-63.
[993] The HMGS (1970) map notes '*Πυργος*' in the area and this may refer either to the tower or more generally to the fortress.

Tower (38.45.438, 023.29.818, height 214m.) – Skouras no.116, Lock no.10
Skouras, although he could find no remains due to heavy underbrush in the area on his visit, referring to Sackett and Koder, notes a tower in the area of a classical fortification 2 km. to the north of Prokopi, just to the right of the road, The former, however, makes no mention of any medieval remains at this point but notes Roman and medieval remains at a point called Katounia, 2 km. to the east - a place not shown on the HMGS (1970) map - whilst Koder mentions Prokopi, but without any clear identification of a tower in the area.
Our own visit also turned up no positive result, although this is not surprising given the level of heavy mining activity in the area (and the need for construction stone) and the fact that the hilltops appear to have been bull-dozed for use by foresters or beekeepers. Sherds were seen washed down into the road just below the position noted, and another hilltop to the southeast appeared to indicate the existence of some ancient earthworks. This is an obvious position for a tower linking Mantoudi with Cleisura but, unfortunately, the evidence is lacking.
My conclusion is that this tower is actually that noted on the HMGS(1988) map just to the south of Mantoudi – see **NE17** above - and that there may have been another but this must be treated as a hypothesis only.
Skouras (2003) 95; Sackett (1966) 45-46; Koder (1973) 116.

Agia Paraskevē Church
Skouras describes this as a Byzantine or late Byzantine church, over which a new one has now been constructed.
Skouras (1998) 163.

Zoodochos Pēgē Church
First renovated in 1891 this has now been roofed with asbestos tiles. Date unknown.
Skouras (1998) 164.

Site NE19 **Dafnousa (Drazi)**

General
This hamlet lies to the east of the Kandyli mountain (889m.) in an area of dense forest. There is little agricultural land in the immediate area. Once part of the Achmed Aga estate, it came into the possession of the Noel-Baker family on the departure of the Turks in 1833.

Medieval Name - None found

Beza Pyrgos Tower – Skouras no.44, Lock no.11
Just west of the hamlet this tower still stands to a height of 7 metres. Measuring 9.10 x 7.40 m. with a wall thickness of 1.20m., its rectangular rather than square base make it an exception to the general architecture of towers on the island.
Entrance was gained at the first-floor level, the wooden floor of which rested on a ledge 0.4m. wide. The second (and top) storey also had a wooden floor with a vaulted roof. Holes exist laterally within the walls where once wooden beams would have provided structural support. Lock noted signs of internal plastering on his visit. Entrance is by a stone stair, but this may have been a later addition as was most likely a short buttress on the south wall. A circuit wall runs around the tower, 2.5m. from its east and west faces, then elongating to form a courtyard to the south.
Although tradition dates it to the Frankish period, its lack of rationale, both feudal and strategic, no close-by church and its rectangular floor plan may indicate later Turkish construction. Buchon believed it was of later date than the other towers (which he terms 'vigie') that he had seen on his travels and suggested a late Venetian origin in the mid. 14th century.
Buchon (1911) 54-59; Lock (1996); Skouras (2003) 44; Koder (1973) 117; Triantafyllopoulos (1974) 233; Koder and Hild (1976) 149.

Churches - None identified.

Site: NE20 **Monē Galatakē**

General
The Galatakē monastery is situated 7 kilometres southeast of Limnē, set in a small valley to the west of the Kantyli mountain. The only land access historically would have been via a very difficult track up over the mountain to the East, which connects to a path that runs approximately parallel with the coast to Dafnousa (**NE19)** and may have been one of the medieval links between Limnē and Prokopi.
Koder and Hild (1976) 225.

Medieval name
It is not mentioned by name on any maps of the period, although a symbol with a single tower, similar to '***el caloiaro'*** on the eastern Attic coast, another monastery, is shown at this point on the Sonetti (1485) isolario map.

Tower (023.22.283, 38.42.994, height 106m.) – Skouras no.84, Lock no.12
This tower is said to have been built by Osios David the Elder, but the present structure has been shown by Doukaris to have been built in 1555 with permission from the Sultan. It is probable therefore that it was constructed on the foundations of an earlier tower for which we have no date. The tower according to Lock (today it houses the library and museum of the monastery) was (re?)-plastered externally in 1954.
It measures 7.20 x 7.20 m. with a wall thickness of 0.95m. and overlooks the sea. Although it does not have direct line-of-sight southeast along the coast towards Politika due to the Kantyli mountain, nor to Kastri at Limnē, it can view Kokala (**NE3)** and would have provided a good defence against a potential pirate incursion into the valuable agricultural area around Prokopi (NE18) to the east.
Theodoros I Skouras (2003) 77; Lock (1996) 113; Doukaris (2001) 38**;** Koder (1973) 115.

Agios Nikolaos Church
There is a great volume of literature on this cross-vaulted church with three apses. The original structure is probably Byzantine, but it was damaged in 1470 and thereafter rebuilt in 1547.
Skouras (1998) 132; Orlandos (1958) 26-27; Bouras (1988-89) 62.

Site: NE21 **Pēlion**

General
This village lies on the east Aegean coast in a heavily afforested area at the head of a narrow fertile valley. The beach is easily approachable and protected by two promontories (to the NE and SW). Today there is a small harbour from which magnesite had been shipped in the 19th century. Being the only point to beach a boat on a long rugged 20km coastline stretching from Kymasi (**NE15**) to Blachia (**NE22**) to the east, it is in a strategic position.

Medieval name - None found

Kastri
Sackett describes a 'fortified rocky spur', measuring 20 x 25m., overlooking the village with the remains of classical walls.
Buchon (1911) 67; Sackett (1966) 45; Triantafyllopoulos (1974) 233; Philippson (1951) 666; Skouras (2003) 90.

Fortified town
This was identified initially by Buchon during his travels in 1841. Philippson believed it to have been the ancient 'δήμος των Διακριών'. It appears, as Triantafyllopoulos writes, judging from the existence of a local church and monastery in the area, to have been continuously populated into the medieval period. Buchon, too, noted the classical acropolis, its walls of cut stone and parts of a square tower, whilst he saw the remains of houses stretching down to the valley floor, and of an aqueduct leading from a spring on the side of the mountain.
Buchon (1911) 65-66; Sackett (1966) 45; Triantafyllopoulos (1974) 233; Philippson (1951) 666; Skouras (2003) 90.

Agios Ioannis Theologos Church
This church is situated close to the sea. Its floor is two steps down from the surrounding ground and its walls are covered by well-painted frescoes. Skouras reports that it possesses a unique feature. 20 cm. above the floor there runs a 40cm. high fresco all around the internal wall of the church, on which are painted various scenes from hell with annotations (now indecipherable) possibly to describe the scenes depicted. Undated.
Skouras (1998) 158; Triantafyllopoulos (1974).

Monastery
Buchon identified the ruins of a monastery close to the sea, its church, which he describes as a large chapel flanked by two narrower ones, constructed from stones taken from an ancient temple
Buchon (1911) 66; Skouras (1998) 158-159.

Site: NE22 **Blachia**

General
The village of Blachia is 2km. inland at a height of 170m., approximately equidistant between Pēlion (**NE21**) and Cape Sarakiniko (**NE23**), 7 km. away. It has limited agricultural land and possibly originally grew to support the nearby strategic fortification set on the coast (see below), which provided a key link in the chain of fortifications running along the Aegean coast.

Medieval Name - None found

Kastri Tower – Skouras no.27
This tower originally stood at a height of 80m. on the peak of a hill called '*Kastri'* but has now disappeared. There is a wide promontory jutting out into the Aegean, which provides a sheltered anchorage for ships to the southeast, where there is a small beach.[994]
Skouras (2003) 49.

Site: NE23 **Sarakiniko**

General
This is a cape in the centre of the northeast coast of the island. Whilst having strategic importance, since from here there are views over the sea for many kilometres both northwest and southeast, it is remote and there is minimal agricultural land around the small settlement. There is a small anchorage below, but the offshore reef would have provided a treacherous approach for sailing ships**.** Behind the settlement the land rises rapidly to over 700m. The 'Saracen' name suggests that it might have originated as a stronghold of Arab forces on the island (9^{th} / 10^{th} c.?).

[994] Its stones have been used for the construction of a holiday home. Fortunately, a friend of Skouras, Vasilis Charlas, had photographed the ruin prior to its complete disappearance.

Medieval Name – none identified

Tower- Skouras no.120
Until relatively recently, recounts Skouras, this was a tiny hamlet accessible only on foot. The tower once stood, probably at a height of 40m., close to the local church, an indication of better times but not noted by Skouras as being of any significance. The tower would have had a view to Blachia (**NE22**) but the mountain behind it would have prevented communication further south.
Skouras (2003) 97.

Site: NE24 **Cleisura (Agios)**

General
Cleisura appears to have been the medieval name given to the narrow Ravine (or canyon) that provides access between north and central Euboea. Agios is the closest village. The modern road rises from 60m. at Prokopi (**NE18**) up to 600m. at the pass. Historically it had been a very difficult climb and Buchon noted in his diary in 1841 'Dès l'entrèe du Dervend, la mauvaise route commence pour les chevaux'.[995] His ascent took four hours. To the west (Mt. Kantyli, 1,224m.) and east (Mt Dirfys, 1.743m.) a wall of mountains blocks passage. For nearly 15 km. there is no village of any size, and snow closes the modern road each year.

Medieval Name
Cle[i]sura / Chiesura: **14th c.** – ***Chiesura/Chiusura***: Sanudo Torsello;[996] 15th c. – ***Clesura***: Venetian Senate,[997] Sonetti (1485) but without name; **19th c** - ***Sideroporton***: Buchon.[998] The position is also known on more modern Greek maps as Κλιμάκι, Δερβένι (Turkish for defile), Καστρο Κλεισούρας, Σιδεροκάστρο.[999]
Sonetti notes a fortification without a name southeast of ***El mandugo*** **(NE17)**. The symbol has two towers, suggesting something of reasonable size/importance, and it is also drawn on a very high hill, possibly the highest on the map. The most obvious candidate is ***Cleisura,*** which was a key regional fortress of one of the *Tercieri*.[1000] Skouras identified the fortress perched high above the gorge, marked on the HMGS (1970) map as 'Kastri'.[1001] Possibly, Sonetti really did not know the name, it being so far away from the coast, and locals had simply pointed out the existence of an old fortress in the area.

Kastri Fortress – Skouras no.1
This is situated at a height between 470 m. and 500m., a position which provides panoramic views to the northwest, Dafnoussa (**NE19**), northeast as far as Pēlion (**NE21**) and a limited view south through the mountains. Access is very difficult. Skouras took six hours cutting through underbrush to reach it, whilst our own ascent, by car up some forestry trails and then on foot, lasted 1.5 hours.[1002]
The enclosed area is approximately 270 x 110m. – about 3 hectares. A long original wall (deliberately destroyed by the Turks or used for lime production?) encompasses the summit of the mountain. It

[995] Buchon (1911) 48-52.
[996] Hopf (Ed.) (1873) **Chroniques gréco-romanes: ineédites ou peu connues, pub. avec notes et tables généalogiques**, Berlin: , 123, 130.
[997] (1890-1900), 317.15.
[998] Buchon (1911) 49.
[999] Skouras (2003) 35-36. During our visit we found a fist-sized chunk of iron ore within the area of the fortress, providing a rationale for the name Σιδεροκάστρο literally meaning 'iron castle'. We also identified what appeared to be iron oxide on the slopes leading up to the fortress -.
[1000] This is also the conclusion of Koder (1973) 68 and 116-117. See also Koder and Hild (1976) 188-189.
[1001] Skouras (2003) 35.
[1002] Buchon noted '*Il nous paraissait impossible, en la voyant du bas, de nous élever sur cette muraille perpendiculaire et unie à une si grande élévation'* - Buchon (1911) 48. Skouras writes that, of 24 references he had found, many were in error and none appeared to have personally seen the fortress, so this note is the first full description of the site.

appears to be of simple construction without the use of mortar. To the southeast – the only effective point of entry - two newer walls (about 1.5 m. thick and still standing to a height of 3m.) of stone and mortar in-filled with tile slips have been constructed. Importantly, Buchon noted the complete lack of any Hellenistic or Classical remains, but mentioned the ruins of Churches, houses and cisterns. Two large cisterns were found by us in the centre, some rendering still intact in the protected corners - the first 9 x 5 x 3 m., the second 13 x 5.5 x 3 m, but the rest had disappeared by the time of our visit. Within the walled area the remains of channels cut into the rock to catch rainwater could also be seen.
The original wall was probably that of a Middle Byzantine refuge fortification, similar to many in Greece.[1003] Buchon believed the mortared walls to be Frank, although the major Frankish fortification in the area was probably at ***Mantugo*** / Mantoudi (**NE17**), a fortress noted and named by Sonetti (1485). In the early 1280's the Byzantine re-annexation of most of the island led them to re-fortify ***Cleisura*** along with a number of other locations.[1004] The mortared walls probably date from this period.
As a fortress for daily administrative use it was too inaccessible, whilst as a refuge against sudden pirate attack it was too remote from the plains, functions most likely taken over by the new ***El mandugo*** fortress.[1005] Two hundred years later, by which time Venice had taken absolute control of the administration of the island, its role would have been marginal at best, as the Venetian authorities invested their limited resources in the reinforcement of the fortifications at ***Negroponte.***[1006] For the Ottomans it was not strategic at all and most likely had been long abandoned by the time of Sonetti's survey. He thus noted it as a key feature on the road north from ***Negroponte***, probably based on hearsay, but nothing more. The reason for its subsequent omission by cartographers of the 16th and 17th centuries is then obvious
Buchon (1911) 48-52; Skouras (2003) 35-36; Koder (1973) 97, 114-117; Triantafyllopoulos (1974); Koder and Hild (1976) 188-189.

Tower
Judging from a nearly complete section of wall that had fallen in situ, there had also been a tower overlooking the narrow entrance, possibly the one described by Buchon on his visit, although he also writes of a number of lesser towers stretching down into the defile below, none of which seem to have survived. This tower was probably contemporary with the wall (see above), but it might also have been built by the Lombards and Venetians when they re-captured the fortress in the (mid.?) 1280's as a way of garrisoning it at minimum cost.

Churches
Only one building, possibly a church, could be identified on our visit.

Site: NE25 **Markates**

General
This small village is exceptional for its old churches. It possesses limited agricultural land but is in a key strategic position (height 420 m.) at the conjunction of two tributaries of the Kēreus river which runs through Prokopi **(NE18)**, offering a possible route to by-pass the main north-south road which runs

[1003] Unfortunately there is a large lacuna in Procopius at the point where he reaches Euboea so this cannot be confirmed - Dewing and Downey (tr.)**[Procopius] in seven volumes with an English translation**, London: Heinemann.
[1004] See **Chapter 4**.
[1005] Its first walls were probably constructed by the Byzantines under Licario in the early 1280's.
[1006] We know that in the mid. 15th c. outlying areas were generally being starved of military aid. There is correspondence to this effect where residents were appealing for reinforcements direct to Venice to combat pirate attack, by-passing the Bailie in ***Negroponte***. Methods of warfare (and the enemy) had also considerably changed in the 250 years since 1205 – the Venetians knew that only a fortress such as ***Negroponte*** had any chance of sustaining itself against a concerted Ottoman attack and therefore, whilst withdrawing support from the ***Mandugo*** area would have been a political problem, it was not strategically significant.

close to the **Cleisura** fortress (**NE24**) to the west. This suggests that there may be an, as yet, unidentified fortification or tower in the area, which, if situated just above the village, would have had direct line-of-sight to ***Cleisura,*** thus forming with Pyrgaki to the southwest (**NE27**) and Vlachia (**NE22**) to the northeast a 25 km. defensive line from Mt. Kantyli in the west to the Aegean coast

Medieval Name - None found.

Agios Spiridōn Church
This was situated at a height of 390m. but a new church has now been constructed in its place. Undated.
Skouras (1998) 143.

Agios Georgios Church
Also known as 'Monasteraki' since a monk used to live in a section of it. This has now been over-built with a new church. Undated.
Skouras (1998) 143.

Other Churches
Skouras writes 'in this village there existed the ruins of churches, which have now vanished due to cultivation and renovation'. Two churches are mentioned above but he does not refer to the other(s) destroyed by cultivation.
Skouras (1998) 143.

NE26 Kotsikia

General
The small village of Kotsikia lies on the road running down the east Aegean coast between Basilika (**NW17**) and Fragkakē (**NE7**) t the south. The area is afforested with steep hills. It must have been a strategic position, since it has a small sheltered bay with a good beach. It was occupied from the classical period and an old fortification exists just to the north of the beach, in the area of which there was also once a medieval tower.

Medieval name - None identified

Palaiokastron - Skouras no.74
This is shown on the HMGS (1970) map just to the north of Kotsikia beach, although Sackett (1966) makes no mention of it. The establishment of a tower within the fortified area suggests continued use without any other evidence to the contrary. It has a good viewshed out over the Aegean and would also have been critical in protecting both the settled area to the south and the small protected beach. Intermittent occupation assumed.
Skouras (2003) 73.

Tower – Skouras no.73
This was identified by Skouras following enquiries amongst the local population. It had existed within the environs of the classical fortification, but a fire had revealed the existence of the two under the heavy vegetation and the locals took advantage of the situation to use the stones for building their own houses. Skouras only found sherds spread around the area on his visit.
Skouras (2003) 73.

NE27 **Dafne - Ochyron**

General
This area lies 14km. southeast of Galataki Monastery (**NE20**) and 9 km. northwest of Nerotrivia (**CN1**). The Kantyli mountain, which rises to nearly 1,200m., at this point plunges directly into the Gulf of North Euboea, providing an impenetrable western barrier to potential attackers. The only settlement along this inhospitable coastline is the small village of Dafnē 5 km. to the south.

Medieval name
No name could be found for this tower but the village of Dafnē just to the south may be the site of ***Santa Chiara*** mentioned by Sonetti(1485), Agnese (1554-1556), but not by other later cartographers (see also Nerotrivia **- CN1**). A monastery of the same name is noted by Camocio (c. 1572) in his cityscape of ***Negroponte.***

Pyrgaki possible Tower – no. 219
This is noted on the HMGS (1970) map at the southeast end of the Kantyli mountain range. On a peak that stands at 1,064m. with line-of-sight to the fortress of ***Cleisura*** (**NE24**) 4 km. away, south to Ochyron 3 km away, and to Tourla (**CN1 - Nerotrivia**) to the southeast, it provides a strategic observation point overlooking the Gulf of North Euboea. Access from the sea is impossible and very difficult from the landward side.

Ochyron possible fortification
The direct north-south road appears to have passed immediately beneath this possible fort, which is shown at a height of 744 m. on the HMGS (1970) map. It has line-of-sight to Pyrgaki, Cleisura (**NE24**), Taourla (**CN28**) to the east, and Tourla (**CN1 – Nerotrivia**) to the southeast. It also overlooks the sea to the west and would have been a key link in a possible chain of watchtowers along the coast.

Drakotourla possible tower – no. 205
This is noted on the HMGS (1970) map to the northwest of Pyrgaki (see above). Dating is not known but the name may suggest a classical or earlier tower. Excluded from analysis.

NE28 **Limnionas**

General
This is a small remote beach on the Aegean shore of the island, partially protected from the prevailing north-easterly winds. It has a small continuously flowing river which would have provided a convenient stopping off point for ships. No indication of any form of fortification was identified in the area.

Medieval Name - None identified, but the modern name suggests its use as a harbour (Limen).

Settlement
A small village, Mēloi, exists in a protected position just to the north, close to which there is a monastery – undated but possibly Ottoman period.

Agia Sophia church
An early Christian church noted by the local Ephoria, which gave its name to the village 3 kms southwest of Limnionas.
A. Delt. (1960) 15.

Agios Konstantinos and Eleni church
This was possibly an early Christian church, but the building was washed away in a flood in 1884.
Skouras (1998) 87.

Appendix 5.2.3 Central North Region

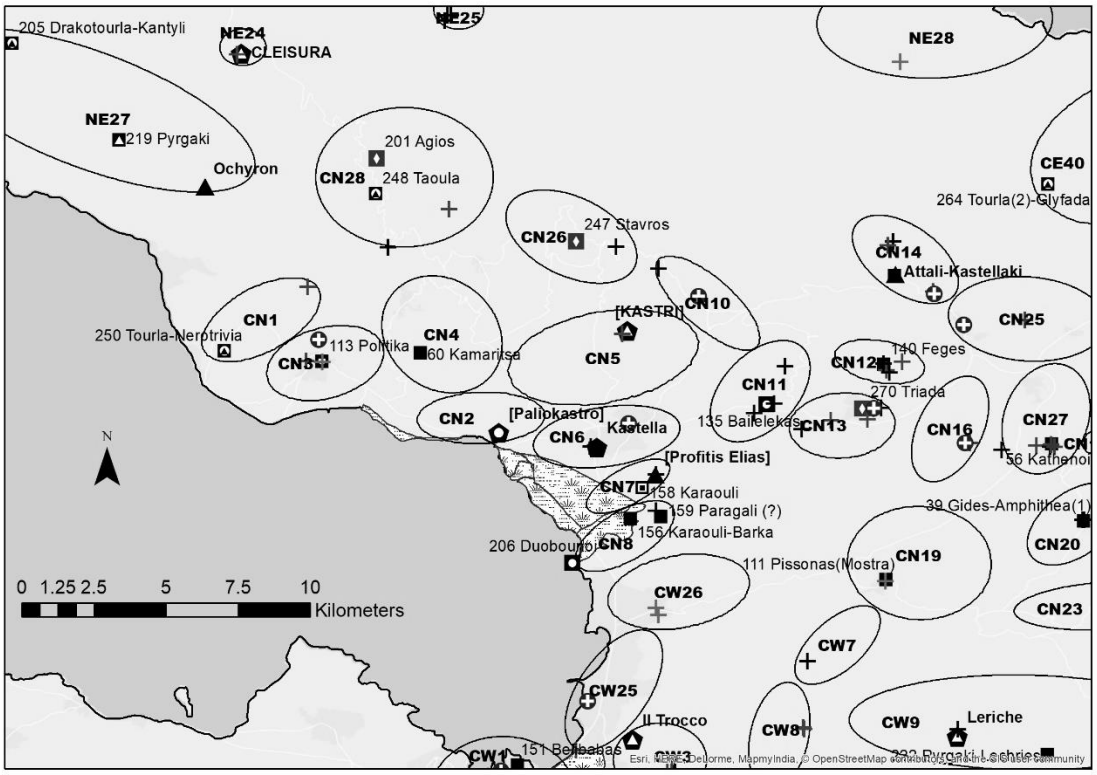


Figure A5.6 – Central North Euboea

This is a rich region just to the north Chalkida. It is nearly completely surrounded by mountains. Bounded on the west by the Gulf of Northern Euboea it stretches as far east as the foothills of Mt. Dirfis (2,743m.). To the west lie two small flood plains, while the east is a lush upland area ideal for livestock rearing. There are no records of any significant classical city in the area and it appears to have been under the control of the city of Chalkida.

On a large rock outcrop just to the north of the modern town of Psachna lies what appears to have been a Middle Byzantine fortress, although no excavation has been undertaken and Procopius is silent on whether it had its roots in the Justinian period.[1007] In the centre at Attali (**CN14**) and Triada (**CN13**) there are some of the most significant remains of early churches on the island, whilst the village of Bounoi / ***Vumi*** (**CN18**), with six churches from the Late Medieval period, appears to have been a major inland centre during this time.

Site: CN1 Nerotribia

General

This substantial village lies on what may have been the direct road north to Limnē, and backs onto the foothills (approx. 850m. high, running south-easterly) of Mt. Kandyli. From it a series of narrow ridges fan out towards the sea, 3 kms. to the southwest. The area is now given over substantially to olive groves, but its plentiful supply of water would have also made it good for animal husbandry. No medieval churches are noted within the village, although the large modern village church could have been constructed on the foundations of a much older one. The existence of the church of Agios Georgios one kilometre up the valley to the northeast may suggest that the original village had been sited there.

[1007] At the point where Procopius reaches the region, there appears to be a large lacuna in his work.

Medieval Name
No early name has been identified. Early maps from the 15th and 16th centuries (seemingly based on the Sonnetti (1485) *isolario*) show a monastery in approximately this position (or that of Daphnē just to the west) called ***Santa Chiara***, probably linked to a similarly named monastery in the northern suburbs of ***Negroponte***.[1008]

Church ruin
This lies 1 km. northeast of the village, close to the modern church of Agios Georgios, which possibly replaced it. Much still stands. It is constructed of rough stone with a vaulted roof and Skouras dates it securely as Byzantine.
Skouras (1998) 148.

Tourla possible tower site – no. 258
This is noted on the HMGS1970 map at a height of 121m. overlooking the sea 2 kms. southwest of the village. It has line-of-sight to Ochyron (**NE27**) 6 kms. to the northwest and to Paliokastro (**CN2**) 8 kms. to the southeast, and probably formed a node in the coastal defensive network (see **chapter 9**).

Site: CN2 **Kethrias**

General
This is a low hill between the Politika and Psachna floodplains, control of which meant control of the area and would have been a very strategic position to hold.

Medieval Name – none identified

Paliokastro possible fort
This is noted on the HMGS (1970) map at a height of 41m. It controls the narrow coastal pass and has line-of-sight to Tourla (**CN1**), Politika (**CN3**), Kamaritsa fort (**CN4**), Kastri fortress (**CN5**), Bailolekka (**CN11**) and south to Kastelli (**CN6**) and all the key positions until ***Negroponte***. It would thus have been a strategic position of the greatest importance. It is situated next to the Larko bauxite loading pier and all trace of its existence has disappeared.

Possible village
Sampson reports the finding of late Roman graves at the base of the hill. Most probably the site was abandoned in the Middle Byzantine period and the population retreated further inland.
Adamantios Sampson (1980) site 4.

Churches – none identified

Site: CN3 **Politika**

General
This appears to have been a prosperous town in both the Middle Byzantine and late medieval periods. It straddles a small river, and to the south and east there is substantial easily-worked farmland. It backs onto the southern slopes of the Kandyli mountain range, which would have provided good upland grazing, and is a key point on the most direct land route via Nerotrivia (**CN1**) to Limnē (**NE2**) and the north of the island.
Koder and Hild (1976) 245.

[1008] Camocio (c. 1572) "**Citta Di Negroponte**". Venice. Athens, Margarita Samourka Collection, Tolias (2009), no. 0401

Medieval name
Politica (14th c. – ***Politica*****:** Vesconte(1318), Pizzigano(1357); 15th c. – Sonetti(1485); 16th c. – ***Politica*****:** Bordone (1528), Camocio (c. 1575), ***Politicha*****:** Agnese (1554-1556); 17th c. – ***Polirica*****:** Boschini (1654/1658), Coronelli (1687)).
Politika is mentioned on nearly all the early portolan charts,[1009] isolarii and maps of the period.

Tower (23.32.742, 38.35.823, height 45m.) – Skouras no.113, Lock no.13
This is one of the best-preserved towers on the island and survives to its full height of about 15m. complete with crenellations. It has recently been renovated by the 23rd Ephorate. It has four floors with entry at the second on the south side, each floor being laid on a small ledge as the thickness of the walls reduces, whilst the fighting platform is supported by a vaulted ceiling to the third floor on a north-south axis.
General construction is of roughly worked stones (larger at the base) with mortar and tile in-slips. The tower, measuring 6.2m. x 6.0m, is approximately square with a wall thickness of 1.2m. at ground floor level. The second-floor doorway has a gap for a plaque (now missing) and an arrow slit on each of the other sides. There are round-headed windows with dressed stone surrounds in the centre of each side at third floor level, an opening with corbel supports for a probable toilet on the north face[1010] and an arrow slit (or chimney flue) to the right of the window on the east face. The battlements are in chevron style.
Koder focusses on its use as a watchtower, suggesting incorrectly line-of-sight to Kastri (**CN5**) and Kamaritsa (**CN4**), while Lock hypothesises its construction by a member of the elite, either Villehardouin in the 1250's or the Venetians. A Villehardouin construction is unlikely, given the rapidity of his campaign and the dressed stone window surrounds,[1011] which suggest a **type (C4)** construction and a dating to the late 14th century.
Skouras (2003) 94; Koder (1973) 97; Lock (1996); A. Delt (1964) 19, 214-215; **colour plate 10.13(b).**

Panagia Peribleptos monastery
This is a much-studied church (Skouras lists 31 references) situated in a narrow lush valley just to the north of the settlement. The present church is a complex four-columned cross-in square type. It appears to have been built at the beginning of the 11th century and a number of features link it to the Agios Loukas monastery close to Aliberi. Various sculpted components set in the walls also indicate the possibility of a previous church in the same position (or elsewhere?) from around 900.[1012] Orlandos provides a detailed ground plan of the church.
Koder and Hild (1976) 230; Ntafi (2017); Malamut (1988) 584; C. Themelis (1965); A.Delt.(1964) 215; Skouras(1998) 161-162; A Orlandos (1937); Koder(1973) 144-146; Bouras (1989).

Agia Triada church - ruin
This is reported as a Byzantine ruin just outside the village over which a new church has now been constructed, but Skouras could not verify this information. Undated.
Skouras (1998) 162.

Agios Iannis church - ruin
This church is in the centre of the village (at a height of 40m.). Although little remains, judging from the size of the apse Skouras believed it to have been a large church. Orlandos dates it from an early Christian sculpture to the 11th – 12th centuries.
Skouras (1998) 162; Orlandos (1937) 180-181.

[1009] Where the scale is sufficiently large.
[1010] Lock suggests this is for a balcony, but this seems unlikely. The construction of toilets at this level also appears to have been a standard feature – see Basiliko (**CW5**) and Belos (**SC3**).
[1011] See **section 9.1** for a discussion of the architectural issues.
[1012] This information, which I received from my guide around the church in May 2016, was apparently a recent interpretation but I was unable to confirm this further.

Metamorfosē church
This renovated church is next to the tower. In its original form it was probably contemporary with the tower.
A. Delt (1964) 19, 214; A. Delt. (2009) 64, 480-492.

Site: CN4 **Kamaritsa**

General
This area of rising land to the north of the plain leading to Politika **(CN3)** appears to have had a good water supply from the mountains behind and traces have been found close to the fortification of irrigation channels for fields in the fertile plain below.[1013] The modern village is hidden from the sea, well to the north of the fortification, which is set immediately above the plain and, given that no medieval churches have been found within it, there is some doubt as to whether this was its late medieval position.[1014]
There was probably a road linking Paliokastro (**CN2**) with Politika that follows the contour around the valley. A direct road is also shown on the Admiralty (1846) chart, which approximates to the modern highway, but the complete lack of settlements in the plain suggests that much of the area south of this, close to the sea, was either marshland or uncultivated. Most of the hilly land given over today to olive groves was still probably forest in the medieval period, reducing by more than 50% that under cultivation compared to today.

Medieval name – None identified

Tower / Fortification (23.34.584, 38.35.979, height 120m.) Skouras no. 60, Lock no. 14
This tower was not sited to maximise its viewshed or as part of any network. It has no line of sight either towards Politika (**CN3**) to the west or Kastri (**CN5**) to the east,[1015] and was not even sited on a close-by hill. It appears rather to have been positioned next to the channel carrying water down into the fields in the valley, to take advantage of a small rock outcrop, thus making construction easier, and possibly to control a road leading up the hill towards the north. Whilst both Skouras and Lock treat it as a tower this is incorrect. It is actually a small castle and the remains of an external enceinte can clearly be seen. In fact, the Admiralty (1846) chart describes it as '*ruined fortress'*.
The tower itself measures approximately 10m. x 8.5m., constructed of rough stone bonded with mortar and tile in-slips. Lock identified a door sill at first floor level. Its relatively large rectangular construction distinguishes it from other square towers.
Koder(1973) 96-97; Skouras (2003) 67; Lock (1996).

[1013] These have been replaced by concrete channels today.
[1014] The original position may have been below the castle on the edge of the plain where a modern church, Agios Theodoros, is noted on the HMGS(1970) map.
[1015] This is a common misconception, which Lock also reported in error.

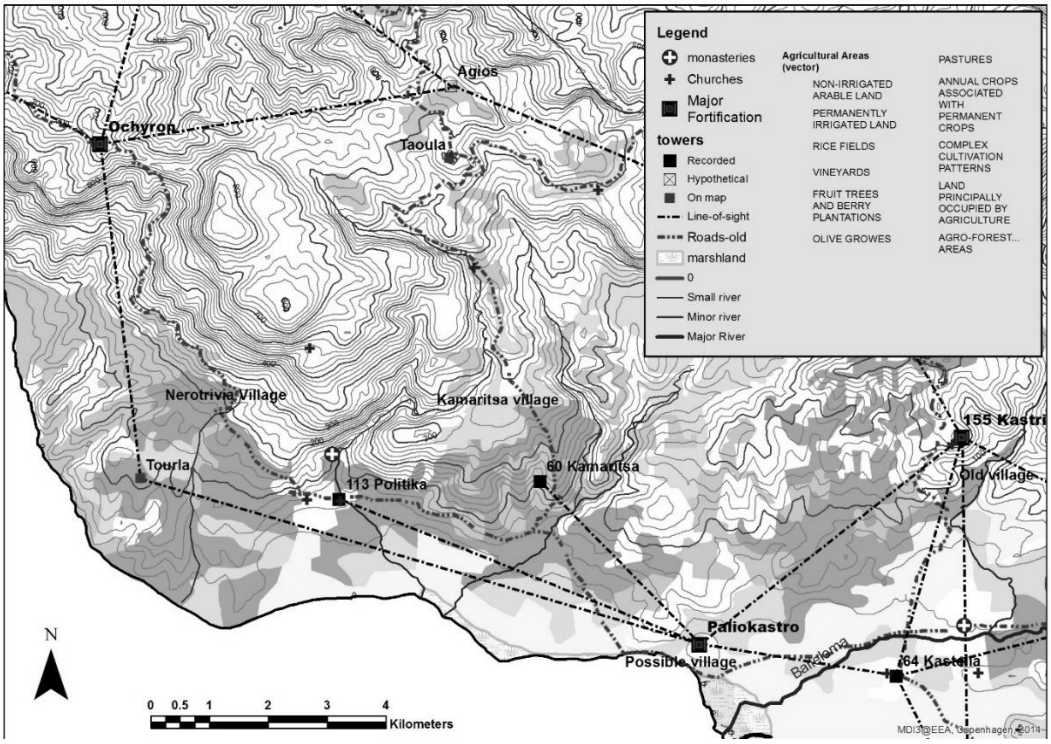


Figure A5.7 – Map of Politika area

Site: CN5 **Kastri**

***Kastri* (Psachna)**

Kastri lies 3.3 km. north of Psachna. It is a rock outcrop atop a steep-sided hill. Three sides have natural defences, whilst approach from the west is up a slight incline. There appears to be a natural well just to the north and a lime kiln was found on the southwest side. It lies 250 m. from a road that is possibly the old main road linking north and central Euboea, which leads to the castle of ***Cleisura*** (**NE24**) in the north and southwards down to ***Kastelli*** (**CN6)** on the Psachna plain. To the west there are extensive olive groves, although these most likely were only developed during the Ottoman period or later by the two monasteries that now exist in the area. Much of the area surrounding the castle was probably covered by forest in the late medieval period.

Medieval name

This is open to much dispute, for the discussions on which see ***Kastella*** (**CN6**) and **appendix 6.2**. The British Admiralty map produced in 1846-47 by Captain T. Graves notes it as '*Venetian fortress'*.[1016] ***Kastri*** has remained as a name to denote the fortress until today on all modern Greek maps, and it possibly never had any other. The HMGS (1970) map notes Palaiopsachna just to the southeast of the fortress, close to the river, and we have a referenence in the Theban cadastral records to a person coming from ***Psachna***.[1017]

Skouras(2003) 118; Papakonstantinou (1971) 47; Koder(1973) 97, 100; Triantafyllopoulos (1974) 218.

[1016] British_Admiralty (1846-47) "**Talanta Channel and the western part of the Euripo Channel -Graves, T.**".
[1017] Svoronos (1959) Recherches sur le cadastre byzantin et la fiscalité aux XIe et XIIe siècles : le cadastre de Thèbes. **Bulletin de Correspondance Hellénique**, 83: (1): 1-145.

The Fortification (38.36.391, 023.38.461, height 269m.) – Skouras no.155
This covers an area of approx.2.5 hectares. There was evidence of fortification walls around the whole area constructed of rough stone with lime cement and tile in-slips, certain areas in good condition. There were also the ruins of a considerable number of dwellings and sherds of glazed and unglazed ware throughout the site, indicating substantial habitation.
The castle has views as far as Chalkida to the south and overlooks all the Psachna area. The Baileleka tower (**CN11**) can easily be seen, and other towers by the coast and east in the fertile plain running towards Dirfis mountain would have been visible, although views to the north and west are limited.[1018]
Skouras (2003) 118-9; Papakonstantinou (1971) 47,146; Koder (1973) 32, 67, 97, 100; A. Delt. (1960) 60.

Church ruin (38.37.957, 023.38.259)
Although we could not be sure, since all the buildings seem to have been deliberately demolished, there appeared to be the remains of a church within the walls of the castle. This is confirmed by Sampson.
Adamantios Sampson (1980); Skouras (2003) 199.

Water cistern and well
Within the walls there were remains of a large cistern approx. 4m. x 8m x 3m. Although most of the walls are now bare rock, low down in the protected corners there could still be seen the (original?) internal lime rendering. Ten metres to the northeast of the castle hidden under an over-hanging rock was what appeared to be a very deep natural well. It would have been easy to lift water directly from here by use of a simple crane up to the castle walls.

Lime Kiln
To the west we found what appears to be the remains of a lime kiln approx. 2.5m. in diameter, which seems by its state to have continued in use until relatively recently.

Village
In the valley to the east, through which runs a continuously flowing small river the HMGS (1970) map notes '*Paliopsachna*'. Sampson also noted substantial signs of habitation in the area and all along the river there are the remains of old water mills, although their dating is unknown.
Sampson (1980) site 5.

Site: CN6 **Kastella (Psachna)**

General
This is a wide fertile flood plain north of Chalkida. To the north the Messapia river, dry in the summer, runs into the sea There may have been some form of harbour close to the mouth of the river or at the existing one next to the bauxite terminal below Palaiokastro (**CN2**), but modern development has destroyed any trace of this. To the northwest of the river probably lie the remains of a Roman settlement (**CN2**), whilst to the south the plain continues until the marshes at Karaouli-Barka (**CN8**). the site of the probable regional harbour. The coastline to the west has also extended substantially over recent centuries and the original line may have been up to a kilometre closer to the town in the medieval period.

Medieval name
Holorita: 15th c. – ***name omitted***: Sonetti (1485);[1019] 16th c. - ***Holorita***: Gastaldi (1545-1550?), Porcacchi (1576), Mercator (1589b).

[1018] Skouras(1973) is incorrect in noting that it has line-of-sight to Kamaritsa **(CN4**) and Politika (**CN3**). The link was probably via Kastella (**CN6**) or Paliokastri (**CN2**). To the north a chain of beacons possibly linked it to Cleisura – see **section 10.1.**
[1019] Sonetti shows a fortress on a high hill in this position but unfortunately does not name it.

The name '*Kastella*' is clearly of medieval Latin origin, but this is not shown on any maps of the period. We do, however, find in this position the name *'Holorita'* about which there is much literature. Koder suggests that it was the name of the fortress at ***Kastri*** (**CN5**), a theory that is followed by Skouras, who notes that the area is still today called Koulouriada (κουλουριάδα).[1020] Papakonstantinou, however, who has undertaken a detailed study of the Psachna region, refers to an area east of the Profētēs Ēlias hill (**CN7**), which appears to have been a classical (possibly Byzantine?) fortification, as bearing this name. My own guide for the area generally supports this location, believing that it refers to the biscuit-type shape of the hills ('Koulouriada' being a type of biscuit in Greek). [1021]
It appears incorrect therefore to call the ***Kastri*** fortress ***Holorita*****:** if indeed the positioning is generally correct,[1022] the name probably refers to the whole area and the names ***Kastri*** and ***Kastella*** have survived to distinguish between the two fortifications.[1023] Sonetti's map, *too*, in which this place is first shown, would have been based on information from a navigator. Viewing the location from the sea, the ***Kastri*** fortress is much too far inland to have been distinguishable for navigation purposes, whilst ***Kastella*** (see below) is easily visible.[1024]
Koder (1973) 100-101; Skouras (2003) 118-119; Papakonstantinou (1971) 103-104; Trintafyllopoulos (1974) 218-219.

Kastella (23.37.857,38.34.193, height 14m.) Skouras no. 64, Lock no. 15
This was probably the site of the medieval town. In 1856, when the area was separated as a dēmos from Chalkida this was the administrative centre. All traces of medieval fortifications have now disappeared, but a number of Byzantine coins from the 9th - 11th centuries have been found in the wider area, and the church of Agios Ioannis appears to indicate its approximate centre. Papakonstantinou refers to a quote by Girard that next to the modern village there was a ruined tower, but all trace of this has now been lost.[1025]
Skouras (2003) 69; Papakonstantinou (1972) 75. 145, 159; Girard (1964).

Agios Ioannis Kalybitēs Monastery
There exists a document from the 12th century referring to this monastery, which appears to have been constructed on the foundations of an early Christian church judging from the marble spolia found in the environs.
Skouras (1998) 197; A.Delt.(1972) 27, 371. Liapes (1971) 17-28.

Agios Ioannis church
A small church in the centre of the village. No literature. Undated.
Skouras (1998) 123.

[1020] These authors also note ***Colochita*** as the same place as ***Holorita*** but this seems incorrect. Sonetti (1485), Agnese (1554) and Coronelli (1688)) clearly note the former in the north close to Limnē. Sonetti's written text also reads '*mandugo, colochita, e lalitada'* re-enforcing this conclusion, since the place is positioned between Mantoudi (**NE17**) and Litada (**NW7**), both in the north of the island – Koder and Hild (1976) 172.
[1021] Georgos Karachalios, to whom I am very grateful for guiding m to many sites which, otherwise, would have remained undiscovered.
[1022] Triantafyllopoulos (1974) is unconvinced by Koder's arguments and leaves the identification open. Allowing ***Colochita*** and ***Holorita*** are the same place, he also suggests a number of possible positions in the north of the island.
[1023] A similar explanation has been seen for the name ***Valona*** (**CE10**)
[1024] In my own study of the distinguishing features of the coastline from ***Negroponte*** up to ***Oreo***, undertaken from the deck of a sailing yacht following the likely route of the early navigators, I was unable easily to identify the ***Kastri*** fortification even with binoculars.
[1025] It may be that Girard's description refers to one of the other towers in the area.

Site: CN7 **Profitis Ilias**

General
This round hill stands just to the south of Psachna and northeast of tower (158) shown in **figure A5.6** It is in a strong position controlling access to the south of the Triada plain over the hills to the east.
Medieval name – none identified

Profētēs Ēlias church (23.39.000, 38.33.707, height 61m.)
The current church, on top of the hill, is new but, as reported by Sackett, sits on ancient blocks, suggesting the existence of an earlier church. There were clear indications that the top of the hill where the church stands had been well fortified at some time and the road up cuts through what appears to have been a wide ditch with earthworks and a stone wall above. Sackett believed there to have been a substantial settlement in the area from earliest times. Undated.
Skouras (1998) 198; Sackett (1966) 54.

Tower (23.38.751, 38.33.46, height 7m.) Skouras no.158, Lock no. 16
This stands next to the probable original ***Negroponte- Kastella*** road, it being forced along this route by the swamp to the west. It measures 6.9m. x 6.9m. with a wall thickness at base of 1.2m., whilst one wall still stands to a level of 4m. Construction is of rough stone with mortar and tile in-slips. Although it is in the centre of good agricultural land it probably also acted as a control on the road, but, although it has line-of-sight northwest to Kastella (**CN6**) and south to Dokos (**CW3**), does not seem to have been directly linked into any network or system of defence.
Skouras (2003) 120; Koder (1973) 97; Papakonstantinou (1971) 104. Triantafyllopoulos (1974); Lock (1996).

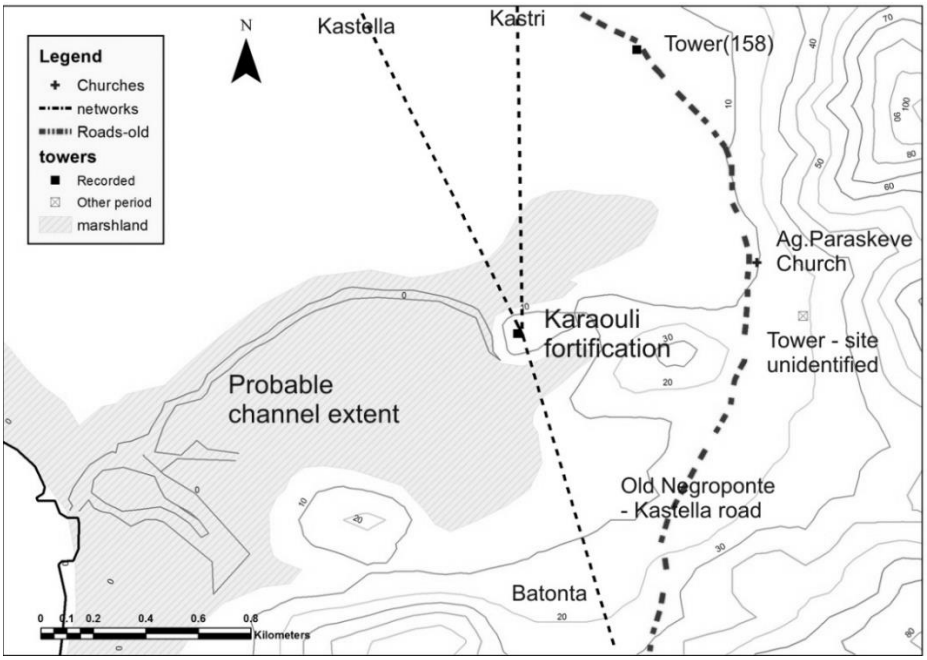


Figure A5.8 – The area of Karaouli (Barka)

Site: CN8 **Karaouli - Barka**

General
This area, just to the north of Batontas **(CW26**) and to the west of the old road linking ***Negroponte*** with ***Kastella*** (**CN6**) is today mostly marshland, but the HMGS (1970) map shows a narrow waterway reaching inland for 1.5kms. to the small mound on which a tower stands. Until the late medieval period this was clearly navigable and would have acted as a secure port for the area, especially for loading of

salt from the nearby salt pans. To the east there was once another tower and to the southwest on the coast another.

Medieval name – none identified

Karaouli - Barka tower/ fort (23.38.51, 38.32.883, height 14m.[1026]) - Skouras nos. 156 & 157, Lock no.18.
The tower sits atop the low mound, measuring approx. 8m. x 8m. Only the foundations still exist but a hole dug by treasure hunters revealed the construction style of rough stones with mortar and tile in-slips. There are signs of other buildings in the vicinity and a circuit wall running all around the hill at a height of about 8m. The base of a stone-built entrance could also be seen with a paved path running down to the water's edge, where there would probably have been a wooden jetty. The British Admiralty map (1846) shows it as '*Pyrgos tower'*.
This was clearly a harbour, the fortification acting as a control of the movement of goods, whilst also having an area for storage and protection of the installations. The fact that the road leads into the water suggests not only that water levels were lower during the late medieval period but also that there was a good channel out to sea.
Skouras (2003) 119. Lock (1996).

Agia Paraskevē church - ruin
This is to the east of the tower by the old road to Chalkida, and on the edge of the range of hills, which rise to a height of 120m. to the east. Skouras reports that on his visit the walls still stood to a height of 0.5 to 1.5m. This had been rebuilt by the time of my visit in May 2016.
Skouras (1998) 198.

Paragali Tower – Skouras no. 159, Lock no.17
Skouras notes this tower of 8m. x 8m. close to the Agia Paraskevē church and in the position Paragali, near the Aga Ibrahim ruins.[1027] There are today a number of agricultural buildings in the area and we could not find it on our visit. Given its position and name it was probably of later Ottoman date.
Skouras (2003) 119; Lock (1996).

Duobouna Tower (023.37.433, 38.32.057, height 10m.) no. 206
This site is set at about 10m. height on a small headland, just to the south of the marshland. Views are excellent in all directions except directly west and the site is equidistant from ***Negroponte*** to the south and ***Kastri*** to the north. Little remains of the walls as treasure hunters have dug out much of them (as they had also done to two apparent tombs close-by), although the impression is that the tower was square. The foundation stones were massive, presumed re-used classical blocks, possibly from a temple on the site. The few smaller stones above, which we could identify in one corner, were bonded with mortar and tile in-slips. In the area around shards from various periods were recognised by my colleague,[1028] and on the seaward side there was some evidence of a perimeter wall.
This appears to have been a strategic coastal settlement and watchtower, which from the limited evidence had been continuously occupied throughout the Middle Byzantine and (possibly) Frankish periods. It has direct line-of-sight to a large number of other fortifications and could control all shipping in the Gulf of north Euboea travelling down to Negroponte. A path was identified running down towards the water, which at this point has a good depth unlike the area immediately to the north, which has now silted up. There were signs that limited stone quarrying had taken place from the rocks on the water's edge. It therefore probably also had a role as a harbour in conjunction with, or subsequent to, that at Karaouli (see above).

[1026] Skouras records the height as 110m. but this is clearly a mistake.
[1027] Is Skouras in error in mentioning Paragali, since, according to the HMGS (1970) map this is actually an area just to the north of Pissonas (**CN19**)?
[1028] Georgos Karachalios.

CN9 **Stenē**

General
This is today a small town in the narrow Steniōtiko valley along which stretches along the modern road up to the saddle next to Dirfis mountain and on down to the Aegean shore. The fact that no remains of a medieval church have been found in the area suggests that the original settlement had been established at Katō Stenē (**CN17**) 1.8kms. to the south at the entrance to the valley, and well below the snow line. The original road most probably turned westwards just above the village on the path that leads up to the possible tower site of 'Tourla'.

Medieval name – none found

Tourla possible tower
This is noted on the Anavisi map at a height of 990m.[1029] It is close to the probable road over the Dirfis mountain range and to a junction with another probable road from Loutsa (**CN15**).

Pyrgakia possible tower
This is to the northeast of the above higher up the mountain as shown on the HMGS (1970) map.

Site: CN10 **Makrimallē**

General
This narrow valley with fertile well-watered farmland just to the northeast of ***Kastri*** (**CN5**) lies on the edge of the Dirfis mountain range, which rises at this point to over 1,100m., thus providing an impenetrable defence against attack from the Aegean coast. There are no other settlements for 18 kms. to the northeast until one reaches the sea. The river runs throughout the year and the remains of leets for water mills can still be seen. To the west was probably the main road north from ***Kastri*** to ***Cleisura*** (**NE24**) 16 kms. away, which unites at the village of Kontodespoti (a Turkish period çiftlik – **CN26**) with the modern main road.
Papakonstantinou (1971) 45.

Agia Marina church (23.39.078, 38.37.553)
This small field church northwest of Makrymallē, according to my guide,[1030] has been built on the foundations of an older one. No other remains were seen in the vicinity, but the position would have been favourable for a settlement.

Koimēsios Theotokos Monastery
The church of the monastery had been dated in 1966 as Byzantine by frescoes that were discovered on one wall. This, however, burnt down and a new church has now been constructed in its place.
Skouras (1998) 140; Anastasopoulos (1967) 110; C. Themelis (1965) 104.

Site: CN11 **Baïlelekas**

General
This area of good farmland, named after the eponymous hill just to the southwest, is situated at the confluence of a small river from the north with the main Baïlelemas (Messapia) river. It is also astride the main road from Kastelli (**CN6**) inland to Triada (**CN13**), which are divided by a line of small but steep hills. Assuming that much of the land to the south of the road was probably waterlogged during the winter months this road, running along the northern bank of the river, would have been the only route to the upland plains.

[1029] Anavasi (2002) "**Mt.Dirfis 1:25,000 map**". Athens.
[1030] Georgos Karahalios – 2014.

Medieval Name
None found but the name of the river, literally meaning '*bailie's river'*, suggests a medieval origin. Could this have referred specifically to the Venetian bailie since the fortress of ***Kastri*** (**CN5**) to the west is also called '*Venetian Fortress'* on the Admiralty (1860) chart.[1031] Bury (1986) supposed that the land granted to the Venetians by the triarchs in 1257 was in the Lelantine plain, but it is also quite possible to have been here.

Tower (23.41.068, 38.35.021, height 55m.) – Skouras no.135; Lock no.19
The tower, standing on a raised area just above the level of the surrounding land, is situated 200m. from the confluence of the two rivers. Since a small bridge was probably necessary to cross the northerly river most of the year, the tower controlled all movement inland and all goods travelling to the coast for export. It survives to a height of about 14m. and measures 7.10m. x 7.10m.
It appears to have had at least three phases of construction. The first phase up to a height of four metres consists of lines of roughly worked stones. The corners are quoined with ashlar blocks taken from an earlier (classical?) building. In a 7 m. band above this level the quoining disappears and a local darker stone, interspersed with the remainder of the stones from the earlier building, is utilised. A third phase begins above this with only dark stonework. All phases are bonded with mortar and tile in-slips. The wall is massively built at ground floor level, but then reduces at first and second floor to support wooden beams for each floor.
It is difficult to be sure exactly where the entrance was. There is a hole at ground floor level on the west face, the internal wall of which seems to indicate a door (the external cut stone has been stolen?), above which is an arrow slit. Lock believed the door to have been at second floor level in the south face but, judging by the external pile of rubble, the wall has simply collapsed at this level! If this is the case, then this tower is one of the few on Euboea to have entry on the ground floor. He also noted crenellations, none of which now survive, although there is a central opening apparent at third floor level on all sides. The east face has an arrow slit at first floor level. The second floor appears blind from the outside on all sides but two small windows (or niches?) can be seen on the inside of the north and east walls.
The cobbled platform noted by Lock could not be identified on our visit, nor could the external circuit wall he notes at about 20m. from the tower, although the lie of the land would suggest that he is correct in his supposition on this. The tower had no indication of any vaulting or of an inset externally just above the base.
Lock (1996); Skouras (2003); Koder (1973) 97,101; Triantafyllopoulos (1974) 218; **colour plate 10.13(a).**

Agios Demetrios church (23.41.212, 38.35.027)
This new church is 200m. to the east of the tower but an older one was shown on the HMGS (1970) map. Probably contemporary with the tower.

Agios Georgios church (23.40.840, 38.34.854)
The church itself is new but my guide reported that there had been an older one in this position.[1032] On the HMGS (1970) map the name *Paliapanagia* also appears in approximately this position – it could refer to this church (which is otherwise unnamed) or to another church in the area somewhat to the east. Undated.

Zoodochos Pēgēs church (23.41.413, 38.35.723)
This is set in a beautiful position next to the river 1.4 kms. to the north of the tower. It is a new church but there had been an older one in this position. My guide noted that his father used to attend the annual

[1031] British_Admiralty (1860) "**The Town and Strait of Euripo: the ancient Chalcis and Euripus [A.L.Mansell, E.W.Brooker - H.M.S.Firefly]**". We need to be careful of such a conclusion since many fortifications were allocated to the Venetians on maps of this period, although on the same map the fortification at Kamaritsa (**CN4**) is called '*ruined fortress'*.
[1032] Georgios Karachalios.

summer festival here over 100 years ago.[1033] Undated. (not utilised in analysis due to distance from the probable settlement, although it might have been a separate hamlet)

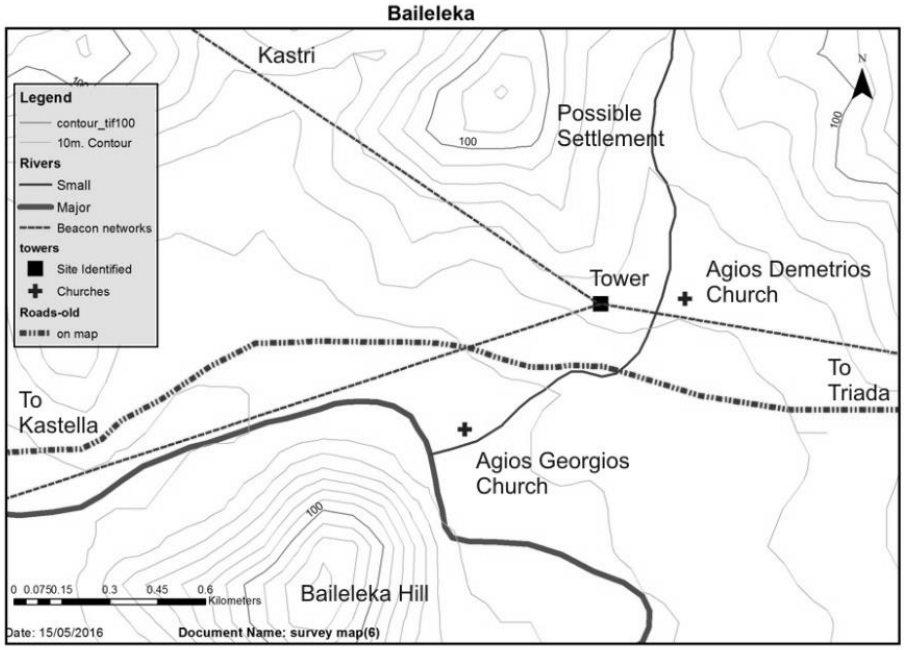


Figure A5.9 – map of Baïlelekas Tower Area

Built area
On the slope of the hill just to the north of the tower and the two churches, in an area that is now cultivated, substantial numbers of sherds were identified, suggesting the existence of a settlement here at some point.

Site: CN12 **Fēges**

General
Although little remains, this was most likely a large village (1 tower and 4 churches, one substantial), 2.5 kms. to the north east of Triada. There is good water from the stream in the valley, hills to the north and east covered with oak forests from which it gains its name, and excellent farmland to the south running down towards Triada. The HMGS (1970) map shows a continuous flowing stream of 600m. at this point and we also found the same on our visit (June 2014).
The area has been occupied at least from the Hellenistic period as coins found have been dated to 369-336 B.C. It was a çiftlik in the Ottoman period. Skouras' identification of one church as early Christian and finds of 11th century coins suggest that both the village and the fortification existed prior to the arrival of the Franks in 1204.
Papakonstantinou (1972) 36.

Medieval name – none identified

[1033] Idem.

Tower - (38.35.766, 023.43.273, height 225m.) – Skouras no.140, Lock no.20
Set on a small hill with steep sides to west, south and east, it has easy access from the north. Little remains of the walls of the tower, but it appears to have been approx. 7.2m. square. Lock was luckier on his visit and was able to identify remnants of vaulting on a north-south axis.
Five metres to the north at a slightly lower level there is a small church (see below) and there are the remains of a thick (>1 metre) wall along the north side of the hill running around to the steep sides of the hill and a ditch to the west. It may therefore have been originally a small fortification (even an acropolis?) with an outer wall approx. 15m. x 30m. It has excellent views south over the plain surrounding Triada **(CN13**), although limited to the north, and towards Pournos (**CN23**) and Kathenoi (**CN27**) in the southeast.
Papakonstantinou (1972) 131; Skouras (2003) 107; Lock (1996).

Church ruin next to tower
This is approx. 5m. x 10m.running east to west. Nothing remains above ground level, but the walls can just be identified. Skouras thought it is early Christian from some of the marble architectural features which he found (now disappeared).
Skouras (1998) 175.

Panagia church (38.35.660, 023.43.336, height 162m.)
This is a large church to the left of the Triada-Attali road just below the tower hill. Walls remain to a height of 2m. but covered up to wall height externally by soil. Identified as cross-transept style by Papakonstantinou but Skouras disagrees. The whole area is so overgrown it is difficult to distinguish anything. Size approx. 15m. x 8m. with 3 aisles. Middle/late Byzantine.
Papakonstantinou (1972) 169; Skouras (1998) 175.

Agia Aikaterini church (38.35.660, 023.43.336, height 152m.)
This is situated to the right of the road on the other side to Panagia. Nothing remains of the old church but Skouras notes that the new one is built over the old church.
Skouras (1998) p.175; Papakonstantinou (1971) 169.

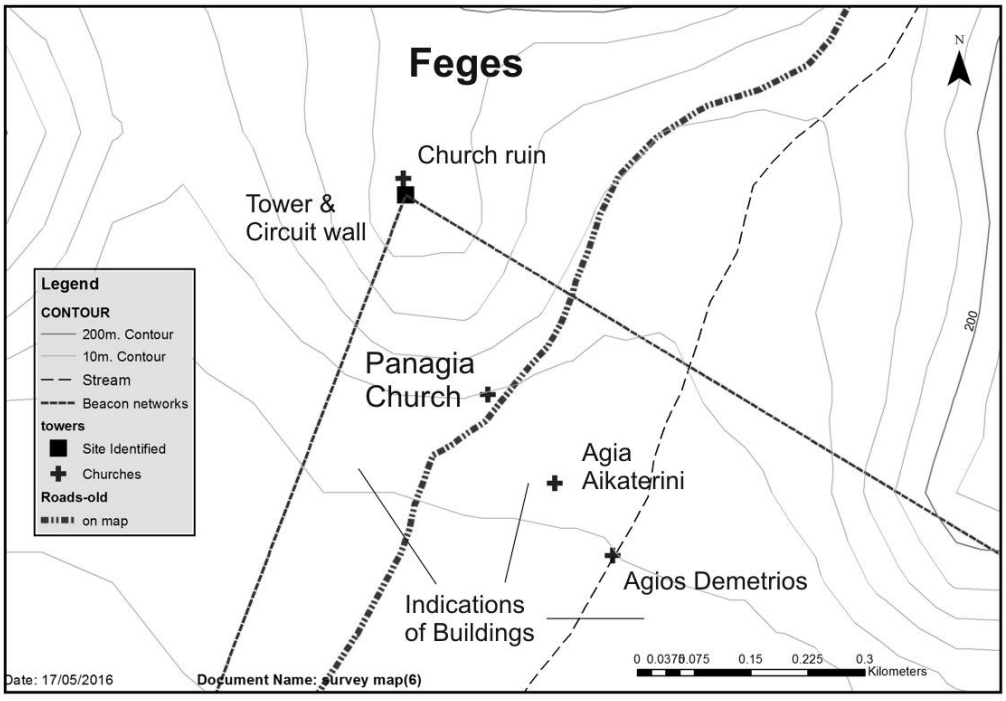


Figure 5.10 – Map of Fēges Area

Agios Demetrios (023.43.605, 38.35.816, height 168m.)
This is to the northeast of the other churches, close to a spring. From here there was a water conduit to Triada, now replaced by a modern cistern and piping. Coins have been found nearby dated to 1071 - 1078 suggesting a Middle Byzantine construction date. Papakonstantinou includes a picture and notes it was cross-transept (σταυρεπίστεγος) type. Little remained on our visit.
Papakonstantinou (1972) 34, 37,167; Skouras (1998) 176.

Site: CN13 **Triada**

General
This is a large agricultural village, a çiftlik in the Ottoman period, set on a low hill (135 m.) in the middle of a wide fertile plain, 6kms east of Psachna (**CN6**). Its centre is today the site of the mansion of Nikolaos Kriezōtis, one of the leaders of the Greek revolution of 1821. The number of churches with probable dating prior to 1204 suggests that there was a substantial settlement in this position during the Middle Byzantine period. The settlement seems to have spread out along the river around the base of the hill.
Koder and Hild (1976) 276-277.

Medieval Name – none identified. Probably named after the Monastery (see below)

Hypothetical Tower - possible castle (23.42.854, 38.34.939, height 141m.)
Given that all other major settlements have some sort of fortification it is unlikely that Triada was an exception. The positioning of the Kriezōtis mansion at the highest point of the hill suggests that this was built in exactly the place of an older tower, probably constructed around the 11th/13th centuries and then maintained by the Ottomans. Satellite images suggest that there was also a rectangular perimeter wall approx. 60m. x 60m. This is very similar in size to other perimeter walls identified (e.g. Bailelekas – **CN11**). The hill is a very strategic and impressive position, surveying the whole valley with views west to Bailelekas, north to Fēges and east to Kathenoi, whilst being at a natural crossroads.

Agia Triada Monastery (023.43.332, 30.35.659, height 120m.)
This church possesses a considerable number of marble architectural components from the classical period. Little remains above one metre height. The church has been much studied extensively in the literature. Orlandos has dated it to 1050-1150. Cross-in-square (σταυροειδής) architecture with cylindrical columns.
Malamut(1988), 584;[1034] A. Orlandos (1958) 60-63; Koder (1973) 147; Papakonstantinou (1972) 133, 184; Skouras (1998) 173; Ntafi(2017). Koder and Hild (1976) 277.

Church ruin
This is situated a few metres south of Agia Triada church. It has a mosaic floor and has been dated as early Christian.
Papakonstantinou (1971) 171; Skouras (1998) 173.

Agia Kalliopē church (023.43.218, 38.34.948, height 136m.)
Close-by and to the east of Agia Triada church, this is a very small cross-vaulted church with a dome which has been re-constructed from the ruins of the original. Probably Middle Byzantine.
A. Orlandos (1940) 15; Skouras (1998) 173.

Zōodochos Pēgē ruined church (023.42.275, 38.34.719, height 98m.)
200m. west of the village in the area of 'Katsēchamou'. Nothing survives except a few stones around an aged tree. Undated
Papakonstantinou (1971) 171.

[1034] Notes the church as '*cruciform complex'*.

Agios Nikolaos ruined church (023.42.953, 38.34.747, height 128m.)
This church, situated on the southeast edge of the village, has a mosaic floor and is thought to be early Christian in date. Little remained on our visit except a small portion of wall.
Orlandos (1958) 80; Papakonstantinou (1971) 169-70; Skouras (1998) 173.

Panagia Church (023.41.728, 38.34.553, height 77m.)
This appears to have been a large church from the amount of stones around, but its walls could not be distinguished from the walls of possible other buildings. My guide believed it to have been an old village and reported that the land around had been given to the refugees in Psachna at the beginning of the 20th century.

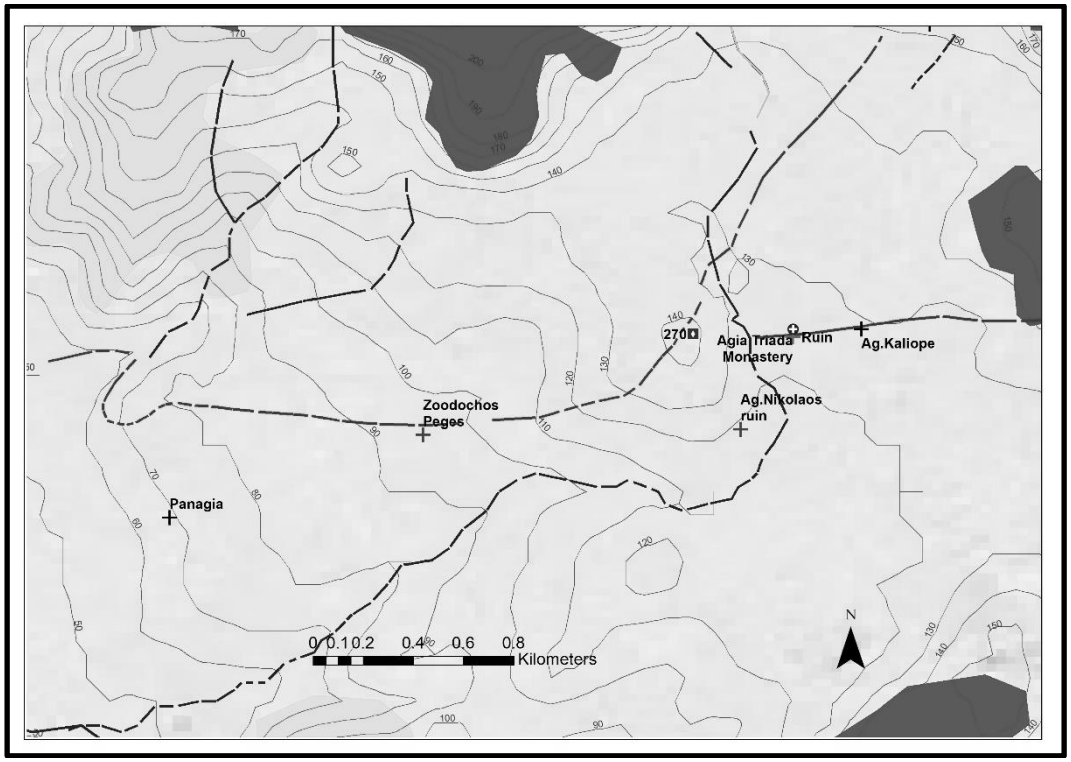


Figure A5.11 – Map of Agia Triada Area

Site: CN14 **Attali**

General
Attali is a village 9km. to the northeast of Psachna set in a small enclosed valley at a height of 220m. Judging from the church architecture it appears to go back at least as far as the Middle Byzantine period. The population may have retreated here in the Middle Byzantine period faced by the threat of incursion from the mainland and the 'Kastellaki' (see below) was a make-shift refuge. The positioning of the churches suggests two separate settlements. An Attali monastery is noted in 1252.[1035]

Medieval Name
No identical name found. Papakonstantinou notes an area just to the north of the village called 'Kastellaki' which may have been corrupted to the name. More likely, however, is his belief that it

[1035] Acta Innoc.IV.145 (No. 83) **in** Koder and Hild (1976) "**Tabula imperii Byzantini. Bd. 1, Hellas und Thessalia**". Vienna, , 130.

derives from the word 'τάλια' or 'τάλη', a word used as a measure of weight in the local dialect. There is also a possibility it has some link (?) to Attaleia / Antalya in Turkey.
Papakonstantinou (1971) 50, 69.

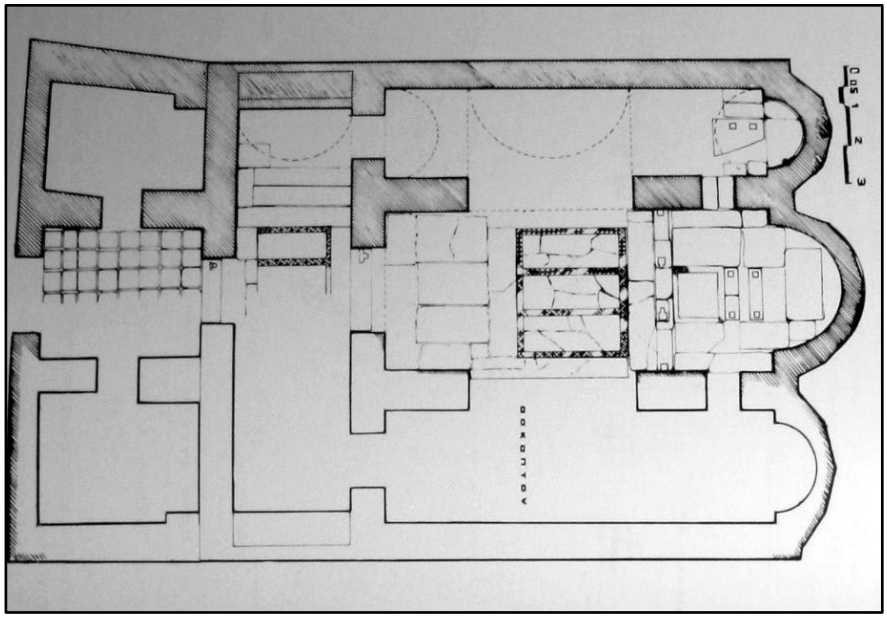


Figure A5.12 - Agios Nikolaos floor plan (source: A.Delt.(1972))

Agios Nikolaos Monastery (23.44.193, 38.37.143, height 205m.)
In the centre of the village. Most of the walls exist to 1 metre height but one section rises to 3 metres. Cross-in-square (σταυροειδής εγγεγραμμένο με τρούλο) style with dome and floor of large marble slabs. This is one of the largest Byzantine churches on Euboea (approx.13m. x 23m.) and unique in its style. There are both horizontal and vertical lines of brickwork. Middle Byzantine, 10th or 11th c.
Malamut (1988) 584; Skouras (1998) 80; Georgopoulou (1977) 369; Papakonstantinou (1972) 174, 221, A. Delt (1972) 27, 167-169.

Eisodios Theotokos (Παναγια) church (23.44.19, 38.37.123, height 209m.)
100m. from the above, this church has undergone a number of changes since its original form – recently renovated (2015) A basilica with 3 aisles (τρίκλητος) with multi-faced arches measuring approx. 14.5m. x 11.5m. Part of the original marble iconostasis is built into the wall of the current building. Middle Byzantine but later than Agios Nikolaos.
Skouras (1998) 80; Georgakopoulou (1977) 369; Papakonstantinou (1972) 175, 221. A. Delt (1972) 27, 169.

Two churches to northwest - Agios Konstantinos (Agiannis Prodromos) and Profētēs Ēlias
These two churches are about 2 kms. away from Attali in an area called Apogremo. Local legend recounts that when the inhabitants were driven out by the Venetians they re-established themselves at this position overlooking a small mountain valley. Whether this is true or not, they are a further indication of the considerable size of the community in the area.
Skouras (1998) 79; Papakonstantinou (1971) 207, 209.

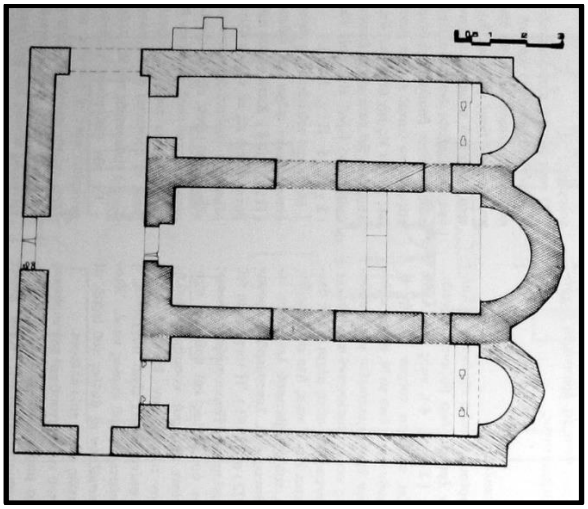


Figure A5.3– Eisodos Theotokos church floorplan (source: A.Delt.(1972))

Kastellaki hypothetical fortification (23.43.471, 38.37.432, height 433m.)
Papakonstantinou notes according to folklore the existence of this fortification in the homonymous area to the north of the village, something confirmed by a local.[1036] It would have had a view via the narrow valley to the south directly over Makrykapa monastery (**CN29**) to the tower at Kathenoi **(CN27**) 8 kms. away. On our site visit we identified the remnants of a wall running around the hill but could not establish whether this was simply terracing or had at some time been something more substantial. No evidence of any building was identified in the vicinity, but on the road below, 800m. away, there were a few houses and a new church (23.43.967, 38.37.108, height 246m.), the foundations of which extend beyond the walls on the south side, an indication that it may have been constructed over something older. The lack of building suggests that, if indeed this was a fortified position, it was a refuge fortification for the residents in the valley below.
Papakonstantinou (1971) 226.

Site: CN15 **Loutsa (Agios Demetrios)**

General
This is a village at a height of 270m. in the foothills to the southwest of Mt Dirfis. The whole area is criss-crossed by small streams, although good arable land is limited. Probably its economy was dependent on livestock rearing with good summer grazing on the mountain behind. The present village may be relatively modern since no old church has been identified close-by, and the original site was possibly to the east in the area of the three churches noted below.

Agia Paraskevē church
Cross-vaulted single-aisle church (10.50 x 5.50 m.) with three-sided apse a little outside the village at a height of 270m. Koder believes it was built in the 14th / 15th century based on the architectural style. Although Triantafyllopoulos,[1037] citing the wall frescoes, prefers a 16th century date, these could, as elsewhere, have been painted over the originals. Late Byzantine.
Skouras (1998) 138; A. Delt (1968) 23, 263; A. Delt (1970) 25, 262; Koder (1973) 148; Trantafyllopoulos (1974); Koder and Hild (1976) 207.

[1036] Mr I. Lafazanes, who noted it in a position called 'Tripitses' on the road to Apogremo.
[1037] Triantafyllopoulos refers to this as a monastery but I could find no reference to it elsewhere and he may have mixed it up with Agios Demetrios Monastery (which he does not mention).

Agios Demetrios Monastery
Close to the above church to the east of the village at a height of 400m. This is today a *metochi* of Makrimallē monastery. It had been abandoned but was renovated, although by Skouras' second visit it had again deteriorated; Undated.
Skouras (1998) 139; C. Themelis (1965).

Panagia (Koimēsē Theotokos – Panagitsa tēs Stenēs) church (023.48.646, 38.35.033)
Just to the east of the village this cross-vaulted church is at a height of 320m. to the right of the road leading to Katō Stenē (**CN18**). It originally possessed a number of good wall frescoes, but some were destroyed by attempts to steal them and others by the effect of damp. The cross-vaulted architecture probably dates it to the Frankish period.
Skouras(1998) 139; A.Delt.(1975) 172; Liapes (1971) 139-142.

Site: CN16 **Eria**

General
This area of good agricultural land 2kms. west of Kathenoi (**CN27**) at a height of 120m., lies astride the river Koumprē, just below the junction of two rivers fed from streams in the foothills of Mt. Dirfis (1,743m.). There are clear signs of a substantial settlement in the area. To the west of the river piles of rocks, some of which appear to have been worked, exist on the edges of the fields. Although generally the fields have good earth, one close to the river has so many rocks and roof tile sherds that it has been left fallow and must have originally held a number of dwellings.
The area must have been well-occupied from as early as the classical period (see name below), and from the Roman era it may have been one of the sources of the water supply for Chalkida. The river is one of the few that flow throughout the year and water appears to have been carried from Eria via an underground tunnel and an aquaduct (see below) 22kms. to the city. It is also on the most direct route between Triada (**CN13**) and Kathenoi (**CN27**).

Medieval name
None found, but Kanatsellos believes it originated in the ancient Greek word Iereus (Ιερεύς) suggesting the existence of an ancient temple in this position from a very early period. Koder-Hild propose a source in the papal letters noting *Nerarii.*
Kanatsellos (1980); Acta Innoc. IV.145 (no.83) **in** Koder and Hild (1976) 156.

Panagia -Ypopantē tou Sōtēros Church (38.34.314, 23.44.801, height 118m.)
This is all that remains of what must have originally been a substantial monastery. Themelis notes reference to it from the 10th century. The cross-transept church, which is more a tiny chapel, is in excellent condition externally, although Skouras reports that the original large Byzantine roof tiles have been replaced by new ones. Internally the wall icons had been in good condition but are now blackened and little remains to be seen. Originally water had flowed from a spring around which the church had been built. An inscription gives the date 1637 but icons discovered on the walls have dated it to the 13th/14th century. There is substantial Greek language literature. Middle Byzantine.
Themelis (1965); Theodoros I. Skouras (1998) 117; Koder(1973) 147-148; A.Delt.(1970) 25, 262-263; Orlandos(1969) 13,17.

Agia Tritē (ruin)
This is close-by the monastery, 2.3 kms. to the west of Kathenoi. Skouras reports that on his visit it was nearly completely covered by undergrowth. It is 7m. x 4m. He could see the remains of icons on the walls and reports that it is cross-vaulted (σταυροεπιστεγή) in design. Although Koder (1973) believed it was constructed after 1470, Skouras found a Latin inscription on the south wall with the date 1457, which provides a *terminus ante quem.* Late Byzantine.
Skouras (1998) 118; Papakonstantinou (1972) 162-163; Koder (1973) 163.

Mill Pond and aquaduct
Just above the monastery site a mill pond has been constructed. Much of the recent concrete structure has now collapsed to reveal the original stonework underneath. Whilst dating was not possible it was probably the base for the aquaduct that ran down to supply Chalkida. A level path leading southwest roughly parallel to the river appears to have been the initial course of the aquaduct, which after 3 kms. must have turned directly south into a 1.5km. long tunnel emerging close to Pissonas (**CN9**).
Just below it linked up with another aquaduct coming from Kampia (close to **Katō** Stenē - **CN17**) which has been explored by Reber and Schmid (2000). From this point it followed the southward course of the Lilas river for 8 kms. turning west just before the towers at Mytikas (**CW2**), again through a short tunnel, to Dokos (**CW3**).

Site: CN17 **Katō Stenē**

General
This area contains a good-sized village southwest of the town of Stenē at the entrance to the narrow valley from which it takes its name. To the west are indications around the tower of dispersed settlement. Although the Corine land survey shows most of the area as cultivated our visit indicated that much is secondary land of little value, especially around the tower. The village itself, to the northeast of the area, sits immediately above the river which has a strong flow throughout the year. Probably much of the area was given over to animal husbandry with the large area of summer grazing to the north, but the river also provided the power for watermills (see below). The distance between the tower and the church suggest two small settlements.

Medieval name - No name has been found which might be identified with the site

Tower (38.34.022, 023.47.728, height 245m.) Skouras no. 126, Lock no. 23
This tower is southwest of the village, just to the east of the modern road linking Kathenoi (**CN27**) with Katō Stenē, midway between the two settlements. It stands on a long low hill bounded on the east by a steep incline to a small river and on the west by fields running down to another river. It has good views in all directions. The northern wall still stands to a height of 4.5 metres, but the rest has fallen down. The first few courses contain un-worked stone and a few ashlar blocks with ceramic slip in-fill and what appears to be an old grinding wheel, indicating possible previous activity in the vicinity. Above this are rough rounded stones which were probably taken from the local river. The plastering is good and can clearly be seen on the underside of the remains of an east-west vault, which would have supported a floor at 6m. height. The northern wall, within which there were no signs of internal wood structural reinforcement, is over 1 metre thick with four insets for shelves and possible post holes at approx. 3m. height. The external dimensions are approximately 6.25 x 5.3(?) metres.
It stands in the middle of what appears to be a flattened raised area (see below) of approximately 1,250 sq.m., once bounded by walls, although whether these were agricultural or defensive cannot be defined. Outside the walls the land varies from 0.5 (on the west) to 1.5 metre (in the east) below this level. Sherds, identified as medieval by Lock, were found scattered in the fields around the tower. The land to the south has been left fallow indicating the possible existence of the foundations of other buildings there, which have prevented tillage of the area.
It has good views to other towers around, but its primary role does not seem to have been that of a nodule in the chain of towers linking the east and west coasts of the island. More probable is that it had some form of agricultural / elite function.
Skouras (1998) 100, Gounaropoulos (1930) 11; **colour plate 10.13(c).**

Other Remains
Nothing else was found on the surface during our visit. However, satellite pictures indicate the existence of a number of buildings around the tower and possibly the foundations of a large building to the south, next to some farm buildings. In addition, within about a kilometre from the tower spread out over the area there are four undated churches, for which there appears to be no logic unless there were a number of small hamlets around.

Water Mills
Locals informed us that the small river has a strong flow throughout the year, providing 2,500 m^3 in each 24-hour period and that until relatively recently there were four water mills on the river running down to Bounoi (**CN18**).

Agios Stefanos cave church
This sits on the banks of the river close to the centre of the village built into the side of the hill. The very low entrance (see plate) suggests its age but otherwise it is undateable.

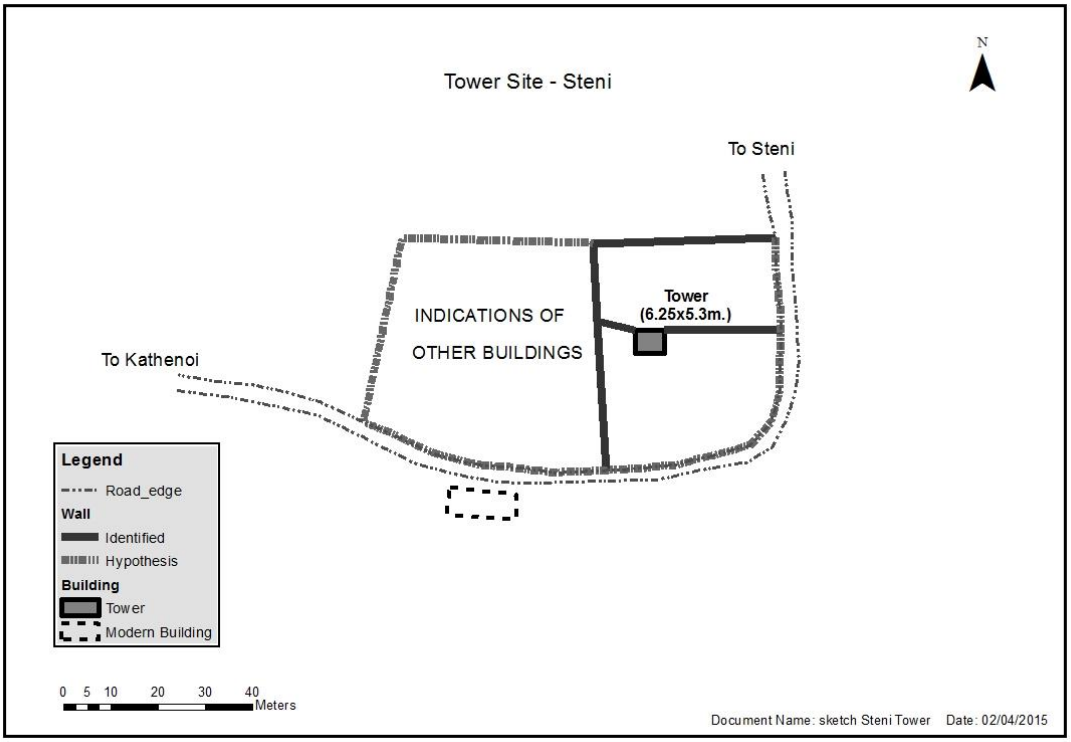


Figure A5.14 – Layout of Stenē Tower

Site: CN18 **Bounoi**

General Description
This is today a small agricultural village just below Mt Dirfis (1,743m.). It appears, however, during the medieval period to have been a thriving community and possibly the main town in the region. It sits astride a narrow ridge with steep slopes to north and south running down to valleys carved by the two continuously -running rivers fed by waters from the Dirfis mountain. There is little good agricultural land, although the slopes, given the plentiful water supply and excellent climate, may have supported vineyards. Most likely, since there are good pastures in the vicinity its inhabitants lived off trades linked to livestock (Cheese, meat from goats and cattle, wool from sheep) as a number of the locals still do today.
The seven churches in the village reflect a large and rich population, whilst the size of the remains of a tower, which is more than twice the size of any in the region indicates its possible use as an administrative centre. This is further supported by the remains of a strong wall with an entrance gate (Lock, 1986), possibly a general perimeter wall for the village (see **sketch**), although little could be

seen on our visit. No evidence could be found for a Middle Byzantine dating, so we must assume it developed during the Frankish period.

Medieval Name
Vumi*: 13th c.** – ***Vumi: Sanudo Torsello; ***16th c.*** – ***Vumi***: Stefano Magno.
There is much discussion about the possible identification of Bounoi with the name of ***Vumi*** noted by Sanudo Torsello. Whilst Koder originally considered this to be an incorrect writing of Kumi and thus believes that he could be referring to modern-day Kymē (Κύμη) to the east of the island,[1038] this has been disputed by Triantafyllopoulos, who believes the change from 'V' to 'K' to be too extreme. He preferred Bounoi (pronounced 'Vuni') as being a simple pronunciation change of 'N' to 'M', citing also possible archaeological evidence (but not specifying what) although without absolute commitment to this version. Skouras criticises both, believing that the physical evidence points clearly to Bounoi and ***Vumi*** being the same place.
The size of the tower, the existence of a probable circuit wall, and the large number of churches clearly indicates a place of sufficient importance for Stefan Magno, when discussing the taking of the island by the Ottomans in 1470 to note '„„*el luogo dei Vumi, el qual era del N.H.Piero da canal quondam Fillipo….'.*
Skouras (2003) 50; Triantafyllopoulos (1974); Koder (1973) 107; Stefano Magno **in** , **Chroniques gréco-romanes: ineédites ou peu connues, pub. avec notes et tables généalogiques**, 1873) 207, fol. 432.

Tower (38 33.588, 023 48.434, height 250m.) - Skouras no.29, Lock no.24
This is situated close to the south entrance and a steep slope leading down to the river and the road to Skounteri (**CN22**), Strangely it is not situated at the top of the slope although, if it possessed an original height of over 15 metres as other towers, then it had clear views over the surrounding countryside in all directions. Its location appears to have been dictated by the ease of defence to the south and the clear view it possesses directly up to the saddle of Dirfis mountain, where the place-name '***pyrgari***' indicates the prior existence of a watchtower. It has clear views to other towers in the area and is, contrary to the statement in Lock (1996), inter-visible with the tower at Skounteri, which is only 3.8 kilometres away
The tower's base is a massive 11m. x 11m., making it more than twice the average size of other towers in the region, indicating the importance of its position. It survives to 3.5m. on its southern side, reducing to a metre on the north (although the external ground level may have been raised). Set on the edge of a sharp slope, it is constructed of roughly-worked stones taken primarily from the river bed. These are set in approximate rows, bound with mortar and infilled with tile slips. No entrance could be found at ground level, so one at first floor or above is assumed. As with some other towers it has a 0.05m. indent in the wall (at 1.30m. height).
The overall impression, despite its size, is that the construction was functional rather than for display purposes. No evidence was found of quoining at the corners or any cut stone. All indications are that this was a military, communications and administrative centre even though by 1470 it was in the ownership of Piero do Canal.
Skouras (2003) 50, Lock (1986). Koder (1973) 107.

Prophētēs Ēlias church (38 33.471, 023 48.04, height 249m.)
Situated about a kilometre to the west of the village, it was a ruin and a new church has now been built over it. Undated.
Skouras (1998) 91.

Agioi Apostoloi church (38 33.588, 23 48.277, height 256m.)
On the west of the village, this is a single nave cross-vaulted (σταυρεπίστεγος) church, which has been renovated. It has two construction phases, the second being the addition of a vaulted narthex (only walls remain) and possibly a new wall above ground floor level during the Frankish period. It has wall frescoes, although much damaged. The foundations of a one metre wide wall which runs to the

[1038] This view he corrected later – Koder and Hild (1976) 280-281.

northwest from the church were noted. This may have been an extension of the village wall, but no other evidence could be found to confirm this. Late Byzantine.
(**Plates CN18.4 and 5**) Skouras (1998) 90; A. Delt (1972) 27, 372.

Agia Paraskevē church (38 33.575,023 48.366, height 250m.)
This was a ruin and a new church has been constructed on its foundations. Undated.
Skouras (1998) 91.

Agios Demetrios church (38 33.575, 023 48.366, height 248)
A simple, although large, church with a new wooden tiled roof. The remains of the old south wall have been left in situ. Undated.
Skouras (1998) 91.

Agios Stephanos church (38 33.579, 023 48.409, height 248)
A pile of stones is all that remains of this church. Undated
Skouras (1998) 91, Triantafyllopoulos (1974).

Koimēsē Theotokos church (38.33.598, 023 48.437, height 250m.)
Renovated church of which only a few original icons have been saved. It is immediately north of the tower and may have acted as the tower chapel. Late Byzantine
Skouras (1998) 91,

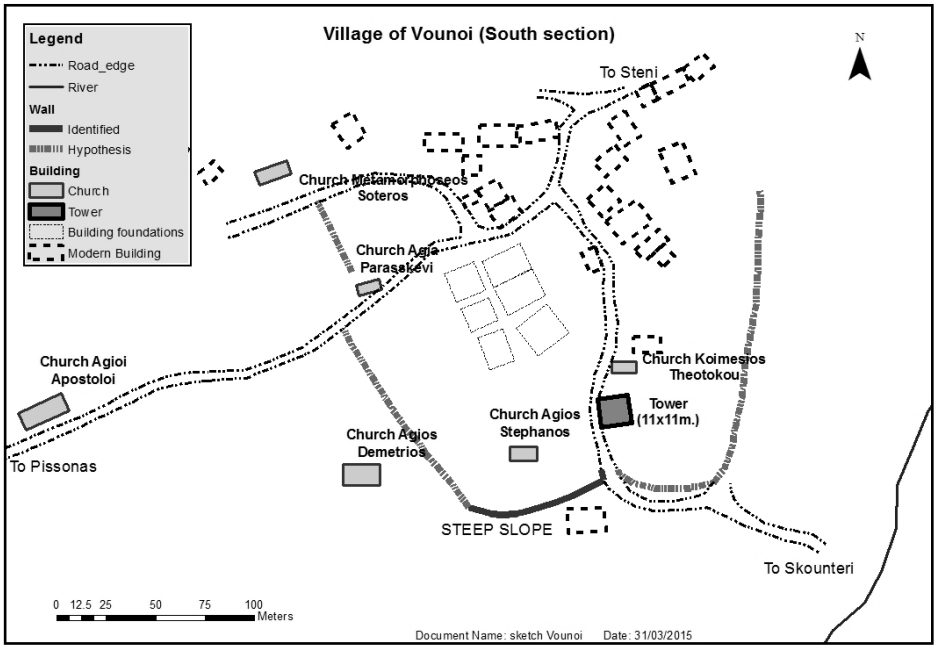


Figure A5.14 – Archaeological remains in village of Bounoi

Metamorphōsē Sōtēros church (38 33.639, 023 48.437, height 270m.)
This is in the cemetery. It is the second cross-vaulted church in the village but is considerably larger and has no narthex. It possesses a semi-circular apse, frescoes and sculptures built into the walls. There had been an older church on the same site. Late Byzantine.
Skouras (1998).90-91, Georgopoulou (1977) 372; A. Delt (1972) 27, 372.

Site: CN19 **Pissonas (Mostra)**

General
This prosperous large village lies on the western edge of a rich agricultural plain just to the north of the juncture of a number of river systems, which flow into the largest river on the island – the Lilas.[1039] The (Roman?) aquaduct that supplied the city of ***Negroponte*** (Chalkida) with its water also passed just to the southeast of the village. To the south is the probable route of the main road from ***Negroponte*** (**CW1)** which ran up the Lilas valley, following the course of the aquaduct and then turned east towards Kathenoi (**CN27**). The village is therefore in a very strategic location and may possibly have also been the base for engineers maintaining the aquaduct.[1040]
Koder and Hild (1976) 243

Medieval Name
The medieval name has not been identified but the tower is also known as 'the tower of Mostra' (πύργος του Μόστρα) according to Skouras, although he could not find any rationale for this name.

Tower (023 43.303, 38.31.746, height 107m.) - Skouras no.111, Lock no.22
This is situated on a slight rise in the centre of the old part of the village. It has undergone many changes with new windows and, as reported by Skouras, a fireplace on the ground floor. It appears to have been inhabited until recently and is joined to a house on the northeast corner.
The walls, approx. 6.90m. square, are of rough stone bonded with mortar in-filled with tile slips, and there is some quoining on the corners. There are regular post holes in the stonework at approximately one metre spacing, similar to those on the tower at Skounteri (**CN23**), indicative of internal wooden re-inforcement but this could not be confirmed, since access could not be obtained to the interior. One feature of special interest architecturally, and not seen on other towers, is that from about 1.5 metre height down to the ground the walls splay slightly outwards and the quoining stones are much larger, presumably to provide more structural stability, but also giving a better defensive capability. Lock reports the walls as 1.5 metres thick but, given this splaying, they may be considerably more at the base. This slight scarping at the base and the quoining may suggest a relatively late construction date in the 15th century or even in the Ottoman period.
Entry appears to have been on the second floor, and there is clearly an arched door at this level in the south wall (now blocked up). The tower rises to a total height of 12 metres, but whether this was the original or not cannot be confirmed. Given the openness of the surrounding area a great height would not have been critical if it had a strategic rather than an agricultural or elite role. Lock's supposition that the builders had eschewed a commanding position for one close to the economic resources is incorrect. Its siting is actually very precise, allowing line-of-sight between the hills southwest down the Lilas valley and southeast to Lechries **(CW9**), whilst also communicating with the towers at Kathenoi **(CN27)** and Gides **(CN20)** to the northeast**.** Siting it on a seemingly more appropriate close-by hill would have precluded at least one of these.
Skouras (2003) 91; A. Delt (1964) 214; Triantafyllopoulos (1974) note 21; Koder (1973) 101; Lock (1996).

[1039] The European Corine land survey overestimates the potential agricultural area. During the late medieval period much of the outlying land would have been forest.
[1040] Possibly even the rationale for the establishment of the village in the first place, since the remains of an early Christian church suggests it was already in existence in the Roman period.

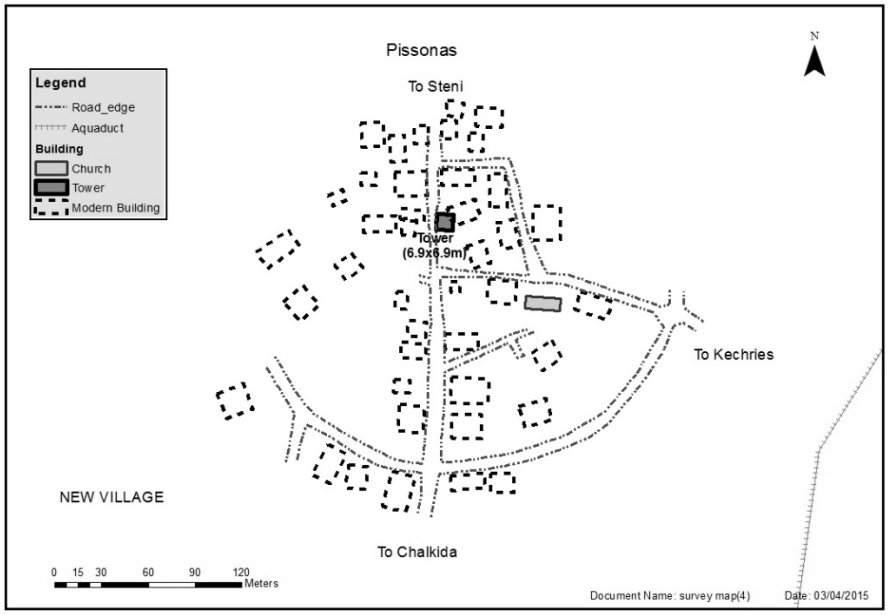


Figure A5.15 – Pissonas village

Early Christian church (023.43.330, 38.31.732)
In the area of the Agios Georgios church the mosaic floor, 5.60 x 4.15 m., of an early Christian church has been discovered.
Skouras (1998) 159-160; A.Delt.(1966) 21, 237-238.

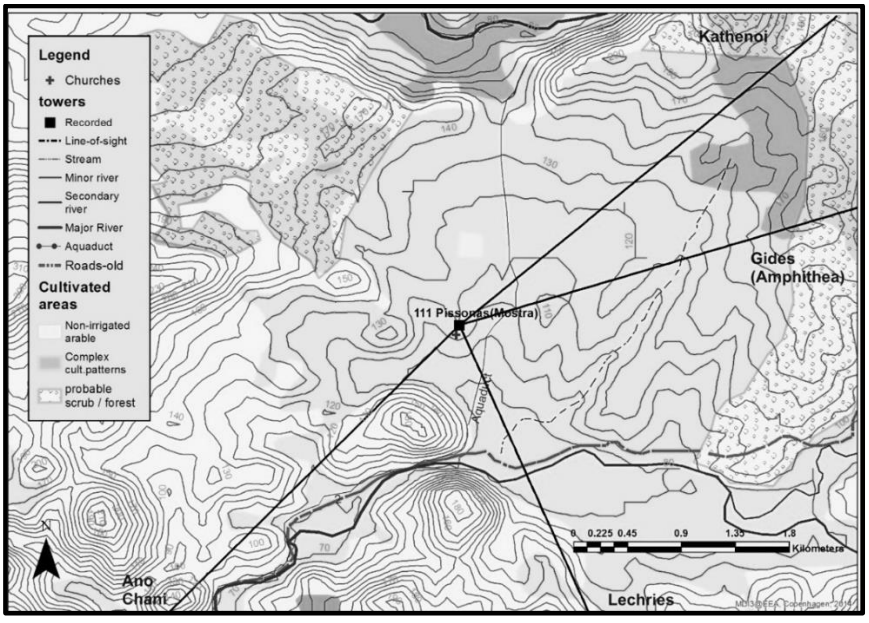


Figure A5.16 – Pissonas area

Agios Spyridon church (023.43.308, 38.31.766)
This is a modern church close to the tower. There may have been another original contemporary with the tower in this position, but no evidence could be found. Skouras calls it post-Byzantine. Not included in analysis.
Skouras (1998) 160.

Aqueduct
This runs up from Mytikas (**CW2**) alongside the Lilas river and, while at Pissonas the river and one spur turns east, a second continues north. Immediately to the northeast of the village at a height of 110m. the aquaduct seems to have moved underground along a tunnel of about 1,500m. It was not possible to identify the position of the tunnel, but the general direction is shown on the HMGS (1970) map and a local informed me that at one time he had descended about five metres down steps to see it.[1041]

Other Remains
The circular nature of the road around the old village for no apparent reason seems to indicate the prior existence of some form of wall, but no trace of this could be seen on our visit.

Site: CN20 **Gides (Amphithea)**

General
This large village, northeast of Chalkida close to the foothills of Mt. Dirfis, sits atop the most westerly of three ridges, between which flow the tributaries of the river Lilas. It is a narrow ridge with steep sides and there is limited good agricultural land for grain cultivation but the continuous flow of water throughout the year would have made it ideal for vineyards, and livestock grazing for which its height at between 170 and 220 metres provided a good climate.

Medieval name – none identified

Tower (38.32.838, 023.46.998, height 250m.) Skouras no. 39
This tower, called *'Pyrgaki'* by the villagers, is in the north-western end of the village. It is surrounded by Agios Ioannis church and other older buildings, although their date was impossible to estimate. Its position is now overgrown with trees and little remains of the tower above four metres, although the vaulting for the first floor is still standing, making it similar in style to the tower at Skounteri **(CN22**). It was impossible to measure the size, and two walls are completely missing.
Skouras (2003) 57.

Koimēsē Theotokos church
This is situated to the north of the tower. It is the church of the cemetery. It has been completely renovated and no trace of earlier construction could be seen. Skouras found an inscription dated to 1768 on a large piece of marble and dated it as post Byzantine, although it is more likely that the original, if there was one, was contemporary with the tower. Undated.
Skouras (1998) 96.

Agios Ioannis Prodromos church
This is a second church (now renovated) also within the boundaries of the cemetery. It is cross-vaulted (σταυροεπίστεγος) in design. It was under reconstruction during Skouras' visit, who noted the existence of a few old wall paintings. Undated.
Skouras (1998) 96.

Site: CN21 **Agios Iannis (Gides)**

General
This is the next ridge 2 kms. east of Gides (Amphithea) and is south of the village of Bounoi (**CN18**). The ridge is even narrower than that at Gides and the soil appears poor and rocky in places, but it

[1041] A similar but much shorter tunnel had also possibly been constructed at Dokos, where the aquaduct turns west from alongside the Lilas river to head towards Chalkida, although the possibility also exists that it took a detour around the hill.

commands a strategic position at the crossroads of the three settlements Amphithea, Skounteri and Bounoi.

Medieval name – none identified

Tower (38.31.742, 023.47.816, height 208m.) - Skouras no. 38, Lock no. 27
This stands to a height of about seven metres and is 5.70m. x 5.50m. with a wall thickness of 1.1m. The entrance is at ground floor level, although it was difficult to distinguish if this was original. There was no trace of internal vaulting. At a height of about 5 m. a line of put-log holes could be distinguished. Construction was of rough rounded stones, possibly from a local river, irregularly placed in approximate rows and bonded with mortar and tile in-slips. There was no quoining, whilst its surviving height provided no other clues as to its architecture.
Skouras (2003) 56-57. Triantafyllopoulos (1974); Lock (1996);

Agios Ioannis Theologos (38.32.693, 023.47.841)
This stands 50 metres from the tower. It has been renovated and nothing remains by which we can date the original church.
Skouras (1998) 96.

Site: CN22 Skountéri (Pyrgos)

General
This is an abandoned village on a high ridge just to the southeast of Bounoi (**CN18**). It is in an area of limited cultivable land, although small rivers to the west and east would have provided good fodder for livestock. Its role appears to have been military in character from the name (see below) and its strategic positioning. Any military force stationed here could move rapidly (within hours if mounted) to support the area of Psachna in the west, the Lilas valley to the southwest, the fortress of Cupa to the southeast, south to Eretria, and even north over the Dirfis mountain pass to the Aegean shoreline to the northeast. Communication is also excellent and there is line-of sight in all directions**.** There are three small churches in the area of the tower, at least one of which was probably constructed on the foundations of an older church contemporary with the tower, but no evidence could be found for this.

Medieval name
No documentary record of the position has been found, but the place-name appears to have a military root. 'S*cuderia*' means 'stable' in Italian, whilst the verb '*escudar*' is 'to shield in Spanish and also came to mean, in the form '*escuderaje*', 'service as a page or squire'.[1042] This suggests that the area was the base for some form of mounted military detachment.[1043]

Tower (023.48.918, 38.32.035, height 302m.) Skouras no. 123, Lock no. 025
This is a large tower, which still survived much in its original form in 1975 when Skouras first visited it. Today much of the walling has now collapsed but a very heavy barrel vault and one wall to a height of 16m. still remain. The walls measure 8m. x 8m. and are 1.5m. thick at ground level.
Construction is of rough stone laid in approximate rows bonded with mortar and tile in-slips, all in a similar style at all levels suggesting it was built at one date and there has been no later reconstruction There are regular lines of post-holes and timber was inset in the wall to improve its structural integrity,

[1042] Roberts (Ed.) (2014) **A Comprehensive Etymological Dictionary of the Spanish Language with Families of Words Based on Indo-European Roots**. XLIBRIS..
[1043] Two deliberations of the Venetian Senate from the early 15th century provide an idea of the size (and limited number) of the professional forces on the island. The first – document no. 1784 of 17/6/1420 – notes the formation of two new companies of twenty Greek soldiers, while the second – document no. 1810 of 7/6/1421 - notes that five companies in all were based on the island: Thiriet (1958), II.

whilst the massive barrel vault, rising to approximately eight metres, saved it from complete collapse in an earthquake in 1985. This latter feature distinguishes its architecture from all other towers on the island (except that at Gides **(CN20**) and Steni(**CN17**)) and is more reminiscent of the Byzantine towers of Chalkidike than those surviving at Belos, Politika, Mytikas and Avlonari.
There are arrow slits on the first-floor level and were large windows with a simple wooden lintel on the second floor on each side (according to Skouras). On the north side at ground level there is a doorway, again with indications of a wooden lintel, and a second feature which separates it from most of the other towers on the island. Two stones suggest that there may have been a rounded arch also at some point above the doorway, but there is no evidence of any dressed stonework on either this or any other opening, or of any quoining on the corners. At about 0.6m. from the ground there is a 0.1m inset in the wall on all sides.
Skouras (2003) 99; Lock (1996); Koder (1973) 101; **colour plate 10.13(d).**

The village
This is now abandoned, and we found only two people still living in the vicinity. The remains of a substantial number of buildings can still be seen. The open nature of the layout of the village with no apparent centre, and a number of large buildings tend to support the hypothesis of this being some form of military centre or stables.

Site: CN23 **Pournos**

General
This village lies at the junction of the Steniotiko, Kampiotiko and Kalamantami rivers, which at Pissonas become the Lilas river. No medieval buildings can be discerned in the village and Skouras notes no church from the era. There is good agricultural land around although it may have been susceptible to flooding. The roads linking Pissonas (**CN19**) with Skounteri (**CN22**), and the latter with Mistros (**CN24**) pass close-by.

Medieval name – none identified.

Tower (23.48.591, 38.31.507, height 249m.[1044]) Skouras no. 124
This lies to the northeast of Pournos and does not seem to have been directly linked to it. Built into the side of the hill, little could be understood of its architecture, although construction was of rough stone with tile in-slips bonded with mortar. Skouras calls it a tower, but this does not seem likely. The walls survive to a height of about 4m. and are 5.90m. x 7.20m. with a dividing wall in the middle of the long side. Their thickness of 0.6 – 0.7m. is insufficient for a tower, and the limited viewshed and dividing wall suggest a (fortified?) house, the role of which may have been linked to a classical era olive grinding stone found in the area.
Skouras (2003); (**plates CN23.2-3**).

Agios Demetrios church
This modern church uses the eastern wall of the above building as its own wall. Whilst the original was probably contemporary with it, there is no clear evidence of this.

Site: CN24 **Mistros**

General
This is a secluded but well-populated village 18 km. north of Eretria. There are three sites - the old village, which was on the road to Seta, Ano Mistra (or Kastelli) slightly to the northeast, and the modern (possibly also originally a Byzantine?) village close to the river, previously referred to as '***Chani'***,

[1044] Skouras' height of 190m. is incorrect.

where nearly all the population now reside.[1045] The land is sufficient together with the plentiful water and upland grazing to have supported a good-sized community, attested by the number of churches in the area.
Koder and Hild (1976) 221.

Medieval Name – none identified.

Agios Demetrios Church
This is in the old village a good way from the centre at a height of 340m. Skouras dates it as post Byzantine.
Skouras (1998) 144.

Agios Basileios Church – ruin
The ruin lies in the area of Lēstarchou at a height of 360m. The walls survive to between 0.60m. and 2m. Skouras dates it as Byzantine.
Skouras (1998) 145.

Profētēs Ēlias church
On a rise to the south of the village. Dated as post Byzantine by Skouras.
Skouras (1998) 145.

Agio Athanassios church
This is a new church at the top of the village, which a local informant told us had been constructed on the site of an older one. Not included.

Tower (23.50.584, 38.31.281, height 225m.) - Skouras no.98, Lock no. 26
Half demolished by the army in 1948, this tower is between the Agios Athanasios and Agioi Anargyroi churches at the top of the village. It is approximately square with sides 9.40m. x 9.20m. Lock identified signs of a circuit wall, but little remained on our visit. Different to nearly all the other towers studied, its walls, a massive 1.45m. thick, show no sign of any vaulting nor do they reduce as they rise to support the upper floors, which appear from the regular lines of internal holes to have had cross-beams as their base. They do, however, include wooden reinforcements set laterally into the walls (see picture). Two water spouts at a height of 4m. were also clear on the eastern wall. The tower survives to a height of approximately 10m.,[1046] although half the southern wall has fallen down, so it was impossible to distinguish if entry had been on the ground or second floor. Construction is of neat lines of rough field and river stones, similar to the Skounteri tower, set in a considerable quantity of highly fired tile in-slips bonded with minimal mortar.[1047]
There are arrow slits set into the three surviving walls (and partially surviving on the southern face) at a height of approx. 6m. Those on the north and western faces exhibit a special feature not seen elsewhere, and are angled to look in a specific direction across the valley (see **chapter 9** for a full discussion)
Skouras (2003) 84; Lock (1996).

Possible tower
To the east of the village at a height of 659m. there is a conical hill with the name 'tourla' shown on the HMGS (1970) map. My local informant noted that the locals also call it '*Kastelli*', since there had once been a fortification there.[1048]

[1045] This name, meaning *wayside inn*, supports my delineation of a road passing from Skounteri east towards the Cuppa fortress (**CE17**).
[1046] Lock incorrectly notes 5m.
[1047] My visit colleague, Georgos Karahalios, an experienced potter, noted that some showed signs of having been fired at 1200º C., suggesting they had previously been used as structural bricks in an older building.
[1048] Evgenia Liaskou from the local tavern. She also informed us that the new Agios Athanasios church had been constructed on the base of an earlier one.

CN25 Makrykapa- Agios Athanasios

General
This is an area to the north of Kathenoi (**CN27**) around the small river that emerges from the 'Nyfē' gorge. Papakonstantinou links it to the villages Kriza and Palēochori, which have now all but disappeared except for a church (see below), and by the name of the former to the establishment of Albanians in the area by the Venetians at the beginning of the 15th century.[1049] No early church or tower has been identified in the village of Agios Athanasios to the east, and we can probably assume that this area was forest in the medieval period. To the west the village of Makrykapa appears to have its origins in the foundation of the monastery on the banks of the river (see below).
Papakonstantinou (1972) 201-203.

Medieval name – none identified

Zōodochos Pēgēs Monastery, Makrikapa
Papakonstantinou believed from local folklore that there was a monastery in the position of the village's cemetery. He also saw indications of an old church in the foundations of the new one, but Skouras found nothing on his visit. Undated. Not included.
Skouras (1998) 140; Papakonstantinou (1972) 178.

Analēpsē church
This is in the position of the probable village of Kriza. It has three apses and internally the three aisles are separated by arches. There were originally wall frescoes, but these were painted over when the church was renovated. The village has a direct view back to the tower at Kathenoi (**CN27**). Probably 15th c.
Skouras (1998) 59; Papakonstantinou (1972) 202.

CN26 Stavros-Kontodespoti

General
These two villages sit astride the road north from Psachna. To the east at Stavros ('crossroads') it is joined by another major road from the direction of Kamenitsa (**CN4**) and Politika **(CN2**). It appears to have gained its importance both from this and the possible existence of a beacon at this point (see below) linking ***Kastri*** (**CN5**) with ***Cleisura*** (**NE24**).

Medieval name – none identified

Old Church (23.38.259, 38.37.957)
This is an old church just northeast of Kontodespoti, shown to me by my guide.[1050] We could not gain access to it. Undated.

Theoretical beacon point no. 247
A hill just above Kontodespoti is one of the few points directly viewable from Kastri (**CN5**) to the south. This same hill also has a direct line-of sight towards Agios (**CN28**) and thence to ***Cleisura*** (**NE24**).

[1049] A similar name, Krieza **(SC4),** also probably with Albanian roots, is found in southern Euboea close to Dystos.
[1050] Georgos Karahalios.

Site: CN27 **Kathenoi**

General
This is a substantial village set on a small hill overlooking an area of excellent agricultural land. Water is available throughout the year in the various streams and small rivers that traverse the area. It is today on the main road linking the modern town of Nea Artaki on the coast with the large village of Steni at the foothills of Mt. Dirfis.
It is clear from the existence of the tower and the plethora of old churches in the area (eight in all, although the location and dating of four is not known) that this was a substantial settlement in the Frankish period. To the west is the area of γραμονή or Γραμμονή (possibly derived from the French graminées – grass). This is lacking in water but has fertile soil suitable for grain growing to supply all the surrounding villages.
Papakonstantinou (1971) 38.

Medieval name – none identified

Tower (38.34.270, 023.46.426, height 242m.) - Skouras no.56, Lock no. 21
The tower no longer exists but, as noted by Papakonstantinou, was just opposite the central church of the village, between the school and the police station.
Skouras (2003) 64; Papakonstantinou (1971) 141; Triantafyllopoulos (1974) 218, note 21; Lock (1996).

Agios Georgios church (height 230m.) – ruin (unseen)
200m. west of the village close to new houses. According to Skouras (1998) it is clearly Byzantine from the style of the walls which existed on the southwest corner to a height of over 2m.
Skouras (1998) 116; Papakonstantinou (1972) 103.

Agios Georgios church
In the centre opposite the new village church. It may be Byzantine, but Papakonstantinou dated it to the 14th century.
Skouras (1998) 117; Papakonstantinou (1972) 165.

Zōodochos Pēgēs (Ambagē) (height 220m.) – ruin (unseen)
About 1.3 kms. west of Kathenoi but covered with such undergrowth that Skouras could make nothing out. Undated.
Skouras (1998) 118; Papakonstantinou (1972) 166.

Agia Tritē (Margalia) church ruin
Cross-vaulted church ruin close to village to the southeast. The A. Delt. provides a full description of its architecture. Late Medieval.
Papakonstantinou (1971) 163-164; A. Delt. (1960) 151.

Four churches
Skouras notes four churches in the area, which have now disappeared - **Agios Konstantinos, Agios Ioannis, Agia Theodora, Prophētēs Ēlias**. Their construction dates are unknown, but they indicate the prior level of prosperity in the region.
Skouras (1998) 118.

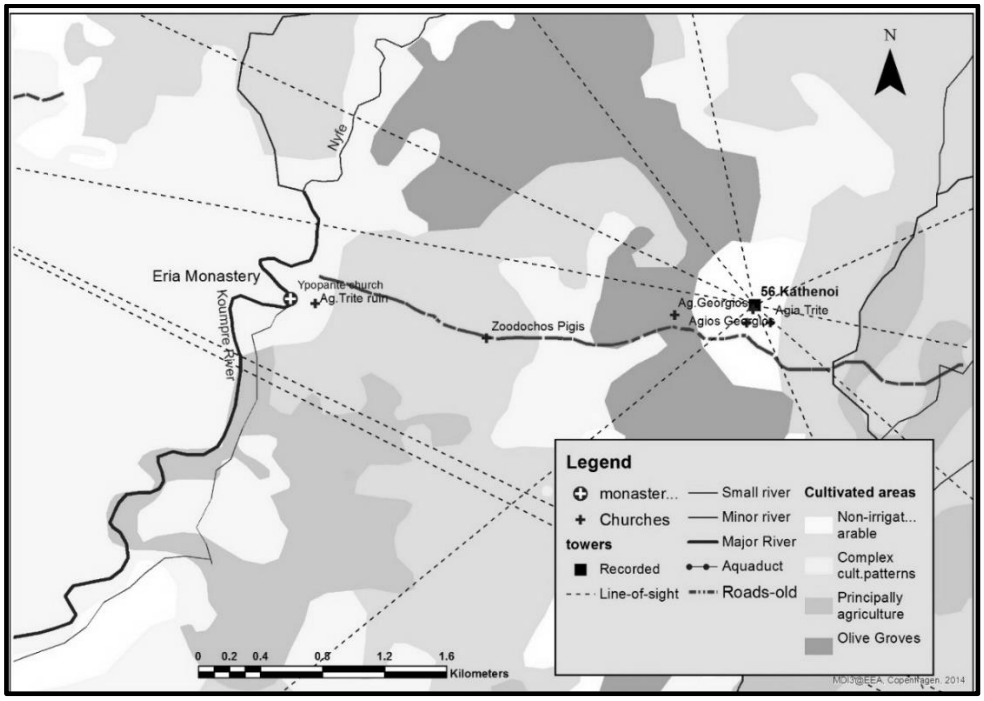


Figure A5.17 - Kathenoi – Eria Area

Site: CN28 **Agios-Akres**

General
These are two small villages just to the southeast of ***Cleisura*** (**NE24**) on the probable old road north from ***Kastri*** (**CN5**). At this point the road meets up with the current road from Psachna, which may also have been the old road south to the village of Kamaritsa **(CN4**), and Politika (**CN3**).

Medieval name – none found

Agios Blasios church
This is to the south of Agios on the road to Kamaritsa (**CN4**). Skouras knew of it but by the time of his visit it had disappeared. Late Byzantine or Ottoman.
Skouras (1998) 120.

Agios Nikolaos church
This is to the east of the village of Akres (or Akrai). The present church is modern but Skouras reports that in 1968 Byzantine foundations were identified together with a quantity of sculpted stonework.
Skouras (1998) 70.

Hypothetical beacon points no. 201
No trace of a tower has been found in the vicinity but the height of two local hills used as trigonometric points on the HMGS (1970) map close to each village – Agios 663m. and Akres 599m. - make them the only points visible both from the north (***Cleisura***) and south (***Kastri***), thus providing a communications link between these two Byzantine fortresses.

Possible tower no.248
Another point at 613m. height, just to the south between them, also has the name '*Taouli*', possibly a corruption of 'tourli/tourla', which at other points denotes a tower location. It is exactly where the two probable old roads meet and would have controlled all movement north and south.

Possible church and settlement – Kyparision
This small village lies to the southeast of Akres. The circular apse (with a small aperture for a slit window) of the Panagia church, just above the modern village and next to the cemetery, suggests an early dating. Most of the building has now been renovated and we could not gain entry on our visit to verify further, but locals indicated that the original (now abandoned) village had been further up the mountain. Insufficient evidence to include.

CN29 Kampia

General
Today these are two villages - Kampia and Katō Kampia – which sit astride not only a continuously flowing river (the source of the Roman(?) aqueduct running to Chalkida) but were probably also on the key road leading east up the river-valley over the mountain pass to settlements on the Aegan shore. 8 churches are noted on maps of the area but only one is mentioned by Skouras (1998) with an early dating. The existence of at least one settlement here in the medieval period seems certain, but further research into the other churches may identify more.

Agia Kyriakē church
This is noted in his index by Skouras but without detail in the body of his listing. Undated.
Skouras (1998) 33.

Appendix 5.2.4 Central West Region

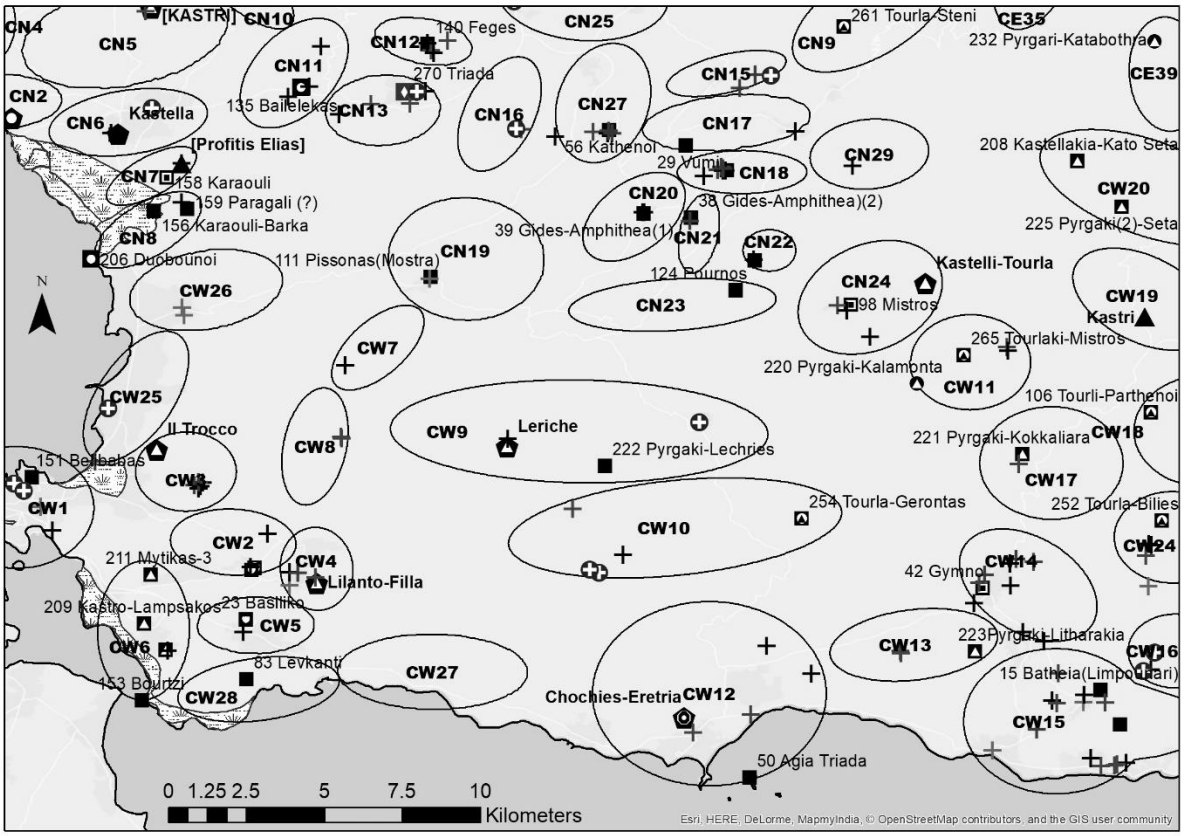


Figure A5.18 – Central West Euboea

This is the richest region on the island. In the Archaic and classical periods the two cities of Chalkis and Eretria competed for control, but by the medieval period the latter had declined and its place was taken by Amarynthos (in the medieval period called ***la Vatia***).To the north and east hills provide a natural barrier, whilst the sea bounds the south and west, where from the classical period a bridge has existed to the mainland.

The wealth of the area arose primarily from its position controlling north-south trade and as an entrepôt for exports from Boeotia on the mainland opposite, but there is also substantial good farmland, especially in the irrigated Lelantine plain and above Amarynthos.

CW1 Chalkida - *Negroponte*

General

The medieval city sat astride the straits and the bridge to the mainland, and included not only the fortress but substantial suburbs outside the walls both to the north (Neapoli) and south (Bourkos). Detailed surveys have been undertaken by a number of researchers and it is not within the ambit of this gazetteer to do more than touch on the features that are relevant to the present study.

Medieval Name

Negropont[e]*: 12th c. – *Euripus*:** Venetian privileges (1187)[1051]; **13th c. – *Negropont*:** Villehardouin;[1052] **14th c. - *Negropont / Negropo / Negroponte*:** *portolan* charts (see **chapter 3), *Εύριπος: Pachymerēs,[1053] Chronicle of the Morea(H),[1054] ***Έγριπος*:** Chronicle of the Morea(T**), *Nigropons* (**Venice);[1055] **15th c. – *Egripo [sive] Nigroponte*:** Christopher Buondelmonte (1420), ***Negroponte***: Sonetti(1485); **16th c - *Negroponte***: Agnese (1555a), Bordone (1528)).

For the 13th to 15th centuries the form of the name was in flux. It appears that Buondelmonte, writing in the second decade of the 15th century, felt it necessary to use two names, but by the 16th century the use of ***Egripo*** or ***Euripus*** had disappeared from common parlance.

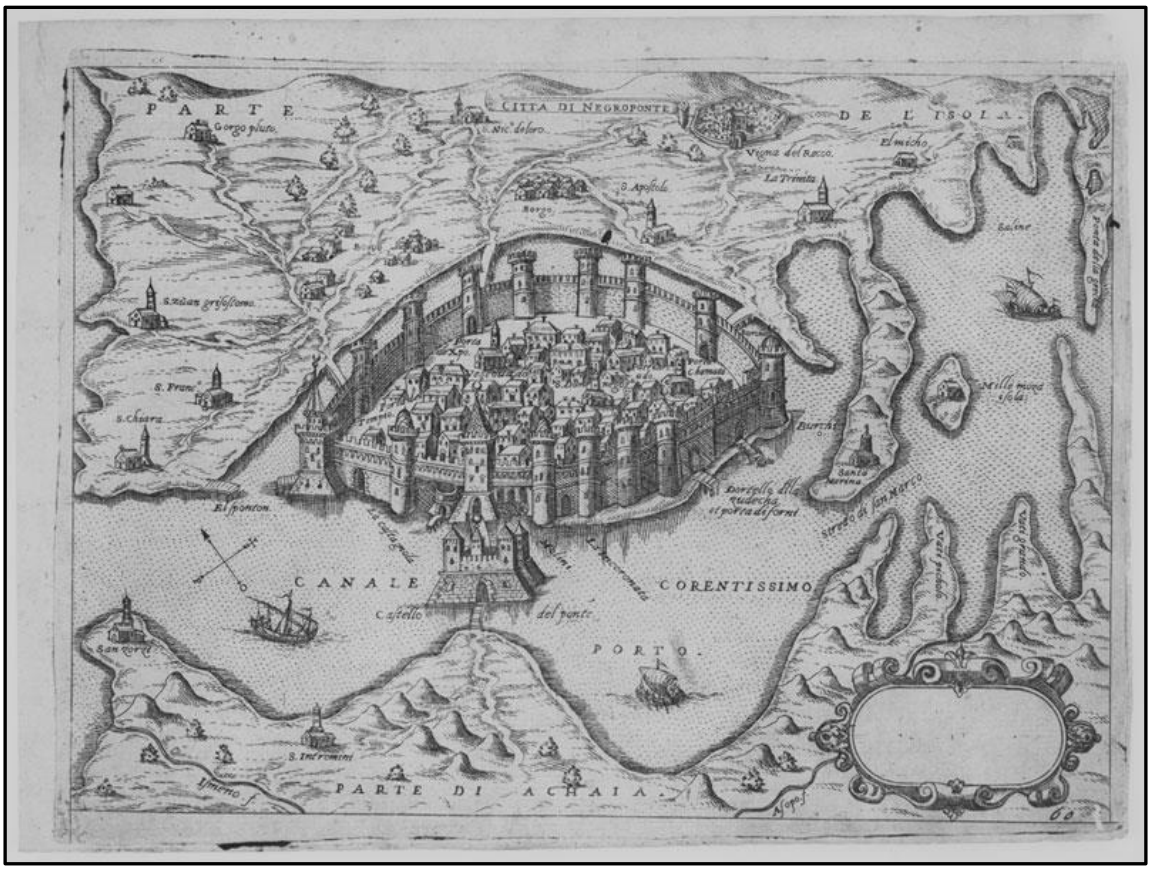


Figure A5.19 – '*Citta de Negroponte*' by Camocio (1574)

[1051] Tafel and Thomas (Eds.) (1856) **Urkunden zur älteren Handels- und Staatsgeschichte der Republik Venedig : vol 1 [814-1205]**, Vienna., 184 – document outlining privileges granted by Emperor Isaac to the Venetian Republic

[1052] Marzials (Ed.) (1908) **Memoirs of the Crusades by Villehardouin and De Joinville**, London: Everyman, xxvii and 30. This was probably written in the second decade of the 13th century.

[1053] Failler (ed.) (1984-2000) **Georges Pachymérès: relations historiques**, Paris, vol II, 429 line vi.

[1054] Schmitt (Ed.) (1904) **The Chronicle of Morea: edited in two parallel texts from the [Greek] MSS of Copenhagen and Paris, with introduction, critical notes and indices**, London: . This is the spelling in the codex **H**avniensis. In the codex **T**aurinensis it is written in the corrupted form ***Έγριπος***, which was transformed via '***τη [ν Έγριπον]'*** into the Italian ***Negripon[te]***, This was understood by the common man to mean the black bridge which spanned the strait between the city and the mainland and even led to the island being referred to as ***Nigra*** by Villehardouin (see above).

[1055] Thiriet (ed.) (1971a) **Déliberations des assemblées venitiennes concernant la Romanie, tome I (1160-1363)**, Paris, 291 no.144 (1308). Reference is made to the '*baiulus Nigropontis'.*

The Fortress - Skouras no.149
It is not known exactly when the new fortress replaced the old classical town of ***Chalkis*** at the ***Arethousa*** spring two kilometres to the east,[1056] but by the time the men of the Fourth Crusade passed through they were able to comment that it was a '*very good city'*.[1057] A view first published by Giovanni Francesco Camocio in 1574, which appears to have been based on engineers' drawings from before 1460,[1058] although having many inaccuracies, provides a good conception of the fortress and its environs. The walls, moat and tower in the centre of the strait together with the local roads and a number of churches are clearly shown.

During the late 19th century the walls were pulled down and the moat filled in so minimal archaeological evidence exists of its original form. A map of the area is however preserved in a British Admiralty map from 1860,[1059] as is a topographic plan prepared sometime after the departure of the Ottomans in 1833[1060] and sketches and photographs from the mid to late 19th century (see Euripos tower below)
Kontogiannis(2012); Mackay(2014); Skouras(2003) 112-115; Koder(1973) 67-86; Bakhuizen (1985).

Euripos Tower
Both early drawings of the city of ***Negroponte*** - those by Camocio (1574) and by Coronelli (1688) - show a massive tower in the channel controlling the movement of shipping north-south and the approaches to the fortress from the landward side.[1061] A drawing by Stackleberg (1829-1834) also shows it, as do photographs of the tower later in the century immediately prior to its demolition.[1062] This is not a simple tower but a strong fortification in its own right, with two towers joined by a fortified wall through which passed the entrance via a drawbridge to the city itself.

Ḇalalalaiou tower – Skouras no.162
This is situated just to the north of the fortifications and has been shown to be a tower from the Ottoman era.[1063] However, in a view of the city from the east by Coronelli dated 1696, which appears to be generally accurate and may be based on Venetian engineers' reports following the siege in 1688, no tower-like structure is shown in this position.[1064]
Salemi (2002); Skouras(2003) 117.

[1056] Kontogiannis (2012a) Euripos-Negroponte- Egriboz: material culture and historical topography of Chalcis from Byzantium to the End of the Ottoman Rule. **Jahrbuch der Österreichischen Byzantinistik**, vol. 62: 29-56. The author suggests a date between the 6th and 9th centuries. Chalkis is mentioned as a Byzantine town in Hierokles (533-535) - Hierokles 645.6.
[1057]Memoirs of the Crusades by Villehardouin and De Joinville, 30.
[1058] MacKay (2014a) The Angiolello Manuscript and other Contemporary Sources, Maps and Views of the fortress of Negropont. [Accessed 10/4/2014], https://digital.lib.washington.edu/researchworks/bitstream/handle/1773/25309/GMA_04_2014_1-23.pdf?sequence=1
[1059] British_Admiralty (1860)
[1060] Kokkinis and Gikas (1974) Το πρώτο πολεοδομικό διάγραμμα του κάστρου της Χαλκίδας και κατάλογος των κτισμάτων. **Archeion Euboikon Meleton**, 19: 277-291. For a recent plan see Kontogiannis(2012).
[1061] This is heavily stylised and does not reflect the actual tower shown in sketches and photographs from the 19th century.
[1062] Author's copy extracted from: Stackelberg (1829-1834) "La Grèce. Vues Pittoresques et Topographiques". J.F. d'Ostervald, Paris, .
[1063] Salemi (2002) Το Ρολόϊ της Χαλκίδας [The Chalkida Clock]. **Archeion Euboikon Meleton**, ΛΔ': 63-84.
[1064]Coronelli (1696) "**Citta di Negroponte, dedicata All'illustrissimo Signore Conte Leopardo Martinengo**". Biblioteca nationale Ambrosiana, 285.c.17 008144.



Figure A5.20 - 19th century view of Chalkida[1065]

Ḇelēmpampa Tower – Skouras no.151
Now demolished, this was situated in Neapoli in the position of the present high school (γυμνάσιο) but, as with the Ḇalalaiou tower, it is not shown on either Camocio's or Coronelli's views. Its dating is uncertain, but the name most probably indicates an Ottoman period construction.
Skouras (2003) 117; Triantafyllopoulos (1974).

Two possible free-standing towers within fortress
Coronelli's (1696) view from the east indicates the existence of two possible free-standing towers within the walls of the fortress. Whilst his drawings tended to include a great deal of imagination and are very westernised, one of these towers is exceptional by its height and size and does not appear to have been part of the walls. In this particular drawing the artist also appears to have tried to be accurate, correctly drawing a number of minarets, a large mosque and what appears to be a blockhouse for cannons added to the eastern wall of the fortress.

Agia Marina - possible tower
A photograph from the 19th century and the British Admiralty (1860) chart show a lone windmill standing at a height of 54m. on this hill to the south of the fortress. Coronelli, however, shows it as a fortified area, while indicating a whole series of windmills to the north of the city in a much more logical position facing the northeast prevailing wind. Could this originally have been a beacon tower, later converted into a windmill, similar to that attested by locals in Zarakes (**SC10**) in southern Euboea? Unless a very tall tower once existed (see above) within the walls such a tower would have been necessary both for control of shipping in the bay to the south and for communication eastwards to the tower (Agios Nikolaos – **CW6)** at the strait close to the mouth of the Lilas river, since otherwise the fortress was blind.There also existed in this position the church of San Marco a Cazonelis
Koder (1973) 96; Koder and Hild (1976) 213.

[1065] **Evia-halkida.blogspot.com** – source and exact date unknown.

Agia Paraskevē (Dominican) church

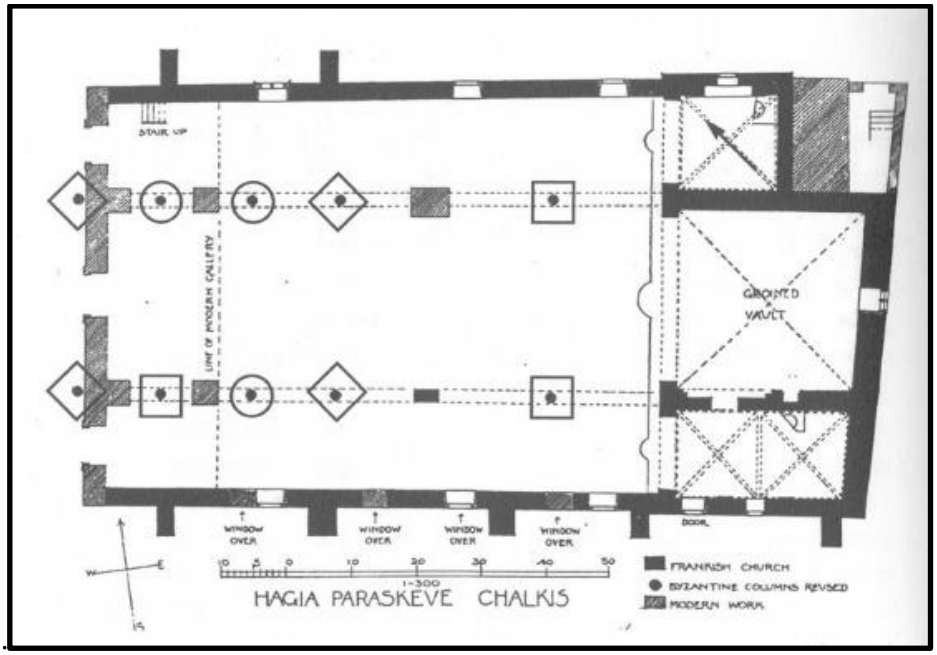


Figure A5.21 - Agia Paraskevē church[1066]

Probably originally constructed in the 5th century, what remains today of this three-aisled timber-roofed basilica is substantially that constructed during the Frankish period. Today it measures 32m. x 22m. but the original length was possibly over 50m. There is substantial literature on the church, which appears to be the only one remaining on Euboea with clear Latin architectural features.
A. Delt (1965) 20, 292-294; Ioannidis (2007); Triantafyllopoulos (1971);Theocharis (1960); Bertolini-Cestari et al. (2007); Kontogiannis (2012a)

Other churches
It is probable that many early churches were destroyed by the Ottomans or subsumed under modern 19th and 20th century construction. A detailed survey of all the other churches in the city – Skouras provides a listing of six churches and three monasteries probably originating from the late medieval period - is therefore unlikely to reflect the situation prior to 1470. Camocio's view of the area (see above) fortunately depicts many churches and, although westernised – he draws towers and steeples on each one – where they can be identified, his siting appears to have been accurate. Twelve can be clearly distinguished, three of which are within the walls of the fortress, but most have still not been identified with any surviving monument. Sometime after 1261 the Latin bishopric in Greece was located in ***Negroponte*** but the exact position of the cathedral dedicated to St Nicholas is not known with any certainty

Skouras (1998) 181-197; Kontogiannis (2012); Pierre MacKay (2006); Mackay (2014); Koder (1973) 90-94.

Other Features
The roads in the area are well delineated in both Camocio's and Coronelli's views, as are some settlements. Additionally, Coronelli shows the Ottoman aqueduct, which brought water from ***Eria*** (**CN16**) to the city, and remains of which still exist. This is also shown in greater detail in the

[1066] From a drawing by Ioannidis (2007) **Η Τρίκλιτη Βασιλική της Αγιας Παρασκευής στη Χαλκίδα**. Athens: Indiktos.

Werdmuller (c.1660) sketch, preparatory to the siege of the city in 1688.[1067] The British Admiralty (1860) chart indicates the position of both the old Roman and new Ottoman aquaducts.

***Millemosa* island**
This islet, also called ***χίλια μόδια,*** and ***Mille Mocge*** lies on the approaches to the city and was used, it appears, as a quarantine point (etymological derivation '*Male mesa'* – plague house). It is noted on *portolan* charts and maps (see Camocio above) and in Venetian senate minutes.[1068] Given its key position it may have once possessed either a small fortification or tower.
Koder-Hild (1976) 220.

CW 2 **Mytikas – Lilantio Plain**

General
This is one of the most fertile areas of the island, and with its rich heavy clay soil watered by the river Lilas has been a point of conflict ever since the establishment of the Archaic and classical cities of ***Chalkis*** to the west and ***Eretria*** to the east. The flat plain is covered by vineyards and fields of vegetables and grain, around the edges of which are planted olive trees. Unlike other areas there is no village focus but the residents live and work on their plots of land, which are irrigated by a sophisticated system of channels from the river. Until its recent incorporation into the *demos* of Chalkida it was officially identified as a 'community' (κοινότητα) and is still referred to by the residents as '*Ta Ampelia'***,** literally meaning 'the vineyards'. No early churches have been found on the plain, but one does exist on the small hill where the two towers stand. Probably much of the land was tilled by inhabitants from the city, travelling out on a daily basis.

Medieval Name
Lilanto: 15th c. – ***Lilanto:*** Venetian document (1417),[1069] Sonetti (1485)
There is no reference to the area on older maps, although it is likely that the castle of ***Fylla*** (**CW8**), probably referred to as ***Lilanto*** on many contemporary maps, took its name from that of the plain as suggested by Triantafyllopoulos. Koder has proposed that ***Lilanto*** (or ***Lilando***) was the modern village of Basiliko, but the existence of Turkish defters from 1474 referring to ***Vasiliko*** precludes this. The military sketch of Werdmuller (1660) provides the solution: it shows palatial buildings on the Twin towers hill and buildings at its base. It was clearly the site of ***Lilanto*** village and this must be the reference in 1420 to '*casale Lilanto'* and '*turris sita in medio dicti casalis*' in a minute of the Venetian senate.[1070]
Koder(1973) 97; Triantafyllopoulos (1974); Balta (1991); Koder and Hild (1976) 202.

The Twin Towers (38.26.682, 023.40.255, height 60m.) - Skouras no.143/144, Lock no. 28
The most prominent feature of the plain are the two towers standing at a height of 60m. on a knoll just to the west of the river Lilas. There are a number of hypotheses about their role. Local legend supposes one to have been the residence of the river superintendent (ποταμάρχης) since the knoll stands at the centre of a sophisticated irrigation scheme (see below).[1071] Koder(1973) believed them to have been part of a chain of towers running up the river, protecting the city of Chalkida (***Negroponte***) during the medieval period, whilst Lock(1986) placed them within a feudal framework as the centre of a large family estate. Standing opposite the castle of ***Fylla*** (**CW8**) there is also the theory that they were

[1067] "**Festung Negroponte und Umgebung [Johann Rudolf Werdmüller collection]**". (c. 1660). ETH-Bibliothek, Zurich, Ms T 76. See also discussion below in
[1068] Thiriet (1958), no.2033; (1890-1900), III:314. The name seems to derive from '*Male mesa*'(literally, 'plague house'). It is also referred to as 'Pasha' island.
[1069] Thiriet (1958), no.1794.
[1070] Tafel and Thomas (Eds.) (1857) **Urkunden zur älteren Handels- und Staatsgeschichte der Republik Venedig : Vol.3 [1256-1299]**, Vienna., 130, no.366.
[1071] This is supported by a reference in the Venetian senate - Thiriet (1958), no.2496(9).

constructed in the 1280's to oppose the invading Byzantine forces who, having taken the rest of the island, had established their headquarters here, in order to lay siege to ***Negroponte***.

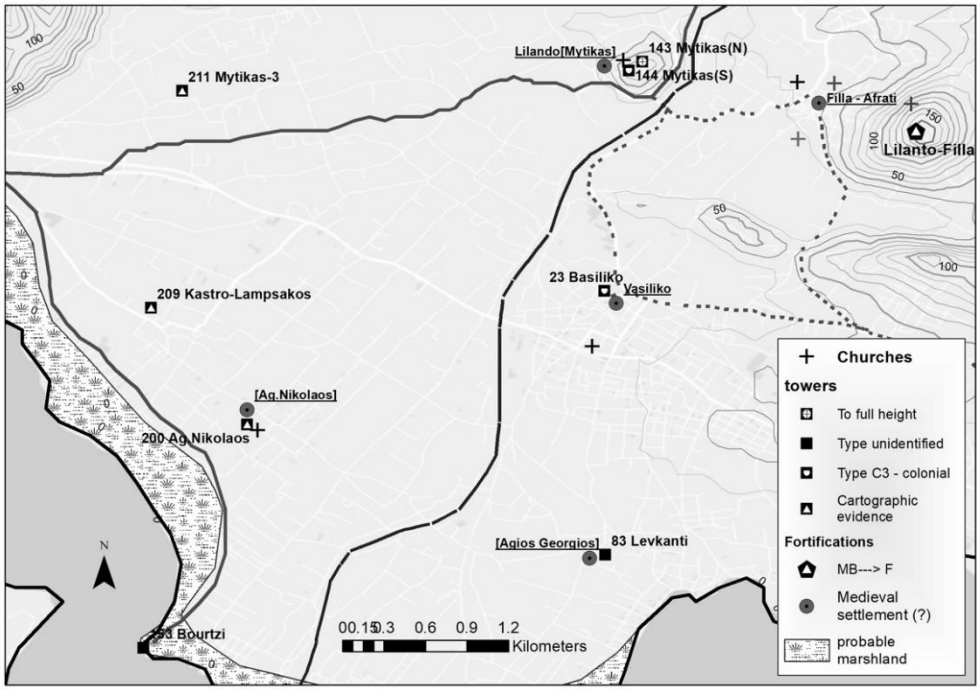


Figure A5.22 – Map of Lelantine plain

The archaeological evidence, too, is complex. The towers, while termed 'twins', are actually very different architecturally. The base of the northern one (N) is 6.15 x 6.10 whilst that of the southern (S) is 7.45 x 6.95, and their heights are approximately 18m. and 16m. respectively, thus giving (N) an extra floor. Both have an indent externally at between 0.40 to 0.60m height and entry at the second level, but configuration of the openings on each tower differs: on the other 3 sides (S) has three openings - an arrow slit at upper ground level topped by narrow windows on the 1st and 2nd floors vertically above – but the second floor windows on (N) are offset and on the third floor there are circles of brick (approx.. 2m. in diameter) to the right of each of which is a small window surrounded by well-cut stone, blocked up with rough stone on the southern side at a later stage.

Further differences appear at the battlement level: (S) has Venetian style chevrons, whilst the battlements on (N) were added later – there is a clear line of bricks above which rough stone has been laid in a weak mortar. This suggests that the tower originally had a roof and that this was later converted to battlements. The large-scale sketch in the Werdműller collection, dated to 1660, confirms this and shows two towers, one of which has a roof (with a crescent over it?) and the other castellation (see **chapter 8**).

The most significant variance between the two is the corners – (S) has rough stone whilst (N) has excellent quoining except for the first few rows, where the stonework is similar to (S). In all, although access could not be gained to see the internal configuration, (N) is clearly superior both architecturally and in its workmanship. It also bears no relationship to any other tower on the island. The small windows and roundels on each side, quoining and finish on the windows suggests a possibly 16th c. Ottoman, date of construction on foundations which may be contemporary or earlier than (S). Add in the crescent over the tower and it together with the adjacent hall may have been an Ottoman religious institution (madrasa?), the tower being a clocktower as that in ***Negroponte***.

Skouras (2003) 109; Koder (1973) 102; Lock (1995) 28; Triantafyllopoulos (1974) 230; **colour plates 10.14 (a) and (b).**

Agia Paraskevē Church
This is a small chapel close to (N), whose general external appearance and proximity to the tower suggests an early dating. It probably appears on the Werdmuller (c.1660) sketch but, since it is so small on the sketch and set between the two towers, this is possibly merely the bell tower of an older church, now superceded by the modern one, which now exists in a slight dip between the two towers. Undated. No references identified.

Agios Iannis Church
On the edge of the Lilas plain, close to the modern bridge over the river to Afrati. Undated.

Settlement
The area around both towers has now been cleared but the Werdmuller (1660) map indicates a substantial settlement on the knoll with palatial size construction, whilst smaller houses are shown to the west at its base close to the edge of the modern village and where the modern Evangelistria church now stands – see also Basiliko **(CW5**) for a contemporary reference.

Irrigation system
While much of the irrigation system that exists today was built in the 19th and early 20th centuries, there was an earlier phase, whose dating may go back even as far as the construction of the old (probably Roman) aquaducts from Kampia (close to Bounoi **(CN18**))[1072] and Eria (**CN16**)[1073] to supply water to Chalkida. The maximum extent of this would have been the old road from Chalkida to Basiliko, since the British Admiralty (1860) map shows salt pans and only sporadic cultivation beyond this point - most probably being marshland. In a document from 1439 we find a reference to a *potomarcho* (river superintendent), a Greek name suggesting dating from prior to the Frankish period.[1074]

CW3 Dokos (Agia Eleousa)

General
This village to the northeast of Chalkida, is sited on the eastern edge of a small plain bounded on two sides by mountains. On the west lies the Gulf of Northern Euboea and a saline swamp, that has only recently been drained, and to the east the much larger Lelantine plain. On the mountain to the immediate north there lie the remains of fortifications, whilst Skouras has identified five churches of the Byzantine era in the village – an indication of a thriving community. The (Roman?) aquaduct ran northeast-southwest through the area.

Medieval name
Tore / Turita / El Troco: **11th/12th c**. - ***Douchos:*** Byzantine Cadastre;[1075] **14th c**. - ***Tore, Ture, Turita***: *portolan* charts;[1076] **15th c. - *El Troco***: Sonetti (1485); **16th c. - *Il Trocco***: Bordone (1528), ***El Troco***: Agnese (1555b), ***El Trocho***: Agnese (1559)).
The *portolan* charts of the early 14th century note two fortifications with the name ***tore*** or ***turita*** – one immediately southeast of ***Negroponte*** and one to the north. The former is probably the ***Filla*** (Fylla) castle (see **CW4**). The latter was called simply ***'tore'*** (or tower) by the locals, a name which became

[1072] Reber and Schmid (2000) Zur wasserversorgung von Chalkis (Euböa). **Mitteilungen des Deutschen archäologischen Institut: Athenische Abteilung**, 115: 359-402
[1073] This branch of the aquaduct is not reported by Reber and Schmid, but locals report its existence and an underground tunnel, which once existed, running north from Pissonas (**CN19**). The dating of this section is unknown.
[1074] '*potamarcho de Lilanto'* - Sathas (ed.) (1890-1900), III, 455:6-24
[1075] Svoronos (1959).
[1076] See **chapter 3.1.**

'***El Troco'*** in the 15th century on the *isolario* maps of the period. The area is now known as 'Dokos' locally (see **appendix 6.2** for a discussion).[1077]

Kopana or Tampouri Fortification (38.28.720, 023.38.517, height 180m.) Skouras no.146
This fortification lies on the hill just above the village and one local church is called Panagia tēs Portaïtiosas (the church of the gate). Skouras noted an inner and outer wall on his visit in 1975, even finding the remains of two buildings of unknown use and towers on the northern side with walls up to 1,2m. high in places. Unfortunately, by our visit little remained to be seen except piles of stones, although treasure hunters had dug a hole at one point and construction of rough stone with mortar could clearly be discerned.
Koder (1973) 97; Skouras (2003) 110-111.

Matamorfosē Sōtēros church
This is opposite the village graveyard, now renovated. Undated.
Skouras (1998) 106; G. Papabasileiou (1891) 611 **in** Skouras (1998).

Agios Georgios church (now lost)
Papabasileiou writes of a church with this name close to the above church. Skouras identified a modern church close-by and locals note that there had existed an older small church in the same area. Noted during siege of ***Negroponte*** by Ottomans in 1470. Date unknown.
Skouras (1998) 106; G. Papabasileiou (1891) 611 **in** Skouras(1998).

Agia Triada Church
In the foundations of this church and the eastern wall can be seen the remains of the original church. Skouras notes its position in the area of a Neolithic settlement. Date unknown.
Skouras (1998) 107.

Agios Athanasios Athōnitēs church
A new church has been constructed on the foundations of the old one. Date unknown.
Skouras (1998) 107.

Agia Marina and Agios Theodoros church
With two dedications this church is described by Skouras as 'ψευδοδίκογχη' (false two apse) and has recently been renovated. Undated.
Skouras (1998) 107.

CW4 **Afrati - Fylla**

General
These two large villages lie to the east of the Lilas river on the eastern edge of the irrigated fertile Lelantine plain. Both appear to be a late medieval settlement and are noted in the Turkish defters from 1474.[1078] Fylla is named after the eponymous medieval castle that overlooks it (*Castello della Filla che guarda sopre Lilando)*[1079] and slightly further to the east there are the remains of an older fortification. It was reputed to have been re-fortified in the late 13th century by Licario as his base for the re-conquest of Euboea by the Byzantines (see **chapter 4**), whilst the British Admiralty chart (1846) refers to it as '*Venetian Fortress'*. The four churches and a metochi in Fylla suggest a large population in the medieval

[1077] On the British Admiralty (1860) chart there is also a point called 'Drokos' just to the south of the city, which complicates the correct identification of ***El Trocco*** even further: see **appendix 6**.
[1078] Balta (1991)
[1079] [Marino-Sanudo-Torsello] 141.30.

period. It is perplexing that Afrati has no medieval churches within the modern village. It may be simply that the modern church was built over the foundations of an older one.
Koder and Hild (1976) 242.

Medieval Name
Tore / Turita / Lilanto:* 14th c.** – ***Filla: Sanudo;[1080] ***Tore, Ture, Turita*** (*portolan* charts);[1081] **15th c.** – ***Lila[n]to***: Sonetti (1485); **16th c.** – ***Lila[n]to***: Agnese (1554), Bordone (1528); **17th c.** – ***Lilanto***: Boschini (1658), ***Tianto***: Coronelli (1688)).
Whilst the 14th century *portolan* charts appear to note the castle as simply ***Tore*** or ***Turita*** (literally tower), by the 15th century it had taken on the name of the Lelantine plain, which it overlooks. A Greek *portolan* of the 16th century refers to ***Toureta***, but this is probably the new tower built (by the Ottomans?) at Agios Nikolaos (**CW6**).[1082]

***Filla* (**Fylla**) Castle** (38.26.408,023.41.326, height 153m.) - Skouras no.141
This is in an imposing position overlooking the Lelantine plain. It controlled communication both to the north up the Lilas river to Pissonas (**CN19**) and all seaborne traffic sailing from the south in the Gulf of Southern Euboea. It is mentioned in Marino Sanudo Torsello's *Istoria di Romania* as being captured in 1280 (?) by Licario at the head of Byzantine forces, thus preventing anyone approaching the '***Lilando*** [river]'. The British Admiralty (1846) chart shows it as '*Venetian Fortress'* while the modern HMGS (1970) map notes it as *'Pyrgari'*.
Skouras (2003) 107; Triantafyllopoulos (1974) 229-231; Koder (1973) 96, 102.

Panagia Rizokastriotissa church
This three-apse church is situated slightly below the castle. It contains good wall frescoes from the 17th c. although Skouras notes that some may be dated to the 14th c. The local priest (August 2016) noted that recent research suggests an original construction of the church in the 7th century, but I could not confirm this. Probably Middle Byzantine.
Skouras (1998) 176; A. Delt. (1969) 24, 210.

Metochi
Noted by Themelis in the village as a *metochi* of 'Μονή Ιβήρων του Αγίου Όρους'**.** Date unknown.
Note 67 -Themelis, 14 **in** Triantafyllopoulos (1974) 230.

Agios Zacharias Church - ruin
Within the village in the position Nichōri, this has been dated as early Byzantine
Skouras (1998) 179; A. Delt. (1963) 18.

Agios Nikolaos Church
Situated within the village, this has now been refurbished but Skouras notes it as Venetian from the coat of arms built into a wall of the church.
Skouras (1998) 176; A. Delt. (1960).

CW5 **Basiliko**

General
This is a town to the east of the river Lilas and south of Fylla castle. Whilst the modern road passes through the town, according to the Werdmüller (1660) map – see **figure A5.19 -** this did not exist until much later, since the main road is shown to pass directly under the two towers in Mytikas (**CW2**). It possesses a well-preserved tower, but its style and being off the main highway suggests it was merely

[1080] [Marino-Sanudo-Torsello], 141.
[1081] See **chapter 3.**
[1082] Delatte (1947) "Les portulans grecs". Liege, *Parisinus* gr.1416, f.8.

an estate fortification. Its survivial suggests that the tower probably continued in use into the Ottoman era, any local Christian place of worship being suppressed, since the housing around the tower indicates a substantial settlement. No church has been identified in the area, but this may be under the large modern church close to the tower. Sackett has identified Roman and medieval sherds on a hill close to Agios Antreas church to the southeast (**CW27**).

Medieval Name
Vassilikos – Ottoman defter (1474). It has been suggested by Koder that this village and not Fylla castle (**CW4**) may have taken the name of ***Lilanto*** but the Ottoman defter is clear evidence of the name (see also **CW2).**
Triantafyllopoulos (1974) 231; Koder (1973) 102; Balta (1991).

Tower (38.25.817, 023.40.114, height 24m.) – Skouras no.23, Lock no.29
Situated in the centre of the old village, this tower stands to its full height of 17.5m. and still possesses its castellations in a chevron style. It measures 8.3 x 8.4 m. with three floors and entry at first floor level. It has a clear view north to Fylla castle, south towards the sea and east to the tower in Eretria 12 km. away, although there may have been another, as yet unidentified, tower in between the two.[1083]
It possesses three special features. The first is a fireplace, only identified elsewhere in the towers at Belos (**SC3**) and Pissonas (**CN19**), the second is an opening for a probable toilet, and the third is what appears to be a small side chapel set into one of the walls. The survey undertaken indicates that the tower had never been rendered (although see my reservations about such conclusions in **chapter 8**), had an external indent of 20cm. at about 0,60m. height, wall thickness of 1.70m. reducing to 0.90m. on the second floor, and cut stonework on the corners.
Angeli and Stylianou (2012); Skouras (2003) 47; Koder (1973) 97, 102.

Sinaïtiko Metochi
This was referred to by Themelis, but Skouras could find no trace of it in the area of the town.
Skouras (1998) 88, Themelis (1965) 105.

CW6 **Agios Nikolaos (Levkanti)**

General
This area is a flat area of plain to the west of the Lilas river, bordered on the south and west by the sea and to the north by the Chalkida-Eretria road. Although it is highly productive today, with boreholes having lowered the water table and irrigation via a series of sophisticated channels from the river Lilas, the British Admiralty chart from 1846 notes only 'salt pans' and an area 'partially cultivated' in its southern part. The old road indicated on this chart, which runs some way inland, passing by two towers as it heads directly for the pre-historic settlement and natural harbour of Levkanti then turning south, thus suggests the line of the effective coastline during the late medieval period, which must have been extended over recent centuries by silt from the frequent flooding of the Lilas river.

Medieval Name - None identified

Bourtzi – Skouras no.153
This is a tower, which has been assumed to have been from the Ottoman era, built just at the point where the channel to Chalkida begins (indicated as *Burj* in **figure A5.21**). It is shown on the Werdmuller (c.1660) map, however, as a circular tower slightly inland. This may suggest that an early 15th century one, very similar with its scarping to the Genoese towers of Chios and the Venetian tower in Messenia (see **chapter 9** for a discussion on the architecture) may have existed here. It was probably replaced by

[1083] This assumes that there was some sort of beacon or defence network.

the *Bourtzi*, which stands right on the water's edge, is much larger (providing the base for a gun?) and has no apparent scarping at its lower surviving levels. The tower is mentioned in 16th century *portolans.* Skouras (2003) 117-118; Koder and Hild (1976) 279. Delatte (1947) 225.4.

Mytikas (3) tower no. 211
A roofed tower and its associated hall are noted on the Werdmuller (1660) map just to the north of the old road from Chalkida via Nea Lampsakos to the twin towers in Mytikas. Over the roof there appears to be a crescent suggesting a religious building (*chani* – wayside inn?). In this position today there stands the modern church of Agios Nikolaos (not to be confused with the other eponymous church below) and its cemetery, and closeby the monastery of Agia Paraskevē.

Kastro-Lampsakos tower no.209
This crenelated tower is drawn both on the Werdmuller (1660) map and on the British Admiralty (1846) chart (noted as '***Kastro***'), being used to provide a siting with a clump of Cypress trees for navigation purposes (see **figure A5.21**). It probably fulfilled the function of guarding the salt pans just to the west (also noted on the chart).

Agios Nikolaos church ruin and village
The church is noted by Skouras as close to the modern village of Agios Nikolaos in the Trakaniarē plot. Undated.
Skouras (1998) 147. Papabasileiou (1910) 68.

Agios Nikolaos Tower no.200
A roofed tower appears on the Werdmüller (c.1660) map in the position of the modern village. It stands next to a large hall-like building surrounded by houses.

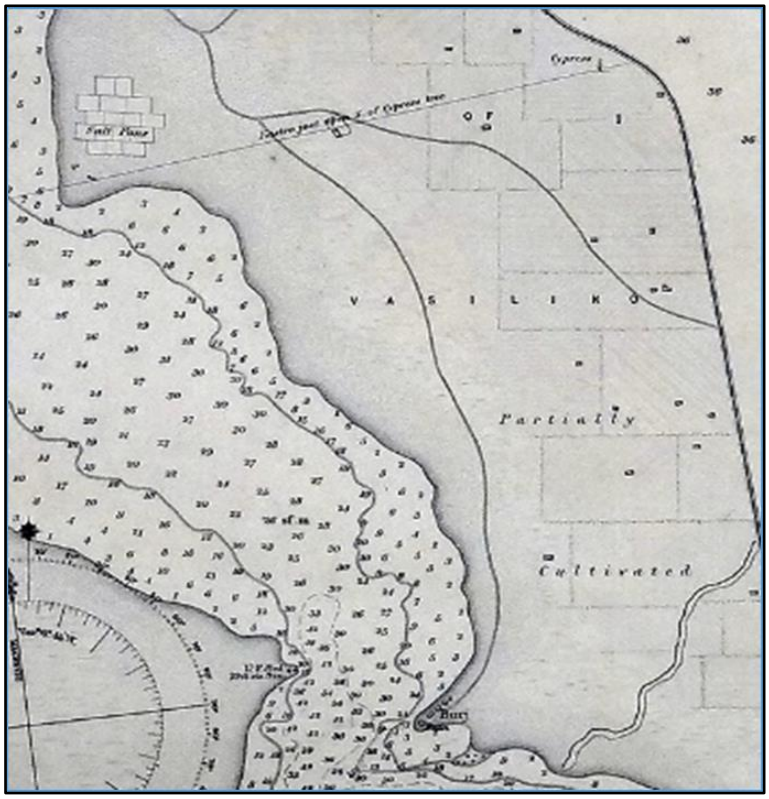


Figure A5.23 - Map - Approaches to Euripos channel[1084]

[1084] Source: Extract from British Admiralty (1846) chart.

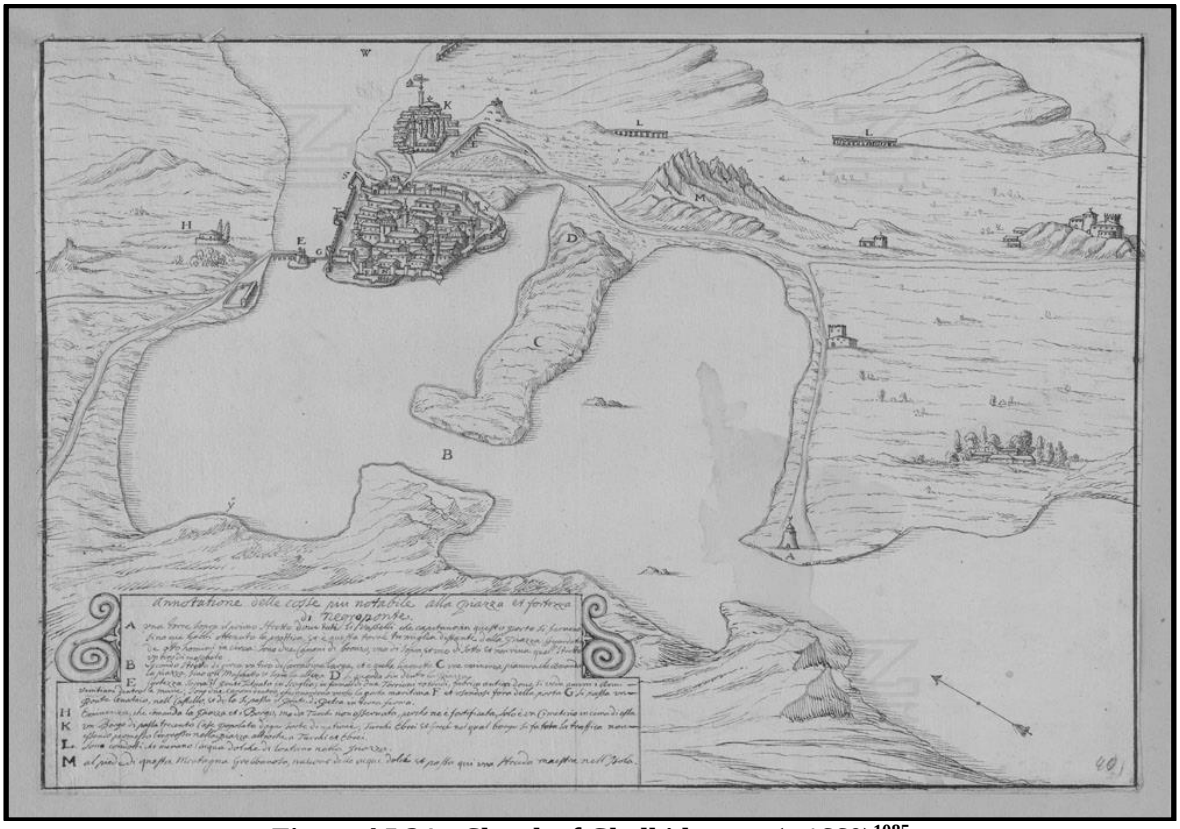


Figure A5.24 – Sketch of Chalkida area (c.1660)[1085]

CW7 **Lilas (North)**

General[1086]
This area is called Pano Chani meaning 'Higher Inn', a place where travellers could stop until relatively recent times on the road, which runs parallel to the river from the twin towers at Mytikas (**CW2**) up to Pissonas (**CN19**). There is a tiny fertile valley, sufficient for a small settlement, spreading east and west of the river. The aqueduct to Chalkida passes close-by, and there may also have been some form of signalling station on a hill above to connect Pissonas with Kato Chani (**CN8**) and Fylla castle.

Medieval Name - None identified

Paliokklesia Church – ruin
This is on the western side of the river. Heavy cultivation has recently extinguished nearly all trace. Skouras (1998) 85.

[1085] Source: Johann Rudolf Werdmüller collection.
[1086] Thanks to Panagiotis Sevilias, whose encyclopaedic knowledge of the area along the Lilas river and of the irrigation systems in the Lelantine plain provided the basis for my understanding of the area.

CW8 **Lilas (South)**

General
At a point called Kato Chani on the Lilas river, a place where travellers used to stop on their way north up the valley to Pissonas (**CN19**), there is a small fertile valley just to the east of the river. The name of the place (meaning 'Lower Inn') together with the two small churches suggests the existence of a village in the vicinity. One may also speculate that there may have been some form of signalling station at this point linking the castle at Fylla with Pissonas further up-river.

Medieval name - None found

Twin churches Agios Basileios
These two ruined churches lie close to each other a kilometre east of the river at a height of 70m. They are both similar in construction with a barrel-vaulted roof and an apse which is cylindrical externally but four sided internally. Undated.
Skouras (1998) 85.

CW9 **Lechries**

General
This is a small remote fertile valley 6 kms. to the northeast of Afrati (**CW4**) at a height ranging from 220 to 260 m. The hills around are rocky and of little agricultural use. Pockets of cultivated land exist close to water sources in the vicinity. On the steeper land around the small hill in the centre of the valley there is evidence of substantial terracing, but this cannot be dated.

Medieval Name
Larachi / Leriche*:** – ***Larachi: Bury,[1087] fortress of ***Arachi***: Venetian assembly[1088]
This is not mentioned on any early *portolan* charts or by Sonetti (1485). Bury (1888), referring to the place as ***Larachi*,[1089]** relates how Maria Sanudo sometime after 1385 granted both the castle and village to her relation Filippo Sanudo,
Skouras (2003) 46.

Agios Basileios church - ruin
This is situated at a height of 270m. close to the fortification. Little remained on Skouras' visit except part of the apse. It is likely to be contemporary with the fortification. I found nothing on my visit.
Skouras (1998) 84; Sampson (1980).

Fortification (38.28.804, 23.44.629, height 269m.) – Skouras no. 19
This is perched on a natural rock outcrop, which projects out of a small hill in the centre of the valley. On three sides it has sheer cliffs and there are the remains of a small wall on the northern side, all that was necessary to make it secure. The enclosed area is approx. 20m. x 20m. There are views from here down to Pissonas but the large castle at Fylla cannot be seen (Skouras' note is incorrect here). There is no evidence of a tower within the walls but Skouras reports that he found the foundations of other buildings, although this was not apparent on my visit. There are the remains of walls close around the summit of the hill, but it is difficult to understand if these were simply terracing or whether certain had been of a defensive nature.
Skouras (2003) 46; Sampson (1980).

[1087] Bury (1888) The Lombards and Venetians in Euboea (1340-1470). **JHS**, 9: 91-117 99. He notes a complaint in Venice by Nicolo Spezzabanda in 1359 against the bailie for abuse of authority – one action of whom was to have '*imprisoned the châtelain of **Larachi**, Demetrias of Alessandria'.*
[1088] Pietro Morosini, the bailie was reprimanded by the Venetian assembly for occupying the fortification in 1359 - Thiriet (1958) 354, 94.
[1089] Bury (1888) 102.

Possible Pyrgaki tower no. 222
This is shown on the HMGS (1970) map 3 km. to the east of Lechries at a height of 360m. A tower in this position was absolutely necessary for the security of Lechries since the valley otherwise is blind to the north, south and east.

CW10 Agios Georgos ARMA

General
This is a remote valley 9 km. east of Afrati (**CW4**) and north of Eretria (**CW12**). Agriculturally there is little of interest in the immediate vicinity. The monastery is large and must have had extensive land holdings elsewhere to support it.

Medieval Name - None identified

The Monastery church (38.26.617, 023.46.237, height 340m.)
This is one of the most impressive and best preserved of all the medieval churches on Euboea. There is an extensive literature and Skouras provides 35 Greek language references, but Koder is the only foreigner to have studied it. The best drawings are provided by P. Lazaridis in the A. Deltio. It appears to have been constructed over or using material from another older church in the locality since these are apparent in the walls. It also utilised columns internally from a construction of the classical period, probably a temple of Apollo. The construction date has been deciphered as 1141 from a marble plaque built into a wall which reads '*ZPME*'.
Liapes (1971) 38-60; Skouras (1998) 177-179; A. Delt. (1966) 21, 236-241; Koder (1973) 148-150; Koder and Hild (1976) 163.

Paliarma church and monastery - ruins
The site of this is close to the above. Probably early Byzantine and replaced by above.
Skouras (1998) 177-179.

Profētēs Ēlias Church
This cross-vaulted church was northeast of the monastery at a height of 520m. It has now been replaced by a modern church. The narthex is a later addition. Undated.
Skouras (1998) 179.

Tourla possible tower no. 254
This is the name of the peak of a hill 5 km. east of the monastery, just above the village of Gerontas and a small fertile valley. It has line-of-sight to Pyrgaki-Lechries (**CW9**) but has restricted views elsewhere. The logic of a beacon here is unclear unless the HMGS (1970) map is in error. The hill actually has a double peak: if the beacon were placed on that nearer the sea then it has line of sight between the mountains to the tower of Agia Triada (**CW12**) on an island just to the southeast of Eretria.

Kamarion possible settlement
Sackett reports medieval finds on a hill in the centre of this small valley at the juncture of two small rivers.
Sackett (1966) 62.

Agiannakis church
This appears to be an Ottoman-period church but its siting next to the village of Kamarion and the finds by Sackett (see above) suggest that this may have been built over an earlier church.

CW11 Kalamonta (Mistros)

General
This is an area of forest and summer pastures to the southeast of Mistros (**CN24**) and lies on the road from Mistros to Seta (**CW19).** Cultivable land begins eastwards further down the valley. The two churches suggest a small village community at some point and there are still farm holdings in the area.

Medieval name – none identified

Agios Demetrios church – ruin
This is at a height of 410m. in the area of Alōnia-Kalamonta. Dated as Byzantine by Skouras from a column he found on site.
Skouras (1998) 145.

Agios Georgios church – ruin
Close to the above but at a lower height of 360m. Undated.
Skouras (1998) 145.

Tourlaki possible tower no. 220
This, probably a beacon site, lies at a height of 850 m. on a hill to the southwest of Kalamonta and provides a link northwest from the tower of Mistros (**CN24**) via that at Kokkaliara (**CW17**) to the rich area around Gymno **(CW14**).

Pyrgaki Possible tower no. 265
To the southwest of the two churches and close to Kalamonta a hill of 420m. bears the name '*Pyrgaki*'. This lies alongside the main route east and, given the strategic nature of this road probably had a military function.

CW12 Eretria

General
Eretria was a well-known classical Greek city, reference to which disappeared in the Byzantine period and is only mentioned again in the 14th century. There was medieval construction atop the classical acropolis and four early churches have been identified in the area. The sites are so spread out, however, that they are probably indications not of a substantial settlement but only of small farming hamlets.

Medieval name
Coce / Coches/ Eretria: **14th c.** – ***coce, coche[s]***: portolan - Vesconte (1311); **15th c.** – ***Eretria dita Cochies***: Sonetti (1485)).
In the second and third decades of the 14th century the Vesconte family produced a number of charts noting ***Coce*** and ***Coches*** as a name in the area of Eretria. On his *isolario* of 1485 Bartolomeo dalli Sonetti confirmed this. Thereafter the classical name was once again used to denote the settlement.

Acropolis – Skouras no. 49
Skouras notes that various buildings had existed on the summit of the hill where the acropolis once was but provides no details. The siting of a church just at the foot of the hill may suggest the existence of something but nothing is proven.
Skouras (2003) 62.

Agia Triada Tower – Skouras no.50
Skouras reports the existence on this island just off the coast of a medieval tower (he calls it Venetian), which had been demolished and re-built in a similar style. If he is correct there would have been little

need for one on the acropolis. From this tower there is a clear view to that at Levkanti (**CW6** – 17 km.) and east to Ano Bathia (**CW15** – 12 km.)
Skouras (2003) 63.

Agia Triada church
A new church has been built on the foundations of the Byzantine one, which was just at the exit from the town on the road to Amarynthos.
Skouras (1998) 110.

Agia Paraskevē - ruin
This is 1.5 km. from the town towards Amarynthos on the right of the road 150m. from the sea. Byzantine church constructed of classical material.
Skouras (1998) 110.

Agioi Theodoroi church - ruin
Situated next to a new church by the same name. Undated
Skouras (1998) 110.

Agios Demetrios church - ruin
In the area of Kotroni at a height of 95m. Undated.
Skouras (1998) 110.

CW13 **Litharakia (Eretria)**

General
This is an area of secondary agricultural land, the name literally meaning 'little rocks' from the floods that bring down rocks from the mountains behind. Most fields are given over to Olive groves.

Hypothetical tower no.223
This is a small hill between two streams with a trig. Point of 72 m. just to the south of the old road to Gymno. It is called '*Pyrgaki*' on the HMGS (1988) map. The position would have been an obvious point to place a tower to control both movement at this crossroads and view south out to sea.

Agioi Asōmatoi Church - ruin
This is situated on the old road to Gymno. Skouras describes it as a large church built from ancient spolia. Probably Byzantine. He notes significant sherd finds in the area, indicating a large settlement.
Skouras (1998) 110.

CW14 **Gymno**

General
This area encompasses the small town of Gymno and the village of Kallithea. Although the land is hilly the Sarantapotamos river, possibly named after the plethora of small rivers which descend from the mountains to the east, provides the basis for a good agricultural economy. It is also a secure area away from the coast, being protected by mountains to east and west. There are nine early churches around the town making it one of the most populous of the medieval era.

Medieval name
The name ***La Vatia*** (**CW15**) was probably used more generally to refer to the wider area including Gymno. Bordone (1528) exceptionally draws a town symbol for ***Vathia*** and then adds another tower slightly inland which most likely refers to Gymno (see **CW15**)

Tower (23.52.739, 38.26.462, height 159m.) Skouras no.42, Lock no.32
To the north of the town the tower still stands to a height of 14m. It measures 7.80 x 7.80 m. with a wall thickness at ground level of 1.20m. Entrance is at first floor level on the south side with no evidence of vaulting internally. Construction is of roughly worked stone set in approximate rows bonded with mortar and tile in-slips.
Skouras (2003) 58; Lock (1995); Koder (1973) 103; **colour plate 10.14(c).**

Agios Georgios Church
North of the village at a height of 170m. this has been dated to the13th century.
Demetrokallis (1964) 31-37 **in** Skouras (1998) 97-98; Koder (1973) 163; Koder and Hild (1976) 168.

Agios Nikolaos Church – disappeared
It had been in the southwest corner of the village from a report Skouras found dated to 1920. A new brick-built church now exists in its place. Undated.
Skouras (1998) 99.

Agios Andreas Church - disappeared
To the north of the village, just before Agios Georgios church. A new church has been constructed in its place. Undated.
Skouras (1998) 99-100.

Panagia Armenizousa Church – disappeared
Also called Chilarmenē and Armenissa, this church dated as Byzantine by the marble columns and spolia on site has now been replaced by a new one.
Skouras (1998) 101.

Koimēsē Theotokos Church – disappeared
Just to the north of the tower. Skouras dates this as Venetian. Spolia from the church was used in the construction of the new school and on the site has now been constructed the village church.
Skouras (1998) 101.

Agioi Apostoloi Church
1.5 km. northeast of the village at a height of 150m. Dated as Byzantine by the cross over the entrance and the style of the window on the apse.
Skouras (1998) 101.

Agia Paraskevē church – ruin
This is just to the east of the village and signs of its three apses can still be seen. Undated.
Skouras (1998) 100.

Agioi Theodoroi church
On right of road from Kallithea to Gymno. Recent renovation. Undated
Skouras (1998) 118.

Agios Andreas church - disappeared
To the south west of Kallithea. This has now been built over by the new church. Undated.
Skouras (1998) 118.

CW15 Amarynthos (Batheia & Anō Bathia)

General
This is today a good-sized seaside town and, judging by the 14 early churches and two towers in the area, was also very prosperous in the late medieval period. Three probable villages can be discerned

Amarynthos, Galazia nearby and ***La Vatia***. It (was noted as a possession of the See of Athens in 1208,[1090] and two hundred years later in 1408 Guglielmazzo della Gronda leased ***La Vatia*** for 29 years at an annual rental of 2,000 hyperperi.[1091]
Koder and Hild (1976) 132.

Medieval name
[La] vati[a]: **13th c.** – ***Vatia***: Ep. Innoc. (1208);[1092] **14th c.** – ***vati***[a] : *portolan* chart; **15th c.** – ***La Vat[h]ia***: Venetian document,[1093] Sonetti (1485); **16th c.** – ***Vathia*** : Bordone (1528)), ***La Vatia*** : Agnese(1555); **17th c.** – ***Vatia*** : Coronelli (1688)).
The town was well known during the medieval period, appearing as noted above in a letter from Pope Innocent III in 1208, and from the late 14th century on the *portolan* charts.[1094] It has retained the name ***Vathi*** until today, although officially it is now called by its classical name Amarynthos. Bordone (1528) shows a tower separate from the town, which probably refers to Gymno (**CW14**).

Anō Batheia Tower (23.52.739, 38.26.462, height 159m.) Skouras no.15
Situated at a height of 100m. in the position Limpounari, only the foundations of this tower could still be seen by Skouras on his visit. He reports that each side measured 20m., making this the largest tower on the island. Unfortunately, on our visit new building was seen on the hill identified by Skouras and we could find nothing but the remains of some later construction. Given the size of the tower we can possibly link the leasing of the fief in 1408 to the construction of the tower, since it was clearly an elite residence similar in size to the St. Omer tower in Thiva. Skouras noted its line of sight to Rizokastro **(SC2**) close to Aliberi but mountains block this. The most probable view position is on a small rise on the coast (see below)
Skouras (2003) 43.

Amarynthos Tower - Skouras no.14
On a hill called 'Rachē tou Kokanikou' at a height of 120m. northeast of Amarynthos and southeast of Anō Batheia there were the foundations of a tower, over which a house has now been constructed. It has a limited viewshed.
Skouras (2003) 42.

Hypothetical settlement and tower(?)
On the low hill of Paliochoria, which contains two churches – one middle Byzantine and one Frankish - and overlooks the position of a classical temple (currently being excavated), there appears by its name to have been a settlement. With its strategic position and clear views west to Eretria and south to a number of towers and observation points, there was possibly also a tower at this point for communication and to control the loading of goods from the rich hinterland.

Metamorfosē Sōtēros church
Situated on the road east just after Amarynthos on a small hill called Paliochoria or Sarantaklēsi at a height of 45m. this cross-vaulted church possesses a special feature - a prosthesis made from a cube of worked stone on top of a marble column and a 14cm. thick base. Middle Byzantine.
Skouras (1998) 73; Koder (1973) 163; Orlandos (1951); A. Delt. (1964) 215.

[1090] Orlandos (1951b) Σταυρεπίστεγοι ναοί Βάθειας Ευβοίας. **Αρχείον των Βυζαντινών μνημείων της Ελλάδος**, 7: 111-130.
[1091] Bury (1888) 104.
[1092] Επιστολαί Ιννοκεντιού III XI, 256 **in** Orlandos (1951b). See also Mourteri - site (**CE15**); Farantos (1980) 354, note 78.
[1093] (1890-1900) 447, no.1044.
[1094] Blackler (2019) Euboea during the 14th century as recorded on the portolan charts of the period [Εύβοια κατά τον 14ο αιώνα όπως έχει καταγραφεί στους χάρτες πορτολάνους αυτής της εποχής]. **Awaiting publication**,

Koimēsē Theotokos
A cross-vaulted church close to the above, strangely oriented to the north due to the topography. Frankish.
Skouras (1998) 73; A. Delt. (1964) 215; Koder (1973) 163.

'Palaiochristianikos' Church – disappeared
The remains of a semi-circular apse with numerous marble spolia were found in a plot in the centre of the town. Now built over. Early Byzantine.
Skouras (1998) 71.

Koimēsē Theotokos or 'Panagitsa' church
This cross-vaulted church measuring 9.17m x 5.60m. lies on a rise to the left of the Amarynthos- Ano Batheia road. It had a mosaic floor. Dated to 1311.
Skouras (1998) 72; Orlandos (1951); Koder (1973) 159,163; A. Delt. (1964) 215.

Unknown name - ruin
On the same hill and north-east of above at a height of 40m. Undated
Skouras (1998) 73.

Agios Taxiarchēs church
To left of road to Aliberi close to the above, Possibly late Byzantine - stone construction with a vaulted roof.
Skouras (1998) 74.

Agioi Anargyroi church
To the right of the road to Aliberi at a height of 20m. just before the above. Undated.
Skouras (1998) 74.

Agios Demetrios church
In the position Kladē at a height of 120m. to the east of Ano Batheia. Skouras notes it as Byzantine.
Skouras (1998) 74.

Profētēs Ēlias church
In the position Mavro Lithari at a height of 350m. Undated.
Skouras (1998) 74.

Agios Ioannis Prodromos church - ruin
North of Ano Batheia village at a height of 100m. Metochi of Agios Nikolaos monastery Undated.
Skouras (1998) 78.

Agios Nikolaos church
This is a new church in the village of Ano Batheia built on the foundations of an older Byzantine church.
Skouras (1998) 76.

Agioi Apostoloi church - ruin
1.5km. from Ano Batheia and 4 km. from Amarynthos at a height of 100m., dated as Byzantine by Skouras.
Skouras (1998) 77.

Agios Georgios church – ruin
In the position of the same name west of the village. Metochi of Agios Nikolaos monastery. Undated.
Skouras (1998) 77.

Agios Demetrios church – ruin
In the position Fygontra west of Ano Batheia at a height of 40m. Dated as Byzantine by Skouras.
Skouras (1998) 77.

CW16 Agios Nikolaos Monastery

General
Set in a remote area 9 km. to the east of Ano Batheia. The monastery possessed much property in the area – see **CW14** and **CW15**.

Agios Nikolaos Monastery
Cross-vaulted church (6.17m. x 9.80m. externally) next to which has been constructed a modern church. This has been studied in detail by Orlandos, who dates it either to the late Frankish period or early Ottoman. His drawing is an exemplary study of the type and is included below.
Skouras (1998) 77; Orlandos (1951b); Koder (1973) 149,163.

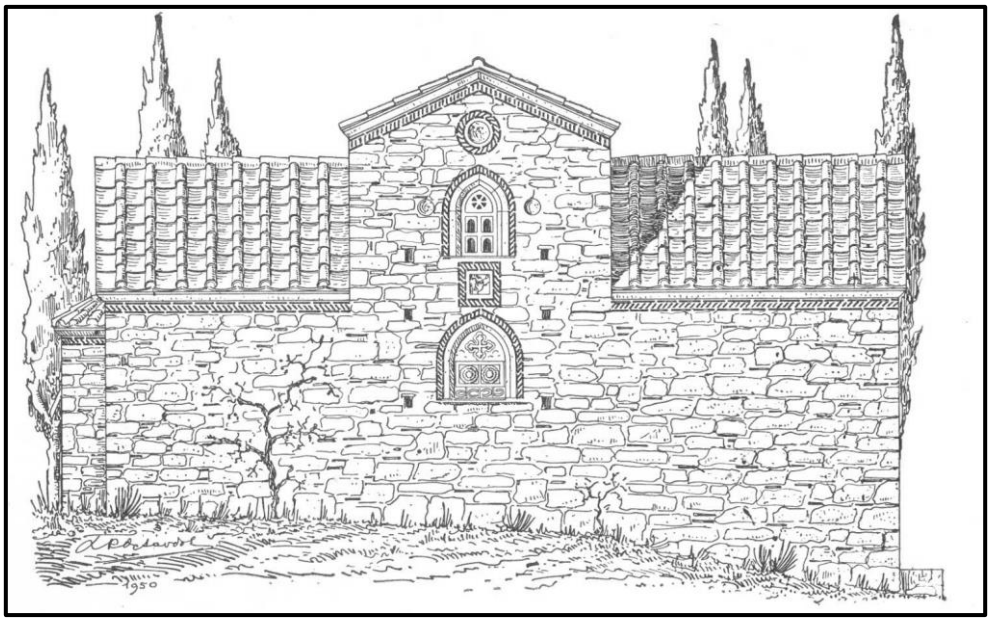


Figure A5.25 - Northern face of Agios Nikolaos

Zōodochos Pēgē / Aglefaros Monastery
Cross-vaulted (σταυρεπίστεγος) church at a height of 270m. which originally had wall frescoes. Late Byzantine.
Skouras (1998) 76; Demetrokallis (1983) 274,276; Orlandos (1951); Triantafyllopoulos (1974).

Agia Eleousa Church – ruin
Close to the above monastery. Undated.
Skouras (1998) 78.

CW17 Kokkaliara (Gymno)

General
This area straddles the crossroads that linked ***Vumi*** (**CN18**) and ***Negroponte*** with the east and Avlonari (**CE10**). It is bereft of large settlements and only one church has been identified in the area but contains

a hypothetical tower site inter-visible with the tower at Parthenoi **(CW18**), both of which may have provided security for what must have been a very strategic road.

Zōodochos Pēgēs or Agia Church
A cross-vaulted Byzantine church which was converted in 1895 into a single-knave church with a wooden roof, it is called both 'Andreiōu' and 'Evangelismos'. It is just below the Pyrgaki tower and provides further proof of the latter's probable existence in the late medieval period.
Skouras91998) 98; A. Delt (1960).

Pyrgaki Possible tower (38.29.408, 023.55.754, height 545m.) **no.221**
This hill, called 'Pyrgaki' on the HMGS (1988) map, is just to the west of the road, 4.3 km. southwest of the Parthenoi tower (**CW18**). This position has views to four other possible tower sites.

CW18 **Parthenoi**

General
This is a remote village set in a small fertile valley in the centre of the mountains. It's economy was probably based on livestock rearing, given the vast area of upland pasture in its environs. No early church has been found in the village, but one has been identified to the southwest in the area of Kastri.

Kastri (38.28.232, 023.57.183, height 570m.) – Skouras no.105
Southwest of the village this is a classical fortification. Skouras identified a possible tower measuring 8 x8 m. and the remains of other buildings including a church, an indication of its possible use during the Late Medieval period.
Skouras (2003) 89.

Tourli tower (38.28.679, 023.53.553, height 665m.) – Skouras no.106
On a small hill of 655m., which the locals call 'Tourli' (also shown on the HMGS (1988) map) an area 20 x 30 m. has been flattened. Sampson reported the existence of a medieval tower in this position, but Skouras found nothing on his visit.
Skouras (2003) 89; Sampson (1993); Σκοτεινή Θαρρουνίων 245,335 **in** Skouras (2003).

Agios Demetrios Church – ruin
This is in the area of Kastri. Probably Byzantine but not confirmed.
Skouras (1998) 156.

CW19 **Seta**

General
This is a village in the mountains on the modern Gymno-Avlonari road. Skouras notes nothing in the area but the sites of two possible fortifications are shown on the HMGS (1970) map. The lack of medieval churches possibly suggests minimal population in the area and that the old road did not follow this route but passed through Tharrounia (**CW22**) and Trachēli (**CW23**).

Medieval name
None known but the name '*Seta*' is the Italian for silk, suggesting that this may have been a substantial silk manufacturing centre during the Frankish period. An alternative name derives from the Turkish 'Saita', meaning 'lady', thus intimating that the village developed only in the Ottoman period.

Kastri possible fortification (38.31.033, 023.55.683, height 752m.)
To the east of the road and south of the village the name is noted on the HMGS (1970) map, but no other reports have been found regarding it.

Tourla hypothetical tower (38.31.001, 023.56.516, height 735m.) **no. 260**
This is shown on the HMGS (1988) map to the east of Kastri. No other reference found. It has line-of-sight in all directions.

CW20 Katō Seta

General
This is a small village in the mountains to the northeast of Seta on the modern Gymno-Avlonari road. No early churches have been identified in the area. See comments above.

Medieval name – see **CW19**

Pyrgaki (1) hypothetical tower (height 727m.) **no.224**
This is noted on the HMGS (1988) map just to the east of the village overlooking the road. It has line-of-sight south to Tourla (**CW19**), northeast to Manikia (**CW21**) and northwest to Pyrgaki (2).

Pyrgaki (2) hypothetical tower (height 644m**.) no. 225**
This is shown on the HMGS (1988) map to the northwest of the village. It has line-of-sight to Pyrgaki (1) and Katabothra hypothetical tower (**CE32**), thus providing a link over the mountains to Stropones (**CE35**).

Kastellaki possible tower / fortification (height 1,080m.) **no. 208**
This is a prominent hill on the HMSG(1970) map further northwest of Seta, close to a road that leads back to Mistros (**CN24**). No other reference found.

CW21 Manikia

General
This village in the mountains lies on the Gymno-Avlonari road. There are three old churches noted along the road stretching back west from the village to another village known as Makrychori (Far village).
Koder and Hild (1976) 211.

Medieval name – none found

Agios Konstantinos Church
To the north of the Gymno-Avlonari road one kilometre after the village. Undated.
Skouras (1998) 142.

Kastro fortification (38.32.534, 023.59.394
There are signs of walls and a large inhabited area around and above the church, but, although Skouras hazarded a guess that it was originally a classical fortification, he provided no evidence. The existence of the church within it may suggest its continued use into the Byzantine period. It has line-of-sight southwest to Kato Seta (**CW20**), south to the hypothetical tower site at Tracheli (**CW23**) and a view east down the valley towards Neochori (**CE17**), although no direct sight of the fortress.

Agios Nikolaos Church
This three-apse church is just to the east of the road running north to Manikia from Makrychori at a height of 480m. The three apses are divided internally by two arches which run the length of the church.

There had been two columns with Byzantine capitals, but these had disappeared on Skouras' second site visit.
Skouras (1998) 142.

Agios Demetrios church
A cross-vaulted church built in 1302/3 according to the inscription. It is within the village of Makrychori.
Skouras (1998) 141-142; Koder (1973) 161,166.

Agiannakos Monastery
Skouras notes that this lies in an area called Skapatos at a height of 200m., presumably to the east of Manikia down the valley towards Neochori. It is a metochi of the Klibano monastery. Byzantine
Skouras (1998) 142.

CW22 Tharrounia

General
This populous village runs along the river and what was probably the medieval road linking Gymno **(CW14**) with Avlonari (**CE10**) to the east.

Tower Skouras no.53, Lock no.40
On Skouras visit the walls still stood to a height of 3m. The tower seems to have been placed deliberately in this position in order to have a view not only both to the southwest towards Parthenoi (**CW18**), east to Trachēli (**CW23**) and southeast to Rizokastro (**SC2**), but to control the point at which the road, following the river, emerges from the narrow valley and divides into two – one going east to modern Avlonari, the other northeast to the Cupa fortress.
Skouras (2003) 64; Lock (1995**).**

Agios Nikolaos Church
This single-aisle church (internal 6.25 x 3 m.) with a vaulted roof is situated amongst the rocks just below the tower. Dated by Sampson in A. Delt as Byzantine.
Skouras (1998) 114; A. Delt. (1983); Farantos (1980) 348.

Panagitsa Church
An unassuming church within the village, dated by Skouras as late Byzantine.
Skouras (1998) 114.

Metamorfosē Sōtēros Church – ruin
Remains found of the church when excavating for a new church on the site. Undated.
Skouras (1998) 114. Farantos (1980) 348.

Giatrapezo church - ruin
This was once about 2km. to the west of Tharrounia. It was just a pile of stones on Skouras' visit. Undated.
Skouras (1998) 114.

CW23 Trachēli

General
This village is on the western edge of the wide Avlonari valley, situated between two river systems.

Tower (38.30.673, 24.0.357, height 420m.) - Skouras no.134, Lock no.41
The tower has survived to its full height and the chevron-shaped battlements are still intact as is the vaulted roof at second floor level. It measures 7.10m. x 7.00m. The walls are approx. 1.5m thick and rise internally with the same thickness. Entry is at second floor level in the south face. A number of windows appear at first floor level. Although there is no sign of dressed stone surrounds recent repairs may have hidden traces of these. Internally there are a number of niches set into the walls
There are a significant number of older buildings and narrow streets around the tower, just below the peak of the hill, suggesting that this may have been some sort of fortified village. The tower has line-of-sight to Tharrounia (**CW22**) and to the south, but views are restricted to the north.
Skouras (2003) 104-105; Lock (1995); **colour plate 10.14(d).**

Probable un-named church - foundations
Next to the tower, which stands in the village cemetery, Skouras found foundations, which are probably that of a church, but he could not confirm his find.
Skouras (2003) 104.

Tourla possible tower no. 262
This is the name of the hill directly north of the village on the HMGS (1970) map. A beacon here would have been necessary to communicate with the fortress of ***Cupa*** (**CE18**) to the northeast

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CW24 Agios Athanasios (Gymno)

General
This is an area to the east of Gymno (**CW14)** in the foothills of the mountains that separate the area from Aliberi and Avlonari. The land around is steep but cultivable and there exist good upland pastures for stock rearing. No habitations are shown on the HMGS (1970) map so the settlement was probably abandoned in the Ottoman period.

Tourla possible Tower no. 252
This conical hill, noted on the HMGS (1970) map, rises to a height of 773m. just to the north of the three churches noted below. The local name of '*Bilies*' (see below), if indeed it originally derives from '*vigles*', provides potential support for the existence of the tower / look-out point from the Byzantine period.

Agios Georgios Church – ruin
East of the village on the mountain at a height of 375m., this church is noted as a metochi of Agios Nikolaos Monastery. It is dated to the Early Byzantine period by Skouras according to the cloisonné construction style and marble spolia he found.
Skouras (1998) 100-101.

Panagia Theotokos Church
A long way to the east of the village at a height of 400m. in a position today called '*Bilies*' ('*βιλιες*' - Vigles?) by the locals according to Skouras. It seems to have belonged to Agios Nikolaos monastery, but the evidence is not secure. Skouras dates it as Byzantine.
Skouras (1998) 102.

Agios Nikolaos church – ruin
Close to Panagia Theotokos church but higher up the mountain at 470m. Undated.
Skouras(1998) 102.

Agia Paraskevē church – ruin
Owned by the Agios Nikolaos monastery, this is close to Agios Nikolaos church. Undated.
Skouras (1998) 102-103.

CW25 **Manika**

This is a narrow strip of land just one kilometre wide, bordered on the east by the sea and the west by rocky hills that runs along the coast north from Chalkida. At its northernmost extent it is bounded by the small fertile valley of Batontas (**CW26**). It includes the area of *Manika*, a large pre-historic settlement, estimated to have covered an area of 70 hectares, much of which is now covered by the sea.[1095]

Medieval Name – none found

Zōodochos Pēgē Monastery
This is by the sea just to the south of a small promontory that juts out into the sea. It is a metochi of the Makrymallē Monastery **(CN10).** A new chapel has been built in the position of the old one. Undated.
Skouras (1998) 108-109.

Agio Nikolaos Church - ruin
This is situated 3 km. from Chalkida on the sea side of the road north to Nea Artaki in an area called Giakoupē. Skouras describes it as a vaulted Byzantine church. This may indicate the existence of a small fishing hamlet at this position.
Skouras (1998) 109.

CW26 **Batontas**

General
This is a small valley 8 km. north of Chalkida. Although no trace of any older churches exists in the modern town of Nea Artaki on the coast, the two churches at Batontas, which lies just above the main medieval north-south road are an indication of a settlement in the area during the medieval period. No remains of any fortifications have been identified closeby. Skouras suggests that there was possibly a tower in the position of the ancient *Drakospito* just to the southeast, but this seems unlikely. More possible is that the church of Agios Simeon on a rounded hill just above the village indicates the existence of some fortified point there.
Koder and Hild (1976) 280.

Medieval Name
Vatonda: **13th** c. – Marino Sanudo[1096]
The area is not mentioned on any contemporary maps but is well known for the battle that took place here in c.1280, in which the invading Byzantine forces under Licario were victorious over the Lombard barons of Euboea (see **chapter 4**).

Agia Paraskevē Basilica – ruin
Sited close to the modern poultry houses near the village, Lazarides in the A. Delt (1964) notes the construction and sculpting to be of excellent quality. Dated to the early Byzantine period.
Skouras (1998) 89; A. Delt. (1964) 19, 214; A. Delt (1969) 24, 211.

[1095] Sackett(1966) 57; Sampson (1988) **Μάνικα II : μιά πρωτοελλαδική πόλη στη Χαλκίδα, Ο πρωτοελλαδικός οικισμός και το νεκροταφείο [the early helladic settlement and cemetery]**. Athens: Δήμος Χαλκιδέων [Chalkida council]
[1096] [Marino-Sanudo-Torsello], 141.

Agios Georgios Church[1097] **- ruin**
Close to the above. The original church all but fell down in the 1950's. It was reconstructed and some wall frescoes from the 17th - 18th centuries were saved. Lazarides notes that it was probably built on the foundations of an older (classical?) period building, since he found fragments of such in the vicinity. Byzantine.
Skouras (1998) 89; A. Delt. (1964) 19, 214.

CW27 **Agios Antreas**

General
This is an area of average agricultural land adjacent to the shoreline through which the Basiliko (**CW5**) to Eretria (**CW12**) road passes. It is of little importance except for the beacon tower probably positioned on a small hill just to the north of the area.

Medieval Name – none identified

Settlement
Sackett reports the existence of medieval finds on a small hill to the west of Agios Antreas church, something which may suggest that the church is constructed over the foundations of an older one and the existence of a settlement here.
Sackett (1966) 61.

Panorama hypothetical tower
This possibly existed on a hill that rises to 260m. to the northwest of Agios Antreas church. It protects the entrance to the valley that runs up to the ***Leriche*** (**CW9**) valley and the upland plain around mt. Dirfis and would have been a key node in any communication network running both east from ***Filla*** castle (**CW4**) to ***Eretria*** (**CW12**), and north towards the probable military centre at Skounteri (**CN22**).[1098] Insufficient evidence to include.

CW28 **Agios Georgios -Levkanti**

General
This is the site of the Mycenaean / Archaic settlement of Levkanti. The old road from ***Negroponte*** (**CW1**) to ***Eretria*** (**CW12**) appears to have run along the shoreline and marshland at this point through the village around the tower set on a small knoll. To the northwest is the Lelantine plain and the land is generally very productive.

Levkanti Tower (38.24.79, 23.40.118, height 8m.) - Skouras no.83, Lock no.30
This is close to the seashore 100m. to the east of the Agios Georgios church on a low knoll. Its base could still be discerned (8.40 x 7.40 m.) by Skouras, but a store had been built over it. On my visit a neighbour confirmed its existence but nearly all trace has now disappeared. It appears to have been critical in any chain of beacons / towers running eastwards from Chalkida **(NW1**) to Rizokastro-Aliveri (**SC2**).
Skouras (2003) 76; Lock (1995). Sackett (1966) 61.

Agios Georgios church
This is just to the west of the position of the tower. It has been renovated. Strangely, Skouras does not include this church in his site listing. Although much of the church appears modern and it has been

[1097] Skouras notes two churches with the same name, one a ruin, but this appears to be an editing error since the references are to the same church.
[1098] See **chapter 6** for a discussion of this.

renovated, the style of the apse with its thick walls and tiny window is reminiscent of many medieval churches identified. Not included.

Settlement
A substantial number of sherds on the cultivated land around the tower indicates the probability of a settlement on the small knoll. It is also clearly shown on a map by Werdmuller (1660) – see **figure A5.20** (**CW6)**.
Sackett (1966) 61.

Appendix 5.2.5 Central-East Region

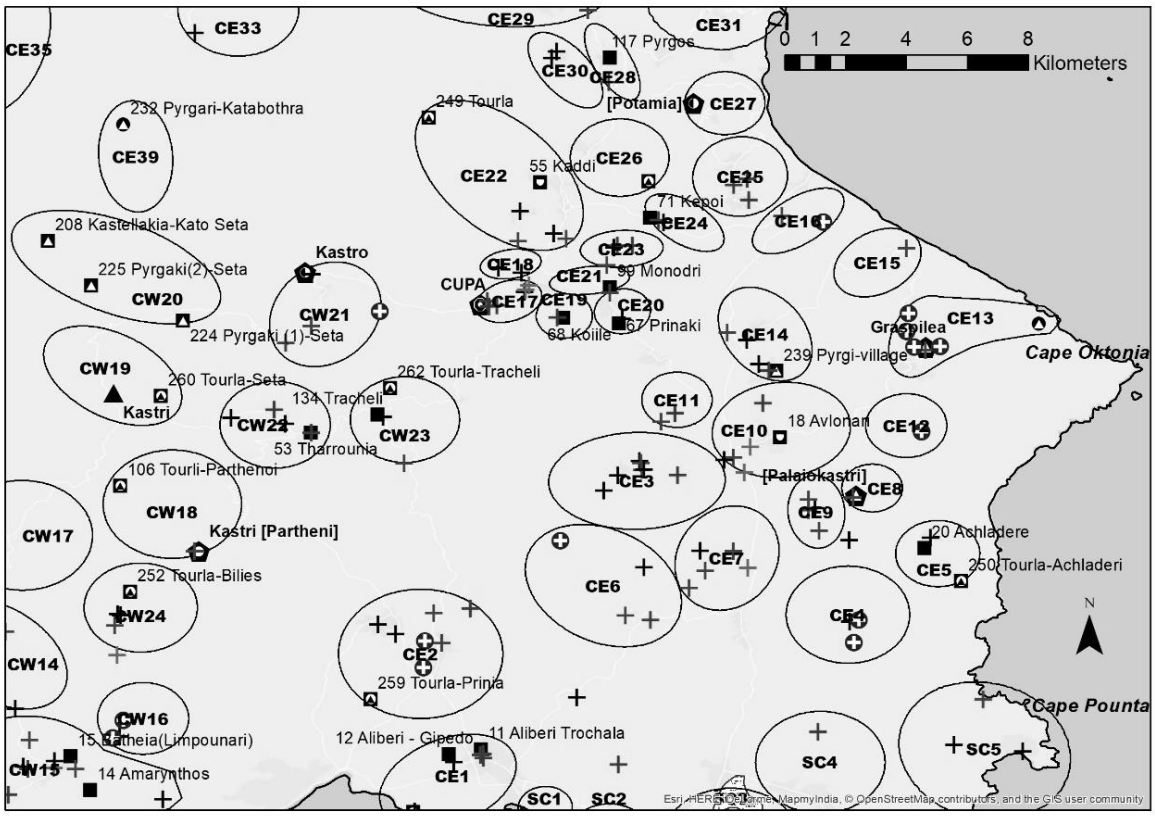


Figure A5.26 = Central East Euboea

The region running from Aliberi on the west coast to Kymē on the Aegean is, due to its relatively high rainfall, one of the most fertile on Euboea, so much so that Piri Reis, the Ottoman admiral, wrote on his *portolan* chart in 1528 that at the village of ***Avlunar*** on the east coast '*small boats stop to load corn*'.[1099] It seems also to have had a high production of wine. The name 'Ambelia' (meaning 'vineyards) we find noted a number of times on modern maps, whilst the locals still refer to the village of Belos (**SC3**) just to the south as '*ta belousia'*, a corruption of this. The bishopric of the area was referred to as '*Ambelonensis*' in a Papal document from the 13th century, a name which seems to have been corrupted (via *Abelona ?*) to ***Valena / Valona*** on 14th century charts and thus to the Turkish ***Avlunar***.
To the northwest there exists a small remote sub-region (sites **CE33-40**), which runs 35 km. along the shoreline to the northeast of the Mount Dirfis mountain range. Access during the winter months, when the mountains were covered with snow and the north-easterly winds prevented sailing, would have been at the best limited and only in the last twenty years has an asphalt road existed. Agricultural land is also minimal, covering less than 5% of the whole area

CE1 Aliberi (Aliveri)

General

There appears to have been a settlement in the area since the classical period (see Karabos (**SC1**)), and the small bay is ideal, although very exposed to a southerly wind, for the export of goods from the rich lands around Avlonari to the east. During the medieval period the town appears to have been focussed on a small hill to the northwest of the bay.[1100]

[1099] See discussion in **chapter 6** regarding the name.
[1100] It is mentioned by Hierokles (533-535) - Hierokles 645.7.

Koder and Hild (1976) 246.

Medieval name
Protimo*: Classical – *Porthmus; **14th c.** – ***pro[tmo]*** (Portolan chart); **15th c.** – ***Protimo***: Sonetti (1485); **16th c.** – ***Protimo***: Bordone (1528), Agnese (1555))
The name ***Porthmos*** is still given to an area by the shore to the southwest of the town, where the river emerges into the sea. This appears to have silted up since the hill to the east is called Mesonēsi (Middle island). By the medieval period the tower by the shore opposite Karabos to the east of the bay (**SC1**) probably indicates the position of the new harbour.
Koder-Hild (1976) 120-121.

Tower (Classical?) – Skouras no.11
The foundations of a tower measuring 8.50 x 6.90 m. were found in an area called Trochala, close to the Panagitsa church, during excavations there in 1988. Two corners were constructed of massive stone blocks suggesting that this was possibly a classical tower, whose use continued into the medieval period.
Skouras (2003) 41; Sampson (1988-89) 170.[1101]

Tower - Skouras no.12
Skouras reports that this once stood on a hill just above the football ground.
Skouras (2003) 41.

Possible tower – Skouras no.13
On the western beach of Aliberi in a position called Rifi there exists a probable classical period structure approximately 9m. square. The existence of a church nearby suggests continued use into the medieval period.

Koimēsē Theotokos or Panagitsa Church
In the centre of the town at a height of 60m., it once bore an inscription giving the date 1393.
Skouras (1998) 70; Koder (1973) 164; Farantos (1980) 328; Koder-Hild (1976) 120-121, Kalamara (2016).

Agios Demetrios Church
In the centre of the town, this has been much changed over the centuries. It has been dated as Byzantine, but this is uncertain.
Skouras (1998) 71; Farantos (1980) 328.

Agios Nikolaos church
Within the area of the modern Agios Georgios church it is dated between the above two churches by Farantos. It measures 6.00 x 3.10m. internally with a barrel-vaulted roof and a three-sided apse.
Farantos (1980) 329-330; Skouras (1998) 71.

Church - ruin
Close to the tower in an area called Rifi. Undated but probably Frankish.
Skouras (2003) 71.

CE2 Agios Ioannis/ Agios Loukas

General
These are two good-sized villages in close proximity to each other, just to the north of Aliberi **(CE1)**, in a valley where four intermittent rivers join to form one that flows down to Aiberi.

[1101] Sampson A. (1988-89) «Επισήμανση αρχαιολογικών θέσεων στην Εύβοια», **Ανθρωπολογικά και Αρχαιολογικά Χρονικά**, 1 **in** Skouras (2003) 41.

Medieval Name
***S. Lucas*: 13th c.** - Acta Innoc.[1102]

Agios Demetrios Church
In the village of Agios Ioannis. Undated.
Skouras (1998) 63.

Panagia Fonissa Church - disappeared
On road to Agios Ioannis village. Undated.
Skouras (1998) 63; Farantos (1980) 325.

Metamorfosē Sōtēros Monastery
Cross-vaulted church, probably late Byzantine. No location details.
Skouras (1998) 66; Farantos (1980) 335.

Agios Loukas Korakiōn Monastery
The church is cross-vaulted in style. Late Byzantine (possibly Ottoman)
Skouras (1998) 64-65; Farantos (1980) 339-346.

Agios Loukas Church
The new church of Agios Athanasios incorporates a good deal of spolia and engravings from the old one. Byzantine dated to 1014.
Malamut (1988) 584; Ntafi (2017); Skouras (1998) 63; Koder (1971) 150-152; A. Orlandos (1951c) 131-145.

Agios Demetrios Church
Situated at a height of 180m., this church has been dated to the 14th century by Farantos.
Farantos (1980) 327-333; Skouras (1998) 66.

Koimēsē Theotokos Church - ruin
This is 500m. from Agios Demetrios in the position Lykotroupa. Byzantine.
Skouras (1998) 66; Farantos (1980) 333.

Tourla hypothetical Tower no.259
To the southwest of Agios Loukas, this is a small hill with a height of 153m. noted on the HMGS (1988) map. It is directly in line with the towers at Aliberi (**CE1**) and Rizokastro (**SC2**), and provides a link over the mountain to Gymno (**CW17**).

CE3 Agios Georgios

General
This large village with seven churches lies on a steep hill (height 200m.) 13km. to the north of Aliberi above the Manikiotis river on the old road that linked Gymno **(CW14**) with Avlonari (**CE10**).

Medieval Name – none found

Agios Ioannis Prodromos (or Rebythas or Nēstevtēs) church
Situated 2 km. to the left of the main road to the village, this church has been dated to the 13th century by Farantos, although it has undergone many changes.
Skouras (1998) 60; Farantos (1981-82) 282.

[1102] Acta Innoc. 353 (no. 122) **in** Koder and Hild (1976) 205.

Agia Panagia t'Artemisia church – ruin
This vaulted church in the area of Artemisia at a height of 100m. possesses a round apse that covers the whole eastern wall, while there are so many tile-slips in the construction that it appears red in colour. Undated.
Skouras (1998) 60-61.

Agios Georgios church – ruin
In the position Koutsouradi to the east of the village at a height of 130m. – possibly once a monastery. Dated as Byzantine from the wall frescoes (now disappeared).
Skouras (1998) 61.

Agios Basileios church – ruin
Once next to Agios Georgios, now disappeared. Undated.
Skouras (1998) 61.

Agia Kyriakē church – ruin
A good way east of the village at a height of 150m. Late Byzantine.
Skouras (1998) 61.

Agios Georgios church – ruin
150 m. away from Agia Kyriakē, now only a pile of stones. Undated.
Skouras (1998) 61.

Agios Basileios church - ruin
Southwest of the village at a height of 160m. in the Kampou area. Undated.
Skouras (1998) 61.

CE4 Peribolia

General
This is an area to the east of the modern Aliberi-Kyme road. That it is good farmland is emphasised by the name which means 'an enclosed area of cultivated land'.

Medieval Name – none found

Taxiarchēs Monastery
Situated in the position 'ampelia' (meaning vineyard) this is to the east of the village. The monks' cells have now disappeared, and the late Byzantine church has been changed beyond recognition.
Skouras (1998) 157; Farantos (1981-82).

Panagitsa Ampelousia church
Close to the monastery this is a small stone-built church with a four-sided apse externally but semi-circular internally and signs of wall frescoes. Undated.
Skouras (1998) 157.

Agioi Anargyroi Monastery
Southeast of the village, the extent of the ruins suggests that it was once a monastery. Undated.
Skouras (1998) 15; Farantos (1981-82) 157.

CE5 Achladerē

General
This village to the northeast of Peribolia (**CE4**) overlooks the Aegean shoreline. The land is fertile but hilly.

Medieval Name – none found.

Agios Nikolaos church
This is a cross-vaulted church with a false external double apse on the east wall. Although Farantos dates it to the 17th century from the wall frescoes and some architectural components, there may have been a late Byzantine church in this position, given the tower close-by,
Farantos (1983) 289; Skouras (1998) 87-88.

Tower (height 300m.) Skouras no.20
There once existed a tower in the position Fakithi, but its ruins disappeared when the army fortified the position during the civil war. It has a view to Palaiokastri (**CE8**).
Skouras (2003) 46; Triantafyllopoulos (1974) 227.

Tourla possible tower (height 382m.) no. 250
This is the name of a conical hill to the southeast of the village. It has clear views out over the Aegean, and would have been visible from a watchpoint at ***Porto Petries*** (**SC5**), although we have no evidence of such there except the harbour name.

CE6 Gabalas

General
This village situated at a height of 175m. is 7 km. northeast of Aliberi, beyond a range of low hills. To the west there is a large agricultural area whilst another range of hills lies immediately to the north.

Medieval Name – none found

Agios Panteleēmonas monastery - ruin
Skouras notes the ruins of a church and many other buildings as being a good distance northwest of the village at a height of 270m. This, coupled with local information, suggested to him that the ruins were originally of a monastery. Undated.
Skouras (1998) 93.

Agios Athanasios A' church
Situated southwest of the village cemetery at a height of 120m. this is a late Byzantine barrel- vaulted church.
Skouras (1998) 93.

Agios Athanasios B' church – ruin
Skouras notes this as being on private land at a height of 50m. (probably a mistake for 150m.) and that a new church has now been constructed on the foundations of the old larger Byzantine one, some portions of the walls of which were still apparent.
Skouras (1998) 93.

Agia Sophia or Palaiokklēsia church – ruin
At a height of 260m. in the position Palaiokklēsia on the border between Dafnē and Gabalas. This is a three-apse church. Little remains except the base of a column.
Karapas (1955) Gabalas, **Κυμαικα Νεα** 1 **in** Skouras (1998) 104.

CE7 Dafne

General
This area encompasses the two villages of Dafnē and Lofiskos in a small valley of 2 x 3 km. which straddles the river and north-south road from Aliberi (**CE1**) to Avlonari (**CE10**). The latter village may be modern given the complete lack of earlier churches in its environs.

Medieval Name – none found

Koimēsē Theotokoσ church
In 1951 the church was renovated and Karapas noted more than fifty large ashlar blocks, marble columns and other spolia, indicating the probable (according to Farantos) early Byzantine dating of this church, but all had disappeared by Skouras' visit.
Karapas (1952) **in** Skouras (1998) 103; Farantos (1981-82) 278.

Agios Nikolaos church - disappeared
This has now been superceded by a new church. Skouras had seen the old one and dated it Byzantine.
Skouras (1998) 104-105.

Agios Ioannis church - disappeared
Northwest of the village at a height of 120m. in the cemetery. Some wooden carvings and icons of the Apostles, indicating its possible Byzantine dating, have been preserved in the new church.
Skouras (1998) 104

Agios Demetrios church – ruin
In the position Palaiochori at a height of 170m. Undated.
Skouras (1998) 104

Agios Georgios church - ruin
At a height of 130m. in the area of Skoumpithi, where a new church has been constructed. Byzantine.
Skouras (1998) 104.

CE8 Palaiokastri

General
This is situated just to the southeast of Avlonari (**CE10**) on the peak of a mountain. This is a strategic position with panoramic views except for the northeast.

Medieval Name
Much has been written about the identification of this small castle with various names on maps from the 15th and 16th century. Some have mixed up the name '***Potiri***' with that of '***Cupa***', the large fortress to the east (***CE17***), both seeming to mean 'cup'. Koder (1973) locates the former at Oktōnia (**CE13**). Triantafyllopoulos (1974), reviewing Koder's work, draws no firm conclusion, noting that '***Potiri'*** could be either the Oktonia castle or Palaiokastri.
My discovery of the manuscript Sonetti (1485) *isolario*, to which no researcher has referred and from which many 16th century cartographers appear to have copied, suggests that this castle had no name, which can be securely identified on the contemporary maps (see **appendix 5.2**).
Koder (1973) 104-108; Triantafyllopoulos (1974) 224-225; Skouras (2003) 44-45.

The Palaiokastri fortification (024.09.149, 38.29.198, height 402m.) – Skouras no.17
This is a small fortification within which there is the Panagia church and a few other buildings. It is likely that the settlement that supported the garrison was at the base of the mountain (**CE9**). Its compact

style and integral church suggest a Frankish origin, but the lack of any tower, its remoteness on a mountain peak and its name 'Palaiokastri' (rather than some form of 'Kastellaki' or 'Kastraki') may intimate (although names can be very misleading in this context) a Byzantine refuge fortification with later Frankish use. It has direct line-of-sight northwest to ***Cupa*** (**CE18**) and Avlonari (**CE10**), southeast to Achladeri (**CE5**), and south and west to Peribolia **(CE4**) and Agios Georgios (**CE3**) although there is no sign of any beacon or tower at these.
Skouras (2003)44-45; Koder (1973) 104-108; Triantafyllopoulos (1974) 224-225.

Panagia church
On the south side of the fortification at a height of 412m. It has a vaulted ceiling and the external wall is also that of the castle. It is very basic and functional – Byzantine or Frankish for the garrison troops.
Skouras (1998) 83.

CE9 **Panagia**

General
This collection of four churches are in a narrow valley on the western slope of the mountain, on the top of which stands Palaiokastri castle (**CE8**). Immediately below is the river and to the west the village of Dafnē **(CE7**). There was most likely once a settlement here to support the garrison in the fortification above but the old road leading directly north to Avlonari, probably following the course of the river, has now been replaced by a new one through Lofiskos to the west.

Medieval Name – none found

Agios Ioannis Keskesa church
Set at a height of 100m. on the slope below the Palaiokastri castle (**CE8**), the exact position is difficult to discern from Skouras' commentary. Dated as Byzantine by the wall frescoes.
Skouras (1998) 67.

Agios Ioannis church – ruin
On the foothills of the Palaiokastri mountain in the position Chontroi. Undated.
Skouras (1998) 82; Farantos (1980) 368.

Church (unknown name) – ruin
To the southwest of the Palaiokastri mountain. Dated as Byzantine from the construction style.
Skouras (1998) 82.

Church (unknown name) – ruin
Slightly higher up the slope of Palaiokastri mountain than the above. Dated as Byzantine from the construction style.
Skouras (1998) 82.

CE10 **Avlonari**
General
This is a small town centred on a low hill close to the confluence of two rivers, midway between the two coastal towns of Aliberi (**CE1**) to the southwest and Kymē **(CE31**) to the northeast. The modern town now stretches along the new road north, to the west of the old centre. There are six older churches close to the river in the environs of the modern town (the site of the original Byzantine town?), but none has been identified within the old town on a hill closeby, intimating that the latter's tower and associated

fortification (?) were constructed later, probably in the Frankish period, and only grew into a town under the Ottomans.
Koder and Hild (1976) 139; Kalamara (2016).

Medieval Name
Valona / Vellona: **14th c. -** ***Valona/Velona/Vellona***: *Portolan* charts, ***Vallona***: Sanudo; **15th c.** – ***Avalone*** Venetian assembly decision,[1103] ***Valona***: Sonetti (1485); **16th c.** – ***Velona***: Agnese (1555), ***Valona:*** Bordone (1528)).
These are all names, which have a similarity to the modern name, probably derived from the Ottoman ***Avlunar***. But it is argued in **appendix 5.2** that ***[La] Valona*** (literally *the valley*) referred generally to the region, not to an individual town. In the early 16th century Piri Reis notes it as a coastal village, and I propose that the sttlement was originally at Oxilithos (**CE25**) in the Late Medieval period. and the administrative centre moved only in the later Ottoman period (after mid. 16th c.?) to modern Avlonari.[1104]

Tower (24.07.523,38.30.234, height 107m.) Skouras no.18, Lock no.39
This stands to its full height in the centre of the old town. It measures 8.10 x 8.10 m. at the base with three floors, the ground/mezzanine is vaulted N-S, the first is horizontal wooden and the second vaulted E-W. Entry is on the first floor, although a new door has been inserted on the ground floor. The castellations are in chevron style and there is an indent of approximately 0.25m. around the base at a height of about 0.50m. The window openings appear to have undergone a degree of reconstruction, so it is difficult to draw any conclusions except that the tower was most likely still in use during the Ottoman period. The stonework is rough and there is no evidence of quoining on the corners. Wall thickness is estimated by Lock as 2m. at ground floor level.
Lock (1995) 117; Skouras (2003) 45-46; Koder104-108; A.Delt.(1965) 20, 296; **colour plate 10.15(b).**

Agios Demetrios church
This is a large 13th c. cross-vaulted (σταυρεπίστεγη) church with three apses, the central of which is larger than those on the side. It is constructed over the foundations of an older (Byzantine?) church. It is, according to Skouras, one of the best architecturally on the island.
Skouras (1998) 81; Farantos (1980) 368-370; A. Delt (1968) 23, 244.

Church ruin
On the road to the village of Agios Georgios at a height of 60m. Undated
Skouras (19980 82.

Early Christian church ruin
In the settlement of Chania. Early Byzantine.
Skouras (1998) 83.

Early Chistian Church ruin
In the area of Itea. Early Byzantine
Skouras (1998) 83.

CE11 **Agia Thekla**

General
This is a hamlet in a small valley to the northwest of Avlonari (**CE10**) on a tributary of the main river that flows past the latter.
Koder and Hild (1976) 272.

[1103] (1890-1900), III, 6; Thiriet (1958), no.1485. This notes that the captain of ***Avalone*** is ordered to reside in '***la Coppa'***.
[1104] There is also a full discussion of the name and positioning in Koder and Hild (1976) 131.

Medieval Name – none found

Agia Thekla church
This cross-vaulted church in the village cemetery has been dated to the 14th century.
Skouras (1998) 62-63; A.Delt.(1965) 20, 298; Koder (1973) 161,184; Farantos (1981-82).

Agia Marina Church
Just to the south of the village, this small cross-vaulted church has been dated by Farantos to the 13th century.
Farantos (1981-82) 285; Skouras (1998) 63.

CE12 Agios Charalampros Levkōn

General
This is an isolated area in the mountains to the east of Avlonari (**CE10**) and north of Palaiokastri (**CE8**) at a height of 450m.

Medieval Name – none found but probably used its dedication name.

The 'Panagia tōn Levkōn' Monastery
This is a large monastery, which had originally been dedicated to 'Eisodia tou Theotokou', but also takes the name Agios Charalampos. The main church is cross-vaulted in style. There is substantial Greek language literature. Dating uncertain – Middle Byzantine or Frankish.
Skouras (1998) 84; Koder (1973) 150, 152, 165. Themelis (1965) 104.

CE13 Oktōnia

General
This is a large village at a height of 365m. composed of four separate settlements - Panōchōri, Katōchōri, Alōnia and Panagia - in the mountains to the northwest of Avlonari **(CE10).** It is exceptional in possessing four monasteries. To the west Bouni mountain rises to a height of 761m. To the north there are over 10 km. of open beaches along the Aegean shoreline, easily attacked by corsairs.
Koder-Hild (1976) 226.

Medieval Name
***Graspilea*:** 17th c. - Coronelli (1687), Boschini (1654/1658))
No clear definition found, although Koder suggests it as a solution to the correct identification of '***Potiri'***, a conclusion which Triantafyllopoulos - see (**CE8**) - considers possible. Skouras argues for the name '***Graspilea***' based on the cartographic evidence of the period and that close-by there is a very large cave ('*Spēlia*' in Greek) system with a number of chambers on the road from the castle to the sea. The name could therefore be a corruption of 'Gran spelia', meaning literally 'large cave'. I have followed this conclusion.
Triantafyllopoulos (1974) 224-225. Koder (1973) 107; Skouras (2003) 87.

Agios Demetrios Katarrachtēs Monastery
The main church is a cross-vaulted type. Whilst the wall frescoes are dated to the 17th century, Skouras suggests an earlier date for its foundation and Koder puts it in the 14th century based on the architectural style. Probably 15th or 16th century according to Farantos.
Skouras (1998) 148; Koder (1973) 150-163; Triantafyllopoulos (1974) 241; Farantos (1980) 358.

Eisodia Theotokos Papablassa Monastery
Metochi of Levkōn monastery, this is a small church (internally 3.90 x 2.60 m.) around which were the remains of a number of other buildings. 15th or 16th century.
Farantos (1980) 355-357. Skouras (1998) 150; Koder (1973,153) identifies this incorrectly.

Taxiarchēs Kotzikias Monastery
This monastery is just to the east of the castle to the northeast of Oktōnia. Byzantine.
Skouras (1998) 150; Farantos (1980) 355-357.

Agios Georgios Koutsouros Monastery – ruin
Two km. to the north of the village on the road to Mourteri (**CE15**). Undated.
Skouras (1998) 151; Farantos (1981-82) 310.

Fortification church
This is within the wall of the castle and has now been renovated. The original church appears to have been contemporary with the castle.
Skouras (1998) 151.

The fortification (38.31.844, 024.10.094, height 365m.) – Skouras no.103
This is oval in shape, measuring approximately 90 x 50 m. To the north there is a raised rocky area of 30 x 20 m., 7 m. above, that may have acted as a keep. The church together with a well stands in the centre of the lower level. The fortification would have been very strategic. It had views out to sea along much of the shoreline to the northwest but would have required further observation points to cover the area southwest beyond the mountain. Dating is difficult. Its size and location suggest initial Byzantine construction to protect the area, with later use by Frankish forces.
Skouras (2003) 87; Koder (1973) 107-108.

Zōodochos Pēgē church
Situated 1 km. east of the castle and now renovated. Undated, possibly Ottoman period and niot included in analysis

Pyrgaria possible tower no.238
This is the name on the HMGS (1970) map of a hill overlooking the shoreline. If indeed this was once a beacon tower, there would have been a need for a number around Cape Pounta to protect the coast against incursion by pirates, but no links or other possible tower site could be directly identified.

CE14 Pyrgi - Orion

General
These are two villages on either side of the river as it flows northeast down this kilometre–wide valley to the sea at Mourteri. There is excellent farmland along the banks of the river, which is one of the few that continues to flow throughout the year. The four churches suggest two good-sized settlements in the area.
Koder and Hild (1976) 248.

Medieval Name – none found

Pyrgi hypothetical tower no. 239
It appears likely, given the name of the village, that a tower once stood in its centre. It would have had clear views down the valley towards the sea and line-of sight south to Avlonari (**CE10**) – but only in this position and not if it had been positioned at the top of the hill – northwest to the ***Cupa*** fortress (**CE18**) and southeast to Palaiokastri **(CE8**).

Metamorfosē Sōtēros church
This is a much-studied cross-vaulted church dated to 1307 by Koder, although others have suggested 1296. A more recent study has reported the existence of an earlier layer of wall frescoes, although this could not be confirmed.[1105] Such a conclusion may be supported by the name '*Pyrgi*' rather than *'Tourla'* or similar, and the fact that it may have been a node in a Byzantine communication network (see **chapter 7**).
Skouras (1998) 164; Koder (1973) 161, 167; A. Delt. (1965) 20, 296.

Agia Paraskevē church - ruin
The foundations of this church can be found on the eastern bank of the river. Undated.
Skouras (1998) 165.

Gen. Ioannis Prodromos (Agriogiannēs) church
About 1 km. after the turn to Oxilithos (**CE25**) this is situated on a small rise. It has three aisles and a vaulted roof. Dated to the early 14th century by Farantos.
Skouras (1998) 154; Triantafyllopoulos (1974) 224; Farantos (1980) 351-353.

Church (unknown name)
In the village of Orion, this has now been replaced by a new church. Undated.
Skouras (1998) 155.

CE15 **Mourteri**

General
This small village overlooks a long open beach. Although this is a lone church, documentary evidence confirms the village's existence at least from the early 13th century. Sackett reported evidence of medieval settlement.
Sackett (1966) 74.

Medieval Name
***Mortar*: (1208 – *Mortar*)**
The name is mentioned in a letter to Pope Innocent III in February 1208 – *'In quibus haec propriis duximus vocalibus exprimenta casalia…Vatia, Literme, Mortar'* - This may also have been the beach area that Piri Re'is (1528) mentions, from where grain was loaded – see (**CE10**) for discussion.
Farantos (1980) 354, note 78.

Koimēsē Theotokos or Panagia church
This church is in the cemetery of the village. It has a number of wall frescoes studied by Farantos. Although the wall frescoes were insufficiently clear for him to date them, a church already existed in the village in 1208 (see above), which suggests a middle Byzantine dating.
Skouras (1998) 146; Farantos (353-355)

CE16 **Mantzari Monastery**
General
This area lies along the river that runs northeast to the sea below the large village of Oxilithos (**CE25**). To the south are some sharply rising hills within which is situated the monastery.

[1105] This was reported by the lady who opened the church for me, but I have not identified any literature to confirm this.

Medieval Name – none found

Koimēsē Theotokou Mantzarē Monastery
This is a cross-vaulted church situated within the monastery at a height of 160m., 2.2km. south of the bridge over the river. Frankish based on architecture.
Skouras (1998) 154; Farantos (1981-1982).

Kokkinoekklēsies church
Byzantine church according to Skouras that once stood to the left of the road to Orion close to the bridge.
Skouras (1998) 154.

CE17 **Brysē**

General
This is a village just to the northeast of the fortress of ***Cupa***. The valley is verdant, watered by the confluence of two continuously-flowing rivers, and there has been a substantial population in the area since at least the classical period when it appears to have been a *demos* of Eretria (known as ***Βρύγχη*** or ***Γρύγχη).*** Six old churches are noted in the area, three in the environs of the fortress.

Medieval Name
Cuppa: **14th c.** – ***Cuppa***: Sanudo;[1106] **15th c.** – ***la Coppa***: Venetian assembly;[1107] ***Cup[p]a***: Sonetti (1485); **16th c. -** ***Cupa***: Bordone (1528), Agnese (1555))
All the contemporary sources – documentary and cartographic – are consistent in their reference to the fortress as ***Cuppa,***[1108] and, given its importance, its identification with Brysē seems to be supported not only by the extent of the remains but the topography which contains a large sinkhole still called today Koupa (Κούπα – cup). The substantial literature had been confused in the past by the lack of both documentary and archaeological evidence but Koder (1973, 104-108),[1109] supported by Triantafyllopoulos (1974), finally provided the necessary in-depth analysis to confirm this conclusion.[1110]

Agia Paraskevē church
This is in the village cemetery. It is a simple church with a wooden roof and semi-circular apse, in the walls of which are marble from an early Christian church.
Farantos (1981-1982) 139-141; Skouras (1998) 92.

Agios Ioannis Prodromos church
This is just outside the village. Undated.
Skouras (1998) 92.

[1106] [Marino-Sanudo-Torsello], 137. There is the possibility that the name originated from the Latin word 'cupa'. This means basket and transferred into English in the 14th century via the french 'le kype', which appears to be the root of the English word 'keep, as used for the tower at Guines in the Pas de Calais, France - Kenyon and Thompson (1994) The Origin of the word 'keep'. **Medieval Archaeology**, 38: 175-176

[1107] (1890-1900), III, 6. The document of June 1413 refers to the *'Capitaneo Avalone''*, who was ordered from ***Negroponte*** to his place of service, the fortress of ***La Coppa.***

[1108] On later printed maps there appear a number of other versions of the name – *La Cupa, Cupali, Cupon, Cupha, Cupna* – Skouras (2003) 52.

[1109] Koder and Hild (1976) 140.

[1110] It is possibly relevant that another fortress with basically the same name, '*Cuppae'*, dated to the late 1st century A.D. and restored by the emperor Justinian in the 6th century, existed on the Limes at Golubac on the Danube river in modern Serbia - Kondić (1984) "Les formes des fortifications protobyzantines dans la région des Portes de fer ". In Dagron, et al. (Eds.) **Villes et peuplement dans l'Illyricum protobyzantin. Actes du Colloque organisé par l'École Française de Rome, Rome 12-14 mai 1982**. Ecole française de Rome. 131-161.

Agia Anna church
This is a new church close to the above. During construction α mosaic floor, possibly from an early Christian church, and marble spolia were identified.
Skouras (1998) 92.

Kastro Draggonara – Cup(p)a (38.32.613, 24.02.177, height 200-300m.) - Skouras no.32
This is situated to the southwest of the village and overlooks all the region. Skouras notes the existence of a sinkhole which possibly gave the fortification its name derived from the latin *cuppa* for 'cup' (It possesses a cave within which there is a natural cistern fed from a spring called *Agiasma* by the locals, the level of which has remained stable over the years). A better derivation for the name is, however, linked to the latin *cupa* meaning barrel and adopted in French as *Kype*. This seems to form the root for the well-used English word *kepe* or *keep* meaning the central stronghold of a fortification (see **chapter 9.5.2**).
We found remains not only of walls but of other buildings on our visit. The height of the fortress provides panoramic views in all directions except to the northeast, where the Mavrobouni mountain rises to a height of 1,190m. Its position also controls access from eastern to western Euboea and ***Negroponte.*** Koder notes that early travellers had spoken of a tower at the highest point of the fortress. Licarios refortified it in the 1280's (see **chapter 4**) and it was headquarters of the Venetian garrison in the region in the 15th century as attested by a Venetian document from 1426.[1111]
Koder (1973) 104-108; Skouras (2003) 52-53; Triantafyllopoulos (1974) 224-225.

Evangelismos church
Of the three churches in the fortress this is the only one renovated. Undated.
Skouras (1998) 92.

Agios Athanasios church - ruin
Ruin on the northwest of the fortress. Undated.
Skouras (1998) 92.

Church (unknown name) – ruin
At a height of 230m. within the fortress. Undated.
Skouras (1998) 93.

CE18 **Episkopē**

General
This is a village to the northwest of Brysē **(CE17**), so close that they may be treated as one.

Medieval Name
None found but the name implies that it may have been the seat of the Bishop of the Avlonari region, a conclusion which is further supported by its location just below the ***Cupa*** fortress (**CE17**).

Agios Ioannis church
A new church has now been constructed in this position and only three columns of this old church remain, Skouras noted that it is northeast of the village at a height of 80m. Undated.
Skouras (1998) 109.

[1111] Sathas (1890-1900) III,309.

Agios Nikolaos and Agia Barbara (38.33.265, 024.02.505, height 180m.)
This small church, the foundations of which appeared old, was noted on our visit. It is to the northwest of the village. Undated. 400m. further to the north there were the remains of substantial terracing and possibly of habitations.
No literature found.

CE19 **Koilion / Kēlē**

General
This is the third of the many villages in the valley along the edges of the river Manikiotēs.

Medieval Name – none found

Agios Ioannis church – ruin
This was close to the tower and may be considered contemporary with it.
Skouras (1998) 125.

Tower – Skouras no.68, Lock no. 42
Skouras notes the foundations of this tower that were clearly visible in the centre of the village on his visit, writing that it was 'bigger' than another one on the road to the village of Prinaki (**CE20**). Its base was 7.70m. x 8.00m. Koder also noted an enclosure just below the tower. Its positioning does not appear to suggest any strategic purpose.
Skouras (2003) 70-71; Koder (1973) 106. A. Delt. (1969) 24, 211; Koder and Hild (1976) 189-190.

CE20 **Prinaki**

General
This is a small hamlet on the road from Avlonari (**CE10**) to Monodri (**CE21**).

Medieval Name – none found

Tower – Skouras no.67, Lock no. 42
This is to the north of the village towards Monodri, where there is the turning left for Kēlē (**CE19**). It measures 8.00m. x 7.70 m. and survived to a height of 0.50 to 1.00 m. on Skouras' visit
Skouras (2003) 70; A. Delt. (1969) 24, 211.

Church – ruin
Skouras, although finding a reference to a ruined church in the hamlet, could not find it on his visit. Undated.
Corbin (1954); Skouras (1998) 159.

CE21 **Monodri**
General
This small settlement spans the Manikiōtēs river. The old village is to the north at a height of 70m. while the new dwellings are in the valley to the south of the river.

Medieval Name – none found

Tower - Skouras no.99
Reported in the 'χρόνικα του δήμου Αυλώνας 1833-1862' by K. Sgouros as having been demolished to build the new Koimēsē Theotokos church. Skouras places this at a height of 100m. but the topography suggests 80m.
Skouras (2003) 84.

Koimēsē Theotokos church
There was originally a Byzantine church in the position of the new church. Marble spolia are built into the walls of the new church.
K.Sgouros(1983) **in** Skouras(1998) 145.

CE22 **Konistres**

General
This area covers four equally spaced small villages, each with the remains of a medieval church or tower – Kaddi, Agios Blasios, Dirrevmata and Lokas. Konistres itself, which stretches along the modern road, has no medieval monument and may not have existed in the period.

Medieval Name – none identified

Kaddi tower (024.3.244, 38.34.791, height 216m.) Skouras no. 55, Lock no.47
Next to the church this tower is well-preserved. It is approx. 6.50m. x 6.50m. and stands to its full height (without crenellations) of 12m. Its wall thickness at base of 1.45m. suggests a strategic application. Entry is on the second floor on the south side and three corbels still remain to support this. On the second floor the rounded windows are surrounded by dressed stone. The walls are inset by 0.15m. at a height between 0.25 and 0.75m. The close proximity (less than 2m.) of the new church to the tower suggests either the existence of an older much smaller one in this position at some point or that there may have once been a hall in this position. Construction is of rough stone and mortar with tile in-slips, and there is no quoining at the corners. The tower has a commanding position, good views in all directions, and is situated equidistant from Pyrgos (**CE28**) and the fortress of ***Cupa*** (**CE18**).
Skouras (2003) 65; A. Delt.(1969) 24, 210-211; .Lock (1996); Koder and Hild (1976) 177; **colour plate 10.15(a)**

Agia Anna church – ruin
This is in Agios Blasios. Only a pile of stones remained on Skouras' visit. Undated.
Skouras (1998) 58.

Agia Paraskevē church
This is the main church of Dirrevmata, which replaced an older one destroyed by the Turks in 1823. Undated.
Skouras (1998) 105.

Agios Nikolaos church – ruin
To the left of the main road north out of Dirrevmata at a height of 115m. Undated.
Skouras (1998) 105.

Agia Zacharia church
This is to the south of the hamlet of Lokas, and was substantially replaced by the new church, which has a section of wall from the old one. Byzantine.
Skouras (1998) 59.

Tourla tower no.249
This appears on the HMGS (1970) map 3.5km. to the northwest of the Kaddi tower, just to the east of Mavrobouni, at a height of approx. 900 m.

CE23 **Spēlies**

General
This is a slightly isolated village in a hilly area to the east of Konistres (**CE22**). The siting of the churches over a wide area may indicate a number of small settlements.
Koder and Hild (1976) 261

Medieval Name – none found

Panagia Odēgētria church
Within the village at a height of 100m., this is a cross-vaulted church with a three-sided apse and well-preserved tiled roof. Dated to 1311 by Koder.
Skouras (1998) 168-169; A. Delt. (1965) 20, 298; Koder (1973) 167.

Agios Basileios church – ruin
On the border between the village and Monodri, a little before the river, the style of construction indicated its Byzantine dating to Skouras.
Skouras (1998) 170.

Agios Nikolaos church – ruin
Just to the southwest of Panagia Odēgētria church, this was just a pile of stones on Skouras' visit. Undated
Skouras (1998) 169**.**

Agios Gregorios church
Contemporary with Panagia Odēgētria church, this is close to the village to the right of the road east at a height of 70m. Late Byzantine.
Skouras (1998) 169.

CE24 **Kēpoi**

General
This large village, to the northeast of Spilies (**CE23**) on the northern slopes of the valley, runs along the banks of a river. Its name, 'gardens', implies an area of high agricultural productivity.

Medieval Name – none found

Tower – Skouras no.71, Lock no. 43
This tower in the centre of the village was half-demolished on Skouras' visit.
Skouras (2003) 72; Koder (1973) 108; Koder and Hild (1976) 187.

Koimēsē Theotokos church
A cross-vaulted church in the village. Probably Byzantine.
Skouras (19980 124; A.Delt. (1960) 16, 158.

Agioi Apostoloi church – ruin
Slightly outside the village, this has now become just a pile of stones. Undated.
Skouras91998) 125.

CE25 **Oxilithos**

General

This large village stretches for over a kilometre along a steep ridge that overlooks the Aegean. Most of the surviving older housing appears to be 19th century or modern. The churches have the peculiarity of being privately owned, suggesting that this was once a prosperous settlement in the 14th century. To the south, close to the river, there is a fortification that, it has been suggested, may have been ancient Kymē.
Koder and Hild (1976) 229.

Medieval Name

Possibly ***Valona*** – see **appendix 5.2**.

Koimēsē Theotokos church

At the entrance to the village in the cemetery (height 130m.) this is a cross-vaulted church. A good number of well-preserved wall frescoes have been dated to the 14th century.
Skouras (1998) 152; A. Delt.(1965) 20, 296; Koder (1973) 161; Farantos (1992-93) 149.

Agia Anna (Alexianōn) church

After the village at a height of 100m. this single nave church has a barrel-vaulted ceiling covered externally with tiles. It possesses two levels of wall frescoes, the second (and very inferior) of which was painted in 1370.
Skouras (1998) 153; A. Delt. (1965) 20, 296; Koder (1973) 164.

Agios Nikolaos 'tōn Ritzanōn' church

In the village at a height of 100m. this cross-vaulted church has been dated by Koder to 1304.
Skouras (1998) 152-153; A.Delt. (1965) 20, 297; Koder (1973) 166.

Palaiokastro fortification

This is in the valley on a prominent hill south of the village, close to the church of Agia Triada and 3 kms. from the sea.
Skouras (2003) 68-69′

CE26 **Kourounia**

General

These two small villages of Anō and Katō Kouroinia lie to the west of Oxilithos (**CE25**) in a hilly area of little agricultural value. To the northwest is the village of Taxiarches, but no early churches have been identified in its locality.

Medieval Name – none found

Tourla tower – Skouras no.75, Lock no. 44

The hill just above the villages is called '*Tourla*' on the HMGS (1988) map. On it lies the half – demolished remains of a tower, which would have been in a strategic position, linking the ***Cupa*** fortress (**CE17**) with settlements further north.
Skouras (2003) 73-74; Koder (1973) 108; Koder-Hild (1976) 123.

CE27 **Ano Potamia**

General

This village is on a steep hill above the Aegean shoreline on the road to Oxilithos (**CE25**)

Medieval Name
None has been found but proposals have been made that this may have been the position of 'Platari' noted on a number of isolario maps, a suggestion that Triantafyllopoulos (1974) discounts.

Kastri Fortification – Skouras no.114
This is a late classical fortification on a conical hill to the northwest of the village, well described by Sackett. Medieval wall construction also indicates its continued use into this period.
Sackett (1966) 75; Skouras (2003) 94-95; Triantafyllopoulos (1974) 222.

CE28 **Pyrgos**

General
This is a village on a strategically placed ridge to the north of Kourounia (**CE26**). It once had a mosque. To the east is the small village of Kallianoi but, lacking any medieval monument, this appears to be a recent settlement.
Koder and Hild (1976) 248-249.

Medieval Name – none found

Agios Nikolaos church
This is just before the village at a height of 145m. It is a single nave church with a vaulted roof from the 14th century (possibly dated to 1300-1310). Two layers of wall frescoes are preserved - from its initial construction and from the 17th century.
Skouras (1998) 153; A. Delt. (1965) 20, 297; Koder (1973) 157.

Pyrgos Tower – Skouras no. 117
This once existed in the village, presumably on the peak of the ridge, but has now disappeared.
Triantafyllopoulos (1974) 222; Skouras (2003) 96.

CE29 **Bitala**

General
This is a remote mountainous but well-watered area with access to a small upland plain, to the east of which there are two good-sized villages – Bitala (the largest) and Maletianoi (with an early dated church) – whilst to the west of the plain there is a tower and church indicating another small settlement. Access to the west is blocked by a wall of mountains, around which the modern road takes a tortuous route to the north, but there also exists a track which follows the narrow river valleys to the south.

Medieval Name – none found

Evangelismos church
In the village of Maletianoi, this church has now been replaced by a new one. Skouras identified icons and a carved wooden altar screen in dating it as Byzantine.
Skouras (1998) 142.

Agios Mandēlios church
Next to the tower at a height of 550m., its style of construction using tile slips and thin shavers of slate indicate its probable Byzantine dating but is insufficient for greater accuracy.
Skouras (2003) 90.

Tower - Skouras no. 26, Lock no. 45
This is 4 km. to the west of the village on the western edge of the upland plain at a height of 550m. It still stands to half of its probable original height. Its positioning does not seem to be strategic.
Skouras (2003) 49; Triantafyllopoulos (1974) 222.

Paliopyrgos possible tower no.
This appears on the HMGS (1988) map as the name of a mountain (1,094 m.) immediately to the west of the above tower. Its name, meaning 'old tower', clearly signifies the existence of a tower at some point in this position. It would also have been a critical node in a chain of beacons linking the Lamarē area (CE37) with Agios Georgios castle (**CE32**) to the east. It has a clear view to Pirgeri (**CE33**) to the west and southeast to the village of Pyrgos (**CE28**), 6 km. away.

CE30 Andronianoi

General
This large modern village, which grew from the coal mining in the area, is south of Bitala (**CE29**), just to the east of the mountains. There is little good agricultural land, but substantial upland pastures.

Medieval Name – none found

Agios Georgios church
This church was originally close to the new church that has now been constructed. Its walls had slowly collapsed into the pathways made for coal extraction. Undated but said to have had good wall frescoes.
Skouras (1998) 75.

Metamorfosē Sōtēros church
This was a small church with a tiled roof, which has now been enlarged. Skouras notes the special character of its apse which is semi-circular on its base and pentagonal above. Undated.
Skouras (1998) 75.

CE31 Kymē

General
This is set in a steep valley high above the Aegean. It is the main town for the region, but its lack of any older church suggests that it did not exist during the medieval period, but only grew in the 18th and 19th centuries on the back of the area's position as a large centre for merchant shipping. To the south the hill called 'Brachos' may have been the site of a beacon-watchtower, given its strategic position and viewshed and the village of Enoria just below, but no evidence has been recorded of such.
Koder and Hild (1976) 196.

Medieval Name
There has been much discussion about the linking of the town's name with the ancient town of the same name. Koder suggests that the '***Vumi'*** noted in Sanudo may be a corruption of Kumi = Kymē but, as Triantafyllopoulos notes, this seems unlikely and is probably Bounoi (**CN18**), which appears to have been a large medieval settlement (See **appendix 5.2** for a detailed discussion). All the maps show Kymē (in the form ***Cumi*** or ***Chumi***) much further south.
Koder (1973) 88; Triantafyllopoulos (1974) 235.

Agios Nikolaos Keliōn Monastery
A metochi of Sōtēros Monastery, this is a few kilometres outside the town on the road to the monastery at a height of 260m. It is a Byzantine three-aisled basilica on the walls of which only fragments remain of the original frescoes.
Skouras (1998) 127; A. Delt. (1965) 20, 297.

CE32 Sōtēros Monastery

General
This is an inhospitable mountainous area to the north of Kymē (**CE31**) and the only rationale for settlement appears to have been the strategic position of the castle guarding the Aegean shoreline.
Koder and Hild (1976) 260

Medieval name – none identified

Agios Georgios Castle – Skouras no.79
Skouras notes that it is not large in size and almost all demolished. It stands at a height of 380m. on a hill just to the west of the monastery. Two churches have been identified within its environs. It has views out to sea to the north and east, whilst 15 km. of mountains protect the shoreline to the west until Chiliadou (**CE38**). Communication would have required a beacon on one of the mountains to the south, the most probable of which is at Brachos ('rock') above the village of Enoria, just to the south of modern Kymē. Probably 11th century.
Skouras (2003) 75; Triantafyllopoulos (1974) 235; Koder (1973) 98, 107.

Sōtēros Monastery
This is just to the east of the castle. It is a three-aisled basilica with three columns and arches to each colonnade and a pentagonal apse. In one renovation the roof took on the form of a cross-in-square church. Although there is the possibility of it being earlier, the monastery was probably founded in the 17th century, and has not been included in the analysis. The monastery also had a tower at one time (Skouras no.81).
A. Delt. (1965) 20, 297; Skouras (1998) 127-128; Koder (1973) 150, 153.

Agios Georgios church
This is a cross-vaulted church, now renovated, within the walled area of the castle. Byzantine or Frankish.
Skouras (1998) 128.

Church (unknown name)
Within the confines of the walls of the castle this small church measures 3.50 x 1.50 m. Undated but probably contemporary with the castle.
Skouras (1998) 128.

CE33 Metochion

General
This area has two small villages – Agioi Apostoloi and Metochi – and seven churches with steep mountains rising as high as 900 m. to east and west. A narrow valley leads from the pass over Mt. Dirfis through the area down to the Aegean Sea. The land running along the east of the river is extensively terraced. Probable development during Ottoman era.

Medieval Name
None known but it suggests the existence of a metochi of a monastery.

Panagia church
Skouras reports two articles which note the remains of this church and substantial buildings, believed to be that of a monastery, but he could not identify them on his visit. Undated.
Nikoloutsos (1973) Πανευβοικον Βημα, 1740&1747 **in** Skouras (1998) 143.

Pirgerē hypothetical tower no. 217
This is a hill 2.5km. to the northeast of Metochion village mentioned on the HMGS (1970) map.

CE34 Agios Nikolaos Sikeliotis

General
This is an area below Metochion (**CE33**), where the valley widens slightly as it reaches the sea. On the steep hills to each side there is substantial terracing. There are seven churches noted in the region so possibly this was an area which developed during the Ottoman period.

Medieval Name – none found

Agios Nikolaos Sikeliōtēs monastery
This is between Metochion and the sea at a height of 110m. Skouras notes that the surviving remains suggest a monastery of considerable size. There is the small Taxiarchēs chapel, which he believed from the building style to be earlier in date, and the main church. The latter has three apses and a mosaic floor inlaid with large tiles. Undated, possibly Byzantine.
Skouras (1998) 143-144; Farantos (1992-1993) 128.

CE35 Stropones

General
This village, on the road that descends from the pass over Mt. Dirfis to the sea, lies at a height of 330 m. just below the snowline. There is little good land but substantial areas of mountain grazing.

Medieval Name – none found

Tower - Skouras no.129
This was reported by Koder, but Skouras could find no trace of it on his visit. A hill just to the north of the village (height 470m.) is a logical place to position a tower to control both the road up to the pass over Mt. Dirfis and as a nodule in a beacon network. It would also explain the existence of the village, which is surrounded by little agricultural land of any value.
Koder (1973) 97, 101; Skouras (2003) 129.

CE36 Agia Irene

General
This is little more than a hamlet. It lies at the juncture of two narrow river valleys and the east-west road. There are two indications of fortifications in the area, but little cultivable land to support settlement beyond this.

Medieval Name – none found

Kastria
This is shown on the HMGS (1970) map to the north of the village.

Pyrgari hypothetical tower no.227
To the northwest of the village a ridge, the most northerly part of which is called ***Pyrgari,*** runs out to the Aegean.

CE37 **Lamarē**

General
This is a heavily wooded area with little cultivable land. The village seems to have grown around the fortification below which it is situated, although the name possibly comes from refugees who settled there from north-western Greece following the fall of Ali Pasha in 1822.[1112]

Medieval Name – none found

Panagia Monastery
At a height of 330m. this small monastery is on the road to Chiliadou from Lamarē. The church has been renovated. The floor is two steps below the level of the ground and its windows are like arrow slits. Undated.
Skouras (1998) 129-130.

CE38 **Chiliadou**

General
This area fronts onto the sea. Whilst the monastery is 1 km. inland, the village of Koutourla is set high on a ridge 3.5km. to the south.

Medieval Name – none found.

Koimēsē Theotokos / Chiliadou monastery
This is 6.2 km. from Lamarē and 1 km. from the beach. It has a cross-vaulted church with part of the roof elevated and three apses. Undated.
Skouras (1998) 130-131; Farantos (1992-1993) 124.

Koutourla possible Tower no. 210
The name and positioning of the village on a ridge at a height of 480m. suggests the existence of a tower in this position. It is equidistant between the fortification at Lamarē (**CE37**) and the possible tower of Pirgerē, (**CE33**) and would have been necessary for practical communication between the two. It also has clear views out to sea and would have controlled access up the two valleys which run south to the east and west of it.

CE39 **Katabothra**

General
This area comprises two small upland valleys at a height of 800m. and 1,000m. Today there is no central settlement and probably in the past the area, since it is above the snowline during much of the winter, was only occupied during the summer months.

Medieval Name – none found

Pyrgaki possible tower no.232
Shown on the HMGS (1970) map, this is to the very north of the two valleys. It has line-of-sight to Stropones (**CE35**) and Kastri (**CW19**), but to the south a second tower on the saddle between the two valleys would have been necessary for communication towards Pyrgaki (1) at Kato Seta (**CW29**)

[1112] http://tsoutsouneros.arvanitis.eu/archives/28915 [accessed 10/02/2019].

Buildings and tower
A collection of what appear to be abandoned buildings and even a tower has been identified from satellite photographs close to the road at the saddle between the two valleys.

CE40 Glyfada

General
This is a small remote village (height 460m.) hidden in a fold of the hills from the Aegean 2km. away. Mountains to the south, east and west make access very difficult except by sea. There is a limited amount of good cultivable land. To the northeast by the beach the HMGS (1970) map notes an area called 'Polis' suggesting some form of classical settlement. Two kilometres to the northwest of the village, overlooking a small beach, another area is noted as Bēlē. There is the possibility that this derives from Vigli and indicates a watchtower, but the evidence is insufficient to include in the analysis.

Medieval name – none found

Tourla (1) possible tower no. 263
This is a hill noted on the HMGS (1970) map to the northeast of the village. From its summit there are good views over the Aegean. It has line-of-sight to Agia Irene (**CE38**) and may have been a node in a series of coastal watchtowers.

Tourla (2) possible tower no. 264
This is a hill noted on the HMGS (1970) map to the southwest of the area

Appendix 5.2.6 South-Central Region

Introduction

As discussed in **chapter 4**, this is an area of transition. The lush greenery of the region surrounding Dirfis mountain slowly gives way to barren mountains as one approaches Karystos on the southern tip of the island. It is also one of the narrowest parts of the island and, while stretching 50kms.from north to south, is only 7kms. wide at one point. Thus, a tower situated at Polypotamos (**SC14)** could have surveyed both the Aegean Sea to the east and the Euboean Gulf to the west.

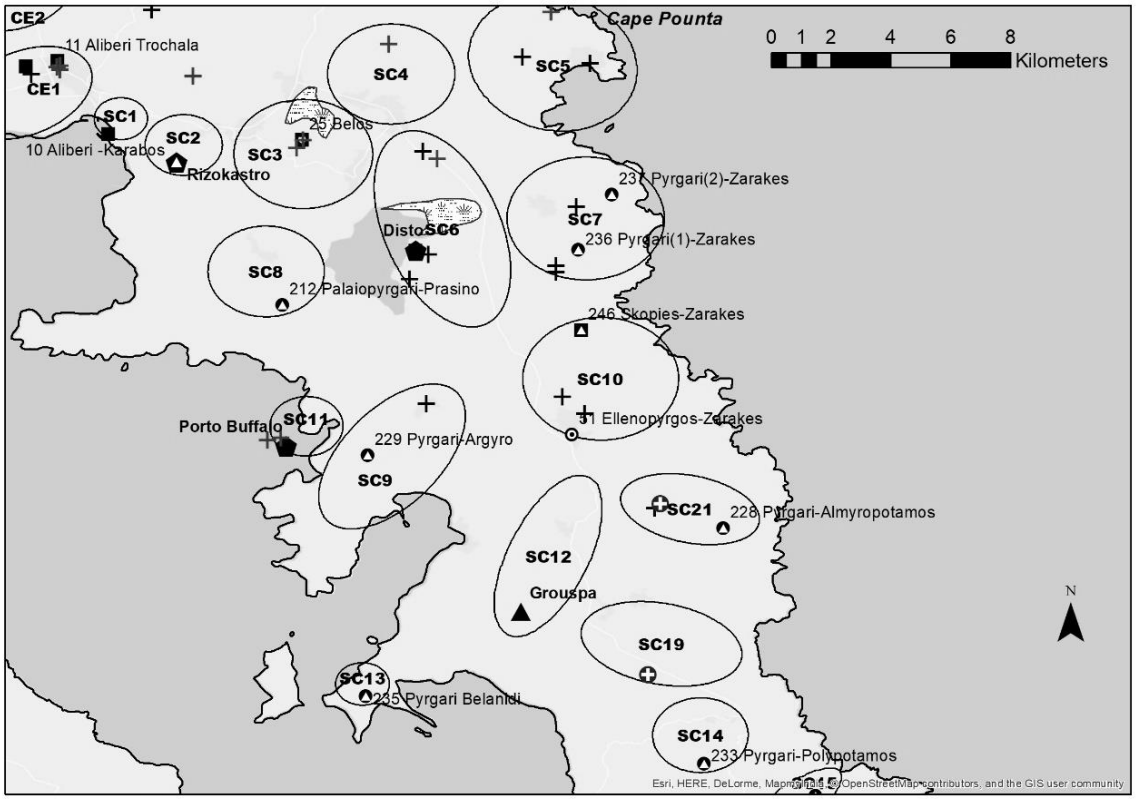


Figure 5.27 – South Central Euboea (a)

SC1 Karabos (Aliberi)

General

This port probably developed following the silting up of the harbour at Aliberi (**CE1**). It was further expanded during the 20th century for export of coal from the local mines and more recently, as the seams ran out, import of coal for the electricity power station built alongside the shoreline. Classical and Early/Middle Byzantine finds (up to the 7th century have been reported by Sackett (1966),[1113] and have also been identified in the area as part of the excavations for a new gas-fired power station.[1114]

[1113] Sackett et al. (1966) 69.

[1114] Ntafi (2017) "Η κεντρική Εύβοια στο τέλος της αρχαιότητας. Ένα σύνολο αγγείων από τον υστερορωμαικό και πρωροβυζαντινό οικισμό στις εγκαταστάσεις της ΔΕΗ Αλιβερίου". In Tankosic, et al. (Eds.) **An Island between Two Worlds: the Archaeology of Euboea from Prehistoric to Byzantine times, July 2013, Eretria**. Norwegian Institute at Athens. 469-492.

Medieval Name
Either this or nearby Aliberi (or both) may have been referred to as ***Porthmos*** or ***Protimo*** (See **CE1** for discussion)

Pyrgaki Tower (38.23.413, 024.03.106) - Skouras no. 10, Lock no. 35.
The tower sits within the area of the power station. It is currently undergoing renovation by the local archaeological service. No formal report has been issued, but indications from site finds are that it has been in continuous use from the Byzantine period.[1115] It appears, therefore, to have acted as a control point (customs house?) for the export of goods (probably wine and grain) from the nearby Belos-Krieza-Avlonari plain to the east.
The tower still stands to its full height, although it has been extensively renovated (one wall has been rebuilt) even prior to the present work. Re-used classical masonry is incorporated into the lower courses of the southern wall. It is a square tower measuring 7.60 x 7.70 m. with 1.45m. thick walls at the base. Skouras (2003) 41. Lock (1996); Koder (1973) 104. A. Delt (1961) 157.

SC2 **Rizokastro**

General
This fortification is set in an imposing and strategic position on a conical hill above the port of Karabos (**SC1**) and controls the route eastwards to Belos (**SC3**) and the rich Avlonari plain.

Castle / Tower (024.307.38, 38.22.913, height 147m.) Skouras no.9
Although the fortification is always referred to as a castle it is in essence a tower with the apparent later addition of out-buildings and an enceinte.[1116] The tower measures 7.6m. x 7.1m. with a wall thickness at base of 0.90m. reducing to 0.6m. at the 2nd floor level. It is constructed of rough-cut stones bonded with mortar and tile in-slips. The walls rise to a maximum height of 11m. There was no indication of the usual indent at 0.60m. height. The window surrounds are rough, suggesting an early dating. Door entry is presumed to have been on the ground floor on the east side (now fallen in). The south corner shows signs of a secondary wall re-enforcement, whilst the ground floor is divided into two.
The impression is that the tower was constructed separately from the extensive out-buildings. Their mortar is slightly different with a sea-sand mix and certain areas are flush-pointed with mortar that has resisted the weather much better than the tower. It is not possible to define with any certainty whether there had originally been a castle here earlier to which a donjon was added at a later stage but Stavros Mamaloukas from an architectural study believes the tower predates the outer fortifications. Two underground arched cisterns set into the rock were identified to one side (there could have been more). One building may have been originally a hall, church or prison and possesses a massive doorway with holes for (steel?) bars. The whole is enclosed in a rectangular wall measuring 46 x 30 m.
There are good views over the bay of Aliberi to the west and to the tower at Belos (**SC3**) to the northeast. Koder suggests a 14th c. dating while Mamaloukas prefers the early 13th c. Its strategic position within any communication network and the form of the tower, which differs from most others on the island, suggests that its origin as a Middle Byzantine construction should also not be excluded, but neither considers this possibility.
Skouras (2003) ??; Koder (1973) 105, A. Delt. (1961) 157-159.; Mamaloukas (2016); **colour plate 10.17.**

[1115] Information received verbally from Nikos Kontogiannis of the 23rd Ephoria.
[1116] Mamaloukos (2016) "The Rizokastro near Aliveri, Euboea, in the context of the Frankish castle architecture in Greece". In Tankosic, et al. (Eds.) **An Island between Two Worlds: the Archaeology of Euboea from Prehistoric to Byzantine times, July 2013, Eretria**. Norwegian Institute at Athens. 613-623.

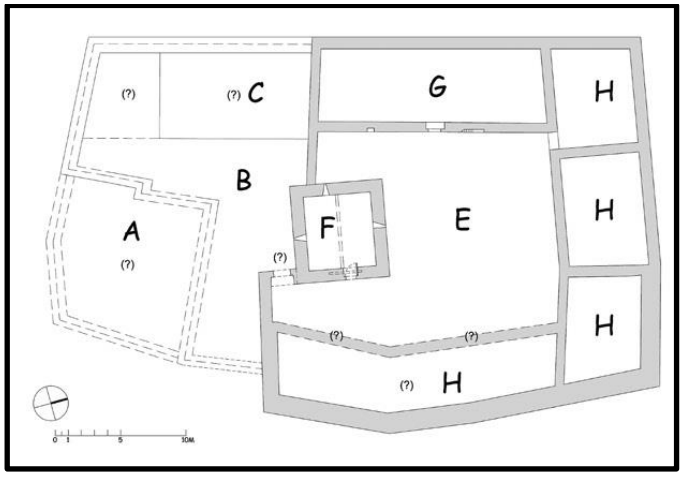


Figure A5.28 - Rizokastro Ground plan – extract from Mamaloukas (2016)
(A-Barbican, B-outer courtyard, C-Stables, E-inner courtyard,
F-tower, G-great hall? (cisterns underneath), H-ancillary buildings)

SC3 **Belos**

General

Whilst the modern village straddles the highway leading east from Aliberi (**CE1**) to Avlonari (**CE10**), the old village was established further south on the northern slope of a small valley on what appears to have been the old road south, between the castle of Rizokastro (**SC2**) to the west and the tower to the east. To the south there is the old village of Koutoumoulas after which the tower is sometimes named. To the east there is a well-watered plain, although much may have been marsh prior to modern water extraction lowering the water table. The two churches in close proximity to the tower indicate that there had probably once been a settlement at this point.

Medieval name
None identified. However, the name has only recently been changed, and originally the local residents referred to it as 'ta Belousia', a term which appears to have its roots in the Greek word 'αμπελώνια' meaning vineyards.

Tower (24.06.608, 38.23.304, height 155m.) – Skouras no.25, Lock no.37.
This lies in a strategic position. To the west there is a direct view to Rizokastro (**SC2**), to the northeast to the now derelict village of Drosia (**SC4** - previously Zapanti), and to the southeast to Dystos (**SC6**). It also has a view over the whole plain. The old north-south road is a few hundred metres away.
The basic tower still stands to its original height of over 12m. and the battlements are intact. The stonework is rough, bonded with masonry and tile in-slips. There is no indication of quoining. It is approximately square and measures 7.10 x 6.70 m. The walls reduce in diameter internally, providing the bases for the wooden floors (all now disappeared) for which there are also post holes. The top floor has a vaulted ceiling (still intact), through which there is an access hatchway, providing a flat base for a fighting platform or beacon. Externally at 0.60m. height there is a small 0.10m. indentation all around the walls. There is an opening for a fireplace on the top floor with a chimney on the east wall.
Three corbels for support of what may have been a toilet exist on the west wall next to a window. Entrance was originally at first floor level on the east wall and the remains of post holes can be seen below it for an entry platform, although this appears to have been converted at a later stage into a smaller window with a cut stone circular archway (during the Ottoman period?). On the other three sides at the

same level there are what appear to have been gun loopholes,[1117] since they lack the vertical length of an arrow slit.
The tower is surrounded by a low-level chemise approximately one metre from the walls with circular bastions at each corner. A further enceinte appears to have existed approximately 23m. distant from the tower, again with circular bastions at each corner.[1118] It could not be ascertained whether this originally included within it the church to the south. One particular feature noted by Skouras is that a water channel (now destroyed) had been constructed to the tower.
The relative lack of sophistication in its initial form, small windows at second/third floor level and external works suggests an original military role. Later architectural detail with dressed stone cornices on the windows, coupled with its good state of repair indicate that the tower was thereafter in continuous use during the Ottoman period.
Skouras (2003) 48; Lock (1996) 117; Koder (1973) 104-105; Triantafyllopoulos (1974**); colour plate 10.16(b).**

Eisodion Theotokos (Mesoportissa) Church
From the outside this appears to be a modern church. However, it is constructed around a much older one and it is necessary to descend three steps at the entrance to the original floor. Internally there is a barrel-vaulted roof with wall frescoes, dated by Farantos to the 17th century. Most probably the church is contemporary with the tower but there is no secure evidence to support this.
Skouras (1998) 126; Farantos (1980) 332.[1119]

Church Ruin
Reported by Skouras, this church is close to the village cemetery of Koutoumoulas on the track to the tower. He dates it as Byzantine, noting the cylindrical style of the apse and finding a marble slab with an engraved cross.
Skouras (1998) 126.

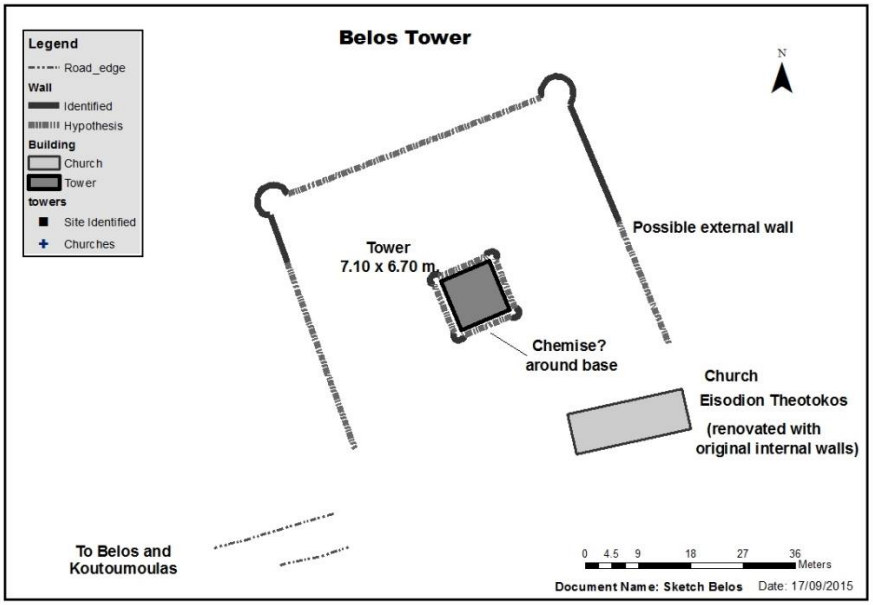


Figure A5.29 - Belos tower – ground plan sketch

[1117] These may also have been an addition by the Italian army who occupied the site in WWII. The surround appears to be concrete but I could not examine it up close.
[1118] Such a construction is very similar to early Byzantine forts in the northern Balkans e.g. at Hadjucka Vodenika, Slatinska Reka and Milutinovac - Kondić (1984). There is the possibility, however, that this is a much later addition (some even Italian trenching from WWII?) and is not contemporary with the original tower.
[1119] Farantos (1980) Βυζαντινές και μεταβυζαντινές εκκλησίες στις περιοχές των χωριών ... [Byzantine and post-byzantine churches in the area of the villages of central Euboea]. **Archeion Euboikon Meleton**, ΚΓ':

SC4 **Krieza**

General
This is a town on the opposite side of the plain to Belos (**SC3**) formed by the joining of two villages – Alonia and Krieza. To the north on the banks of a small river another village, now derelict, appears to have been the main medieval centre. This is called Drosia today but historically had the name ***Zapanti***. Whilst two churches exist in the vicinity no tower has been identified. There is a road that leads directly from ***Zapanti*** to the village of Petries and the harbour on the Aegean coast, suggesting that this may have been the original medieval road

Medieval Name
The name of Krieza appears to have an Albanian root,[1120] suggesting its establishment in the late 14th / 15th century, but it has not been noted on any maps of the period.

Agios Ioannis Prodromos Church
This is situated in the now derelict village of Drosia (***Zapanti***). It has a semi-circular apse. Skouras identified marble carvings and plates built into the walls. He dated it as late Byzantine.
Skouras (1998) 111.

Hypothetical Tower
Drosia is the natural link in a chain of towers running north from Karabos (**SC1**) up to Avlonari (**CE10**). Its height of 175m. provides good visibility in all directions except east. Since there is no other evidence (except possibly the church) to support this supposition, it has not been marked as a tower but simply as a node in the network.

SC5 **Petries (Petriai)**

General
Petries, which is 2 km. inland, possesses the only safe harbour with protection against the strong north-easterly winds along the barren mountainous south-eastern Aegean coast of the island. It is 90 km. from the southern port of ***Kastri*** (**S14**) and thus in a very important strategic position. Surrounded by mountains, access is difficult, Whilst the modern road passes over the mountain to the west to Krieza (**SC4**) the easier route was most likely towards Drosia (**SC4**) to the northwest. The possible watchtower situated close to Koskina **(SC7**) just to the south would have provided views out to sea and communication back to the castle at Dystos **(SC6**).
The positioning of the surviving churches suggests three settlements in the area – the large village of Petries, the harbour (modern Ag. Apostoloi) in what is still called the Gulf of Petries, and a hamlet at the church of Agios Ioannis in a small bay to the northeast (although this may be Ottoman).

Medieval name
Porto Potres / Potiris / Potiri**: 15th c.** – Venice (1426), Sonetti (1485) symbol only; **16th c. - *Porto Petres/Potres*****:** Agnese,[1121] Pseudo Buondelmonte,[1122] ***Potiri*** – Millo (1590).[1123]

[1120] Papakonstantinou (1971) **Η Ευβοική Μεσσαπια, χώρος, - κάτοικοι - πολιτισμός [the Euboean Messapia, area - inhabitants - culture]**. Athens 53. He notes that Kriza/ krieza (also a place in Makrykappa, close to Psachna) means kefalaki or small head in Albanian.
[1121] Agnese (1559) "**Cosmographia. [Portolan Atlas.] La isola di Negroponte [map 12]**". Venice. Beinecke Library MS 560
[1122] Legrand (Ed.) (1897) **Description des îles de l'Archipel : première partie [by Cristoforo Buondelmonte trans. from Greek]**, Paris: Leroux. The author includes a map of Euboea of unknown authorship, which Koder (1973) assumes to be by Cristoforo Buondelmonte – see discussion in **chapter 4**.
[1123] Milo (1590) "**[Evvia. From an isolario (island book) of the Mediterranean with descriptions]**". National Maritime Museum, Greenwich, London, P/17(96)

Although Sonetti (1485) clearly shows a place on his map in this position (as some later maps), he does not unfortunately name it, so we are dependent on Battista Agnese in the 16th century for the first identification of the port. The position of ***Potiri*** is subject to much debate. Triantafyllopoulos (1974) has suggested the possibility of Palaiokastri (close to Avlonari – **CE10**) or Oktonia (**CE13**) while Koder (1973) notes its similarity to ***P[orto] Potries.*** Triantafyllopoulos rightly distinguishes between the port and the nearby village of Petries, the name of which is very similar to '***Potiris***'. Also, as noted in a contemporary document (1426),[1124] it would have been the obvious position to station a garrison and any ship (or fleet) protecting the eastern seabord of the island against corsair attack. Bury (1888) presumed ***Potiri*** to have been Styra (**SC16**) but this seems much too far south.[1125]– see **appendix 6.2** for a detailed discussion.

Agios Ioannis Church (now lost)
Marked on the HMGS (1970) map in a sandy bay just to the north of Petries, this has now disappeared under a new church. Skouras notes it as post Byzantine with a pyramid shaped three-sided apse.
Skouras (1998) 157.

Agioi Apostoloi Church
Agioi Apostoloi is now the name of the port of Petries. Skouras reports that there had existed an old church in the position of the new one that has now been constructed here. Undated.
Skouras (1998) 58.

Agios Demetrios Church (ruin)
The walls survive to their full height. It is close to the new church of the same name next to a small stream on the road east from Petries. It has a three-sided apse covered with a slate style roof, hemispherical internally. Skouras noted traces of wall frescoes. Undated.
Skouras (1998) 158.

SC6 **Dystos**

General
Dystos is an area occupied from antiquity. It is a large enclosed valley (25 sq.km.), just to the southeast of Aliberi, into which run streams from the surrounding mountains to form a lake and marshland towards the west. On the east side of this there lies a conical hill on which the classical and Byzantine fortification, and the medieval tower stand. The agricultural land with its plentiful water supply would have been very productive and four villages exist on the hills around.
The modern village of Dystos, originally called Zerbisia sits on the north-western slopes of the plain. The old section overlooks the lake, but no early church has been identified close-by. The medieval village was probably on the south-eastern side of the plain northwest of the hill called Tsakoni, where the ruins of a church have been identified. Most likely this controlled the southern shores of the lake, whilst the northern and western plain was owned by the settlements at Agios Nikolaos, where two churches have been identified, and by the large village of Koskina (**SC7**).[1126]

Medieval Name
***Disto*: 15th** – none, **16th** – none, **17th – *Disto*:** Coronelli.[1127]

[1124] *'...capetanarie l un di qual stava in un castel de comun dito **la Coppa** et altro in un castel de comun ditto **Potiris**....'*- (1890-1900), III, 309, ll 13-14.
[1125] Bury (1888).
[1126] Chatzidimitriou (2003) **Δύστος πόλις Εύβοιας: Αρχαιλογικά και ιστορικά δεδομένα για τον αρχαίο δήμο του Δύστου**. Athens.
[1127] Coronelli (1687)

Although Ortelius (1584)[1128] notes the name '***Dystos***' on a map of classical places on the island in a list of place-names he could not identify, the first mention of ***Disto*** on a map appears to be that of Coronelli dated to 1688. Probably the area was identified by engineers in preparation for the Venetian expedition of 1688 to lay siege to ***Negroponte*** (since 1470 under control of the Ottomans).
Koder and Hild (1976) 151-152.

Tower (24.8.631, 38.21.325 height 128m.) – Skouras no.46, Lock no.49
The tower is positioned atop the conical hill in the centre of the plain. It is in a critical strategic position with panoramic views and, contrary to Lock (1996),[1129] has a clear view to the Belos tower to the north. In all it can communicate with seven possible towers/beacons in the area. The tower measures 6.80 x 6.80m. Only one wall with a round-arched window still stands to its original 14m. height. There are traces of three floors of which the topmost was vaulted.
Skouras (2003) 60, Lock (1996), Koder (1973) 105, Sackett (1966) 76; **colour plate 10.16(a).**

Fortification
The above tower is surrounded by a thick wall of rough stone and mortar, within which there are the remains of buildings. The fortification may have initially been of Byzantine origin, something supported by the nearby place-name *Tsakone* (see below), but Chatzidimitriou reports walls constructed during the Venetian period and it was probably one of the eleven garrisoned by the Venetians in the 15th century – see **chapter 6**. It seems probable that this was the central fortification for the defence of the '***Potiri***' region – see **appendix 6.2** for a detailed discussion.
Sackett (1966) 76, Skouras (2003) 60. Chatzidimitriou (2003).

Agios Georgios church
This small church sits at the base of the hill to the southeast close to what might have been the road up to the fortification. It appears a modern church, but the rounded rough apse and small slit window suggest a much older date for this section of the construction. Undated.

Unidentified Tower - Skouras no.137
Skouras reports having been informed of this tower, but on two visits to its supposed position on a hill called Tsakōni, to the southeast of the Dystos plain, he was unsuccessful in finding it. This has not been included in the analysis.
Skouras (2003) 106.

Church ruin
Ruin identified to south of plain on the hill called Tsakōni. Undated.
Skouras (1998) 108,

Agios Nikolaos Church, ruin
This is situated in an area called Soulinari close to the well. According to Skouras it has now been reconstructed. Undated.
Skouras (1998) 108.

Agia Triada Church, ruin
Situated southeast of Agios Nikolaos Skouras found marble remains scattered around the area and believed it to be Byzantine.
Skouras (1998) 108.

[1128] Ortelius (1584 various editions) "**Negroponte in CANDIA INSVLA - ARCHIPELAGI INSVLARVM ALIQVOT DESCRIP**". Cartographica Neerlandica, http://www.orteliusmaps.com/book/ort147.html
[1129] Lock notes 'As a watchtower its use is severely curtailed by the high ground to the north'.

SC7 **Koskina**

General
This village is situated to the east of the Dystos plain. It is distinguished by two possible towers within its area – possibly because its eastern border is defined by 10km. of the island's Aegean coastline and small beaches suitable for corsair incursion. Further, the existence of two churches to the south just below a possible tower indicates the possibility of another early settlement in the area.

Medieval Name - None found

Pyrgari Tower (1) no.236
Situated to the south of Koskina just above two churches (see below) at the end of an established road, this possible tower is noted on the HMGS (1970) map as 'Pyrgari'. It has a clear view west to the Dystos tower (**SC6**), east out over the Bay of Mourteria, and northeast to the second tower in the area.

Pyrgari Tower (2) (height 265m.) no.237
This possible tower site noted on the HMGS (1988) map stands on a hill close to a headland and has panoramic views out over the Aegean Sea. It would therefore have controlled all shipping in the area north to the harbour at Petries (**SC5**) and south as far as Zarakes (**SC10**)

Profētès Ēlias Church ruin.
At a height of 130m. in a position called Brysè Kalogyrou (literally 'Monk's spring') Skouras, by his finds of cut stone blocks, believed this church to be built over an older sanctuary. Undated.
Skouras (1998) 125.

Agios Demetrios Church
This is 200m. from the above church. It is noted on the HMGS (1988) map. A new church has been constructed on the foundations of an older one which, according to Skouras, was originally a satellite of Monē Levkōn. Undated.
Skouras (1998) 125.

Agios Georgios Church ruin
In the district of Sarantazi or Diaselo at a height of 140m. Skouras could find no evidence of the ruin being a church except local folklore. Undated.
Skouras (1998) 125.

SC8 **Palaiopyrgari (Prasino)**

General
This is a small valley that leads northwest to the sea close-by Rizokastro (**SC2**). It is just to the west of, but separate from, the Dystos lake. It has grown recently due to the cement plant and power station to the north but has sufficient cultivable land to have supported a small settlement in the medieval period.

Medieval Name - None found

Old churches - None identified

Paliopygari Tower no. 212
This is noted on the HMGS (1988) map to the south of the village on a hill that rises to a height of 537 m. up to which a track leads from the village. It has a direct view east to Dystos tower (**SC6**) and Rizokastro **(SC2**), and surveys south over Ḇoufalo bay to Pyrgari (Argyro – **SC9**) and west over the southern Euboean Gulf to the mainland.

SC9 Argyro

General

A rich village with two small fertile agricultural plains and access to the south of the Dystos plain, it stands at the crossroads of two roads, one from Koskina (**SC7**) and the other from Zarakes (**SC10**) to the southeast, that lead to Porto Ḇoufalo (**SC11**). Substantial terracing (now abandoned) suggests the existence of a large population. Another now abandoned village existed to the south close to the hamlet of Agios Dēmētrios. A local shepherd reported that the area was once well known for its production of acorns and that there had existed in the mid. 20th century over 10,000 sheep grazing on the surrounding hills (see **chapter 4**).

Medieval Name

None found but the area was most probably known by the name 'Porto Bufalo' by mariners (see **SC11** for discussion).

Pyrgari Tower no. 229

This is noted on the HMGS (1970) map to the southwest of the village at a point (height 547m.) where wind turbines have now been constructed. Although a tower could not be found on our visit sheepfolds and signs of habitation were identified (although undateable). A small modern chapel was also seen just to the east. The tower has panoramic views with sight to Dystos (**SC6**), Palaiopyrgari (**SC8**), Zarakes (1) (**SC10**), and Pyrgari (Belanidi – **SC13**) to the south.

Agios Iōannis Church

This has now disappeared under the foundations of a newly constructed church in the centre of the village. Its prior existence was witnessed, according to Skouras, by a donation in the will of Nikos Kriezōtēs and post-Byzantine icons in the new church. Undated.
Skouras (1998) 79.

SC10 Zarakes

General

This large village, to the south of Dystos, is set amongst the mountains that form the spine of the island. It has access to landing points both on the east and west coasts and is a place known from antiquity.[1130] The old village lies in a protected position in a valley to the east that leads down to a small bay on the Aegean coast.

Medieval Name – none found

Ellēnopyrgos Tower - Skouras no.51

The original tower was at some point replaced by a windmill, but the foundations still appear. Given the name, this may have originally been a classical period tower, which continued its existence into the medieval period. It has line of sight to Dystos (**SC6**), Argyro (**SC9**), Koskina tower (2) (**SC7**), and to the possible Skopies tower to the north.
Skouras (2003) 63.

Skopies possible Tower (height 397m.) no. 246

This is shown on the HMGS (1970) map on a long ridge which overlooks the Aegean at a height of 397m. It is approximately equidistant between Ellēnopyrgos and Koskina tower (**SC7**) and has line-of sight to Dystos (**SC6**). The name may indicate that it was not a tower but simply a lookout point.

[1130] Sackett et al. (1966) 77. The area has been identified as the ancient deme of Ξάρηξ.

Panagia church, now lost
This church originally stood close to the present-day church of Agios Antōnios. Undated.
Skouras (1998) 112.

Agios Geōrgios Church, ruin
This ruin is to be found in an area called Trapthi. Undated.
Skouras (1998) 112.

SC11 Porto Ḇoufalo

General
Historically Porto Ḇoufalo would have provided a natural harbour for the export of goods to the West from the Dystos plain and its surrounding villages. The slopes of the valley are heavily terraced. Little medieval remains, however, exist in the modern village, but Skouras has reported the existence not only of a fortification but also a number of medieval buildings and churches on an island just offshore.

Medieval Name
***Porto Buffalo*: 15th c.** – none; **16th c.** – none; **17th c. – *Porto Buffalo*:** Coronelli (1688)
The name itself is indicative of a Latin settlement but the first mention on a map was only in 1688 by Vincenzo Coronelli,[1131] a correction of another map he had issued in 1687. Various theories as to an ancient source have been suggested but none persuasive. It could have been adopted from the town of this name *Porto Buffale* in the region of Friuli in north-eastern Italy which came under Venetian control in the late 14th century. Alternatively, it could have been named for its production/use of Buffaloes in the Dystos lake area.
Chatzidimitriou (2003), Marino Sanuto (1502).[1132]

Fortifications
On the offshore island called Daskalio Skouras identified walls from the medieval period (probably Byzantine) around the whole perimeter.
Skouras (2003) 84-86.

Seven church ruins
Skouras identified the ruins of two churches, one with walls to a height of 3m., the other 2m. with a semi-circular apse. Seven have been reported.
Skouras (1998) 146. Κ.Μιχαηλ (2000) .[1133]

SC12 Almyropotamos

General
This village lies to the south of Zarakes (**SC10**) on the road from Dystos (**SC6**) to Styra (**SC16**) with another settlement, Panagia, in the bay to the west where there is a small harbour. To the east the rocky coast would have provided a level of security against potential pirate incursions. Strangely no old churches have been identified within the villages (possibly one is under the foundations of the modern

[1131] Coronelli (1687)
[1132] Sanuto (1853) "Descrizione della patria del Friuli di Marino Sanuto fatta l'anno 1502-1503 ed ora per la prima volta pubblicata". Pietro Naratovich, 31.
[1133] Κ. Μιχαηλ (2000) Αργυρό, ο χαμένος θησαυρός της Εύβοιας', **Ευβοικό χωριό 11 in** Chatzidimitriou (2003).

church?), even though there is cultivable land around. Exceptionally, without surviving evidence except for the undated Grouspa fortification to the southwest, Almyropotamos has been marked as a settlement.

Medieval name - None found.

Grouspa Fortification (height 515m.)– Skouras no. 95
This is the local name given to a hill to the southwest of the village, where Skouras found a wall of thickness up to 2m. running around its top. Nothing else is known about it, but It has good views in all directions and lies at a critical point with no other refuge fortification closeby. Possibly Byzantine?

SC13 Pyrgari Belanidi

General
This promontory is directly south of the bay of Almyropotamos. Its mountainous nature makes it unsuitable for anything other than the production of acorns (hence the name) and rough grazing. There are no settlements close-by.

Medieval Name - None identified

Pyrgari Belanidi possible tower no. 235
Noted on the HMGS (1970) map, it overlooks the small island of Kaballianē. Any tower at this point has a 360º view over the southern gulf of Euboea, effectively controlling any movement of shipping through the narrow (6 km.) channel between Euboea and the mainland to the west. It has a clear view to Argyro (**SC9**) to the north, Polypotamos (**SC14**) and Larmeno – Styra (**SC16**) to the south.

SC14 Polypotamos

General
This small village with only a little good agricultural land lies on the main road south to Styra (**SC16**) in the centre of the island

Medieval Name - None found.

Pyrgari possible tower (height 334m.) no. 233
This is 1.7km. south of the village close to the main road. It has a clear view to Belanidi (**SC13**), out to sea over the Aegean and south to Styra and the Larmeno fortification (**SC16**). It would have formed an important link in the chain of towers from Dystos down to Styra.

Churches
None have been identified in the area.

SC15 Zoodochos Pēgē

General
This is a small village to the south of Polypotamos (**SC14**) on the road south to Styra. No churches have been identified in the area and no settlement has been assumed

Medieval Name - None found

Pyrgari possible tower no. 234
Noted on the HMGS (1970) map this is situated northeast of the village on the Aegean coast where it overlooks a small cove. It has a direct view to Polypotamos (**SC14**).

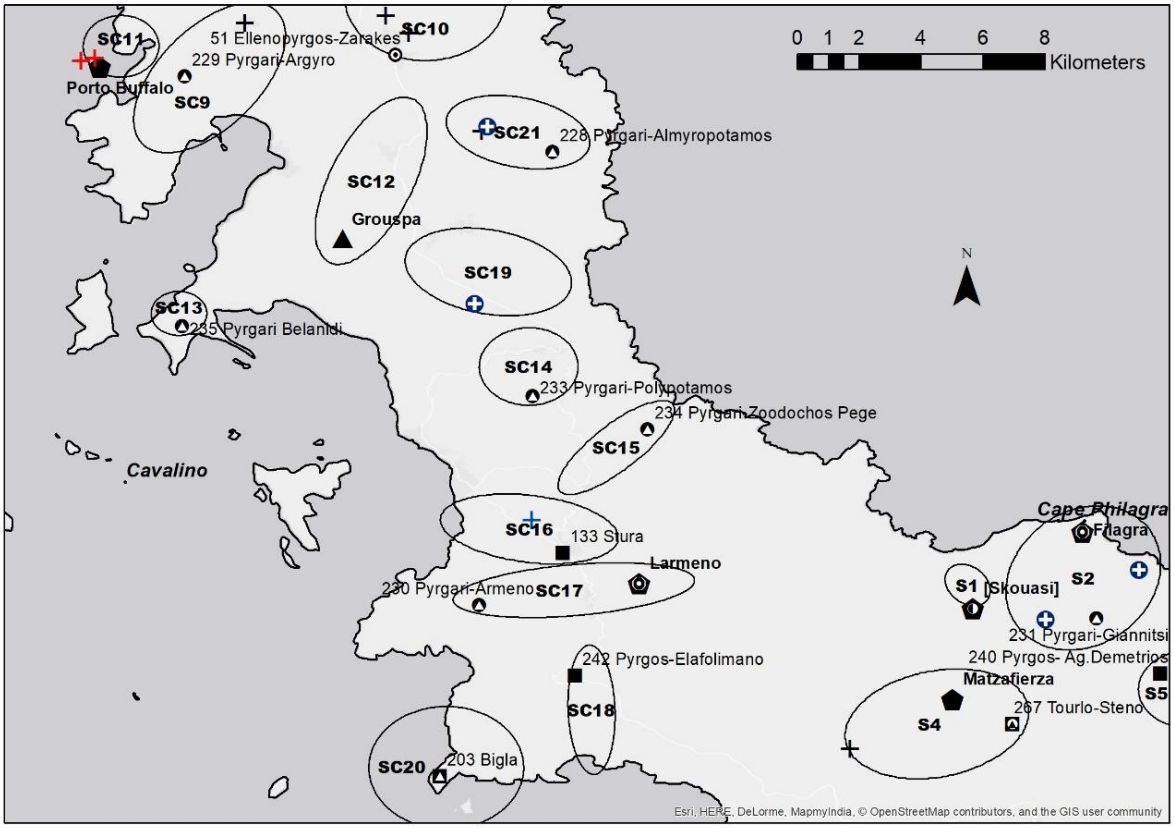


Figure A5.30 – South Central Euboea (b)

SC16 Styra

General

Although there exists today the seaside town of Nea Styra on the western coast of the island, the original settlement, still a substantial village, is situated 5 km. inland on the road south to Karystos. As a town it is known from antiquity,[1134] whilst it is noted on early *portolan* charts and maps (see **chapter 3**). To the southeast there lie the village of Kapsala and the classical and medieval fortification of ***Larmeno***. No early churches have been recorded within the village.
Koder and Hild (1976) 264-265.

Medieval Name

Stiro / Stira / Astura / Stura* / *Lastura*: 14th c. – *Stiro: anon. (Genoese portolan chart);[1135] **15th c. – *Lastura:*** Sonetti (1485), **16th c. – *Lastura:*** Agnese (1555)[1136], ***Stura:*** Bordone (1528)[1137]
The name has been in continuous use in its various forms from the medieval period. It is often used interchangeably with the name of the fortress ***Larmeno*** (see **SC17**).

[1134]Sackett et al. (1966) 77-80.
[1135] See **Appendix 6.1**.
[1136] Agnese (1555a) "**Map of Aegean** ". Venice. National Maritime Museum, Greenwich, London, P/12 f.14.
[1137] Bordone (1528) "**Libro di Benedetto Bordone, nel qual si ragiona de tutte l'Isole del mondo**". Venice, Per N. d'Aristotile detto Zoppino. The British Library,London, C.7.b.10.

Tower – Skouras no.133, Lock no. 51
This tower used to exist on the west side of the central square but was demolished according to Skouras in the mid 20th century. It has a clear view to Polypotamos (**SC14**) to the north and southerly to the fortress of ***Larmeno*** (**SC17**) and the tower at Elafolimeno (**SC18**).
Skouras (2003) 104, Triantafyllopoulos (1974), Koder (1973) 123.

Panagia Bourliōtissa Church
This is situated on the road between Styra and Nea Styra. Skouras dates it as Byzantine or late Byzantine.
Skouras (1998) 171.

SC17 Armeno

General
The fortress of Armeno lies on the road south from Styra (**SC16**). West of it is the village of Kapsala. There is little good land in the area, but the fortress is in a highly strategic position controlling movement north-south along the road.

Medieval Name
Larmeno / Armeno / Armene: **14th c. -** ***Armene*** **(**Sanudo**); 15th c. –** ***Larmeno*****:** Sonetti (1485)**; 16th c. –** ***Armeno*****:** Bordone (1528), Porcacchi (1576)
There is general consistency in the spelling of the fortress' name and its identification with that close to Styra is undisputed.

Fortification – Skouras no.132
2.5 km. southeast of Styra at a height of 550m., this fortification was one of the key strongholds on Euboea and effectively controlled the only pass over a line of mountains that traverses the island from the west to the east. Marino Sanudo writes in his book on the history of Romania that Licarios, having invaded Euboea in the 1270's (see **chapter 4**) at the head of a Byzantine army re-fortified '***Armene***'.[1138]
Skouras (2003) 103-104, Koder (1973) 124, Sackett (1966) 77-80, Philippson (1951) 625,704; Koder and Hild (1976) 125

Pyrgari possible tower (height 435m.) no. 230
This possible tower is 3.5km, west of the village, from where it has a view northwest over Styra island to Pyrgari Belanidi (**SC13**) 12km. away and inland to Styra (**SC16**) and Elafolimeno (**SC18**). It also surveys the bay of Nimporeio to the south and provides a link to the key coastal watchtower at cape Bigla **(SC20**).

SC18 Elafolimano (Porto Lafia)

General
This is a small sheltered beach. Historically it would have been of little interest since access is very difficult from the landward side, as the Ḏelibia mountain rises sharply to a height of 567m.

Medieval Name - None found.

[1138] 137.

Pyrgos possible tower (height 463m.) no. 242
This possible tower is note on the HMGS (1970) map and is encircled on three sides by the modern road south. Its view to the southeast is blocked, but it has a clear view to Kapsala **(SC17**) to the north and to Marmari (**S6**) to the south. It thus fulfils a limited function as a watchtower but is a key link in the chain of towers running south to Karystos and would have controlled any traffic along the old road, which appears to have followed a route to the west of the modern one.

SC19 Tsakaioi

General
This is an area of three villages – Tsakaioi, Raptai and Mesochoria – set in hilly countryside but with good agricultural land. To the east is the Aegean. The main road south runs to the west of the area close to which is the Evangelismos Monastery.

Medieval Name - None found.

Tourouno possible tower (height 115m.) no. 269
This possible tower is noted on the HMGS (1970) map on a small hill overlooking the Aegean and a small beach. Its position is equidistant from the towers at Almyropotamos (**SC12**) and Polypotamos (**SC14**) although it does not have line-of-sight to the latter and there may have been another intermediate watch-point. The root of the name may mean tower in Italian, since the name does not appear to be Greek and it fills a natural gap in the network of watchtowers down the Aegean coastline of the island.

Evangelismos Monastery
Skouras believes that, judging from the extent and richness of the ruins he found, this must have been a large monastery. No other literature has been found and its dating is unknown.
Skouras (1998) 174.

SC20 Cape Bigla

General
This is the cape to the southeast of the Armeno fortress. It possesses a nearly 270º viewshed over the southern Gulf of Euboea, the Bay of Marmari, the island of ***Petalies*** noted on older maps,[1139] and the collection of small islands in the Gulf called the Micronisia.[1140]

Medieval Name – none found.

Bigla possible tower no. 203
This is noted on the HMGS (1970) map and fits well into a chain of beacons running down the island as a coastal defence system. To the northeast it links via Pyrgari (**SC17**) to Armeno **(SC17**) and Styra **(SC16**), to the northwest to Pyrgari Belanidi **(SC13**), and to the southeast to Marmari and the possible tower at Schisto (**SC6**).

[1139] Sonetti (c.1485). He notes 'Petalie dita Spitulus', although in a position further south than the actual island. See also Koder and Hild (1976) 235-236.farakl
[1140] Boschini (1654/1658) "**Negroponte in 'LArcipelago con tutte le isole....**'". Venice, Francesco Nicolini. Bibliothèque nationale de France, CPL GE DD-2987 (6198).

SC21 **Bythoulkas**

General
This is a remote area of little agricultural value 2.5kms. east of Amyropotamos.

Medieval Name – none found

Pyrgari possible tower (height 330m.) no. 228
This is noted on the HMGS (1970) map east of the monastery. It overlooks the Aegean and links to the tower at Polypotamos (**SC14**).

Eisodion Theotokos (Bythoulkas) Monastery
All that remains of the site is a small chapel. The icon of the monastery, which Skouras dated to the 14th century, is now installed in the modern church at Zarakes.
Skouras (1998) 111-112.

Agios Ioannis Church
This was just over a stream on the other side of the valley but has now disappeared completely since Skouras' initial visit. Undated.
Skouras (1998) 112.

Appendix 5.2.7 Southern Region

General

Travelling along the road south, after Kapsala (**SC17**) the geography of the island changes distinctly. This region is generally much drier and there is little good agricultural land – less than 10% being recorded as being under cultivation. Thus, there is a harsh contrast between the lush forestry and plains of central Euboea and the bare hills surrounding Karystos, which resemble more the Cyclades islands to the south. This is reflected in the number and size of settlements and the lack of churches and towers although, surprisingly, there are a significant number of larger fortifications.[1141]

The style of construction also changes in this region. Buildings both from antiquity and the medieval period are built of an easily cut schist, which resembles slate, either as large blocks or as thin slivers for roofing. The earliest example of this can be seen on Mt. Ochi to the south of Karystos where a so-called 'Dragon' house was constructed on its peak at a height of 1,178m. probably in the Archaic period.

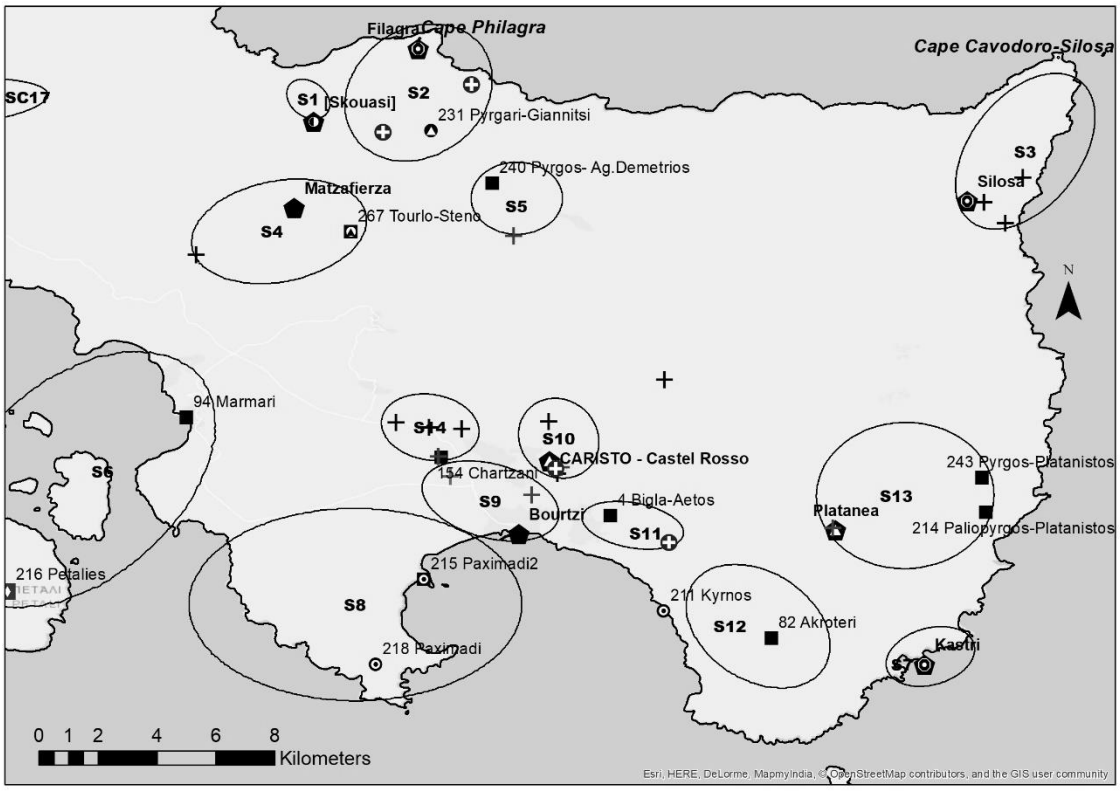


Figure A5.31 South Euboea

S1 Aktaion (Skouasi)

General

Set on the north Aegean coast of the Karystian peninsular this is a remote area. The mountains descend directly into the sea and there is no secure anchorage. Albanian (Arvanitika) is still spoken by many of the older members of the population and the old village name 'Skouasi' is an Albanian word meaning 'pass'.

Medieval Name

[1141] Lock (1996), however, only mentions two – ***Armeno*** and ***Caristo*** – his work being before the Skouras (2003) publication

Skouras believes (in error since he has not studied the portolan charts of the 14th c. – see **S3**) that the local area should be identified with the name ***Silosa*** found on early maps, whilst Koder (1973) and Triantafyllopoulos (1974) are ignorant of its existence, since Skouras presents it for the first time in 2003. Its current name 'palaiokastro' suggests that another replaced it at some point (see below).
Although most researchers agree in the identification of ***Filagra*** (**S2**), Triantafyllopoulos also suggested that ***Platari***, noted on some 16th century maps (see **chapter 6**), may have been the same place. The identification, however, of Aktaion with ***Platari*** would solve this problem. For lack of evidence the verdict must remain open.
Skouras (2003) 97-99; Koder (1973) 30-31; Triantafyllopoulos (1974).

Paliokastro fortification (height 598m.) - Skouras no.122
This is set atop a mountain on the HMGS (1970) map. Skouras found a 12m. stretch of wall intact with a width of 2.5m. He does not unfortunately provide further details of its construction although notes its similarity to other fortresses in the region (see **S2** for comparison), and believes it was still in use in the medieval period – a conclusion that fits with a number of similar 'refuge' type fortresses on the island. Its closeness to ***Filagra*** (**S2**) – a mere four kilometres away – and another fortification at Ekalē (**S4**) just to the south is, however, perplexing. The solution may be in the name '*palaiokastro*', suggesting that an older (classical?) fortress inland was replaced in the medieval period by ***Filagra***, a fortified area that had initially developed from the extraction of minerals at the site. The latter is also much better situated on the coast to provide warning inland.
Skouras (2003) 97-99;

S2 **Giannitsi (*Filagra*)**

General
The village of Giannitsi stands opposite the fortress of ***Filagra*** overlooking a small beach, which is the only landing site along this long inhospitable coast, Alongside, is the river (Megala Rema) which, judging from the HMGS (1970) map, flows throughout the year, thus providing the basis for a small local agricultural economy. Up river to the southwest is the small village of Pothion.
Koder and Hild (1976) 239.

Medieval Name
Fillagre / Filagra - (14th c – Fillagre: Venetian contract (1331)**; 15th c:** none; **16th c**: none**)**
The modern sources agree with the identification of the position as ***Filagra***, and it is noted as Cape Filagra on the HMGS (1970) map, but it is problematic that no mention of the name is made on any early maps. Koder provides a reference to ***Fillagre*** in a Venetian contract dated to 1331, thus substantiating its existence during this period, but he then argues that ***Filagra*** is the same place both as ***Silosa*** (see **S3**) and the fortress of ***Anemopylae***, which was noted as having been used as his base by Licario in the 1270's (see **chapter 4**).[1142]
Silosa, judging from the 14th c. portolan charts to which Koder did not have access, was clearly elsewhere (see **S3**). As regards ***Anemopylae*** (meaning literally 'wind-gates'), whilst there is insufficient evidence to confirm or disprove Koder's supposition,[1143] the logistical aspects of its position as a base for Licarios provide some indications that he may be correct. Licarios required a base that was remote yet self-sufficient (but not economically interesting) and convenient for raids both by land and sea. ***Filagra*** fulfils all of these: it was just too costly (for little gain) for the Lord of ***Karystos*** to mount an expeditionary force in very difficult territory to re-capture it, whilst it was easy for Licarios to raid north by land and, using the small beach, to attack the primary east-west shipping lane from Constantinople

[1142] 'Κατάρχοντα δέ καί νήσου μεγίστης, ήν Ανεμοπύλας έθος τοις εκεί λέγειν' - Failler (1984-2000), 525. Sanudo writes *'ove il fu dato un certo castello in una montagna altissima, detta l'Anemopile, ove fece un castello fortissimo*' - [Marino-Sanudo-Torsello], 131.
[1143] For a full discussion see Triantafyllopoulos (1974) Τοπογραφικά Προβλήματα της Μεσαιονικής Εύβοιας [Topographic problems of Medieval Euboea]. **Archeion Euboikon Meleton, Athens**, ΙΘ: 209-258.

to Italy and the islands to the south. An alternative site is suggested by Skouras for ***Anemopylae*** at ***Matzafierza*** **(S4).**
Koder (1973) 122; Triantafyllopoulos (1974); Skouras (2003) 91-94; Sackett (1966) 80.

Fortification - Skouras no.37
This stands high on the cape above the small beach. It controls all movement of shipping in a 20 km. arc running from Capo Doro **(S3)** to the south, north to Almyropotamos (**SC12**). Skouras describes finding walls that stretch for 500m. with the remains of substantial building, a cistern, and a tunnel that descends directly to the beach. He also writes of its continued use into the medieval period, whilst Sackett notes the walls constructed of local, easily broken, schist in a 'header-and-stretcher technique' and mounds of slag and possible mine shafts.
Koder (1973) 30-31,68,123; Triantafyllopoulos (1974); Sackett (1966) 80; Skouras (2003) 56-57.

Pyrgari possible tower no. 231
This is noted on the HMGS (1970) map at a height of 603m., 1 km. south of the village. If, indeed, Aktaion was a Middle Byzantine refuge fortress, then it would have been necessary as a watchpoint to survey eastwards over the Aegean towards ***Cavo Doro*** (**S3**).

Agia Triada (Probably previously Agios Nikolaos) Monastery
A medieval church (internally 5.25 x 3.48m.) with three phases of construction, one possibly Frankish, constructed on the foundations of a Byzantine church.
Skouras (1998) 95; Farantos (1995)[1144] 237-247.

Evangelismos tēs Theotokou church
This is called a monastery by the locals. Dated to the 11th century by Farantos.
Skouras (1998) 160; Farantos (1995) 247- 248.

S3 **Capo Doro**

General
This is just to the south of the south-eastern cape of Euboea, one of the most remote areas, and one of the most dangerous for shipping as the currents and the prevailing north-easterly winds provide a recipe for disaster.[1145] It possesses a little, but steep, agricultural land, and satellite images provide evidence for substantial terracing. This and the existence locally of four villages – Amygdalia, Prinia, Schizalē and Zacharia – and three old churches, although none dated, suggests a well-populated area at some point.

Medieval Name
C.doro / doro / C. d'Oro / capo Doro: **14th c. –** ***doro*****:** *portolans*; **15th c. –** ***Capo doro*****:** Sonetti (c.1485); **16th c. –** ***c. doro*****:** Agnese (1554), ***capo doro*****:** Porcacchi (1576);[1146] **17th c. –** ***C. d'Oro*****:** Coronelli (1887). ***Silosa / Silopha/ Silorna:*** **14th c. –** ***capo di silosa / silosa*****:** *portolans;* **15th c,** – none; **16th c. –** ***La bocca della Silopha*****:** Bordone (1528),[1147] ***Bocca della Silosa*****:** Camocio (1568),[1148] ***bocca de Silosa & Silosa*****:**

[1144] Farantos (1995) Χριστιανικά μνημεία στα χωριά Γιαννίτσι και Πόθι στην Νότια Εύβοια. **Archeion Euboikon Meleton**, ΛΑ':
[1145] The invading Persian fleet, which had sailed down here to try to try to outflank the Greek one standing at the entrance to the Gulf of northern Euboea, was completely lost in 480 B.C in approximately this area.
[1146] Porcacchi (1576) "**Negroponte in 'L'isole piu famose del mondo'**". Biblioteca nazionale Marciana, B7.d.133 018579,
[1147] Bordone (1528)
[1148] Camocio (1568-1571) "**[NEGROPONTE insula, p. 43, in 'Atlante-isole famose']**". Venice. Bavarian State Library, Munich, Germany

Gastaldi (1545),[1149] ***Bouche de la Silosa*****:** Pseudo-Buondelmonte**; 17th c. -** ***bocca silorna*****:** Boschini (1658),[1150] ***Bocca di Silofia*****:** Coronelli (1688),[1151]).

This area is referred to on the maps by two names. The first is that of the cape – ***Capo (***or ***'cavo') d'Oro.*** The root of the second name appears to have been originally from the Greek *Ξυλοφαϊ.* literally meaning wood (ie. Ship) eater but was then corrupted by Latin sailors (***Xylo phaì* => *Silofa* => *Silosa***) into something completely different.[1152] The name of the channel between Euboea and Andros then became ***bocca de Silosa*** – literally 'the mouth of silence',[1153] which seems to be a euphemism for the dangers of the strong winds at this point.
Some maps note the cape, the strait and a place called ***Silosa*** in a position just to the south of the cape.[1154] This suggests that the Zacharia fortification / settlement may once have taken its name from the strait and that ***Silosa*** is not, as Skouras posits, at modern Aktaion (**S1**), nor at ***Filagra*** (**S2**) as Koder (1973) proposes.
Skouras (2003) 63-64. Triantafyllopoulos (1974); Koder (1973) 123.

Zacharia (Kiza or Chorza) Fortification – Skouras no.52
This is situated, according to Skouras, atop a flattened rock outcrop just to the east of the hamlet of Zacharia. Access is via a path paved with slate slabs. Construction is with easily worked large schist slabs in regular rows without the use of mortar. The walls are 1.5m., or more, thick. Below, according to satellite imagery, running down nearly to the sea, there are signs of extensive terracing. It has clear views out over the channel.
Construction of dry-stone walling using the local schist stone known as 'πλακες Καρύστου' (Karystian slate) is still a well-known method. It is therefore very difficult to judge without excavation whether what may have been a classical fortification was still in use in the medieval period. Its position, however, surveying the passage between Euboea and Andros, would have given it a clear strategic purpose.
Skouras (2003) 63-64.

Ypopantēs Church
This large church, constructed of stone slabs, is close to the beach below Zacharia. The circular apse covers nearly the whole of the eastern wall. There were a significant number of sculpted pieces set both within the walls and lying around on Skouras' visit, but everything has more recently been plastered over. Undated.
Skouras (1998) 112.

Agia Paraskevē Church
This appears by Skouras' description and satellite imagery to be just to the right of the road from Zacharia to Amygdalia on a hill above the Ypopantēs church. It has been constructed in the area of an older church, whose walls can still be discerned. Above is the Zacharia fortification. Undated.
Skouras (1998) 75.

Prophētēs Ēlias Church
Unfortunately, Skouras does not give the exact location of the church, so it has been placed in the centre of the village of Amygdalia on my map. It is built of stone with an arched entrance. Skouras was

[1149] Gastaldi (1545-1550?) "**Descrittione dela geografia moderna detutta la Gretia**". Venice. Biblioteca nazionale Marciana, 028073,138.c.4
[1150] Boschini (1654/1658)
[1151] Coronelli (1687)
[1152] Michael Choniates calls the cape Καφηρίς. In the life of Ioannis Tsetsis therε is written 'the cape of Euboea is called 'ξυλοφάγος' – Koder and Hild (1976) 281.
[1153] Babiniotis (Ed.) (1998) **Λεξικό της νέας Ελληνικής γλώσσας**. Athens, Kentro Lexilogias EPE. From 'booca' meaning 'mouth' in Italian and the Greek σιλό possibly originally meaning 'hole'. The root is, however, very unsure.
[1154] Gastaldi(1545-1550?); Porcacchi(1576).

impressed by the thickness of the walls and identified signs of an older wall that had been reconstructed. Undated.
Skouras (1998) 75.

S4 **Ekalē**

General
This village stands in the centre of the island at the crossroads controlling movement along the valley between Marmari (**S6**) to the south, and Aktaion (**S1**) and Giannitsi (**S2**) to the north.

Medieval Name
The name was most likely also ***Matzafierza*** in the medieval period, given that this appears to have an Italian root, but we have no maps or documents to substantiate such a conclusion.

***Matzafierza* Fortification**– Skouras no.127
Travelling north from Marmari (**S6**), to the left of the road just before it branches left to Aktaion (**S1**) and right to Giannitsi (**S2**), this fortification stands on a small conical hill at a height of 240m. It is called ***Matzafierza*** by the locals and has a clear view to Paliokastro (**S1**) to the north, Pyrgari and Filagra **(S2**) to the northeast and southerly along the road down the valley to the village of Chania but is blocked by the mountains to the east and west. A church is shown just below on the HMGS (1988) map.
Skouras argues that this may have been the castle, called ***Anemopylae***, controlled by Licarios in the 1270's (see (**S2**) for an alternative hypothesis). If so, this may have been a new construction to protect Licarios' landward borders. Alternatively, it could have been constructed by the Lord of Karystos to prevent incursions by Licarios inland. Both scenarios, given the Italian name, suggest construction in the Frankish period.
Skouras (2003) 101.

Tourla possible tower no. 267
This is a possible tower noted on the HMGS (1970) map to the east of ***Matzafierza***. Given the restricted viewshed of ***Matzafiera***, this most likely superceded the latter at some point in the 14th century.

Churches - None identified.

S5 **Agios Dēmētrios**

General
This narrow valley leads north along the river towards the small beach of Cape Kydōnia (literally 'Quince'). The small village is set 5 km. inland.

Medieval Name - None found.

Pyrgos Possible tower no. 240
This hill named '**Pyrgos**' on the HMGS (1970) map rises to a height of 845 m. A beacon tower placed on its summit would have had a clear view both out over the Aegean and northwest to **Pyrgari** (**S2**).

Agios Demetrios Church
This cross-vaulted church is just before the village to the left of the road. Farantos dates it as Byzantine.
Skouras (1998) 62; Farantos (1983) 297.

S6 **Marmari**

General
This thriving seaside town which, due to the ferryboat that links it to the mainland, has undergone major development in recent years, is after Karystos the largest in southern Euboea. Its name derives from the extensive marble mining in the area during the classical and Roman periods. It is surrounded by a substantial agricultural area to the east.[1155]

Medieval Name
Marble quarrying appears to have ceased during the medieval period and the town is not mentioned on any early maps.

Possible Tower – Skouras no.94
Skouras writes that locals told him a tower had existed close to the sea shore and the Agios Georgios church, but he could not confirm anything – probably due to the mass of modern building in the town. It would have had a direct view to Elafolimeno tower (**SC18**).
Skouras (2003) 81-82.

Churches – none identified.

Petalies Hypothetical Tower (approx. 360m.) no. 216
It is probable that a tower once stood on this island to control movement of shipping up the Gulf of Southern Euboea and provide a communication link between Cape Bigla **(SC20**) and the Paximadi peninsular (**S8**). There is sufficient cultivable land on the island to support a small community. The peak of the hill on the island has been treated as a beacon point.
The island is noted on the *Compasso di Navigare* as ***Petalline,*** on the Greek Portolans of the 16th century as ***Petalidais*** (Πεταλίδαις), on Coronelli (1688) as ***Spitilus***, and on Porcacchi (1620) as ***Spiritus***. It was clearly a well-known landmark.
Koder (1973) 31-32.

S7 **Kastri**

General
This is a natural harbour and was a most important port of call on the route from the west prior to sailing into the Aegean and on to Constantinople.
Koder and Hild (1976) 185.

Medieval Name
Castri* / Caristo: 14th c. - *Castri*[1156]:** all *Portolan* charts; **15th c.** – ***el castri: Sonetti (1485); **16th c. – *il castri*:** Bordone (1528), Porcacchi (1576), ***Castri*:** Camocio (1568-71), Caristo: Millo (1590); **17th c. - *Geraisto***: Boschini (1648)
The town is known from antiquity as ***Geraistos (Γεραιστος),*** a name that became corrupted to the modern Karystos and appears to have been used over time to refer to the new port (**S9**) of the ***Castel Rosso*** fortress. In the medieval period it was generally referred to on the maps as ***Castri***, but we see in a map by Millo (1590) the use of **Caristo** twice – for the port and the fortress. – and many maps omit it completely, noting only the fortress.

[1155] Lock, referencing Skouras (1976), notes the existence of a tower (Lock no. 52, Skouras no. 15) in a village called Barelaioi 8km. from Marmari, but Skouras concluded that the local villagers were mistaken and that it was actually the remains of a grave.
[1156] The ***compasso di navigare*** (end 13th c.) possibly refers to it as ***Porto Caristo***.

Fortification – **Skouras no.35**
This fortification, which appears to have existed into the medieval period due to the finds of mortar and tile slips within it, lies on a small promontory to the east of the present hamlet of Koustonēsi.
Skouras (2003) 54; Sackett (1966) 81.

Churches – Koder notes Eisodia Theotokos in the fortification. No other mention found.
Koder (1973) 121.

S8 Paximadi Peninsular

General
The Paximadi peninsular lies to the west of Karystos. It is dry and rocky and, although the old terracing suggests the area was once cultivated, today the area is covered with low level maquis and wild olive trees. Between 1979 and 1981 a general survey was undertaken of the area by Donald Keller,[1157] between 1984 and 1988 it was intensively surveyed by the South East Euboea Project (SEEP) and in 1992/93 Parkinson reviewed in detail the towers identified by the SEEP survey (see below).[1158] Whilst there is substantial evidence of classical and Roman occupation (distributed farmsteads?) no signs of medieval settlements have been identified in the area.

Medieval Name – none identified

Towers
25 possible tower-like structures were identified in the area in an article by Seifreid and Parkinson (2014).[1159] The majority of these could be dated by site finds to the classical period (5th to 3rd centuries) but, interestingly, five had indications of Byzantine, two of late medieval and two of Ottoman use. Since none has survived above a few courses, their original height could only be surmised as possibly twice their base size as suggested in a study by Young (1956) of five full-standing classical towers. [1160] 11 towers were quadrangular and 13 circular (one could not be defined). Wall length of the quadrangular towers varied from 3 to 7m. with an average of approximately 5m., whilst the diameter of the circular towers averaged 6.7m. diameter.
Although all the structures are presumed to be towers, their wall thickness varied significantly from 0.5m. up to 1.25 m., and the thinness of six may suggest, given the relative fragility of construction with rough-cut rectangular schist blocks without mortar, that these were no more than single or two storey buildings. The towers with evidence of Roman occupation were identified as all being quadrangular in shape, suggesting a change of architecture in this period, and possible new construction of towers in the Roman period. Whilst there was high inter-visibility in the classical period, possibly due to the high density, this was not the case in other eras.
The relative paucity of medieval evidence means that only two towers can be incorporated directly into the analysis, but the high density of 0.86 / sq.km (substantially higher than 0.51 on Sifnos) and the continued use of a number into the Byzantine, late medieval and Ottoman periods suggests that such towers must also have existed elsewhere on the island during these earlier periods.

[1157] Keller (1985) **Archaeological survey in southern Euboea, Greece : a reconstruction of human activity from Neolithic times through the Byzantine period**. Indiana University
[1158] Cullen et al. (2011) "The Emerging Prehistory of Southern Euboea". **Euboea and Athens: Proceedings of a Colloquium in Memory of Malcolm B. Wallace, Athens 26-27 June 2009**. Publications of the Canadian Institute in Greece.
[1159] Seifried and Parkinson (2014) The ancient towers of the Paximadi Peninsular, Southern Euboia. **Hesperia**, 83: (2): 277-313
[1160] Young (1956b) Studies in South Attica: Country Estates at Sounion. Ibid.25: 122-146

Two coastal watchtowers
These two towers are the only ones to have clear evidence of Byzantine period occupation and, significantly, both are set on a strategic headland:

Agia Pelagia tower – no. 218, Seifried site no. 13
A circular isolated tower sited on the highest point of a small rounded hill. It has a diameter of 5.35m. and two courses of well-cut stones, laid on a platform of rubble fill, survive. There are clear 270° views except for the north. The tower probably served both as a watch-point for Castel Rosso (**S10**) to the northeast and as a node in any beacon network that may have existed to Petalies (**S6**) to the west and Akrotiri (**S12**), the southernmost cape of Euboea, to the east. Seifried also notes that the island of Andros can also be seen, but this is 30kms. away and probably irrelevant, since any beacon on Akrotiri would have been much better placed.

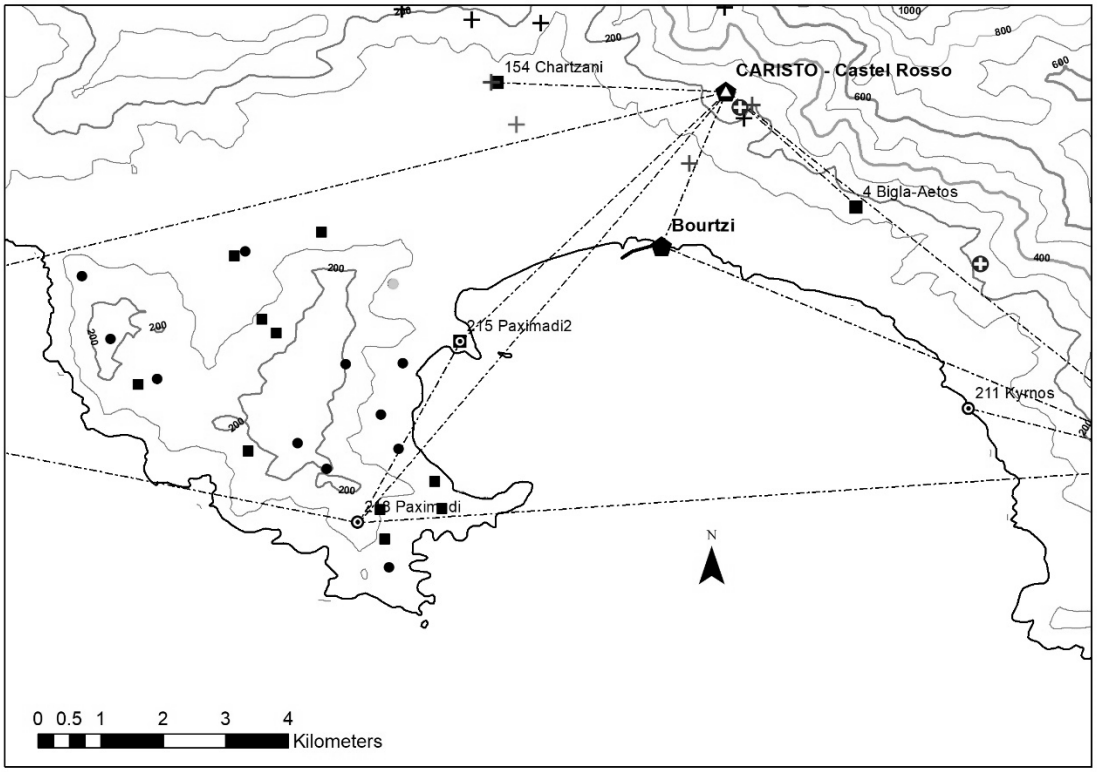


Figure A5.32 – Karystos and the Paximadi peninsula [showing classical square and circular towers and line-of-sight]

Paximadi Peak tower – no.216, Seifried site no.
This is a square tower measuring 3m. x 3m. although the walls have been reduced to barely distinguishable rubble. Finds in the vicinity included a possibly Late Roman coarse cooking ware handle, a plain glazed bowl body sherd dated to the 6th c. A.D., and a Frankish silver coin. Fragments of a Byzantine millstone and tiles were built into the walls. This suggests an early Byzantine period construction with possible continued use into the Frankish period, whilst its small size can only signify some form of military function. It is sited on a small promontory on the western shore of the Bay of Karystos with views to **site no.13** and the ***Castel Rosso*** fortress (**S10**). Equidistant between **site no.13** and Karystos harbour (**S9**), it probably complemented the tower at Aetos (**S11)** on the western shore of the bay.

Churches – none identified

S9 **Karystos**

General
This is the largest town in southern Euboea and grew as the port for the fortress of ***Castel Rosso***, a little inland to the north. It possesses a good fertile plain and the harbour facilities were at some point heavily fortified with the probable construction of a massive fort by the Venetians in the late 14th century.
Koder and Hild (1976) 183-184

Medieval Name
Porto Caristo: **15th c.** – ***Caristo***(?): Bartolommeo da li Sonetti (c.1485); **16th c.** - ***Caristo***: Agnese (1555); **17th c**. - ***Porto Caristo***: Boschini (1654), Coronelli (1688)
It appears to have taken its name over a period of time from the classical port of ***Geraistos*** (***Kastri* - S7**), whose role it slowly assumed but the adoption of this name is a relatively recent phenomenon. Early maps generally note ***Caristo***, referring to the fortress, or ***P[orto]. Caristo***, but still in the late 17th century Boschini (1654) and Coronelli (1688) note ***Porto Caristo***, referring, it seems, to ***Kastri*** (S7). Agnese (1555) notes the fortress as a symbol but places the name '***Caristo***' on the bay where the modern town stands.[1161]

Bourtzi Fortification – Skouras no.63
This stands on the seafront overlooking the harbour. Skouras noted the significant amount of classical and Roman stonework built into the walls. It is six-sided and is well-preserved to a height of two storeys plus battlements (approx. 11m.), probably due to its continued use into the Ottoman period (it was captured by Morosini during the Venetian expedition of 1688 against ***Negroponte***). Its walls are 15.2 x 5.5m., providing a three-sided prow-like shape towards the sea, with a thickness ranging from 1.5 to 2.5m. and topped by Venetian style battlements and machicolations. Construction is of the local schist stone bound with mortar and internal wooden re-enforcement. Internally the walls were originally rendered. Fourteen cannon ports exist around the walls on all levels.

Koder dates it to the late 14th century based on a Venetian document allowing construction in the area '*except the fortification in the harbour'*. Maria Stai, however, in a detailed study of the fortification prefers an early 15th century date based on it having clearly been constructed with cannons in mind. She notes, too, the relative lack of finishing of the stonework, indicating the possible poor economic state of the local economy at the time, although this could alternatively suggest hasty construction by the Venetians within a limited budget. Neither, however, has read the book of the traveller Bernard Randolph, who on his visit in 1676 relates the tale of how a Turk, Ibrahim Aga, had built the fortification at his own expense. The probable truth is that a fortified point existed at the harbour from the Venetian period, but it was transformed/upgraded during the Turkish period.
Skouras (2003) 69; Koder (1973) 120-121; Stai (2012); Randolph (1687), 5.

Agios Markos Church - ruin
Situated at a height of 80m. this is noted as a Byzantine church by Skouras.
Skouras (1998) 121.

Panagia Church - ruin
Skouras happened to be present when workers dug up the foundations of this church with fragments of a mosaic floor. Locals testified to the existence of a Byzantine basilica in this position (Alamaneika).
Skouras (1998) 121-122.

[1161] Agnese (1555b) "**[negroponte p/12 folio 18]**". Venice. National Maritime Museum, Greenwich, London, P/12, f.18

Church ruin
In the position Alōnaki in the old village of Karystos, this is a small church with a circular apse. Skouras notes a number of sculpted remains and a floor constructed of pebbles. Undated.
Skouras (1998) 122.

S10 **Myloi**

General
The village of Myloi, together with two others nearby, lies directly north of Karystos **(S9**) and close under the ramparts of the fortress. It is important for the existence of a monastery locally and the major fortification of Castel Rosso, the key medieval fortification in southern Euboea.

Medieval Name
Caristo / Castel Rosso*: 13th c. – *castello de caristo*:** Lo compass di navigare;[1162] **14th c. – *caristo: *Portolan* charts; **15th c. – *Caristo*:** Sonetti (1485); **16thc – *Caristo*:** Bordone (1528), Agnese (1555), Milo (1590);[1163] **17thc – *Castel Rosso*:** Coronelli(1688)
Caristo is a name generally used to describe the area, but it may have meant different places at different times (see ***Kastri***(**S7**) and Karystos(**S9**)).

Castel Rosso Fortress – Skouras no.62
This is situated to the north of the modern town of Karystos and appears to derive its name from the high ceramic content in its wall construction, which gives it a reddish glow, especially at sunset. The medieval walled town was set just below the fortress, although the walls which survive to today were constructed at the time of the Greek War of Independence after 1821. The fortress seems to have originally been constructed by the Dalle Carceri family according to Eleni Tsiompikou after 1204, but on a hill naturally suitable for defence and probably already in use from the classical period, or even earlier.[1164] There is a very wide Greek language literature, but little in other languages.
Skouras(2003) 67-69; Koder(1973) 121,170; Chatzikonstantis(1974) 42-50; Fousaras(1959) 154-168; Tsiompikou (2012); Hopf (1833).

Zōodochos Pēgē church
This is at a height of 460m. in a place called Montefoli. Late medieval.
Skouras (1998) 122; Koder (1973) 119; Triantafyllopoulos (1974), Koder and Hild (1976) 285.

Agios Ioannis Church
The modern church is constructed on the foundations of an older Byzantine church.
Skouras (1998) 146.

Agia Sofia Church
Situated in the village of Grampias, this small church has been identified as Byzantine by the quantity of artefacts from the period found in its vicinity.
Skouras (1998) 97.

Monēdrion Agios Georgios Monastery
Only a written church record testifies to its existence somewhere close to Myloi.
Skouras (1998) 147.

[1162] As noted **in** Koder (1973) 30-31.
[1163] Milo (1590)
[1164] 'Καρυστος' is mentioned by Hierokles (533-535) in his list of towns of the eastern empire - Hierokles 645.8

S11 Aetos

General
This is an area to the southeast of Karystos. There is little settlement in the area which is surrounded to the east by bare mountains.

Medieval Name - None found.

Bigla Tower – Skouras no.4, Lock no. 54
This is situated on a hill called '*Bigla*' (Vigla) by the locals (although not on the HMGS (1970) map). But no trace of the original tower could be found by Skouras on his visit.
Skouras (2003) 38-39; Gounaropoulos (1930) 139.

Agios Georgios Mavros Monastery
Cross-vaulted church dated to 1260 by an inscription. This appears to have been a group of three churches (Externally 6.35 x 7.66 m.). The monastery was dissolved in 1635.
Skouras (1998) 144; Koder (1973) 154,166; Farantos (1984-85) 374- 383.

S12 Akrotiri

General
This area lies on the south-eastern edge of the Bay of Karystos. It is surrounded by steep bare mountains with no habitation before ***Kastri*** (**S7**) 8 km. to the east and Platanistos (**S13**) to the northeast. No settlements were found but the name Akrotiri (meaning 'cape' in Greek) probably indicates it was the last settlement before Cape ***Mantello*** to the south, named after the eponymous island ('Μανδηλος'on modern maps) just off the cape.

Medieval Name
Mantello*: 14th c. – *Mantalene*:** Vesconte (1313); **15th c. – *Ma[n]tello*:** Anon. (early 15th);[1165] 16th **c. – *cavo ma[n]tello*:** Agnese (1555); ***κάβον Μαντέλο – *portolan* [1166]

Fortification – Skouras no.82, Lock no. 55
This is noted by Skouras as a tower but, reading Gounaropoulos, may only be a classical period fortification. It is in a coastal area called Kyrnos, but he could find no trace. A tower on a hill to the east, however, close to the road, would have been essential to provide a link from Karystos (**S9**) to Kastri (**S2**) and also supervise shipping passing the cape.
Skouras (2003) 76; Gounaropoulos (1930) 138.[1167]

Churches – none identified.

S13 Platanistos

General
This is set amongst the mountains to the east of Karystos in a steep-sided valley at the confluence of two rivers close to the road towards ***Cavo Doro*** **(S3).**
Koder and Hild (1976) 244.

[1165] Anon.Venetian (early 15th c.) "**Portolan**". Venice MC Port.40 (Pujades C28)
[1166] Delatte (1947) 271.
[1167] Gounaropoulos (1930) **Ιστορία του νήσου Ευβοίας [History of the island of Euboea]**. Thessalonike: Gounaropoulos and Kapollas.

Medieval Name
P*latanea*: 15th c. – *El platanea*: Sonetti (1485); **16th c. – *Laplatanea***: Agnese (1555)[1168]
The area seems to have kept its name until the present day. Skouras, based on local tradition which calls the place Anemoportes (Ανεμόπορτες - wind gates), believes this is the site of ***Anemopylae***, the fortress that Licario was given in the late 1260's (see **chapter 4**), as opposed to ***Fylagra*** (Giannitsi – **S2**). Whilst folklore is a good basis for his argument, the site's lack of a port, its proximity to ***Kastri*** (**S7**), and the difficulty of attacking anything overland north of Karystos due to the position of ***Castel Rosso*** (**S10**) tends to preclude such a conclusion.

Ellēniko fortress – Skouras no.112
Named after an inscription found on site, this substantial fortification southeast of Platanistos covers an area of about 4,000 sq.m., whilst a wall on one side stretches for 106 m. rising to a height in places up to 7m. It controls the eastern approaches up the river valleys to the plain of Karystos, 10km. to the west. Excavations have uncovered late medieval arms and sculptures.
Skouras (2003) 91-93; Triantafyllopoulos (1974); Koder (1973) 48, 50, 63, 123.

Agios Konstantinos Church
This is in the area of the fortress. It is dated as Byzantine by Papabasileiou.
Skouras (1998) 160; Papabasileiou (1908) 101 in Skouras (1998).

Two possible towers
Both these sites overlook the coast, about 5 km. to the east of Platanistos.
1 Paliopyrgos no. 214
This name is noted on the HMGS (1970) map on the brow of a hill at a height of 309m. It has direct line-of sight to Platanistos to the west, overlooks the small bay of the same name and has a panoramic view south and east over the ***Silosa*** channel across to the island of Andros.
2 Pyrgos no. 243
This is noted on the HMGS (1970) map on a hill 2 km. to the north of (1). Its viewshed is more restricted, and it does not have line-of-sight to Kastri (**S7)**

S14 Kalybia

General
This is an agricultural area to the northwest of Karystos on the road to Marmari. The spread of the churches suggests the existence of a number of small hamlets in the area rather than one large village.
Koder and Hild (1976) 180.

Medieval name – none found

Agios Georgios & Agia Mavra Church (height 300m.)
This is a double church with two apses. Its height suggests it is to the north of the town, but Skouras does not unfortunately give the exact location. Undated.
Skouras (1998) 122.

Agia Triada and Agos Spyridon Church (height 150m.)
This is another double church with two apses which replaced a much earlier one. Again, Skouras only notes its height. Undated.
Skouras (1998) 122.

[1168] Agnese (1555a).

Taxiarchēs church (height 140m.)
This church with three apses is situated in the village at a height of 140m. Undated.
Skouras (1998) 119; Koder (1973) 154; Farantos (1987) 10;[1169]

Chartzani tower – Skouras no.154
This is to the west of the village of Kalybia at a height of 60m. The satellite imagery shows the ruins of a village in the area. This stands to the level of the first floor. It has a fireplace and is constructed of small stones of different colours which make a mosaic effect.
Skouras (2003) 118; A. Delt. (1972) 27, 171; Koder(1973) 121.

Agios Loukas and Analēpsē church
This is another double church close to the tower. Probably late Byzantine contemporary with the tower.
Skouras (1998) 197; A, Delt. (1972) 27, 171.

[1169] Farantos, Ch. (1987) Ο Ταξιαρχης στα Καλύβια Καρύστου, **'Κάρυστος' Journal**, 28-30 **in** Skouras (1998) 118.

Appendix 5.3 Settlement and Demographic Model

Assuming that a church exists to minister to a population, whether nucleated or dispaersed, it is theoretically possible to use churches as proxies for the existence of a settlement. Potentially, too, we may be able to define the size of its population by the density and size of ecclesiastical properties found at the same location.[1170] The larger the building the greater the population. Within a medieval agricultural economy wealth depended primarily on the level of production, which itself is a function in an un-mechanised economy of the number of farmhands. Thus, the more people who contribute (either directly or indirectly via rentals to their landlord, who in most cases was probably the instigator of church construction) the greater the available investment, which may be utilized by either building more churches or a larger church.

To utilise churches as population indicators it is necessary first to establish how many people needed to live in an area to justify the construction of a church. Two pieces of contemporary documentary evidence provide some guidance on this. The first is the request by Othon De la Roche to the Pope to provide a priest for every community with greater than 12 hearths, the response to which was an instruction by the latter in 1210 to Bérard, Bishop of Athens, to provide the same.[1171]

Secondly, In 1223 an agreement was reached between Pope Honorius III and Geoffrey De Villehardouin to restrict the number of priests per head of population,[1172] the basic feature of which was that there should be no more than two priests for a community of 25 to 70 hearths implying, although not specifying, one up to 24 hearths. Theoretically, this should be applied only to Latin churches. Yet, since Greek priests on Euboea seem to have remained in their position as part of a Roman church hierarchy, and the Venetians were concerned about the church generally over-exploiting its parishioners to the detriment of the Venetian landlords' own income, this may be applied to the whole corpus of churches.[1173]

Taking the average suggests a maximum of one priest, or church, per 31 hearths (households).[1174] Thus, we have a minimum of 12 and a maximum of 31. In the following analysis I have used their mid-point - 21.5 - as my base figure, approximating it to a population of 90 persons with a family size just over four for a church measuring externally 4m. x 8m. or 32 sq.m., a size found frequently in small villages and next to towers.[1175] Such a figure works for a small village, but for settlements over an equivalent size of four churches/priests we must use the maximum of 31, which probably better reflects the larger churches in the towns and cities, and was clearly reflected in the limit of six priests for a settlement population over 125 households. Thus, the population supporting the very large San Marco church in ***Negroponte*** can be calculated as 4,427. [1176]

[1170] It should, however, be remembered that during the Frankish period a growing level of the economy was being generated by trade, banking, manufacturing and piracy – see **chapter 4**.

[1171] Innocent III an. XIV, ep.110 **in** Setton (1976) 413. We must be careful not to treat this too literally since Othon de La Roche may have simply been following the bible's twelve apostles in a formalised way. Othon also probably had in mind the new Latin immigrants, but this probably reflects a general conception at the time of the relative number of clergy to congregation.

[1172] Hon. Ill, an. VIII, ep. 47 **in** Setton (1976) **The Papacy and the Levant (1204-1571). Vol.1, The thirteenth and fourteenth centuries**. Philadelphia, 48. This document refers to the Acts of Ravennika. It also notes only four priests from 70 to 125 hearths and a maximum of six over this limit.

[1173] The Orthodox bishop of **Negroponte**, Berard, remained in his position after 1204 and in the 15th century the Venetians, following increased emigration, cancelled taxes in order to improve peasant income and retain them on the land.

[1174] Average maximum - 3 priests = (24+70)/ 3 = 31 hearths per priest. The maximum of four priests for 125 hearths (see above note) reconfirms this average.

[1175] The estimation of average hearth size is fraught with difficulty since it changed over space and time. The figure used of 4.2 can only be treated as indicative. This has been taken by averaging the various hearth sizes of Mt Athos estates in the early 14th century as presented in Laiou-Thomadakis (1977) **Peasant Society in the Late Byzantine Empire: A Social and Demographic Study**. Princeton University Press.

[1176] This church, today Agia Paraskevē, once measured 50m. x 22m. Using the above size, we can calculate that it was supported by a population equivalent to (50 x 22)/32 = 34 base churches.

In addition to this basic ecclesiastical data cognizance was also taken of the comments of various travelers and the 1485 *isolario* chart of Bartolomeo dalli Sonetti (see **chapter 3**). As regards the effect of fortifications, a recorded tower, if unaccompanied by a church, was assumed equally to require a local population of 90 (see discussion above) to support it - but only if a local village could be identified,[1177]. For this purpose, cognizance was taken neither of 'possible' nor of 'hypothetical' towers, their existence being insufficiently proven.

Major fortifications would have either created a service population as garrison troops were allocated to them, or the need for the fortification as a refuge would have been generated by the size of rural settlements in the local area Thus, there was probably a company of professional mounted troops stationed at Oreoi (***Oreo*** **- NW9**) in the north. We have evidence that each company numbered twenty.[1178] Their salaries may have been paid by the Venetians or the Triarchs but support of them and their camp-followers must have fallen to the locals and a population of at least 500 (ie. about 120 families) would have been the minimum.[1179] ***Oreo*** was also the capital of the northern triarchy, and the defence of its fortress would have required significant numbers of personnel.[1180] Buchon, too, notes that the nearby town of Xerochori (modern day Istiaia), although not being mentioned in any contemporary 14th or 15th century documents, had a population of 2,500 in 1841.[1181] Taking all this evidence together with the fact that the surrounding area is a fertile open plain we must conclude that medieval ***Oreo*** probably had a population of over 2,000 people (approx. 480 hearths) in the early 15th century. This number can be compared to Karystos, a town in the south of the island with a similarly sized strategically placed fortress, ***Castel Rosso***. Contemporary documentary evidence provides a population of 2,432 people in the area in 1436.[1182]

The treatment of smaller fortresses/castles is problematic. A number, from their location and the limited surviving evidence of permanent internal construction, appear to have been fortified refuges, whilst others were clearly strategically located. Since there is no way of calculating population from the surviving evidence a nominal value equivalent to three base churches adjusted for local circumstances, was allocated to each.[1183]

Total population is then – family size x hearths per priest x equivalent no. of base churches = 4.2 x 31 x 34 = 4,427.

[1177] The link between towers, as symbols of lordship, and churches is also well documented in Western Europe. For example, see Creighton (2002) **Castles and Landscapes: Power, Community and Fortification in Medieval England**. London: Equinox, 26.

[1178] Four companies of twenty men sent to ***Negroponte*** - Thiriet (1958), no. 108 (1340). As a comparison five companies were voted to garrison ***Negroponte*** in a period of unrest - Thiriet (1958) no.331 (1358).

[1179] In fact, their salaries, used to purchase goods and services, and the investment necessary to maintain the fortifications would have been a positive stimulus to the local economy, probably attracting tradesmen to the area. Exactly how much was required to support each soldier is unknown. We can look to Venetian Crete for guidance, where there were initially 200 fiefs (*cavallaria or militia*), each of which was divided into 6 *serventaria.* Each fief was to support a warhorse, two mounted soldiers and two foot-soldiers. At the lowest level each foot-soldier was given a *serventarie* to support himself and provide his weaponry - Gasparis (1997) **Η Γη και οι Αγρότες στη Μεσαιονική Κρήτη 13ος-14ος αι. [Land and peasants in Medieval Crete 13th-14th c.]**. Athens: Institute for Byzantine Research, 32-34. Each *serventarie* was theoretically similar but in practise there was probably considerable variation. The minimum functional unit may have been 12 hearths referred to above, which could provide the support for a priest and a foot-soldier, but many were probably considerably larger. Gasparis provides us with an example of a village with 56 hearths that was divided into two fiefs in 1414, providing a possible base of 28 hearths. This is of a similar order of magnitude to the allocation of priests to communities discussed above, but this isolated example may not be representative of the whole - Gasparis (1997) 220-221.

[1180] As a strategic outpost it was subjected to a number of sieges over the Frankish period (see **chapter 4**).

[1181] Buchon (1911), 58.

[1182] Hopf (1833) **Geschichtlicher von Karystos auf Euboea in dem Zeitraume von 1205-1470**. Vienna35, note 7.

[1183] The resident population probably fluctuated radically over time as threats appeared and diminished.

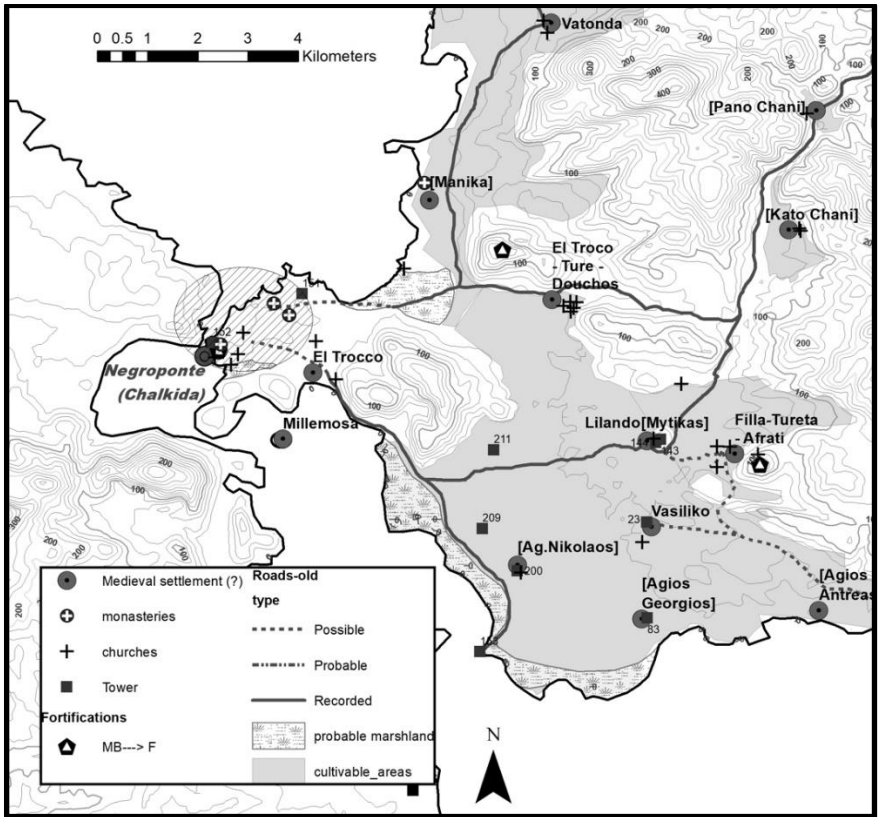


Figure A5.33 – *Negroponte* and the Lelantine Plain

In order to display how effective this modelling approach may be, a detailed study was undertaken of the environs around the city of ***Negroponte*** (Chalkida) and the Lelantine plain in the central-west region. During the Frankish period this was a major strategic area with a high population, possibly at times reaching 15,000 people.[1184] Well-frequented by sailors, soldiers, merchants and travelers, it is the only area, where we have relatively large scale contemporary and early maps,[1185] we can identify with some accuracy the medieval settlements, and still have sufficient surviving monuments to draw statistically meaningful conclusions.

We also have evidence from the Ottoman *defters* of 1474 and the 16th century of the population for some settlements in the area. The early documentary and cartographic evidence provide us with the names of nine sites in the area – ***Negroponte, El Trocco, Milemosa, El Troco (Douchos),Vatonda, Filla (Tureta), Afrati, Lilando,***[1186] and ***Vasiliko***. The concentration of historical ecclesiastical sites combined with the known fortifications provides us with a clear definition of the location of all these settlements except ***Afrati***,[1187] within which no early church has been identified but is so close to ***Filla*** that it may be combined with it. This is shown on the map in **figure A5.26.**

One settlement is noted on the road north - Manika (the position of a monastery – **CW25**), and two following the aquaduct up to Pissonas (**CN19**) – Kato Chani and Panō Chani (both small odern settlements and from their name the probable position of inns on the road – **CW8 and CW9**). Another is noted at Agios Nikolaos in an area where the Admiralty (1846) chart notes salt pans and the

[1184] Jacoby (2001) has placed a maximum population (although see my comments in **chapter 4**) of the walled city alone at 14,500. Four of the settlements in the surrounding area had 397 households (circa 1,700 people?) in the 16th century according to Balta (1991). George Wheler (1682) noted that the population outside the walls was much greater than within and that it probably amounted to '*fourteen or fifteen thousand people'.*

[1185] These are the *portolan* chart by Vesconte (1313); the study by Camocio (1572) probably based on a Venetian survey in the 15th century; the military plan by Werdmüller (c.1660) preparatory to the attack on ***Negroponte***; the aerial sketches by Coronelli (1688) from the siege of the city in that year; and the British Admiralty charts of the early 19th century.

[1186] This has been treated separately here but the castle of ***Filla*** and the village of ***Lilando (Lilanto)*** were possibly treated as one by later cartographers. For a full discussion see **chapter 6** and the notes in the site gazetteer.

[1187] The modern village is situated just one kilometre north of Fylla.

Werdműller map shows a tower (probably to protect them).[1188] Importantly, no false locations are shown. Only one site is not identified - that at tower no. 211 shown on the Werdműller map – but this may be due to the modern Agios Nikolaos church (which also possesses a churchyard – a good indicator of an older church) having been built over the foundations of a previous one This suggests that Skouras' identification and dating of churches is generally accurate.

Medieval [modern] name	Villages (Ref.)	Other estimates	Around 1529	Model
El Trocco **(Dokos)**	**CW3**		563	1,300
Vassilikos [Vasiliko]	**CW5**		449	90
Filla **[Fylla]**	**CW4**		399	1,300
Afrat [Afrati]	**CW4**		256	0
Negroponte **[Chalkida]**	**CW1**	**7 → 15,000**		**8580**
Millemosa	**CW1**			90
El Troco	**CW1**			90
Lilando **[? Mytikas]**	**CW2**		-	180
[Agios Nikolaos]	**CW6**		-	90
[Manika]	**CW25**		-	180
Vatonda **[Batonta]**	**CW26**			180
[Pano Chani]	**CW7**			90
[Katō Chani]	**CW8**			180
Total - ***Negroponte*** **area**				**12,350**
Loreo [Oreoi]	**NW9**	**>2,000?**		**1,560**
Castel Rosso [Karystos]	**S10**	**2,432**		**1,950**

Table 5.1 – Comparison of Population estimates[1189]

An attempt to use churches as a proxy for population estimates of the settlements identified presents some difficulties. Firstly, the survival rate of churches will reduce the estimate, but this may be more than offset by the fact that we may be counting churches built in an earlier period, that were not in continuous use. Secondly, since many churches, especially in the major towns, were probably substantially larger than the base size, this is factored into the calculation by assuming the maximum number of hearths per priest/church (125/4 = 31) in settlements with more than four churches, even though in practice larger churches may have had proportionately more priests, and in ***Negroponte*** the churches noted by Camocio (1572) are assumed to be double the base size.[1190]

[1188] Known to be important to the Venetians**.** Salt from ***Negroponte*** is noted in deliberations of the Venetian Assembly - **Thiriet (ed.) (1971) Déliberations des assemblées venitiennes concernant la Romanie, tome II (1364-1463)), Paris**no.1414 (1414).

[1189] The 1529 population figures derive from Ottoman defters, calculated on the basis of 4.2 persons per household (see above for source)

[1190] The type of religious institution within an urban context also causes problems. Latin churches were probably deliberately large to impress and may not reflect actual population levels. Monastic institutions reflected the wealth of their benefactor which, in the context of Venetian ***Negroponte***, could have derived from trade, manufacturing or even piracy (see **chapter 4**) and therefore not be directly related to population.

Population estimates in t**able 5.1** are compared with household numbers taken from the Ottoman defters in Balta (1991), and figures for the three major cities as discussed above and in **chapter 4.** The lack of population in Basiliko and Afrati is probably because the present village church has been constructed over an older original.[1191] The estimates for Dokos and Fylla are significantly higher than the 1529 Ottoman defters,[1192] but the model has generated population numbers close to historical reports for the major centres of Chalkida, Oreoi and Karystos.

The conclusion we can draw from the above is that the model can correctly predict the existence of a settlement, but it may fail to identify a settlement where its centre has remained unchanged over time, and the construction of a new modern village church has obliterated any trace of an older one in the same position. As regards population figures, however, while providing some indication of relative size the model cannot be relied on for providing accurate estimates of individual settlements. Notwithstanding this, and the high standard deviation of individual estimates, the total population for ***Negroponte*** at 8,580, whilst below the maximum population estimate of 15,000, is of the order of magnitude that we would expect.[1193]

[1191] There is a general problem when the centre of a settlement has remained in its original position. Thus, the two largest churches of modern Chalkida – Agios Demetrios and Agios Nikolaos – are situated in the centre of the city, less than two hundred metres apart in what would have been the northern suburbs of ***Negroponte***, as shown on the Camocio map. Both were probably constructed over older smaller churches, built to serve the expanding community in the Frankish period but we have no evidence to substantiate this.

[1192] These villages would have born the brunt of the Ottoman attack in 1470 and their inhabitants had probably fled to the mountains or to the fortress of ***Negroponte*** and been enslaved or killed when it was captured.

[1193] The 16th / 17th century maps of the major towns manipulate the appearance of the urban space, noting for instance only the Latin churches and not the Orthodox ones, and the style of buildings (churches and fortifications) is typically 'western'. Thus there were probably considerably more churches in ***Negroponte,*** than the documentary evidence reflects – see also Georgopoulou (2006) "Mapping Mediterranean Lands". In Georgopoulou (Ed.) **Χαρτογράφηση της Μεσογείου** Athens: Gennadion. 2-18.

APPENDIX 6 GEOGRAPHICAL ISSUES

6.1 Place-names on Portolan charts (* indicates red colour; # indicates portolan)

The following shows first a map of Euboea with place-names identified from 2 *portolans* and 36 *portolan* charts up to the first decade of the 15th century. This is followed by a table with a complete list of places identified on each chart. Work was not continued beyond this point since no new information could be seen on later 15th century charts and the much larger scale *isolario* genre developed around 1420 obviated their use.

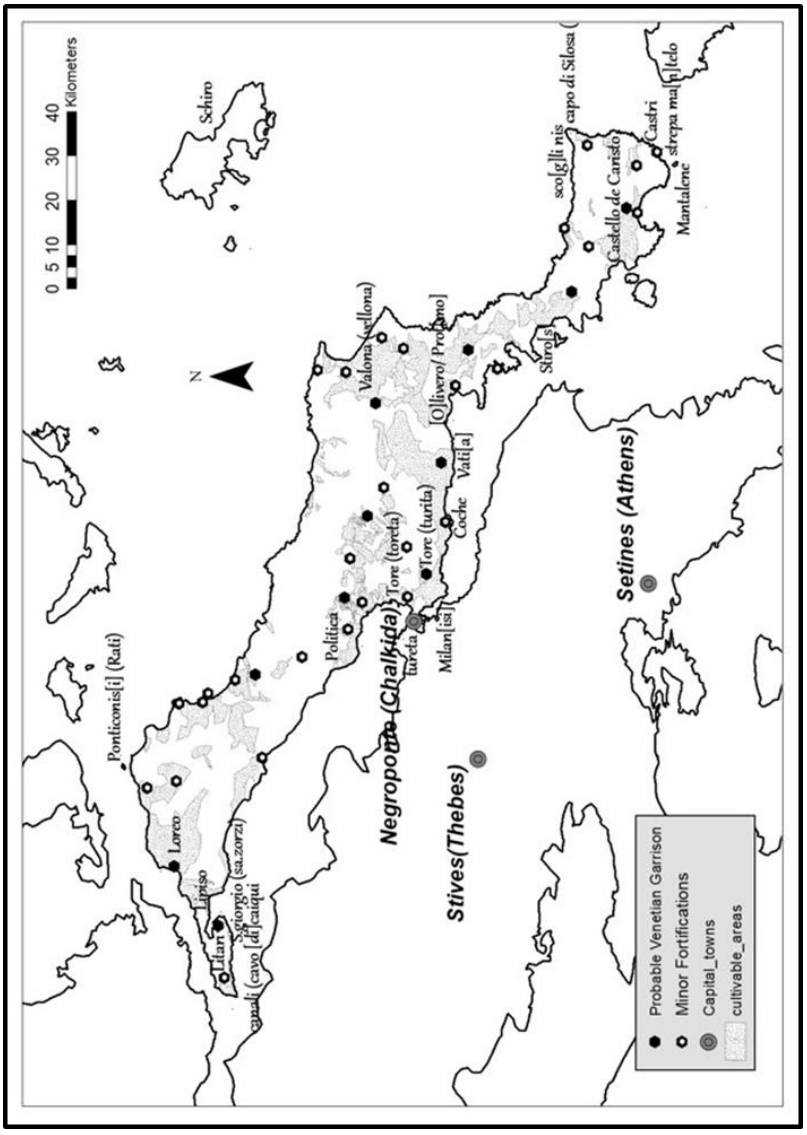


Figure A6.1 – Map based on *Portolan* charts

Table A6.1 – Place-names on Portolan charts

Author / name	Date	Negroponte	Oreo	Litar	Lipiso	Pondiconisi	Politica	Valona	Tureta (?il trocco)	Cochies	caristo	Castri	Silosa / Cavo doro	OTHER NAMES (Shown infrequently)
Lo compasso di navigare #	13th c.	Negropo[nte]	L'Oreo			Pondiconese		uelena			castello de caristo	porto caristo	capo de sirosa	[o]livero
Carte Pisane	end 13th c.	Negrupu*		cauo [di] caiqui									cavo [di} sirosa	
Cortona chart	beg. 14thc.	negropo[nt]												
Vesconte, Pietro	1311	Nigropo*	Loreo	Litar				[valona?]		[?coce?]	caristo		silosa	
Vesconte, Pietro	1313	neg[ro]po[n]t*	loreo	canali		Pondiconis		valona			caristo	castri		scolinis, tureta, strepa ma[n]telo, mantalene
Vesconte, Pietro	1318	Nig[ro]po*	loreo	canali	lipiso	pondiconis	politica	vallona	[?tore]	[?coce]	caristo	castri		tore(s of bridge)
Vesconte, Pietro	1318	Nig[ro]po[n]te*	loreo	canali	lipiso	pondiconis	polirica	vellona	tore	coche	caristo	castri		milanaza, tore (s of bridge)
Vesconte, Pietro	1321	Nigropo*	loreo	canali	lipisico	pondiconis		vellona		coches	caristo	castri		
Vesconte, Pietro	c.1321	neg[ro]po*	loredo	canali		pondiconis	politica	vallona	toreta	cochies	caristo	castri		milimazi, toreta
Vesconte	c.1322	neg[ro]po*	loreo			podico		vellona	tureta	coche	caristo	castri		
Vesconte, Perrino	1321	Nig[ro]po[n]te*	loreo	canali	lipiso	pondico		vallona	ture		caristo	castri		turita, milan[isi]
Anon. Genoese	1300-25	nigrapo[nt]*	Loreo	cauo d litar									sirosa prom	stiro[s]
Vesconte	c.1325	nigropo[n]te*	loreo	canali	lipiso	pondiconis		vallona	ture	coche	caristo	castri		malimosa
Vesconte, Perrino	1327	negro[po]*		[litari?]		[nisi] pondi								[????] , [????], [????]
Carignano (destroyed)	c.1327	[negroponte?]	P Loreo											
Dalorto/Dulceti	1330	negrop[on]t*	Loreo*	cauo litar				valona			caristo	castri		
Dulceti	1339	Neg[r]opu[n]te*	Loreo*	Litar				valona				castri	[?loro]	
Dulceti/ Anon.Majorca	1339-50	Nig[ro]po[n]t*	Loreo*	litar				valona				castri		
Anon.Genoese	1325-50	Nig[ro]po[n]t*	loreo	litar										[?????]

uthor / name	Date	Negroponte	Oreo	Litar	Lipiso	Pondiconisi	Politica	Valona	Tureta (?il trocco)	Cochies	caristo	Castri	Silosa / Cavo doro	OTHER NAMES (Shown infrequently)
Anon. Genoese	c.1325-50	nig[ro]ponte*	[?oreo]											
Anon.Genoese	1325-50	Negropont*	loreo (on_river)	litar				velena			caristo	castri		prom [stiros]
Anon.Genoese	mid 14th	Negropont*	[loreo?]	[litar?]				valona			[caristo?]	[castri?]		
Pizzigano, F. (+D/M)	1367	Negroponti*	Loreo*	[litar?]			po[liti]ca	[?valona?]			[caristo?]	[castri?]		
Pizzigano, F.	1373-83	Nigropo*	loro	[????]		[????]					caristo	castri	[loro]	
Catalan Atlas	c.1375	[?negroponte]*	[loreo?]*	[litar?]				[?uelona]				[?castri]		
Soler, Guillem	c.1385	neg[ro]po[[nt]*	Oreo*	cavo litar		[????]					caristo	castri		
Soler, Guillem	1385	neg[ro]po[[nt]*	Loreo*	litari, [Sgiorgo?]						[?coce or ?tore]		[????]		
Anon.Majorcan	1375-1400	[?negr[o]po[nt]?]*	[?loreo?]*	[?litar?]				[?valona?]				[?castri?]		
Anon.Majorcan	1375-1400	neg[ro]po[n]t*	Loreo*	cavo litar				valona			caristo	castri		
Venetian(Pizzigano ?)	1375-1400	Nigropont*	Loiro*	canali		[????]	[?politica]	[?valona]			[?caristo]	[?castri]	Siloso, loro	pro[tmo?], vati[a]
Anon. Majorca	end 14th	neg[ro]po[nt]*	Loreo*											[????], [????]
Anon. Venetian	end 14th	negropo *	Loreo*											
Corbitis [ex 'Combitis'] Atlas - Venetian	end 14th / 15th c.	Nigroponte*	Loreo*					ualona			caristo	castri	Siloso, [loro]	
Anon. venice (Cesaris) Pinelli-Walckenaer Atlas	end 14th / 15th c.	Negroponte*	Lorio					valona			caristo	castri		
Beccari	1403	negrop[on]t*	loreo	cavo litar		rati		vellona			caristo	castri	loro	
De Virga	1409	Nigripo*	Lorio*											
Anon.Venetian	Beg 15th	nigripo[nt]*	[????]	[????], Sa.ʒorʒi			[?politica]	valona			caristo	castri	[l]oro	matello

6.2 Toponymic and topographic problems and solutions

There has been much discussion in the literature regarding the location of certain places on the island, as commentators have tried to identify place-names found in cartographic sources or in documentary sources with places on the ground. Each of these is discussed below.

Litar – Lalutra – Lalitada

It is not surprising that various cartographers were misled into errors for the names of the places on the Lichada (Lithada or *Κηναίον*) peninsular since there are so many places, even today, with different yet similar and inter-mixed names - Cape Lichada, Lichada, Agios Georgios, Gialtra, Agios Georgios Gialtrōn, Loutra Gialtrōn, and Gregolimano, These appear to have roots in three words – 'Litar' possibly derived from the Greek root *lithos* (λιθος), meaning stone or rock and a possible reference to the rocky mountain , which is a feature of the peninsular, 'Loutra' from the Greek *loutra* (λουτρά) meaning baths due to the fact that there are natural hot springs in the area,[1194] and Agios Georgios or ***s.gorgi*** (see **NW6**), which is a monastery dating from the 8th century just south of present-day Lichada.[1195]

There appears to be common agreement from the maps that ***litar*** in all its permutations refers in some way either to the peninsular or a place on it. Recent analysts differ, however, on the detail. Koder(1973) identified it, I believe incorrectly, with the modern village of Gialtra[1196] on the east of the peninsular, also noting ***talitada***[1197] as Lichada and the islands to the west as being called ***'la lita',*** based on the 16th century maps.[1198] Triantafyllopoulos(1974), in his commentary on Koder's book,[1199] believed that the name refers rather to the general area surrounding the modern-day town of Lichada (previously Lithada), which is set to the east of the classical fortress in a central elevated inland location as were so many towns of the late medieval era. It also possesses both a number of Byzantine churches and a medieval tower (see **NW6**). Skouras,[1200] supporting this contention, found no evidence of either Byzantine or Frankish churches or fortifications in the area of Gialtra.

Fortunately, the various annotated prints of Sonetti's map, on which Koder was unable to draw, provide us with a solution. His original map (1485) places ***Lalita*** in the centre of the promontory with the place-name annotated just above within the shoreline of the island. His second, the (1486-94) printed version, had insufficient space for the name and the annotator was

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[1194] The area was famous for its baths in the Roman period – Dryden and Clough (tr.)(1932) **[Plutarch] The Lives of the Noble Grecians and Romans**, New York: PAGE REF???

[1195] Skouras (1998) **Χριστιανικά μνημεία της Έυβοιας : Έντοπισμός Ιδιαιτερότητες Καταστροφές Καταγραφή**. Chalkida, Greece: Σύγχρονος Τύποςp.137. We also have two other instances of a monastery being named on a map – those of ***S. Chiara*** just northwest of Politika and ***Caloiaro*** on the map of Bartolomeo Dalli Sonetti (1485).

[1196] Koder (1973) **Negroponte: Untersuchungen und Siedlungsgeschichte der Insel Euboia während der Zeit der Venezianerherrschaft**. Vienna , 30-31

[1197] '***Talitada'*** appears to be only a 16th century reference.

[1198] He also assumed that the Pseudo-Buondelmonte map (see **chapter 3**) was 1420 when it is more likely 16th or even 17th century.

[1199] Triantafyllopoulos (1974) He noted additionally that, although some medieval remains have been found by Sackett (37-8 fig.8) in the Gialtra area, Gialtra itself, referring to the Β.Πλατη(1954) map (Χάρτης Ευβοίας-Αττικοβοιωτίας, 1:250,000, Athens), was called historically Kastelli (or Tourla), indicating that it posesses some form of fortification and possibly a tower.

[1200] Skouras (1998)and Skouras (2003) **Ακρόπολεις - Κάστρα - Πύργοι της Εύβοιας [Acropoli - castles - Towers of Euboea]**. Chalkida, Greece: Nomarchiaki Avtodioikisi Euboias It should be noted, however, that, since so many monuments have been built over or robbed of their stones in recent years, lack of evidence does not mean there was none.

forced to write it just to the north in the sea.[1201] Evidence from a Venetian document of 1415 also provides some clarity – it refers to '*li luogi de Lepso, Litada, Lalutra, Similes at altri luogi e caxali'*.[1202] There is thus a clear distinction between 'Lita' and all its derivatives and 'lutra' and all its derivatives. The latter can also be divided up into two places because the same document refers later to ***Gralutra***,[1203] which appears to derive from '*Gra(n) Lutra'* and was probably subsequently corrupted to 'Gialtra' – the name of the modern settlement- thus leaving ***Lalutra*** to refer simply to modern Loutra Gialtrōn.

Taking ***Lalita(r)*** and ***(La) Litada*** to refer to modern-day Lichada,[1204] the other map-names subsequently fall relatively simply into place (see **map 6.4**). ***Cavo litar[i]*** is naturally the cape, and ***s.gorgi***[1205] is the modern-day port of Agios Georgios, so-named for the eponymous monastery just above it.[1206] We can link ***p[orto].litra*** most probably with Agios Georgios Gialtrōn, which is a natural harbour set in the bay just below Gialtra opposite Aidēpsos (**NW1**).[1207] It does, however have one big drawback as a harbour – approaches to it are very open to the prevailing northeasterly winds, especially in the winter months. In such winds ships would have been forced to change anchorage to Gregolimano, south of Gialtra, so-named because it is a 'harbour from the northeasterly wind.[1208] This latter has not been mentioned on any early maps, but appears on more modern ones.[1209]

Holorita – Colochita

Located by a number of cartographers[1210] just to the east of ***politica*** (**CN3**) in the general area of modern-day Psachna, Skouras identifies ***Holorita*** with the fortress of **Kastri** (**CN6**) just to the north of Psachna on the basis that the local area is called Koulouriada (κουλουριάδα),[1211] a very similar name. There is also, however, just to the west a village called **Kastella** in the centre of the rich Psachna plain, where there used to be a tower. This name, therefore, probably refers to the general area and not to any particular place since still, both on modern Greek maps and by the locals, the fortress is called **Kastri** (Καστρί) and the village is referred to as **Kastella**.[1212]

Koder reaches a similar conclusion to Skouras, but then proposes that ***Colochita,*** found on a number of 15th to 17th century maps, is the same place[1213]. Triantafyllopoulos (1974) rightly questions this conclusion, since all the maps, which note it, consistently place **Colochita** in the north-west of the island, to the north of ***Limene*** (**NE2**) and to the south of ***Loreo*** (**NW9**). There

[1201] This appears to have created the foundation for subsequent copyists' errors (for instance Bordone (1528) and Camocio (1571)).
[1202] Sathas (1890-1900) III, 125, line 23.
[1203] Sathas (1890-1900) III, 127, line 29.
[1204] The name ***talitada*** on 16th century maps on the eastern shore of the island appears to be a mistaken allocation of the name *lalitada* in the Sonetti (1485) isolario text to an otherwise unidentified place, an error subsequently copied by other cartographers in the 16th and 17th centuries, although Triantafyllopoulos(1974) suggests that we may need to consider other options for this.
[1205] According to Giroldis (1426) and also ANON (14th century) in Nordenskiold (1897) **Periplus, an essay on the early history of charts and sailing directions [translated from the Swedish original by F.A. Bather]**. Stockholm: P.A.Norstedt & Sõner, 39.
[1206] Interestingly, Camocio (1571), who provides small sketches of each place he notes, does not give ***litar*** towers but draws what looks very much like a church with a steeple, an obvious rendering of the Agios Georgios monastery.
[1207] This appears later in the 17th century to have been called ***P[orto] Calos*** (Boschini / Coronelli)
[1208] The 'Grego' ('Gregale' in Catalan and re-adopted into Greek as the 'Γρεγος') is the name given by Italian sailors to the northeasterly wind, named after the harsh winds that sweep down from the Greek island of Zakynthos into the waters around Malta.
[1209] Elias (2007)
[1210] Coronelli (1688) and Porcacchi (1620)
[1211] Based on the likeness of the local geography to a bagel (or *koulouri* in Greek) Skouras (2003)
[1212] There is also a third probable fortification just to the south – that of Profitis Elias (**CN7**) – but it is uncertain whether this was still in use in the 15th century.
[1213] Koder (1973) 30-34.

are a number of possible candidates but the only one that seems to be in the right place, was strategically placed, and had clear views in all directions (see **chapter 6**) is the fortification identified by Skouras at Mēlies (**NW13**),[1214] an identification that must remain open until further evidence comes to light.

Il Troco - Il Trocco – El Troco – tronco – Iltrodo

The place-name is written exactly on the binding of its earliest recorded use, the Sonetti (1485) coloured manuscript map,[1215] thus obscuring the centre, but is clearly written as ***Il Troco*** on a copy of his printed (1486-94) map,[1216] and on Bordone (1528).[1217] Both Agnese (1554) and Boschini (1658) later spell it with two 'c's. Gastaldi's (16th c.) '***tronco***'[1218] and Coronelli's (1688) '***iltrodo***' appear to be copying mistakes.

Much has been written as to the position of ***el troco***, largely because the 16th and 17th century maps have placed it in so many different locations.[1219] Assuming that Sonetti (1485) is the original source for most of these, we should first focus on his positioning. His (1485) map places it just inland to the northeast of ***Negroponte*** and northwest of ***lila[n]to*** (**CW4**). The (1486-94) printed version, however, places it southeast of ***Negroponte*** and west of ***lila[n]to*** – a treatment that was exacerbated by other mapmakers, who placed it even further east, somewhere between ***Negroponte*** and L***avatia*** (**CW15**).

Koder, following Pseudo-Buondelmonti,[1220] identified it with modern-day Batontas (Βατόντας – **CW26**),[1221] which is a settlement slightly inland, just to the north of Chalkida, although the place-names '***Ture***' and '***Tureta***' on the Vesconte portolan charts of the early 14th century,[1222] suggesting that it was some form of fortification, tend to preclude this. Triantafyllopoulos (1974) with no evidence to the contrary does not disagree with this conclusion but notes the plethora of other un-identified fortifications in the area. Skouras (2003) provides a partial answer to the puzzle[1223]. There exists a large fortification on Kopana (or Tampouri) hill, just to the northeast of Chalkida and one kilometre inland above the village of Agia Eleousa, otherwise known as Dokos (**CW3**). Remnants of walls around the summit still remained on his visit, some to a height of 1.2m with a thickness of 2 -2.5m.[1224] The Admiralty (1860) chart, however, notes *Drokos* elsewhere - as a promontory close to the old classical town of Chalkis about two kilometres to the east of Negroponte, a conclusion supported by Mackay (2011).[1225]

The solution to this conundrum can only be seen by both understanding the etymological roots of the word '*Troco*', which in medieval Latin in the form '*trocare*' means to exchange or barter,[1226] and by looking at a large-scale map of the area (see **map 6.5**). This shows clearly that

[1214] Skouras (2003) 83.
[1215] Sonetti (c.1485).
[1216] Sonetti (1486-94) "**[isolario woodcut with later town and coastline annotations]**". Venice. Boston Public Library (MARCXML)
[1217] Bordone (1528).
[1218] Gastaldi (16th c.) "**[Descrittione dele geografia moderna de tutta la Gretia...]**". Biblioteca Nazionale Marciana,, Venice.
[1219] Sonetti (1485) north east; Bordone (1528) north-east; Agnese (1554) north-east; Gastaldi ( ) east; Cantelli (1685) north;
[1220] Legrand (Ed.) (1897) **Description des îles de l'Archipel : première partie [by Cristoforo Buondelmonte trans. from Greek]**, Paris: Leroux. – the dating of this map by Koder is incorrect. As yet, although it was included by Legrand in his translation of Buondelmonte, the authorship and dating of this map is unknown.
[1221] Koder (1973) 30-33,97,100.
[1222] See **Appendix 3.1**.
[1223] Skouras (2003) pp.110-111.
[1224] On my own visit nearly everything had disappeared – see **appendix - CW3**.
[1225] MacKay (2011) Map of Siege of Negropont, 1470. [Accessed 20/11/2016], https://www.academia.edu/1511739/ Map_of_Siege_of_Negropont_1470.
[1226] This appears in various forms in Portuguese, Catalan, Spanish, and French (troquer).

there were only two access points to medieval ***Negroponte*** – a narrow coastal road from the southeast and the north-eastern road following the line of the ancient (Roman?) aqueduct across the salt marshes, which have only recently been land-filled. The noting of '***El Troco'*** in two positions is thus clear – they were two markets established to control (and probably tax) all goods coming into the city, and later cartographers, without direct access to the area during the Ottoman occupation, were naturally confused as to the correct location. Thus, the fortification above ***Douchos*** (Dokos),[1227] shown on the *portolan* charts of the 14th century as ***ture*** or ***tureta***, became known in the 15th century, as its military role declined following investment in the fortress of ***Negroponte***, by its new market-place role as ***troco***. Similarly, to the south, in the area of Classical ***Chalkis*** a new market area grew up with the same name.

Filla – Tore/Tureta - Lilando – Lilanto/Tianto

There has been some confusion over the exact identification of these place-names – all in the Lelantine plain. Koder has proposed that ***Lilanto*** referred to the modern village of Basiliko,[1228] but the publication by Balta (1991) of the Ottoman defters of 1474, immediately after Euboea's capture, clearly notes the villages of ***Vasiliko, Afrat*** and ***Filla***, thus precluding such a conclusion. ***Afrat(i)*** is immediately next door to the village of ***Filla***, which takes its name from and stands below the castle that Sanudo Torsello notes was re-fortified in the 1280's by the Byzantines under Licarios.[1229] On the *portolan* charts of the early 14th century the castle is noted as ***Ture*** (see **appendix 3.1**), while in a Greek *portolan* of the 16th century it is noted as ***Toureta***.[1230]

The name of ***Lilando*** or ***Lilanto*** (later corrupted on maps to ***Tianto*** - see **CW4**) appears primarily to have referred to the plain, but it also became applied to both the castle above it, and a village within the plain. There is a reference in 1420 to '*turris sita in medio dicti casalis*' (tower situated within the said village). [1231] Four tower sites exist within the plain: the one close to Agios Nikolaos (**CW6**) appears to stand alone, ***Vasiliko*** (**CW5**) has been precluded above, whilst the tower at Agios Georgios (**CW28**), which has a church close-by and seems to have been surrounded by other buildings, may be a candidate but is very close to the coast and may be too far south to be considered within the plain, and thus to bear its name. There remain only the 'twin towers' of Mytikas (**CW2**), which stand on a small knoll within the plain. One was probably Ottoman (see discussion in **appendix 5.2.4**) and the other today stands alone in an open area on the top of the hill, below which is the modern village of Mytikas. In the Late Medieval period, however, this hill appears to have been a built-up area and a military sketch in the Werdmüller collection dated to c.1660[1232] shows not only the two towers, but palatial building on its summit and houses clustered around its base. Identification of this with ***Lilando*** village seems irrefutable.

[1227] Skouras had presumed that 'Dokos' is a corruption of 'Trocos', but this is incorrect. The name 'Dokos' in the form 'Douchos' is to be found in a Byzantine Cadastre from Thebes, which notes inhabitants who came from Psachna and Douchos - Svoronos (1959).

[1228] Koder (1973) 102.

[1229] *'…il castello della Filla , che guarda sopra Lilando…*' - Chroniques gréco-romanes: ineédites ou peu connues, pub. avec notes et tables généalogiques, 127

[1230] This notes precisely that it is '*three miles from* ***Negroponte*** *and one mile inland'*. The logic suggests this is the Fylla castle and the *portolan* refers to 'τον κάβο δε λή Τουρέτα' and 'η πούντα της Τουρέτας'. There are a number of towers in the area but these do not appear of sufficient significance to have taken on this name -Delatte (1947), *Parisinus* gr.1416, f.8.

[1231] Sathas (1890-1900) 216.

[1232] Festung Negroponte und Umgebung [Johann Rudolf Werdmüller collection] (c. 1660). This was probably prepared by an Italian engineer/spy in preparation for the failed Venetian assault on ***Negroponte*** in 1688. It shows not only ***Negroponte*** city and the Lelantine plain but also the roads and settlements within it. The sketch of the hill appears in **figure 7.??**

Vumi

Disagreeing with Koder's suggestion of ***Vumi***[1233] being a corruption of Kumē, Trintafyllopoulos (1974) proposes its identification as Bounoi (pronounced 'Vuni' – **CN18**), a settlement in the centre of the island just below Mt Dirfis. The archaeological evidence is strong for such a conclusion: seven churches have been identified within the modern village by Skouras,[1234] four dated to the Frankish period, more than any other town except ***Negroponte***; it is set on the banks of a river that runs throughout the year; the aquaduct supplying water to ***Negroponte*** begins nearby; and the area of the base of the tower within the settlement is twice the size of the average tower on the island, implying its possible military/elite role within an administrative centre. The weather is also temperate, being just below the snow line of Mt Dirfis, and the surrounding region is a good-sized upland plain where agricultural productivity, both animal husbandry and cropping, is good. Its key position is also suggested by the possible existence of a strategic military reserve being stationed close-by at Skountéri (**CN22**).[1235]

Valona – Avlunar – Chumi

Appearances may be deceptive in identifying modern Avlonari with medieval ***Valona***. Both the positioning of the town by Sonetti (1485) some kilometres inland on a river, and the use by the cartographer of a symbol for the town of three towers, larger than any other on the island except ***Negroponte***, something reflected by the high density of churches and a tower found in the Avlonari area, suggests its correctness. The name appears to derive from the Greek 'Ambelona' (αμπελόνα) meaning vineyard, and we have written evidence of the original name in Latin from a listing of the four Latin bishoprics of Euboea (early 13th century) which describes one as '*Abelonensis*'[1236], and a *'bishop of Avalona'* is mentioned in a document from 1343.[1237]

The Turkish cartographer Piri Re'is, however, in an *isolario* chart with sailing instructions dated to 1528 writes *'moving on northwest* [from the harbour of ***Petries*** **(SC5)**] *one reaches the village* ***Avlunar****. In front of the village small boats moor and load grain'*[1238]. This seems to place the town closer to, or even right on, the coast. More confusingly, the seat of the Diocese of *Avalona* may have been to the west at Episkopē (literally bishopric – **CE17**), which is a village just below the fortress identified by Koder as ***Cuppa*** (**CE18**),[1239] 8 kms. away from both the coast and Avlonari. Two further factors tend to preclude modern Avlonari's identification with ***Valona***: firstly, while on the *isolario* maps of the 15th to 17th centuries ***Cuppa*** is always placed well to the southwest of ***Valona***, the actual siting of ***Cuppa*** is northwest of modern Avlonari; secondly, the Late Medieval settlement of Avlonari seems by the density of churches in the area to have been at Chania, a kilometre away from the modern town and the tower that stands at its centre.

Probably the name was used to refer to both the region (there is still an area called τα αμπελάκια on the HMGS (1988) map) and the town. Such a definition is supported by Sanudo

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[1233] Stefano Magno **in** Hopf(1873) 207. He notes during a description of the annexation of the island by the Ottomans in 1470 '*el luogo dei Vumi'.*

[1234] Skouras (1998) 90-91.

[1235] See **chapter 7** for a detailed discussion.

[1236] Bury (1886) The Lombards and Venetians in Euboea (1205-1303. **JHS**, 7: 309-352 note 4 - *'Episcopatum . . .Abelonensem, Zorconesem, Caristiensem* (Inn. Ep. xi. 256). The transformation process here might have been: ***αμπελόνα ->abelona/ avelona / valona/avlonari (Latin)-> avlunar (Turkish) -> Αυλονάρι.***

[1237] Miller (1908) **The Latins in the Levant, A history of Frankish Greece (1204-1566)**. New York: Barnes and Noble p.68, note 2 (Predelli, *Commemoriali*, ii,123,126).

[1238] Loupis (1999) p.187. By this time, 50 years after the Ottoman annexation of Euboea, Piri Re'is' maps indicate substantial new settlement in the area. Yet, despite the Ottoman emphasis on grain as opposed to wine production, the fact that the name lingered on in the area is some indication of the high level of wine production during the Frankish period.

[1239] Koder (1973) 105-106.

Torsello, who writes that the general Licarios fortified the castle **'***Della Cuppa in la Vallona',*[1240] thus suggesting another corruption of the word to mean literally *' the valley'* – a form that would have some logic since the fortress stands at the entrance to a massive valley. A contemporary Venetian state document of June 1413,[1241] too, refers to the *'Capitaneo Avalone'*, who was ordered from ***Negroponte*** to his place of service, the fortress of ***La Coppa***. He was clearly responsible militarily for the region of '*Avalone*'. Another Venetian document from 1428 supports this, noting '*in una pertinentia dicta Lavlona'*.[1242]

The question remains – which is the town? A possible solution lies at Oxilithos (**CE25**), a sprawling village which lies two kilometres from the sea on the slopes of a steep hill that rises to 350m. Recent archaeological research suggests that just to the south may have been the site of ancient Kymē but, more importantly, there are a number of churches in the area dated to the Frankish period, and its positioning ties in with contemporary maps – away from the coast, northeast of the fortress of ***Cuppa***, by the major river in the region, and close enough to the sea to agree with Piri Re'is' description. Sapouna-Sakellaraki (1997) also calls this site 'Biglatouri', possibly meaning 'watchtower fort', presumably based on local folklore, providing further support for a medieval settlement here.[1243]

Whilst the general, although not specific, positioning of ***Valona*** is agreed the identification of ***Chumi***, as noted on the Sonetti (1485) manuscript map and many subsequent printed maps of the 16th and 17th centuries, with a particular settlement or fortress is problematic. On nearly all these maps ***Chumi*** is placed in the Karystian peninsular in the far southeast of the island. Koder's identification of the place-name with modern Kymē,[1244] 60 kms. to the northwest is in error. It was based on his incorrect dating of the Pseudo-Buondelmonte map, his positing of ***Vumi*** as a possible corruption of ***Chumi*** (see above) and his trust in the subsequent printed maps of the 16th and 17th centuries, which have been discredited. Further there is no evidence of Late Medieval settlement (churches or fortification) in modern Kymē. Rather, the Piri Re'is (1528) *isolario* map indicates that this area was heavily settled by the Ottomans in the 16th century.[1245]

Close examination of the manuscript Sonetti (1485) map suggests that the writing of the name ***chumi*** may have been a copying error,[1246] but it is possible that it could refer to the self-contained area of Giannitsi (**S2**) or even Silosa (**S3**), both to the north of the Karystian peninsular, where Skouras has found substantial evidence of Classical fortification.[1247] The most probable, however, appears to be the site at Oxilithos, where classical finds have been made (see above), but the evidence is insufficient for a formal identification to be made.

[1240] [Marino-Sanudo-Torsello] 137, ll2-3. During the Byzantine invasion of the island in the 1280's.
[1241] Sathas (1890-1900), no.554, 14 July 1413
[1242] This also provides the etymological link between ***Valona*** and ***Avlonari*** - Sathas (1890-1900) no.306, l.31, 1428.
[1243] Sapouna-Sakellaraki (1997) Η ανασκαφή στο βιγλατούρι Οξυλίθου. **Archeion Euboikon Meleton**, ΛΒ: 59-64.
[1244] Koder (1973) 30-33.
[1245] The map shows only a few settlements – Negroponte, Oreo, La Vatia, Stura, Karystos, Avlonar; three fortresses – Oreo, Negroponte and Karystos; but intense settlement in the Kymē area
[1246] Subsequently compounded on the printed maps of the 16th and 17th centuries.
[1247] Skouras (2003) 55-56, 63-64, 97-99. Kymē is linked to Greek colonisation of southern Italy in the 8th and 7th centuries B.C. The relative paucity of good cultivable land in this region yet large fortifications, may suggest that the pressure on population levels was much stronger and felt earlier here than in the rich Avlonari valley to the north.

Potiris – Graspilea

The ***Potiri***s fortification has not been identified securely in the literature. Koder identifies it with the castle at Oktōnia (**CE13**),[1248] Skouras with Palaiokastri (**CE8**),[1249] just to the southeast of modern Avlonari, while Triantafyllopoulos treats each as a possibility. Koder speculates that it may also have some relation to ***Porto Potries*** (**SC5**), a harbour on the Aegean coast to the south, which is shown on a number of maps. Other positions are also possible – the tower at Belos (**SC3**) appears to have been part of a much larger fortification,[1250] the castle at Rizokastro (**SC2**) is not mentioned anywhere in the literature, and the fortification in the centre of the Dystos valley (**SC6**) is a possible candidate.

The key to understanding its location may lie in defining its role. Assuming that ***La pertinentia de la Valona,*** which contains the two key castles of ***la Coppa*** (***Cuppa***) and ***Potiris***, as noted in a deliberation of the *Cancellaria Secreta*,[1251] covers the area approximately of the **central-east** and the northern part of the **south-central** regions, stretching from Aliberi to Kyme down to Dystos, the castle of ***La Coppa*** covers the northern section of this. This suggests that the castle of **Potiris,** noted in the same document, should be located to control the south-eastern section of the area, and the maps clearly show it to the east of ***Protimo*** (Aliberi-**CE1**) and to the southeast of ***Cuppa***, as we would expect.

Thus, Koder's speculation regarding ***Porto Potries*** (Agioi Apostoloi-**SC5**), which is the only large secure port along this whole Aegean coastline, may be justified.[1252] Slightly inland there is the large village of Petries (**SC5**), which is etymologically similar, while further west there is the now-abandoned village of Zapanti (Drosia – **SC4**). Unfortunately, there is no fortress in either of these positions so the verdict must remain open but, as we have seen in the case of the fortress of ***Mantugo*** (**NE17**), fortifications no longer of strategic use in an accessible position are quickly mined for building stone. The final possibility, given the extensive medieval remains and Frankish(?) tower and walls in the centre of the classical fortification in the Dystos valley is that this was the central fortification for the area. Etymologically the Greek word 'potiri' means cup in English (described by modern geographers as a basin) and this describes exactly the depression with its lake, in the centre of which the fortress lies. The existence of watchpoints (*pyrgaria*) all around re-enforces such a conclusion (see **figure A9.3**)

Whilst ***Graspilea*** could not be located by either Koder[1253] or Triantafyllopoulos,[1254] Skouras identifies it with Oktōnia (linked with ***Potiris*** by Koder – see above), arguing that close-by there is a very large cave system ('*Spēlia*' in Greek) with a number of chambers on the road from the castle to the sea. The name could therefore be a corruption of '*Gran spelia'*, meaning literally 'large cave'. The location of ***Graspilea*** on the early maps also tends to support this conclusion although, since we have no early documentary proof, we cannot confirm that the name was in use in the 15th century

[1248] Koder (1973) 30-31.
[1249] Skouras 2003) 44-45.
[1250] Speculatively,if we use the etymological link – *potiri* (ποτίρι) meaning 'cup' in Greek - then the cup-like corners on both the circuit wall and the tower (see **SC3** sketch) could provide a rationale for such a name.
[1251] Sathas (1890-1900)III, 309, no.895, l 10.
[1252] Any rapid reaction against raiding corsairs would have required the stationing of a galley here. Thus the captain of ***Potiris*** could have had both a military and naval role.
[1253] Koder (1973) 30-31.
[1254] Triantafyllopoulos (1974)

Fillagra – Anemopēles (Termopile) – Silosa – Platari (Map 6.9)

The fortress of ***Fillagra*** is mentioned in the agreement of 1331 between the Catalan Alfonso Fradrigo and the Venetians,[1255] noting that '*…debeat dirrui facere muralia Fillagre…'* and that no other fortification should be constructed between ***Armeno*** (**SC17**) and ***Caristo*** **(S10**). It appears to have stood on a headland overlooking the Aegean at the present cape Filagra, close to the village of Giannitsi (**S2**). Koder recognizes this but then attempts to link it to ***Silosa*** mentioned on the maps,[1256] yet this is nearly 20 kms. away and is simply the name of the channel – ***bocca de silosa*** (the mouth of silence)[1257] – a euphemism used by sailors for this difficult windy strait between the islands of Euboea and Andros off cape ***Capo D'oro***, and the settlement / fortification noted on the Pseudo-Buondelmonte map has simply taken its name by association.

A place called ***Platari*** also appears on the Pseudo-Buondelmonte map and a number of others[1258] approximately in the position of ***Fillagra***. Since there is no mention of the latter on any earlier map, and in the absence of any other evidence, there is the possibility that the two are the same, a conclusion reached by Triantafyllopoulos (1974). Alternatively, it may be identified with the fortress more recently discovered by Skouras at Aktaion (**S1**),[1259] which he in error tries to identify with ***Silosa***,

The conundrum, however, is the identification of ***Anemopēles*** (or ***Termopile***[1260]) as noted in Georges Pachymeres[1261] and Sanudo Torsello.[1262] This was a fortification given in about 1265 to the knight Licario, who was to become the general leading Byzantine forces against the Latins on Euboea in the 1270's and 1280's. We are told by Sanudo Torsello that the fortress, in a high position, was much strengthened (*fortissima*), whilst its name suggests a position both windy (*anemo*) and, interpreting '*pēles'* as 'gates', that it stood at the entrance to a major gorge or ravine.[1263] Licario used the fortress as his base for raiding both on land and sea over a number of years, so we must identify a position that is self-contained, defensible, possesses a sheltered mooring and gives land access for raiding the surrounding land. Most commentators have agreed the possibility of its identification with ***Fillagra***, which possesses the above characteristics. I accept this conclusion, but we should not exclude either Aktaion (**S1**) just 4 kms away or the castle of Matzafierza (**S4**) situated at the entrance to the gorge leading to ***Fillagra*** and 7 kms. southwest of it, a solution proposed by Skouras.

[1255] Sathas (1890-1900) III, 345. See also **chapter 4** for the history surrounding this.
[1256] Koder(1973) 123.
[1257] The original Greek form is *'Xylo phai'* (ξυλο φαϊ) meaning 'wood (ie. Ship) eater', which has been corrupted and re-interpreted over time as *silosa* seemingly deriving from the Italian '*Silensioza*', an obvious nautical euphemism for this very windy cape.
[1258] These have been shown in chapter 3 to have little original work and of low accuracy so were probably a copy of the former – Gastaldi (16th c?); Porcacchi (1576).
[1259] Skouras (2003) 97-99.
[1260] Marino Sanudo Torsello **in** Chroniques gréco-romanes: ineédites ou peu connues, pub. avec notes et tables généalogiques 120.
[1261] Failler (1984-2000)525, l 5.
[1262] *'…ove li fu dato un certo castello in una montagne altissima, detta l'***Anemopile***, ove face un castello fortissimo…'* - Marino Sanudo Torsello **in** [Marino-Sanudo-Torsello] 131, ll 18-19.
[1263] We have a similar name used for ***Cleisura*** (**NE24**), which stands high over a gorge linking central and northern Euboea, and was also called sideroporta (σιδηρόπορτα) meaning 'iron gates'

APPENDIX 7 TOWERS

Appendix 7.1 – Listing of various names used to describe towers in Greece

1. Pyrgos (Πύργοι – πυργί, , πυργάκι, πυργίσκο)

Modern maps show a number of permutations of the basic term '*pyrgos*'. Pachymeres, writing at the end of the 13th century, uses the term loosely to refer to any tower-like structure that is not a fortress.[1264] Smyrlis (2016) notes its use in the 14th century linked to the term *'kastelion'*. It has also come to be used to refer to mansions of the late Frankish and early modern era (e.g on Naxos and Chios) in the same way that in England stately homes often bear the name '……..Towers'. '*Pyrgi', 'Pyrgaki'* and *'Pyrgisko'* seem to have been diminutive forms of 'Pyrgos' and we often found the tɛrms being used inter-changeably by villagers.

2. Pyrgari (πυργάρι, πυργάρια)

'*Pyrgari'* has the same root as (1) above but seems to have a specific use as a term to describe a 'look-out' or 'beacon' – see **section 8.5.** Its only literary use seems to have been in an audit of the properties of the church undertaken on the island of Cephalonia - , **Το Πρακτικόν της Λατινικής Επισκοπής Κέφαλληνίας του 1264 και η Επιτομή του**, 1965) - In the *praktikon* 'Τά Πυργάρια', 812. In the abstract: 'ἀπό τόν Πυργάριον', 24r: l 17. It is not mentioned in any dictionary.

3. Tore (tore, ture, toreta, tureta, turita, tourē – τούρη, tourla - τουρλα)

This term first makes it appearance on the *portolan* charts of Pietro Vesconte (Venice) in the second decade of the 14th century[1265]. Its exact use during this period is unknown but it appears to have referred either to a tower or a fortification. Specifically on his map it seems to refer to the fortifications of Dokos and Lilanto, north and south of ***Negroponte***. There exists a large tower with this name on the island of Cornat in modern Croatia. It may also have referred to the Ottoman gun-tower at the entrance to the Euripos channel just to the south of ***Negroponte*** in the 16th century.[1266]

Unlike other Italian terms most of the versions of the word do not appear to have ever been transliterated into Greek except on the island of Corfu (Κέρκυρα), where the word '***tourē***' is used to refer to inland towers (both rectangular and circular),[1267] and on Euboea where there are a number of references on modern HMGS (1988) maps to ***tourla***.[1268] This latter, Paschalis (1966) notes, is used in the form ***Bigla-Tourla*** on Andros as the name of a headland. It appears to derive from the French *tourelle*. The form ***turetta*** is found on the Petro Vesconte *portolan* chart from 1311.[1269]

[1264] Failler (1984-2000) vol.5, Greek lexicon.
[1265] See chapter 5.1 for a detailed discussion of the word and the sources
[1266] Delatte (1947), folio 7, line 5. See also appendix 6.1 for its use on *portolan* charts.
[1267] Kitsos (2010) **Οι βίγλες του Ιόνιου πέλαγους**. UG Dissertation, ATEI Peiraeus
[1268] Triantafyllopoulos (1974) refers to ***Kastelli*** at Gialtra (**NW7**) with the alternative name '*tourla*' (τούρλα)
[1269] See appendix 6.1

4. Vigla/Bigla (Βίγλα – βιγλάκι, βίλια, μεροβίγλα, καμινοβίγλια, φραγκοβίγλα[1270])

This word, derived from the Latin *vigilo,* appears to have been used for watch-towers, generally situated on the coast and still appears on modern maps. On many islands current place-names such as *Meroviglo* (day-watch), *Nichtovigli* (night-watch) or *Kaminovigli* (beacon watch) reflect their previous use.[1271] On Euboea a special watchtower tax, the *vigliatiko*, was levied.

5. Phryktoria (φρυκτώρεία, φανόπυργος)

This is the ancient Greek equivalent for *kaminovigla* (fire tower) - a term which developed during the Byzantine period – see above) and derives from the classical Greek *φρυκτός* meaning beacon.

6. Koula / Goulas (κούλα / κουλέδες, γούλας / γουλάδες)

The Turkish word for *tower,* it seems to have been used for a multiplicity of sizes and styles of fortifications from an early date throughout Greece. On Santorini it was used for the fortified towers (*goulades*) of the elite in the 17th century, whilst it has been used for the tower on the acropolis in Athens.[1272] It was also used in Crete, where the Ottomans established a network of Koulades, equivalent to mini fortresses.

7. Skopia (Σκοπιά)

The dictionary indicates its primary equivalence to παρατήριο (lookout) or βίγλα, but whether such a place-name was used in more recent times or earlier is debatable.[1273] Certainly on modern maps its positioning on the top of hills indicates the existence of such look-out points. Its use in the Ionian islands and on the island of Amorgos as the name of a tower called 'skopoi', which dates from the Frankish period and is thought to be Venetian,[1274] may indicate the use of the word at this date. Arakadaki (1989) uses the term to describe Venetian watchtowers on Crete.

8. Vardiola (βαρδιόλα)

This appears to have been a term used only on the islands of the Ionian Sea – remains of many such watchtowers exist on Zakynthos[1275], Cephalonia and Levkada . The word does not exist in Italian, but appears to have developed, similarly with *vigla* from Latin, from the word *vardia*, meaning 'watch' in the Venetian dialect.[1276]

[1270] Arakadaki (2012) "Πύργος ακτοφρουράς της ύστερης βενετοκρατίας απο τις βόρειες ακτές της Κρήτης". In Damoulos (Ed.) **Η Οχυρωματική Αρχιτεκτονική στο Αιγαίο και ο Μεσαιωνικός Οικισμός του Αναβάτου Χίου, 26-28 September 2008**. Chios. 127-136 Note 6 [Ν.Μουτζούρης, 'Πως μας μιλάνε τα τοπωνύμια της Μήλου', Πρακικά Δ' Ονοματολογικού Συνεδρίου – Ονοματολογικά Κυκλάδων, (Τήνος, 20-22 Οκτωβρίου 2005),Ονόματα 19(2007), 623-674]

[1271] For a list of place-names including the term '*vigla*' -Spiliopoulou and Kotsakis (2008-2012) Οι πύργοι και οι οχυρωμένες κατοικίες των νησιών του Αιγαίου και της Πελοπόννησου (14ος-19ος αι.). Μια ιστορικό-πολιτισμική προσέγγιση με έμφαση στην περιπτώση της Νάξου. **EOA & Esperia**, 8: 207-302.

[1272] Spiliopoulou and Kotsakis (2008-2012)

[1273] Λεξικό της νέας Ελληνικής γλώσσας (1998)

[1274] Spiliopoulou and Kotsakis (2008-2012)

[1275] Arakadaki (2012) Note8 [Δ.Ζήβας 'Οι βαρδιόλες της Ζακύνθου', Θησαυρίσματα 33(2003), 303-310 και εικ. 1-14].

[1276] Kitsos (2010)

9. Guardie

This was another name given to the watchtowers on Cephalonia. In the 16th century 126 were planned for construction on the island.[1277]

10. Pyrgospita (πυργόσπιτα or πυργοειδείς επαύλεις)

The term refers to 'tower-houses' or 'tower-type mansions'. It is not used by the local people but only in the literature as a means of 'typing' a house that has tower-like characteristics. Travellers in the early modern period often referred to them simply as 'towers' thereby creating the potential for confusion with other medieval towers in the same area.

11. Kastella / Castella / Kastelli (Καστέλλα / καστέλιον)

Whilst ***Kastella*** refers generally to a fortified village, as seen on Chios, Euboea and possibly in Messenia, villages were often planned or grew up around a central tower and then took on this name. The name was already apparently well-used by late antiquity and Procopius notes '*thus he made each one of them a* ***pyrgo-castellum*** *as it was called, and as it actually was. For they call forts* ***Castella*** *in the Latin tongue'.*[1278] See comment above regarding its use *with 'pyrgos,'*[1279] and **section 9.5.3**.

12. Kastro (Κάστρο)

Kastro normally refers only to a castle or large fortification. However, it appears that a number, such as ***Rizokastro*** close to modern Aliveri on Euboea, developed from a central tower to which was added at a later stage an external circuit wall (*enceinte)* or *chemise*.[1280] For discussion of similar estate fortification development and nomenclature see Smyrlis (2016).

7.2 Summary Listing of Extensive surveys, Intensive Field surveys, and Excavations in Greece and the Aegean

[1277] Titselis (1960) **Συμβολαί εις την ιστορίαν και λαογραφίαν της νήσου Κεφαλληνίας εισ τόμους τρεις**. Κεφαλληνιακά Σύμμικτα. 2, Athens.
[1278] Procopius, **Buildings**, II, V, 6-9 **in**: Foss and Winfield (1986) **Byzantine Fortifications: An Introduction**. Pretoria, 9.
[1279] Smyrlis (2016) "Estate fortifications in late Byzantine Macedonia: the Athonite evidence". In Daim and Drauschke (Eds.) **Hinter den Mauern und auf dem offenen Land Leben im Byzantinischen Reich**. Mainz: Römisch-Germanischen Zentralmuseum. 189-206.
[1280] Mamaloukos (2016).

Region	*Survey Name*	*Abbreviation*	*Dates*	*Survey Type*	*Towers*[1]	*References / Comments*
Euboea	Southern Euboea Exploration Project	SEEP	1984-1997	Intensive	0 (25)	Keller (1985); Seifried and Parkinson (2014) - Focussed on classical period but 5 classical towers noted with signs of late medieval occupation.
	Acropoli-castles-towers of Euboea	Skouras (2003)	1960 - 2003	Extensive - fortifications	79 (80)	Theodoros I Skouras (2003) - Includes all fortifications on the island found over forty years of research.
	The Towers of Euboea: Lombard or Venetian, Agrarian or Strategic?	Lock (1996)	1996	Extensive - towers	54 (55)	Lock (1996) – draws on Skouras(1975) for his base list of towers. He visited many sites, measuring dimensions and noting architectural styles.
	Prehistoric Euboea: Contributions toward a Survey	Sackett	1966	Extensive	18 (18)	Sackett et al. (1966) - although the focus is prehistoric a number of medieval towers and remains are mentioned in passing and noted on sketch-maps
Attica	Studies in South Attica: country estates at Sounion	Young	1956	Extensive – towers	0 (80)	Young (1956b) - Focussed on Classical era towers, listing of 80 classical towers from Argolid, Attica and 19 islands.
	The Frankish Tower on the Acropolis, Athens	Lock (1987)	1987	Tower Study	1 (1)	Lock (1987) - Draws on photographs and records prior to its destruction in 1874.
	The mortared towers of Central Greece: an Attic Supplement	Langdon	1995	Extensive - Towers	44 (>60)	M. K. Langdon (1995) – A comprehensive survey of early to late medieval sites. It includes also circular and Ottoman period tower houses.
	Medieval coastal towers of Athens	Pallis(2012)	2007	Extensive - towers	Noted in Langdon	Pallis (2012) – detailed discussion of a few towers
	Urban and rural landscape in early and middle Byzantine Attica (4th-12th c. AD)	Tzavella	2013	Extensive	Noted in Langdon	Tzavella(2013) – Thesis with excellent photos of surviving towers
	A Monument to the Battle of Marathon	Van (1966)	1966	Intensive	1 (1)	Vanderpool (1966) – site survey
The Aegean	Andros	K – K (1990)	1987	Extensive-towers	5 (9)	Koutsoukou and Kanellopoulos (1990) – Multi-period surface survey of 4 classical towers in NW Andros.
		Paschalis(1966)			See S-K	Paschalis (1966)- survey of fortifications and towers
	Amorgos	BandR (1983)	1983	Extensive	1 (2)	Boussac and Rougemont (1983)

		Paschalis(1966)			*See S-K*	*Paschalis (1966)- survey of fortifications and towers*
	Amorgos	BandR (1983)	1983	Extensive	1 (2)	Boussac and Rougemont (1983)
	Chios	A-M(2009) Ier(2013)	1992 & 2009??	Extensive - towers	>24 (>70)	Anairousi and Mylonadis (2009); Ierapetritis (2013); Chorianthis et al. (1973) – surveys of towers in the mastichochoria and *vigles* around the coast.
	Keos Survey	KS (1991)	1983-1984	Selective Intensive	0 (>100)	Cherry et al. (1991) – multi-period study of NW. and of six probable classical towers with medieval occupation.
	Kythera Survey	APKAS (2007)	1998 -	Intensive	0 (1)	Gregory (2007); Ince and Ballantyne (2007)
	Melos	Renfrew(1982)	1982	Intensive		Renfrew and Wagstaff (1982)
	Mytilene	S-K (2012)	2012	Reference only	0 (>20)	Spiliopoulou and Kotsakis (2008-2012)
	Naxos	S-K (2012)	2008-2012	Extensive – Towers & mansions	6 (69)	Spiliopoulou and Kotsakis (2008-2012); listing of archontic towers from 14th to 19th c.; also other islands
	Paros	CY.RE.P(2006)	2006	Intensive - fortifications	1 (1)	Vionis (2006) – detailed study of the castle of Kephalos and its environs.
	Rhodes	Lock (2006) Stefanidou	2001 – 2002	Extensive - Towers	13 (23)	Lock (2006) – a personal survey of towers on the island Stefanidou (2002), Heslop (2008).
	Samos	Kienast	1998	Architectural Survey	1 (1)	Kienast (1998) – detailed architectural survey of one complete tower built in 1577.
	Samothrakē	C-H	1997	Extensive	1 (1)	Ćurčić and Hadjitryphonos (1997)
	Santorini	M and L (2016)	2001	Vigla Study / arch. history	1 (6)	Monioudi-Gavala (2001);Meligkaris and Lignos (2016);
	Siphnos	Pik (1998)	1956, 1998	Extensive - Towers	0 (>57)	Young (1956a); Pikoulas (1998); Birkett-Smith (2000) - all circular towers; presumed of classical period;
	Syros	Zarda (2011)	2011	Vigla study	0 (24)	Zarda (2011) notes 24 vigla-related names.
	Thasos	Osborne(1986)	1986	Extensive - Towers	0 (30)	Osborne (1986); Bon (1930) – discussion of classical towers (7 round, 23 quadrangular)
	Tinos	Mosch.(1965)		Vigles study	24 (54)	Moschonas (1965-66), Siotos and Siotos (2006), Foskolos (2005), Foskolos (2012)

Boeotia	*Cambridge-Bradford Boeotia Project*	*CBBP*	*1979 - >*	*Highly Intensive*	*See Lock*	*J. L. Bintliff and Snodgrass (1985); J. L. Bintliff et al. (2007); J. L. Bintliff (2007); Farinetti (2011); Dunn (2016); BSA – initial reports;*
	Frankish Towers of Central Greece	Lock (1986)	1983-1986	Extensive - Towers	26 (28)	Lock (1986); Lock (1989) – survey of towers from site visits and literature; link to CBBP
	Stanford Skourta Plain Project	SSPP	1985-91991	Excavation	2 (2)	Gerstel et al. (2003)– notes on Skourta plain survey and excavations at Panakton and Pyli tower.
	Eastern Boeotia Archaeological Project	EBAP	2007	Excavation	1 (1)	Burke et al. (2007) – interim report on-line on Harma (Eleon) site
	Leiden-Ljubljana Ancient Cities of Boeotia Project	ACBP	2011	Intensive	1 (1)	J. L. Bintliff et al. (2013) – Intensive surveys of cities of Koroneia, Hyettos, Thespiai, Askra, Haliartos, Tanagra
	Catalan Boeotia	Ki (2012)	2012	Extensive - fortifications	See Lock	Kontogiannis (2012b) – survey of Catalan fortifications in Boeotia
Epirus Vetus (and W.	Southern Epirus & Aetolo-acarnania	Veikou (2010)	2010	Extensive - General	5 (5)	Veikou (2012) - Survey of Byzantine sites 6th to 12th centuries.
Greece)	Aetolia Survey	Bomm. (2009)	2009	Extensive	1 (1)	Bommelje (2009) - describes the tower at Erateini as part of an analysis of forts in the region
	Acarnania, Stratike Surface Survey project	SSSP	1990-1997	Excavation - intensive	1 (1)	Lang (2009); survey of city of Stratos; Ciriaco di Pizzicolli (d'Ancona) noted it as 'γεροβίγλι' .
	The *vigles* of the Ionian Sea	Kitsos (2010)	2010	Extensive	? (>160)	Kitsos (2010) ; Kritikos and Maroulis (2007) – Dissertation on the *vigles* of the islands of Cephalonia, Zakynthos, Corfu and Levkada.
Peloponnese	University of Minnesota Messenia Expedition	UMME	1959 - 1968	Extensive	-	Rapp and Aschenbrenner (1978) – these had a focus on pre-historic and classical periods.
	Excavations at Nichoria	NMME	1969-1971	Excavation	0 (0)	McDonald and Coulson (1983) – multi-period survey
	Pylos Regional Archaeological Project	PRAP	1991-1995	Extensive - intensive	0 (0)	Davis (2008, Davis et al. (1997), Davies (2004) - more intense survey of some areas of UMME investigation.
	Messenia	Kb(2012) H-L(1996)	2012	Extensive - Fortifications	5 (5)	Hodgetts and Lock (1996, Kontogiannis (2012c) survey of fortifications from Byzantine to early modern period
	East Korinthian Archaeological Survey	EKAS	1997-2003	Multiple methods	0 (0)	Tartaron et al. (2006); Gregory (2007) – multi-disciplinary integrated survey of 350sq.km.

	Nemea Valley Archaeological Project	*NVAP*	*1984-1986*	*Intensive - excavation*	*1 (5)*	*Wright et al. (1990)– multi-period study of area of 85 sq.km.*
Crete	The Laconia Survey	LS	1983-1989	Intensive	1 (2)	Shipley (1996); C.B. Mee and Cavanagh (1998) - multi-period survey covering an area of 70 sq.km.
	Laconia Rural Sites project	LRSP	1992 - 1995	Selective - very intensive	1 (1)	Cavanagh et al. (2005) – the tower house noted in the sites listing is same as LS survey.
	The Morea Project	Morea Pr.	2003	Extensive - architecture	>18(18)	Cooper et al. (2002); Kourelis (2003) – detailed Medieval extensive survey
	The Asea Valley Survey	AVS	1994-1996	Intensive	1 (1)	Forsén and Forsén (2003) - multi-period survey of a small valley in the central Peloponnese.
	The Argolid Exploration Project	AEP	1979-	Intensive	0 (7)	Jameson et al. (1994); Sutton (2000) – multi-period survey of the Southern Argolid.
	Methana Survey	MS		Intensive	0 (0)	C. Mee and Forbes (1997) – Multi-period study of the Methana peninsular.
	The Berbati-Limnes Survey	B-LS	1988 - 1990	Intensive	0 (0)	Wells and Runnels (1996); Lindblom and Wells (2011) -
	Peloponnese	Dim(1987)	2008	Extensive - Towers	? (>500)	Paulopoulos (2008); Dimakopoulos (1987) – Study of Ottoman and EM towers and tower-like structures
	Peloponnese fortified villages	H-L(1996)	1996	Extensive - fortifications	5 (5)	Hodgetts and Lock (1996) – survey of small forts and towers in Messenia.
	West Mesara Survey	WMS	1984 - 1987	Extensive - intensive	15 (17)	Watrous et al. (1997); Vallianos and Kokkore (1987) multi-period survey covering Mesara plain in S.Crete.
	Sphakia Survey	Sphakia	1987-1996	Extensive	1 (1)	Nixon et al. (2009) – multiple period survey of 472 sq.km; 15th c. Venetian watchtower noted at Khora.
	Rethymnon	Gia(2012)	2012	Extensive – tower-houses	0 (13)	Giapitsoglou (2012) – survey of tower-houses in local villages dated to 16th – 18th c.
	Crete	Arak(2009)	2009-2012	Extensive - watchtowers	0 (1)	Arakadaki (2009); Arakadaki (2012)
	Merabelo	Arak(1989)	1989	Map - watchtowers	? (29)	Arakadaki (1989) listing of watchtowers according to map of Merabelo (1633), dating unknown
	Phryktories on Crete	M&M(2006)	2006	Extensive	? (54)	Mastorakis and Manolis (2006) – survey of *vigles* on the island (includes Merabelo); possible max 134.
	Nomos Chanion	K&M(2003)	2003	Extensive	BSA	Kyriazi and Manousakis (2003)

Northern Greece	Palaiopyrgos, Trikala	Andr (1991)	1990	Extensive	1 (1)	Androudis (1991) – study of fortifications and environs with a Byzantine tower of 14th/15th c.
	Macedonia	Pap(2007)	2001-2007	Extensive and Site surveys	>100 (>100)	Lefort (1982), Papaggelos (2000); Androudis (2001, 2007a, 2014); Dunn (2009) – base map of fortifications.
	Chalkidikē	Smy(2016)	2016	Extensive	45 (45)	Smyrlis (2016) documentary study of estate fortifications
	Agio Oros	P&P(2008)	2008	Extensive	43 (79)	Theocharides (1996), Theocarides and Papaggelos (2002), Androudis (2012), Papantoniou and Pitsis (2008),
	Chalkidikē	Bogd(2011)	2011	Extensive - Towers	7 (7)	Bogdanovic (2012)
	Thrace fortifications	Tsouris(2012)	2012	Extensive	2 (2)	Tsouris (2012) organization of fortifications from 9th to 15th centuries
	Philippi	Lawr(1983)	1983	Site survey	1 (1)	Lawrence (1983), Lemerle and Ducoux (1938)
other	Aegean Sea	G&P(2014)	2014	Extensive		Gioles and Pallis (2014) - cartographic gazetteer of major sites
	Greek Traditional Architecture	Phil(1991)	1989	Extensive		Philippidis (1989) – Survey of traditional architecture in all regions of Greece (houses, towers etc.)

NOTES:-

1. ## (##) – notes possible medieval towers and (total) tower sites listed by each survey. Medieval sites listed outside the primary survey area (e.g. as noted by S-K) are not included but have been added to the tower listing in **Appendix 6-5**.
2. This table includes only surveys with some relevance to the present study and does not represent all the surveys undertaken in Greece.

7.3 Medieval Towers in field surveys by Region

The following provides notes on each region studied and the sources used. Maps are also included for many areas. The accuracy of the positioning of towers is approximate since most are taken off the sketches provided in the various publications referred to. The standard reference is the 'recorded' tower. Where further information is available then extra groupings have been made. A full legend is in the Maps section. The scale used for each region differs according to its size.

7.3.1 Northern Greece

Macedonia

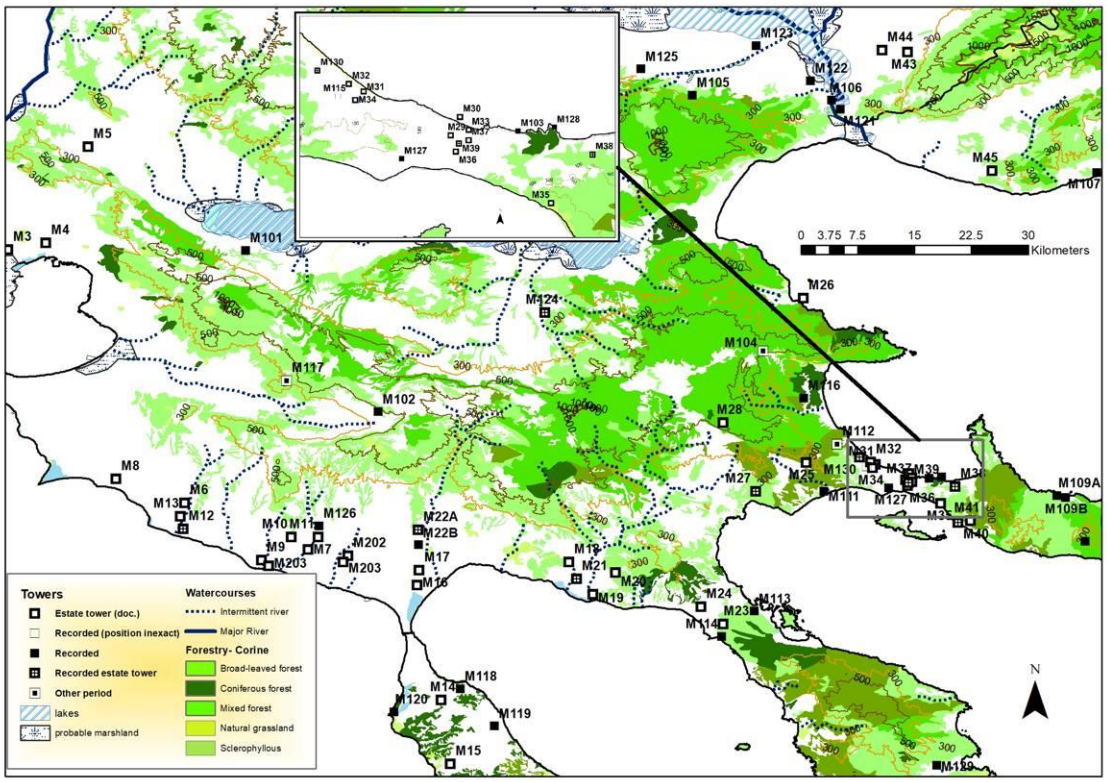


Figure A7.1 - Medieval Towers in Macedonia [sources: see below]

An extensive survey by Jaques Lefort (1982) of the villages of Western Macedonia is the first to note towers in the region. This was followed by studies by P. Theocharides (1996) and I. Papaggelos (2000), and by Zekos (1998) on the Strymon valley to the east. The most important study, however, as regards the present work is a detailed listing by Smyrlis(2016) of towers referenced in the Mt Athos archives, which date from as early as the tenth century, since this provides the only really accurate dating of towers, something generally lacking for the rest of Greece. Theocharides and Papaggelos (2002), have undertaken an analysis of towers within the confines of Mt Athos (Agio Oros) but, although certain towers are earlier, most construction is related to the post-medieval period.

Thrace

K. Tsouris (2012) notes a few towers on the Thracian coast (at Gatos and at Phonia on Samothrace), but concludes that the coastal zone of Thrace was primarily protected by urban fortification. Forts (Phrouria), refuges, and towers were of secondary importance.

Epirus, Aetolia, Thessaly

Despite its size and agricultural potential, strangely, no medieval tower has been identified in the huge plain of Thessaly surrounding the modern town of Larissa, nor on the coast to the east. Myrto Veikou (2012) has identified 6 towers in Western Greece. Two are within a monastic complex, one controlled a river crossing, possibly possessing Middle Byzantine foundations, another two were probably watchtowers - one (Middle Byzantine(?) measuring 3.5m. x 4.0m.) overlooking the lower Achelaos river and the other at Erateini on the coast. The others can possibly be placed within an estate context dated to the 13th - 15th century.

The only other recorded tower in the region, but also the most impressive, is that at Ptelion (8.0m. x 8.0m.) on the east coast in the Gulf of Volos. This has retained the name *'Vigla'*, possessed extensive out-buildings, cisterns and a light enceinte, and was probably built by the Venetians following their absorption of the region into their empire following the Catalan expedition into Thessaly in the early 14th century - Setton (1948), 36-37.

7.3.2 Central Greece

Euboea

[See detailed maps in **Site Gazetteer – section 5.2**]

The basic source for the towers on Euboea is the listing of classical and medieval fortifications on the island by Theodoros Skouras published in 2003 with some additional dimension measurements, architectural details and historical context provided by Peter Lock (1996). To this has been added notes and remarks from my own site visits. The 57 probable tower sites identified by me from cartographic sources have not been included in **table 7.1** since these have not, as yet, been formally recorded on the ground and such work has not been undertaken for other regions, thus unduly skewing the results.

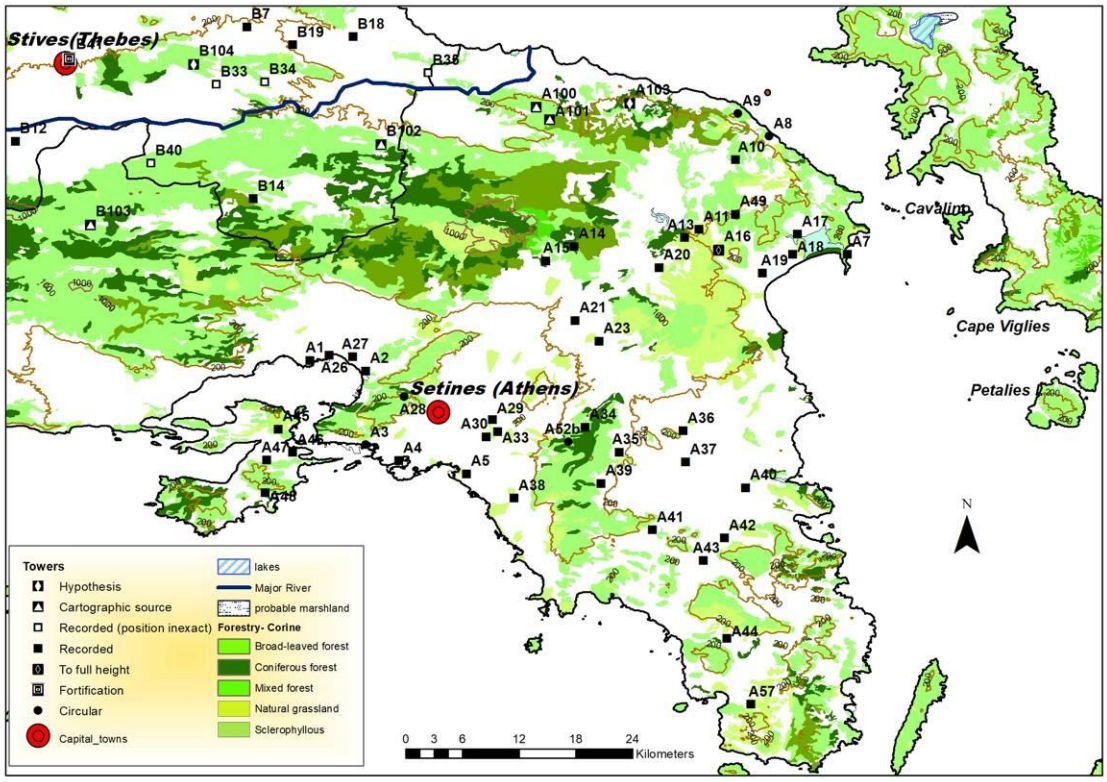
Siefreid and Parkinson (2014) note evidence of the continued use into the medieval period of five out of 25 classical towers identified during intensive survey in the Paximadi peninsular close to Karystos in the south of the island, but mention no medieval towers in the area, whilst L.H. Sackett(1966) in his survey of pre-historic sites provides valuable background information on 18 medieval towers.

Attica

John H,Young(1956) focussed on classical towers, noting six in the area of Sounion, south of Athens, also listing 80 towers in the Argolid, in Attica and on 19 Aegean islands. His analysis of the possible roles of towers has equal relevance to the classical and medieval periods.

Langdon (1995) provides the base listing of medieval towers for Attica. His list is defined, however, by the word 'mortared', thus including both circular towers, which may be dated as

Early/Middle Byzantine, and clear Ottoman era tower houses (mansions). Two towers on his list are also included in Lock (1986 and 1987). Langdon notes 47 sites providing a possible total of more than 60 free-standing towers including a further 13 ecclesiastical and related sites. Excluding all but three of the latter, towers that are clearly out of our study period and those which he hypothesizes (similarly to the present work for Euboea) based on map references to 'Πύργοι', 44 remain for analysis.



A7.2 – Towers in Attica [source: Langdon(1995)]

A PhD thesis by Elisavet Tzavella (2013) on Early and Middle Byzantine Attica includes many excellent photographs of surviving towers. Some are clearly classical, but the mortared towers may be any date, even Ottoman. A site survey by Eugene Vanderpool (1966) supplies evidence of a Middle Byzantine era tower (**A18**) in a probable estate setting.

Boeotia

The basic source for the medieval towers of Boeotia is the ground-breaking study by Peter Lock (1986). He identified 28 towers in Central Greece, of which two are in Attica and five in Phokis and Pthiotis. To this can be added one tower not noted by Lock, that at Pyli, identified by the Stanford Skourta Plain Project (SSPP), and a further eleven on a map of Byzantine and Frankish Boeotia by John Bintliff (2007) - see **figure A7.3**.

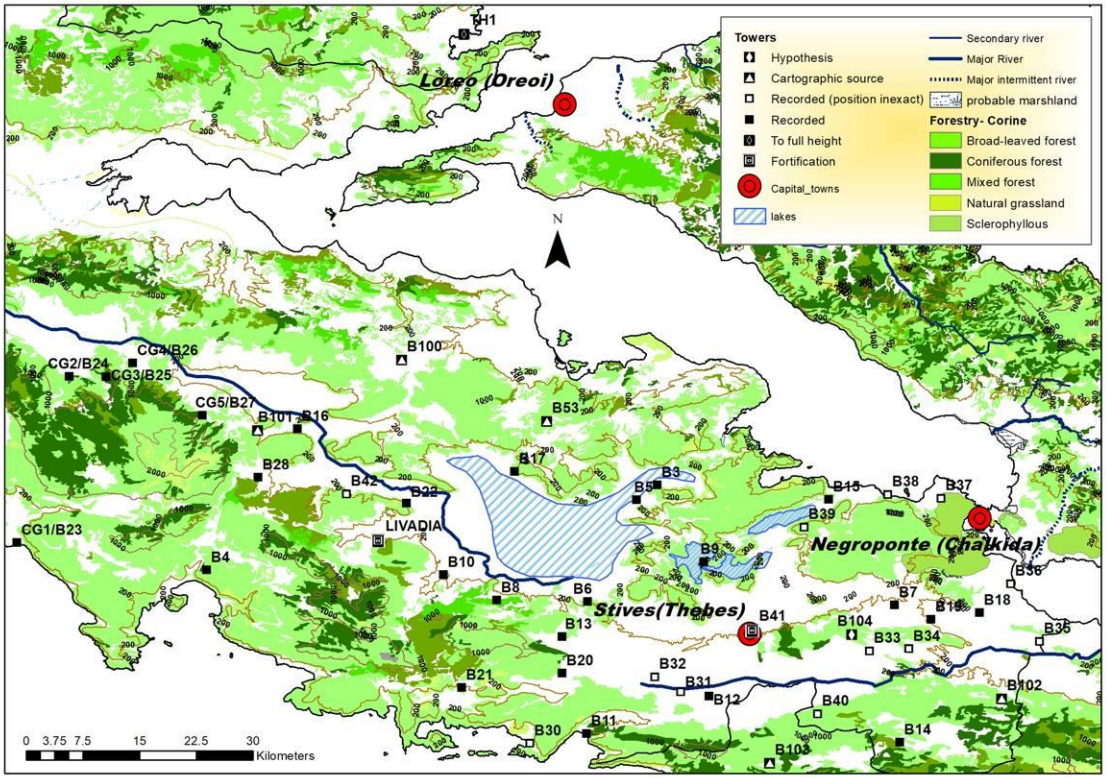


Figure A7.3 – Towers in Boeotia [source: Lock(1986), Bintliff(2007)]

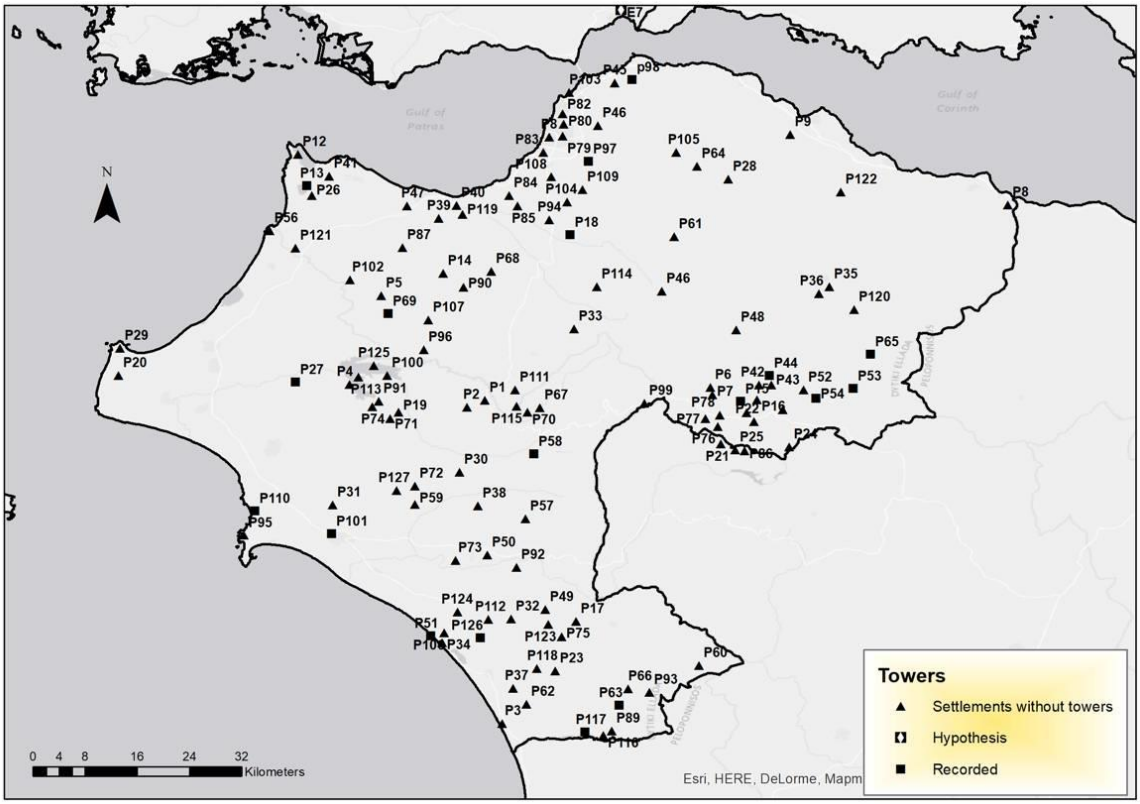
Generally, there is considerable variation in the towers, both in size and location. Few towers are inter-visible and they tend to be related to a settlement (although cartographic investigation similar to my own on Euboea may change this – see **chapter 9**). Written sources quoted by Lock indicate their construction in the 14th or 15th centuries. More recent excavation by the SSSP (Gerstel et al.,2003) indicates occupation of the towers at Panakton **(B14)** and Pyli (**B43**), which are inter-visible and possibly related, from the early 1300's until the middle of the 15th century (this conclusion is based both on ceramics (including a glazed bowl decorated with incised concentric circles and late medieval fine ware vessels) and numismatic finds – a Venetian tornesello of Giovanni Dolfin (1356-1361) at Pyli, and one of Tomaso Mocenigo (1414-1423) in the fields below Panakton).

7.3.3 The Peloponnese

In Messenia the PRAP I report (Davis et al., 1997) found no evidence of towers in four key sites surveyed despite finding evidence of settlements and Frankish occupation. A similar pattern emerges from the EKAS report (Tartaron et al., 2006) on 350 sq.km. in the Eastern Korinthia and the Argolid Exploration project, while NVAP (Cherry et al. 1998) notes only one tower in the Nemea region, and this within a fortified area, part of a large complex of sites around the peak of Mt. Polyphengi, which guarded the route to Argos. The Laconia survey (Shipley, 1996) identified only one tower, thinking it to be Byzantine or Ottoman.

The Methana survey (Mee and Forbes, 1997) located three large villages dating to the 13-14th centuries, each of which was linked to a church. They were located at heights of 710m, 480m. and 300m. with ready access to good agricultural land but a good way from the shore, presumably for reasons of security. No sign of a tower was identified nearby, although there was a fort at Palaiokastro close to the harbour, which may have fulfilled the role of a refuge. Similarly, the Berbati/Limnes survey in NW Peloponnese noted the existence of eleven churches in its area of survey, an indication of a substantial population, but no sign of any tower.

Nikos Kontoiannis (2012) in his survey of the fortifications in Messenia notes five towers – two coastal watchtowers and three with a light perimeter wall. The watchtowers he dates as probably Venetian, whilst giving no further details on the others (see **figure A9.5**). Gregory (2007) in his comparison of land use in the E. Korinthia and on the island of Kythera, whilst undertaking a detailed analysis of the distribution of churches and fortifications in both areas, makes no mention of any tower in either region.



A7.4 – Towers in the Northwest Peloponnese [source: Kourelis(2003)]

Konstantinos Kourelis (2003) has produced the most comprehensive study of the Medieval period in the Peloponnese. His extensive survey (emerging from the *Houses in the Morea* project – Cooper et al. (2002) - of the medieval settlements in northwest Peloponnese identifies 18 probable medieval towers. Additionally, there is a large volume of other sites – generally settlements – identified as medieval, where he found no tower, but many of which may have had one or a tower house within them. It is difficult to draw any firm conclusion, but most surviving towers appear to be in the mountains to the east or towards the sea on the plains

The largest number of towers identified in any study is that of Ottoman and early modern towers by I. Dimakopoulos (1987) and M. Paulopoulos (2008) who identify more than 500. Two PRAP reports provide documentary evidence of Turkish towers in the region. Bennet et al. (2000) quotes notes from the visit by Sir William Gell in 1814 - *'These residences generally consist in a tower, overlooking the humble dwellings of the peasants, who cultivate the soil, which form a quadrangle inclosing the house'*, while Siriol Davies (2004) investigated legal documents from the 17th century, one of which notes '*A tower in the estate of Curro in this territory formerly of the Turk Mezier Saprichi with a small orchard of fruit trees, uncultivated, belonging to that Turk'.* The presumption

must be that a number of these had their origins in the Medieval period but without detailed survey work this cannot be proven.

7.3.4 Ionian Sea

Kitsos(2010) provides a listing of watchtowers on the islands of Zakynthos, Cephalonia, Levkada and Corfu(Kerkyra) in the Ionian Sea. Names given to these coastal watchtowers vary from island to island. Although the use of the term *vigla* appears common he notes that they also went under the name of *skopia, vardiola, guardie* and *tourē*. Their importance can be understood from the fact that the Latin Archbishop of Cephalonia undertook an audit of the tower network on the island in 1264, a date immediately after the Byzantine re-capture of Constantinople - , **Το Πρακτικόν της Λατινικής Επισκοπής Κέφαλληνίας του 1264 και η Επιτομή του**. Documentary evidence from the late 16th century also exists showing not only that the Venetians envisaged the construction of a sophisticated network of 126 towers there, although we do not know if it was ever completed, but that plans were also drawn up for the necessary military organization to support it.

7.3.5 The Aegean islands

There has been a tendency to study the history of Euboea separately from the other Aegean islands. Yet in the same way that, even prior to taking full control of the island in the late 14th century, Venice had immense political and economic influence on Euboea from the early 13th century, Vionis (2012) notes twenty two other Aegean islands that also came within its sphere of influence [noted with '*' in listing]. The first ruler of the Duchy of Naxos was Marco I Sanudo, the nephew of Doge Enrico Dandolo, and six other Venetian families ruled other islands in the Aegean, many of whom were permanent residents of the city of Candia in Crete, even on its ruling council. There were also direct family links with Euboea. Thus, Nicolo dalle Carceri, who on the death of his mother in 1371 became both Duke of Naxos and a Triarch of Euboea, actually resided in ***Negroponte***, employing his uncle, Januli Gozzadini, to administer the Duchy - Bury (1888),

Andros*

In a sketch by Tournefot from the 17th century there can be seen clear signs of tower houses in the chora. Spilopoulou and Kotsakis (2008-2012) regard the tower-type houses of Andros as generally similar to those on Naxos. Constructed during the Ottoman period (after 1566) and sited inland, they were two or three storeys tall and had generally an agrarian rather than defensive character. A few coastal towers can be dated to the Frankish period – one to as early as the 14th century. Vionis, writing on the archaeology of the Aegean, notes - '*It is also very possible that the tower-houses of Andros could have evolved from the Frankish towers of central Greece and, most importantly, the neighbouring island of Euboea*' - Vionis (2012), 118.

Amorgos*

Spilopoulou and Kotsakis (2008-2012) note two towers on the island, one a coastal watchtower.

Chios

There appear to have been three types of tower on the island, the architectural styles of which also vary. Drawings by Arnold Smith (1962) indicate chevron type battlements at Pyrgi but standard battlements at Agios Georgios and on the circular towers on the coast. The first and earliest were probably part of the Byzantine fortifications of the island (Kastro tis Grias, Dotion, Nea Moni) erected prior to or early in the 14th century.

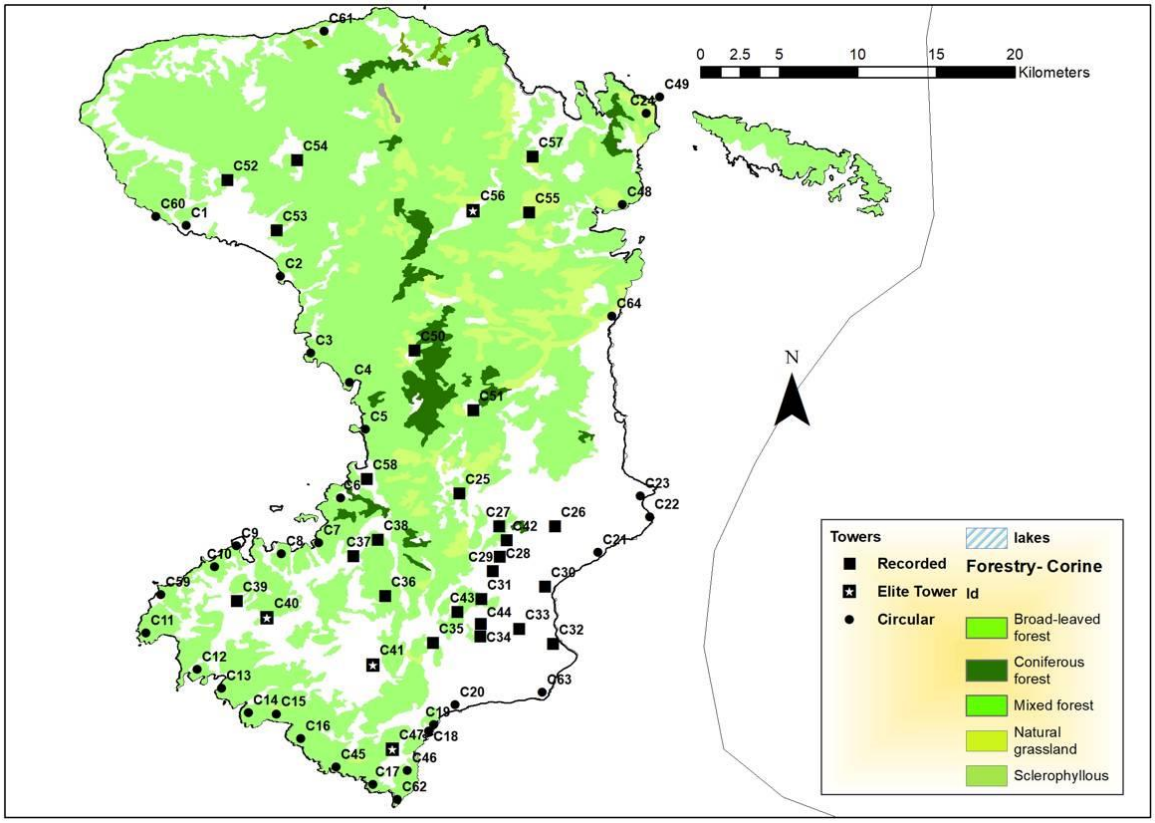


Figure A7.5 –Towers and Vigles on Chios[1281]

The second was a network of 24 circular watch-towers or beacons (known as *viglae*) predominantly on the southern coastline around the Mastic producing region, which may have originally numbered more than 50 - Psaltakis (2008). These were probably constructed in the main as part of a general improvement of the fortifications by the Genoese following their annexation of the island in 1346 and immediately after the Venetian attack in 1440, although some may date to as

[1281] Grey and Black areas are forestry and non-cultivable. Sources: Vournous and Kizis (2001) "Οι βίγλες της Χίου [The watchtowers of Chios]". **Conference on Communication and Transportation in the Pre-industrial Period, 11th Symposium on History and Art, 23-26 July 1998, Monemvasia Castle, Greece**. Athens. 52; Ierapetritis (2013) Watchtowers, mastic contraband and rural communities in the Aegean archipelago under Ottoman sovereignty. **The Historical Review / La Revue Historique**, 10: 219-254; Psaltakis (2008) **Βίγλες του Χίου - Εξερεύνοντας τα μεσαιωνικά παρατηρητήρια**. Dissertation, TEI Peiraeus; www.kastra.eu (downloaded 1/8/2016).

early as the 11th century. **Figure A6.2** shows the surviving *viglae* on the island, from the coastal positioning and inter-visibility of which their function is clear. Their role, however, was not simply to warn of possible pirate or enemy incursions but also to prevent the smuggling of the valuable mastic of which, due to its peculiar soil, the island had a monopoly,[1282] and the potential exodus of members of the local population necessary for its harvesting – a very labour intensive activity. These appear to have been deliberately sited at points where not only did they have a clear view out to sea and communication with other vigles, but also by their visibility and architecture to be a warning to approaching shipping that they were under surveillance.

The third type resulted from the consolidation and fortification of the small settlements in the region by the Genoese, thus creating what are today known as the *masticochoria*. This appears to have been undertaken by constructing a central tower or donjon and then surrounding it by the houses of the village, whose back walls acted as an external enceinte - Ierapetritis (2013). Only a few of these have survived as a number of the villages were destroyed by the earthquake of 1889. A good example is the tower at Pyrgi, which measures approximately 19 x 22m (approx. measurement on my visit in June 2015) and is surrounded by a dense grid pattern of other small houses, some inter-connected across the narrow 1 – 2 metre wide streets by enclosed walkways at first floor level. Close-by is a town square and church. Whilst the original architecture of the tower cannot be separated from the many later interventions (much has now been converted into smaller houses) it must have originally risen to a height of over 20 metres.

Keos*

The six towers studied in detail by Cherry et al. (1991) were generally identified as being of classical/ Roman origin. They all, however, have signs (from ceramics) of occupation in the medieval period and one, Agia Marina, is still preserved to a height of 24m. Various possible uses of the towers are discussed – for protection of mines and mineral wealth, as lighthouses, coastal watchtowers, beacon towers, strongholds against pirate attacks, an agrarian role, and finally as status symbols. They note that some are '*deliberately monumental and conspicuous erections'*, a sign of '*competitive emulation among the wealthy'*, and hypothesise that the construction of towers in the classical period was an indication of both high prosperity and insecurity, thus justifying their existence on some islands and not on others.

Significance was seen in the location of classical towers relative to towns – all are 2-2.5 km from local towns. On Siphnos no tower is closer than 1.7km from the ***Kastro***, on Thasos this figure is 3.5km., and on Amorgos all are more than a half hour's walk from the urban defences. The town walls thus provided a community defence while in the country landowners had to fend for themselves. Robin Osborne (1986) noted about the classical towers on Thasos '*Those who lived in the country enjoyed no such public protection……..Rich individuals usurped for themselves the protective role which communal decisions assumed in the town'*.

Lesbos (Mytilene)

No towers of the medieval period were identified by Spilopoulou and Kotsakis (2008-2012), only archontic mansions of the Ottoman and early modern periods.

[1282]This was also a monopoly when the island was under Byzantine control - Dunn (1992) The Exploitation and Control of Woodland and Scrubland in the Byzantine World. **Byzantine and Modern Greek Studies**, 16: 235-298.

Naxos*

69 towers, tower-houses or tower-like mansions are listed on the island by Spiliopoulou and Kotsakis (2008-2012), although they suspect that many others originally existed. Only six appear to be from the late medieval /Frankish period when the island was the capital of the Duchy of Naxos, which lasted from 1209 until its annexation by the Ottomans in 1566. Most are from after the 16th century and include nine fortified monasteries, seven Orthodox and two Catholic. These were in the main constructed in the good agricultural areas with surrounding buildings, both residential and agricultural, which appear to have acted as a form of defense. Few are to be found either by the coastline or in the mountains.

Nearly all towers had Catholic churches built by their owners or older Orthodox churches converted to the Catholic faith. Some churches even had dual denomination. The older towers have a clear defensive role as shown by their siting, height (three storeys), thick walls, ramparts, gun-slits and draw-bridges. The oldest tower (Della-Rocca, Kourounochori – **N9**) appears to have possessed cylindrical defensive bastions on each of its corners - structures seen on other towers in the Balkans and Western Europe. The rationale for the construction of towers was initially probably defense, both against pirate attack and other landowners. The most recent appear to have been built more as status symbols to impress their neighbours rather than provide refuge for their owners.

As Spilopoulou and Kotsakis (2008-2012) note, it is perhaps an oxymoron that more towers were built on Naxos under Ottoman occupation than in the previous Frankish period. But this is most probably a result of the agricultural expansion during the 16th and 17th centuries as the old landed class, left in power on Naxos by the Ottomans, profited from peace and expanding trade in the Aegean, enabling them to maintain an anachronistic feudal existence long after new forms of political structure had developed elsewhere.

Paros*

Vionis(2006), as part of a detailed study of the 13th to 16th century castle of Kephalos, discusses the results of an intensive study of the central plain on the island. Whilst noting extensive settlement outside the walls of the three castles on the island, he believes that their relative proximity (less than 3 kilometres) to a defensive position abrogated any need for further construction of towers or fortified settlements.

Rhodes

Peter Lock (2006) dates the majority of towers to the period 1470-1503. They were constructed by the Knights of St. John, who controlled the island from 1306. He also identified a building contract dated to 1366 for two towers, which seem never to have been constructed. He splits towers between agrarian and defensive. These latter have also been studied by Michael Heslop (2008) who notes the existence of a Middle Byzantine phase of tower construction for defensive purposes.

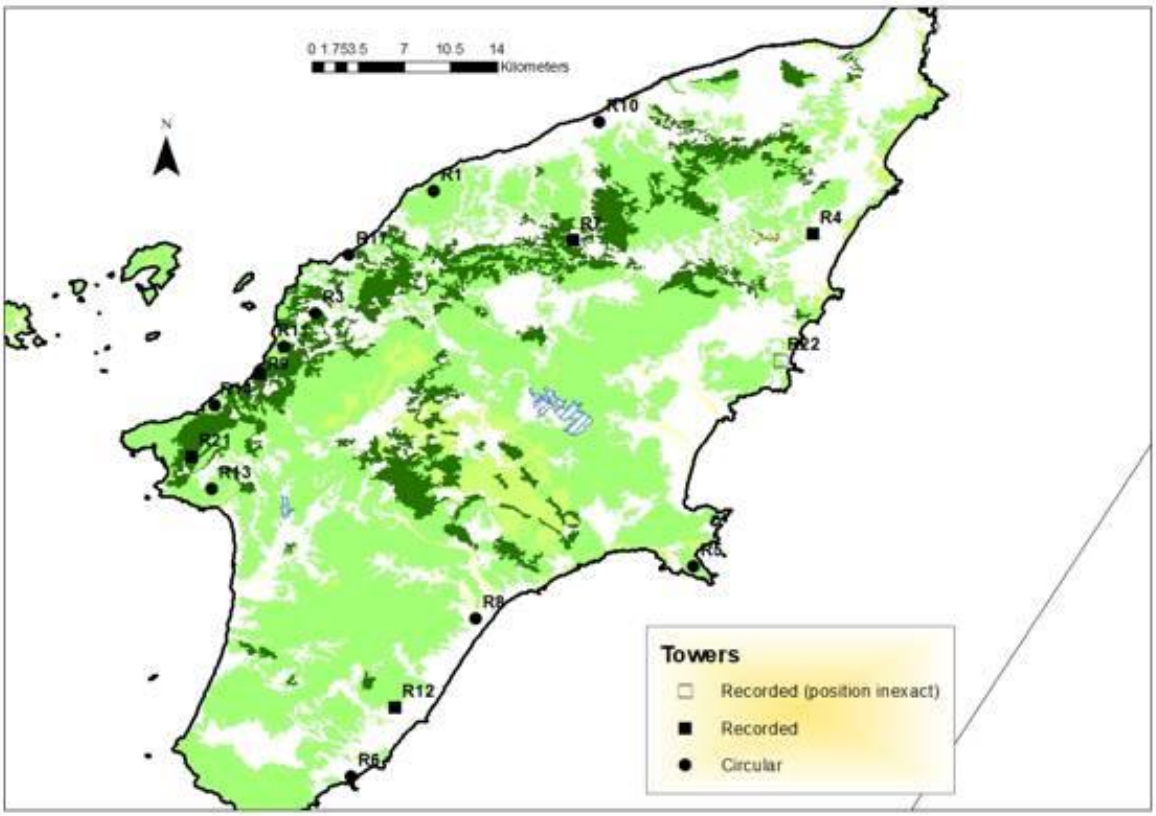


Figure A7.6 – Towers on Rhodes [source: Lock(2006)]

Samos

One tower in the area of Pythagoreio, the *pyrgos tou Logothetē*, whose initial construction phase dates to the 11th century, is noted by Spiliopoulou and Kotsakis (2008-2012). This is one of the few Middle Byzantine towers identified in the Aegean.

Samothrakē

The rectangular tower on the seashore at Phonia, *pyrgos tas phonias*, was constructed by the Genoese in the late 14th century. The tower appeared to be four storeys and have its entrance on the first floor.

Santorini*

There exist the remains of a number of medieval towers on the island. A few are set in the centre of Castelli and seem to have performed the role of the western European *donjon*, but they also existed in the countryside as refuges for farmers. Locally they are called *goulades* (sing. *Goulas)* - Spiliopoulou and Kotsakis (2008-2012). They had a clear defensive character, rectangular and multi storied, with thick walls, no ground floor entry, battlements, steel doors and firing slits. The earliest documentary record of their existence is in 1336 - Monioudi-Gavala (2001). Around the coast there also existed small circular watchtowers (*vigles)* and traces of their existence are reflected in place-names such as *Ēmerovigli* and *Merovigli.*

Siphnos*

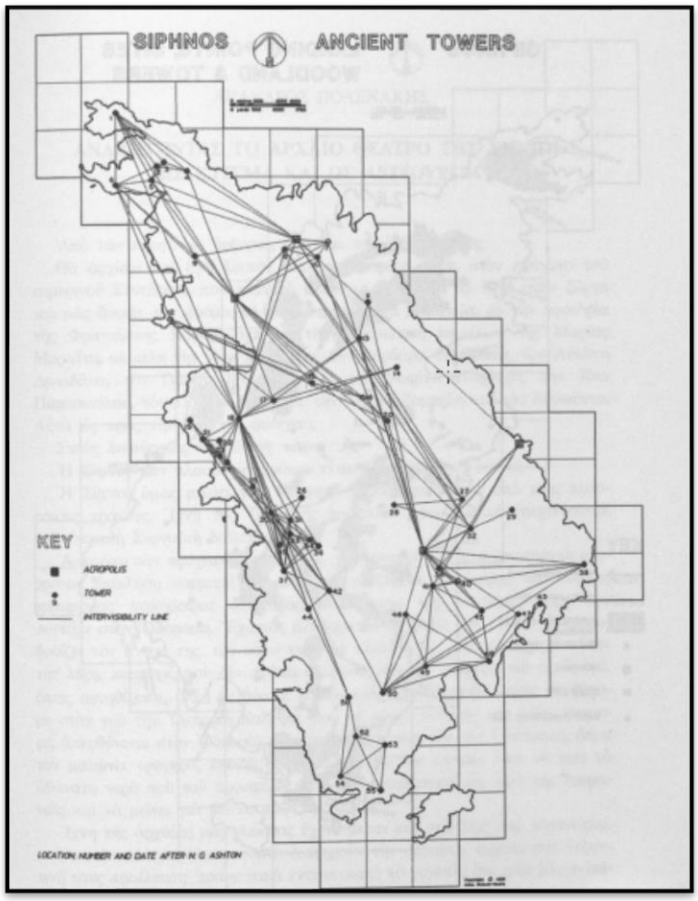


Figure A7.7 – Intervisibility of classical towers on Siphnos [source:Ashton(1991)]

The classical towers on the island have a peculiarity that sets them apart from all the other areas of Greece – they are all circular. 57 have been found over recent years but Pikoulas (1998) believes that the number is at least 20% higher. Two, *Laouteri* (Pikoulas no.18) and *Aspros Pyrgos* (Pikoulas no.48), betray signs of later intervention, but this has not been fully confirmed by excavation.

The survival of so many towers, many to a great height, is of some significance. They were not ransacked for their building stone for medieval buildings to the same extent as were the classical towers in most other areas, thus demonstrating a clear strategic use, possibly even into the Frankish period. Ashton and Pantazoglou (1991) have constructed a map of the inter-visibility of the towers and this is reproduced in **figure A6.3** - Birkett-Smith (2000). Although their date of construction is over 1,000 years earlier, the relative completeness of their survival within a self-contained geographical area, and the rationale of their function as watchtowers or refuges has direct relevance to the study of the medieval towers in Greece.

Syros

F. Zarda (2011) notes 24 place-names which indicate the existence of vigles on the island.

Thasos

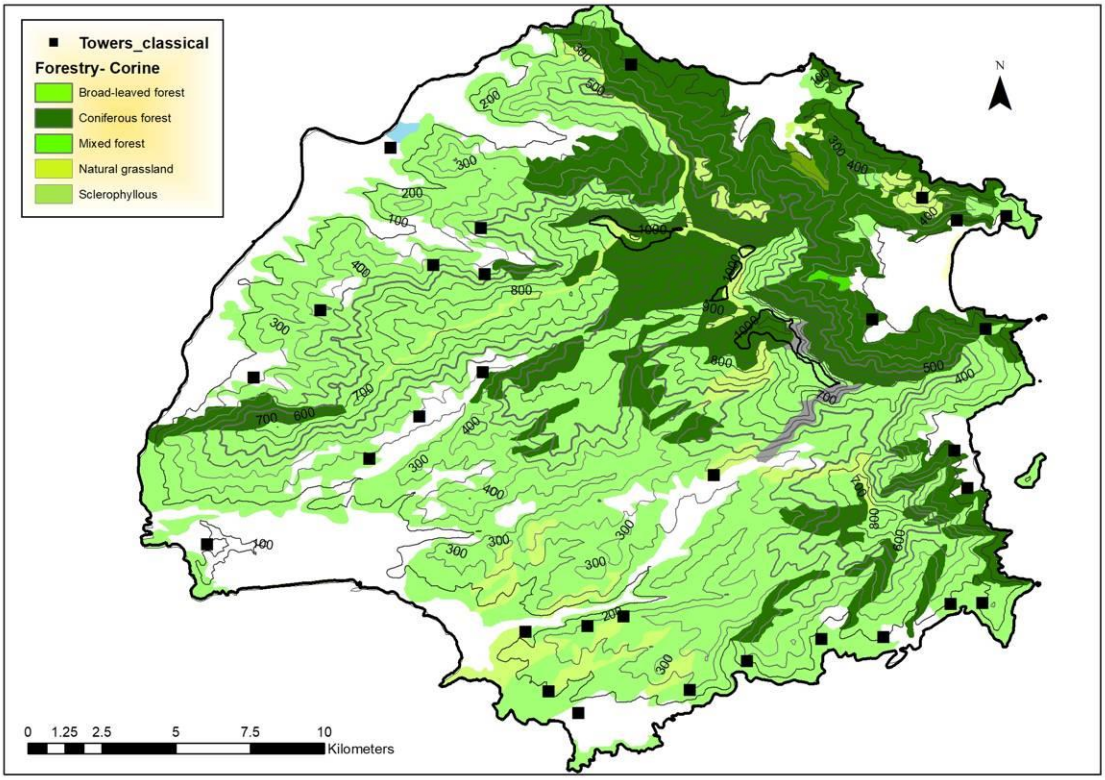


Figure A7.8 - Classical Towers on Thasos [source: Bon (1930)]

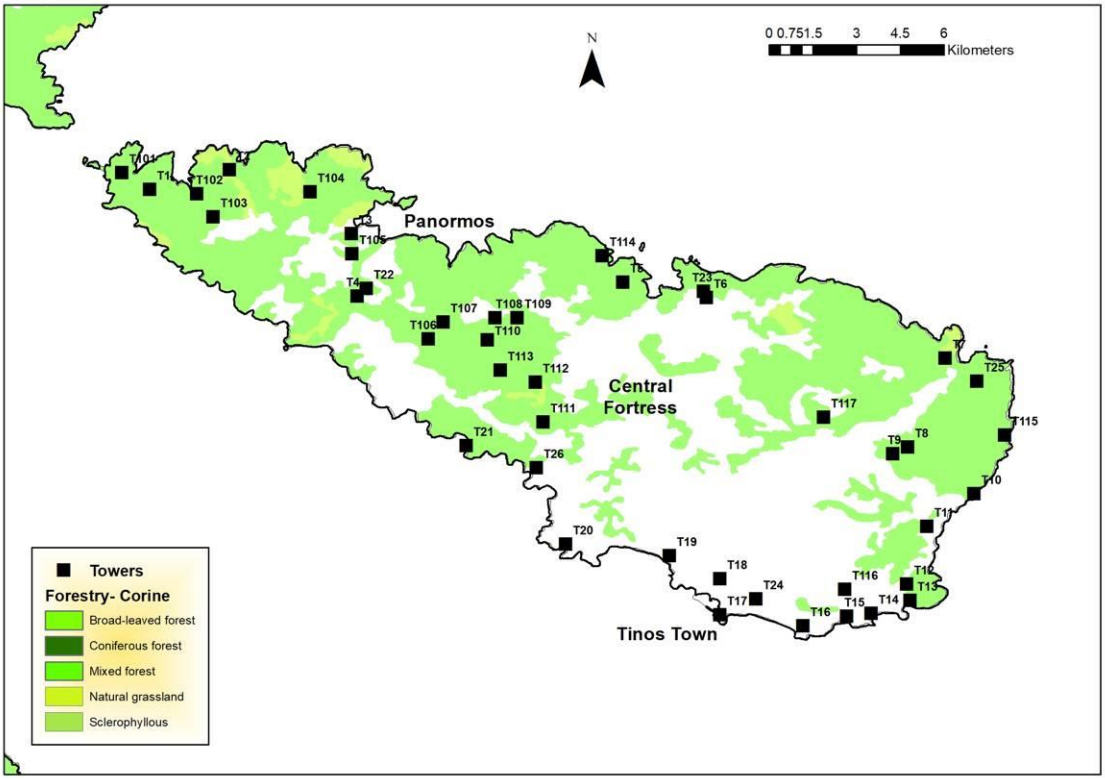
Robin Osborne (1986) writes that thirty towers are known on the island, seven circular and 23 quadrangular. All are well dated as classical or Hellenistic and no mention is made by him of any from other periods or later occupation. Sizes vary considerably from 5.0 x 7.5 m. to 16.3 x 17.8m. although the majority are approximately 8.5m square. There is substantial variation, too, in their siting – coastal, prominent, settlement-related and agrarian (see **figure 7.8**). One tower at Phanari cape (no.27), is circular and, measuring only 3.5m., was clearly a coastal watchtower similar in conception to the later medieval '*pyragria*' found in Central Greece

He concludes that the substantial variation in size, siting and architecture, does not support one single functional explanation for their existence, but that they are united in their '*monumentality*'. He thus posits that '*display*' in an unequal society, not function, is possibly the prime reason for the construction of the towers on Thasos, thereby contradicting Bon (1930) who argued for a strategic and defensive role. The density on the southern exposed coast, where there is little good agricultural land, suggests, however, that a division of the towers into defensive and agricultural (as per Peter Lock on Rhodes) may be a better explanation.

Tinos

The island came into private Venetian hands, the Ghisi family, in 1207, and fully into the Venetian Empire in 1390. Its defensive vigla network has been studied by N. Moschonas (1965-66), whilst a more recent studies have recently been undertaken by Haris Koutelakis(2001) and by Father Markos Foskolos Ed. (2005) as part of a history of the island (see also Siotos and Siotos (2006)). The towers appear to have been essentially defensive in nature acting as watch-points with

the defense of the island focussed on the central fortress, which withstood a number of sieges until its final conquest by the Ottomans in 1715



A7.9 Towers on Tinos
[source: Moschonas (1965-66) & Koutelakis (2001)]

7.3.5 Crete

Crete became a Venetian Colony in 1210 and remained so until its annexation by the Ottomans in 1669. Its settlement structure and organization can therefore provide guidelines for the role of towers elsewhere. Mastorakis and Pantelias (2006) attempted a comprehensive survey of the fortifications of the island. Apart from 34 large fortifications they identified more than 50 watchtowers (*vigles)* around the coast.

Two earlier surveys provide more detailed regional analysis of towers on the island, although little information is provided for the Late Medieval period. That by Watrous et al. (1997) of the West Mesara, the largest plain on Crete, which contains two-thirds of the best arable soil on the island, identified thirteen houses with integrated towers dating to the end of the 16th and 17th centuries, whilst two 'military' towers from the Venetian period are noted as are two Turkish forts. Arakadaki(1989) in her survey of the Merabelo region in central Crete notes 29 *vigles* and estimates that the Venetians had plans in place to construct a network of 134 throughout the island based on written records from the Venetian governor of the area prepared in 1633 and large scale maps by Francisco Basilicata drawn around the same time.

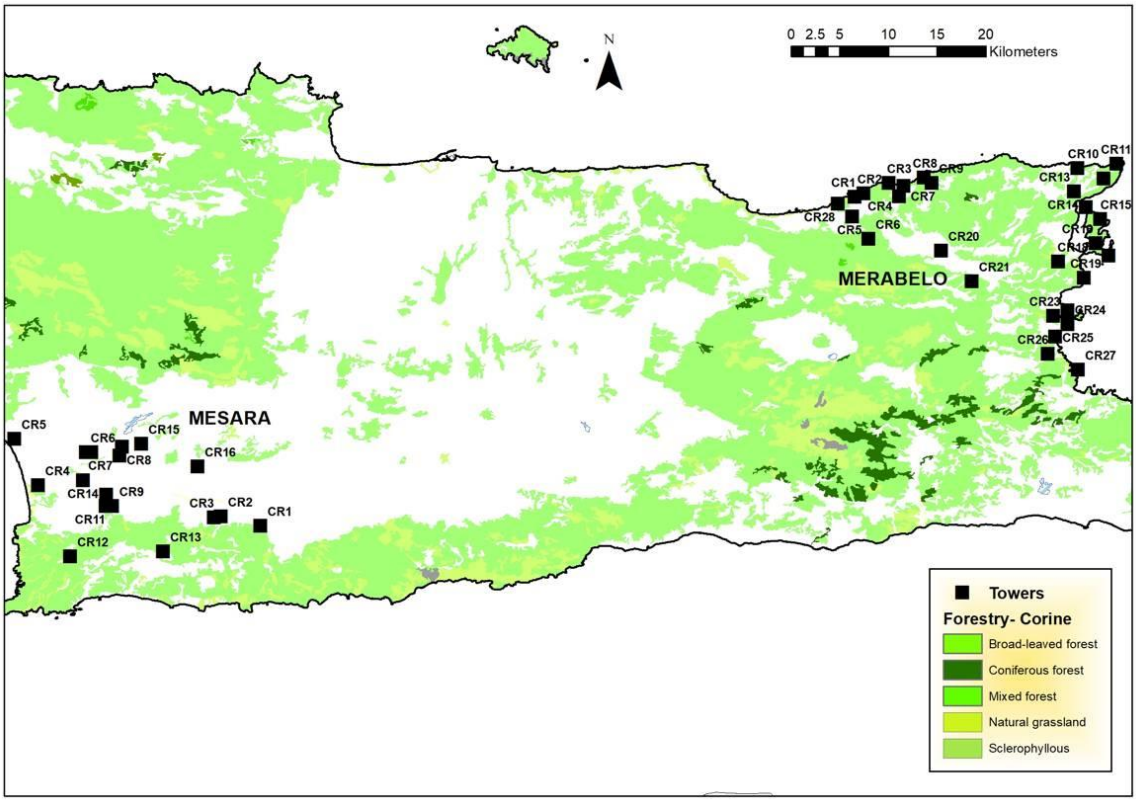


Figure A7.10 – Mesara and Merabelo regions on Crete 15th – 19th c.

[Source: Vallianos and Kokkore (1987) and Arakadaki(1989)]

7.4 Towers and beacon networks beyond Greece

7.4.1 The Roman period

The existence of signalling with beacons has been known from antiquity and the columns of both Trajan[1283] and Marcus Aurelius seem to show soldiers signalling with flaming torches from towers, whilst it would seem improbable that no system of communication had existed between the more than 120 forts and 900 watchtowers on the Limes of the Rhine and Danube 550 km long border.[1284] To the west in England, on the northeast Yorkshire coast, a defensive network appears to have been established during the Later Roman period in the 4th century.[1285] The five watchtowers,[1286] established on high headlands, consisted of a walled area approximately 60m. square with what appears to have been a tower (approx..13m. x 13m.) at its centre with an estimated height of about 18m. This basic layout is similar to a series of 50 towers on the Upper Rhine frontier, although most had a smaller footprint being 7-12m. square. The authors note similar networks on the Gask ridge in Scotland with 3m. square wooden towers, and others on the Cumbrian coast of stone construction about 6m. square.

7.4.2 Beacon networks in the Middle Byzantine period

Generally, beacon and tower networks and their use are undocumented in the contemporary literature and we are dependent on archaeological evidence. A notable exception is the chain of beacons said to have been designed by Leo the Philosopher, the details of which have been researched by Pattenden (1983).[1287] Developed in the reign of the emperor Theophilus (829-842), this theoretically stretched from Loulon in the Taurus mountains (Cilicia) to Constantinople,[1288] a total of nine beacons over a distance of 450 miles (724 km.). The distance separating the first five beacons averaged 104 km. and the latter 50 km. Messages were sent via a sophisticated method linked to the time of day and existed until the rule of Michael III (842-867). A similar one seems to have existed (was re-established?) in the reign of Manuel I Komnenos (1143-1180).[1289]

[1283] Idem and Pollen (1874) **A description of the Trajan column**. London: Eyre & Spottiswode.

[1284] Fassbinder (2010) Geophysical Prospection of the Frontiers of the Roman Empire in Southern Germany,. **Archaeological Prospection**, 17: 129-139. The rectangular design of many fortifications (approx..40 x 60m.), a number found with a central tower, are reminiscent of the tower site and external enceinte at Belos (**SC3**) - Kondić (1984).

[1285] Ottaway et al. (2000) Excavations on the Site of the Roman Signal Station At Carr Naze, Filey, 1993–94. **Archaeological Journal**, 157: (1): 79-199. The authors note other such networks on the Gask ridge in Scotland and on the Cumbrian coast.

[1286] Three others have also been postulated at Flamborough Head, Hartlepool and Whitby suggesting an average spacing between them of about 9 kms. over a total distance of 60kms. - Bell (1998) A Roman Signal Station at Whitby. Ibid.155: 303-322

[1287] Pattenden (1983) The Byzantine Early Warning System. **Byzantion : revue internationale des études byzantines**, 53: 258-259he refers to a number of contemporary references to it including Pseudo-Symeon, Theophanes Continuatus, Constantine Porphyrogenitus, Scylitzes, George Cedrenus and Zonararas – the first providing a full description including the use of clocks and their inventor, Leo.

[1288] As Pattenden explains there is considerable disagreement as to the location of the beacon and whether Loulon was in Byzantine hands at this date. I also view with some suspicion that there may have been a distance of 105km between stations. This is so far that it would have required almost perfect weather conditions and would have been useless with even the slightest amount of cloud or haze. The difficulties encountered (see **section 7.5**) in a recent re-enactment of the Elizabethan beacon network in England with nodes a mere 12 km. apart, even discounting the lack of mountains and poor weather, suggests that there were a number of other, as yet unidentified, nodes.

[1289] Foss (1991) "Beacon". In Kazhdan (Ed.) **The Oxford Dictionary of Byzantium**. London and New York: Oxford University Press. 273-274; Foss (1985) **Survey of Medieval Castles of Anatolia I: Kütahya**. BAR International Series no.261. Oxford, 86-94.

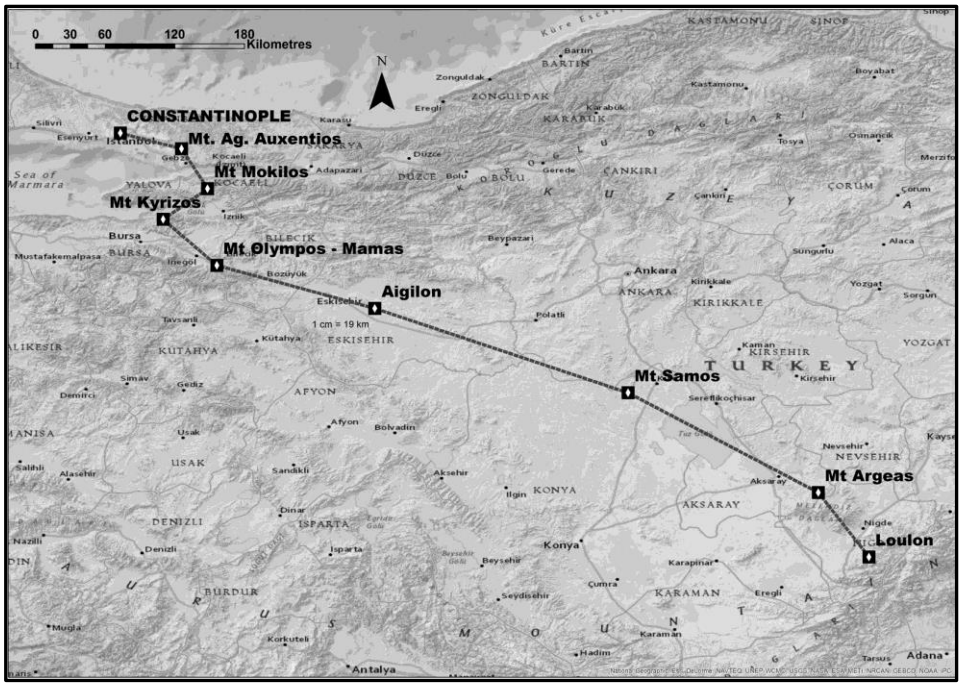


Figure A7.11 – 9th c. Byzantine chain of beacons in Anatolia[1290]

A comparable chain has been hypothesised by Joseph Rife based on an inscription found by the Venetians during their dominion of the Peloponnese (1687-1715):[1291]

'Lord Leo erected here

A tower to send signal by lamp

Of bands of barbarians'

He suggests that the emperor in question is Leo VI (886-911),[1292] a general dating that seems to tie in with the establishment of the Cilician chain of towers, and argues that, although it may come from a now-lost tower elsewhere (possibly at Patras?) it was probably originally appended to the tower site on Acrocorinth.[1293] He then posits the existence, based on this evidence, of a network of towers running throughout the Peloponnese.[1294] We therefore appear to have a tradition

[1290] The route of the chain of beacons is only indicative since there is considerable discussion as to the location of a number of nodes -Aschoff(1980) **in** Pattenden (1983) and the latter's comments; Holzmann and Pehrson (1994) **The Early History of Data Networks**. Wiley-IEEE Computer Society Press.

[1291] Rife (2008) "Leo's Peloponnesian fire-tower and the Byzantine watch-tower on Acrocorinth". In Caraher, et al. (Eds.) **Archaeology and History in Roman, Medieval and Post-medieval Greece: Studies on method and meaning in honour of Timothy E. Gregory**. Ashgate. 281-306.

[1292] He also suggests Leo V (813-820) as a possible candidate. My own interpretation would be that this could not be possible since the concept of such a network appears to have been developed at a later date in the reign of Theophilus (829-842) by Leo the Philosopher, who also should not be totally excluded as the possible 'Lord Leo'.

[1293] Whilst Rife's argument is seductive, and the tower measures a massive 12.70m. x 12.05m. with walls at base of 2.60 – 2.85m. signifying possibly a very tall building (30m.?), the use of '*roughly-cut limestone blocks, irregular rubble, and spolia, all set unevenly in a coarse lime mortar'* allow a later dating. Such construction also seems below the standard of an emperor. It would, however, fit well into the widespread Frankish construction of towers (or Donjons) within existing Byzantine fortresses – On the acropolis in Athens, the St Omer tower in Thebes, those at Levadeia and Davleia – after 1204. The sheer height of Acrocorinth does not require the construction of a massive tower for a beacon. Although I believe Rife is probably correct in his dating of the tower to the 9th or 10th centuries, it may be the triumphal erection of a tower by Geoffrey de Villehardouin in 1208, after four years' siege of the fortress.

[1294] Possible sites for other beacons within the Peloponnese have been researched by Peppas (1990) **Μεσαιωνικές Σελίδες της Αργολίδος, Αρκαδίας, Κορινθίας, Αττικής**. Athens.

established in the 9th century throughout the empire of long distance communication via beacons.[1295]

Other networks have been identified in Byzantine Sicily by Modeo and Cutaia (2010). They hypothesise that not only did there lie a Byzantine system of communication between a number of recently identified fortifications and mountain-top fire-pits along the Platani valley in western Sicily, but that there was also an observation network running along the southwest coast to Syracuse.[1296]

7.4.3 Beacon Networks in the Southern Mediterranean

On the North African coast, from where many Arab corsairs may have sailed to threaten the Eastern Peloponnese, we find another contemporary network of beacons. The Arab geographer, Al-Muqaddasi, writing c.985,[1297] notes a series of watch-stations (*ribâts*) with towers (*mihrâses*) along the coast of Palestine ready to signal the approach of Greek galleys carrying Moslem prisoners for ransom. Upon seeing one the alarm was raised by lighting a beacon on the tower of the watch-station, a signal (fire or smoke) which was passed along the coast by other watch-stations until it reached the capital, Ramle, within an hour. Khalilieh (1999) notes how watchmen were equipped with 'optical devices' and that the average distance between the stations was approximately 12 km.

He explains how this system also operated to communicate along the coast and that a message could be transmitted from Ceuta in Morocco to Alexandria, a distance of over 4,000 km., in one night. Additionally, the role of these coastal stations was not merely defensive, but the garrison troops were obligated to provide assistance to commercial ships and their passengers both Moslem and foreign merchants. A similar system of coastal towers also existed in the 11th century between Basra and Abadan in the Abbasid Caliphate, although these seem to have been much more similar to lighthouses in their function. They were built of four wooden stilts onto which an observation platform with '*people stationed therein to keep a fire lighted at night, as a warning to ships to steer clear of this shallow place*'.[1298]

Far south in Egypt another probable Roman network of 12 *hydrevmata* (fortified water points) and 65 towers has been identified along the 175km. route linking Levko-Limen on the Red Sea with the Nile river at Coptos.[1299] The towers are spaced at between one and 5 km. intervals, and have a dry-stone construction – stacked stones without mortar – slightly tapering to provide stability. They are 3.0 – 3.5m. in width. Whilst acting as route markers Zitterkopf and Sidebotham (1989) argue that these were actually beacons, since all towers had line-of-sight between each other.

But towers also had a private role. Decker (2006) has undertaken a review of *towers, refuges and fortified farms in the Late Roman East.*[1300] Focussing on the period from the 4th to 7th centuries he notes their description as *pyrgoi* and widespread distribution (he uses the word 'thousands' to define their number) along the Levantine coast and finds that most had a mixed domestic and security role, functioning in parallel as 'living spaces or storehouses' and as a refuge. Whilst many were not tall buildings he notes two from Syria - one dated to 492, which stood to a height of 15m.with one internal wall of 5.5m., and another 17m. high with 5 storeys, which he estimates

[1295] Given that we have evidence of their existence in Greece and the Eastern Provinces, the logic is that similar networks may have existed in Macedonia and the northern Balkans.

[1296] Noted by 9th century chronicles during the Arab conquest and later during the period of Norman domination in the 11th and 12th centuries - Modeo and Cutaia (2010) "Il sistema bizantino di difesa e di trasmissione dei messaggi ottici nella valle del Platani". In Congiu, et al. (Eds.) **La Sicilia bizantina: storia, città e territorio, Atti del VI Convegno di Studi (Caltanissetta, 9-10 maggio 2009)**. 297-330.

[1297] Khalilieh (1999) The Ribât System and Its Role in Coastal Navigation. **Journal of the Economic and Social History of the Orient**, 42: (2): 212-225

[1298] Nâsîr-îî Khosraw, **Book of Travels (Safarnaima) in** Khalilieh (1999), note 31.

[1299] Zitterkopf and Sidebotham (1989) Stations and Towers on the Quseir-Nile Road. **The Journal of Egyptian Archaeology**, 75 155-189.

[1300] Decker (2006) Towers, Refuges, and Fortified Farms in the Late Roman East. **Liber Annuus**, 56: 499-520.

probably took 900-1200 man days to build. These were relatively light buildings with walls only 0.7m. thick built to withstand raids by nomads but not a purposeful siege. But other towers dated to the 6th century were clearly designed for defence, with sides from 6 to 10 metres, walls 1.8m. thick, arrow slits and scarping at the base to 3m.

7.4.4 France

The first castles of the motte and bailey type in France appear to have been constructed around the end of the 10th century – 50 years before the few built in England by the Norman retainers of Edward the Confessor (1042-1066).[1301] The direct translation of the word 'castles' into French causes some difficulties, since they tend to be included, together with the great mansions of later centuries, within the all-encompassing term '*châteaux*'. One term, however, that of '*maisons-fortes'* (literally '*strong-houses'*), on which there has been substantial research, links directly to our study.

In an introduction to a volume of conference papers on the *maison-forte* Bur (1986), referring to it also as '*domus firma'*, defines the term by reference to that which it is not – neither a '*maison plane*' on the one hand nor a '*château*' on the other.[1302] He defines it, specifically, as a building possessing a combination of a platform raised above the surrounding area to the height a man can throw a sod of earth,[1303] a ditch and a simple wall possibly lightly re-inforced with turrets. Beyond this, when towers are added to the walls, the ditch becomes deeper and the walls stronger it comes into the category of '*chastels-et-forteresses'*. Pesez, in a paper at the same conference, following a line of thought similar to Brown(1976) suggests that these three features may not be necessary, it being sufficient that the central building is a tower.[1304] Such a structure appears very similar to many of the towers and their associated outbuildings, which we find on Euboea. In fact such structures constructed between 1216 and 1327 in Gascogne were given the name *domus fortis* or *magnum fortilicium*,[1305] the latter term being one also found in use in Venetian state documents when referring to their fortifications on the island.[1306]

To the east of France in Bourgogne and Gascogne can be found stand-alone towers ('*tours-saules'*), the names of which transform into *'bastide'* in the Midi and '*Wohnturm*' or '*Turmburg*' in Germany (see below). These towers appear to fulfil the same role as those in western France but lack the motte – a situation similar to that found in certain areas of England (see below). In both countries the tower is the essence of the feudal castle.

In an archaeological study of 10 fortifications in north-west France with dimensions of 50-100m, internal walls 5 -10m., and a surrounding ditch, Decaens (1993)[1307] found that nearly all contained agricultural or residential buildings within the *bailey*, often a chapel. Some had artifical mounds and others had taken advantage of natural features, similar to those we find in Greece. From the beginning of the 12th century stone tended to replace wooden construction, and towers were

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[1301] Although many may be earlier than this, going back as far as Charlemagne - Coulson (2003) **Castles in medieval society : fortresses in England, France and ireland in the central Middle Ages**. Oxford: Oxford University Press, 79.

[1302] Bur (ed.) (1984) **La Maison forte au Moyen Age : actes de la Table ronde de Nancy-Pont-à-Mousson des 31 mai-3 juin 1984**: Editions du Centre national de la recherche scientifique, 7.

[1303] This is a legal form introduced in French (Champenoise) legislation in the period 1160-1250 to control the excess of castle building at this time, which was very similar to that of 1091 issued in Normandy – Bur (1986) 8

[1304] Another definition for Bourgogne limits it to a ditch, a platform and a tower - Pesez (1986) "Maison Forte, Manoir, Bastide, Tour, Motte, Enceinte, Moated-site, Wasserburg, ou les ensembles en archéologie". In Bur (Ed.) **La Maison forte au Moyen Age : actes de la Table ronde de Nancy-Pont-à-Mousson des 31 mai-3 juin 1984**. Editions du Centre national de la recherche scientifique. 332-339.

[1305] J Gardelles (1972) *Les châteaux du Moyen Age dans la France du Sud-Ouest (1216-1337*), Paris **in** Bur (1986), 8.

[1306] *'Omnia fortilicia que erunt reparanda et fortificanda'* - Sathas (1890-1900), III, 308 l.36.

[1307] Decaëns (1993) "De la Motte au Château de Pierre dans la Nord-Ouest de la France". In Meirion-Jones and Jones (Eds.) **Manorial domestic buildings in England and Northern France**. London: Society of Antiquaries of London. 65-81.

constructed on the *mottes*. He found no essential distinction, however, between large and small fortifications, their difference merely reflecting the feudal level of their owner. All acted as the centre of an estate,but some also had a clear military or strategic function.

As regards tower architecture, Heliot (1969)[1308] notes a clear trend for towers in France to change from square to circular or polygonal from the beginning of the 12th century. Seraphin (2006)[1309] has studied 150 towers in the area of Lot (in the region of Quercy), most dating from the 11th to the 14th centuries. Referring to what he calls *tours-beffrois*[1310] he identified 150 as *donjons* which, he believes, are representative of a feudal power,but could not identify any clear typological framework in their architecture, and concluded that random factors predominated over any functional motivation. Towers with varying styles – some of simple plain construction, some with buttresses, and various styles of footprint were identified together with varying functions – bell, clock, residential, tower-house, military, solar (solidaire), dovecote (Colombier).

Thompson (1991),[1311] citing a study of 108 square towers in western France, notes how some are distinguished by their 'pilaster buttresses', an apparently ornamental feature projecting only a few centimetres from the wall which are also found in England but not further afield. He defines the 'normal French tower' as being three storeys high with a wall thickness ranging from 1.4 to 3.8m., and entry 6m. above ground level, sometimes with a forebuilding but normally probably with a wooden ladder or bridge. A third have an internal space, with one wall in excess of 10 m, sufficient for a hall, but the majority, which he terms *solar-keeps*, are square with wall size very similar those under study in Greece.

He notes how a distinctive feature of many castles was the hall, usually built on the first floor. He cites the castle of Lillebonne near Le Havre, a drawing from c.1820 of the palace of which shows a substantial building, its hall, apparently, on the first floor since the ground floor arches are blocked off, and compares it to similar buildings in Germany and Northern Italy.[1312] As important for our own study is the fact that of all the buildings of this castle only a cylindrical keep, built in 1204, has survived, mirroring many of the surviving tower sites in Greece, where there are indications that apparently stand-alone towers were once attached to or part of a much larger constructed area.

7.4.5 The British Isles

In 1066 one of the first actions of Lord William on landing his Norman forces on the southern English coast was to construct three castles to protect his fleet and base, two within the area of existing Roman forts. Pounds (1990) identifies two key innovations which ensured his eventual conquest of the whole country. The first was the creation of a class of men contractually linked to himself with grants of land linked to an obligation to provide a defined level of military support – essentially the feudal system. The second was the introduction of the 'castle' as both a '*fortified home and military base*',[1313] the concept of which is discussed in **chapter 1**.

The essential architectural characteristics of the early castle can be seen in one of the best preserved – that at Totnes in the county of Devon at the lowest fording point of the River Dart, constructed in 1068 by Juhel, one of William's commanders.[1314] Initially this was a massive mound (*motte*), made of pounded earth and rubble, surrounded by an enclosure (*bailey)*, each with a deep defensive ditch. A tower seems to have been constructed on the flat top at about the same time,

[1308] Heliot (1969) L'évolution des donjons dans le Nord-Ouest de la France et l'Angleterre au XIIe siècle. **Comptes rendus des séances de l'Académie des Inscriptions et Belles-Lettres**, 113: (3): pp. 439-448.
[1309] Séraphin (2006) Les tours féodales du Quercy. **Archéologie du Midi médiéval. Résidences aristocratiques, résidences du pouvoir entre Loire et Pyrénées, Xe-XVe siècles**, 4: (4): 127-138. He provides a detailed table listing the towers studied with his conclusions as to their role and date.
[1310] A term not to be confused with belfry towers.
[1311] Thompson (1991) **The rise of the castle**. Cambridge: Cambridge University Press, 38-42.
[1312] Thompson (1991), 28-32.
[1313] Pounds (1990) **The medieval castle in England and Wales : a social and political history**. Cambridge: Cambridge University Press
[1314] Poultney (ed.) (2013) **Totnes Castle**, London: English Heritage

around which there had probably been an approximately circular wooden pallisade (*shell keep*)[1315] of 21m. internal diameter, which was replaced by a wall of limestone rubble faced with red sandstone in the early 14th century. The tower measured internally 4.0 x 4.9m. with wall thickness of 0.76m. Its height is not known, although the stone foundations (probably set on bedrock) are now covered to a height of 3.4m. by earth, and the relatively thin walls suggest a low structure while the upper floors may have been of wooden construction. The battlements of the *keep* consist of broad *merlons* pierced by arrow slits.

Such *motte* and *bailey* fortifications were raised throughout England by William and his successors in the 11th and 12th centuries.[1316] Often attached, as was the one at Totnes to a pre-existing Saxon town,[1317] they were also built independently in the countryside, attracting the construction of dwellings around them, which often developed into villages and towns.[1318] Within the surrounding *bailey* there were normally a number of buildings, which until the 13th century were still of wooden construction, whilst the walls of the *keeps* (often massive towers), even if constructed of stone, due to the relatively poor quality of the masonry were sometimes whitewashed with lime or rendered.[1319] By the end of the 12th century fireplaces were being introduced into the walls of the main *hall*, as were toilets (*garderobes)*, often projecting on corbels out over the external wall, occasionally directly into the *bailey*.[1320] Whilst there was a level of consistency in castles' initial construction style, in many areas by the 14th and 15th centuries there was little conformity and they were becoming merely 'well-protected homes'.[1321]

At least 1,500 castles appear to have been constructed between the 11th and 13th centuries with a 'remarkably even' spatial pattern,[1322] but only a relatively few appear to have had a clear strategic purpose. We find a grouping of smaller mottes along the Welsh border to the west of England,[1323] established both to gain territory and protect their owners and livestock against raiding bands of Welsh, whilst in the northern Borders region similar conditions reigned against Scottish marauders. There the large fortresses were often used to protect refugees from the countryside around, when danger of major invasion from Scotland was apparent.[1324] To deal with the threat of minor raids, however, the tower-house, (referred to as '*Pele*', or '*bastle*' in its smaller form, in England) developed on both sides of the border region, where more than 150 have been noted,[1325] a number constructed by the religious orders to protect their tenants.[1326] These were commonly rectangular, of three (possibly four) storeys and plain construction, with internal stairs, a fireplace and simple dooor mouldings and showed little architectural development over the 13th to 15th centuries.[1327] They usually had parapets with a battlement, sometimes with very thick walls (up to 3m.), an iron grill at the entrance, and vaulted ground floor, also an enclosing wall or ditch,[1328] while in England most were annexed to a hall.

[1315] The *shell keep*, effectively a small raised and enclosed fortified area, is to be distinguished from the *keep*, which was a fortified building with multiple floors, otherwise described as a '*tower*' or '*tower keep'*.
[1316] Brown (1976) **English castles**. London: Batsford, 9.
[1317] Totnes with an estimated population of 500 people was at this time the second largest town (after Exeter further north) in Devon. Juhel had been granted it with a further 100 manors in the surrounding area – Poultney (2013), 16.
[1318] Creighton (2002), 133.
[1319] Pounds (1990), 128.
[1320] Idem, 189-190.
[1321] Idem, 249-270.
[1322] Idem, 55-57.
[1323] Idem, 70.
[1324] In 1323 command was given to the Sheriff of Cumberland to allow free entry and the use of pastures to persons resident in the region - Coulson (2003), 256.
[1325] Barley (1986) **Houses and history**. London: Faber and Faber, 116.
[1326] King (1988), 12.
[1327] Pounds (1990), 279.
[1328] These were used as refuges for the population around and called '*base-courts'* in English – not to be confused with '*basse-cour'* in French, which is a farmyard – King (1988), 12.

On the Scottish side of the border the towers were more often free-standing[1329] and, unlike England, exhibited considerable change over time. Dixon notes three phases up to 1500 – from 1080, simple earthen *motte* and *baileys*; after 1220, stone halls within courtyards; from the early 14th century, new houses with *solar* towers of great strength and curtain walls.[1330] This appears to have been a reaction to the increasing insecurity in the border areas.

In Eastern Ireland McNeill (2011)[1331] in a detailed review of more than 130 sites of *mottes* and *raths*[1332] argues, contrary to the traditional view that the *motte* was essentially a military tool and therefore an indication of the extent of English manorial settlement on the island after 1200, that this was limited to the Meath/Oriel border region and that it in reality possessed a multi-functional role as the centre (*caput*) of essentially peaceful estates. He notes further that the stone tower houses constructed in Ireland from the 15th century appear to have been the social equivalent of the motte, erected not by the established powerful families but by newcomers and the lesser gentry.

The changing nature of warfare by the 14th century with the introduction of gunpowder was reflected in the abandonment of half of the fortifications constructed in England since William's invasion in 1066.[1333] Increasingly disputes were settled on the battlefield by professional armies, rather than through sieges of enemy fortifications.[1334] It was only in the border regions, where security was poor and the threat essentially local, that small *motte* and *bailey* castles or tower-houses continued in use into the 15th and 16th centuries. In central England, however, whilst Brown (1976) believed that the 'golden age of castles ceased at the end of the 13th century,[1335] Dixon and Lott (1993) argue that the residential *solar* tower and *donjon* continued to be developed during the following two centuries such that there was often little distinction between the castles and great houses of the period, their construction being *'a shell for the overt symbolism of social power*'.[1336]

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7.4.6 Germany

Fortification in Germany does not appear to have any direct relevance to Greece, except for a particular curiosity of German castles - their squared rusticated stonework, *'half-dressed but with sharp edges'*.[1337] This is a characteristic not found in France, but it does occur in Italy, much of the north of which was at this date part of the Holy Roman Empire. This is an important point in the present study since not only does it show architectural influences between the two regions but both the Venetians and the three Lombard Triarchs installed on Euboea in the first decade of the 13th century were from northern Italy.

[1329] There is some disagreement about this conclusion by Pounds and others, but archaeological evidence may suggest that also on the Scottish side there had originally been substantial outbuildings around the towers - Tabraham (1988) The Scottish medieval towerhouse as lordly residence in the light of recent excavation. **Proceedings of the Society of Antiquaries of Scotland**, 118: 267-276.

[1330] After 1500 there was further sophistication/extension of existing towers, a second phase of new tower construction, combined with the building by tenants of roughly built fortified houses (termed 'pele' by the Scots), which lasted into the 17th century - Dixon (1993) "Mota, Aula et Turris: the Manor Houses of the Anglo-Scottish Border". In Meirion-Jones and Jones (Eds.) **Manorial domestic buildings in England and Northern France**. London: Society of Antiquaries of London. 22-48.

[1331] In the counties of Meath, Leinster and Ulster - McNeill (2011) Mountains or Molehills? Different Uses for Mottes in the Lordships of Eastern Ireland. **Archaeological Journal**, 168: (1): 227-271.

[1332] The name given to the ringforts that were initially constructed in the 6th to 8th centuries and then further developed up to the 12th century, immediately prior to the English invasions.

[1333] Pounds (1990), 256. This did not, however, occur in the border regions, where there was continued construction, a phenomenon which, King argues in a recent article, was as much about castles as status symbols as the level of insecurity in the region - King (2007) Fortresses and fashion statements: gentry castles in fourteenth-century Northumberland. **Journal of Medieval History**, 33: (4): 372-397.

[1334] Idem, 249.

[1335] Brown (1976), 128.

[1336] Dixon and Lott (1993) The Courtyard and The Tower: Contexts and Symbols in the Development of Late Medieval Great Houses. **Journal of the British Archaeological Association**, 146: (1): 93-101.

[1337] Thompson (1991), 21-23.

7.4.7 Italy

In 1066 Duke William had conquered England from his base in northwest France, but Normans, beginning in about 1010, had also achieved domination of most of Southern Italy and Sicily by the end of the 11th century, creating the Norman Kingdom of Sicily in 1130. The two appear to have maintained a close relationship and soldiers from Norman Italy formed part of William's invasion forces. [1338] But influences on the Kingdom also came from the Arab world to the south.[1339] Similaly, northern Italy was during this period under the control of (or at least influenced by, as regards the independent city states of Venice, Pisa and Genoa) the essentially Germanic Holy Roman Empire.[1340]

Germanic influences have been noted above in the stonework style of towers in northern Italy, whilst a study by Chiesa (1998),[1341] comparing the towers of Sicily and Apulia with English and Norman towers, concluded that their rectangular plan, ground-floor access, relatively thin wall thickness, and internal layout were suggestive of the 'palaces' of the 11th and 12th centuries to the north.[1342] The massive size and ground floor entry of his sample, however, makes them significantly different to the majority of those found in Greece. As regards their role he notes that a line of towers had been constructed to protect the eastern coast of Sicily and the harbour at Catania.[1343] He also notes comparisons that have been made between the tower at Pisa and the 'Manar' tower, constructed about 1010 in the Algerian capital, Al Qal'a, by the Beni Hammad. This square (20 x 20m.) tower, whose principal use seems to have been as a '*tour à signaux où tour à feu*' was the precursor, it has been argued,[1344] to that at Pisa but Chiesa believes that the latter could as easily have Norman roots.

Comba (1986), studying the *maison-forte* in notarial documents in central-southern Italy, notes how the term '*motta'* from the 11th century begins to be used in the south to describe a new fortified settlement which replaces the old *casale* (village).[1345] Towers, constructed of stone and mortar of 8-12 m. height, also appear from the 12th century in the vineyards, and from the 14th century multiply

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[1338] Drell (1999) Cultural syncretism and ethnic identity: The Norman 'conquest' of Southern Italy and Sicily. **Journal of Medieval History**, 25: (3): 187-202; Sartore (2013) Eleventh- and Twelfth-Century Similarities in the Norman Influence, Contact and "Conquests" of Sicily, Southern Italy and England. **Al-Masāq**, 25: (2): 184 - 203.

[1339] The geographer Al-Idrisi, is one of the most well-known scholars at the court of King Roger II (1130-1154). International scholarly influence continued under the Hohenstaufen rule of Frederick II (1220-1250) - Davis-Secord (2010) Medieval Sicily and Southern Italy in Recent Historiographical Perspective. **History Compass**, 8: (1): 61-87.

[1340] Although there was significant Norman influence, this is not to say that the *motte* was imported into Italy from the north. A parallel development of *mottes* has been identified in the country from the 10th century - Noyé (2013) "Per la storia della ricerca archeologica recent sulle fortificazioni in terra in Francia e in Italia. Stato delle conoscenze e dei problemi". In Settia, et al. (Eds.) **Fortificazione di terra in Italia, motte, tumuli, tumbi, recinti: atti del Convegno (Scarlino, 14-16 Aprile 2011)**. Archeologia medievale, XL. 15-35.

[1341] Chiesa (1998) Les donjons normands d'Italie. Une comparaison. **Mélanges de l'Ecole française de Rome. Moyen-Age, Temps modernes**, 110: (1): 317-339.

[1342] Chiesa (1998).

[1343] Another article on the defence of Sicily from the 6th to 15th century refers to a letter dated 1405 regarding 39 towers (*turres*) around the coast, most '*da construirei'* but 14 '*da retaurarei'* - Maurici (2001) "difese costiere delia Sicilia secoli VI-XV". In Martin (Ed.) **Castrum 7: Zones côtières littorales dans le monde Méditerranéen au Moyen Âge : défense, peuplement, mise en valeur**. Portada: Casa de Velázquez.

[1344] Georges Marçais (1954) *L'architecture musulmane d'Occident*, Paris, 122 **in** Chiesa (1998).

[1345] He quotes the terms '*motae, bastitae, tumbae'* being used for '*maison-fortes'* used in the documents: - Comba (1986) "Tours et Maisons Fortes dans les campagnes médiévales Italiennes: état present des recherches". In Bur (Ed.) **La Maison forte au Moyen Age : actes de la Table ronde de Nancy-Pont-à-Mousson des 31 mai-3 juin 1984**. Editions du Centre national de la recherche scientifique 317-339.

around the cane plantations (and processing plants) and in the suburban '*jardins*'.[1346] In 1430 we find a contract by the Teutonic Knights in Messenia that even provides the architectural specifications for an apparently typical manor farm, in effect a well-appointed castle – the *baglum* (enceinte) is protected by a high wall 6m. high and 0.75m. thick and a tower of 8m. height; within this there is a hall and four rooms for the equipment and livestock.[1347] This was, at least intially, to combat possible incursions, but Comba (1986) provides an example of a tower being constructed by its owner '*aux plaisirs de la chasse avec ses amis'*, and sees the construction of others as having a symbolic value beyond their purely functional role.

Tower construction materials were diverse and a study by Settia (1980) in Verona, just to the west of Venice, identified the use of brick, stone, earth and especially wood.[1348] A treatise on agriculture from 1561 suggests for a farm the use of an external belt (ditch, suitable slope or hedge) or to build a surrounding wall in the corner of which there should be '*une tour ou un bastion dans le quel puissent se retirer en cas de besoin le maître avec sa famille et les travaileurs'*.[1349] But there was significant intechangeability of the terms he found in the notarial documents of the period. From the beginning of the 13th century the words *domus*, *turris* and *mota* are found. One particular property in Carmagnola was variously described as *motta* or *castello* (1338), *motta* or *casa forte* (1343), *bastita* or *palacium* (1413), and *casale vocato Mota* (1347), whilst another property (1421) was described as '*mota sive turre'*.[1350] For the larger fortifications the *castrum* is noted separately from the *fortilicium* and *fortilicium parvum*,[1351] but we also have a reference from 1141 of '*motam Castri franchi sive castrum'*.[1352] A drawing from the 16th century illustrates one particular fortified residence (**figure 8.4**): it shows clearly a tower and residence built on a motte surrounded by a ditch with a church, itself also with a tower, built just outside the property.

Pringle (1974) provides a detailed architectural study of the towers in Tuscania, an area in the north of Italy just to the southwest of Venice, characterised by incessant internecine strife in the 12th and 13th centuries both between the nobles, and between them and the people of the town, until its submission to the commune of Rome in 1300.[1353] Such instability appears to have been a general feature of Italy at this time - as does a plethora of urban and country towers, and he notes how at least 140 towers were attacked and taken by the populace in Rome in one year alone (1257). He perceives urban towers to be an extension of the watch-towers that land-owners had utilised since the Late Roman period to protect their country estates,[1354] the exaggerated height of many (>30m.) not being militarily of any practical use but an 'element of prestige'.

As regards the use of towers for signalling, Pringle (1974) suggests that this may have been a partial rationale for their height in Tuscania – to reach above the surrounding houses - whilst Montanari (2014) notes communication as a key feature of those in the countryside around Rome.

[1346] These are plots of land, often enclosed used for intensive cultivation - Bresc (1972) Les jardins de Palerme (1290-1460). **Mélanges de l'Ecole française de Rome. Moyen-Age, Temps modernes**, 84: (1): 55-127.

[1347] Bresc (1980) La casa rurale nella Sicilia medievale: massaria, casale e "terra". **Archeologia Medievale**, 7: 375-381.

[1348] Settia (1980) Tra azienda agricola e fortezza: case forti, "motte" e "tombe" nell'Italia settentrionale. Dati e problemi. **Archeologia Medievale**, 7: 31- 54. A later study of timber castles suggests the possible existence of these from as early as the 10th century and that it is difficult to demonstrate that they were a primarily Norman importation - Higham and Barker (1992) **Timber castles**. Batsford, 78-79.

[1349] P De Crezcenzi (1561) *Delle cose appartenenti a bisogni et a comodi della villa*, 1:5 **in** Comba (1986).

[1350] Settia (1980), notes 13-17, 23.

[1351] B. Sorio (ed.) (1851) *P. De Crescenzi*: *Trattoria della agricoltura*, I, 102 **in** Settia(1980) 39, note 33.

[1352] Noyé (2013).

[1353] Pringle (1974) A Group of Medieval Towers in Tuscania. **Papers of the British School at Rome**, 42: 179-223 -both refuge towers and tower-houses – casa torre – but excluding clock and fortification-wall towers).

[1354] These are the so-called torre-vedette - Montanari (2014) Torri campagna Romana: sistemi di comunicazione e segnalazione. [Accessed 4/1/2017], http://www.fondazioneproposta.it/museo/in-soccorso-di-gondor/. The author notes entry at ground level and vaulting on the first and top floors of each tower, suggesting signalling using fire and smoke.

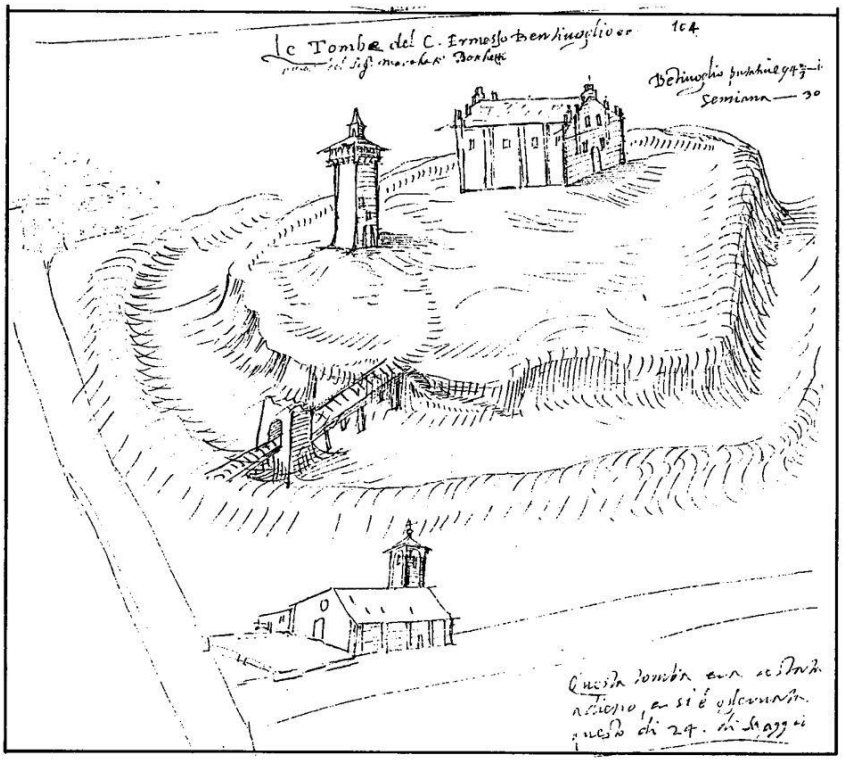


Figure A7.12 - Le Tombe dei bentivoglio nel secolo XVI[1355]

7.4.8 The Iberian Peninsula

The Crown of Aragon, a maritime empire initially established in 1137 through the marriage of Princess Petronella of Aragon and Ramon Berenguer IV, Count of Barcelona, grew beyond the Spanish mainland in the 13th century to control the islands of Mallorca and Sicily, and, through the Catalan company, Athens and Central Greece in the 14th century.[1356] In 1318 Catalan forces invaded Euboea and temporarily over-ran much of the island.

Timber watchtowers of the late eighth century, frontier works of the early Carolingian reconquest, have been excavated in Catalonia,[1357] but generally stone was the preferred material for fortification in Spain, probably reflecting its ready availability and the concomitant lack of wood in many areas (as in many areas of Greece). To the south lay Arab controlled lands and by the end of the 11th century a process of colonisation had established a network of towers stretching from the coast 150kms. into the interior. A study by Araguas (1979) notes that these were circular in style, something which sets them apart from the mostly quadrangular towers found in western Europe and on Euboea. Documentary evidence indicates how colonists as part of their concession were obliged to construct a tower of stone and mortar, suggesting – he believes - apart from the security they provided, not only that dry-stone towers may also have been common at this time,[1358] but that the Count of Barcelona wished to display his dominion over the territory. Chapels were generally built close-by, sometimes linked by a wall to the tower, as were outbuildings. Entry was at first up to

[1355] Fanti (1967) **Ville,castelli e chiesi bolognesi da un libro di disegni del Cinquecento**. Bologne, 30:104 **in** Setta (1980), 44.
[1356] Tarver and Slape (eds.) (2016) **The Spanish Empire : A Historical Encyclopedia**, Denver, Colorado: ABC-CLIO, 8-10.
[1357] Higham and Barker (1992), 79.
[1358] Araguas (1979) Les chateaux des marches de Catalogne et Ribagorce. **Bulletin monumental**, 1: (37): 205-224.

third floor level, diameters varied from 5 to 12m., while height could reach over 30m. Square towers also existed but these were Frankish style donjons within the perimeter of a larger fortress.[1359] Later groups of observation towers have also been identified in Andalucia (13th century)[1360] and on what was the frontier of the Kingdom of Granada (14th century).[1361]

Towers also formed a communication system in the Iberian peninsula but the roots of this – whether Roman or Arab/medieval - are disputed,[1362] although the use of the Arab word '*Atalaya'* to describe watchtowers in the region may tend to suggest the latter. A defensive line of signal and watch-towers, constructed from the 8th century by the invading Arab forces and integrated with pre-existing Roman fortifications along the old road by the rivers Ebro, Segre and Cinca has been identified from documentary, toponymic and archaeological evidence by Bassols (1990).[1363] The utilisation of towers as secure wayside inns alomg the communication routes and borders of Arab Spain, later integrated into Christian fortifications, has also been proposed,[1364] whilst Marti et al.(2007) in a detailed historiographical work on the Iberian towers draw a clear conclusion on their Arab roots.

7.4.9 The Kingdom of Jerusalem

The Kingdom was set up in 1099 following the annexation of Jerusalem by forces of the First Crusade, and lasted for nearly 200 years until its last stronghold, Acre, was lost to the Mamluks in 1291. Its establishment by a force with essentially similar roots to that of the Fourth Crusade, which annexed Central Greece in 1204, gives it particular relevance to the present study. Pringle in two publications provides a comprehensive analysis and listing of 89 quadrangular buildings within the

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[1359] Idem.

[1360] Morales and Lara (2005) "Las atalayas entre Talavera y Talamanca: ¿un limes de época andalusí?". **Congreso Espacios fortificados en la provincia de Toledo, Toledo, Diputación Provincial,**. dialnet.unirioja.es. 481- 507.

[1361] Aguilera and Megias (2004) En la Frontera del Reino de Granada: una intervención arqueológica en las torres-atalayas de Montefrío. **Antiquitas**, 16: 121-129. Coastal networks of towers also exist on the Balearic islands (Mallorca and Menorca), on Corsica to the east and south on the Valencia coast, the architecture of which are remarkably similar to the 15th century vigles on Genoese Chios and in Venetian Messenia and are even referred to as *vilies* in Spanish, but most appear to have been constructed in the 16th – 17th centuries – for further references on these: Rodríguez-Navarro (2015) **Modern Age Fortifications of the Mediterranean Coast. Bibliographic Guide**. Spain: Universitat Politècnica de València; Händel **Mallorca Torres** [online]. http://www.mallorca-torres.de/index_uk.php [Accessed 8/1/2017]; Pérez (2009) Las voces silenciosas de las torres de señales: un sistema de comunicación mediterráneo ahora perdido. **Anales de Historia del Arte**, 323-337; Cámara et al. (2005) "Los guardianes del mar: fortificaciones, torres y atalayas en la costa valenciana (siglo XVI)". **Jornadas del Bicentenario de Torrevieja 1803 - 2003 - Instituto Municipal de Cultura Joaquín Chapaprieta Torregrosa**. 201-220.

[1362] Marti et al. (2007) Fars i torres de guaita a Catalunya: sobre la problemàtica dels orígens
Ramon Martí / Cristian Folch / Jordi Gibert. **Arqueologia medieval**, 3: 30-43; see also Morales and Lara (2005).

[1363] Bassols (1990) Una línea de torres vigía musulmanas: Lérida-Tortosa. **Al-Qantara: Revista de Estudios Árabes**, 11: (1): 127-154. He identifies place-names, which include the Arab words *burj* and *talīa* and *manāra*. The principal line ran Lérida – Escarp – Mequinenza – Tortosa.

[1364] The towers studied were of standardised construction - circular, less than 5m. externally with light walls, and constructed of double faced neat stone rows bonded with mortar and in-filled with rubble - Sánchez (2005) "Fortalezas y atalayas en el entorno del Alberche en los siglos X-XIII. Estado de la cuestión". In Rodríguez (Ed.) **Actas del III Congreso de Castellología Ibérica: 28 de octubre - 1 de noviembre, Guadalajara de 2005**. 305-324.

Kingdom, which he describes as 'towers',[1365] the dimensions of 43 of which are plotted in **figure 8.5**.[1366]

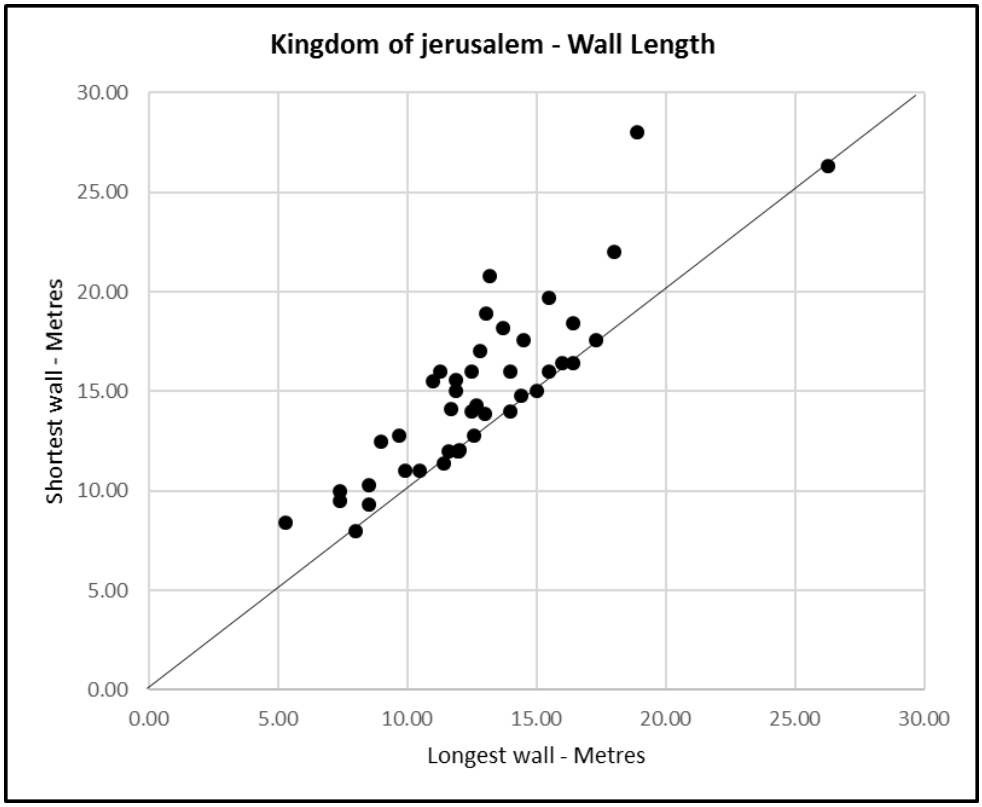


Figure A7.13 - Kingdom of Jerusalem: tower sizes

Less than 40% of these are square, the majority being rectangular. They are also very large with the average wall length being 12.2 metres, providing an external footprint averaging between 150 and 200 sq.metres (see **Figure 8.6).** In contrast, the internal area is small and averages little over 50 sq.m. Wall thickness varies from 1.0 m. up to an extraordinary 5.0 m. with a mean of a massive 2.59 m. and standard deviation of 0.47m. Unfortunately very few towers have survived to their full height but for three towers with an internal area over 100 sq.m. their heights are circa 12m., 17m. and circa 14m. ,[1367] whilst their wall widths are 3m., 2.5 to 2.9m., and 2.2m. respectively. Wall thickness, therefore, on this small sample does not appear to be a function of height (and thus the requirements of engineering) but such towers appear rather to have been constructed to withstand a substantial siege.

[1365] Pringle (1994) Towers in Crusader Palestine. **Chateau Gaillard**, 16: 335-350; Pringle (1997) **Secular Buildings in the Crusader Kingdom of. Jerusalem: An Archaeological Gazetteer**. Cambridge University Press, 8-9.

[1366] These have been chosen because external dimensions, wall thickness and internal area of the first floor are known. For most, however, little remains above the first floor. Towers running along the 45° line are square.

[1367] No.s 26, 37, and 63 in Pringles list.

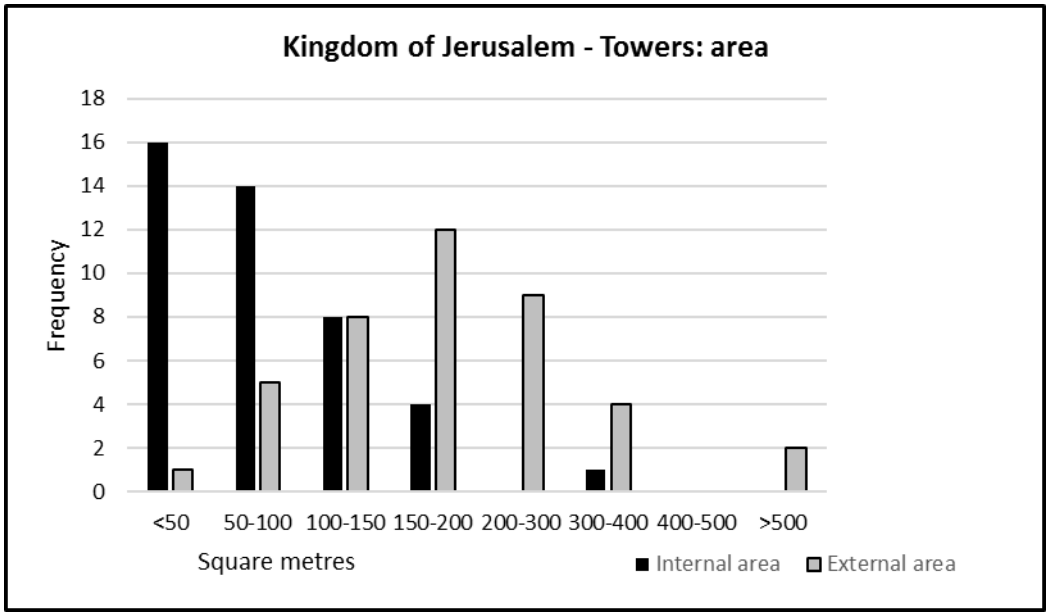


Figure A7.14 - Kingdom of Jerusalem: tower areas[1368]

None of these towers has more than two storeys, and only three of the whole corpus do, suggesting that the 'towers' under study should be identified rather as squat strong fortlets, a conclusion further supported by the relatively small amount of internal living space of many – more than 50% have less than 60 sq.m. Whilst the larger ones provided good living space, the smaller ones may have acted simply as a refuge, the main living quarters or hall being adjacent, or as a solar tower for sleeping accomodation. The floors are usually barrel vaulted and there is only one recorded case of wooden construction. They are often found with outbuildings, a chapel, and sometimes an external fortified enclosure wall or ditch.

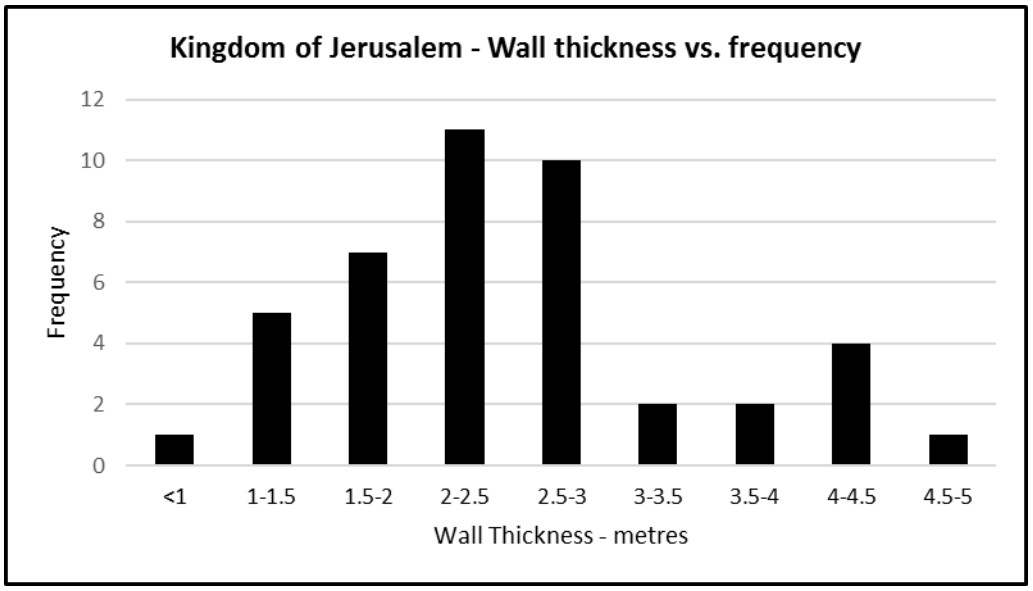


Figure 7.15 - Kingdom of Jerusalem: tower wall thickness

[1368] Internal area measured is at first floor level.

The walls were generally constructed with two facings of ashlar blocks enclosing a rubble core bonded with 'weak lime concrete or clay' and 'finer freestone' for the quoining, whilst the entrances were invariably at ground floor level.[1369] Stairs were often accommodated within the wall thickness, the larger towers may have had a hall at first floor level, whilst cisterns have been found in the basements of a number. Many towers developed into semi-fortified complexes or castles and he also found 'defended hall-houses' and other types of 'semi-fortified courtyard buildings'.

Such constructions are reminiscent of the *maison forte*, a topic covered within a study of 235 rural settlements by Ellenblum (1998). He describes the sponsoring by landowners of new European settlements in unoccupied areas, thus creating rural villages often referred to as '*castella*' or '*castra*'.[1370] This process, he argues, led to the establishment of a plethora of types of settlement – rural burgi, fortified and unfortified villages, manor houses and seigneurial strongholds – in many ways similar to those to be found in southern Europe during the same period, the terms used to describe which were often interchangeable – *casale*, *castrum* and *villa* are often used to describe the same place.[1371] He provides the ground plan of a fortified manor house within such a village, similar in many ways to the 'towers' listed by Pringle analysed above with massive walls at ground and first floor level (**figure 8.8**).

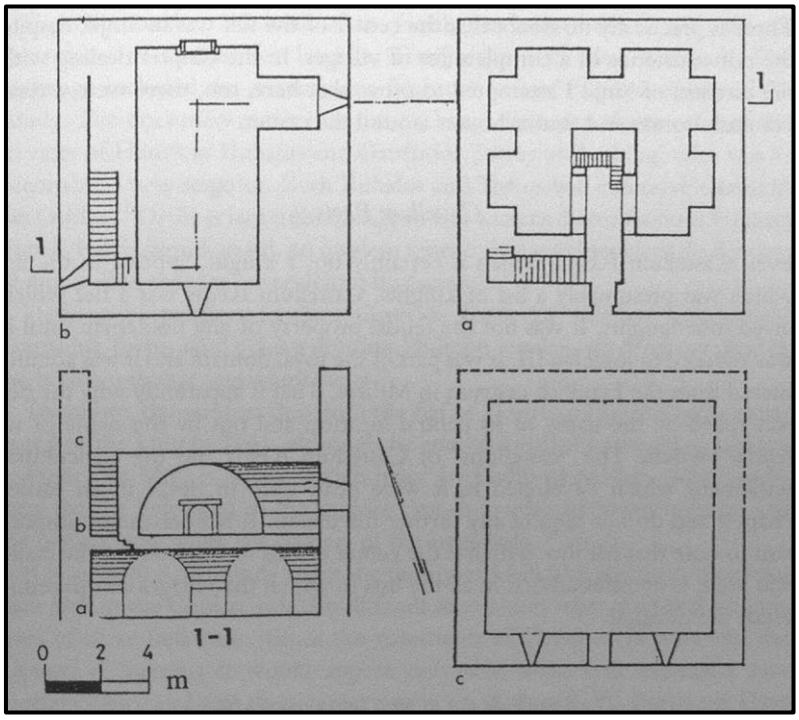


Figure A7.16 – Plan and section of the manor house in Jab'a[1372]

Pringle in the earlier article[1373] sees little in common between the tower houses found in Syria in the 5th and 6th centuries and these Crusader towers of the 11th and 12th centuries, preferring a Western European influence. He does accept that a number may have been re-built,[1374] but notes

[1369] He makes no mention of wooden construction, presumably because of the general lack of available wood and the need for much stronger fortification than could be provided by wood.
[1370] Ellenblum (1998) **Frankish Rural Settlement in the Latin Kingdom of Jerusalem**. Cambridge, 33-38.
[1371] Idem, 68-69.
[1372] Ellenblum (1998), 165.
[1373] Pringle (1994)
[1374] The 6th century *Life of St Sabas* by Cyril of Scythopolis notes that the saint constructed two towers – one residential and the other where he could find solitude – at his monastery in the Kidron valley. The site, modern

that more typically the Franks constructed a new residential tower within existing fortifications – something that seems to be refuted by the finding above that the residential area in most towers was severely restricted. He does, however, provide valuable documentary evidence on the functions of towers. These ranged from an offensive role as part of a siege, as a road station and to protect the lines of communication, as refuges, an administrative role as courthouses or as residences for administrators of settlements, as urban residences[1375] and prisons,[1376] as palaces and even churches (église-donjon), but the most numerous group he found was that of towers, which had both a residential and defensive function, often established at the centres of newly established settlements.

Dair Mar Saba, is still dominated by two rectangular towers probably built in the 6th century, one of which seems to have been repaired or rebuilt in the 12th century.

[1375] Very prevalent in Acre where Genoese, Pisan and Venetian towers are recorded, but also to be found in Tyre - Mack (2007) The Italian quarters of Frankish Tyre: mapping a medieval city. **Journal of Medieval History**, 33: (2): 147-165.

[1376] Molin (1997) The non-military functions of crusader fortifications, 1187-circa 1380. Ibid.23: (4): 367-388

7.5 Tower Listing

7.5.1 Euboea

Code	Site	Name	wall1	wall2	Type	Prime Source(s)
2	NE8	Pyrgos-Agkali	0	0	Recorded	Skouras(2003)
3	NE16	Agia Anna	0	0	Recorded	Skouras(2003)
4	S11	Bigla-Aetos	0	0	Recorded	Skouras(2003)
7	NW2	Lipso	6.6	7	Type C2 - Coursed	Skouras(2003)
10	SC1	Aliberi - Karabos	7.55	7.6	Recorded	Skouras(2003)
11	CE1	Aliberi - Trochala	0	0	Recorded	Skouras(2003)
12	CE1	Aliberi (Gipedo)	0	0	Recorded	Skouras(2003)
13	CE1	Aliberi - Rifi	0	0	Classical / Roman - Quadrangular	Skouras(2003)
14	CW15	Amarynthos	0	0	Recorded	Skouras(2003)
15	CW15	Batheia(Limpounari)	20	20	Recorded	Skouras(2003)
18	CE10	Avlonari	7.95	7.95	Type C4 - Colonial	Skouras(2003)
20	CE5	Achladere	0	0	Recorded	Skouras(2003)
21	NE11	Achladi	0	0	Cartographic Evidence	Skouras(2003)
21	NE7	Prasidi	0	0	Recorded	Skouras(2003)
22	NW17	Basilika	0	0	Recorded	Skouras(2003)
23	CW5	Basiliko	8.3	8.4	Type C4 - Colonial	Skouras(2003)
25	SC3	Belos	6.7	7	Type C4 - Colonial	Skouras(2003)
26	CE29	Bitala	0	0	Recorded	Skouras(2003)
27	NE22	Kastri-Blachia	0	0	Recorded	Skouras(2003)
29	CN18	Vumi	10.2	10.2	Recorded	Skouras(2003)
38	CN21	Gides-Amphithea)(2)	5.7	5.5	Recorded	Skouras(2003)
39	CN20	Gides-Amphithea(1)	5.2	5.2	Recorded	Skouras(2003)
42	CW14	Gymno	7.8	7.8	Type C2 - Coursed	Skouras(2003)
43	NE4	Daphne-Limne	9	9	Recorded	Skouras(2003)
44	NE19	Beza/Dafnousa	7.4	9.1	Recorded	Skouras(2003)
46	SC6	Dystos	6.8	6.8	Recorded	Skouras(2003)
50	CW12	Agia Triada	0	0	Recorded	Skouras(2003)
51	SC10.1	Ellēnopyrgos-Zarakes	0	0	Classical / Roman - Circular	Skouras(2003)
53	CW22	Tharrounia	0	0	Recorded	Skouras(2003)
55	CE22	Kaddi	6.5	6.5	Type C4 - Colonial	Skouras(2003)
56	CN27	Kathenoi	0	0	Recorded	Skouras(2003)
58	NW11	Kamaria	0	0	Recorded	Skouras(2003)
60	CN4	Kamaritsa	6.75	7.5	Recorded	Skouras(2003)
64	CN6	Kastella	0	0	Recorded	Skouras(2003)

Code	Site	Name	wall1	wall2	Type	Prime Source(s)
66	NE9	Kerameia	0	0	Recorded	Skouras(2003)
67	CE20	Prinaki	7.7	8	Recorded	Skouras(2003)
68	CE19	Koile	7.8	8	Recorded	Skouras(2003)
71	CE24	Kepoi	0	0	Recorded	Skouras(2003)
73	NE26	Kotsikia	0	0	Recorded	Skouras(2003)
75	CE26	Tourla-Kourounia	0	0	Recorded	Skouras(2003), HMGS (1970,1988)
82	S12	Akrotēri	0	0	Recorded	Skouras(2003)
83	CW6	Levkanti	7.4	8	Recorded	Skouras(2003)
85	NE20	Galataki	7.2	7.2	Recorded	Skouras(2003)
86	NE2	Bigla-Limne	8.6	8.6	Cartographic Evidence	Skouras(2003)
87	NE3	Limne-Kokale	0	0	Hypothesis	Skouras(2003)
89	NW6	Lichada	7.3	7.3	Recorded	Skouras(2003)
92	NE15	Pyrgaki-Kymasi	8.2	8.2	Recorded	Skouras(2003)
94	S6	Marmari	0	0	Recorded	Skouras(2003)
98	CN23	Mistros	9.2	9.4	Type C2 - Coursed	Skouras(2003)
99	CE21	Monodri	0	0	Recorded	Skouras(2003)
102	NW8	Caloiaro	0	0	Recorded	Skouras(2003)
106	CW18	Tourli-Parthenoi	0	0	Cartographic Evidence	Skouras(2003)
111	CN19	Pissonas(Mostra)	6.9	6.9	Recorded	Skouras(2003)
113	CN3	Politika	6	6.2	Type C4 - Colonial	Skouras(2003)
116	NE18	Mantoudi(Prokope)	0	0	Recorded	Skouras(2003)
117	CE28	Pyrgos	0	0	Recorded	Skouras(2003)
119	NE1	Robies	9.5	6	Recorded	Skouras(2003)
120	NE23	Sarakiniko	0	0	Recorded	Skouras(2003)
121	NE5	Skepaste	0	0	Recorded	Skouras(2003)
123	CN22	Skountéri	7.9	8	Recorded	Skouras(2003)
124	CN23	Pournos	0	0	Recorded	Skouras(2003)
126	CN17	Kato Stenē	5.1	6.14	Recorded	Skouras(2003)
129	CE35	Stropones	0	0	Recorded	Skouras(2003)
131	NE10	Strofylia	0	0	Recorded	Skouras(2003)
133	SC16	Stura	0	0	Recorded	Skouras(2003)
134	CW23	Trachēli	7	7.1	Recorded	Skouras(2003)
135	CN11	Bailelekas	7.1	7.1	Type C1 - Byzantine	Skouras(2003)
138	NE14	Tsouka	9.1	9.6	Recorded	Skouras(2003)
139	NE13	Farakla	6.35	7.35	Type C2 - Coursed	Skouras(2003)
140	CN12	Fēges	7.2	7.2	Recorded	Skouras(2003)
143	CW2	Mytikas(N)	6.1	6.15	Clock Tower	Skouras(2003)
144	CW2	Mytikas(S)	6.95	7.45	Type C4 - Colonial	Skouras(2003)
151	CW1	Belibabas	0	0	Recorded	Skouras(2003)
152	CW1	Balalaion	0	0	Clock Tower	Skouras(2003)
153	CW6	Bourtzi	0	0	Recorded	Skouras(2003)

Code	Site	Name	wall1	wall2	Type	Prime Source(s)
154	S14	Chartzani	0	0	Recorded	Skouras(2003)
156	CN8	Karaouli-Barka	7.5	7.5	Recorded	Skouras(2003)
158	CN7	Karaouli	6.1	6.1	Type C2 - Coursed	Skouras(2003)
159	CN8	Paragali(?)	0	0	Recorded	Skouras(2003)
200	CW6	Ag.Nikolaos	0	0	Cartographic Evidence	Werdmuller (1660)
201	CN28	Agios	0	0	Hypothesis	Author
202	NW22	Agios Georgios	0	0	Hypothesis	Author
203	SC20	Bigla	0	0	Cartographic Evidence	HMGS (1970,1988)
204	NW4	Bigla-Almyri	0	0	Cartographic Evidence	Greek Cartographic Service(1907)
205	NE27	Drakotourla-Kantyli	0	0	Cartographic Evidence	HMGS (1970,1988)
206	CN8	Duobounoi	0	0	Type C1 - Byzantine	Author
207	CN14	Kastellaki-Attali	0	0	Recorded	HMGS (1970,1988), Papakonstantinou (1971)
208	CW20	Kastellakia-Kato Seta	0	0	Cartographic Evidence	HMGS (1970,1988)
209	CW6	Kastro-Lampsakos	0	0	Cartographic Evidence	Admiralty(1846), Werdmuller (1660)
210	CE38	Koutourla	0	0	Cartographic Evidence	HMGS (1970,1988)
211	CW2	Mytikas-3	0	0	Cartographic Evidence	Werdmuller (1660)
211	S12	Kyrnos	0	0	Classical / Roman - Circular	Skouras(2003), Gounaropoulos (1930)
212	SC8	Palaiopyrgari-Prasino	0	0	Cartographic Evidence	HMGS (1970,1988)
213	CE29	Paliopyrgos-Bitala	0	0	Cartographic Evidence	HMGS (1970,1988)
214	S13	Paliopyrgos-Platanistos	0	0	Recorded	HMGS (1970,1988)
215	S8	Paximadi 2	0	0	Classical / Roman - Quadrangular	Siefried (2014)
216	S6	Petalies (island)	0	0	Hypothesis	Author
217	CE33	Pirgere-Metochion	0	0	Cartographic Evidence	HMGS (1970,1988)
218	S8	Paximadi	0	0	Classical / Roman - Circular	Siefried (2014)
219	NE27	Pyrgaki	0	0	Cartographic Evidence	HMGS (1970,1988)
220	CW11	Pyrgaki-Kalamonta	0	0	Cartographic Evidence	HMGS (1970,1988)
221	CW17	Pyrgaki-Kokkaliara	0	0	Cartographic Evidence	HMGS (1970,1988)
222	CW9	Pyrgaki-Lechries	0	0	Recorded	HMGS (1970,1988)
223	CW13	Pyrgaki-Litharakia	0	0	Cartographic Evidence	HMGS (1970,1988)
224	CW20	Pyrgaki(1)-Seta	0	0	Cartographic Evidence	HMGS (1970,1988)
225	CW20	Pyrgaki(2)-Seta	0	0	Cartographic Evidence	HMGS (1970,1988)
226	CN9	Pyrgakia-Dirfis	0	0	Cartographic Evidence	HMGS (1970,1988)

Code	Site	Name	wall1	wall2	Type	Prime Source(s)
227	CE36	Pyrgari-Ag.Irene	0	0	Cartographic Evidence	HMGS (1970,1988)
228	SC12	Pyrgari-Almyropotamos	0	0	Cartographic Evidence	HMGS (1970,1988)
229	SC9	Pyrgari-Argyro	0	0	Cartographic Evidence	HMGS (1970,1988)
230	SC17	Pyrgari-Armeno	0	0	Cartographic Evidence	HMGS (1970,1988)
231	S2	Pyrgari-Giannitsi	0	0	Cartographic Evidence	HMGS (1970,1988)
232	CE39	Pyrgari-Katabothra	0	0	Cartographic Evidence	HMGS (1970,1988)
233	SC14	Pyrgari-Polypotamos	0	0	Cartographic Evidence	HMGS (1970,1988)
234	SC15	Pyrgari-Zoodochos Pege	0	0	Cartographic Evidence	HMGS (1970,1988)
235	SC13	Pyrgari Belanidi	0	0	Cartographic Evidence	HMGS (1970,1988)
236	SC7	Pyrgari(1)-Zarakes	0	0	Cartographic Evidence	HMGS (1970,1988)
237	SC7	Pyrgari(2)-Zarakes	0	0	Cartographic Evidence	HMGS (1970,1988)
238	CE13	Pyrgaria-Oktonia	0	0	Cartographic Evidence	HMGS (1970,1988)
239	CE14	Pyrgi-village	0	0	Cartographic Evidence	HMGS (1970,1988)
240	S5	Pyrgos-Ag.Demetrios	0	0	Recorded	HMGS (1970,1988)
241	NW19	Pyrgos-Agios	0	0	Recorded	HMGS (1970,1988)
242	SC18	Pyrgos-Elafolimano	0	0	Recorded	HMGS (1970,1988)
243	S13	Pyrgos-Platanistos	0	0	Recorded	HMGS (1970,1988)
244	NE8	Pyrgos hill	0	0	Cartographic Evidence	HMGS (1970,1988)
245	NE7	Skopia-Achladi	0	0	Recorded	Settas (1977), Skouras (2003)
246	SC10.2	Skopies-Zarakes	0	0	Cartographic Evidence	HMGS (1970,1988)
247	CN26	Stavros	0	0	Hypothesis	Author
248	CN28	Taoula	0	0	Cartographic Evidence	HMGS (1970,1988)
249	CE22	Tourla	0	0	Cartographic Evidence	HMGS (1970,1988)
250	CE5	Tourla-Achladeri	0	0	Cartographic Evidence	HMGS (1970,1988)
250	CN1	Tourla-Nerotrivia	0	0	Cartographic Evidence	HMGS (1970,1988)
251	NW20	Tourla-Agdines	0	0	Cartographic Evidence	HMGS (1970,1988)
252	CW24	Tourla-Bilies	0	0	Cartographic Evidence	HMGS (1970,1988)
253	NW23	Tourla-Gerakion	0	0	Cartographic Evidence	HMGS (1970,1988)
254	CW10	Tourla-Gerontas	0	0	Cartographic Evidence	HMGS (1970,1988)
256	NW11	Tourla-Kamaria	0	0	Cartographic Evidence	HMGS (1970,1988)
257	NE6	Tourla-Kechries	0	0	Cartographic Evidence	HMGS (1970,1988)
259	CE2	Tourla-Prinia	0	0	Cartographic Evidence	HMGS (1970,1988)
260	CW19	Tourla-Seta	0	0	Cartographic Evidence	HMGS (1970,1988)

Code	Site	Name	wall1	wall2	Type	Prime Source(s)
261	CN9	Tourla-Steni	0	0	Cartographic Evidence	Anavasi (2002)
262	CW23	Tourla-Trachēli	0	0	Cartographic Evidence	HMGS (1970,1988)
263	CE40	Tourla(1)-Glyfada	0	0	Cartographic Evidence	HMGS (1970,1988)
264	CE40	Tourla(2)-Glyfada	0	0	Cartographic Evidence	HMGS (1970,1988)
265	CW11	Tourlaki-Mistros	0	0	Cartographic Evidence	HMGS (1970,1988)
266	NE13	Tourles-Spathari	0	0	Cartographic Evidence	HMGS (1970,1988)
267	S4	Tourlo-Steno	0	0	Cartographic Evidence	HMGS (1970,1988)
268	NE11	Tourlos-Achladi	0	0	Cartographic Evidence	HMGS (1970, 1988), Settas(1977)
270	CN13	Triada	0	0	Hypothesis	Author

7.5.2 Greece

Code	Placename	Prime Source(s)
A1	Eleusis	Langdon(1995)
A2	Reitoi	Langdon(1995)
A3	Keratopyrgos	Langdon(1995)
A4	Peiraeas	Langdon(1995)
A5	Treis Pyrgoi	Langdon(1995)
A7	Kynosoura	Langdon(1995)
A8	Pyrgari	Langdon(1995)
A9	Pyrgarti	Langdon(1995)
A10	Varnava	Langdon(1995)
A11	Kalenzi	Langdon(1995)
A13	Gaitana	Langdon(1995)
A14	Tatoi	Langdon(1995)
A15	Varibobi	Langdon(1995)
A16	Ninoi	Langdon(1995)
A17	Kato Souli	Langdon(1995)
A18	Panagia Mesoporitissa, Marathon	Langdon(1995) - Vanderpool(1966)
A19	Marathon B	Langdon(1995)
A20	Mygdaleza	Langdon(1995)
A21	Monomati	Langdon(1995)
A23	Logotheti	Langdon(1995)
A26	Eleusinian Kephisos	Langdon(1995)
A27	Aspropyrrgos	Langdon(1995)
A28	Mt Korydallos	Langdon(1995)
A29	Academy	Langdon(1995)
A30	Botanical Garden	Langdon(1995)
A33	Athens	Langdon(1995)
A34	Koula	Langdon(1995)
A35	Agios Andreas, Liopesi	Langdon(1995)
A36	Spata	Langdon(1995)
A37	Kylindra	Langdon(1995)
A38	Chasani/Dragonisi/Ag Theodoros	Langdon(1995)
A39	Philiati	Langdon(1995)
A40	Vraona	Langdon(1995)
A41	Lambrika	Langdon(1995)
A42	Dangla	Langdon(1995)

Code	Placename	Prime Source(s)
A43	Ennea Pyrgoi	Langdon(1995)
A44	Olympos	Langdon(1995)
A45	Zoodochos Piyi	Langdon(1995)
A46	Ambelakia	Langdon(1995)
A47	Panagia Vrontous	Langdon(1995)
A48	Agia Marina	Langdon(1995)
A49	Palaiomonasteri	Langdon(1995)
A57	Kataphyghi	Langdon(1995)
A100	Pyrgari	HMGS(1970)
A101	Pyrgari	HMGS(1970)
A103	Kalamos	HMGS(1988)
A52b	Ymettos	Langdon(1995)
AN90	Andros	K-K(1990)
AN100	Agia Marina	K-K(1990)
AN101	Hellenikon-Choreza	K-K(1990)
B3	Agia Marina	Lock(1986)
B4	Antikirra	Lock(1986)
B5	Gia	Lock(1986)
B6	Haliartos	Lock(1986)
B7	Arma	Lock(1986)
B8	Hypsilanti	Lock(1986)
B9	Iliki	Lock(1986)
B10	Koroneia	Lock(1986)
B11	Livadostro	Lock(1986)
B12	Melissochoroi	Lock(1986)
B13	Palaiopyrgos	Lock(1986)
B14	Panakton (Kavasala)	Lock(1986)
B15	Paralimni	Lock(1986)
B16	Parorion	Lock(1986)
B17	Pirgos	Lock(1986)
B18	Scimatari	Lock(1986)
B19	Tanagra	Lock(1986)
B20	Tatiza	Lock(1986)
B21	Thisbe	Lock(1986)
B22	Thurion	Lock(1986)
B28	Davleia	Lock(1986)
B30	Aliki	Bintliff(2007)

Code	Placename	Prime Source(s)
B31	Kaparelli	Bintliff(2007)
B32	Levktra	Bintliff(2007)
B33	Mustaphades (Kallithea)	Bintliff(2007)
B34	Klobucar (Assopia)	Bintliff(2007)
B35	Stanlates (Oinofyta)	Bintliff(2007)
B36	Dramisi (Avlida)	Bintliff(2007)
B37	Halya (Drosia)	Bintliff(2007)
B38	Loukisia	Bintliff(2007)
B39	Mouriki	Bintliff(2007)
B40	Bubuka (Erythres)	Bintliff(2007)
B41	THEBES	Kontogiannis (2012)
B42	Chaironeia	Bintliff(2007)
B43	Pyli	Stanford Skourta Plain Project (1990)
B53	Pyrgari - Loutsi	HMGS(1970)
B100	Tourla	HMGS(1970)
B101	Tourli	HMGS(1970)
B102	Pyrgari	HMGS(1970)
B103	Vilia	HMGS(1970)
B104	Kallithea	HMGS(1970)
LIVADIA	LIVADEIA	Mamaloukos(2012), Kontogiannis (2012)
C1	Agia markella	Psaltakis(2008)
C2	Siderounti (Pyrgari?)	Psaltakis(2008)
C3	Pachi	Psaltakis(2008)
C4	Elinta	Psaltakis(2008)
C5	Trachili	Psaltakis(2008)
C6	Kaminaki	Psaltakis(2008)
C7	Agia Eirini	Psaltakis(2008)
C8	Didymes	Psaltakis(2008)
C9	Livadi	Psaltakis(2008)
C10	Prionas	Psaltakis(2008)
C11	Petasos	Psaltakis(2008)
C12	Avlonia	Psaltakis(2008)
C13	Agia Dynami	Psaltakis(2008)
C14	Nepagos	Psaltakis(2008)
C15	Verkos	Psaltakis(2008)
C16	Chrysolio	Psaltakis(2008)
C17	Vourlidia	Psaltakis(2008)

Code	Placename	Prime Source(s)
C18	Emporio	Psaltakis(2008)
C19	Broukia	Psaltakis(2008)
C20	Komi	Psaltakis(2008)
C21	Gadara	Psaltakis(2008)
C22	Thymiana	Psaltakis(2008)
C23	Agia Eleni	Psaltakis(2008)
C24	Megali Vigla	Psaltakis(2008)
C25	Agios Georgios Sikousis	Ierapetritis(2013)
C26	Kallamasia	Ierapetritis(2013)
C27	Tholopotami	Ierapetritis(2013)
C28	Mesa Didyma	Ierapetritis(2013)
C29	Exo Didyma	Ierapetritis(2013)
C30	Kataraktis	Ierapetritis(2013)
C31	Pagida	Ierapetritis(2013)
C32	Nenita	Ierapetritis(2013)
C33	Kalamioti	Ierapetritis(2013)
C34	Flatsia	Ierapetritis(2013)
C35	Patrika	Ierapetritis(2013)
C36	Armolia	Ierapetritis(2013)
C37	Elatta	Ierapetritis(2013)
C38	Vessa	Ierapetritis(2013)
C39	Idesta	Ierapetritis(2013)
C40	Olympoi	Ierapetritis(2013)
C41	Pyrgi	Ierapetritis(2013)
C42	Idirmigi	Ierapetritis(2013)
C43	Kini	Ierapetritis(2013)
C44	Vouno	Ierapetritis(2013)
C45	Nikitas	Ierapetritis(2013)
C46	Kefalia	Ierapetritis(2013)
C47	Dotia	Ierapetritis(2013)
C48	Lagada	Psaltakis(2008)
C49	Strovili	Psaltakis(2008)
C50	Anavatos village	Psaltakis(2008)
C51	Nea Moni	Psaltakis(2008)
C52	Pirama	Psaltakis(2008)
C53	Agios Georgios	Psaltakis(2008)
C54	Tamarkou	Psaltakis(2008)

Code	Placename	Prime Source(s)
C55	Koila or Aggelikousis	Psaltakis(2008)
C56	Pityous	Psaltakis(2008)
C57	Vigla of Gria - Kardamyla	Psaltakis(2008)
C58	Lithi	Ierapetritis(2013)
C59	Merikountas	Psaltakis(2008)
C60	Agia Markella	Psaltakis(2008)
C61	Kampia	Psaltakis(2008)
C62	Pyrgi	Psaltakis(2008)
C63	Nenita	Psaltakis(2008)
C64	Brantados	Psaltakis(2008)
CG1/B23	Kirra	Lock(1986)
CG2/B24	Lilaia	Lock(1986)
CG3/B25	Subala (Polydrossos)	Lock(1986)
CG4/B26	Amphiklea (Dadi)	Lock(1986)
CG5/B27	Ano Tithorea	Lock(1986)
CR1		Arakadaki(1989)
CR2		Arakadaki(1989)
CR3		Arakadaki(1989)
CR4		Arakadaki(1989)
CR5		Arakadaki(1989)
CR6		Arakadaki(1989)
CR7		Arakadaki(1989)
CR8		Arakadaki(1989)
CR9		Arakadaki(1989)
CR10		Arakadaki(1989)
CR11		Arakadaki(1989)
CR12		Arakadaki(1989)
CR13		Arakadaki(1989)
CR14		Arakadaki(1989)
CR15		Arakadaki(1989)
CR16		Arakadaki(1989)
CR17		Arakadaki(1989)
CR18		Arakadaki(1989)
CR19		Arakadaki(1989)
CR20		Arakadaki(1989)
CR21		Arakadaki(1989)
CR22		Arakadaki(1989)

Code	Placename	Prime Source(s)
CR23		Arakadaki(1989)
CR24		Arakadaki(1989)
CR25		Arakadaki(1989)
CR26		Arakadaki(1989)
CR27		Arakadaki(1989)
CR28		Arakadaki(1989)
CR101	?	Watrous et al.(1997)
CR102		Watrous et al.(1997)
CR103		Watrous et al.(1997)
CR104		Watrous et al.(1997)
CR105		Watrous et al.(1997)
CR106		Watrous et al.(1997)
CR107		Watrous et al.(1997)
CR108		Watrous et al.(1997)
CR109		Watrous et al.(1997)
CR110		Watrous et al.(1997)
CR111		Watrous et al.(1997)
CR112		Watrous et al.(1997)
CR113		Watrous et al.(1997)
CR114		Watrous et al.(1997)
CR115		Watrous et al.(1997)
CR116		Watrous et al.(1997)
CR117		Watrous et al.(1997)
E8	Agios Ilias	Veikou(2012)
E51	Katochi	Veikou(2012)
E95	Agios Ilias, Platanos	Veikou(2012)
E105	Stratos	Veikou(2012)
E110	Varassova S, Ag. Nikolaos	Veikou(2012)
E112	Vigla, Rodia Monastery	Veikou(2012)
M1	Komanitze	Smyrlis(2016)
M2	Skoteinon	Smyrlis(2016)
M3	Galikos	Smyrlis(2016)
M4	Kalokairides	Smyrlis(2016)
M5	Raphalion	Smyrlis(2016)
M6	Abramitai-Neochorion	Smyrlis(2016)
M7	Bolbos	Smyrlis(2016)
M8	Loroton	Smyrlis(2016)

Code	Placename	Prime Source(s)
M9	[Oxynon(1)]	Smyrlis(2016)
M10	Oxynon(2)	Smyrlis(2016)
M11	Rosaion	Smyrlis(2016)
M12	[Stomion (1)]	Smyrlis(2016)
M13	(Stomion(2))	Smyrlis(2016)
M14	Mariskin	Smyrlis(2016)
M15	[Sibre]	Smyrlis(2016)
M16	Hagios Mamas (Metochion)	Smyrlis(2016)
M17	Hagios Mamas (village)	Smyrlis(2016)
M18	Hermeleia (Docheiariou)	Smyrlis(2016)
M19	Hermeleia (Lavra)	Smyrlis(2016)
M20	Hermeleia (Vatopedi)	Smyrlis(2016)
M21	Hermeleia (Xeropotamou)	Smyrlis(2016)
M23	[Neakitou(1)]	Smyrlis(2016)
M24	Neakitou (2)	Smyrlis(2016)
M25	[Kamena]	Smyrlis(2016)
M26	Libyzasda	Smyrlis(2016)
M27	Perigardikeia	Smyrlis(2016)
M28	Rebenikeia	Smyrlis(2016)
M29	[Diabripou]	Smyrlis(2016)
M30	Eladiaba	Smyrlis(2016)
M31	Hierissos (Iviron)	Smyrlis(2016)
M32	[Hierissos (Karakala)]	Smyrlis(2016)
M33	Hierissos(Xeropotamou)	Smyrlis(2016)
M34	Hierissos (Zographou)	Smyrlis(2016)
M35	[Katodaimones]	Smyrlis(2016)
M36	Preaulaka (Chilandar)	Smyrlis(2016)
M37	Preaulakia (Esphigmenou)	Smyrlis(2016)
M38	Preaulaka (Iviron)	Smyrlis(2016)
M39	Preaulaka (Lavra)	Smyrlis(2016)
M40	Prosphorion	Smyrlis(2016)
M41	Zygou	Smyrlis(2016)
M42	Chotlolibos	Smyrlis(2016)
M43	Semalton	Smyrlis(2016)
M44	Zabernikeia	Smyrlis(2016)
M45	Prinarion	Smyrlis(2016)
M101	Koroneia	Papaggelos(2000)

Code	Placename	Prime Source(s)
M102	Galatista	Papaggelos(2000)
M103	Pyrgoudia	Papaggelos(2000)
M104	Siderokausia	Papaggelos(2000)
M105		Smyrlis(2016)
M106	Ag.Nikolaoss (Amphipolis)	Papaggelos(2000)
M107	Apollonia	Smyrlis(2016)
M108	Orestes (Serres)	Smyrlis(2016)
M110	Koletsou, Vatopaidi	Smyrlis(2016)
M111	Debeliki	Papaggelos(2000)
M112	Kokkinolakka	Smyrlis(2016)
M113	Ag. Nikolaos	Smyrlis(2016)
M114	Psalidi	Smyrlis(2016)
M115	To Xenofi	Smyrlis(2016)
M116		Smyrlis(2016)
M117	Psiona, Pinson	Papaggelos(2000)
M118	Agios Paulos	Smyrlis(2016)
M119	Solen	Smyrlis(206)
M120	Sani	Papaggelos(2000)
M121	Marmarion, Amfipoli	Smyrlis(2016)
M122	Agios Georgios	Smyrlis(2016)
M123	Maurothalassa	Smyrlis(2016)
M124	Melissourgos	Papaggelos(2000)
M125	Ezeva	Smyrlis(2016)
M126		Smyrlis(2016)
M127	Ozolimnos	Papaggelos(2000)
M128	Skorpios	Papaggelos(2000)
M129	Loggos	Smyrlis(2016)
M130	Krouna, Ierissos	Papaggelos(2000)
M202	Epano Bolbos	Papaggelos(2000)
M203	Metochi Kastamonitou	Papaggelos(2000)
M203	Sosopoli	Papaggelos(2000)
M204	Metamorfose	Papaggelos(2000)
M109A	St.Sava (Hilandar)	Smyrlis(206)
M109B	King Muletin (Hilandar)	Smyrlis(2016)
M22A	Mariana	Smyrlis(2016)
M22B	Mariana (Olynthos)	Smyrlis(2016)
N9	Della Rocca, Kourounochori	S-K(2012)

Code	Placename	Prime Source(s)
N12	Paratrechou	S-K(2012)
N22	Oskelou	S-K(2012)
N51	Sommaripa, Aptsipape	S-K(2012)
N52	Gozadino, Koronos	S-K(2012)
N53	Frankou, Komiake	S-K(2012)
P13	AraxosVardia	Kourelis(2003)
P15	AroaniaTartares	Kourelis(2003)
P18	Chalandritsa	Kourelis(2003)
P27	Elis	Kourelis(2003)
P44	Kastelli	Kourelis(2003)
P51	Kleidi	Kourelis(2003)
P53	Kleitor Tourlada	Kourelis(2003)
P54	Kleitor SW	Kourelis(2003)
P58	Lasion ancient	Kourelis(2003)
P63	Linistena	Kourelis(2003)
P65	Mazeika (3)	Kourelis(2003)
P69	Movre	Kourelis(2003)
P97	Pournarokastro	Kourelis(2003)
P98	Psathpyrgos	Kourelis(2003)
P101	Pyrgos	Kourelis(2003)
P110	Skaphidia	Kourelis(2003)
P117	Stomion	Kourelis(2003)
P126	Xerochori	Kourelis(2003)
P201	Caracopi	Hodgetts-Lock(1996)
P202	Monista	Hodgetts-Lock(1996)
P203	Kastro Franco (Vounaria ?)	Hodgetts-Lock(1996)
P204	Kastro Leone (Palaiopyrgos)	Hodgetts-Lock(1996)
P206	Cosmina	Hodgetts-Lock(1996)
P208	Grisi (Akritochori)	Hodgetts-Lock(1996)
P209	La Canata	Hodgetts-Lock(1996)
P211	Longa	Hodgetts-Lock(1996)
P212	Manticori?	Hodgetts-Lock(1996)
P214	Castemou	Hodgetts-Lock(1996)
P217	Pila	Hodgetts-Lock(1996)
P220	Vounaria	Hodgetts-Lock(1996)
P221	Chrysokellaria	Author: Hypothesis as link
P222	Sapienza	Gertwagen 2000

Code	Placename	Prime Source(s)
P301	Foinikounta (Loutsa)	Kontogiannis(2012)
P302	Karapatas (Memi)	Kontogiannis(2012)
R1	Ag. Minas	Lock(2005)
R3	Amartos	Lock(2005)
R4	Aphandou	Lock(2005)
R5	Cape Phoka	Lock(2005)
R6	Cape Vigli	Lock(2005)
R7	Dhimilia	Lock(2005)
R8	Gennadi	Lock(2005)
R9	Glyfada	Lock(2005)
R10	Soroni	Lock(2005)
R11	Kritikou	Lock(2005)
R12	Lachania	Lock(2005)
R13	Phourni	Lock(2005)
R14	Pyrgos	Lock(2005)
R17	Kamiros Skala	Lock(2005)
R21	Monolithos	Lock(2005)
R22	Stegna	Lock(2005)
T1	Konikofolies	Moschonas(1966)
T2	Katafygi	Moschonas(1966)
T3	Kato Semadaki	Moschonas(1966)
T4	Melissobounia 2	Moschonas(1966)
T5	Mantrokleistes	Moschonas(1966)
T6	Schoinaki 1	Moschonas(1966)
T7	Dasfage	Moschonas(1966)
T8	Tsiknias 2	Moschonas(1966)
T9	Tsiknias 1	Moschonas(1966)
T10	Faneromeni	Moschonas(1966)
T11	Kyra ton Aggelon	Moschonas(1966)
T12	Prassa	Moschonas(1966)
T13	Agios Ioannis	Moschonas(1966)
T14	Agios Sostis	Moschonas(1966)
T15	Kantzilieri	Moschonas(1966)
T16	Stavros	Moschonas(1966)
T17	Pachy Akrotiri	Moschonas(1966)
T18	Agios Nikolaos	Moschonas(1966)
T19	Psari Plaka	Moschonas(1966)

Code	Placename	Prime Source(s)
T20	Kastria	Moschonas(1966)
T21	Pachy Akrotiri 2	Moschonas(1966)
T22	Melissobouni 1	Moschonas(1966)
T23	Schoinaki 2	Moschonas(1966)
T24	Obreokastro	Moschonas(1966)
T25		Koutelakis(2001)
T26		Koutelakis(2001)
T101		Koutelakis(2001)
T102		Koutelakis(2001)
T103		Koutelakis(2001)
T104		Koutelakis(2001)
T105		Koutelakis(2001)
T106		Koutelakis(2001)
T107		Koutelakis(2001)
T108		Koutelakis(2001)
T109		Koutelakis(2001)
T110		Koutelakis(2001)
T111	Avdos	Koutelakis(2001)
T112		Koutelakis(2001)
T113		Koutelakis(2001)
T114		Koutelakis(2001)
T115		Koutelakis(2001)
T116	Smovolo, Ag.Sostis	Koutelakis(2001)
T117		Koutelakis(2001)
TH1	Ptelion	Stantzouris, Paschalis (2016)

APPENDIX 8 - TECHNICAL ASPECTS OF TOWER CONSTRUCTION

8.1 Technical aspects of wooden beam size relative to strength

Any beam has an elasticity and as weight is placed at its centre it will distort. For short beams the movement is so small as to be irrelevant, but as length increases this distortion creates an observable bowing, and eventually it will reach breaking point. **Figure A8.1** examines the strength of wooden beams by plotting beam length against the area of cross-section required to provide a stable floor.[1377]

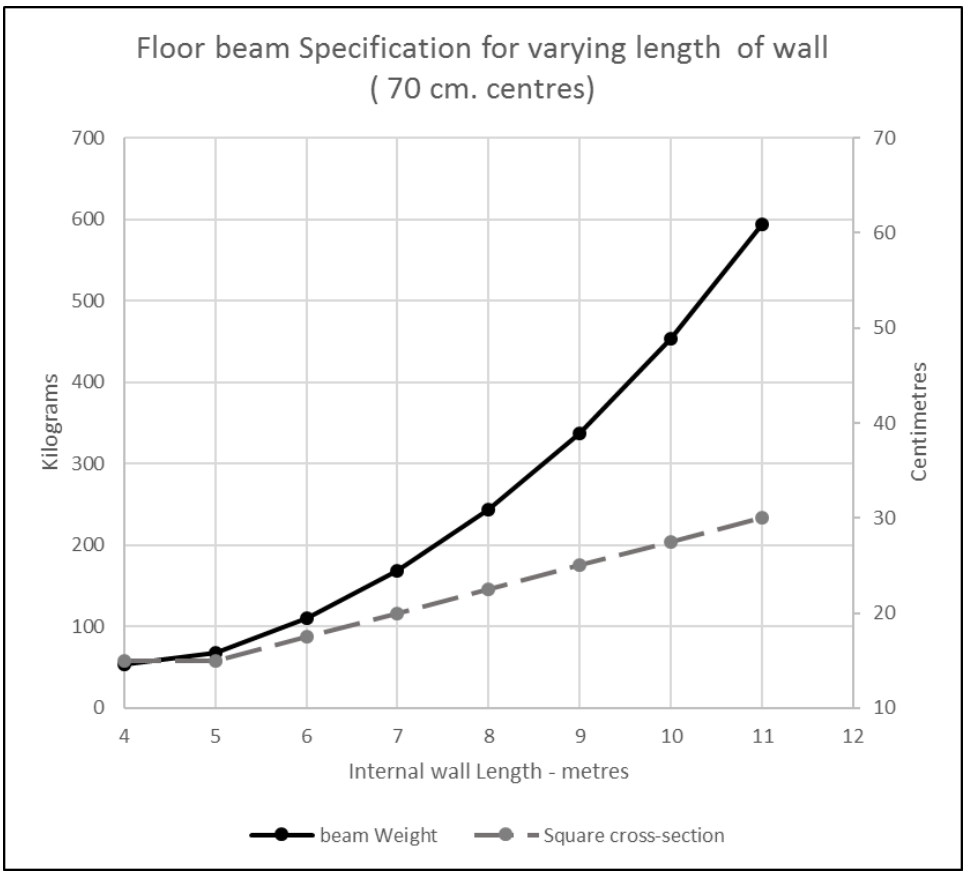


Figure A 8.1 - Differing beam specifications to provide a stable floor[1378]

This assumes the use of Aleppo pine (pinus halepensis) as the base beam wood, a maximum deflection allowed of 5 mm. per metre and a total load of 190 kg per square metre

[1377] A simulation study has been undertaken of a two storey corridor house in the Peloponnese during the Helladic to Hellenistic periods, whose building materials (wood and mud-brick) and methods appear very similar to the structures in the present study - Kormann et al. (2015) "Structural Integrity Modelling of an Early Bronze Age "Corridor House" in Helike of Achaea, NW Peloponnese". In Campana, et al. (Eds.) **43rd annual conference on computer applications and quantitative methods in archaeology, Oxford**. Archaeopress.

[1378] Thanks to Simon Blackler of Nicholls Basker Partners (Consulting structural and Civil Engineers) for the detailed calculations and interpretations of elasticity and sheer strength required to prepare this chart.

– equivalent to current standard imposed floor loadings for domestic properties within the UK. The assumption of 70 cm. centres is based on the remains of the beams of a floor seen on the southern tower at Mytikas (**CW2**) and the evidence of post hole spacing seen on other towers. It is obviously possible to reduce the spacing of beams to provide more strength, but this may not reduce sufficiently the elasticity of the floor such that no slope is recognisable. At each wall length, therefore, the engineer needs to make a decision between a number of parameters - to minimise materials usage and cost yet provide sufficient sheer strength and reduce floor distortion to within acceptable bounds.

Figure A8.1 shows that, while the external dimensions of the wooden beam to support each floor of a residential building increase arithmetically with its length, beyond the six metre point, which equates to an external wall length of 8 to 9 metres (depending on wall thickness) there is a substantial geometric increase in the cross-section (the square of the sides) and thus the weight of the beam. A beam of 150 kg. can be handled by a team of four men or carried by a mule. Beyond this, even assuming that lumber of this size is readily available, the process of cutting, trimming, transport and positioning becomes substantially more expensive. Although evidence of the use of a central support beam is sometimes seen (e.g Mistros – **CN24**) usually either post-holes for beams up to 15 cm. cross-section or a simple 10 – 15 cm. ledge were found.

An early example of a similar challenge an engineer faced can be found in the so-called 'Tzimiskes' tower (see **section 9.5.2**) at the Great Lavra monastery on Mt. Athos dated to the 10/11th century. This elite construction measures 14 x 11.5 m. externally and internal floor beams spanning nearly 9 m. were clearly judged inadequate. The solution identified was to construct a central rectangular pilaster to support four arches extending to piers in the centre of each wall as a structural base for the floor, whose basic supports would therefore be limited in length to less than 5 m.[1379]

A practical modern example of this problem can be seen in the engineering study of the roof of the tower at Basiliko (**CW5**) as part of its recent renovation. This excluded the construction of a flat roof using a 6.50m. beam with a 0.14 x 0.16 m. cross-section (to fit the original post holes) as being inadequate without further support, and thus sets the upper length limit for this size beam.[1380]

[1379] Voyadjis (1996) "The 'Tzimiskes' tower of the Great Lavra Monastery". In Bryer and Cunningham (Eds.) **Mount Athos and Byzantine monasticism : papers from the twenty-eighth Spring Symposium of Byzantine Studies, Birmingham, March 1994**. , Variorum. 198-203

[1380] Angeli and Stylianou (2012) "Αποκατάσταση του μεσαιωνικού πύργου στο Βασιλικό Ευβοίας". In Damoulos (Ed.) **Η Οχυρωματική Αρχιτεκτονική στο Αιγαίο και ο Μεσαιωνικός Οικισμός του Αναβάτου Χίου, 26-28 September 2008**. Chios. 41-48.

8.2 Analysis of Homogeneity of the 'solar' tower population

The extent to which towers are square can be assessed visually by plotting the length of two adjoining sides (**X** and **Y**) on a graph as in **figure A8.1.** A totally square tower appears on the 45^{o} line, indicating that **X** = **Y.** Alternatively, taking a group of towers, a comparison can be made of the mean of the differences between the lengths of the two walls to the mean wall length.

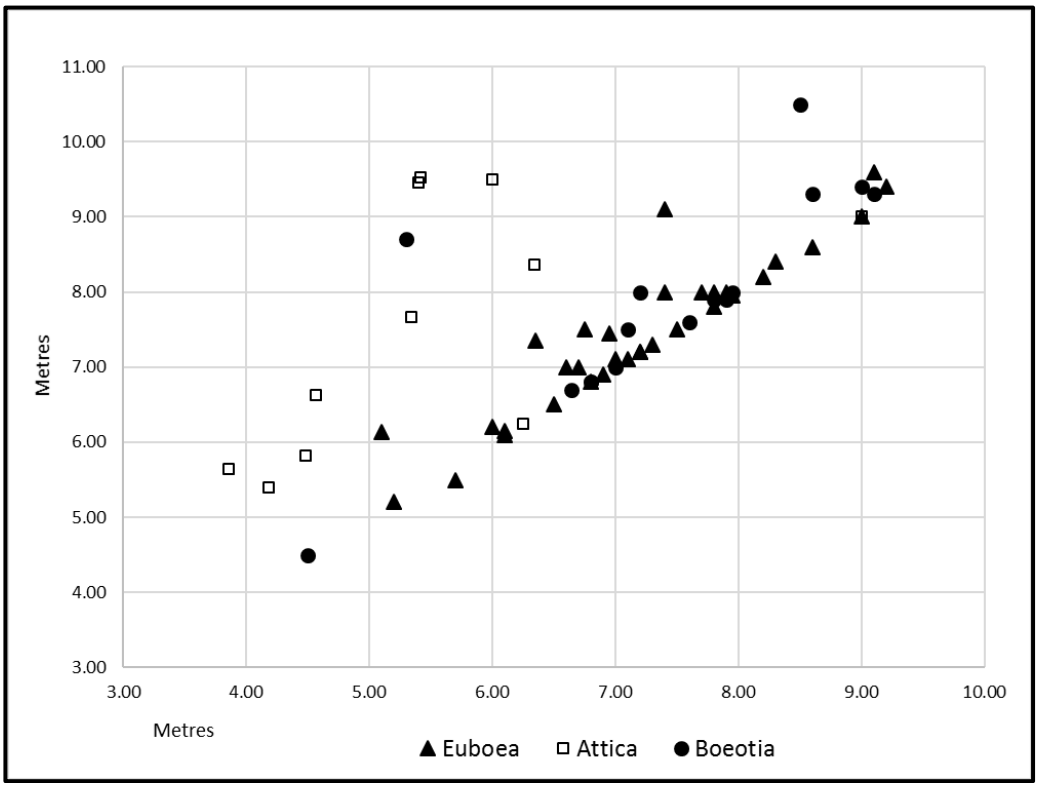


Figure A8.2 – Scatter diagram of tower dimensions in Euboea, Boeotia and Attica[1381]

For 33 towers on Euboea, where we have measurements, the mean difference is 0.24 m. – only 3.2% of the mean wall length – indicating that all towers are essentially square (the shortest wall is on average 96.8% of the longest) with a mean external dimension of 7.31 m. and a standard deviation of 1.05 m. – i.e the wall length varies generally between 6.26m. and 8.36m. Deducting the mean wall thickness of 1.35m.[1382] (standard deviation 0.36m.) we can estimate that the average internal wall length is 4.61m., which means the average internal area is 21 sq.m.- a figure significantly different (relatively only 43%) to the 49 sq.m. internal area of the smallest of the 'elite' hall tower group discussed in **chapter 8**.[1383] There is thus a clear differentiation between these two groups.

[1381] These are drawn from Lock(1986) and Langdon(1995). For consistency purposes the X dimension always shows the shortest wall length and the Y dimension the longest

[1382] This is for a smaller group of 21 towers whose walls could be measured.

[1383] The mean internal area of the 'elite' group is significantly larger again but their sizes vary so considerably that the mean may not be a correct reflection of the group.

Region	Sample size of Towers	Avg. Wall length (metres)	Square - ness	Standard Deviation (wall length)	Avg. wall thickness (metres)	Average Footprint (Sq.m.)
Solar towers						
North (NW & NE)	9	7.95	95%	1.05	1.13	62.9
Central-North (CN)	11	6.75	97%	1.15	1.31	46.1
Central (CW, CE, SC)	13	7.39	98%	0.67	1.54	55.0
Total Euboea	**33**	**7.31**	**97%**	**1.05**	**1.35**	**54.4**
Attica	11	6.55	69%	1.84	1.05	43.1
Boeotia[1384]	16	7.62	93%	1.34	1.58	59.2
N. Greece	6	7.77	97%	0.67	U/A	60.5
Keos	3	7.57	89%	1.56	.97	58.9
Greece – Hall towers	16	11.46	82%	3.02	1.46	134.9
Kingdom of Jerusalem	43	12.21	82%	4.10	2.59	203.9
Italy[1385]	22	6.99	92%	1.40	1.60	50.3
UK – Hall towers[1386]	55	***12.13***	75%	4.59	U/A	U/A
UK - base[1387]	12	***5.85***	84%	1.36	U/A	U/A

Table A8.1 – Tower Wall Dimensions and Homogeneity by Region

To identify if there is consistency between the regions of Euboea we can compare those measured from the north (NE and NW), the Central-North (CN) and the centre/south (CE, CW, SC) with the total. The results of this are shown in **table A8.1** together with similar results for other regions of Greece and farther afield, where we have sufficiently reliable data.

There is a significant difference in the squareness of the towers on Euboea and in Boeotia compared to those in Attica. The former both have a squareness factor above 93%, whilst that for Attica is only 69%. Additionally, if we look at the variability of the shortest and longest sides of the Attica towers separately, the standard deviation of each is 1.42m. and

[1384] Two outliers – **Palaiopyrgos** (**B13** – 5.30 x 8.70m.) and **Amfikleia** (**B26** – 8.50 x 10.50m.) – significantly reduce the squareness factor, suggesting that these two towers should be studied separately (Elite or Ottoman?) from the main group.
[1385] No large elite style towers (as judged by their base dimensions) were identified in the Pringle Tuscania sample.
[1386] Internal wall lengths for UK measurements.
[1387] To be consistent with the Greek data, this covers only those noted as solar keeps with internal wall length less than 7.0 metres.

1.67m. respectively, well-exceeding that for the total of Euboea (1.05m.) and Boeotia (1.34m.).

APPENDIX 9 COMMUNICATIONS NETWORKS

In chapter 9 the tower networks identified within Central Greece were summarised. This appendix studies the technical aspects of signalling, its implications for communication network specification and the details of each of the networks identified. It then moves to other networks identified on Chios and in Messenia, Southern Peloponnese.

9.1 The Method of communication and tower specification

The way in which a message is transmitted is defined essentially by the distance between nodes in a chain. These may vary from a few kilometres – such as on Genoese Chios – up to over 100 kilometres for the network documented between Cilicia and Constantinople in the 9th century.[1388] For the shorter distances a simple flag,[1389] ball (**figure A9.1c**), gun (from 14th century), mirror (when there is sun),[1390] torch or burning brazier with smoke (**figure A9.1a and A9.1b**)[1391] would have been sufficient for

[1388] Haldon (Ed.) (1990) **Three treatises on imperial military expeditions / Constantine Porphyrogenitus; introduction, edition, translation and commentary**, Vienna: Verlag der Österreichischen Akademie der Wissenschaften., text C, R.492, ll.618-638 and note on p.254 ; Bekker J.(ed.) (1833) *Symeon Magister et Logotheta*, Bonn **in** Pattenden (1983), note 1. Each source notes the nodes in the chain of beacons, but the latter that the system of communication, designed by Leo the Philosopher in the time of the emperor Theophilos (r.829-842), was based on a coding system linked to lighting the beacon at a fixed time of day.

[1389] Leo VI, writing at the beginning of the 10th century, provides detailed instructions of how signals may be sent by flags between ships at sea. Such complex signalling seems to have been well-known during the Middle Byzantine period, since he refers to their knowledge by 'τοῖς παλαιοῖς'. He also advises that senior officers need to know (and train in) the code being used to transmit messages and signals - Dennis (Ed.) (2010) **The Taktika of Leo VI [text, translation, and commentary]**, Washington D.C.: Dumbarton Oaks, 522, 19:271-286; See also Haldon (Ed.) (2014) **A critical commentary on the Taktika of Leo VI**, Washington, D.C.: Dumbarton Oaks.,

An earlier version of these instructions, found in Leo VI's Ναυμαχικά,, is slightly more precise '*The signal should indicate commands by being held upright, or being inclined to the right or left, or being shifted to the right again or to the left, or by being waved, or raised or lowered, or completely removed, or having its position moved, or being changed by having its "head" (kephalē) sometimes made to look different, or through patterns or colours, as used to be done in the past'* - Leo_VI (2006) "Ναυμαχικά Λέοντος Βασιλεώς (a)". In Pryor and Jeffreys (Eds.) **The Age of the DROMON: The Byzantine Navy ca 500-1204 (The Medieval Mediterranean)**. Leiden: Brill. 483-519.

[1390] A mirror, together with the use of smoke, is suggested for signalling between ships in a document from the 9th century – Magistros (2006) "Ναυμαχία Συριανού Μαγιστρού". In Pryor (Ed.) **The Age of the DROMON: The Byzantine Navy ca 500-1204 (The Medieval Mediterranean) (9789004151970): John Pryor, Elizabeth M Jeffreys**. Leiden: Brill. 455-481.

[1391] The use of smoke and fire is noted in a report in the *Archivio del Duca di Candia* dated to 1621 by Gerolamo Da Lezze, then serving as '*Capitano General, Sindico et Inquisitor in Tine'*, on the poor state of the network on the island of Tinos and his orders for improvement. He ordained (*folio 20*) by day the use of puffs of smoke equal to the number of ships (or a large repeated smoke cloud if a large fleet) identified by a watchman. Analogously, by night a number of small fires were to be lit or a large one (repeated) in the event of the approach of a fleet. Since many coastal watchpoints were not directly visible in the interior, intermediary stations were set up with a guard who would set off a cannon *(masculo*).- original document (in Italian) **in** Moschonas (1965-66) Η οργάνωσις των ακτοφρουρών της Τήνου υπο του Βενέτου Συνδίκου Ιερωνύμου Da Lezze (1621). **Ἐπετηρὶς Ἑταιρείας Κυκλαδικῶν Μελετῶν**, 5: 668-687.

communication.[1392] Beyond this a large fire (**figure 9.1d**) could have been lit on the battlements of a tower.[1393]

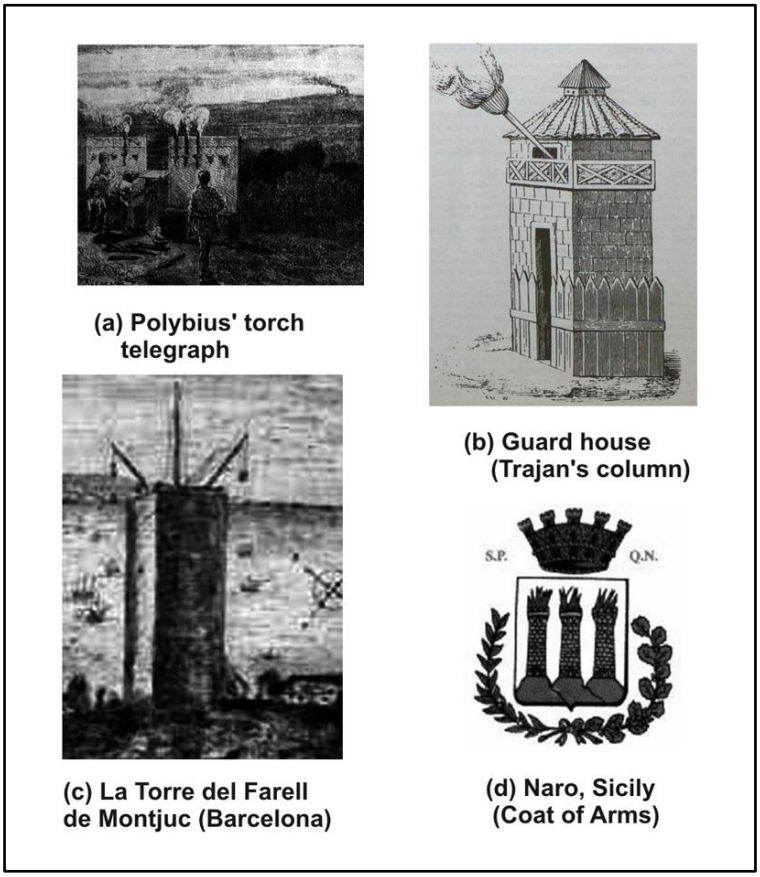


Figure A9.1 – Beacon type illustrations[1394]

As the distance between nodes increased, so the position of the beacon would have needed to be increasingly clear with a backdrop of the sky against which a smoke signal (by day) could be easily spotted, and a fire (at night) would have needed to be more intense.[1395] At some point the tower, except possibly to protect the occupants, would have

[1392] Mirrors has also been suggested in areas with a lack of vegetation - Zitterkopf and Sidebotham (1989). In regions under Mamluk control '*dovecotes, fire and smoke and hand'* were used to link fortifications - Raphael (2011) **Muslim Fortresses in the Levant: between Crusaders and Mongols**. Routledge, 210. In the Iberian peninsula a map dated to 1449 by Gabriel Valseca, and a drawing from 1563 by Anton Van den Wyngaerde shows balls hanging off gantries on the top of the Torre del Farell de Montjuic close to Barcelona - Pérez (2009).

[1393] An example of this can be seen on the coat of arms of the town of Naro in Sicily - Modeo and Cutaia (2010).

[1394] Sources:- **(a) Musée de la Poste,** Paris **in** Holzmann and Pehrson (1994), 23; **(b)** Hennig (1908) **in** Holzmann and Pehrson (1994), 28; **(c)** Pérez (2009); **(d)** Modeo and Cutaia (2010).

[1395] Traditional studies of inter-visibility have simply looked at height and the curvature of the earth. However, when the contrast between the target and its background falls below 2% the target is no longer visible to the naked eye. In areas around the Mediterranean, where humidity is high (many water particles in the air), the atmosphere is affected by sand or dust (a common occurrence in the late summer with the *Meltemi* winds), there are high winds over the sea pushing sea salt into the air or it is raining, this distance is severely restricted. Practical average year-round visibility in coastal areas is closer to 30km. rather than the historically proposed 100km. - Brugge (2017) "To see or not to see: a study in maritime visibility". In Tankosic, et al. (Eds.) **An**

become superfluous because of the great height required to make a long-distance signal and useless, since the size of beacon required would have far outrun the standard 8m. x 8m. tower configuration.

At this point a fire platform or pit would have been constructed. Based on the 1977 re-enactment of the beacon system used to provide warning of the approach of the Spanish armada in Elizabethan England, a fire measuring 9m. x 9m. was required to send a signal over a distance of about 48 km.[1396] This is approximately two thirds of an Arc minute at this distance,[1397] and correlates with the theoretical calculation drawn from a chart used for calculating the visibility of modern lighthouses, which is used as a base in **table A9.1** to estimate the probable size and type of signal required at various inter-beacon distances.

The above suggests that beyond a distance of about 15km. the tower as beacon was no longer relevant and, even for shorter distances, where there was a good vantage point - unless there was a clear security threat - we are likely to find little more than a simple observation point and refuge from the elements for the sentries on duty with a fire pit or platform placed nearby, similar to those identified in Byzantine Sicily.[1398]

Island between Two Worlds: the Archaeology of Euboea from Prehistoric to Byzantine times, July 2013, Eretria. Norwegian Institute at Athens. 613-623; Average measured visibility around the National Observatory of Athens in the period 1931-1948 was approx.. 25 km.with a monthly variation from 19 up to 31 km. - Founda et al. (2016) Long-term visibility variation in Athens (1931–2013): a proxy for local and regional atmospheric aerosol loads. **Atmospheric Chemistry and Physics** [Accessed 25/11/2017], www.atmos-chem-phys.net/16/11219/2016/

Official nautical publications list 9 levels of visibility- below level 4 (thin fog) visibility < 1.8km., level 5(Haze) < 3.6km., level 6(light haze) < 10km., level 7(clear) < 20km., level 8(very clear) < 50km., level 9(exceptionally clear) > 50km. Identification of a point of light is also dependent on its colour and luminous intensity, the latter of which is defined as a *candela* – approximately the light emitted by a common candle (formally defined as 'The SI unit of luminous intensity. One candela is the luminous intensity, in a given direction, of a source that emits monochromatic radiation of frequency 540×10^{12} Hz and that has a radiant intensity in that direction of 1/683 watt per steradian' - OED). Assuming that a candle provides light from 0.2 square centimetre (V. Aschoff (1980) Über den byzantinlischen Feuertelegraphen und Leon den Mathematiker, Deutsches Museum **in** .Pattenden (1983); Holzmann and Pehrson (1994), 247-248) a fire 4 m. wide and 4 m. high of a similar intensity will have a total intensity of approximately 32,000 *candelas*, and with level 6 (slight haze) visibility may be seen at night up to 20 km. - **The American Practical navigator [originally by Nathaniel Bowditch]**. (2002) Bethesda, Maryland: National Imagery and Mapping Agency, ch.4; **Standardization of List of Lights and Fog Signals** (2004) [online]. https://www.iho.int/iho_pubs/standard/S12_ENG.pdf International Hydrographic organization [Accessed 27/9/2017];

[1396] Pattenden (1983). Over a distance of 30 miles (48 km.) a fire base of 9m. x 9m was constructed and found to work in clear weather. The system delivered a night-time connection from London to the Shetland islands - over 600 miles (965 km.) away - in under an hour. This provided good evidence that the English beacon system at the time of the Spanish Armada (1588), which had nodes approximately 18km. apart, should have worked well in most weather conditions.

[1397] At 48 km. 1 arc minute = $2.\pi.48 / (360 \times 60) = 14$m.(approx.)

[1398] These measured 60 – 90 cm. **x** 60 - 90 cm. **x** 20 - 40 cm. with their use possibly dated to the 7th to 9th centuries during the period of Arab invasion threat Close-by, walls (60-100cm. thick made of stones bonded with mortar) of a possible fortification or buildings have also sometimes been identified. These vary in construction style between Byzantine and Arab-Norman. Certain structures also appear to have been built of wood - Modeo and Cutaia (2010).

Signal type	Signal width & height	View distance for 'fire light'[1399]			Observer height[1400]
		Level 4 (Thin fog)	Level 6 (Light haze)	Level 8[1401] (Very clear)	
Lamps, torches,[1402] flags, balls, bells (tower)	0.2m.	<3km.	7 km.	13 km.	>6m.
Brazier or flags/balls (tower)	0.5m.	3 – 5 km.	10 km.	25km.	> 25m.
Fire or smoke (fire pit or tower)	2m.	5km	17 km.	50km.	>85m.[1403]
Fire or smoke (fire pit / platform)	4m.	6 km.	20 km.	62 km.	>140m.
Fire or smoke (fire pit / platform)	10m.	7 km.	25 km.	83 km.	>280m.
Fire or smoke (fire pit / platform)	>15m.	7.4 km.	28km.	100km	>450m.

Table A9.1 – Indicative Beacon visibility distances

9.2 Indications of a Middle Byzantine Communication network

A defensive network requires both organisation and, by inference, a strong central power[1404] - one with the naval and military capability to repel incursions.[1405] Thus, we

[1399] A 'fire light' has been used in the table, but obviously a fire can generate a smoke cloud significantly larger than itself and therefore during the day, when there are no clouds in the sky, view distance would have been substantially higher. Flags and balls would have had a relatively much-restricted view distance and were more sensitive to their contrast with the background. The colour and intensity of a 'fire light' is also very variable so all figures should be considered indicative only.

[1400] The observer height is that for the longest view- distance. It assumes that the spot observed is at a height of > 4m. The observer height required is that above ALL the surrounding landscape between the two nodes. The existence of a small hill in between the target and observer requires that to be inter-visible they need to be analogously higher. The further its location away from the centre point towards the observer, if the hill is lower than the height of the observer, it improves his viewshed but, if it is higher, it impedes the view - drawn from the ***Luminous Range Diagram*** in the 'Standardization of List of Lights and Fog Signals (2004)'..

[1401] Level 8 (very clear) visibility was probably only achieved on a regular basis in the high plains of Anatolia. Practical visibility in the areas under study around the coast of Greece due to higher humidity levels is generally limited to under 35 km – V. Aschoff (1980) **in** .Pattenden (1983).

[1402] These appear to be used on towers shown on Trajan's column - Holzmann and Pehrson (1994), 23; a similar system may have been in use on the 350 towers estimated to have been around Rome in the 12th c. - Montanari (2014). The evidence for the use of torches is not, however, conclusive and the torches suspended from the towers on Trajan's column may have been to guide shipping on the Danube - Southern (1990) Signals versus Illumination on Roman Frontiers. **Britannia**, 21: 233-242.

[1403] A larger 3m. x 3m. fire or brazier on an 8m. x8m. tower was most probably impractical since, assuming walls of 1m., there would only have been 1.5m. of clear room around the fire – insufficient for the person stoking the fire not to get burnt himself!

[1404] Raphael, writing about Moslem fortifications, notes how, because of their relatively weak navy, the Mamluks established small garrisons in fortified towers along the coast. She quotes Keegan (1993) who notes that '*whenever there is a strong central government one invariably finds the construction of strategic defences on the periphery*' - Raphael (2011); Keegan (1993) **A history of warfare**. New York, 142-146.

[1405] References to the naval resources in the region over this period are few. We have a record of the Thematic fleet being involved in the revolt of 727 against the iconoclast Leo III - Herrin (1972) **The social and economic structure of Central Greece in the late twelfth century**. PhD Thesis, University of Birmingham,

should expect to find one in Central Greece not only during the Middle Byzantine period (9th to early 12th centuries)[1406] linking Thebes, the capital of the *Thema* of Greece,[1407] to key observation points but a similar one for ***Negroponte*** in the later centuries of the Frankish period (14th and 15thc.)

Chapter 6 provided details of the surviving archaeological evidence on Middle Byzantine fortifications in Euboea. Emergency communication between them may have been by road, but these are slow, and no surviving paved road has been identified anywhere on the island.[1408] Essentially some form of signal would have been essential.

Two types of tower – **A1** and **C1** - are identified in **chapter 8** as probably Byzantine in origin. Of these the most important for our purposes is the *pyrgari* **(A1**), a line of which is placed in clearly strategic positions along the coasts of Attica and Euboea (see **figure A9.2**). Strangely no *pyrgari* was found in the northern section of the island, nor was there any clearly defined communication network and few fortresses were inter-visible, something that may suggest communication was direct from the Lichada peninsula (**NW6)** to the mainland and then down the Kifissos river valley to Thebes.[1409] Likewise, in the central eastern region – the plain between Aliberi (**CE1**) and Kymē (**CE31**) - there are few towers, but they have no role here since the strong fortresses, which protect the area, are inter-visible.

95. In the expedition against Crete in 911/12 the *thema* of Hellas supplied 10 dromones with 230 rowers and 70 soldiers each – De Ceremoniis , 659 **in** Idem(1972), 95

[1406] During the period of Arab occupation of Crete (820's to 961) the existence of any network would have been especially critical.

[1407] The existence of any network at an earlier date must have been sporadic. Documentary evidence appears to suggest that in the first quarter of the 7th century (? 615) or shortly thereafter following the defeat of the Byzantine navy off the coast of Lycia in 655 Slavic tribes had pillaged '*all Thessaly, and the islands about it and those about Hellas. They pillaged also the Cyclades, all Achaea….*' However, it is unclear whether the reference to '*Hellas*' is to that of classical antiquity or the *thema*, which was created by Justinian II between 687 and 695. We know that Skiathos at the entrance to the Gulf of North Euboea was deserted as a result, but not whether Euboea suffered the same fate. Rather than the probable 9th century dating a network may thus have been originally set up as part of the Justinianic fortification process in the 6th century or come into being as a result of a new defensive strategy with the separation of the Peloponnese from the *thema* of Hellas in the late 8th century – Miracula Sancti Demetrii Martyris Acta, Migne, Pat.Gr., 116:1265 - note 12 **in** Charanis (1970) Kouver, the Chronology of his Activities and their Ethnic Effects on the Regions around Thessalonica. **Balkan studies**, 11(2): 229-248; Nesbitt and Oikonomides (eds.) (1994) **Catalogue of Byzantine seals at Dumbarton Oaks and in the Fogg Museum of Art**, Washington, D.C.: Dumbarton Oaks Research Library and Collection, 62.

[1408] The 7 kms. road linking the port of Oreoi and Istiaia in the north of the island, which passes directly over a flat plain and was important for import and export of goods, had probably been paved in Roman times, yet Buchon on his journey along it in 1841 complains about the bad surface. If this was the state of a primary route then the state of the many mountain roads would have been much worse. He notes, too, that travelling by horse he needed a whole day from the village of Prokope (**NE18)** to Chalkida, a distance of 40km. - Buchon (1911), 38.

[1409] This can only be left as a conjecture, since analysis of mainland networks is beyond the remit of this thesis and must therefore remain as a key area of future research. The geographical position of Thebes, however, places it at the centre of the *Thema* of Greece: if there did exist a network out over Euboea protecting the region against attack from the Aegean, it is most probable that similar networks existed down to Athens (the Saronic Gulf), Corinth (Gulf of Corinth) and westwards to Livadeia, Davleia and the northern borderlands).

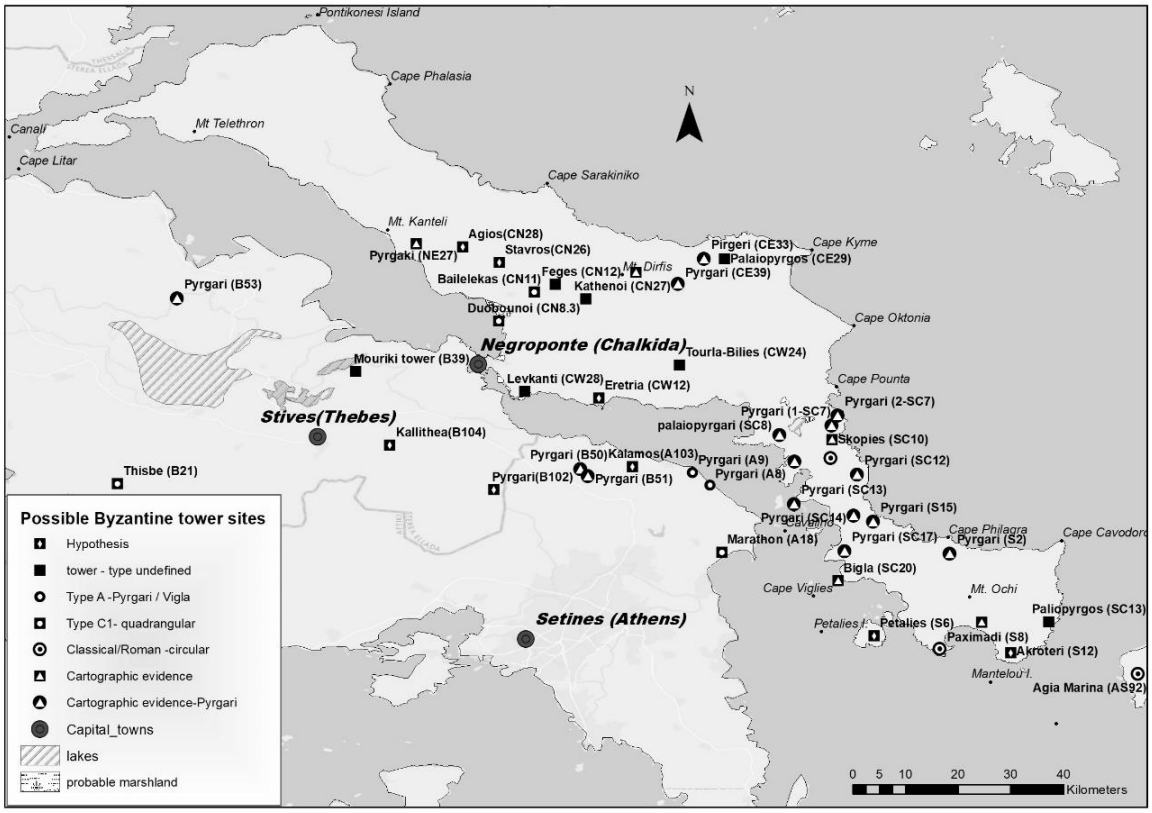


Figure A9.2 – Possible Byzantine tower sites in Euboea, Boeotia and Attica

While tower types **A1** and **C1** have a probable Byzantine origin, some recorded towers have been hypothesised as nodes because they exist in settlements with a recognised Byzantine base (e.g. Fēges (**CN12**) and Kathenoi (**CN27**)),[1410] and others on the headland to the south of the island (e.g. Akrotiri (**S12**) and on the island of ***Petalies*** (**S6**)) – both points critical for controlling the southern and western approaches and for onward communication to Andros to the southeast.[1411] Two circular towers of classical origin, but with traces of medieval occupation, have also been included, as have others with names suggesting their role (*'vigla'),* position *('…thea'* - view) or age ('*palaio*' – old), although the latter designations can often be misleading. For Chalkida it is assumed there was a beacon point in the ancient citadel, since in the early 9th century the fortress on the strait had possibly not yet been constructed in its final medieval form.

Map 9.1 shows the fortifications probably in use on the island in the Middle Byzantine period, indicating where there was direct line-of sight between them and, if not, how this might have been achieved using intermediary beacons.[1412] Assuming the central

[1410] Since we cannot be sure about the exact dating of settlements there is potentially a large margin of error here, although, as the availability of water was a key location factor and many rivers are only intermittent, there is some likelihood that location changes were only over short distances, and therefore are not relevant at this level of analysis.

[1411] These are both remote places, difficult to reach, and neither appears to have been researched in detail on the ground.

[1412] For clarity not all line-of-sight connections are shown. For full detail check on larger scale **maps 2.1 – 2.10**.

administrative point was the capital of the *Thema* at Thebes we can identify three communication chains.[1413]

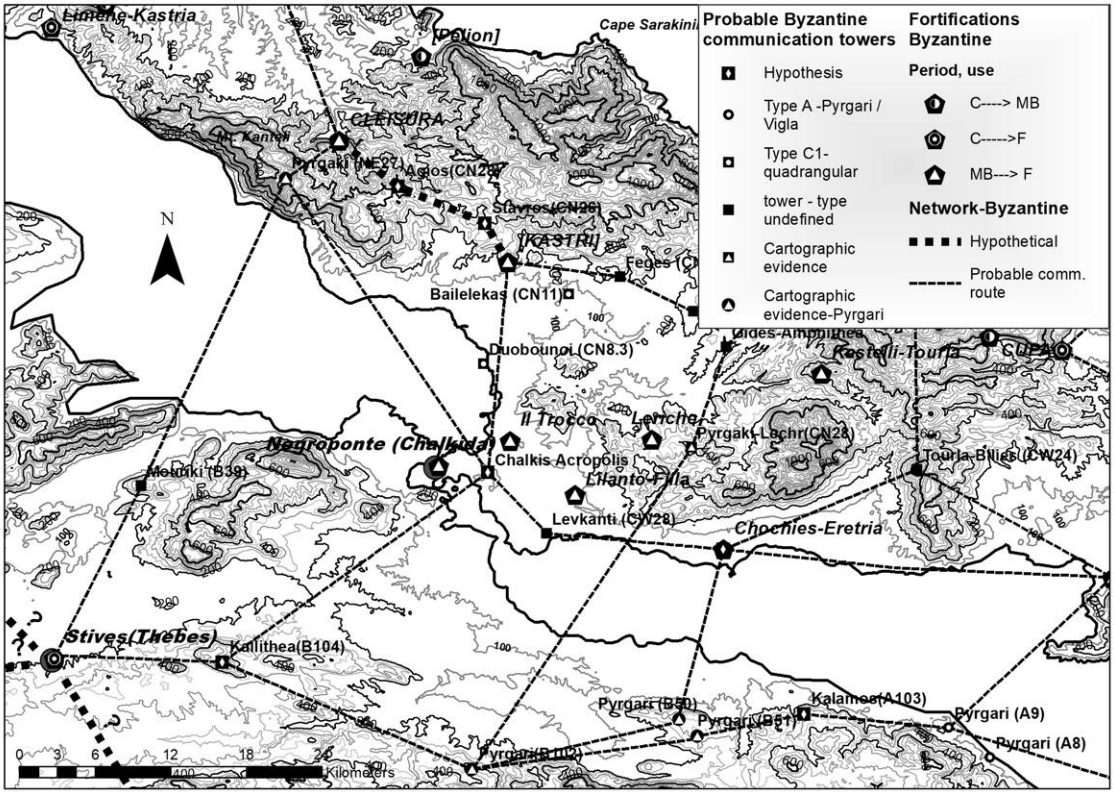


Figure A9.3 – Boeotian beacon chains to eastern coast

The first provides a link via ***Cleisura*** to Cape Phalasia (Kotsikia) on the north-eastern Aegean coast of Euboea with potential for a signal to be transferred onwards to Thessaloniki and Chalkidiki, although probably its prime use would have been to warn the fleet, possibly stationed close to the Euripos strait,[1414] of an approaching enemy from the northern Aegean. The second chain links Thebes to the eastern coast,with three branches to the Aegean coast

[1413] The link to Thebes depends on a tower – Mourliki (**B39**) - noted by Bintliff, whose sketch map is only small scale. I have attempted to place it in the most obvious position, but this requires formal confirmation - Bintliff (2007) "Current Research on the Settlement of Boeotia in the Medieval and Early Modern Era: The Boeotia Village History Project". In Fittschen (Ed.) **Historische Landeskunde and Epigraphik in Griechenland**. Münster: Scriptorium. 217-227.

[1414] In 1091, for instance, John Doukas had assembled his fleet in the ports of Euboea, whilst in 1148-49 the Euboean contingent was a not negligible part of the fleet in Corfu - Malamut (1988) **Les îles de l'empire byzantin, VIIIe-XIIe siècles**. Paris: Sorbonne, 603. Malamut suggests (p.611) that the fortress at ***Negroponte*** (Euripos) was constructed as part of the Justinianic fortification policy, but an exact date is unknown. Ceramic evidence from excavations within its confines over recent years indicates the 9th century, although this does not preclude the existence of an earlier fort - Skartzi and Vaxevanis (2016) "Η Χαλκίδα κατά τους Μεσοβυζαντινούς χρόνους και την Εποχή της Λατινοκρατίας: η μαρτυρία της κεραμικής (9ος - 15ος αι.)". In Tankosic, et al. (Eds.) **An Island between Two Worlds: the Archaeology of Euboea from Prehistoric to Byzantine times, July 2013, Eretria**. Norwegian Institute at Athens. 593-612. The earliest reference to a bishopric here is from 867, and of the fortress walls, when it was besieged by the Emir of Tarsus, in c.880 -Kalamara (2016); Kontogiannis (2012a).

of Euboea - one via the old site of ***Chalkis,*** a second directly over the saddle at Mt Dirfis (confirming the hypothesis of Koder(1973)), and a third via central Euboea.[1415].

The primary chain, however, runs in an almost straight line, east through the mountains to Pyrgari (**A9**), across to Euboea and then down the coast of the island to Andros and the islands of the central Aegean. It is based on four hilltops named '*pyrgari*' and two villages known as *Kallithea* (good view) and *Amfithea* (double view). It would have required careful laying out. Thus, the tower in Thebes is not located at the highest point of the town, but in order to have a view around a hill to *Kallithea*. The chain also divides in the centre, one beacon indicating a message from the south via *Amfithea* (Kalamos – see below), the other from the northeast via *Chochies-Eretria.*

Given this level of sophistication we must conjecture that other chains existed up the Kifissos river valley to the northwest of Boeotia via *pyrgari* (**B53),** a theory of Antoine Bon,[1416] to the east possibly via *Kastorion* (Thisbe - **B21**) to a watchpoint on the promontory just to the southwest, and south towards Athens and Cape Sounion. As can be understood from **Map 9.1,** which shows all line-of sight between points, there are many permutations and the network probably transformed over time to the needs of each period, the potential threat, season and even the daily weather conditions.

9.3 Middle Byzantine Defensive Networks

Two local defensive networks are very clear – that around the rich valley surrounding the ancient ***Dystos*** (**SC7**) fortress and medieval tower in the **South-Central** region, and that around the fortress of ***Cleisura*** on the road northeast to the modern town of Mantoudi. As regards the first, Koder (1973), despite having suggested defensive and communication networks elsewhere,[1417] dismissed any communication further south of Dystos,[1418] while Lock (1996) noted '*as a watchtower its role is severely curtailed by the high ground to the north*'. Both are incorrect in their conclusions. **Figure A9.4** shows the line-of-sight from the Dystos fortification.

There were beacons and watch-points in nearly every direction except the north, from which there was no threat, although there was probably some form of communication link with ***Porto Petries*** on the Aegean coast, which I have as yet been unable to discern. These protected what must have been a heavily populated area with good cultivable land, year-round water and plenty of mountain pasture.[1419] Surrounded by mountains to the south, east and west it would have been secure, as long as the passes and coastal landing points could be aggressively defended. A good level of integrated defence was therefore a necessity and

[1415] He suggests this network existed during the Frankish period based on the (presumed) Frankish tower network but the central nodes - Feges(**CN12**) and Kathenoi(**CN27**) - appear also to have been occupied in the Middle Byzantine period - Koder (1972) "Zum Festungssystem Euboias während der Zeit der Venezianerherrschaft". **Actes du IIe Congrès international des études du sud-est européen Athènes, 1970**. Athens. 441-447; Koder (1973), 97-98.

[1416] Bon (1937) Forteresses médiévales de la Grèce centrale. **Bulletin de Correspondence Hellenique**, 61: 136-208.

[1417] Koder (1972).

[1418] Koder (1973), 104.

[1419] There are five sizeable villages in the area – Disto, Argyro, Porto Bufalo, Koskina and Zarakes. See **chapter 4** for a discussion of the sheep population in just the area surrounding the village of Argyro.

if, as postulated, ***Porto Petries*** was the harbour for ***Potiris*** (see **appendix 6**), then also of strategic significance to the general defence of the eastern seabord of the island.[1420]

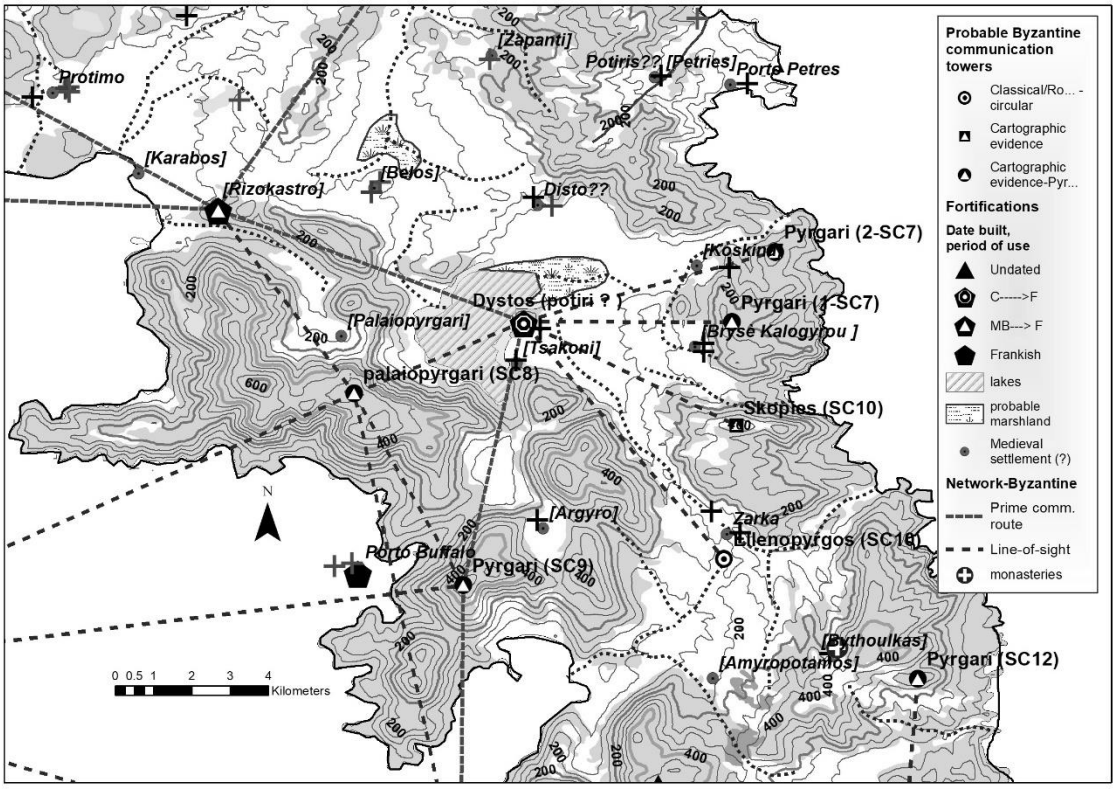


Figure A9.4 – Dystos Byzantine defensive network

The second network, that around the mountain fortress of ***Cleisura*** (**NE24**), controls all movement between the north and centre of the island along the north-south main road, which lies directly below it, and a possible alternative route up the river valley to the west. It was judged as sufficiently strategic to be refortified by Licarios following his invasion of the island with Byzantine forces in the 1280's. It appears to be similar to other refuge fortresses constructed by Justinian in the 6th century and listed by Procopius (also reflected in the name), but unfortunately at this point there is a major lacuna in his work so we have no documentary evidence of any fortresses on the island. It occupies the whole of the top of the mountain (3 hectares), given the lack of buildings, does not appear to have been regularly inhabited, but would have required a considerable force to defend it.[1421]

Line-of-sight links exist to what seems to have been a chain of fortifications stretching from ***Limene*** (Kastria) in the west to ***Cerinto*** on the northeast Aegean coast (see **map 9.3**),[1422] certain indirectly via a probable beacon point at what was to become the fortress

[1420] If this is true, then it is also very possible that there was once a tower/beacon in or near the now-abandoned village of Zapanti close to modern Krieza.

[1421] No signs of habitations were found on our visit, although the remains of a possible church, two very large cisterns and a sophisticated water collection system suggest that there was a skeleton force there at all times to maintain it.

[1422] In all there are seven fortifications identified in this chain of fortifications, but which were classical and which Byzantine remains a subject for future research. The impression, however, is that possibly in the 7th and 8th centuries the north of the island was abandoned, as was the region in the south around ***Caristo*** during

of ***Mandugo*** in the Frankish period.[1423] Communication back to Thebes would have been southwest via Pyrgaki (**NE27**), which overlooks the Gulf of Euboea from Mt. Kantili, and there was probably some form of link through the mountains to Pelion on the east coast, although the nodes of this are unclear.

A number of other possible defensive networks can also be hypothesised on the island (e.g. around the central fortress of ***La Cuppa*** (**CE17**) or along the north coast around ***Oreo*** (**NW9**)) but these are insufficiently defined by the surviving nodes. The conclusion is, however, clear: there probably existed a sophisticated system of beacons and watchtowers linked back to central fortifications during the Middle Byzantine period prior to 1204, especially during the period of Arab control of Crete (820's to 961)[1424] but possibly conceived, if not completed, in the Justinianic period.[1425]

9.4 The tower network on Chios

The most documented and best surviving network of towers is that built by the Genoese on Chios,[1426] probably in the late 14th and 15th centuries, to defend the island against the incursions of Turkish and Latin Corsairs[1427] and to prevent the contraband export of the highly valuable mastic.[1428] The towers on the island can be divided into three basic types – those large square or rectangular towers built inland as residences and points of defence of the *archontes* generally in the centre of villages, smaller towers for protection of (possibly constructed by) the village people, and the circular towers, or *vigles*, around the coastline

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the 9th century (following the Arab capture of Crete) with a central core, agriculturally the most productive, being fortified. One may even speculate that, as the mainland was overrun in this period Byzantine forces withdrew onto the island. This would then date the construction of the fortress at ***Negroponte*** to the 7th century at the latest.

[1423] The point '*pyrgos*' is noted on the HMGS(1988) map to the south of the probable fortress, just on the edge of the modern mineworkings.

[1424] It was under attack from the north by Slavs in the 8th century and Arabs from Crete in the 9th and early 10th centuries - Malamut (1988) 626-627, maps.

[1425] All the networks identified also lead back to the Byzantine fortress at Euripos / Egrippos (***Negroponte***).

[1426] Ierapetritis (2013) -his article focusses on the Mastikochoria, the 21 mastic producing villages in the south of the island, and the documentary evidence on the system of operation of the towers during the period of Ottoman rule. The manning and maintenance of the towers was a community obligation and each inhabitant was obliged to serve as a watchman, *viglatoras*, on one day of the month, watching for the approach of ships and communicating the alarm to the other watchtowers. Supervising this system was the *archiviglatoras*, who was also responsible for raising the alarm to the central authority in Chios when an intruder was identified; see also Psaltakis (2008), and Ρηγάκης and Αμπού Νίτζεμ (2013) **Η αμυντική οχύρωση της Χίου και η επίδραση της στην κοινωνική ζωή και εξέλιξη του νησιού. Πύργοι και πυργοκτίσματα**. UG Thesis, ATEI Peiraeus. Smith (1962) **The architecture of Chios: subsidiary buildings, implements, and crafts**. London: A Tiranti.

[1427] Belavilas (2004) "Η ανακατοίκηση των ακτών" [The repopulation of the coastlines]". In Asdrachas, et al. (Eds.) **Η Ελλάδα της θάλασσας [Greece by the Sea]**. Athens: Melissa. This was a general problem throughout the Aegean during the medieval period. Piracy was a way of life and threat for all communities both on the islands and in the littoral areas of the mainland - Charanis (1973) "Piracy in the Aegean during the reign of Michael VIII Palaeologos". **Social, economic and political life in the Byzantine Empire : collected studies**. London: Variorum reprints. Section XII.

[1428] Recent work may also allow a detailed reconstruction of the network on the island of Andros, key to communication north from the island of Naxos to ***Negroponte***. Much of this may, however, be from the 16th century and has not been investigated further - Vasilopoulos (2015) **Λατινοκρατία στην Ανδρο: κάστρα, πύργοι, εκκλησίες και φεούδα**. Andros, Greece.

(**figure A7.5).** The latter were sited on the shoreline (or immediately above it on a suitable hill) to maximise their viewshed out to sea and minimise the communication distance between each other - on average only 2.5 kilometres on the southern coast[1429] - making them relatively blind on the landward side.[1430]

In the north, however, where the lack of agricultural land and the mountainous nature of the topography makes pirate incursion both less profitable and more difficult, the average inter-tower distance is 5.6 kilometres – more than double that to the south. This suggests that, where tight control was required, a tower-to-tower distance of less than 3.0 kilometres was judged necessary,[1431] whilst that for a network designed simply for defensive purposes may be around 6 kilometres.

9.5 A Venetian network in Messenia

This provides the base for us to understand the role of the two coastal circular towers identified by Iannis Kontogiannis in the southwest Peloponnese.[1432] In 1209 the treaty of Sapientza[1433] between Geoffrey de Villehardouin and Doge Pietro Ziana had recognised Venetian ownership of the fortified towns of ***Modon*** and ***Coron***, but in 1401 they were still separated by Frankish lands,[1434] and the fortified village of ***Grisi*** in between them was only transferred into Venetian hands in 1426. [1435] The earliest dated tower (**P302**-Memi), probably constructed just before this date,[1436] is situated 2.9 kms. southwest of ***Coron***, whilst the second tower (**P301**-Loutsa), which Kontogiannis incorrectly links directly to ***Modon***,[1437] is 2.2 kms. west of ***Grisi***.

The siting of both at first glance appears odd – they are neither on a very high point nor do they have good panoramic views - other close-by features appearing much more suitable.[1438] However, both overlook a strategic beach and, more importantly, are sited so as to form a link in a chain of beacons (see **figure A9.5**) which, after the purchase of ***Grisi*** in 1426 by the Venetians, must have linked the two fortresses. This siting is very precise and is undertaken so as to take advantage of the narrow gaps between hills, providing line-of-sight from the west between the Loutsa tower and ***Grisi*** on the one hand, and from the east between the Memi tower via a beacon that must have existed at the village of Chrysokellaria. There was thus established a chain, ***Coron*** – Memi – Chrysokellaria – ***Grisi*** – Loutsa. The distances between the nodes are 2.2 – 5.0 – 5.8 – 2.2 (km.), within the 6 km. limit of those on Chios calculated above

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[1429] Ierapetritis (2013) notes that smoke signals, shots or bells were used to announce an intrusion during the day, while fires or lanterns were used at night

[1430] This was checked not only via GIS analysis but site visits by the author to some of the surviving examples.

[1431] A similar military tower network can be found in the Arab areas along the river Ebro facing the Catalans on the Iberian peninsula in the 11th and 12th centuries, where the distance between towers was a mere 2 km - Bassols (1990).

[1432] Kontogiannis (2012c) "Οι οχυρώσεις της Μεσσηνίας: από το Βυζάντιο στο νεώτερο Ελληνικό κράτος". In Xanthaki-Karamanou, et al. (Eds.) **Μεσσηνία: Συμβολές στην ιστορία και στον πολιτισμό της**. Athens: Εκδόσεις Παπαζήση. 285-328.

[1433] This is the island just to the south of ***Modon***.

[1434] Hodgetts and Lock (1996) "Some Village Fortifications in the Venetian Peloponnese". In Lock and Sanders (Eds.) **The Archaeology of medieval Greece**. Oxford: Oxbow. 77-90

[1435] Papakosma (2007) Εδαφικές διεκδικήσεις της βενετίας στη Ν. Μεσσενία (Α' μισό του 15ου αιώνα). Με αφορμή ανεκδοτο αργυροβούλλο του Θωμά Παλαιολόγου. **Eoa & Esperia**, 7: 57-84.

[1436] See site gazetteer for detailed descriptions and dating of each – **Appendix 5.3.6.**

[1437] Not only is the tower equidistant between the two fortresses, but it is 11 kms. from ***Modon*** and does not have direct line of sight to it.

[1438] Both towers were visited by the author.

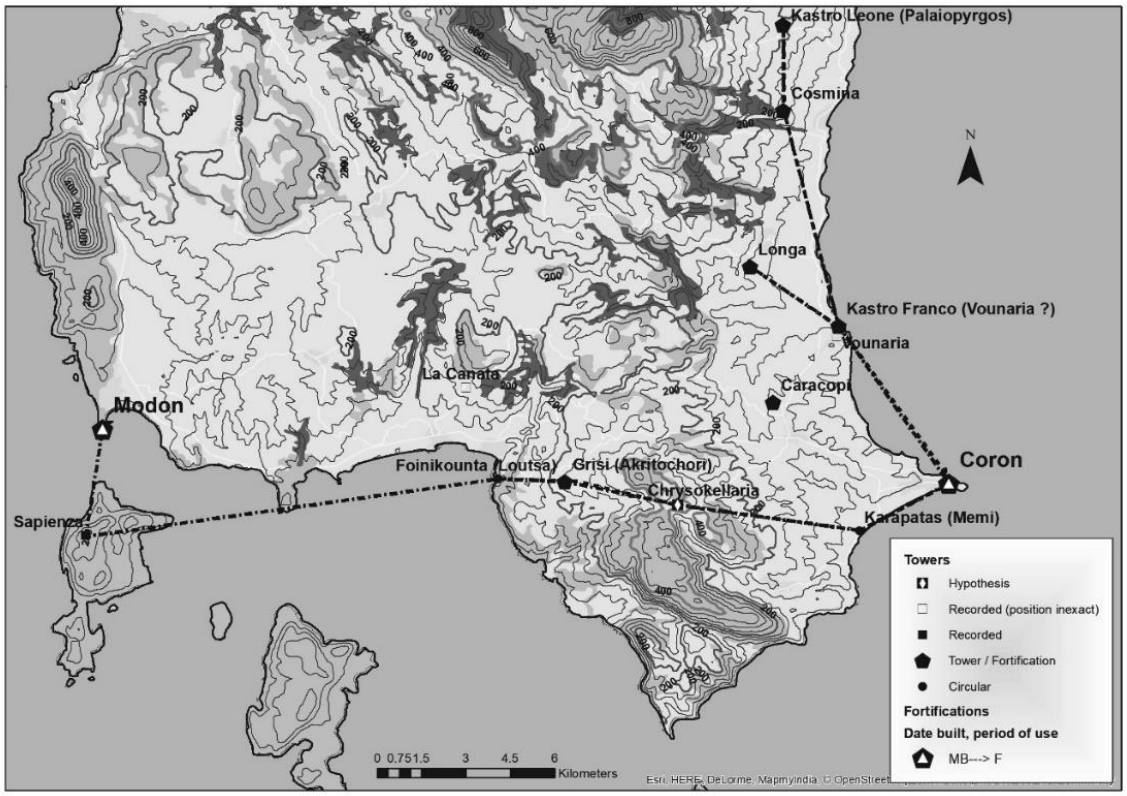


Figure A9.5 - The 15th c. Beacon Network in SW Peloponnese

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There was probably a watchtower on the headland just to the east of ***Modon***, but this was not absolutely necessary since a signal could be sent to the fortress via the island of Sapienza (11.3 km. away), on which there existed a wooden watchtower.[1439] A secondary network was also probably established northwards from ***Coron***. Hodgetts and Lock (1996) have identified a series of fortified positions along the coast to ***Castro Franco*** **(P203**), ***Cosmina*** (**P206**, also called *Vigla*), and ***Castro Leone*** (**P204**, also called *Paliopyrgos*).[1440] These are all inter-visible and formed the eastern coastal boundary of the lands around ***Coron*** after 1426. Something similar also probably existed up the western coast from ***Modon***.

From examination of these two networks it can thus be seen that the siting of towers within communication and defensive networks was much more sophisticated than simply constructing them on a strategically placed hill. There would have been a combination of factors influencing siting decisions – existing settlements, the viewshed, communication links and defensibility, even their proximity to roads, harbours, shipping lanes and a good water source.

[1439] Gertwagen (2000) "Venetian Modon and its Port, 1358-1500". In Cowan (Ed.) **Mediterranean urban culture, 1400-1700** Exeter: University of Exeter Press. 125-150

[1440] Initially the Venetian lands extended only as far as the 'Longa' river (unknown to us, although the village Longa may have taken its name from its proximity to the river). Thus continuous Venetian lands were probably limited to the ***Coron*** – ***Longa*** – Chrysokellaria triangle until 1426.

9.6 Frankish / Venetian networks on Euboea

By the last decades of the 12th century any organised Byzantine network had probably fallen into disuse in Central Greece as the Sgouros family wrested effective control from the central government.[1441] The first half of the 13th century was one of Frankish dominance and aggression against regions in the eastern Aegean and there was little need for a defensive network.[1442] The civil war of the late 1250's and Byzantine insurgence of the 1280's into Euboea, however, apart from impressing on communities away from the major centres of power the need for defences against marauding knights or companies of mercenaries, may have acted as the catalyst for the development of a new defensive system.

After a couple of years of control of nearly all the island except ***Negroponte*** it is unlikely the Byzantines had sufficient resources to do more than garrison the fortresses of ***Oreo*** in the north, ***Cupa*** (for a short period?), and ***Armeno*** and ***Castel Rosso*** in the south. There probably ensued a war of attrition, but by the Byzantine-Venetian treaty of 1285 Venice was enabled to invest in fortifying and re-capturing the island without this becoming a *casus belli* between the parties. If it did not already exist, it was possibly during this period that the tower at ***Skountéri*** (**CN22**) was constructed. It lay in a very strategic position at the centre of the island and cavalry based here could quickly intervene in any conflict from ***Mantugo*** (**NE17**) in the northwest to ***Disto*** (**SC6**) in the southeast, from each of which it was equidistant and about 50 km. (5 hours ride) away.

Because of the density of towers and their inter-links it is difficult to distinguish particular nodes in any communication system, but ***Skountéri*** appears to lie at the centre of a chain of beacons linking these two major fortifications (**Map 9.4).** This follows much the same route as the hypothesised Middle Byzantine chain described above. One tower – that above the small village of Mistros (**CW23**) also provides possible evidence of its use to send sophisticated messages. Superficially it appears like many other surviving towers, measuring 9.40 x 9.40 m. externally, However, not only is the first floor supported by four massive 40 cm. square beams, suggesting something other than domestic use, but at this level there is an arrow slit in each wall, the openings of which on the north and west walls have been skewed so that a sentry can view something at exactly 298º – the precise bearing of the ***Skounteri*** tower 2.8km. away.[1443]. The Mistros tower acts as a node in the ***Cleisura - Disto*** chain, which is an almost perfectly straight line with the same bearing. **Table A9.2** details its various nodes with the justification for each. The peculiar configuration of the openings in the walls of the Mistros tower may also mean that up to three braziers (or alternative in the day) were lit, the two parallel openings allowing an observer to distinguish

[1441] Apart from the general historical background of the period the chrysobull of Alexius III from November 1198 notes a small *thema* (?) centred on Karystos in southern Euboea and Andros - Tafel and Thomas (Eds.) (1856) **Urkunden zur älteren Handels- und Staatsgeschichte der Republik Venedig : vol 1 [814-1205]**, Vienna., 265 - whilst suggesting an effort to combat corsair raids on the Aegean by the Byzantine state, this provides further evidence of its lack of control of Thebes at this date, or, at the very least, a reduction in its role as a military centre.

[1442] A modern parallel to this can be seen in World War II. In 1939-40 the UK was on the defensive and therefore aircraft observation posts and the construction of radar (the modern equivalent of the *vigla?*) was paramount to identify attacking German bombers. Immediately the Allies went on the offensive in 1942-43 the need for these fell away, whilst the Germans were forced to invest a huge effort in building a defensive network along the Atlantic coastline of France to counteract potential Allied attack.

[1443] There is an intervening hill approximately midway between the two, that precludes inter-visibility (although a more precise topographical study may prove otherwise) suggesting that there must have been another beacon at this point.

between them, and thus the transmission of a complex message (see illustration of Sicilian tower above)[1444]

There are apparently primary and secondary nodes along the same route, and in this lies the possible rationale for the hypothesised beacon (no.8) and the Mistros (**CN23**) tower. The primary route has an average distance between its eight nodes of 8.3 km. whilst the secondary with fifteen nodes has only 4.8km., and a number are considerably less. This may be due to the weather conditions in the mountainous areas preventing a consistent level of visibility throughout the year over long distances, but it may also suggest that a higher density of beacon points provided a greater ability to send more complex messages and that the inter-visibility, for instance, between nodes 2 and 4 is purely chance. It is also important to note that the inter-node distance of the secondary route is within the 6 km. distance noted on Chios and in Messenia and suggests a level of consistency between the three in terms of their specification.

Ref.	Node name	Ref.	Probability	Primary chain (km.)	Secondary chain (km.)
1	DISTO	SC6	Recorded		
2	Rizokastro	SC2	Recorded	6.90	6.90
3	Tourla-Prinia	CE2	On map		7.80
4	Tourla-Bilies	CW24	On map	14.80	7.10
5	Pyrgaki-Kokkaliara	CW17	On map		4.30
6	Pyrgaki-Kalamonta	CW11	On map	7.60	3.50
7	Mystros	CN23	Recorded		3.00
8	??	CN23	Hypothesis		1.40
9	Skounteri	CN22	Recorded	5.70	1.50
10	Kathenoi	CN27	Recorded		5.50
11	Feges	CN12	Recorded	10.70	5.30
12	KASTRI	CN5	Recorded		7.10
13	Stavros	CN26	Village	9.40	3.40
14	Agios	CN28	Village	6.10	6.10
15	CLEISURA	CN28	Recorded	5.10	5.10
	TOTAL DISTANCE			**66.30**	**68.00**

Table A9.2 – *Disto–Cleisura* communication chain

There also appears to exist a chain running north from ***Negroponte*** to Kastri (**CN5**), and another following the route of the road from ***Negroponte*** east, a first branch leading up the river Lilas to ***Vumi*** (**CN18**), a second northeast to the fortress of ***La Cuppa*** (**CE17**), and then on to ***Disto*** (**SC6**). In this way most of the island's population and all the best land within 50km. of ***Negroponte*** was incorporated into a protective communication system.

[1444] Lock (1995). Hypothesised that this was to reduce the effect of the strong winter north-easterly winds. In which case why is the eastern slit not skewed?

It is possible, as noted above, that the skeleton of this defensive tower network was created in the last decades of the 13th century. However, after the Catalan victory over the Frankish army in 1311, their invasion of Euboea in 1317, which highlighted the vulnerability of the island (despite heavy investment by the Venetians in fortification work), and increased Turkish corsair raids on the coast in the two following decades, such a network would have become an imperative. With a growing Turkish threat, the Plague outbreak of 1347-48 causing a lack of resources, both human and economic, and Genoese incursions in the 1350's, there must have been great pressure on successive bailies to protect the human capital that was the key to maximising agricultural production. No blueprint has survived for an integrated military strategy on Euboea, but the documented network on Cephalonia in the 16th century may indicate its ultimate form.[1445]

[1445] This notes 129 watchtowers supported by a force of 222 mounted troops of which 133 were professional soldiers and the rest a draft (*decimali*) from the local population - ASV, Relazioni B.83, report of Hieron. Tiepolo 8/11/1584 in Kitsos (2010), 85.

Colour Photographs of key towers, fortresses and features



(a) Parorion (B16)



(b) Haliartos (B6)



(c) Thisbe (B21) – North



(d) Thisbe (B21) – South and West

Plate 10.1 – Boeotia



Plate 10.2 – Boeotia: Thebes, St. Omer (B41)



Plate 10.3 – Thessaly: 'Vigla', Ptelion (TH1)



(a) Pachi (C3)



(b) Elinta (C4)



(c) Dotia (C47)

Plate 10.4 – Chios island



(a) Memi, Karapatas (P302) **(b) Loutsa, Foinikounta (P301)**

Plate 10.5 – The Peloponnese, Messenia



Plate 10.6 – Italy: San Gimignano, Tuscany



(a) external **(b) internal**

Plate 10.7 – Attica, Kalamos: 'Pyrgarti' (A9)



(a) Smobolo **(b) Abdos**

Plate 10.8 - Tinos Island, Classical towers renovated in the Medieval period



(a) Prosphorion (Ouranopolis) (M40)



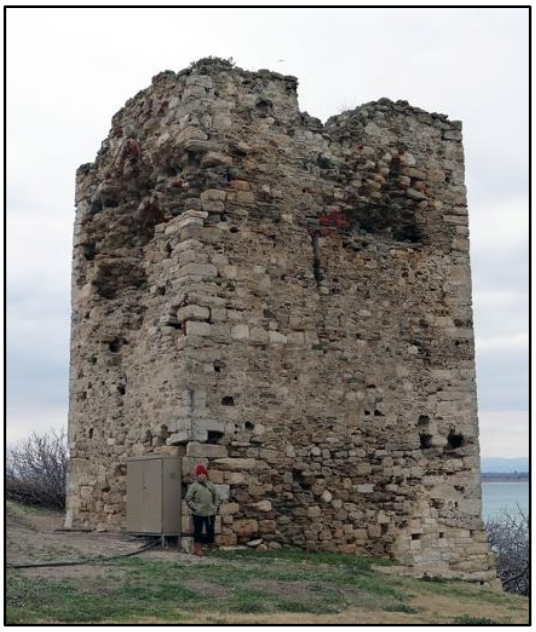


(b) Krouna (M130) **(c) Agios Pavlos, Nea Phokia (M118)**

Plate 10.9 – Chalkidiki, Macedonia (1)



(a) Galatista (M102)



(b) Sani (M120)



(c) Mariana - internal (M22A)



(d) Mariana – External (M22A)

Plate 10.10 Chalkidiki, Macedonia (2)



(a) Lipso (NW2)



(b) Lichada (NW6)

Plate 10.11 Euboea Northwest



(a) Farakla internal (NE13)



(b) Zoodochos Pigis (NE14)

Plate 10.12 Euboea Northeast



(a) Bailelekkas (CN11)



(b) Politika (CN3)



(c) Steni North wall – internal (CN17-2)



d) Skountéri South and East (CN22-1)

Plate 10.13 Euboea Central North



(a) Mytikas north tower (CW2.6)



(b) Mytikas South tower (CW2.9)



(c) Gymno – North and West (CW14.1)



(d) Tracheli – North and West (CW23.2)

Plate 10.14 Euboea Central West

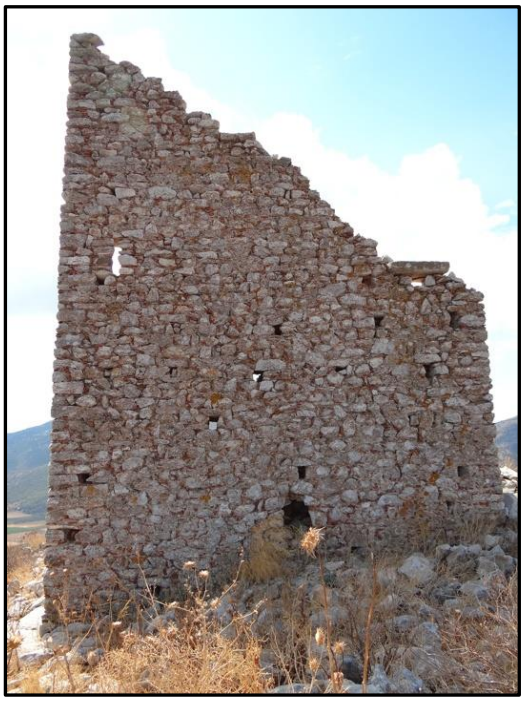


(a) Kaddi – south (CE22.2)



(b) Avlonari – West and South (CE10)

Plate 10.15 Euboea Central East



(a) Dystos – West (SC6.1)



(b) Belos – South and West

Plate 10.16 Euboea South Central



Plate 10.17 Euboea South Central - Rizokastro (SC2)



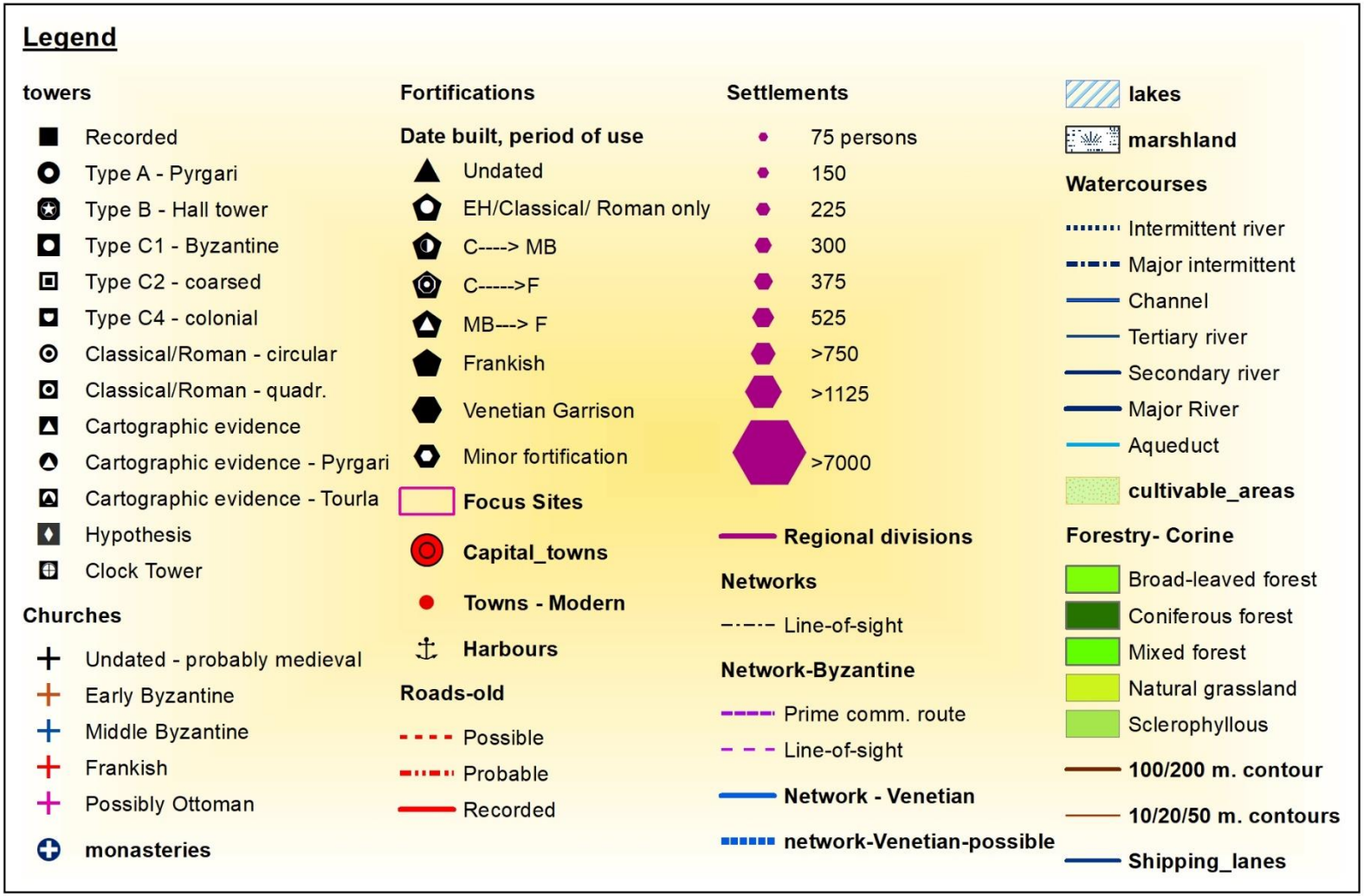
Plate 10.18 Euboea South - Castel Rosso (Karystos)



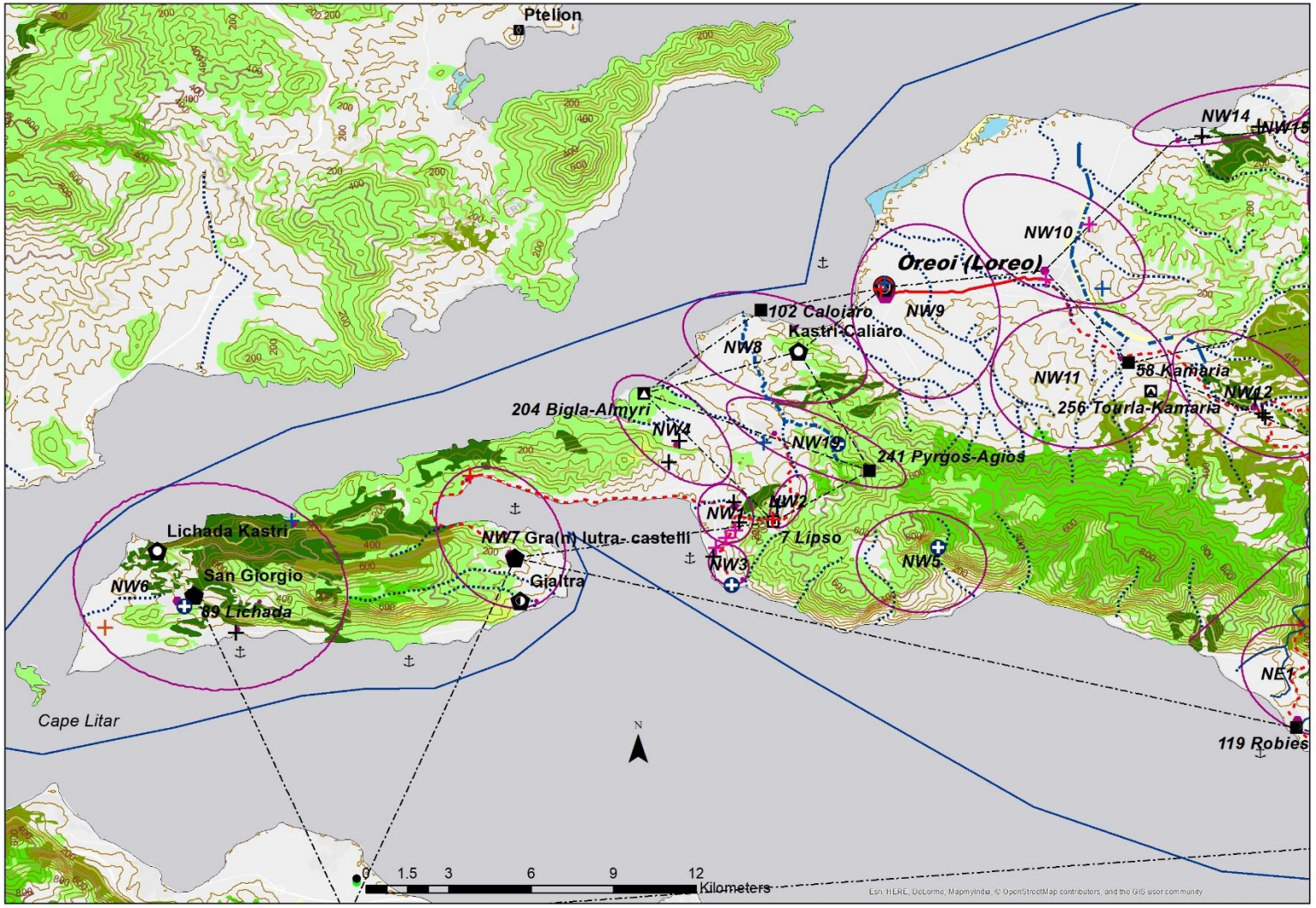
Plate 10.19 Euboea Northwest – Oreoi fortification wall



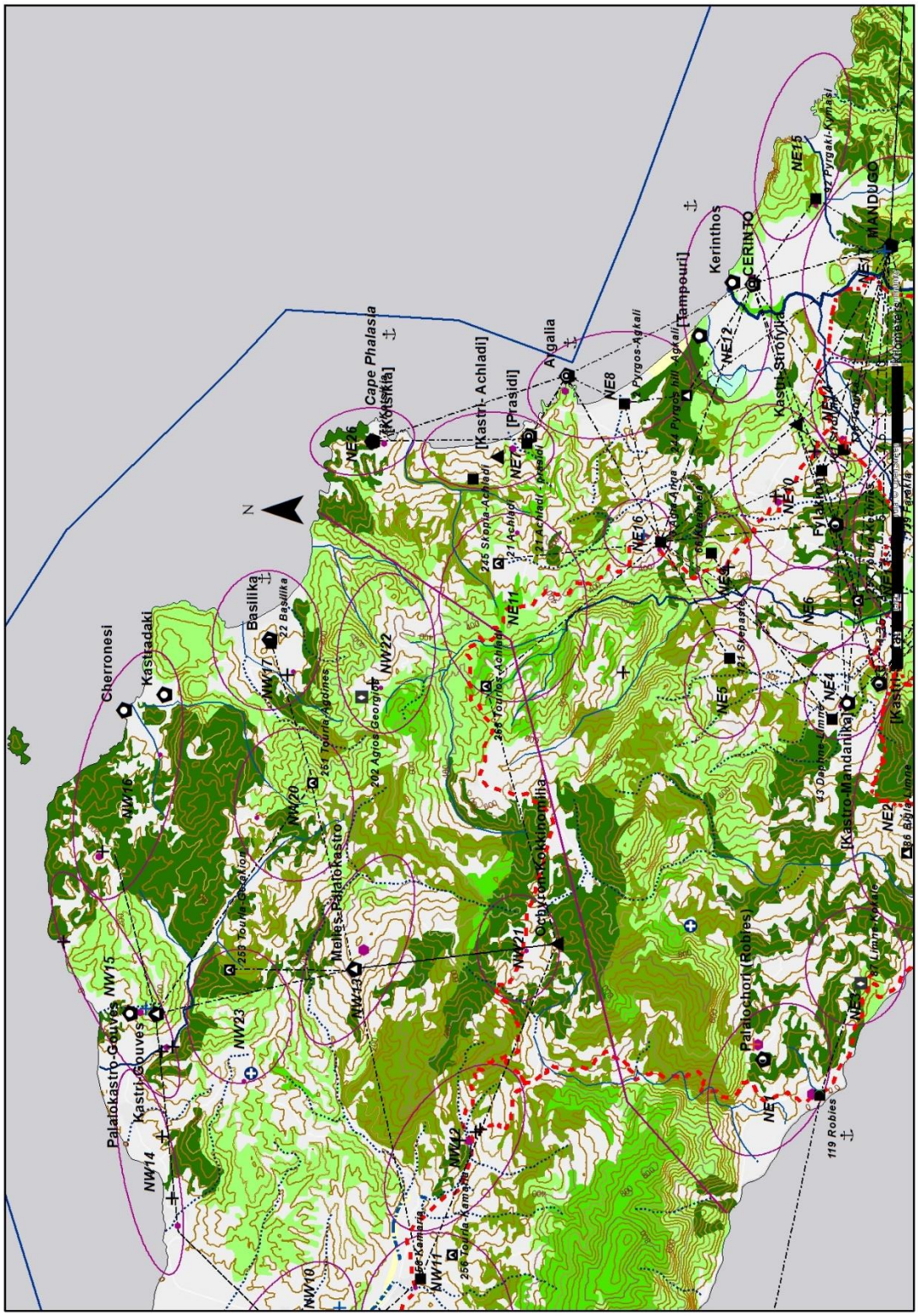
Plate 10.20 Euboea Central West – Phylla (Filla) fortification



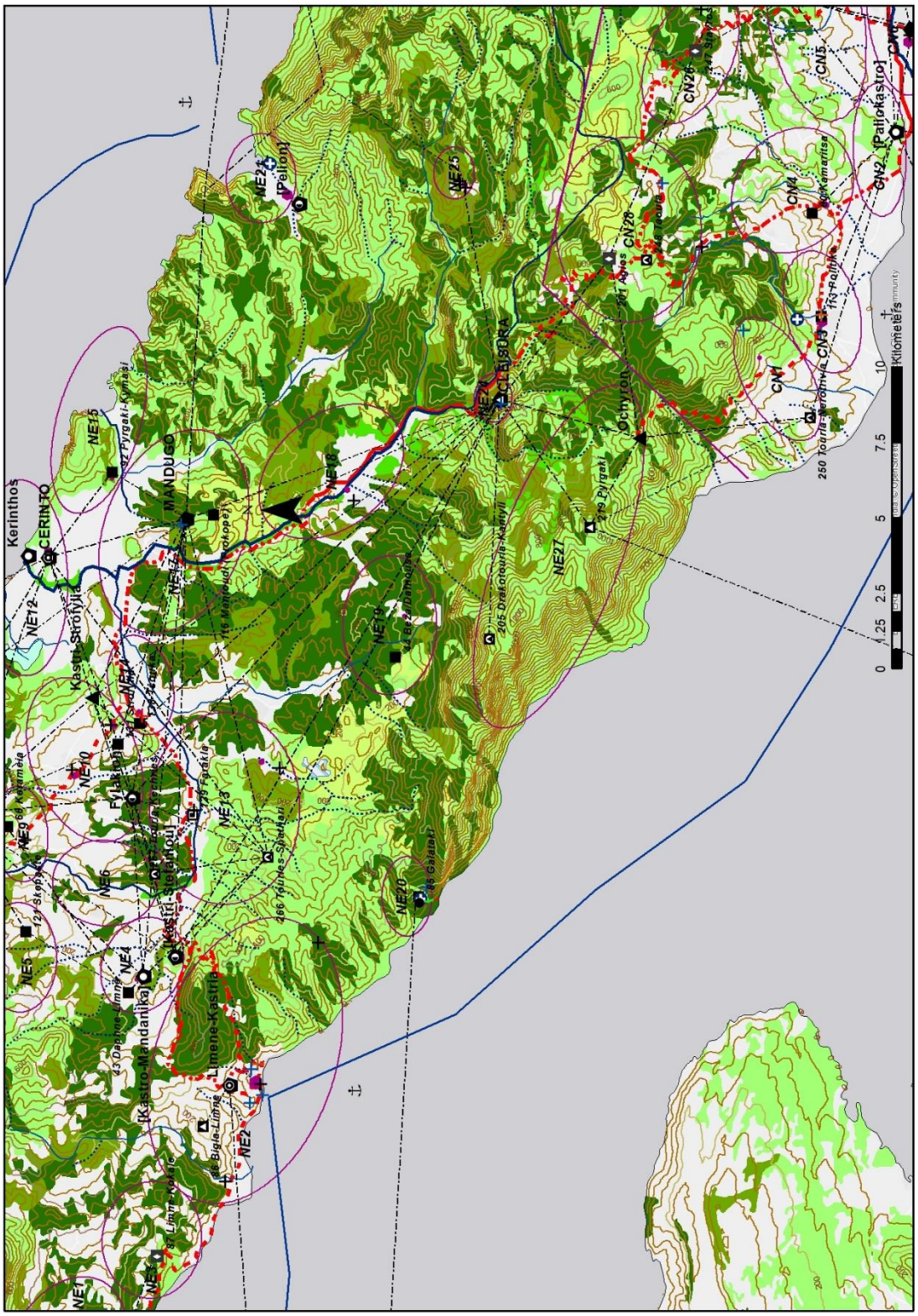
Map 1.1 Legend



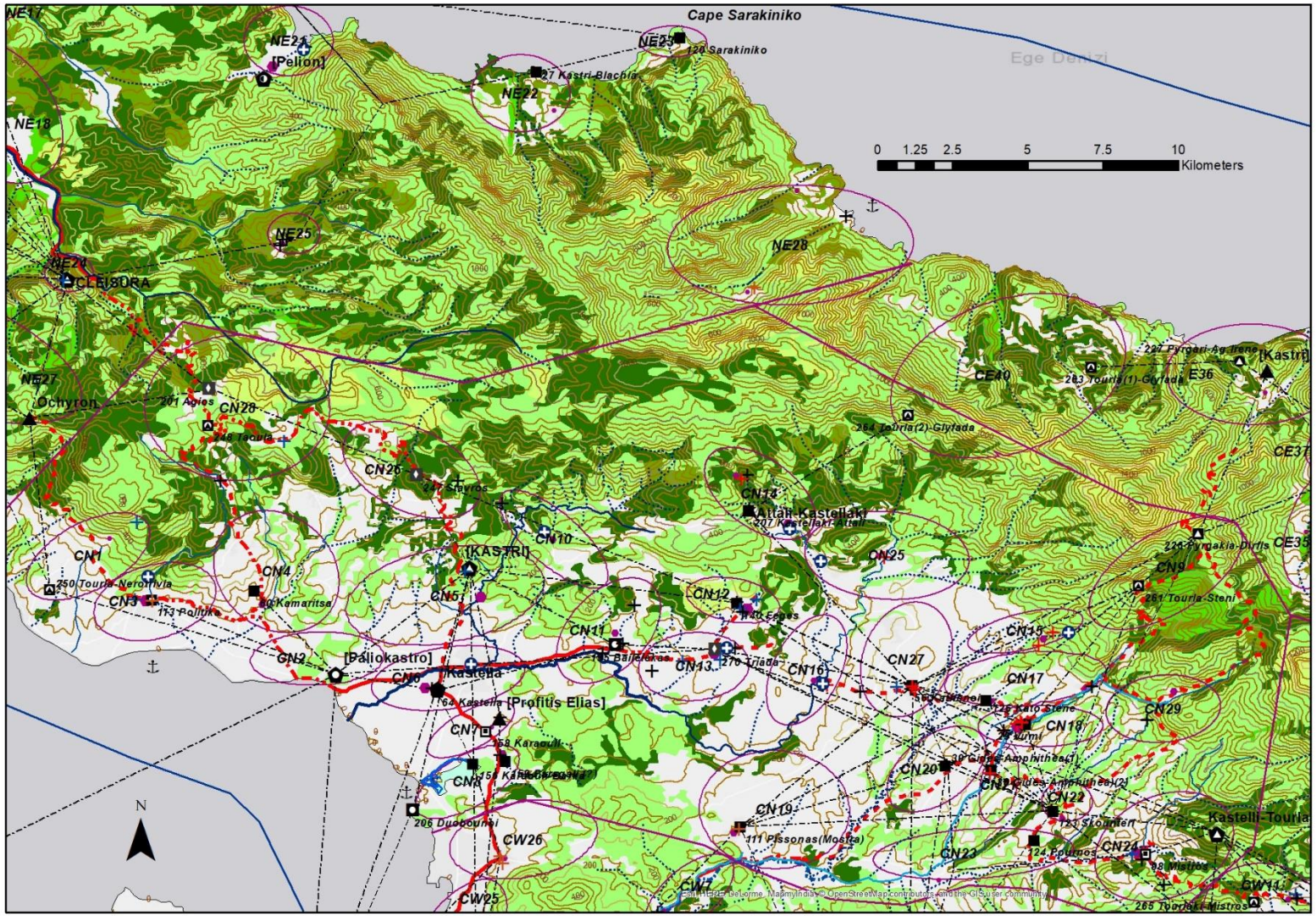
Map 1.2 Euboea Northwest (Oreoi)



Map 1.3 - Euboea Northwest (Basilika)



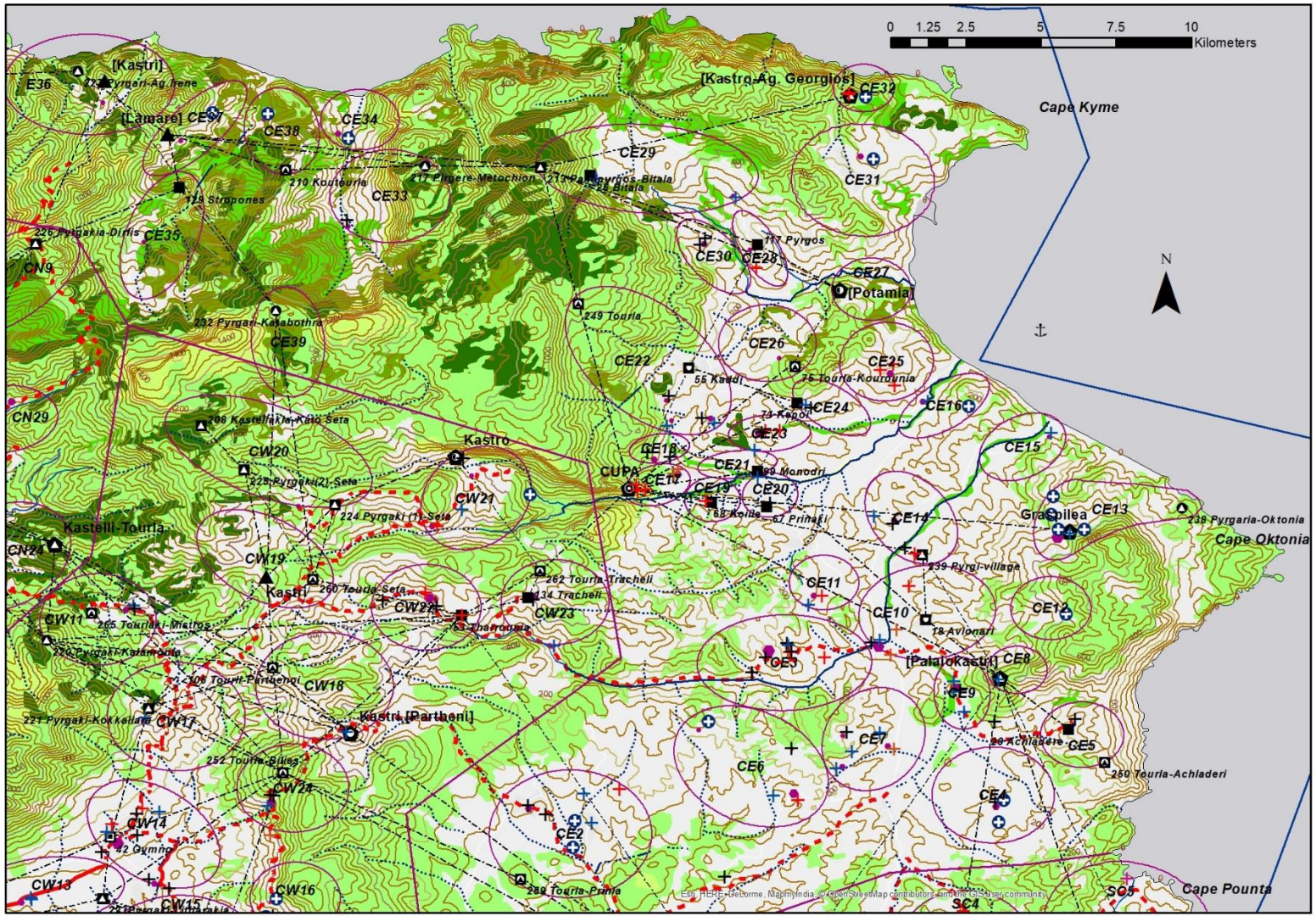
Map 1.4 - Euboea Northeast



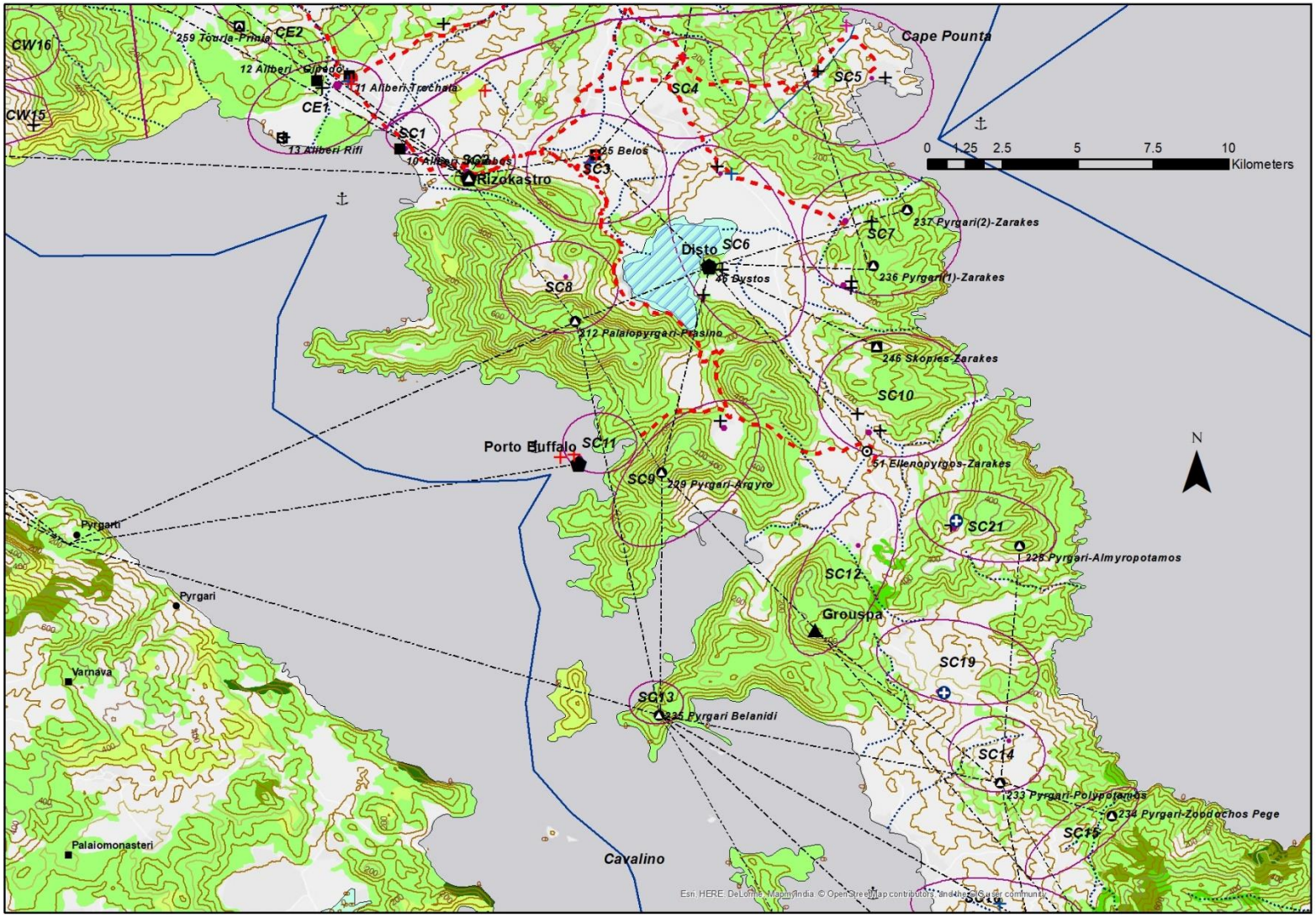
Map 1.5 - Euboea Central North



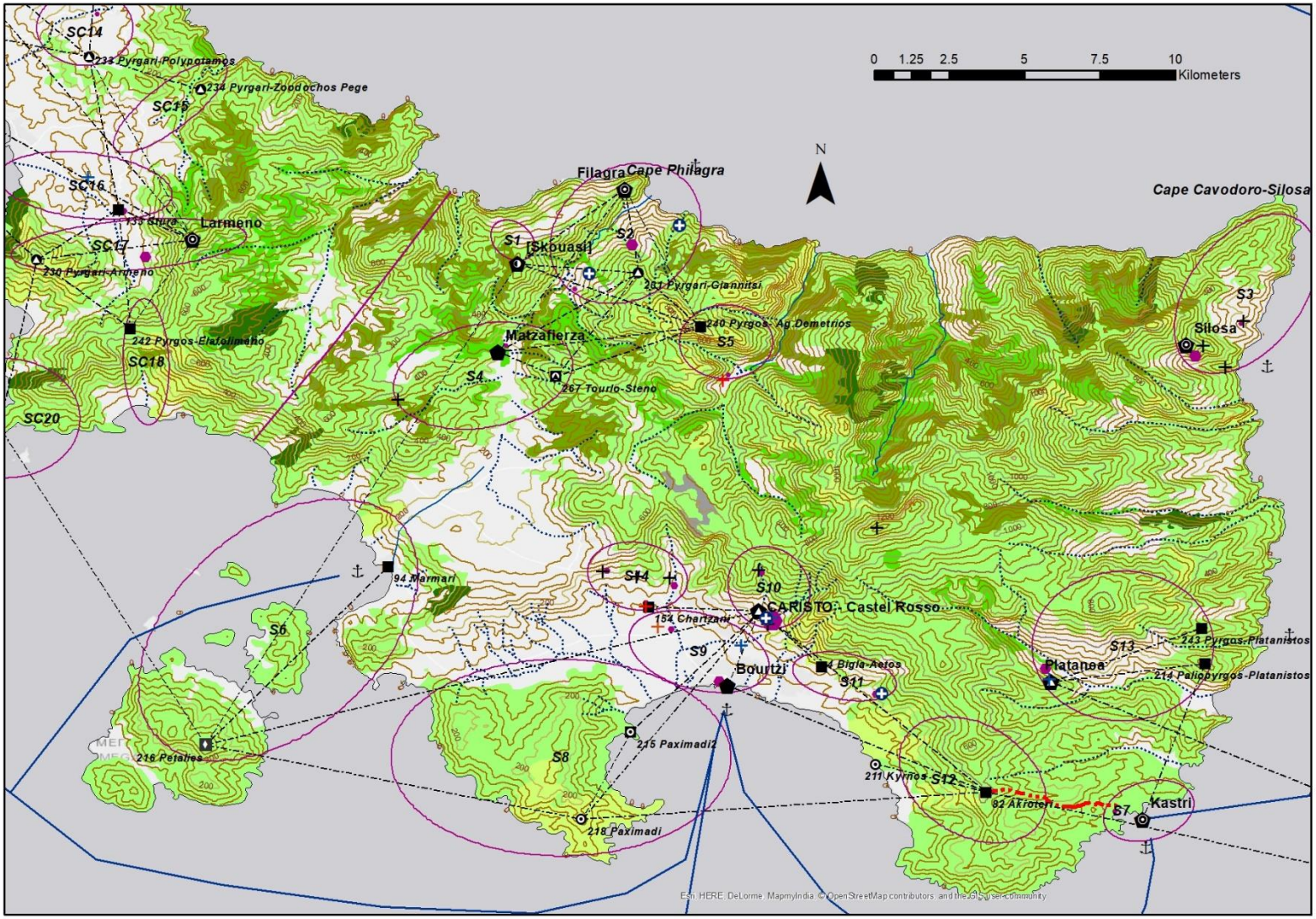
Map 1.6 - Euboea Central West



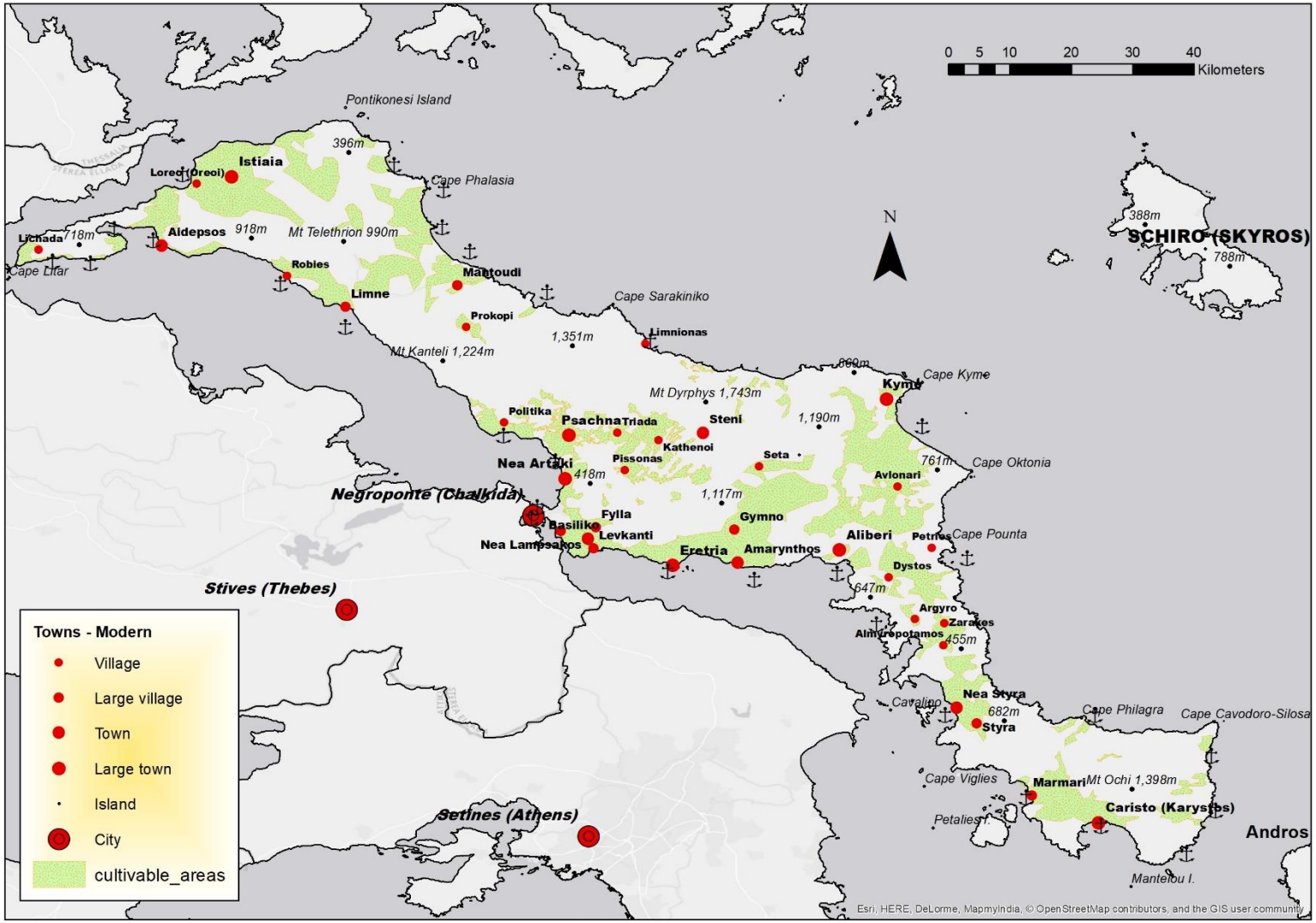
Map 1.7 - Euboea Central East



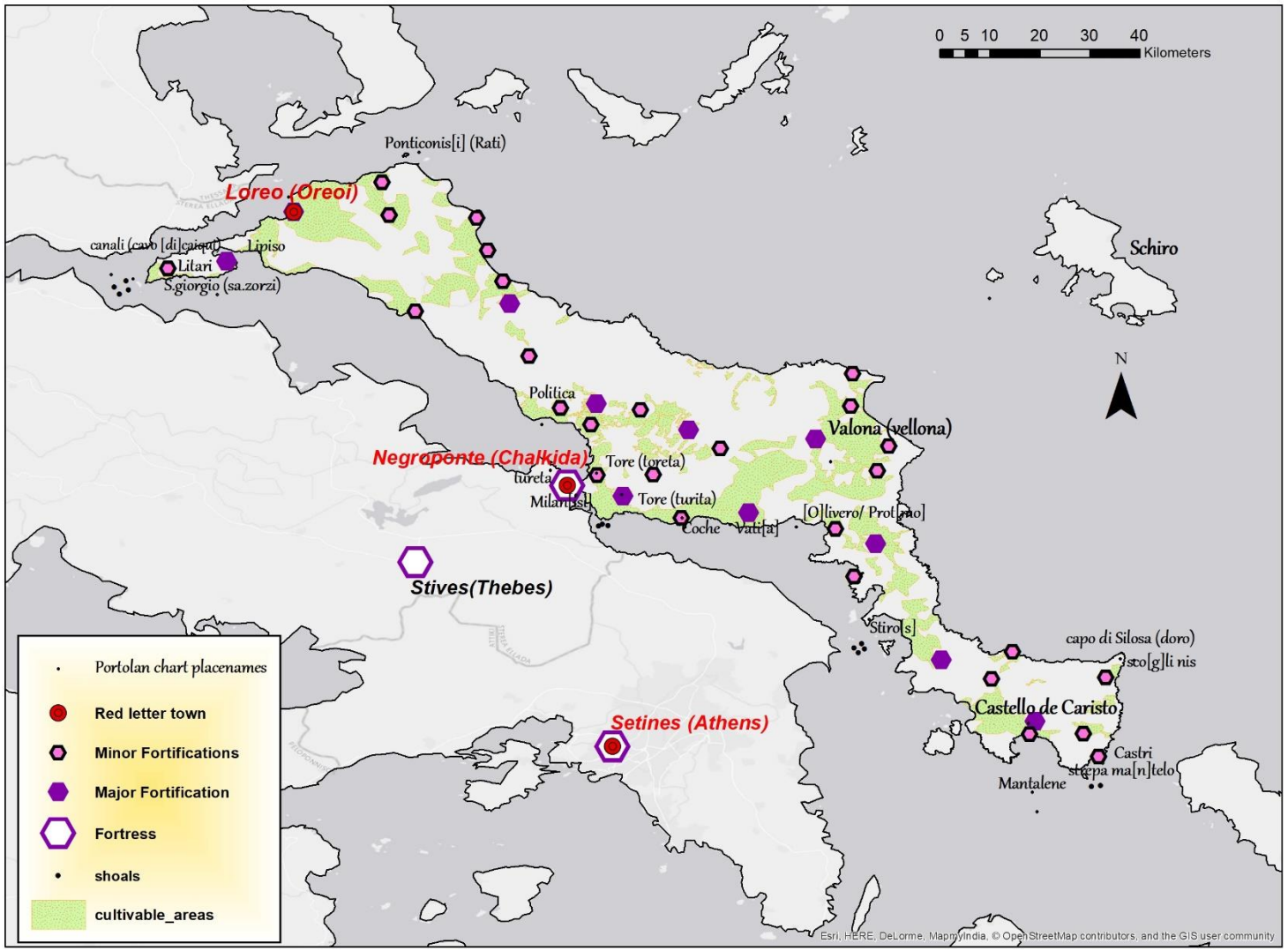
Map 1.8 - Euboea South Central



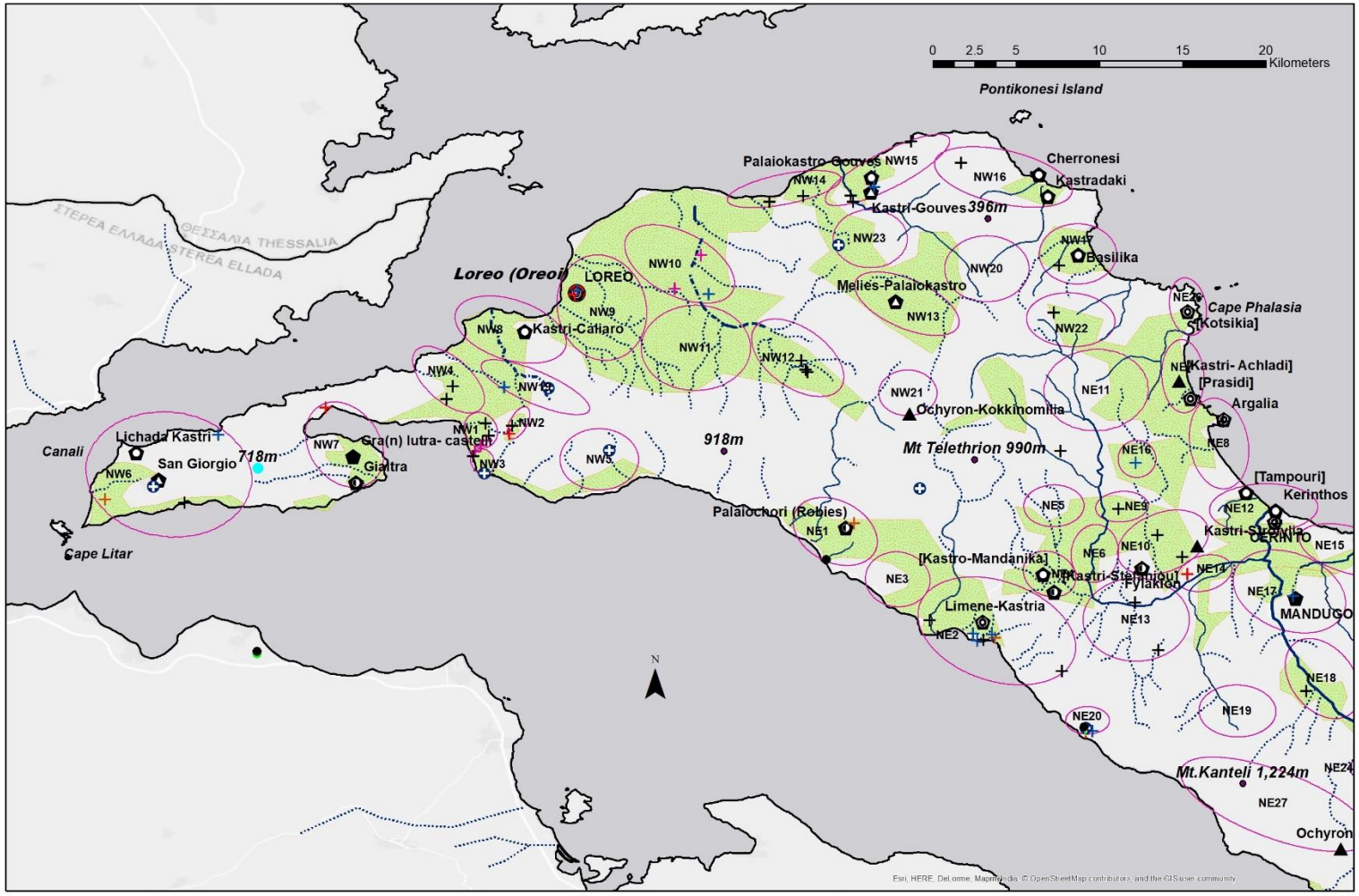
Map 1.9 - Euboea South



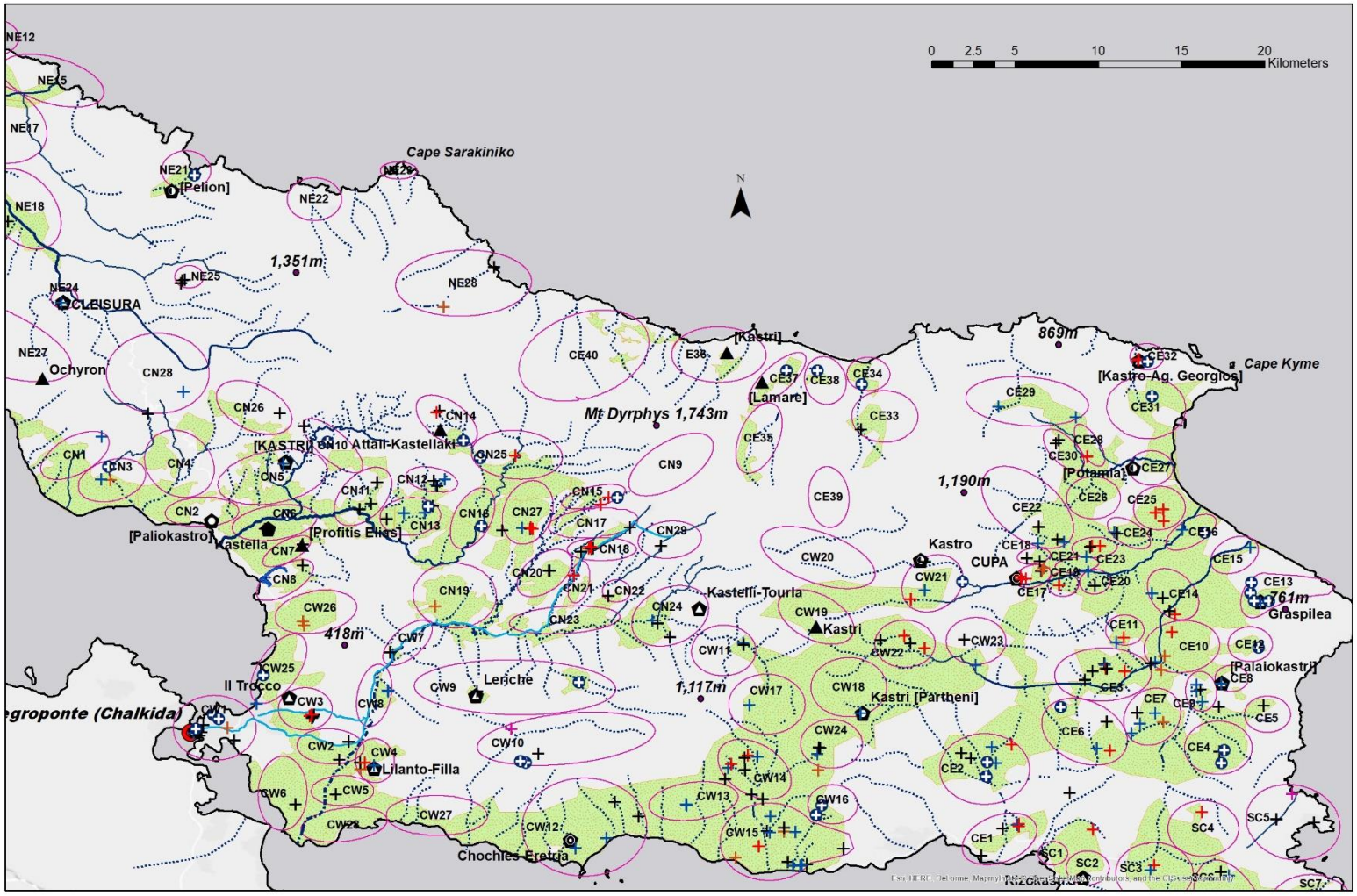
Map 2- Modern Euboea



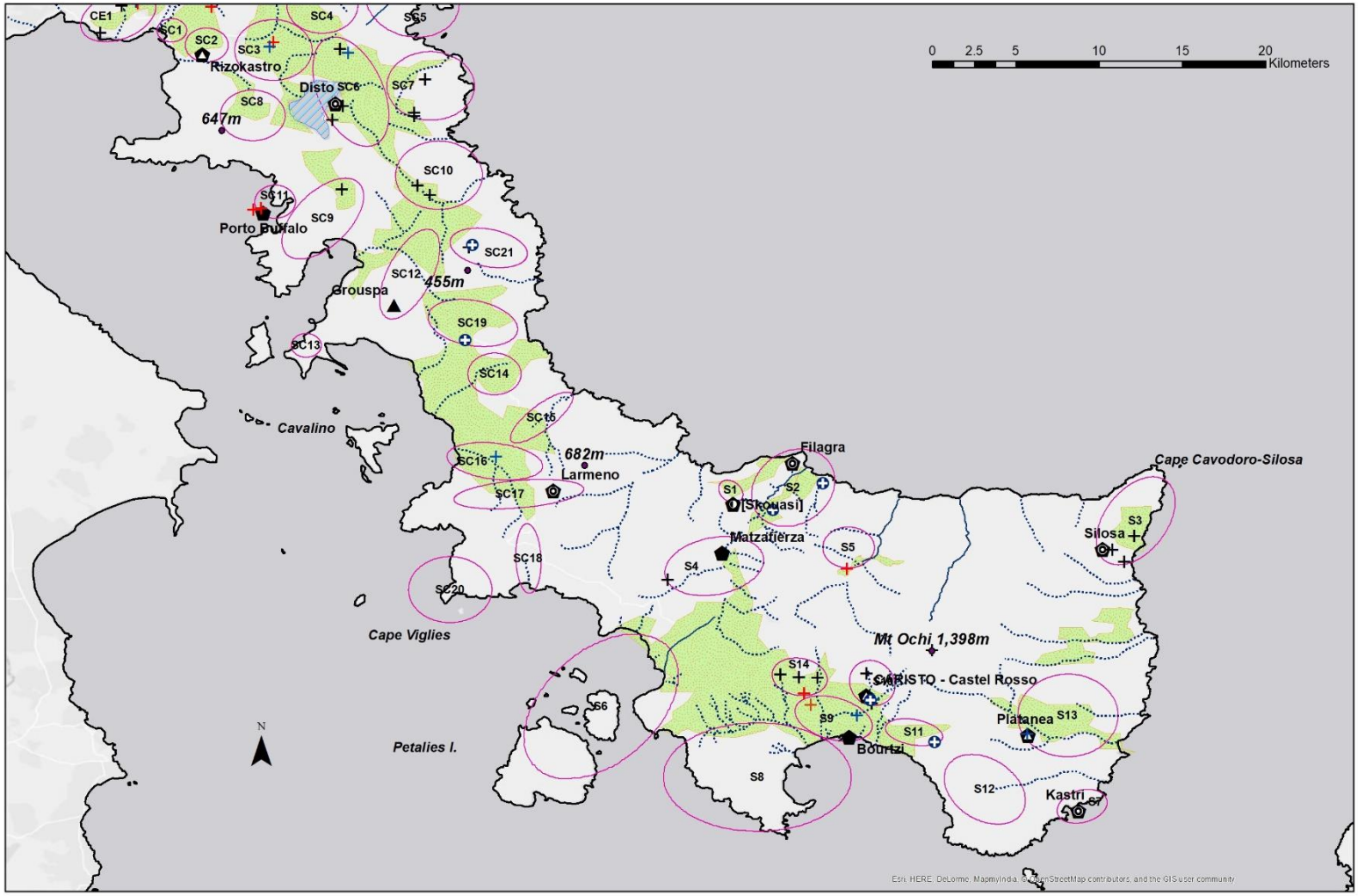
Map 3 - Euboea in the late 14th century as per portolan charts



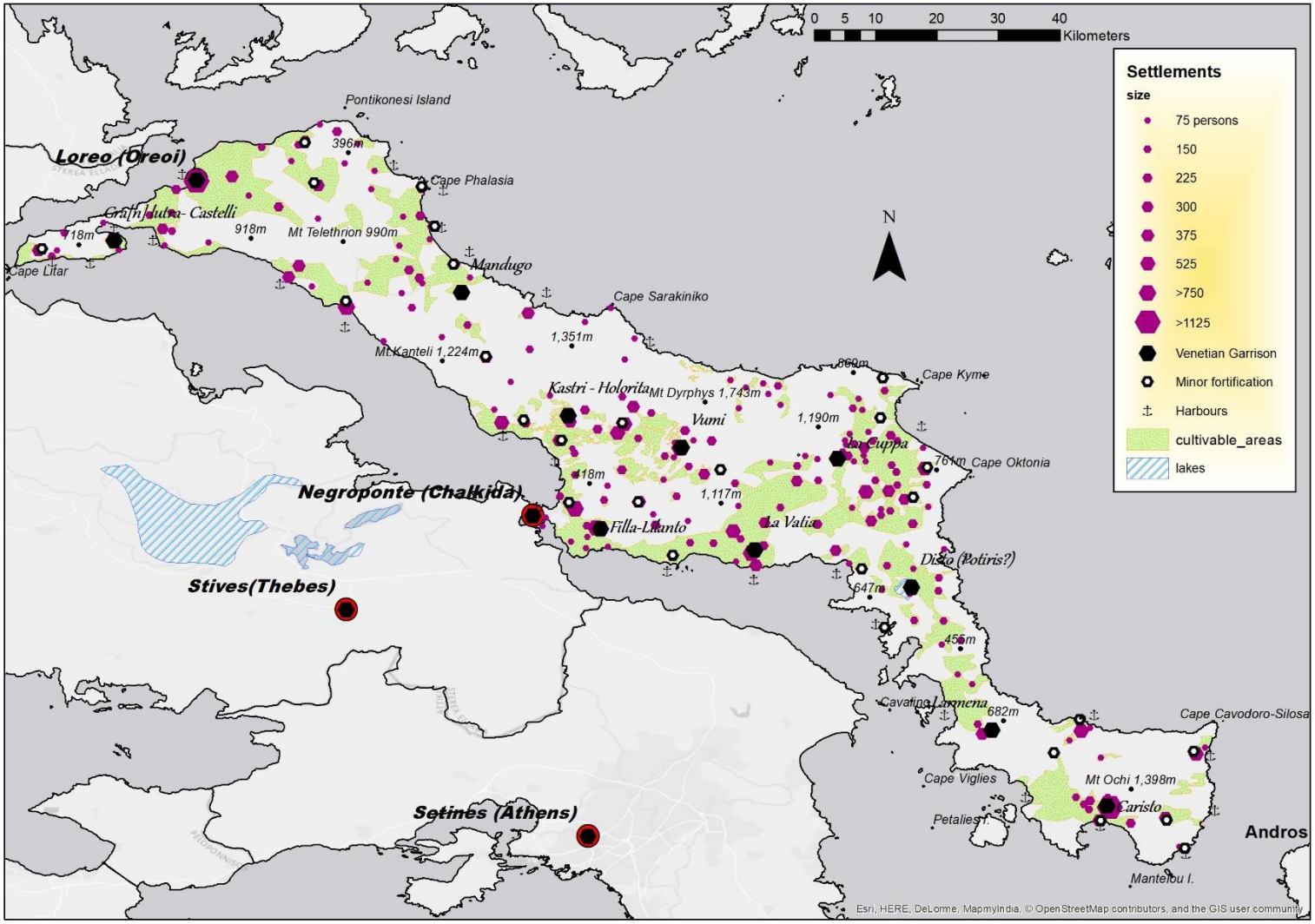
Map 4.1 - Churches and Monasteries : Northwest



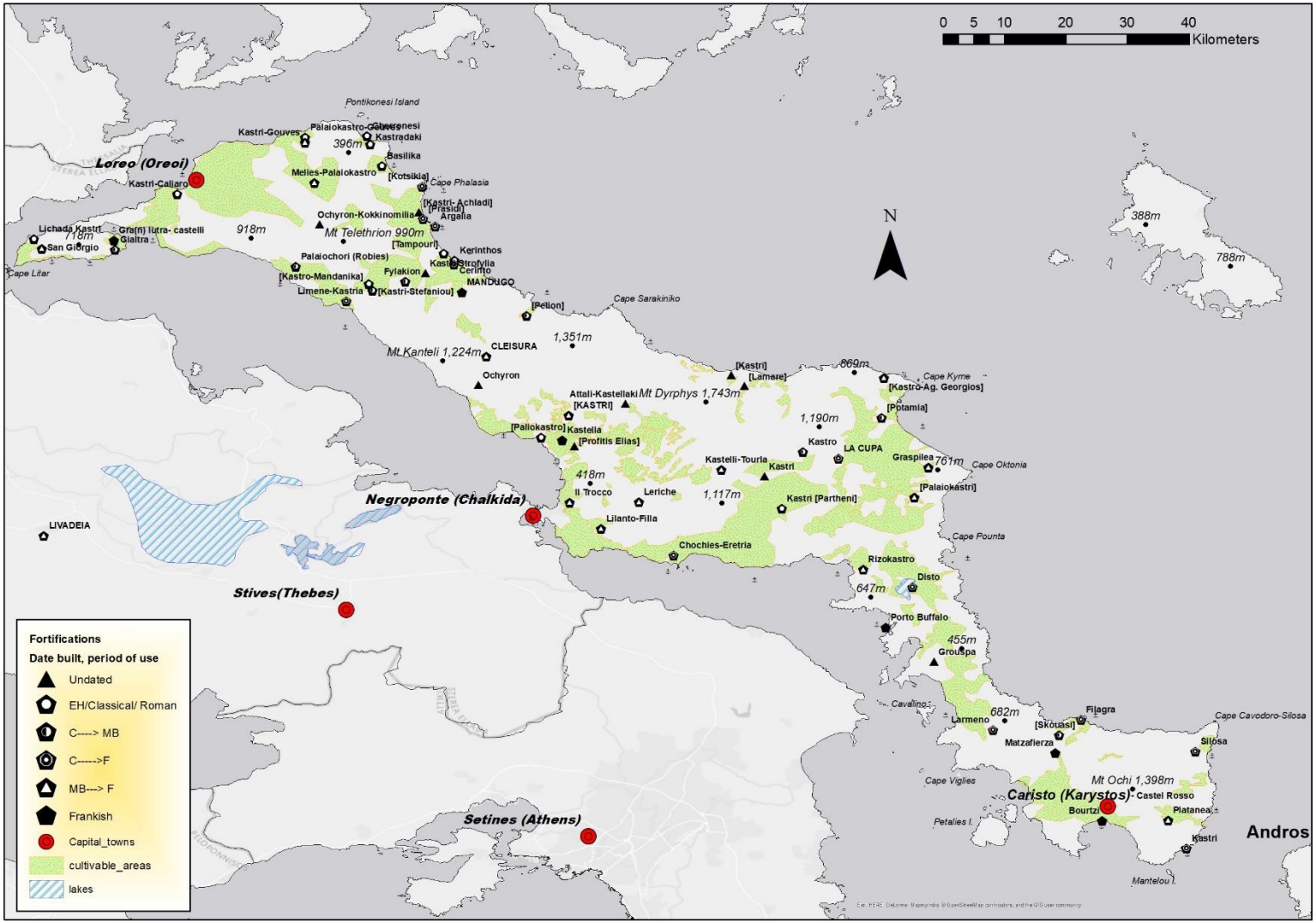
Map 4.2 - Churches and Monasteries : Central



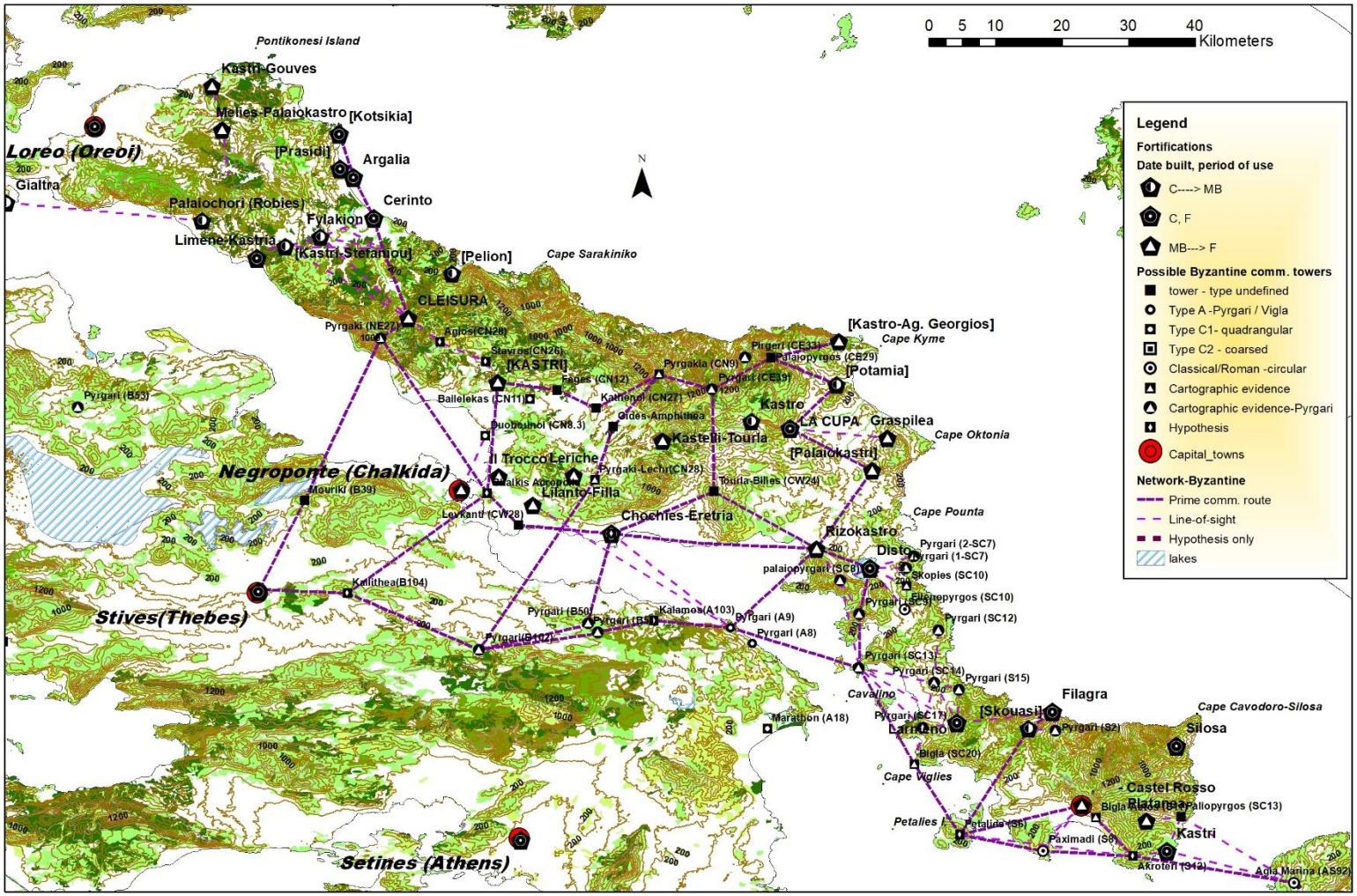
Map 4.3 - Churches and Monasteries : Southeast



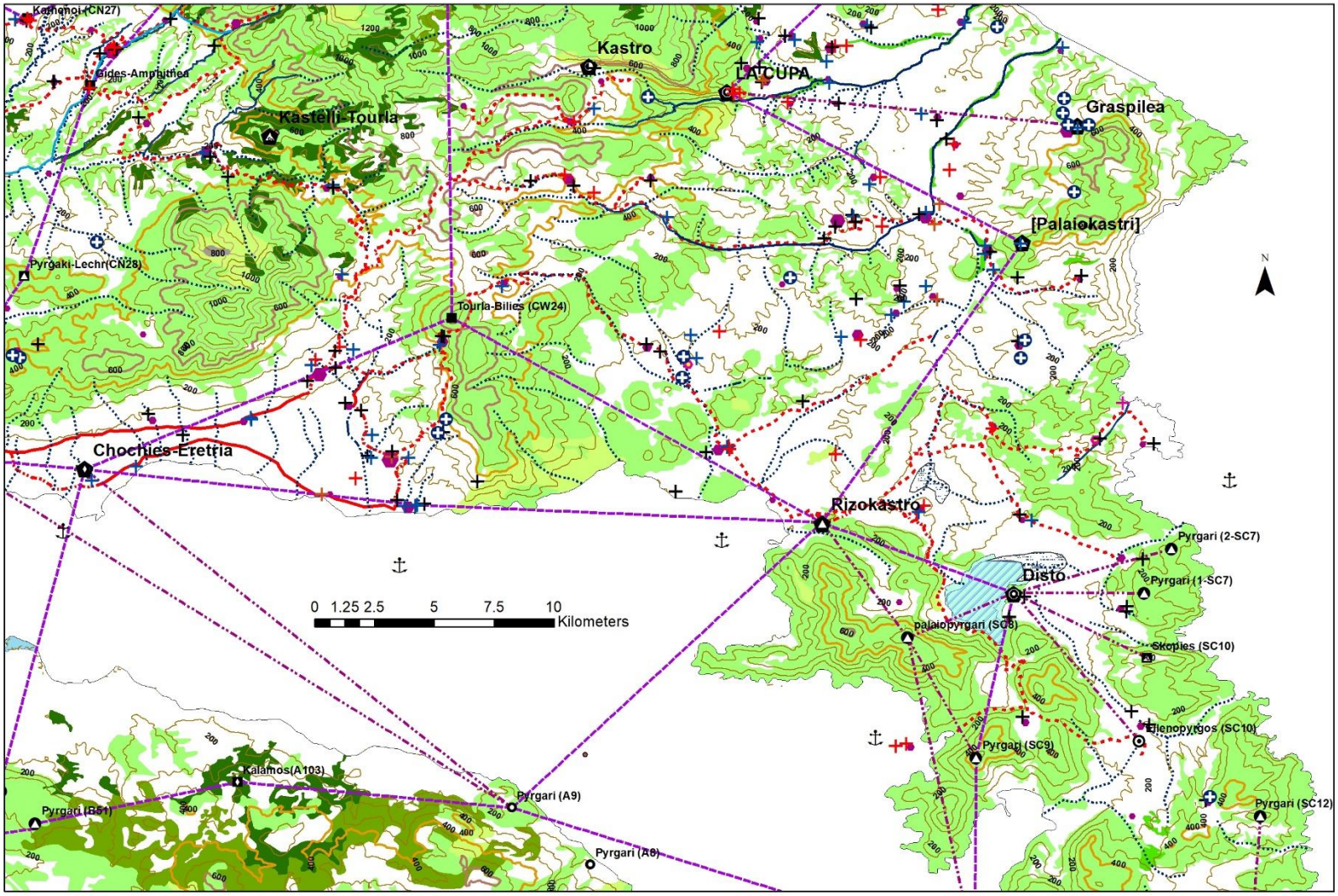
Map 5 - Euboea Settlements and Garrisons



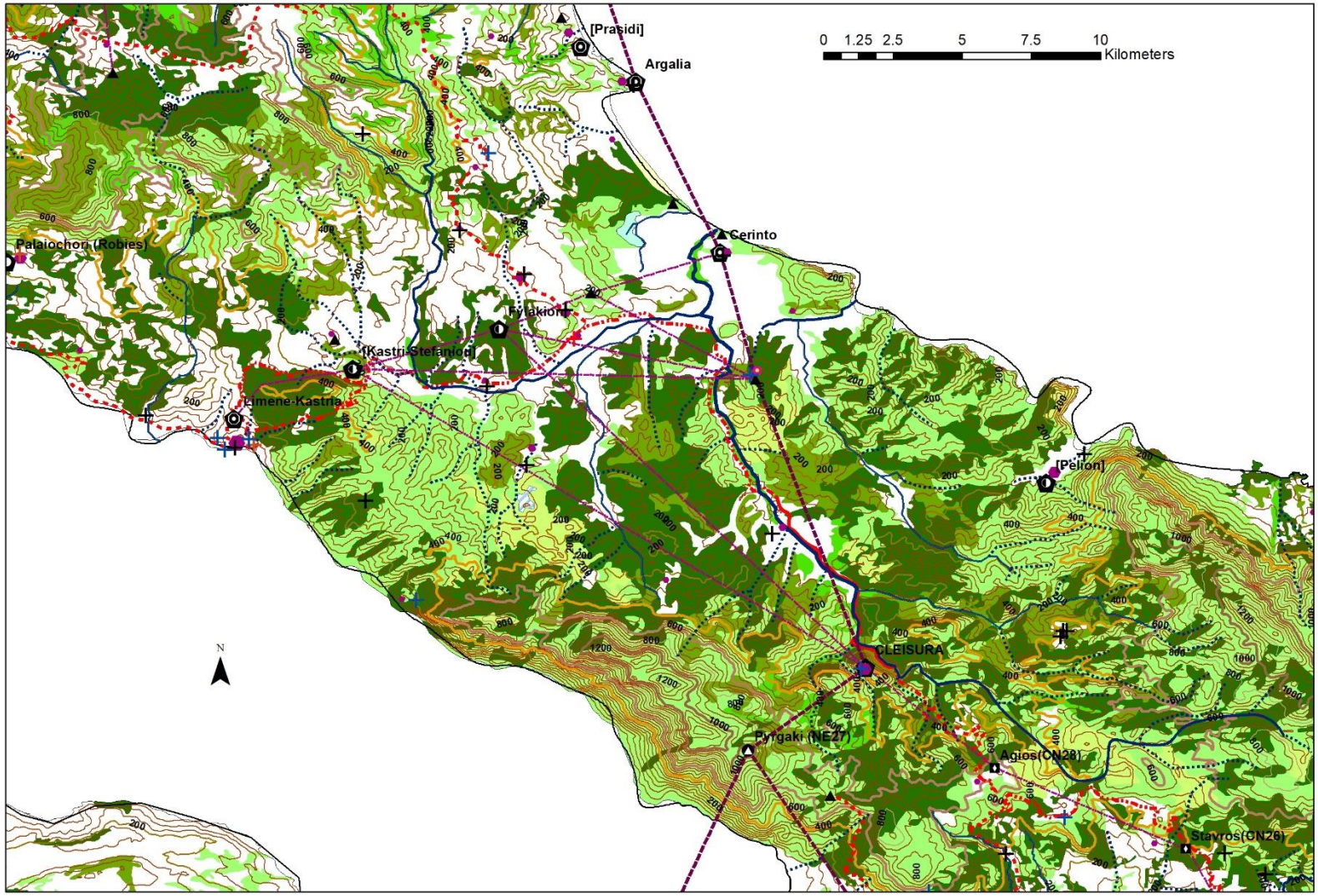
Map 6 - Euboea Fortifications



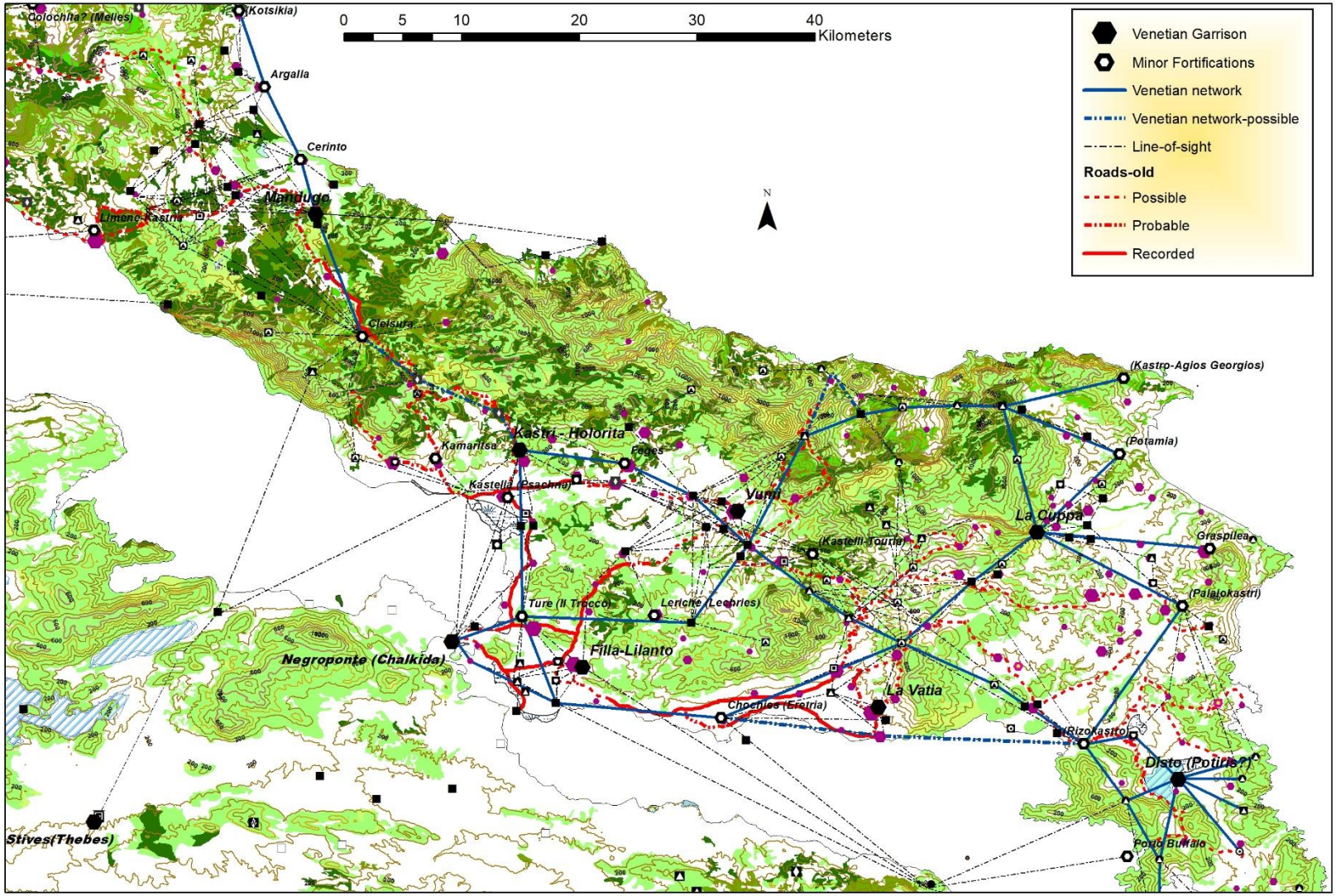
Map 9.1 Possible Byzantine Communication network



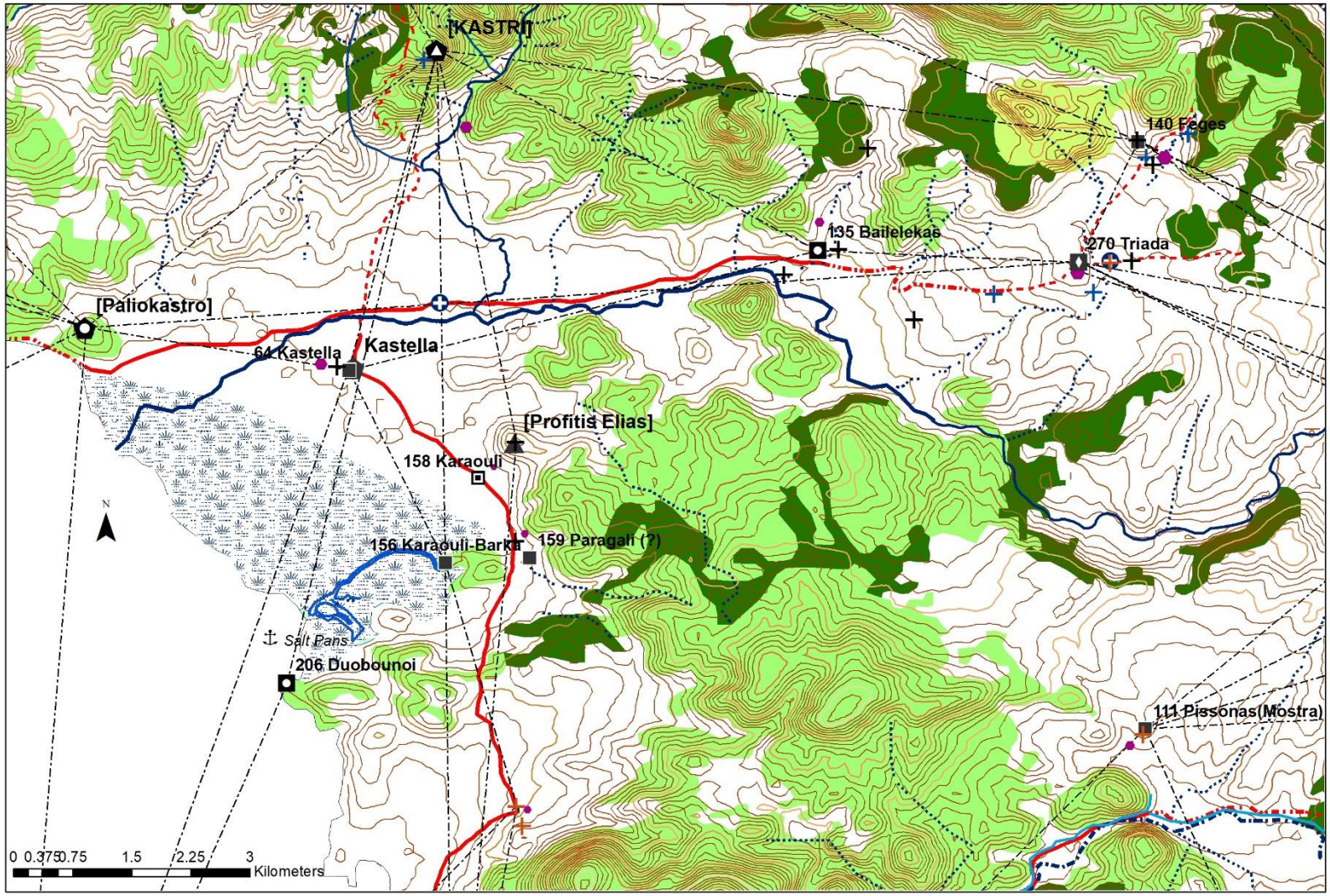
Map 9.2 Dystos-Cupa Byzantine Network



Map 9.3 Cleisura Byzantine Network



Map 9.4 Venetian Network



Map 9.5 Psachna Plain and Hinterland