

Defend Your Coast: Network Analysis of Crusader Fortifications and Settlements in the Kyrenia

Region of Cyprus

By

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The Mediterranean island of Cyprus is situated at the crossroads of the Near East and the Aegean Civilizations. During the Middle Ages, Cyprus experienced raids that would devastate the coastal landscape. Coastal towns and villages were destroyed, and many of them never rebuilt. Fortifications were constructed to defend the coastline from raiders and potential invaders. Scholars believe that during times of heavy raiding coastal settlements are abandoned in favor of inland settlements. This theory has not been tested using Geographic Information System (GIS). This study used GIS to test the area of influence raiders could exert inland during a raid. Based on past research the extent of influence was determined to be 3000 m inland. The Network Analyst tool was used to determine the shortest routes raiders and defenders took to reach undefended villages and churches. The time needed for defenders and attackers to reach sites was determined using a hiking calculator. Based on the results of the test the majority of sites are situated outside the range of raiders influence.

Defend Your Coast: Network Analysis of Crusader Fortifications and Settlements in the Kyrenia

Region of Cyprus

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Kyrenia Region of Cyprus

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Chapter 1: Introduction

The island of Cyprus, located between the Near East and the Aegean civilizations, was a melting pot of eastern and western philosophy, trade, and religion. The third largest island in the Mediterranean Sea, Cyprus has a historical and archaeological record that dates back to the Mesolithic period, and possibly to the end of the Palaeolithic. During the Early Middle Ages, Cyprus was situated between the Byzantine Empire and Islamic Caliphates, constantly competing for economic, political, and military control of the eastern Mediterranean. The Crusades, beginning in A.D. 1095, introduced western European power to the Levant. Cyprus was a key aspect of the Crusaders' plan of success to maintain control of the Crusader States established after the First Crusade.

One of the consequences of the power struggles between the Byzantine Empire, Islamic Caliphates, and Frankish Kingdoms was a rise in piracy in the eastern Mediterranean, with Cyprus being a lucrative target. There are numerous historical and archaeological examples of raids conducted on Cyprus during the Middle Ages, ranging from opportunistic small-scale raids to large raids sanctioned by enemy states. Scholars tend to believe that periods of heavy raiding caused inhabitants to move settlements farther away from the coast (Stewart 1997; Mallari 1986; Ostapchuk 2001). However, this interpretation has not been tested rigorously. Modern GIS tools can be used to analyze changes in settlement patterns over time. This thesis combines historical, archaeological, and modern data to analyze the defensive capabilities in northern Cyprus against sea raiders during the Crusader Period (10th to 15th centuries A. D.) using Geographic Information System technologies to test the hypothesis that Cypriots abandoned the coast during times of heavy raiding activity. Due to the rich number of archaeological sites on Cyprus, the medieval period is largely passed over in favor of older sites.

Research Question

Combining archaeological, historical, and GIS data, this thesis will demonstrate ways settlement patterns can be studied. Tools within ArcGIS, primarily the Network Analyst toolset, provide calculations of the extent of raider influence on the northern coast of Cyprus can be made. Secondly, a hiking time calculator published by Brian Eagen (2014) on outdoorblueprint.com will be used to demonstrate if raiders were capable of raiding a settlement before being intercepted by defending forces. These methods will be used to answer several questions.

Primary

- 1) Are the defensive fortifications and suspected military villages in the Kyrenia mountain range capable of intercepting raiders before they can attack undefended settlements, churches, and monasteries?
- 2) Are a majority of medieval sites in this study situated outside of the raider's zone of influence?
- 3) Did settlements in the Kyrenia region move inland based on the threat presented by raiders?

This study will provide a better understanding of the nature of these defensive sites and the raiding patterns on the northern coast of Cyprus.

Limitations

One of the major challenges of this thesis is the lack of archaeological evidence and surveys in the northern region of Cyprus. Only two of the four areas, Cape Kormakiti and Melandryna Monastery to Karpass Peninsula, were surveyed by archaeologists. George Jeffery's analysis of monuments in Cyprus in 1918 details many of the sites in this study.

The Turkish invasion of Cyprus in 1974 put an end to many archaeological projects in the northern regions of Cyprus. Many of the archaeological sites in this study were discovered before the invasion period. Additionally, archaeological surveys have not been conducted in many areas of the region. Surveyed areas will be discussed in the site selection chapter.

A limitation in Network Analyst is the inability to apply the slope data to the network dataset when determining the shortest route to each site on an established road system. There are other methods within ArcMap to establish pathways, such as the Find Path tool. Due to the extent of this study, these other methods were not explored further. The shortest route tool in Network Analyst (Esri 2016) does take into account the elevation change, but this study did not incorporate an additional cost to moving uphill. To account for this problem, the data has been supplemented by recreating the shortest routes in Google Earth Pro to ascertain the elevation data needed for the marching speed test. The marching speed test does apply the speed changes associated with elevation changes, such as it taking more time to move uphill.

Thesis Structure

Chapter 2 outlines the history of Cyprus during the Middle Ages. This chapter will demonstrate the reason why this period and location were selected for this specific study. Much

of the chapter focuses on the fortifications constructed by the Byzantine Empire in response to Arabic raids that devastated the island from the 7th to 9th centuries A.D.

Chapter 3 details the known raids that occurred on the island during the Middle Ages. Historical and archaeological sources detail the extent and severity of several raids throughout this period. This chapter further reinforces the reason why Medieval Cyprus was selected to study raiding patterns.

The site selection chapter (Chapter 4) outlines the Medieval sites located in the Kyrenia region of Cyprus. The known historical and archaeological record of each site will be detailed to establish dates of construction and occupation. The amount of information regarding the date and historical knowledge of each site varies depending on which archaeological excavation records survive and how frequently the village or church is mentioned.

Chapter 5 details the methodology used to conduct the study in ArcMap (Esri 2016). Tools within Network Analyst (Esri 2016), primarily New Service Area (Esri 2016) and New Route (Esri 2016), determined the area in which raiders could likely attack and get back to their ships, and the likely pathways attackers and defenders used to march across the landscape. The results of the GIS analysis were mapped in two parts. The Raiding Zone maps establish an area of influence where raiders could potentially attack without risking being intercepted by defending forces. The Pathways maps show the most likely path that the defending and raiding forces.

Using the historical and archeological evidence and spatial analysis, it is possible to develop an understanding of the medieval settlements of North Cyprus. The New Service Area tool in Network Analyst creates a shaded area based on a predetermined distance from single or multiple points on a map. This shaded area will show the extent of distance inland raiders could

attack inland before running the risk of being overrun by defending forces. Using a marching speed calculator from Brian Eagen's (2014) article on estimating hiking travel times on Outdoorblueprint.com demonstrates the time needed by raiders to conduct attacks and defenders' ability to either intercept or cut off the attackers from escaping back to their ships. Applying this model to the historical and archaeological record of Cyprus reveals the extent of influence raiding had on settlement patterns during the Middle Ages.

Chapter 6 discusses the results by combining the network analyst study and the marching calculations. This chapter outlines the likely paths that raiders and defenders took to reach vulnerable settlements. Additionally, maps demonstrate the extent of raiders' influence based on the methodology outlined in chapter 5. Charts at the end of the chapter show the number of settlements deemed vulnerable to attack by raiders.

Chapter 7 discusses the conclusions drawn from the methodology applied to this study. It will establish that raiding does play a role in the locations selected for settlements and churches in the Kyrenia region. Improvement for this study in the future and ideas for further research discussed.

The combination of archaeological, historical, and GIS evidence is necessary to determine the extent of raiders' influence on the settlement patterns along the northern coastline of Cyprus. Network Analyst and the marching speed calculations demonstrate the best way to analyze raiders' area of influence at this time. Applying this model to the historical and archaeological record demonstrates that people, during times of heavy raiding, did consider their safety and moved away from the coastline.

Chapter 2 : History of Raiding in Cyprus

During the Middle Ages, castles began to dot the landscape of Europe and the Levant. Cyprus, the land of copper, had fortresses on the island going back to the Late Bronze Age. With castles guarding strategic passes and ports, Cyprus was a well-fortified island. It is theorized that Alexis I of the Byzantine Empire (1081-1118) ordered the construction of castles along mountain passes and ports to deter further raids by Arabic fleets (Metcalf 537: 2009). The construction project was largely successful in stopping the raids, but the arrival of a usurper king by the name of Isaac Comnenus (A.D. 1184-1191) severed the ties with the Byzantine Empire. Isaac set up his own kingdom, where the first major test of the new castles on Cyprus was put to the test against Richard the Lionheart. Using the capture and torture of his soldiers by Isaac as a pretext, Richard invaded Cyprus. Isaac had strong fortifications at his disposal, but without the support of the people, Richard quickly overran the Island. Cyprus then became an arm of the Crusaders, and they sought to use the strategic location of the island as a staging ground for incursions into the Levant. Unfortunately, infighting among the Crusaders on Cyprus led to civil war, where the fortifications were put to the test again. After the civil war, Cyprus began to funnel money and resources into the Levant to attempt to defend the few possessions left on the Mainland, but help arrived too late. Arabic forces took total control of the Levant Coast after the fall of Acre and Tortosa in 1291 and Cyprus began playing defense. Being the last of the Crusader Kingdoms, Cyprus became a haven for refugees from the mainland. With the influx of refugees to Cyprus, a renewed effort to construct defensive fortifications along the coastline of the island started to protect against the possibility of an Arabic invasion.

Armenian and Maronite established villages in the Northern parts of the island during the tenth century (Metcalf 2009: 486). These villages were strategically placed to serve as lookout

posts to warn against raiders that frequently targeted Cyprus. “The Maronites of modern Cyprus live mostly in just three villages occupying crucial strategic sites in relation to the Pentadaktylos range (Kormakitis, Ayia Marina Skillouras, and Asomatos)” (Metcalf 2009: 487). These villages could also provide troops a place to garrison and make defensive stands against attackers, the latter of which would face an uphill battle against a well-entrenched position. Several fortifications were constructed along the Pentadaktylos range during this period to ensure the north was well defended from attack.

The fortifications of Cyprus can be divided into three major categories-- inland castles, port castles, and mountain range castles (Fedden 1957: 109). Each provided a separate function on the island. Throughout the Crusades, different operational powers put a priority on certain types of fortifications on Cyprus.

The inland fortifications did not have the impressive walls that the port and mountain fortifications had. This was due to their primary function being largely administrative (Fedden 1957: 110). These castles were not designed to withstand a well-organized army, but rather ensured that the local population could not rebel. If they did, the inland castles provided enough strength to withstand any small peasant rebellion.

The mountain fortifications were large impressive castles built to guard the passes into the interior of Cyprus from the north. The Byzantines designed these castles as lookout posts for incoming raiding ships (Metcalf 2009: 486). These castles saw a great deal of use during the Crusades, but lost their importance when Cyprus was ceded to the Venetians.

Port castles were the most important fortification works on Cyprus. Being an island, Cyprus relied on these ports as their lifeline to the outside world. These castles were large and had thick walls to defend against any invasion force that looked to overtake the island (Fedden 1957: 110).

The Crusaders improved upon these castles when Cyprus became a Crusader Kingdom -- in the hopes of using the ports to stage launching points to the Levant mainland -- but it was the Byzantine Empire that first began to construct Medieval castles on Cyprus.

The Byzantine Empire lost many possessions to Arabic forces, shrinking their territory and threatening the continued existence of the Empire. Restructuring the Empire's army and disunity within Arabic land, having divided themselves into a number of Caliphates, allowed for the Byzantines to retake Cyprus in A.D. 965 (Metcalf 2009: 485). At the time, Cyprus was primarily occupied in the southern regions of the Island. The southern region had fertile lands and access to the many trading ports that dotted the southern coast. The threat of raiding from the Arabs forced the Byzantines to relocate people and resources to the north of the island.

The Pentadaktylos range is a long stretch of mountains that runs one hundred sixty kilometers along the northern coast of Cyprus. Safe routes through these ranges are few, thus providing strategic locations from which fortifications could deny entry into the southern part of Cyprus. The castles of St. Hilarion, Buffavento, and Kantara were either built or strengthened by the Byzantine Empire (Metcalf 2009: 535). Located in the mountain range, these castles not only had strong defensive capabilities, but they were capable of sending signals along the mountain range to warn people of impending attacks from raiders.

Without archaeological evidence, it is not possible to trace the exact construction dates of St. Hilarion and Buffavento, but Alexius I likely constructed them in response to the threats of Turkish advances in the Levant coast (Metcalf 2009: 536). These fortifications were just two of the many strongholds built during this time throughout the Byzantine Empire in response to the rapid advances of the Arabs in the Levant. The Byzantines were also wary of the Crusader forces with whom they had allied. The Crusaders they allied with were powerful, and the Byzantines

were unsure of their loyalty due to the mistrust between the Latins and the Greeks. The Crusader States, primarily Antioch, were always eager to expand their territory at the expense of both Arabs and Byzantines alike.

Alexius I's building program (for which we still do not have a year) ensured that Cyprus did not come under direct invasion by the Arab or Crusader forces, but the Byzantines lost control of the island due to the treachery of Isaac Comnenus. Isaac was from a noble Byzantine family and was appointed a governorship in Cilicia. The Armenians captured him and held him in prison until the Byzantines paid his ransom. Upon his release, Isaac gathered what remained of his wealth and hired Armenian mercenaries to set sail to Cyprus (Metcalf 2009: 558).

When he arrived in Cyprus in 1183, Isaac falsified documents claiming that the emperor sent him to take over as governor of the island. The Byzantine Empire did not initially respond to the situation on the island, due to the more pressing advance of the Turks. Knowing that the Byzantine navy would eventually make its way to Cyprus, Isaac allied with the King of Sicily to protect the island from invasion in return for trade rights (Metcalf 2009: 560). The Byzantines did eventually send a fleet to retake the island from Isaac, but with the combined forces of Isaac and his Sicilian ally, defeated the Byzantines. For the time being Isaac secured control of the Island and crowned himself king of Cyprus.

Isaac quickly began to take advantage of the Cypriots, who had suffered a great loss of life due to a plague. "Observations by Neophytos state that in 1176 the population of Cyprus had been reduced by death and starvation to one third" (Metcalf 2009:558). Isaac imposed heavy taxation upon the nobles and peasants on Cyprus, bringing resentment and hate from the people he ruled over. His Armenian mercenaries, which formed the largest part of his army, ensured that there would be no revolts from the local population. Accusations of Isaac's brutality included

“Isaac’s raping young women and punishing people by cutting off their limbs” (Metcalf 2009: 560). Isaac was more interested in filling his treasuries, rather than using the wealth of the island to provide for his people. He did not attempt to build upon the past construction projects of the Byzantine Empire, thinking his position was safe from any threats. The arrival of King Richard the Lionheart to the Levant in 1191, in response to Saladin’s advances on the Crusader States, would see an end to the tyrannical rule of Isaac and the absorption of the island into the Crusader Kingdoms.

Where once the Crusaders invaded and conquered territories, the Crusaders were now put on the defensive due to Saladin’s advance into the Holy Land. The vast lands that they had acquired were now under threat of Saladin, Sultan of Egypt. He began to retake the Levant coast from Christian forces. In response, the Kingdom of Jerusalem sent a large force to counter the advances of Saladin. The two forces met at the Battle of Hattin (1187) where Saladin, using the environment to his favor, dealt a decisive defeat of the Crusader forces (Phillips 2014: 162). Without an army to resist and generous terms of surrender offered by Saladin, Jerusalem surrendered to Islamic forces in 1187. After the fall of Jerusalem, Tyre and Acre were the last remaining strongholds held by the Latin States on the Levant coast. The loss of the Levant prompted the call for the Third Crusade, in which Cyprus became an unanticipated battleground.

The call of the Third Crusade set a course for Cyprus to become a Latin Kingdom. Richard the Lionheart, King of England, took up the cross in 1189. He raised a substantial fleet numbering around one hundred ships and set sail for the Holy Land to regain control of Jerusalem from Saladin (Phillips 2014: 170). The *Estoire de la guerre sainte* and *Itenerarium Regis Ricardi*, written by Ambroise of Normand, captured the events that unfolded during the Third Crusade (Ambroise 2014: 3). Ambroise was a medieval poet who not only chronicled the

events of the crusade, but also accompanied King Richard the Lionheart on the Third Crusade. These poems, however, are written from the perspective of the English. Thus it is important to understand that there is potential for bias. Nevertheless, the poems reveal valuable insights into the events that led to the conquest and subjugation of Cyprus. Gaston Paris discovered and translated the poems in 1897 (Ambroise 1941: 4).

Richard set sail from Sicily with his fleet towards the Levant coast, with the intention of landing at the besieged city of Tyre. He then planned to link up with King Phillip II, who had landed his forces in Acre before Richard. With this combined force, they would march on Jerusalem and retake the city in the name of Christendom. However, as the English fleet made its way across the Mediterranean Sea, a violent storm scattered the fleet near Cyprus. “Of Richards’s vessels that were scattered, three here were cast ashore and shattered” (Barber 2012: 342, Novare 1936: 83, Holbach 1912: 72). One of the ships that separated from the main fleet carried his sister Joan and the soon to be Queen of England, Berengaria. Additional ships, including a treasure ship, wrecked outside the Port of Limassol. The Queen’s ship, having been badly damaged by the storm, lay just outside the port of Limassol. “The Emperor attempted to persuade the queens to land, but they feared his intentions and procrastinated” (Ambroise 1941: 85). The ships that did run aground, however, were set upon by Greek forces. After a brief struggle, the Greeks captured the outnumbered English, along with the wealth of the treasure ship. “After this episode, Isaac, who feared the coming of Richard, quickly came to Limassol and garrisoned it with men at arms, both of foot and horse” (Edbury 1998: 102).

Having reconsolidated his fleet, Richard learned about the treachery of Isaac and sent his fleet to the port of Limassol. After recovering the ship with the queen and his sister, Richard sent out an envoy to Isaac to demand the release of both his men and the seized treasure that. Isaac,

having gathered his troops in Limassol, refused to relinquish the men and treasure he had captured. Upon hearing this, Richard ordered his men to force a landing on Limassol. “Arm Yourselves! To which they all did straightaway, not pausing to make long delay” (Ambroise 1941: 86). Richard’s forces loaded small boats with a mix of crossbowmen and heavy infantry and the king himself for the initial assault (Edbury 1998: 103).

The logistics of conducting a naval invasion of an island were complex for the time. The Byzantines were known to have conducted naval landings on Crete, and William the Conqueror landed a naval force in England in 1066. These operations required careful planning; therefore “It was quite possible that Richard’s operation was planned in advance” (Barber 2012: 342). Based on the nature of the logistical complexity that would be needed to conduct an attack, and the looting of the island’s resources and wealth by Richard to help fund his crusade, it seems likely that this event was planned in advance. The wrecking of his sister’s ship on the island serves as a convenient pretext to justify his actions on the island.

Isaac waited on the shore for the incoming invasion force. “The Greek army waiting for them behind a rough barricade made of timber and household furniture” (Wilkinson 1933: 74). “Isaac had stripped Limassol bare of everything that could be moved and used it to fortify the beach” (Gillingham 1999: 146). Additionally, Isaac had some galleys inside the port, filled with men to defend the docks.

The first stage of the landing was to secure five galleys that anchored within the port of Limassol. Isaac filled the galleys with troops and archers ready to meet the invading force. “Like dogs they hooted us and jeered, but their pride swiftly disappeared” (Ambroise 1941: 86-87). Having been in a number of campaigns before the Third Crusade, Richard’s men were more battle-hardened than Isaac’s troops. Additionally, among Isaac’s men “few of them were armed

and almost all were unskilled in battle” (Wilkinson 1933: 74). After an exchange of crossbow bolts to which the poem states “our crossbowmen their quarrel shot, and many did not miss I wot” (Ambroise 1941: 87), Richards’s infantry descended on the galleys and quickly took over the ships.

After the capture of the galleys, the boats made their way to the shore in to establish a beachhead for the main force. As the boats approached the shoreline, archers and crossbowmen exchanged volleys to thin out the opposition before the infantry closed ranks. The English continued to row under heavy fire and eventually made landfall along the beach. Once on shore, a fierce fight broke out on the beach for control of the shoreline. After an initial skirmish, the English pushed back the Greek forces into the town of Limassol. Instead of allowing the Greeks to reconsolidate their forces, the English pressed the attack into town. King Richard landed after the beachhead was secured and joined his troops in the battle for Limassol. In the confusion, many Greek and Armenian troops defending the island were cut down. During the fighting, King Richard found a horse, presumably from a Greek defender, and mounted it proposing a challenge to Isaac. “Come, emperor and joust! Make haste! But he for jousting had no taste” (Novare 1936: 88). This passage is most likely an exaggeration of the situation in the battle to praise Richard, but the outcome of the initial assault on Cyprus resulted in a complete route of the Greek forces. After routing the Greeks, it was time to bring the main force of the army into the harbor. As with most Latin armies of the Crusades, the main component of the army consisted of mounted knights. Mounted knights were among the strongest units to take the field during the Middle Ages. Large war horses mixed with a heavily armed and armored rider made for a formidable soldier.

Richard had transported a large number of horses from England to engage Saladin's forces. As formidable as mounted knights were, the trip across the Mediterranean Sea meant that the knights' horses needed to recover from traveling on a ship for a number of days. Richards's men knew that horses are known to be frequently susceptible to seasickness (Ambroise: 89). Therefore it is not possible for mounted forces to land and ride straight into battle.

L'Estoire de la guerre sainte details that, after establishing control of Limassol, Richard brought his larger transport ships, carrying his horses, into port to be disembarked (Ambroise 1941: 88, Wilerson 1931:75). After unloading the horses, they needed to be exercised "for they were all benumbed and sore and stiff for the whole month before which they had spent upon the sea unable to lie down at ease" (Ambroise 1941:89). It appears that it did not take long for the horses to get over their seasickness because the next day troops mounted and began to track and pursue Isaac into the interior of Cyprus (Holbach: 76). That morning, the main host of knights caught up to Isaac, who had set up camp on the roads a few miles outside Limassol. "According to one account he drove in their rearguard before him; according to another he came suddenly in sight of a sleeping camp" (Wilkerson 1933: 75). The Greek army broke quickly against the strong charge of the heavily armed knights and began to flee deeper into the interior of Cyprus. The Greek forces moved into the Troodos mountain range, where the highest elevation on Cyprus is found.

With King Richard pursuing them at great speed, the Greek forces once again were unable to set up a suitable defensive line in the Troodos mountains before the Latin army was upon them. This time, the main host of the Greek forces were either captured or killed. Isaac, although present in the battle and apparently "Personally unhorsed by Richard" (Novare 1936: 91), still managed to elude capture. However, the imperial standard was captured by Richard's

forces, dealing a large morale blow to the already beleaguered forces defending Cyprus. Isaac relied heavily on the Armenian troops that helped him overtake Cyprus and establish his island kingdom. Due to this, the Greek troops had little love for Isaac, which may explain, in part, the ease with which Richard was able to break the defending forces.

After the major victory, Richard decided to let Isaac flee for the moment to allow his men to rest and consolidate the wealth that was now in his army's possession. After the battle, Richards's army captured a vast amount of Isaac's wealth, which he had brought with his army to the battle.

It was at this point that the exiled Guy de Lusignan, King of the Kingdom of Jerusalem, landed in Cyprus to lend his support for King Richard's conquest of the island. King Guy lost most of his troops at the battle of Hattin and was captured during the battle. He was released in exchange for the port city of Ascalon in modern day Israel, but both his bannermen and King Phillip II resented him (Novare 1936: 93). He traveled to Cyprus to lend his support for the invasion of Cyprus, but also to establish an alliance with Richard so he would be put back on the throne following Jerusalem's recapture. An exchange of gifts sealed the new alliance between the two kings.

With the alliance made, King Richard consolidated his forces. Reinforcements of galleys arrived off the coast of Limassol, where they had captured a number of Arabic ships filled with goods and eight hundred Turk and Persian prisoners (Ambroise 1941: 95). With his full forces now united, Richard marched on Nicosia, the modern-day capital of Cyprus. Isaac was there with the remaining troops he had, but realized that there was no chance for victory and sent an envoy to Richard suing for peace. He promised money, men, and resources from Cyprus for Richard's use during the Crusade. "The Greeks promised to come on the Crusade with the English king

accompanied with five hundred knights and to hand over the castles of Cyprus as a pledge of his sincerity together with 3,500 marks” (Bridge 1989: 143). Additionally, he promised to swear fealty to Richard.

Richard agreed to these terms and agreed to meet with him to finalize the peace offering Isaac proposed. “The two men then exchanged the kiss of peace, returned to Limassol like brothers, dined together, and retired to bed” (Bridge 1989: 143). Fearing that Richard would not honor the agreements and instead hold him captive, Isaac fled to the port city of Famagusta.

Richard moved part of his galley fleet to Famagusta to cut Isaac off, telling King Guy to follow him along the shoreline. In three days, they made their way to Famagusta, where Richard’s ships anchored to ensure that Isaac could not escape by sea. Isaac abruptly turned north to Nicosia to regroup his forces for another stand against Richard. Having secured the southern ports, Richard and Guy set out to Nicosia to capture Isaac (Ambrose: 99). Richard was unable to move his fleet to the northern ports of Cyprus because the army could not reinforce the fleet and Isaac was in full control of the fortresses that guarded both the passes and ports north of the Kyrenia Mountain Range.

As Richard and Guy advanced on Nicosia, Isaac laid an ambush at the village of Tremithius to attempt to capture Richard. Lying in wait, seven hundred Greek soldiers laid an ambush for Richard’s forces, “waiting until a majority of Richard’s men had passed before attacking them” (Bridge 1989: 143). Sweeping from the front and two sides of the road, mounted horsemen descended on Richard’s forces. Trying to cut the head off the snake, the Greeks fired “At the king launched two arrows that had been tipped in poison brew” (Holbach 1912: 82). Enraged, Richard pursued the fleeing force after the ambush failed, but was unable to catch the Greek forces. This is because the Greeks likely rode swifter horses designed for rapid assault and

retreat rather than Richards's horses that were bred to be slower but stronger. The armies then moved into Nicosia, which was not defended.

The last phase of the assault on Cyprus was to take the heavily fortified Kyrenia Mountain Range. Kyrenia, Dieudamor (St. Hilarion), and Buffavento were the primary targets of Richard and Guy's armies. Kyrenia Castle guards the main port entrance to Kyrenia, while Buffavento and Dieudamor guard the main passes into the town from the south.

King Guy was charged with taking the port castle of Kyrenia. He commanded the ships that he brought from Syria to blockade the port and moved his galleys close to the fortification. His army surrounded Kyrenia Castle. Once his troops were in place he began a fierce assault on the castle. The defending troops, already low on men and supplies, quickly capitulated and surrendered the fort to Guy. Inside the castle, Guy discovered that the emperor's daughter sought refuge at this castle. Guy captured her, raised his banner on the heist tower, and moved his forces to Dieudamor, which is within eyesight of Kyrenia Castle (Ambroise 1941: 103).

Dieudamor was a fortress built into the mountains and occupied the highest point of the Kyrenia region. Taking it by force would be an incredible undertaking. Guy moved up the range to besiege the castle, leaving behind a host of troops to maintain Kyrenia Castle and guard Isaac's daughter. Having seen the capture of Kyrenia, the defenders were dismayed by the quick advance of Guy, but defended the castle once his army set upon them. Knowing the fight was lost, and the moral low, Isaac ordered that the defenders surrender to Guy.

Buffavento was the last fortress defending the Kyrenia region. The strongest of the three castles, Isaac himself was inside and decided to make one last stand against Guy. Upon learning of the capture of his daughter, Isaac capitulated and surrendered the castle, his remaining troops,

and himself to Guy. Guy then turned over Isaac to Richard and awaited the judgment of the King of England.

Having taken the whole of Cyprus, Richard then passed judgment onto Isaac. Isaac begged not to be put in iron chains to preserve his honor, so Richard had him bound in silver chains and forced him to bend the knee (Ambroise 1941: 106). Isaac then pleaded for his life to Richard, and upon seeing the sincerity of Isaac's plea, he decided to spare him. Isaac was then transported to the Hospitilar fortress of Margat in Syria, where he would spend the rest of his days.

The fortresses that were captured were filled with treasure that Isaac hoarded during his rule of Cyprus. Having secured the island and the treasure of Isaac, Richard consolidated his troops at Limassol. His army boarded their ships and set out for the city of Acre. Richard left behind Robert de Turnham and Richard de Camville to maintain control of the island while Richard went on to fight Saladin (Ambroise 1941: 108).

With full control of Cyprus, Richard imposed new taxes to drain the island of its wealth. "Richard was not one to miss an opportunity of reaping an even richer harvest than that already gathered safely in, he imposed a fifty percent capital levy on them" (Bridge 1989: 143). The Cypriots were again under control of an outsider who imposed heavy taxes on them. The island was soon sold to a Monastic order, the Knights Templar, who wanted to use the island as a launching ground for Crusader forces.

The Knights Templar, a monastic order of pious knights, took over ownership of the island from 1191-1192. The Templars were formed in the early years of the Crusades as defenders of Christian pilgrims making the journey to Jerusalem. Over the course of the Crusades, the Templars acquired a great deal of wealth and land that was either donated to them

by the church or monarchs looking to gain favor with the knights. The Knights Templar saw the logistical advantage of Cyprus as a staging ground from which Crusaders could launch attacks onto the Levant Coast. They offered King Richard 100,000 bezants for payment of the island, 40,000 of which they would pay upfront (Murray 2006: 330). Knowing the cost of upkeep for his army, and having no intention to rule Cyprus, Richard quickly agreed to the Templars' terms.

The Knights Templar landed a small force of around 120 troops to occupy the Island. They could not spare any additional troops due to the fighting on the mainland of the Levant against Saladin. Additionally, many Templar troops were either killed or captured at the Battle of Hattin. The payment to Richard was large, but the Templars knew that the amount of wealth Cyprus had in terms of agricultural products -- such as sugar and vast quantities of raw resources -- would make up for the amount paid.

Armand Bouchart was the commander sent to occupy the island. The riches of the island proved too tempting for the occupying forces, as Knights Templars began to seize treasure and lands from the local Barons of Cyprus. The harsh attitude the Templars had to the Greek Cypriots brought resentment and hatred among the local population. "Their attempt to impose new taxes on the Greeks led to a rebellion in Nicosia" in 1191 (Murray 2006: 330).

Knowing that they vastly outnumbered the Templar, the Cypriots hatched a plot to ambush and kill the Templars. The Templar became aware of the plot and fortified themselves in the stronghold of Nicosia. The Templars sent terms to the rioters to allow the passage of the Templars safely from the island in exchange for the relinquishing of control of Cyprus. The Cypriots refused the terms, fearing that the Templars would simply return to Cyprus with a larger force and slaughter the rebels.

Trapped in the stronghold of Nicosia, the Templars decided to mount and spring a surprise attack on the Cypriots. Without warning, the Templars burst from the gates of the stronghold in full armour and engaged the Cypriots. Poorly organized and caught by surprise, the Cypriot rebels were slaughtered; for the moment, the rebellion was put down.

Although the rebellion crumbled quickly, the Templars knew that they did not have the numbers to hold the island sufficiently. “The master, Brother Robert of Salble, and the convent came to the king and asked him to return the property they had given him and take back the island for it was not something they could hold” (Edbury 1998: 112). As part of the deal, Richard could keep the 40,000 bezants that had already been paid to him. They requested in the relinquishing of the island that they could continue to occupy estates at Famagusta and Limassol as well as castles at Yermsoyia, Gastria, Khiokitia, and Limassol. Richard agreed to these terms. He was not interested in reoccupying the island, due to the resources it would take away from the front lines of the war. Richard then turned over control of Cyprus to Guy of Lusignan in A.D. 1192, who either offered payment for the island or was gifted it for helping Richard seize the island (Edbury 1998: 113, Phillips 2014: 173, Wilkerson 1933: 83). The Knights Templar would still maintain a strong presence on the island, bringing in large amounts of wealth and goods to the Order. In 1291, the city of Acre -- one of the last Christian strongholds of the mainland of the Levant -- fell. The main force of the Templars, including the Grandmaster, transferred the headquarters of the order to Cyprus.

With the relinquishing of Cyprus to Guy of Lusignan, the Kingdom of Cyprus was established as one of the Christian Kingdoms in the Levant. To establish a good relationship with the West, Guy established trade treaties with the powerful maritime powers of Genoa and Venice. These trade deals included the establishment of merchant guilds on Cyprus, as well as

lucrative trade rights within Cyprus (Murray 2006: 332). Genoa and Venice agreed to these terms due to the fact that the majority of their income from trade came from the Levant. It also provided safe ports for their merchant fleet to anchor. Guy also benefited from these terms, for Cyprus could call on the powerful navies of the Venetians and Genoese in the event of an invasion from the Muslims.

The population in Cyprus was still largely Greek. King Guy was aware of the hostility the Greeks felt for their new Latin rulers. To pacify the Greeks, Guy encouraged knights and nobles from the mainland of the Levant to settle on Cyprus. "He offered estates, lands and in some cases dowries in accordance with their social status" (Murray 2006: 330). Due to the continued efforts to defend what remained of the Christian land in the Levant -- reduced to the lands within modern-day Syria -- there were few knights who answered Guy's call to settle on Cyprus. A renewed campaign to remove the Christians from the Levant mainland, led by Baybars I, led to a flood of Frankish and Latin refugees in Cyprus. Christian forces still held the main cities along the coastline of the Levant, but many that lost their land retreated to Cyprus to find new lands and opportunities.

The arrival of new refugees from the Levant and the establishment of Cyprus as the new Headquarters of the Knights Templar bolstered the defenses of the island in terms of manpower and resources. The Knights Templar and the Knights Hospitallers, the two leading knight orders of the Crusades, built castles in strategic locations near the coast at Paphos and Famagusta to ready for a potential invasion. Although there were some castles built or refortified after the fall of the Levant mainland, the Kingdom of Cyprus did not conduct any major overhauls of the island's defense network. This is in part due to their reliance on the Italian maritime states' fleets to protect the island from full-scale invasion.

Ironically, it would not be an invasion of Cyprus that enveloped the Kingdom of Cyprus in its first war, but rather an internal civil war. The increasing amount of nobles immigrating to Cyprus led to a power struggle between the old and the new noble families. When King Hugh passed away in 1218, he left his young son, Henry I, as the successor. The nobles that backed Henry I were relatively new to the island, but had control of the young king. Fredrick II, King of the Holy Roman Empire, attempted to put his son Conrad II of Jerusalem on the throne. This event became known as the War of the Lombards.

Fredrick was at first successful in taking control of the majority of Cyprus. He was unable to take control of the northern parts of Cyprus, due to the Iberian family's control of St. Hilarion and Buffavento castles. Aimery, Fredrick's commander of Cyprus forces, laid siege to St. Hilarion in hopes of capturing it before reinforcements could arrive. A meager force of two hundred soldiers loyal to King Henry I marched from the castle into the pass to meet the two thousand strong cavalry force sent to take the northern pass into Kyrenia.

The troops defending the castle were heavily outnumbered, but they had the advantage of foot soldiers. Once a knight dismounted his horse, he was largely helpless in the battlefield. "There was one thing which greatly helped the Cypriots: they had foot sergeants, which meant that when one of their knights were knocked down, the sergeants helped him up and remounted him on a horse. And when one of the Lombards was struck down, he was either killed or captured by the foot sergeants" (Marshall 1992: 171). The resulting fight led to a complete rout of the Lombard forces and a stunning victory by the Cypriots.

Fredrick's army still held Kyrenia castle after the battle. Henry's forces laid siege to the castle, but were unable to cut off the castle's ability to resupply from the sea. "Their inability to blockade the castle from the sea, defenders were free to come and go in their attempt to find

reinforcements” (Edbury 1991: 65). The Cypriot forces sent an envoy to Genoa to settle terms of agreement for the Genoese fleet to help end the civil war.

With the victory, the Iberian supporters of the Cypriot king won the support of the Genoese fleet in assistance against the Lombards. Thirteen galleys were sent to relieve the port of Kyrenia, which was under siege by the Lombard fleet. Without support and without an army, the Lombards quickly capitulated and Henry I was established as the King of Cyprus.

The civil war brought a great deal of devastation both in men and property in the Kyrenia region. “The area around Kyrenia and St. Hilarion must have suffered during the sieges, and we read of wanton destruction elsewhere, in particular Kythrea where the mills were wrecked in 1232” (Edbury 1991: 67). Many expenditures went toward recovering the lost property of the area, helped in large part by loans from the Genoese.

After the war, Cyprus became the resupplying base that the Crusaders needed for the remaining strongholds on the Levant mainland. “It was a very useful asset, as it was only three days’ sailing from the Palestinian coast, and produced a wide array of foodstuff, vital for a long campaign” (Barber 2012: 343). The Knights Templar established a small fleet on Cyprus and began to harass Muslim shipment coming from Egypt. The Kingdom of Cyprus participated heavily by providing both men and finances in the fifth and the seventh crusades. Both crusades, however, were resounding failures.

With the fall of Acre in 1291 and the subsequent fall of Ruad in 1302, the Crusaders had no more holdings in the Holy Land. Cyprus continued in vain to mount raids into Muslim territories, but without a foothold on the mainland, there was no hope to reconquer the Holy Land. With full control of the Levant mainland, Muslim forces began to raid Cyprus. The

fortresses on Cyprus deterred the Muslims from a full-scale invasion, but there was little the Kingdom could do from punitive raids.

After the Age of the Crusades, the Kingdom of Cyprus eventually dissolved and became a colony of the Venetians. A major building phase to construct new fortifications to defend the ports around the island occurred under Venetian control. The new fortifications were strong and could withstand the force of the newly introduced cannon. However, these fortifications could not hold out against the might of the Ottoman Turks, who invaded the island in 1571, thus ending the dominance of the Latins in Cyprus.

Discussion

Cyprus went through several phases during the age of the Crusades. Prior to the Crusades, the Byzantine Empire attempted to make Cyprus an island fortress that could resist incursions by Arabic forces, following a string of humiliating raids by Arabic fleets. New fortifications were built along the northern region of the island and fortifications guarding major ports were strengthened. New villages were established to populate the north and act as warning stations against raids. The advances made by the Byzantines were short lived by the invasions of one of their own, Isaac Comnenus. Isaac established his kingdom and ruled over his people harshly. The arrival of Richard the Lionheart's fleet, and subsequent capture of some of Richard's men, led to a short but brutal conquest of the island. Isaac was overthrown and put into prison. The Templars then bought Cyprus from Richard, but after a failed rebellion by the Cypriots, sold it to Guy of Lusignan who established the Kingdom of Cyprus. The island endured civil war before eventually establishing itself as a powerful state. The fall of the Levant mainland to the Turks ended the hopes of trying to retake the Holy Land. Fortresses played a key

role throughout the various struggles of Cyprus during the Crusades. The Northern fortresses of St. Hilarion, Buffavento, and Kyrenia were primary targets of invading forces due to their strategic location on the island.

Chapter 3 : Raiding in the Sweet Land of Cyprus

The previous chapter covered the general history of the Late Byzantine through the Crusader periods on Cyprus, but it is also necessary to detail instances of raiding—both specific and general—to demonstrate the reasoning behind this time period being chosen for this study. As stated in the previous chapter, the mountain fortresses in the Kyrenia Mountain Range were built by the Byzantines primarily in response to the raids that devastated the island from the 7th to 10th centuries A.D. Other historical instances of raiding include William of Tyre’s Latin Chronicles, written sometime in the late 12th century, and Leontios Makhairas’s “The Chronicles,” written in the early 15th century.

Islamic Raids from the 7th to 10th centuries

Once Islamic forces conquered the northern coastline of Africa and the Levant in the 7th century, the Rashidun Caliph developed a large fleet and conducted a number of raids in the eastern Mediterranean. The Arabic fleets attacked a number of Byzantine territories such as Cyprus, Rhodes, and Crete. Cyprus, with its proximity to the Levantine coast and wealth, made it an ideal target for raiders. The Byzantine Empire was weakened by the Persian War (A.D. 602-628) and was unable to counter the rise of the Arabic fleets that spread across the Mediterranean Sea (Parthog 2006: 16). In 649 the Arabic fleet landed near the port City of Salamis in Cyprus. The fleet destroyed Salamis, pillaged the countryside of Cyprus, and made off with seventy shiploads of goods (Parthog 2006: 16). After the raid, Cyprus endured attacks from Arabic forces and counterattacks by the Byzantines. In 653 Abu l’A’war raided the island with five hundred ships under the pretext that the Cypriots had broken a treaty condition that forbade them from supplying the Byzantine Empire with ships (Metcalf 2009: 411). Metcalf does not detail the

areas assaulted during this raid, but Arabic forces managed to kill and capture enough of the population on Cyprus that the Cypriots re-confirmed the treaty.

In 806, Caliph Harun Al-Rashid assaulted the island, which led to widespread destruction and thousands being taken into slavery. According to Stephen de Lusignan, Cyprus changed hands at least eleven times and endured twenty-four full-scale Arabic attacks (Parthog 2006: 17). These attacks likely led the Byzantine Empire to construct the fortresses in the Kyrenia Mountain Range and major ports around Cyprus.

Although Arabic attacks on Cyprus often caused widespread destruction, destruction of the island was not the only motivation for such attacks. Slaves were a valuable commodity during this time period. Thousands of Cypriots were sold into slavery and scattered throughout the world. A bishop of Soloi noted that during the first Arabic raids in the spring of 649, 120,000 people were taken as prisoners (Metcalf 2009: 400). During the second wave of raids, an estimated 50,000 people were kidnaped and sold into slavery. While those numbers are likely an exaggeration of the population taken as slaves to be sold, it does provide primary evidence of the raids on Cyprus during this time period. Metcalf (2009: 398) notes that there is a historical source written by Anastasius the Sinaite that mentions that a number of Cypriot slaves were working in the Zoora and Tetrapyrgia, near the Dead Sea. When he asked why there were so many Cypriots in the area, he was told that “the air there was so enervating that only people from Cyprus could work in it, Prisoners coming from other countries soon sickened and died” (Metcalf 2009: 398).

Archaeological evidence suggests that a number of sites were destroyed by raiding during this time period. The Northern port city of Lapithos, which will be discussed further in the site selection chapter, was excavated in 1915. During the excavation, archaeologists found mosaics

along a long chamber upside down, suggesting that they had fallen violently from above (Metcalf 2009: 396). Excavated buildings showed signs of burning, and glass objects were melted by a fire of great heat. A horde of valuable objects found buried at the site suggests that the occupants, who saw the raiding fleet coming, buried their valuables in hopes of one day returning to reclaim their property (Metcalf 2009: 468). At the Limeniotissa Church at Paphos, a thick layer of charred remains in the narthex was uncovered during excavations (Metcalf 2009: 396). Mass graves, a burnt acropolis, and a stock of missiles used by defenders were found at Amathus.

Based on the historical and archaeological evidence for this time period, it is evident that raiding was a serious threat to the stability of Cyprus. Major coastal cities such as Lapithos, Costantania, and Kourion were sacked and destroyed. While Metcalf (2009: 474-478) outlines a theory that people moved to higher ground due to primarily agricultural reasons, security from raiders likely played a part of the calculation in establishing new villages. After the Byzantine Empire reconquered the island in 965, Cyprus established a number of military villages and castles to deter any further attacks on the island. Cyprus seems to have avoided any major invasion once these defenses were in place, until the raid of Raynald of Chatillon in 1156.

Raynald of Châtillon Assaults Cyprus

Raynald of Châtillon perpetrated one of the most infamous and devastating attacks on Cyprus. Unfortunately, we know little about this attack. The circumstances surrounding the attack are also clouded, particularly regarding which party was responsible for the events that led to the attack on Cyprus in 1156. According to William of Tyre, the Byzantine Emperor, Manuel I Komnenos, was contending with a former ally Toros of Cilicia. Toros fled to Cilicia and

proceeded to conduct raids on the Byzantine Empire. Unable to dislodge Toros from his position in Cilicia, and dealing with the much larger threat of Muslim forces on the borders of the Empire, Manuel I appealed to Raynald of Châtillon to attack Toros's fortress in Cilicia in return for a large sum of money. Raynald agreed to the arrangement and subsequently routed Toros's forces from the Cilicia region. The events that followed the defeat of Toros are translated from William's Latin as the following:

Afterward he sent word to the Emperor Explaining the course of events. He had expected a great reward, but, since the emperor had already got what he wanted, he sent nothing. The prince, who was deep in debt, decided to take something by force from the emperor. Accordingly, he invaded Cyprus, which was the emperor's. Therefore, having free range throughout the whole island, [he] destroyed cities, overthrew towns, insolently sacked the monasteries of both the men and women, exposing the nuns and young maidens to mockery. For there was no end to the quantity of gold and silver and precious garments, but these things were thought by the people losing them to be as excrement by comparison with their damaged modesty. Therefore for several days they ravaged the entire region while no one was able to resist. They did not spare anyone for age or sex, considering them to have no difference of the situation. (Handyside 2015: 79)

Paulin Paris published a French translation of William of Tyre's text in 1879-1880. According to Phillip Handyside, there are a number of instances where text was inserted or deleted. Handyside stated, "A good example of this is the case of Renaud de Châtillon, about whom the translator regularly added significant phrases that are lacking in William's text." (Handyside 2015: 7) The translation printed by Paris greatly diminishes the blame associated with Raynald and paints him in a more positive light. This may be due in part to the fact that Raynald was a French nobleman. Paris translated the attack on Cyprus as the following:

Afterward he sent word to the Emperor explaining the course of events. He had expected a great reward, but since the emperor had already gotten what he wanted, he sent nothing. The prince, who was deeply in debt, decided to take something by force from the emperor. Accordingly, he invaded Cyprus, which was the emperor's. Then his men rampaged unhindered through the land, taking castles and sacking cities and towns. They acquired a very large quantity of gold, silver, and silk cloth. It may well be the case that they committed many crimes against maidens and married women, because it is difficult not to in such circumstances.

(Handyside 2015: 78-80)

William's text does not go into the specific towns and monasteries attacked, but it does illustrate that the island was indiscriminately looted. Metcalf (2009: 550) states that resistance was given in the northern region of Cyprus by doux Michael Branas, but his forces were

overwhelmed and he retreated to Nicosia. Branas was eventually captured by Raynald and held for ransom. During Raynald's assault on the island, Cypriot forces confronted a military raid near the Village of Dhikomo, which lies on the southern slope of the Kyrenia Mountains and close to the castles of St. Hilarion and Buffavento. In the ensuing battle, the Cypriot force was annihilated, which presumably allowed for Raynald to take Nicosia and lay further waste to the island unimpeded.

After Raynald's attack on the island in 1155-56, the Egyptian fleet made a number of opportunistic attacks on the weakened island, capturing a score of prisoners, both political and people to be sold into slavery (Metcalf 2009: 550). Three years after the Egyptian raids, Cyprus would again suffer raids encouraged by Raynald. Manuel I, the Byzantine ruler at the time, was to marry the sister of the count of Tripoli, but changed his mind and married the daughter of Constance, Princess of Antioch and Raynald's wife (Metcalf 2009: 550). Raynald at the time was imprisoned by Islamic forces returning from a raid into the valley of the river Euphrates and Marash. Because of the marriage, Raynald encouraged pirates to attack Byzantine held lands, including Cyprus. Alexios Doukas, the governor of Cyprus, was unable to stop the raiders from attacking the island (Metcalf 2009: 550).

While this translation adds and subtracts aspects of William's *Chronicles*, it is important to see the way in which he translated the documents to understand the problems with trusting historical texts and translations of them as absolute fact. William of Tyre, a statesman during his time, undoubtedly had a personal bias in his narration. This is not to say that historical texts should be ignored outright, but rather to understand the potential biases of the author. More importantly, the text reveals a deliberate attack on the island of Cyprus by Raynald and an apparent disregard for human suffering on the island as he plundered it. Throughout history,

monasteries were frequent targets by raiders for their abundance of small valuable goods and lack of defensive capabilities; therefore, it is highly likely that Raynald attacked the monasteries of Cyprus. Archaeological excavations of Cypriot monasteries built before the attacks of Raynald might yield primary evidence of destruction, but to the best of my knowledge, no such study has taken place.

Lack of Raids from 1191 to 1291

After the conquest of Cyprus by Richard the Lionheart and the establishment of the Kingdom of Cyprus in 1192, the island experienced a century of relative peace. During this time, no major raids were conducted on the island, although opportunistic raids likely continued during this time. Professor John Pryor (1988: 133) hypothesized that this era of stability was due largely to the fact that Christian forces held the coastline and major ports along the Palestinian and Syrian coastline. Due to the lack of access to ports outside of Egypt, Muslim galleys did not have the operational range to attack Cyprus. Since the currents of the eastern Mediterranean flow counterclockwise, the logical route to Cyprus was to move along the coast of Palestine before turning west between Beirut and Tripoli (Edbury 1999: 235). Pryor contends that the amount of water needed for the trip, and the amount of time before the water became undrinkable, exceeded the galleys' capabilities to attack Cyprus at that time (Edbury 1999: 236).

Additionally, due to the major military operations being conducted on land in the Near East, retaking lost territory likely took priority over any naval operations. In 1291, Crusader forces lost Acre, the last major port held in the Holy Land by Crusader forces. Acre's fall established Islamic dominance of Palestine and Syria. Although Cyprus would not be invaded by

a full-scale Islamic invasion, Cyprus suffered a number of raids throughout the 14th and 15th centuries. These raids were detailed by Leontios Makhairas.

Sweet Land of Cyprus Raids (14th and 15th centuries)

The Chronicle written by Leontios Makhairas details the history of Cyprus from the 4th century to 1458 (Nicolaou-Konnari 2016: 163). Throughout the text, Makhairas details a number of raids and invasions that occurred in Cyprus. The raids that did occur are detailed to varying degrees. Makhairas also discusses the ways in which Cypriots used raiding to deter Arabic forces from attacking Cyprus.

One of the earliest mention of pirates in the *Chronicle* deals with the hanging of one hundred men for piracy in Cyprus. They were hanged “at Famagusta (eight), at Kyrenia (eight), at Paphos (and) Lemeso (seven), at Lefkosia (eighteen), at Kormakiti seven, at Karpasi sixteen” (Dawkins 1932: 61). King Hugh IV (A. D. 1324-1358) of Cyprus hung these pirates within months of his accession to the throne, likely to deter any opportunistic raiders from attacking the island. The text mentions that the raiders did a great deal of damage to the island with two galleys, but does not detail the areas of the island that were attacked.

The next mention of a raid on Cyprus was an expedition outfitted by the Turks shortly after 1363. The Turks saw an opportunity to plunder the island because a plague ravaged it in 1363. Additionally, the King of Cyprus, King Peter I, was away in Avignon for the election of a new pope, and afterward, he made trips to France, Genoa, and Germany to meet with royals. Taking advantage of this opportunity, the Turks “fitted out twelve galleys and appointed a captain called Mahomet Reis... [He] came to Cyprus and landed at Pentayia (Morphou Bay) and raided many people... [H]e carried them off prisoners and went away (to Turkey)” (Dawkins

1932: 121). Soldiers were sent from Lefkosia to intercept the raiders, but by the time they reached the area, the Turks had already left. “When Mahomet Reis went to Turkey, he told them that Cyprus was left empty, and that they are keeping no guard at all: they rejoiced much, and fitted six galleys and came to Karpasi (Karpass Peninsula), and ravaged there and took many villages and men, and they very nearly captured the Lady of Karpasi: and returned to Turkey” (Dawkins 1932: 121).

To counter the Turkish incursions into Cyprus, the Prince of Cyprus fitted out four galleys from Famagusta to guard the coast. “Two of the galleys went in the direction of Turkey, and Karpasi, and the other two went in the direction of Paphos” (Dawkins 1932: 121). The following text details the battle that occurred once the Cypriot galleys intercepted the Turkish forces:

And when the galleys in which were Sir Francis Spinola and Sir Henrey de La Couronne were going from Karpasi towards Kormakiti, they came upon two Turkish ships: from once the men had landed and gone pillaging and the other one was waiting. And finding the galley empty, the Cypriots set fire to her and burned her; and when the men saw that their ship was burning, they went up on a hill and prepared to defend themselves. And when the regent heard the news, he sent men at arms, and they seized them and brought them to Lefkosia; and they dragged them behind horses and hanged them. The other Turkish galley, when she sighted the two Cypriot galleys, put to sea and made off. And the

galley of Sir Francis Spinola overhauled her and although unarmed bore down upon her, and the Turks at once surrendered: and they made her fast with rope and towed her behind him. The other galley that of Sir Henry de La Couronne, remained under Cyprus to see that the Turkish Galley was fully burned. When the Turks saw that the crew of the galley of Sir Francis Spinola was unarmed, they said to themselves: 'We see that the Christians drag us to execution and hang us, and we have no way of escape: let us stand to our arms to the death, rather than that they drag us at the horse's tail.' And immediately they cut the cable, and take a store of arrows from their bows, and shot and killed the captain, Sir Francis Spinola, and wounded many of the crew of the galley as well. When the rest saw the valor of the Turks, certain (of the Christians) threw themselves into the sea and swam to the other galley, that of Sir Henry de la Couronne, and told him of this, because he was not aware of it. And at once he made his men arm, and turned back and came up to them. And in their fury the Cypriots leaped on the Turkish ship, and with them the captain. And the men (who were in Sir Henry's ship) were many, and (when they boarded the Turkish ship) the ship heeled over, and many men fell into the sea, and they were all under arms (and were drowned).

The galley of John de Mitre also appeared, coming from the region of Paphos: and they seized the Turks who were still alive and put them in irons. And the four galleys came, and they took with them the Turkish ships and the half-burned ship and the Turks as well, and came to Kyrenia. And the regent was deeply grieved at their losses and at the death of the two captains, and by his order they had the Turks dragged by horses and hanged them on the gallows (Dawkins 1932: 123-125).

In the year 1364, in retaliation for raids in Alaya, it appears that the Turks sent three galleys to raid the coastline of Cyprus. *The Chronicles* does not say where the Turks landed, but it does say “now at that time three Turkish ships showed themselves, and the kings five (Cypriot) ships had not discovered them; and they landed and went and pillaged the country, and took away gear and many people, and carried them to their ships” (Dawkins 1932: 133). The commander of the Polis launched three galleys to hunt down the Turkish ships (Dawkins 1932: 133). Fearing for the lives of the prisoners on the Turkish ships, the captain gave orders not to ram the Turkish vessels. However, one galley, said to be in a fit of rage, rammed a Turkish ship and the whole of one side of the ship was broken (Dawkins 1932: 133). More Cypriot ships arrived and by the time the battle was over, the Cypriots “found that they had killed so many Turks that there were only sixty left alive” (Dawkins 1932: 135).

After the raid of 1364, “when the wicked Turks heard of the bitter news that they had lost the three ships and their men, they were sorely grieved, and took an oath that they would never again fit out an expedition to come and ravage” (Dawkins 1932: 135). While it appears that at

this time, the Turkish Empire stopped outfitting ships to attack the coastline of Cyprus, this does not mean raiding stopped completely. Raiding is as much a product of opportunity as it is a tool used by nations to attack rivals. Opportunistic people can turn to piracy and raiding to sustain a living. Economic hardships can also make people turn to piracy and raiding to sustain themselves.

In retaliation for raiding their coastline in 1367, the Saracens outfitted two galleys from Morocco to raid and pillage Cyprus (Dawkins 1932: 203). As they were passing by Famagusta, a light ship on its way to Gorhigos spotted them and alerted the admiral (Dawkins 1932: 203). Three ships were dispatched from Famagusta to track down the Moroccan ships. They were unable to find the ships and returned to Famagusta. *The Chronicles* does not say whether or not the Moroccan ships successfully raided the island, but based on the fact the Cypriots did not appear to capture them, it is plausible they attacked weakly defended areas of Cyprus.

Genoese Assault on Cyprus

According to *The Chronicles*, seven Genoese galleys were sent to Cyprus to demand retribution for the murder of Genoese men on Cypriot soil during a ceremony (Dawkins 1932: 339). Unsatisfied with the negotiations, six galleys began to raid and pillage the island. In the year 1373, the Kingdom of Cyprus declared war against Genoa. All Genoese who lived in Cyprus were arrested and thrown in prison. The Genoese responded by increasing the intensity of their raids. “The galleys cruised round the island and pillaged property, killed cattle, burned crops, received runaway slaves, and did all manner of mischief” (Dawkins 1932: 357). The Genoese attempted to raid Aliko, but were countered by Cypriot forces. The Genoese then proceeded to St. Efxiphis (near Soli) and Pentayia (Dawkins 1932: 357).

In response to the raids on Cyprus, the constable, James de Lusignan, left one thousand men to defend Famagusta. “He took the rest to Lefkosia, and distributed along the coast three hundred good men; he also had a number of local foot soldiers and Armenian mercenary foot soldiers” (Dawkins 1932: 357). This show of force was enough to deter the Genoese from attacking the interior of Cyprus. The Genoese “did not venture to land, not even to draw water, and many of them returned to Lemeso [Limassol] where the garrison was fewer and weak... they landed and burned the houses; and the inhabitants took flight, and they did much damage” (Dawkins 1932: 358-359). Limassol fell to the Genoese forces, providing a strategic port from which to attack Cyprus.

After the fall of Limassol, the Genoese turned their attention to the nearby port city of Paphos. Paphos was reinforced with a castle and one thousand men from Lefkosia, but the Genoese forces were strengthened by a force of two thousand Bulgarians, Greeks, and Tartars (Dawkins 1932: 359). During the battle that ensued, the Cypriots used Greek fire and did a great deal of damage to the Genoese galleys. Seeing that the total strength of the Genoese forces was too great, the Cypriot forces pulled back to Lefkosia. The Genoese landed their galleys and proceeded to raid the area. They took many captives, but the Cypriots who managed to escape fled into the Troodos Mountains (Dawkins 1932: 359). With two major southern ports--Paphos and Limassol--secured, the Genoese turned their attention to Famagusta.

Thirty-six Genoese ships appeared on the coast of Famagusta in a show of force against the Kingdom of Cyprus (Dawkins 1932: 365). The men of Famagusta quickly manned the walls and castles and sent word to the king that the fleet had been spotted in Famagusta. On Sunday October 2, 1373, the king sent a proclamation demanding that all able-bodied men--except for those guarding the capital—were to make ready to march to Famagusta (Dawkins 1932: 365).

The King marched out of Nicosia on a Sunday night and reached Famagusta by the following morning. Today, Famagusta is 62.9 km from Nicosia when traveling by road. Given the average human walking speed of around 5 km per hour, it seems likely that this overnight march to relieve the coastal city was possible. A battle ensued later that day in which casualties mounted on both sides before the Genoese were pushed back into their galleys. The king then entered the city and ordered the gates closed to keep the Nicosian men from leaving and to avoid capture by the Genoese. A siege ensued and the Cypriots within the city could not venture out to acquire supplies. In a strategic move, the Genoese blockaded the port and landed part of their forces on the island. They surrounded the city, effectively preventing the Cypriots from receiving aid from the sea.

James De Lusignan, seeing the hopeless situation of the siege, decided to attack with five hundred men to make a breakthrough so that the Cypriot army could return to Lefkosia. Suffering heavy losses, the Genoese forces pulled back, allowing for Lusignan to retreat with his army from Famagusta. During his return to Lefkosia, Lusignan happened upon sixty Genoese men who had disembarked from their galleys to raid the Cypriot countryside near the estate of Argo (Dawkins 1932: 367). These men quickly overwhelmed the Genoese, capturing twenty, and killing the remaining in the skirmish. The cattle that were stolen by the Genoese were returned to their owners (Dawkins 1932: 367).

Having secured Famagusta and successfully repelled an attack to retake the city by the Cypriots, the Genoese reinforced the city walls so that the city could deter a future attack. Peter de Cassi almost cut off the supply line to Famagusta, but, through a stroke of good fortune, the Genoese were able to capture his forces. Famagusta was seen as the crown jewel by the Genoese, “Sirs we have now come here and God has given us Famagusta: now that we have come to try

and take Kyrenia, we are afraid that we may lose the sweet for the sake of the sour” (Dawkins 1932: 435). This implies that Kyrenia was not nearly as profitable as Famagusta and that if they risked losing men by trying to take the north, the areas that they had captured would be undermanned and susceptible to a counterattack.

After the fall of Famagusta, Lefkosia soon fell and the Cypriot forces were forced to retreat to the Kyrenia Region. As the Genoese secured the wall of Famagusta, the City of Nicosia was being pillaged for its wealth (Dawkins 1932: 425). The capital held a number of noblemen’s estates and houses, including the Prince’s. The Genoese began to strip the wealth from the city, taking a great deal of money and goods, and loading them onto wagons to be transported to Famagusta. A young boy, not named in the text, escaped from Nicosia to inform the constable that the capital had been stripped of its wealth, and that a wagon train carrying the stolen goods was headed to Famagusta (Dawkins 1932: 439). Upon hearing this, “he at once ordered five hundred men at arms to mount and ride after them, and they came to Sivouri to the seigneurial lodging” (Dawkins 1932: 439). This estate was ten miles west of Famagusta (Dawkins 1932: 170). When they arrived, the Cypriots asked where the baggage train was, and discovered that the caravan had stopped in the town on Askia for the night to rest.

The Cypriot leaders discussed the ways to make their next move and secure the loot that was stolen from their capital city. If they attacked the Genoese at Askia and secured the wagons, anyone who escaped could quickly send word to Famagusta and the Cypriots would get caught with the loot before they had a chance to escape over the Kyrenia Mountain Range. Additionally, it was riskier to attack a group that had already set up camp for the night because they would be more capable of responding to a surprise attack than an open road attack. They decided to set up an ambush near the town of Sidna (Dawkins 1932: 439). The hour had grown late when the

constable and his men set out to strike the Genoese, so they used “St. Julian” as a passphrase to reduce the potential for confusion. Four Germans were moving down the road towards the constable, and were subsequently captured and questioned about the baggage train. It is unclear from the text whether or not these men were under Genoese employment, but they told the constable that the wagons were moving down the road from which they had come (Dawkins 1932: 439).

Once the Genoese and the wagon train were spotted, the Cypriots descended on the unsuspecting party. The defenders were quickly overwhelmed by the surprise attack and many were slain; the rest surrendered to the constable. After the short battle, the constable tasked a group of Bulgarians to guard them while he led a small group to scout out the road to Trypimeni to ensure that they would not run into any opposition. Once the group returned, the wagon train was sent with haste to the town of Tryimini, which lies on the southern side of one of the few passes through the Kyrenia Mountain Range (Dawkins 1932: 443). However, wagons could not fit through the pass. Therefore, the loot that had been gathered on the wagons was transferred to camels and quickly moved through the pass before the Genoese could respond (Dawkins 1932: 443).

The constable sent the wagons back to Nicosia, knowing that they would be long gone before the Genoese could send out a force to intercept them. Upon the arrival of the wagons to the capital city, the Genoese were outraged to discover that the loot had been taken by the constable. The Genoese held a council shortly after the arrival of the empty wagons and it was decided that securing Kyrenia from the Cypriots was the only way to end the ongoing struggle. The Genoese were unable to capture the northern part of Cyprus due to the fortifications that dotted the northern mountain range, and the walls of Kyrenia holding firm against a siege.

Additional sorties were sent south to try to make inroads into the captured territory. A knight by the name of Sir Peter de Cassi ventured out from the safety of the Kyrenia region to besiege Famagusta, under the pretext that the provisions secured for the north were sufficient enough to allow a relief force to be sent south. He was given no such order and acted on his own accord but managed to gather a force and moved south. Aware that the area of Akrotiki was being pillaged by the Genoese, he besieged the city of Famagusta, so that provisions could not be brought into the city. However, beleaguered by the prospect of a prolonged siege, Cassi moved his men nine miles north to the village of St. Sergios, thus guarding the road north of Famagusta. The Genoese, told by a local smuggler that the Cypriots guard had become lax in the village, sent a large force of soldiers to capture the unsuspecting Cypriots. The Genoese descended on them by surprise and set fire to the town and tower where the Cypriots resided. Unable to fight both the fires and the Genoese, Cassi and his men surrendered to the Genoese, and were sent to Famagusta as prisoners (Dawkins 1932: 434-435).

The war with the Genoese was a devastating defeat for the Cypriots. Much of the southern lands were destroyed by raiding and the city of Famagusta was ceded to the Genoese. Raiding was a large part of the Genoese strategy to thin out the Cypriot forces before making precision strikes on vulnerable ports.

In 1425, in retaliation for providing pirates with a safe harbor from which to raid and buy stolen goods, the Saracens sent six galleys to attack Cyprus (Dawkins 1932: 631). The Saracens made a successful landing, recapturing stolen goods that were stored at Lemeso. After pillaging the town, they torched it, the pirate ships, and a Cretan merchant ship (Dawkins 1932: 633).

The Saracens quickly outfitted fifty additional ships and sailed to the southern coast of the Karpasi Peninsula and then headed for Famagusta (Dawkins 1932: 633). They burned the

villages of Trapeza and Kalopsida. King Janus sent his brother, the Prince of Galilee, to command five hundred cavalry and two thousand foot soldiers consisting of Armenians, Syrians, and freedmen from Lefkosia to find the Saracens (Dawkins 1932: 633). The prince was able to track the Saracens to Sivouri, killing six men before the rest fled.

The Prince then tracked the Saracen fleet, which was sailing off the coastline of Cyprus. The fleet made its way to Aliko and a battle ensued once the Saracens had landed. *The Chronicles* does not detail the outcome of the battle other than casualties sustained. The Saracens did manage to burn Kellia, Aradippou, the logging of the tower of Aliko, Agrinou, Vromolaxia, and Kiti (Dawkins 1932: 635).

The Cypriot people endured a number of raids that devastated the island throughout the Middle Ages. Positioned at the crossroads of two major empires and major shipping lanes made Cyprus both wealthy and a luring target for raiders. Cyprus did not endure these raids laying down, for they developed a strong navy to conduct raids of their own.

Raids conducted by the Cypriots

The Cypriots were not innocent victims in terms of raiding. On numerous occasions, the Cypriots raided the Turkish coastline to pillage wealth and deter the Turks from making their sorties into Cyprus. Some raids were conducted in retaliation to assaults on Cyprus, while others were opportunistic. Once the Crusaders took control, there was a concerted effort to create and maintain a significant navy. The navy helped defend the island and organized offensive strike forces to raid and plunder enemy territory. The ships protected the island, and also kept major trade routes safe for merchants trading valuable goods from the Near East.

After the conquest of Cyprus in A. D. 1191 by Richard the Lionheart and the establishment of the Kingdom of Cyprus, the Cypriots developed an arsenal in Famagusta to serve as a staging ground for fleets to defend the coastline of Cyprus. On numerous occasions, the Cypriots deployed their ships to hunt down raiding ships harassing their coastline. While not able to fend off every raid, the combination of fortifications and naval operational capabilities made assaulting the island a dangerous prospect.

One of the earliest examples of raids conducted by the Cypriots in *The Chronicle* written by Leontios Makhairas was the attack on the Turkish port of Myra. King Peter I outfitted four galleys, six transports, and four pirate ships for the expedition (Dawkins 1932: 111). The Cypriots successfully captured the castle and Peter “ravaged (and slaughtered) as much as he could” (Dawkins 1932: 113). Additionally, the Cypriot captain, Sir John de Sur, captured a valuable picture of Saint Nicholas, transferring it to the Church of St. Nicholas in Famagusta. After ravaging the town and plundering it of its wealth and taking many people captive, de Sur set fire to the castle and returned to the captured Turkish city of Adalia.

The Turks made significant advances on the southern coast of modern-day Turkey during the last years of King Hugh IV’s reign (1324-1358), making Cyprus vulnerable to raids. “And when the people of Gorhigos saw that the Turks were closing in upon them every day, and were going forward from point to point, they had taken the outlying houses and gardens and much besides, and had taken the town as well,- then some of the Christians came to Cyprus” (Dawkins 1932: 99). The Turks managed to capture two hundred towns and castles in the region (Dawkins 1932: 99). The Armenians remained under constant pressure from the Turks until the ascension of King Peter I of Cyprus” (Dawkins 1932: 99).

In 1360 King Peter sent men and ships to reinforce the men of Gorhigos to push back the Turkish advance in the region. “And from that time until now the kings and regents sent every year two galleys and a monthly wage to the men of Gorhigos, and victual and gear, and they contend daily with the Turks” (Dawkins 1932: 101). This move of reinforcing the mainland with Cypriot troops was made in part because of King Peter’s desire to possess land in Turkey, but it was also likely a move that protected Cyprus from potential raids and invasion coming from Turkey. If the Turks managed to take the ports on the southern coast of Turkey, Cyprus would become an easy target for raids. King Peter I occupied Gorhigos and readied an expedition to dislodge the Turks from the southern coast of Turkey.

The King ordered his army to be ready to sail against the enemies of Cyprus (Dawkins 1932: 103). King Peter outfitted a massive force to invade “And King Peter fitted out also forty-six ships, small and great, belonging to Cyprus. And also to other rulers, in all fifty: and he at once gave each one of them orders to proceed wherever it was the king willed” (Dawkins 1932: 103). A total of one hundred and nineteen would participate in this invasion (Dawkins 1932: 103):

On Tuesday the twenty third of August 1361 the King’s army reached Turkey at the region near Adalia which is called Tetramili, and there they put the horses on shore. And at once the king sent his brother the prince with many men at arms both on foot and on horse to besiege Adalia, and the people went with the prince. And on the twenty fourth of the same month the king came with the rest of the army and besieged the castle on every side, and in the

evening they took it, and as he entered the town was great with joy
and honor, and they gave god great thanks for the first victory”

(Dawkins 1932: 107).

In response to the capture of Adalia, the Turkish general, Takka, allied with the ruler of Alaya. Alaya promised to send ships while Takka besieged the city by land (Dawkins 1932: 117). Forty-five thousand men and eight galleys besieged the city. The defenders were able to repulse the attack and sailed from the gates and routed the defeated Turkish forces. The eight galleys sent to reinforce the Turks fled the battle once the Captain of the ships, John de Brie, spotted them. Many sailors fled from their ships and sought refuge in the mountains. De Brie burned the eight ships upon capture. The Turks were successfully repulsed and the Cypriots maintained a hold on Adalia and Gorhigos, thus ensuring safety from raids coming from the southern coast of Turkey.

In response to the raids that devastated the area surrounding Morphou Bay and the Karpassa Peninsula in 1363, the prince outfitted four galleys in Famagusta for a retaliation raid on the Turks (Dawkins 1932: 125). He included the four galleys that stopped the raids on the northern coast for a total of eight galleys and an unknown number of light ships that sailed to Turkey. The Cypriots landed at Anemouri, and proceeded to set fire to the castle of Anamour, “six miles east of Cape Anamour” (Dawkins 1932: notes 108). The Cypriots managed to capture a number of Turks in this raid. The Cypriots burned down the town of Anemouri, and proceeded to besiege Siki, but abandoned the siege upon learning that Cyprus was being raided by Mahonet Reis (Dawkins 1932:125). Reis fled to the harbor of Tripoli upon learning that a sizable force was returning to Cyprus with the intent of capturing him (Dawkins 1932: 125). In 1364 the Cypriots sent another raiding fleet to pillage the coastline controlled by the Turks:

And the three galleys went along the coast to pillage the Turks, and they came to Alaya and did great mischief there, and went into the harbor to attack the castle: and three Turkish ships came out and fought with them. And whilst they were fighting two more Turkish ships appeared, and this made five: and Sir Nicholas Lase ordered Sir John Goneme to ram one of the ships as she comes in. And he refused to ram her, and moved out of the harbor to go away: and the other galley also went out and following him and they came to Cyprus and joined two others. And before they came to harbor, a great gale got up, and they were separated, three went to Kyrenia and the captain Sir Badin de Brie went to Paphos (Dawkins 1932: 131).

After the defeat of Turkish raiders in 1364, the Cypriots found themselves in conflict with the Saracens. During the raid of Adalia, the Cypriots had captured a Saracen named Khatziani, and brought him back to Kyrenia as a slave (Dawkins 1932:143). The Ruler of Damascus learned of the treatment of one of his countrymen and ordered all Cypriot merchants arrested until the Saracen was released from his bonds (Dawkins 1932: 143). The regent, presumably of Kyrenia, sent a letter to Damascus refusing to release the Saracen. “And this emir, Melek Bekhna, was a man of great pride, and when he heard this news he sent them an answer most hard and shameful: Then by his order, they wrote the harshest letters to the Burgesses of Cyprus.” While the text does not go into detail about the content of the letter, the lords present

with the pope at Avignon “were seized with great and (all) set themselves to come hither, and go to Syria to spoil and ravage (all) the country of the sultan of Cairo” (Dawkins 1932: 145). The arsenal of Famagusta began to outfit ships and prepare supplies for an attack on the lands held by the Sultan of Cairo.

The Cypriot fleet totaled “thirty-three ships for the horses, and ten merchantmen, and twenty other ships of the kind called ‘doves’” (Dawkins 1932: 147). They set sail to Rhodes, where additional forces were waiting (Dawkins 1932: 150). Once the fleet was fully assembled, the Cypriots moved towards Alexandria, arriving on the ninth of October 1365 (Dawkins 1932: 151). The sultan attempted to prevent the Cypriot forces from landing in the harbor, but failed. Once troops had landed and made safe the harbor, the horses began to be unloaded from their transports. The next day, the Cypriots attacked the old harbor with their ships, while the mounted army attacked the town. The Cypriots were able to overwhelm the defending forces. “The crews of the galleys went in and out all over the town, and took away great wealth and brought it to the galleys” (Dawkins 1932: 153). After consulting with the legate and knights, King Peter “gave orders and the army returned to the galleys, and they set sail and came to Lemeso, landing with great joy. And the king landed with all the knights, and the barons, and the galleys went round to Famagusta: and they unloaded the spoils” (Dawkins 1932: 155).

The next major raid conducted by the Cypriots occurred in 1367 on Tripoli. It is unclear if King Peter I intended to occupy the town of Tripoli, but the chaos that ensued led to a complete rout of the Christian forces. Once the Cypriot forces landed in the city, “the people all gave themselves over to pillaging” (Dawkins 1932: 191). The pillaging of the city left the Cypriot forces unorganized and distracted. The town of Tripoli was one mile from the port where the Cypriots had disembarked from their ships. The Cypriots began to return to their ships in a

disorganized manner. The Saracens, having laid in wait in the gardens, sugar cane fields, and hedges that lay in-between the town and port, sprang a trap that left many of the Christian forces wounded or killed (Dawkins 1932: 191). King Peter still occupied the town but, knowing the danger of his position (the town having no protective walls), the king rallied his troops and made their way to their galleys. It is unclear how many troops were killed in the ambush, but it is clear that the King overextended his forces inland and a lack of organization led to the slaughter of his men.

Undeterred by his loss at Tripoli, King Peter's fleet's next target was Tortosa, a castle of the Templars occupied by the Saracens on the coast of Syria (Dawkins 1932: notes 123). The Cypriot forces landed in the town unopposed. "And when the people of the sultan's village saw so great a host, they fled and went up into the mountains" (Dawkins 1932: 193). The Cypriots discovered that supplies used to construct and equip ships, such as oars, pitch, tow, were stored in a former Christian church. "And by the king's orders, they set fire to the material and burned it, and the iron and nails, which the fire did not consume, they threw into the sea" (Dawkins 1932: 193). They occupied the area for an extra day to ensure that they had destroyed the supplies meant for shipbuilding. According to the notes in *The Chronicles*, Tortosa was raided a second time by the Cypriots in 1369 (Dawkins 1932: notes 123).

After a successful attack on Tortosa, King Peter I raided and set fire to the town of Valena, a town on the coast of Syria. Nothing is written about the attack on the town, other than that it burned. Peter then set his sights on the port of Laodicea, but due to strong winds and a storm, he was unable to land his forces. He proceeded to Malo in Syria, staying there for two days, before proceeding to Ayasi.

Ayasi at this point in time was under the control of the Saracens and the Turks of Armenia. The area the king landed in was guarded by two castles, one in the sea and the other further inland (Dawkins 1932: 193). The castle on the shore was overrun and the survivors retreated to the castle further inland. Not wanting to overextend himself and give his men time to rest, Peter I waited until the next day to try and assault the castle. However, this gave the Saracens a chance to fully occupy the castle, and by the time the Cypriot forces began to move on the castle, it was too heavily reinforced to make an assault. Peter I decided that instead of risking the lives of his men for an assault, he instead ordered his men back to their ships (Dawkins 1932: 195). The fleet began to make its way back to Famagusta.

The raids conducted by King Peter I were largely successful. Upon his return to Cyprus, the king made a proclamation: “anyone who is willing to go to the sultan’s country to pillage can go, and they may come back again to Cyprus to rest and then go there again, and they shall be given at Famagusta whatever they may need from the arsenal” (Dawkins 1932: 195). This proclamation declared that the state was willing to aid and abet anyone willing to attack its enemies. This proclamation was a form of privateering that is most famously affiliated with the British Empire, who employed pirates to attack its enemies during the Golden Age of piracy.

Sir John de Grimante and his brother Sir Peter de Grimante outfitted two Genoese galleys in the service of Peter I and proceeded to attack ships at Sidon. Upon reaching the port they seized three ships that were loaded with light merchandise, and on their return trip to Cyprus seized a fourth Saracen vessel (Dawkins 1932: 195). Emboldened by this, the two brothers, under the hire of the king, sailed to Alexandria and seized a Saracen sailing ship loaded with valuable goods.

As the Genoese brothers harassed Saracen shipping, Sir John de Sur outfitted two ships to raid the village of Sarepta (near modern Sarafand, Lebanon). De Sur successfully captured the village and pillaged it before carrying off all the inhabitants. “And the Saracens sent out a cry for help, and from many villages other Saracens came up” (Dawkins 1932: 201). Fearing the passage could be cut off to the galleys, the captain quickly made their escape from the village, and returned to Famagusta.

Upon the ascent of King Peter II in 1369, the King made a similar proclamation that King Peter I made in declaring that the Kingdom of Cyprus would supply weapons and ships to anyone wanting to pillage Syria (Dawkins 1932: 273). The Cypriots at first outfitted a light ship that hunted the coastline of Syria, capturing a ship filled with valuable goods and four other vessels, and sent them to Famagusta. Then the Cypriots equipped four galleys, appointing Sir John de Morphou as captain, to raid the coastline of Syria (Dawkins 1932: 275).

On 3 June 1369, the Cypriot raiding party left Famagusta to raid the Syrian coast. Two days later the fleet landed at Sidon, routing the Saracen forces after fierce fighting that lasted into the evening (Dawkins 1932: 275). Resupplying with water from the nearby river, the fleet then sailed to Beirut. The entrance to the port of Beirut was narrow and there was a watchtower defending the entrance (Dawkins 1932: 275). There were also knights and foot-soldiers, numbering around four hundred, defending the port city. Beirut was too difficult of a target to attack, so the Cypriots set sail to Boutron, with the Saracens following their movements by land (Dawkins 1932: 275).

At the port station of Boutron the Cypriots made a forced landing, routing the Saracens for the second time in their raiding expedition. They pillaged the town and set it ablaze. The fleet then raided the nearby island of Tortosa and plundered the island. The fleet hugged the coastline

of Lebanon and moved north, raiding and pillaging as they went. They attempted to raid the area of Ayasi, but were outnumbered and therefore could not attack. The fleet continued to raid until it landed in Adalia, Turkey for repairs.

Repaired and resupplied, the fleet then sailed to Alexandria, Egypt. Once there, they sent an envoy to the Sultan to determine if the Sultan was willing to make peace with the Cypriots. The Sultan refused, and the fleet moved into the old harbor of Alexandria and attempted to overtake a large Moroccan ship. The Moroccan ship had four hundred men on board, and was receiving reinforcements from the land. One hundred men of the Cypriot fleet were wounded in the engagement, and the captain was forced to retreat. The fleet returned to Sidon and found that the town was well guarded, but the Cypriots were able to route the Saracens. A storm appeared and the Cypriots returned to their galleys and made for Beirut. Having sustained casualties and suffering from exhaustion, the Cypriot fleet returned to Famagusta on 22 July 1396 (Dawkins 1932: 277).

The Cypriot people used raiding as a strategy extensively to increase their sphere of influence, and to deter other nations from attacking their island. Raiding the land held by the Saracens showed that the Cypriots could destroy large parts of the Sultan's territory, thus bringing him to the negotiating table to end a war. In some cases, Cypriots used raiding less diplomatically and simply used it as a retaliatory measure for an enemy raiding Cyprus.

Raiding by no means defined the overall experience of Cyprus during the Middle Ages. However, this chapter has shown that over the course of the Middle Ages, Cyprus endured raids from both Christian and Arabic forces. These raids varied in degree of severity, from singular pirate vessels to fifteen ship fleets that destroyed large parts of the island. The Cypriot people must have taken their safety from raiding into consideration while establishing towns, villages,

monasteries, and farmsteads. While this chapter relies heavily on a few historical sources, it is clear that the island suffered greatly from attacks. The next chapter will show the areas in which the Cypriot people established settlements in relation to the area of influence raiders had on the northern coast of Cyprus. The chapter will also demonstrate that a majority of settlements are either out of range of raiders, or protected by defensive structures/ villages designed to deter attackers.

Chapter 4 : Methodology

Dr. David Stewart's (1997) thesis about raiding patterns on Crete during the Bronze Age demonstrated that during times of heavy raiding, people abandon the coastline for the safety of inland settlements. Stewart (1997) also established a range that raiders could travel inland before they risked being overwhelmed by defending forces. His study was implemented by physically marching from the shore to each site to establish the amount of time it would take to reach the sites. He timed himself going on established pathways and the most direct routes, which involved going over rough terrain. He concluded that moving down established paths was faster than trying to move across the countryside. Using the resulting time, he established hiking routes to each site, he determined a set of areas that he concluded would be safe from raiders. Stewart then measured out the distances from the shore physical survey maps that established settlements zones from the shoreline, with the danger increasing the closer the site was to the shore. In his conclusion, Stewart established that about three thousand meters inland was the extent raiders could attack before risking being overwhelmed by defenders. He conducted his study before the development of computer-based programs that could analyze geographic data and mapped information. This study of Cyprus applies Stewart's methods and uses a computer-based mapping program to test the validity of his conclusions.

This study utilizes the same principles that Stewart used on Crete using a geographic information system (GIS) to map out distances of influence and pathways that raiders and defending forces likely used in the Kyrenia Region of Cyprus. Using ArcMap (Esri), a GIS based program, it is possible to map out the sites associated with Medieval Cyprus and to remotely conduct tests to assess Stewart's (1997) conclusions. . ArcMap has a number of tools that the user can apply to test a variety of analysis. For this study, to test the range of influence raiders

would have inland during the Middle Ages, the Service Area (Esri) tool was used. With this tool one can set a fixed distance from a point, and the tool will move along set pathways established by the user. The tool then produces a shaded area on the map where raiders or defenders can travel with the distance applied. To test the shortest routes defending forces and raiding forces used to reach each site, the New Route (Esri) tool was employed. This tool finds the shortest pathway between two points on a map using the pathways set by the user. The resulting routes from the test were then reconstructed in Google Earth Pro (Google Earth) in order to confirm the elevation and distance data. Dr. Stewart physically marched the routes he established to each site, but this study utilized a Hiking Time Calculator (Eager 2014) in order to establish how much time it would take to get to each site.

Digital Model Network

Digitizing the roads, sites, and landing points of the Kyrenia Region in ArcMap was the first step in the methodology to create a network dataset. Additionally, a Digital Elevation Model developed by Paraskeva Charalambos (2016) was added in ArcMap to account for the elevation change throughout the landscape.

A network dataset is a system of interconnected lines that represent possible routes from one location to another (Esri 2018). Digitization of the Kyrenia Region pathway utilized an imagery basemap that showed the current road system of Cyprus. Smaller roads that were clearly part of a neighborhood were left out of the network due to them being completely modern. Using the modern road system does present a problem with this study, mainly because medieval Cypriots did not have access to all the roads that the island has today. However, many of the road systems in the Kyrenia Region follow the natural curvature of the terrain. Additionally, the only

study of the Historical road systems relevant to this study is Tonnes Bekker-Nielsen's (2004) *The Roads of Ancient Cyprus*.

Nielsen's book presents an excellent overview of the major road systems established during the Roman occupation of the island. In the Kyrenia Region, the main road ran parallel with the coastline and was never more than a few hundred meters from the coast. There are roads that move inland through the major passes of the Kyrenia Mountain Range, but his study does not include secondary roads or paths.

Due to the lack of sources on the road system available to medieval Cypriots and the modern road systems adherence to the natural terrain, it was decided that the current road system would be the best way to analyze movement across the region. This network provided the pathways that the defending and attacking forces for this study traveled on to their respective targets. The resulting roads that were converted into a Network Dataset are shown in the following maps.

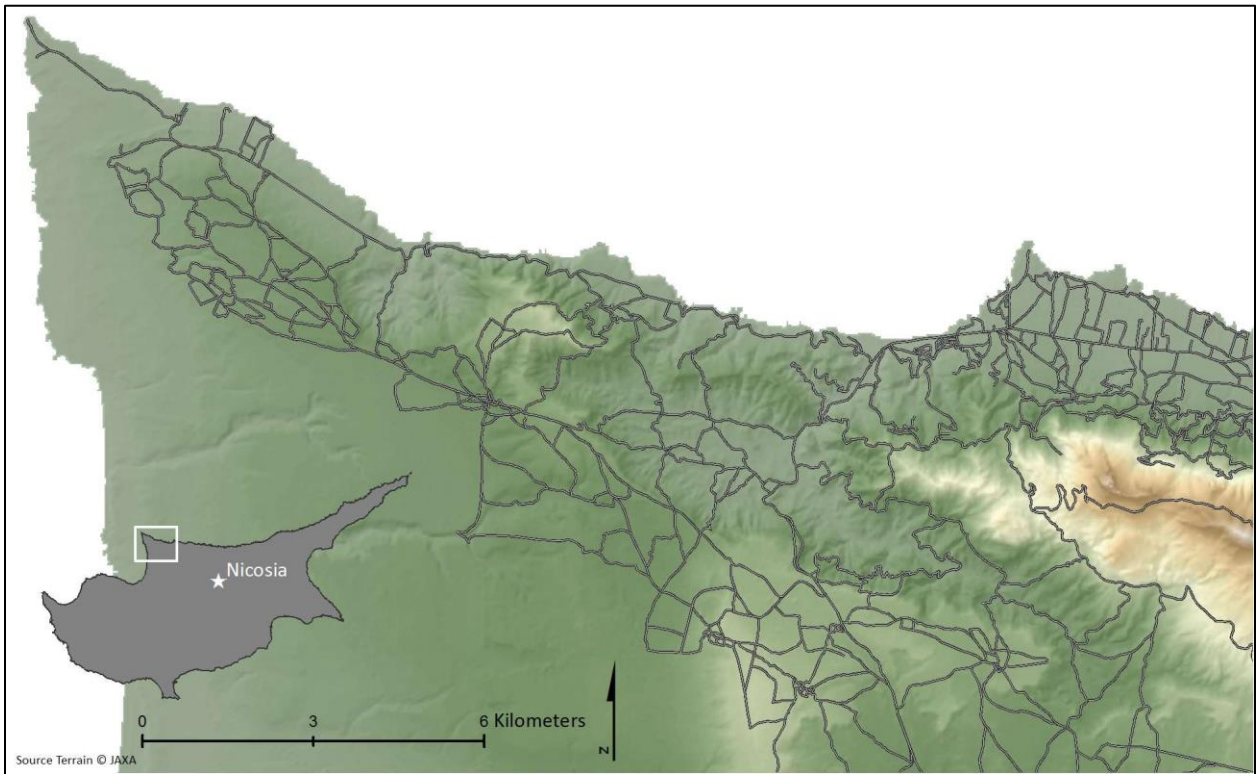


FIGURE 4.1 Cape Kormakiti Pathway Network

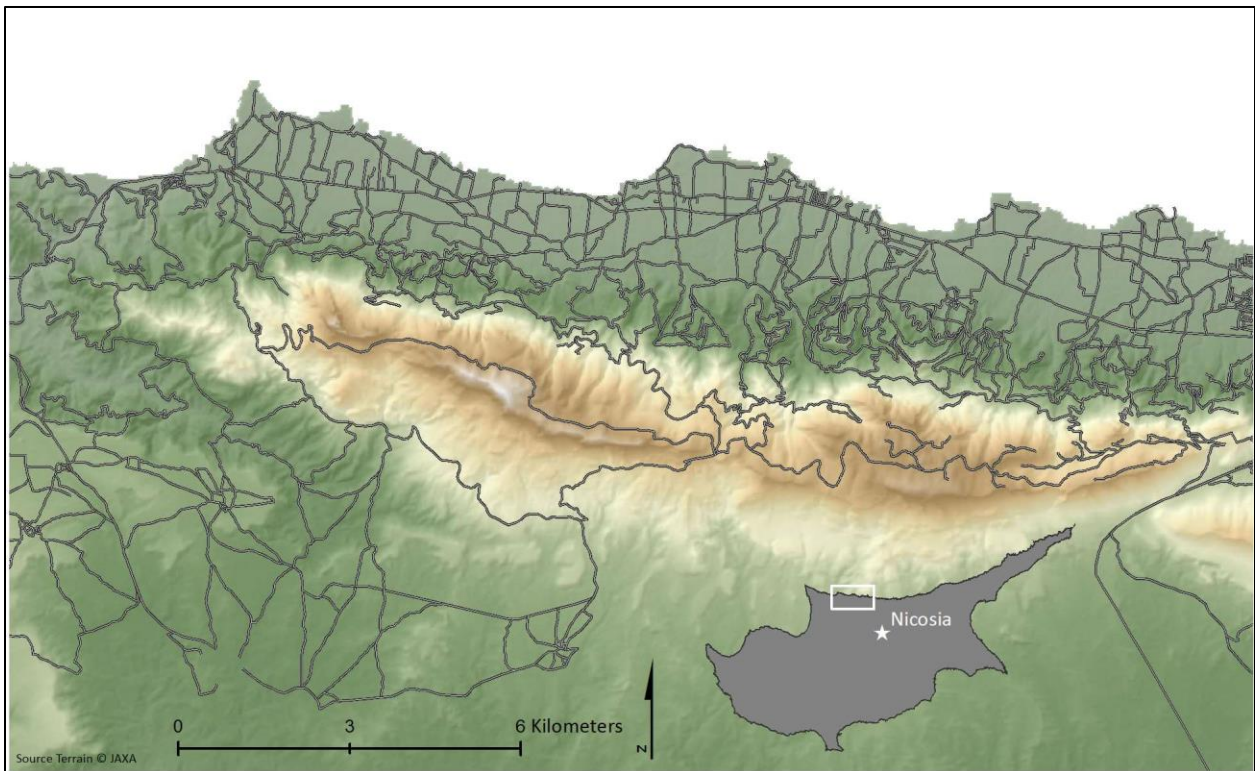


FIGURE 4.2 Myrtou to Kyrenia Pathway Network

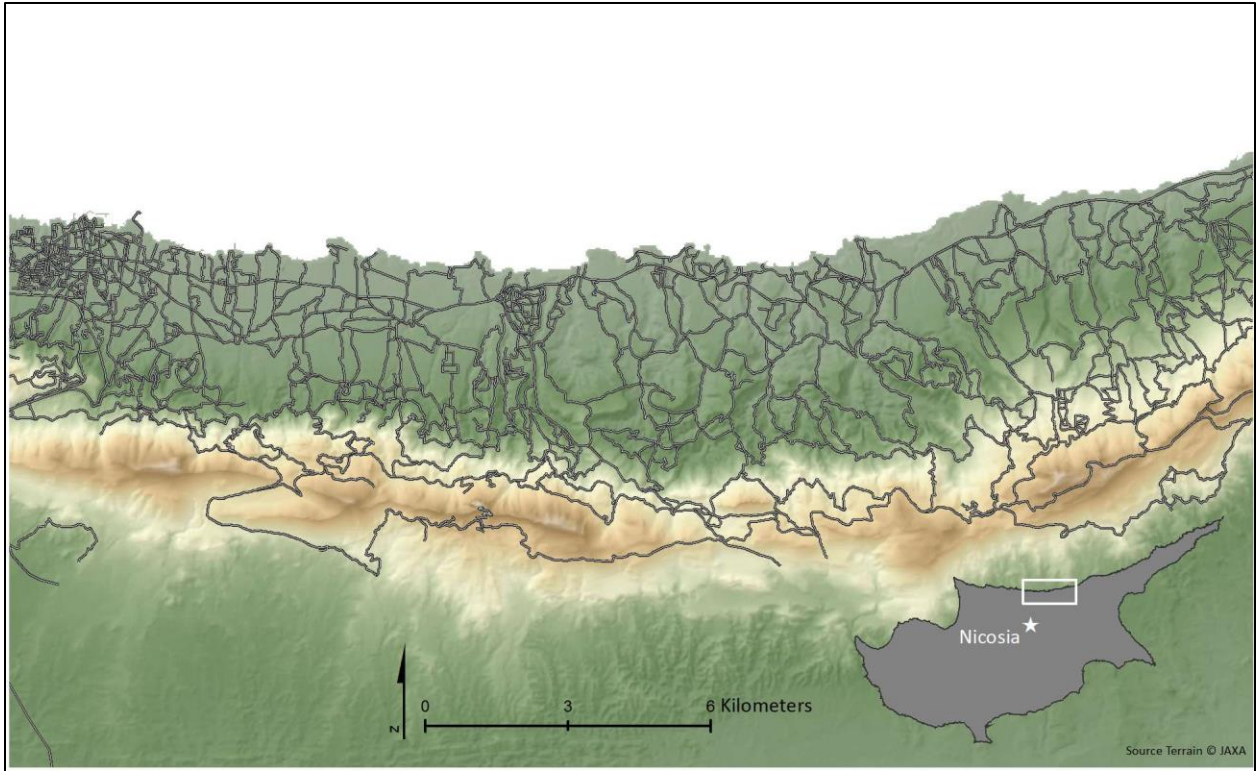


FIGURE 4.3 Kyrenia to Melandryna Pathway Network

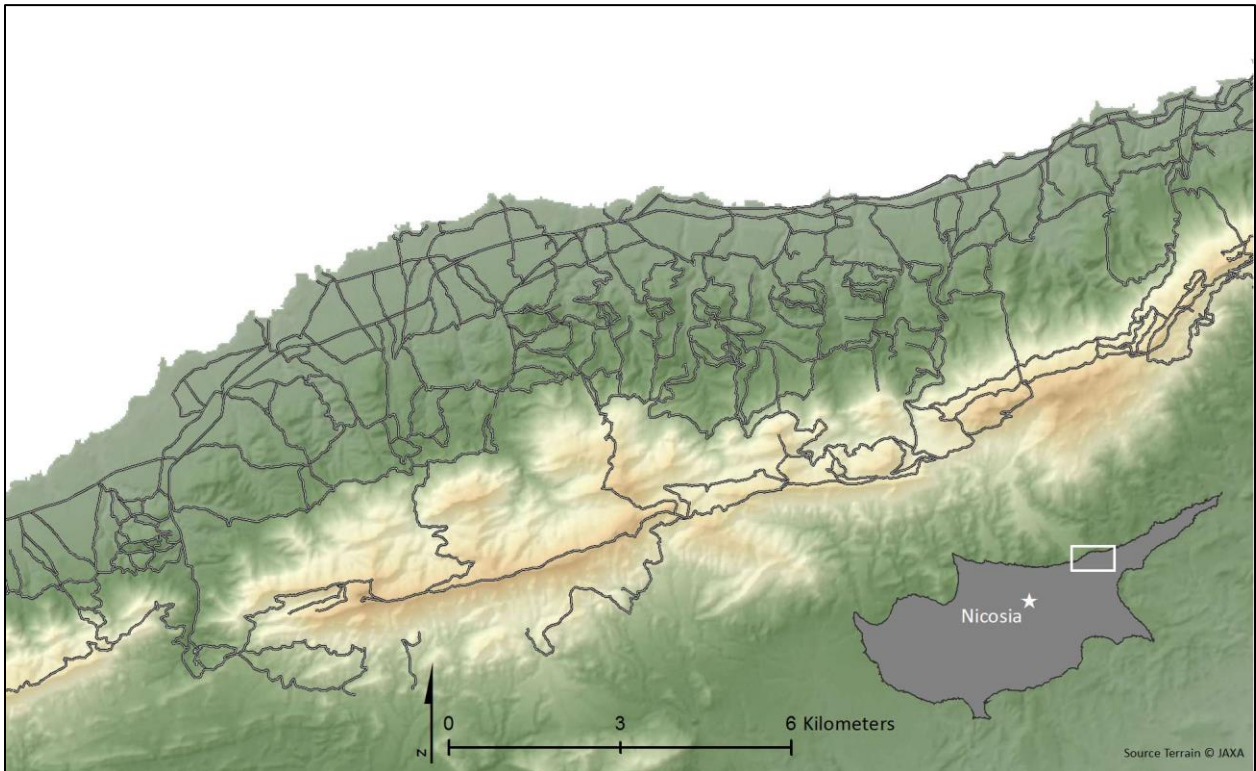


FIGURE 4.4 Melandryna to Karpass Peninsula Pathway Network

The location of the sites of this study were determined with an imagery basemap. Additionally, sites were cross-referenced with the Kitchener's Survey of Cyprus 1882 map (National Library of Scotland). This map showed the first systematic survey of the island and was overlaid on a modern map of Cyprus by the National Library of Scotland. George Jeffery (1918) used this map as a reference while surveying Cyprus. The history of the site is discussed in the next chapter.

The landing points are areas along the northern coastline in which a ship might be able to land. An imagery basemap was used to determine areas that a ship could land in—coves and small beaches were looked for and added to the landing points. Much of the northern coastline of Cyprus is rocky, but there are several coves and beaches in which raiders could land to make an attack.

Once the sites, pathways, and landing points were in place, a Digital Elevation Model was added to the map to provide an accurate representation of the elevation of the island, including the sites and pathways created. A Digital Elevation Model, or DEM, is “a raster representation of a continuous surface, usually referencing the surface of the earth” (Esri 2018). For instance, the location of St. Hilarion is around 732 meters above sea level (Watson-Northcyprus 2018), and the addition of Charalambos's (2016) Cyprus DEM ensures that the elevation for this study is correct. Charalambos developed a DEM as part of his Ph.D. dissertation “Chronology, Topography and Social Change: A Multi-Linear Perspective on the Chalcolithic to Bronze Age Transition in Cyprus” (2016) at the University of Edinburgh. His data is freely available to download at Figshare.com (2016) and his DEM was utilized for the elevation data for this study. For more information about how Charalambos details the steps of creating the DEM, consult “A Digital

Elevation Model for Cyprus based on the Advanced Land Observing Satellite World 3D Topographic Data (ALOS 2 W3D30) Digital Surface Model” (2016). The DEM that Charalambos designed is shown in the figure below.

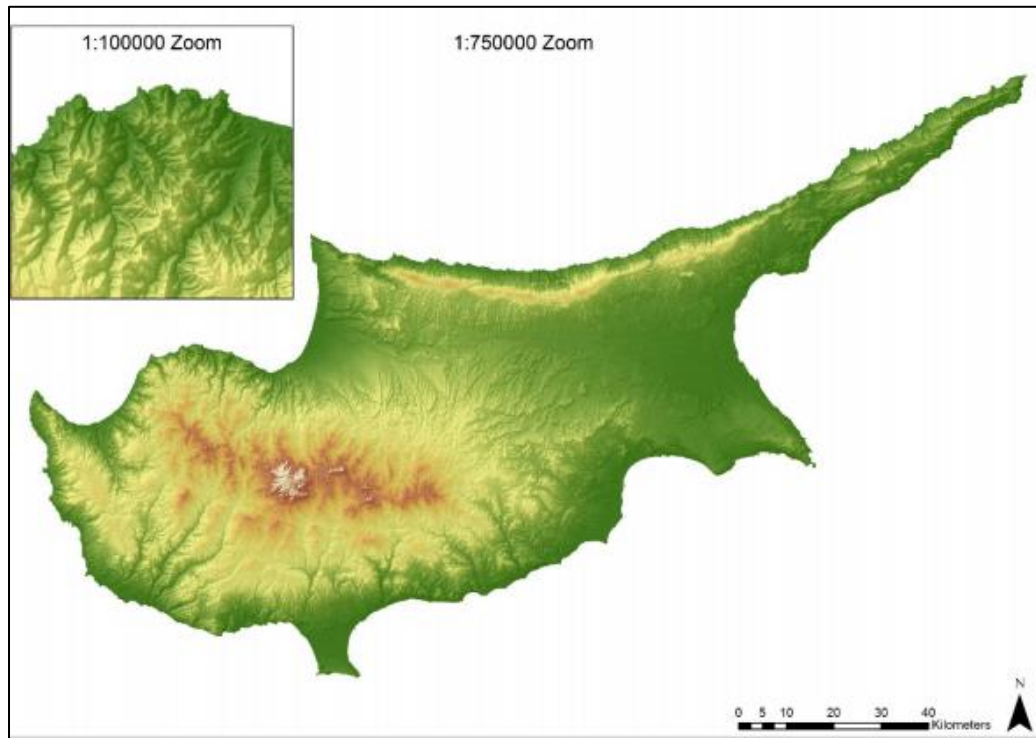


FIGURE 4.5 Paraskeva Charalambos Hillshade Map

With the sites, landing points, pathways, and elevation data in place, the network dataset was constructed. The Esri (2018) website provided a step by step guide to making a network dataset. The pathways are converted into a Network Dataset, which is what the Network Analyst toolset uses as a basis for running the tools. For example, if the New Route tool were to be used to find the shortest route from Kyrenia to Lapithos, the tool would use the network of paths established to find the shortest route.

Service Area

Once the network dataset was constructed, the tools used for this study were utilized. The two tools used for this study, Service Area and New Route, were located in the Network Analyst toolset. Service Area provided a shaded area that showed the area in which raiders could likely attack and escape before running the risk of interception. The New Route tool found the shortest route to the sites for the defenders and the attackers.

Service Area is a tool within the Network Analyst toolset that creates a shaded area on a map that encompasses all pathways around a point to varying degrees of distance (Esri 2018). For example, if a fire station wants to determine where they can get to within five miles of the station, the Service Area tool will begin to move along the pathways connected to the station. The network created will show all of the areas a fire station can serve within five miles.

For this study, the Service Area tool demonstrates the distance inland from a landing point. Dr. Stewart (1997) theorized raiders would be able to make an attack and return to their ships before being overwhelmed by defending forces. Stewart theorized that three kilometers inland appears to be the maximum extent inland raiders can travel (Stewart 1997: 42). Stewart came to this conclusion based on historical and archaeological data on the island of Crete when studying settlement patterns during the Bronze Age. The starting point from which the tool expanded across the network for 3000 meters was the landing points established earlier in the study.

New Route

The Service Area results showed an area in which the raiders can theoretically get to and escape before being intercepted. While this showed an area in which theoretically raiders can get to, it is based on a theory presented by Stewart's (1997) work on Crete. To test the validity of this theory, the New Route tool established the pathways that raiders and defenders took to reach the sites. From this, it is possible to test the amount of time it takes to reach the site to see if the attacking forces would be able to escape before being intercepted by defending forces.

The New Route tool in the Network Analyst toolset shows the shortest route between two places along the established network. For this study, this tool was used to find the shortest pathways between the landing points and sites. Additionally, the tool found the shortest path between the defending fortifications, settlements, and undefended sites. This tool was used to establish the pathways that would be recreated in Google Earth Pro to confirm the paths elevation and distance.

Google Earth Pro

Google Earth Pro was used to confirm the results of the New Route results. The pathways determined in the New Route tool were reconstructed in Google Earth Pro. The distance and elevation data were confirmed in Google Earth Pro. The distance and elevation distance data acquired were then used to determine the amount of time needed to reach each site.

Application of Naismith's Rule

With the shortest routes to each site for the defenders and attackers established, the final phase of the study could be completed. The distances and elevation acquired during this study were applied to a hiking calculator published by Brian Eagen (2014) on outdoorblueprint.com that utilized Naismith's Rule to determine the amount of time it would take to complete a hike.

William W. Naismith, a Scottish Mountaineer, developed this rule in 1892 (Douglas 1982). The Naismith's Rule states that the average person can walk five kilometers per hour and adds one hour for every six hundred meters of ascent (Douglas 1893:136). Naismith's Rule is a general rule with hiking that is largely accepted as a basic calculation when planning a hike.

There are several factors that individuals can take into account, such as physical fitness and age, but for this study, a baseline speed of five kilometers per hour is sufficient.

This study used Naismith's Rule to calculate the amount of time it would take to traverse the pathways of North Cyprus. Naismith's Rule states that Time = 1 hour per 5 kilometers of distance plus one hour for every 600 meters of elevation gained. There are other hiking calculators that tweak Naismith's Rule, such as the Eagen's (2014) hiking calculator that states that adding one hour for every three hundred meters of elevation gain is a good metric to gauge travel time. This discrepancy in Eagen's hiking time is based on people having little experience with hiking, while Naismith's elevation time gain is for more experienced hikers. However, for this study, the elevation gain and elevation loss factors were set to fit the Naismith's Rule of adding one hour for every six hundred meters of elevation gain. The elevation loss factor is based on the fact that during a hike people can move faster while moving downhill.

There are various theories regarding how much time raiders saved during their descent. The Langmuir correction states that the hiker can subtract 10 minutes for every three hundred meters of descent as long the slope is gentle, between 5 and 12 degrees (Langmuir 2013: 38-39). The hiking travel time calculator on outdoorblueprint.com states that it is possible to subtract as much as thirty minutes for every six hundred meters of descent if the trail is in decent shape (Eagen 2014). Since the defending forces coming down from the mountains used well-established pathways to descend into the plains, a compromise was made between the two theories. The deduction of fifteen minutes or every three hundred meters of descent provided a balanced approach to the methodology. The decent speed was also applied to the attacking forces.

Eagen's (2014) hiking calculator that provided the basis for time calculations on specific pathways people likely used in North Cyprus during the Middle Ages. This website uses the imperial system, but the final distances in the results chapter will be written in the metric system. The formula and the parameters used in this study are the following:

$$Total\ Moving\ Time = \frac{Distance}{Pace\ Index} + Elevation\ Factor$$

$$Pace\ Index = \frac{Elevation\ Gain}{Climb\ Rate} - \frac{Elevation\ Loss}{Loss\ Rate}$$

For each group in this study, the climb rate was set to 2000, which adds one hour for every 2000 feet in elevation gain. The loss rate was set to 4000, which subtracts one hour for every 4000 feet of elevation loss. An example of Eagen's hiking calculator is shown in the figure below. The example shows that the hiking distance is set to 2 miles walking at 3 miles per hour. The 1500 feet of elevation gain adds a factor of 0.8 (48 minutes) hours to the trips total time, while the 1500 feet of elevation loss subtracts the total hiking time by .4 hours. The total

elevation factor, therefore, is 0.4 hours (24 minutes) which is added to the final time. Two miles at three miles per hour pace takes about 40 minutes total, but once the elevation factor is added, the total time becomes 1.1 (1 hour and 5 minutes).

Miles Traveled (?)	<input type="text" value="2.0"/>	
Fudge Factor (?)	<input type="text" value="0.2"/>	Total Miles = <input type="text" value="2"/>
Pace Index (?)	<input type="text" value="3"/>	
Elevation Gain (?)	<input type="text" value="1500"/>	
Climbing Rate (?)	<input type="text" value="2000"/>	Gain Factor = <input type="text" value="0.8"/>
Elevation Loss (?)	<input type="text" value="1500"/>	
Loss Rate (?)	<input type="text" value="4000"/>	Loss Factor = <input type="text" value="0.4"/>
		Elevation Factor (?) = <input type="text" value="0.4"/>
		Total Moving Time (?) = <input type="text" value="1.1 hrs"/>

FIGURE 4.6 Example of Outdoorblueprint.com Hiking Calculator

The total raiding event time for attacking forces was split into three categories. The first time for raiders was the amount of time it would take to reach the site, for this section raiders moved at an average speed of 5 kilometers an hour. The second phase was the time needed to assault a site, overwhelm the local population, and gather the spoils from the attack. The final

stage of the raid was escaping back to the ship. Because the attackers would be burdened with supplies and prisoners the return trip was set to two miles per hour.

These stages are based on Stewart's (1997) work on Crete during the Bronze Age. Stewart theorized that three kilometers inland appears to be the maximum extent inland raiders can travel (Stewart 1997: 42). This translates to about one hour of travel time inland to reach a target. Once at the village, he writes that to conduct a raid, one must set aside at least one hour for the attack on the settlement, which includes time to overwhelm the local inhabitants and gather the spoils. After the attack on the settlement concluded, the raiders then needed to spend an hour returning to their ships to escape. Burdened with goods, captured people, and livestock, raiders likely moved significantly slower back to their ships to escape, but this will be discussed in the hiking function section. In all, the maximum amount of time needed for raiders to conduct the entire raid was three hours (Stewart 1997: 41). Stewart came to this conclusion based on historical and archaeological data on the island of Crete when studying settlement patterns during the Bronze Age.

The total time for the defending forces consists of a one way trip to the sites under attack. For this study, the defending forces moved at an average of five kilometers per hour to reach the undefended sites. The defending forces in the Kyrenia Region benefited from moving downhill for a majority of their trip.

Using this formula, it is possible to estimate a reasonable timeframe for a raiding attack in the region. The assumption made in this study is that the raiders are moving from the beach at the same time the defenders are leaving their village or fortification. There are numerous factors that play into a raid. Defenders could potentially spot a raiding ship before it lands and begin moving towards the coast. Inversely, raiders may have successfully navigated into a cove

without detection and land on shore without the defenders' knowledge. There are many more factors, however, this study is focused on the way in which the defensive system in North Cyprus ideally functioned.

By utilizing the Network Analyst toolset and Eagen's hiking calculator, it is possible to determine the range of influence raiders had on Cyprus. The Service Area tool provides a theoretical range of influence that raiders had inland. The elevation and distance data from the New Routes are used in Eagan's hiking calculator to see if the raiders were able to attack sites before being intercepted by defending forces. This methodology is just one of the many ways that routes can be analyzed in ArcMap. The medieval landscape from which the methodology is applied is discussed in the following chapter.

Chapter 5 : Site Selection

The study areas for this project consist of the Kyrenia Mountain Range and the lands north of the mountains. This area was chosen for this study due to the fortifications that dot the mountain range that were constructed to defend the northern coast from raiders. While archaeological surveys have taken place in this area, much of the Medieval landscape remains unknown. By bringing together historical and archaeological data, this section will reconstruct the known medieval settlement pattern of the northern coast of Cyprus.

Cyprus has a rich history that goes back to the Neolithic Period. In 1955, under colonial rule, the Archaeological Survey of Cyprus was established to conduct a “complete record of all archaeological sites and monuments of the island from Prehistoric to late Medieval times” (Hadjisavvas 2004: 37). The program was initially successful, and under Hector Catling two areas were surveyed, one of which includes the area between Cape Kormakiti and Kyrenia, in 1955-1959 (Hadjisavvas 2004: 37). However, the survey’s raw data does not appear to be available for study due to the current political situation. “Shortly after the 1960s the activities of the Archaeological Survey Branch were substantially modified as illicit digging and land development by mechanical means became a serious threat to archaeological sites” (Hadjisavvas 2004: 37). Surveys resumed in 1973 that saw three areas of Cyprus surveyed, one of them being the area surrounding the northern village of Phlamoudhi. Survey work ceased in the northern region of Cyprus, due to the Turkish invasion of 1974, and resulted in the Survey branch being abolished in 1976 (Hadjisavvas 2004: 37). While there are many archaeological surveys and excavations are still ongoing in the southern region of Cyprus, North Cyprus has seen a sharp decline in archaeological activity due to the Turkish invasion of 1974.

The two surveys previously mentioned do encompass part of the study area, but they were largely conducted to understand better the ways in which people in the area lived during the Bronze Age, not the Middle Ages. The Medieval landscape is mentioned in surveys such as the Columbia University Expedition to Phlamoudhi, but the Medieval structures and artifacts found were not the primary purpose of the Survey (Symeonoglou 1972: 187). The problem surrounding the analysis of the fortifications and military villages of North Cyprus is the lack of study in the area. David Metcalf (2009: 539) even admits that the theory surrounding the Armenian villages being military settlements is based on little evidence, but the possibility that these villages were military in origins should not be ignored.

Due to the political situation in North Cyprus, large scale archaeological excavations and surveys have largely ceased. There are exceptions to this, such as Tonnes Bekker-Nielsen's work on locating and mapping the road system of ancient Cyprus. The area surrounding the village of Phlamoudhi has also been extensively surveyed, but the medieval period, while mentioned, was not the primary focus of the survey's research goals (Killian 87: 2008).

To understand the medieval landscape of the area north of the Kyrenia Mountain Range, it is necessary to look to archaeological and historical sources before the invasion in 1974. George Jeffery, the Curator of Ancient Monuments in Cyprus from 1903 until 1935, compiled a list of historical monuments on Cyprus and published his results in 1918 (Roueche, 2001). This list breaks down Cyprus into zones, such as the Karpass Peninsula, and details the medieval structures in the area. Jeffery also detailed whether or not the villages in the area are modern or medieval. He makes use of the Kitchener map as the basis from which to describe the historical monuments on Cyprus. Unfortunately, there are a number of instances in the book where Jeffery mentioned ruined sites, but would not mention the time period in which they came from. This

may be due to the lack of architectural remains to determine a proper date, or the lack of historical significance determined by Jeffery. Other sites that appear in the Kitchener map that are not mentioned in Jeffery's report are omitted due to the fact they may be being simple farms or modern villages. Regardless, Jeffery's survey of Cyprus led to a number of medieval villages and churches to be cataloged, and many of the sites selected for this study came from this survey.

The site selection process used in this study divides the total survey area into four distinct regions; Cape Kormakiti, Myrtou to Kyrenia, Kyrenia to Melandryna, and Melandryna to the Karpass Peninsula (Figure 3.1) The division of the northern coast into four sections was done based of the divisions Jeffery used in his book. Additionally, the division will allow the data to be manageable and readable on a map. Each area will be given a short description of the geographical elements within them before discussing the various sites that exist within each region. This list of sites is not complete due to a lack of archaeological surveys in the region, but is a collection of all the known Late Byzantine and Medieval sites within and north of the Kyrenia Mountain Range. Dates will be provided when available and consist of a mixture of archaeological, architectural, and historical data.

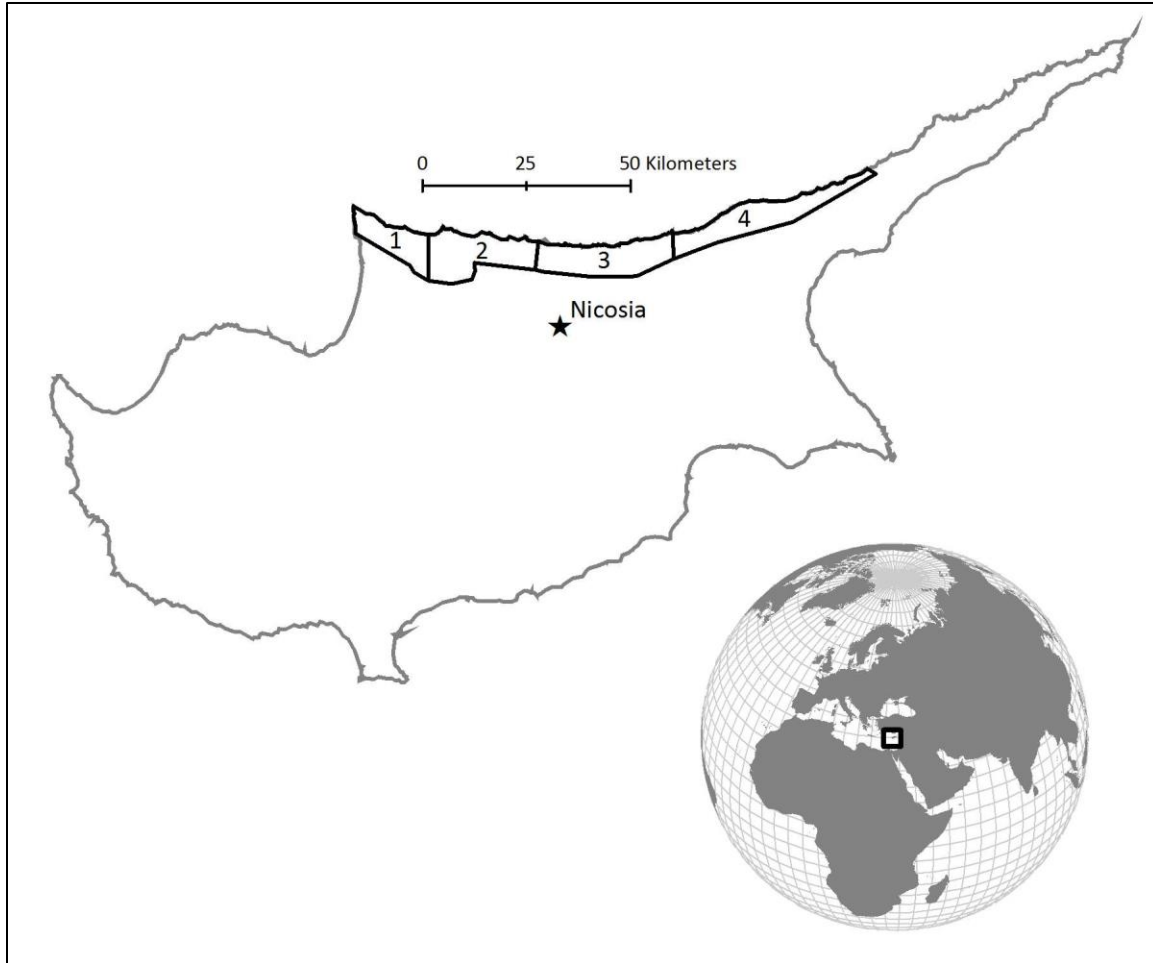


FIGURE 5.1 Areas of Study. 1) Cape Kormakiti 2) Myrtou to Kyrenia 3) Kyrenia to Melandryna 4) Melandryna to Karpass Peninsula

Cape Kormakiti (~91 sq Kilometers)

Cape Kormakiti consists of the westernmost extent of the northern coastline. Hector Catling, the Archaeological Survey Officer of the Department of Antiquities of Cyprus from 1955-1959, conducted a survey that encompassed part of the Cape Kormakiti region (Hadjisavvas 2004: 38). During the survey over four hundred sites were located that span from the Neolithic to Medieval periods (Hadjisavvas 2004: 37). Catling published a map that shows a number of Early Byzantine sites in the region (Figure 1). In his finding, Catling notes that the

Kormakiti region was largely abandoned after the Early Byzantine Era. While there is no one definitive cause to this abandonment, Catling (1972:5) theorizes that the plague of A.D. 747 played a major role. The various raids that Cyprus endured from the 7th to 9th centuries also likely played a major role in the region's depopulation. "At no period subsequently has it been possible to restore the region, though surface evidence suggests that half-hearted efforts were made from time to time in the Middle Ages" (Catling 1972: 5). While Catling does not go into detail about the medieval sites in the area, there are a number of villages and churches noted by George Jeffery's book on historical monuments on Cyprus.

THE CAPE KORMAKITI AREA IN THE EARLY BYZANTINE PERIOD

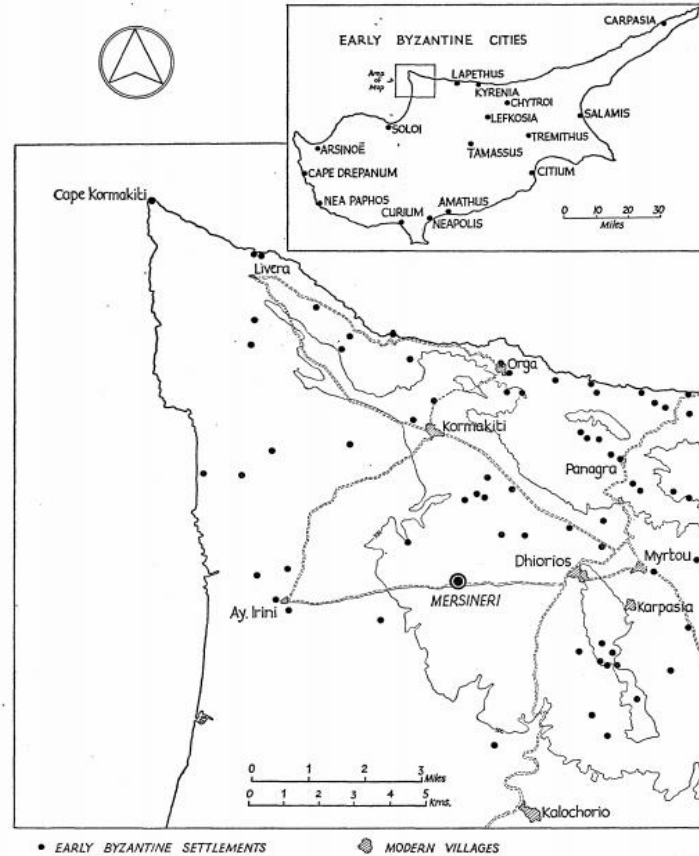


FIGURE 5.2 Map Illustrating position of Mersineri in Relation to Early Byzantine settlement of the Kormakiti Peninsula (Catling 1972: 2)

Tonnes Bekker-Nielsen (2004) conducted a survey of the road systems that existed in the Roman Period, which were likely, albeit in some state of disrepair, used well into the Medieval Period. Specifically, in the Cape Kormakiti region, Bekker-Nielsen notes “there are no traces of ancient engineering works along the coast” (Bekker-Nielsen 2004: 153). This suggests that any site within this region was connected to the outside world via the road system in place in the region. Although there are no recorded coastal engineering works there does appear to be a

number of coves and small beaches where a raiding party could potentially land and conduct raids in the region.

The map and list below show the extent of the known Byzantine and Medieval villages, churches, and fortifications in the Cape Kormakiti region.

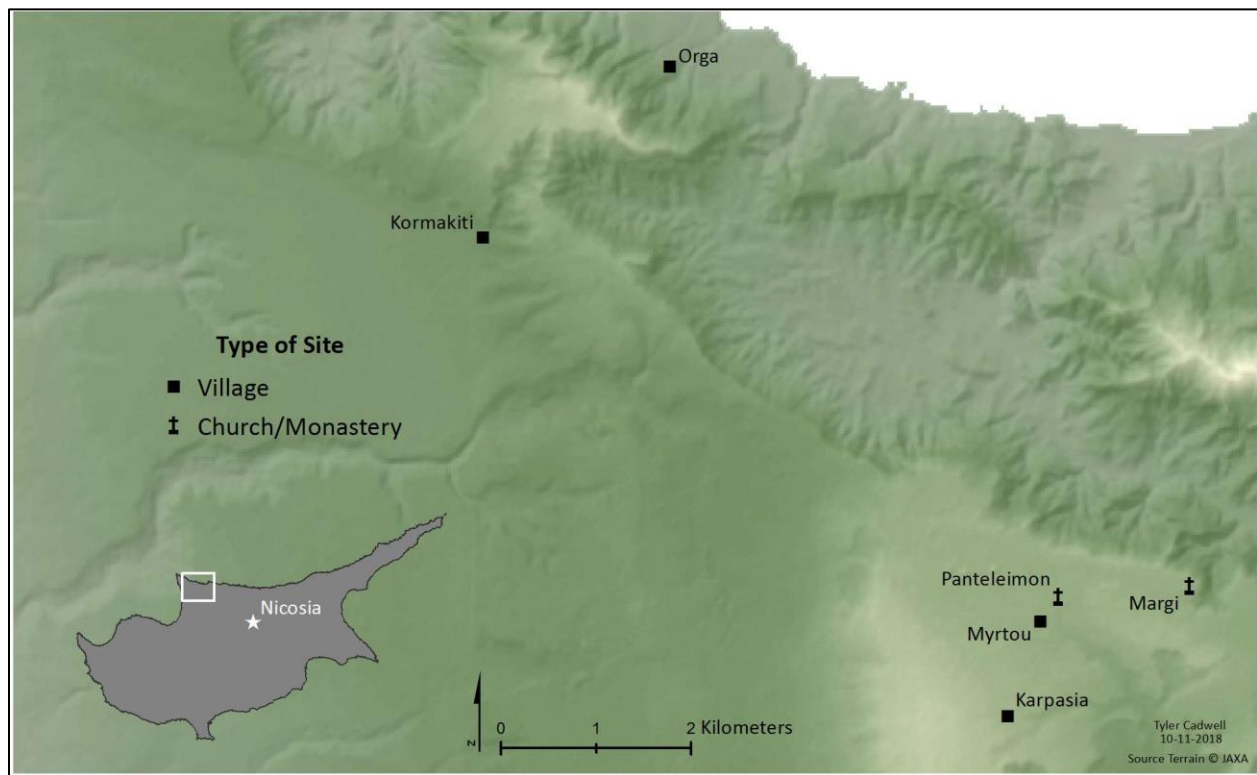


FIGURE 5.3 Medieval Sites of Cape Kormakiti

Kormakiti (10th-12 C)

The westernmost settlement in this study, Kormakiti is likely the largest settlement in the Cape Kormakiti region. This settlement is suggested by Kyrris as one of the *akritai*, a village with military or watching duties, and was founded by Maronite settlers in the 10th to 12th century (Metcalf 2009: 538). There are two churches in Kormakiti, one dedicated to St. George in the center of the settlement that was repaired at the beginning of the 14th century, but the original

date is not clear (Jeffery 1918: 279). One mile to the west is a church that dates to the 15th century, only being described in the Kitchener map as “Church.” It is unclear the saint that this church is dedicated to but by the time Jeffery conducted his survey, it is mentioned that the building was abandoned and in poor condition (Jeffery 1918: 279).

Orga (Roman-Byzantine)

Jeffery (1918: 279) describes this small village as a hamlet that is primarily occupied during the harvest season. “Habitation (of the site) goes back as far as the Bronze Age and continues well into the Roman period” (Bekker-Nielsen 2004: 153). Bekker-Nielsen also notes that there do not appear to be any traces of engineering work along the coastline. While he does not outright say that this place was occupied during the Middle Ages, Jeffery (1918: 279) does mention a small domed chapel on a hill near the village, which is undated. The presence of a ruined church, while not definitive proof that this area was occupied during the Middle Ages, does allude to the possibility that it was occupied during the Crusades. This is why it is included in the study. If archaeological surveys conclude that this is not the case, this hamlet will be removed from the study.

Karpasia (10th-12th centuries)

This Maronite village is another settlement that Kyrris suspects of being originally founded as an *akritai* (Metcalf 2009: 538). While it appears that Karpasia is a small village and unable to field a sizable force for defense, but the addition of forces from the neighboring village of Kamyli and Asomatos likely provided enough troops to fend off raiding parties. Jeffery (1918: 279) details that there is an ancient church in the village that was recently rebuilt, and that Dandini mentioned it in 1596. The exact date of the founding is unknown, if the theory of a

defensive line of fortification and settlements is true then it seems plausible that this settlement was founded during the construction of the castles.

Myrtou (11th century)

The village of Myrtou was first attested in the 11th Century (Papacostas 1999: Table 4 Appendices). The village is mentioned, “according to the 12th Century inventory of Krinia, the monastery” (Papacostas 1999: 149). The village itself is not analyzed by Jeffery. This may be due to the lack of architectural monuments within the village that allowed Jeffery to provide a date.

Ayios Panteleimon Monastery (15th-17th centuries)

The founding of this monastery is unclear. The travel website Whatson-Northcyprus.com places the founding dates to around the 16th century. The story goes that two monks sat and prayed to Saint Panteleimon at the site in 1600 (Whatson-Northcyprus 2018). As they were praying water rose from the stones and thus a small church was established (whatson-northcyprus 2018). Cyprusisland.net (2018) states that the monastery was built during the 15th century.

It is unclear based on the description provided by Jeffery if this monastery he described was built on an earlier structure. “The church has been much altered and enlarged in former times, and probably in the 17th-18th centuries, the original nave was pulled down and rebuilt on a larger scale with the addition of a remarkable loggia of pointed arches and vaulting of the south side” (Jeffery 1918: 278). There is mention of “woodwork that comprises of an older medieval screen used up in a later framework” (Jeffery 1918: 278). There was also a chapel of the patron Saint that Jeffery refers to as ancient (Jeffery 1918: 278).



FIGURE 5.4 Ayios Panteleimon Monastery 35°18' N 33°04' E (Google Earth Pro 2018)

Margi (11th-12th centuries)

Margi was founded sometime between the 11th to 12th centuries (Papacostas 1999: Table One Appendices). The church lies about one mile east on Myrtou, and was attested in the 11th century as Metochion of Krina monastery (Papacostas 1999: 57 [1]). The church lies in ruins, but based on the remains had a square plane with a large dome (Jeffery 1918: 278; Papacostas 1999: 57 [1]). Papacostas (1999: 57 [1]) suggests that this church could be identified as a Maronite church of Santa Maria di Margino/ Mariadia. Jeffery (1918: 280) mentions that there was a large amount of fallen debris during his survey, but the current condition of the ruins is unclear.

Myrtou to Kyrenia (approximately 156 sq miles)

The second area of study consists of the land in between the medieval village of Myrtou to the major town of Kyrenia. Between these settlements lay several villages and churches. This area experienced one of the recorded attacks by Arabic raiders in the seventh century that devastated the main town of Lapithos (Metcalf 2009: 468). Hector Catling's survey of the Cape Kormakiti region includes land within this study area, but again this survey has not been made public. There are a number of sites within this region that are discussed in length by George

Jeffery. In terms of the historical record, Tassos Papacostas (2015) discusses evidence of one of the only surviving texts that detail the lands owned by the Krinia Monetary.

The geography of this region consists of a long narrow stretch of land between the coastline and the Kyrenia Mountain Range. There appears to be only a handful of passageways through the mountains in this region. South of the village of Palaeospophos appears to be a narrow pathway that goes up over the mountains, which likely means that passage was only traversable by foot or pack animal. North of Kamyli, a number of small valleys run from the coastline into the southern region of Cyprus. The main pathway through the mountains lies between Yannoutti and Ayios Yeorgios and is indicated on Kitchener's Map with the double solid line indicating a road. Tennes Bekker-Nielsen (2004: 141) refers to the pass as Panagra/Gecitkoy, at the western extremity of the range. This was the primary road traversed to move trade goods from north to south through this region. Bekker-Nielsen's survey confirms that this pathway was used in the Roman period, and it is highly likely that this pathway continued to be used in the Middle Ages (Bekker-Nielsen 2004: Map 7 Appendices). Once through the pass, the Roman road leading to Kyrenia continued close to the coastline (Bekker-Nielsen 2004: Map 8 Appendices).

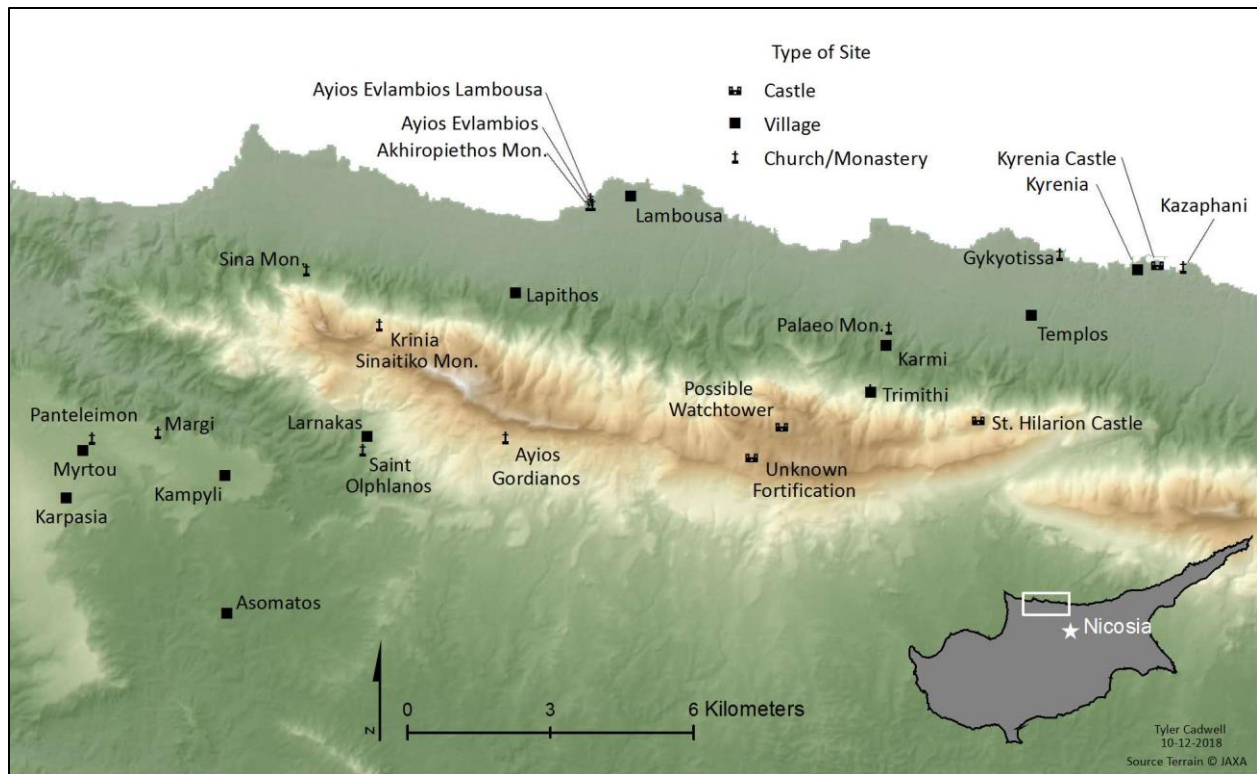


FIGURE 5.5 Medieval sites from Myrtou to Kyrenia

Kampyli (Kambyli) (10th-12th centuries)

Kampyli is a Maronite village that was mentioned in Girolamo Dandini's travels through Cyprus in 1597. Metcalf (2009: 338) mentions that a number of Maronite villages were established in Cyprus by at least the 12th century, and possibly as early as the 10th century. This timeline fits nicely with the accepted timeframe of the construction of fortifications in the Kyrenia Mountain Range, sometime between the 11th and 12th centuries (Jeffery 1918: 278). There is an ancient church dedicated to Blessed Virgin Mary which Jeffery describes as uncharacteristic (Jeffery 1918: 278). Kampyli is one of the villages in the western range of the Kyrenia Mountains that Kyrris suggests is one of the military villages tasked with defending the area from piracy (Metcalf 2009: 538). Along with the neighboring villages of Karpasia and Asomatos, Kampyli would be able to field enough soldiers to counterattack raiding parties that sought to plunder the area.

Asomatos (10th-12th centuries)

Asomatos is a Maronite village situated about 2.8 km south of Kamyli. There is a church marked in the northeastern part of the village in Kitchener's map. Jeffery (1918: 277) mentions that the church was rebuilt in 1895 and dedicated to Archangel Michael. There is no mention of the original church, but as with Kamyli, there is reasonable suspicion that this village was founded in the 10th-12th centuries during a migration period of Minorities to Cyprus. Kyrris suggests that Asomatos is a military village designed to defend against raiders (Metcalf 2009: 538). This marks the last *akritai* village in the western region of the Kyrenia Mountain Range, bringing the total number of military villages to four.

Ayios Gordianos (date unknown)

This is a church ruin that lies to the north of the village of Sisklipos on the southern slope of the mountain range. Jeffery (1918: 280) notes that the ruin is known to the local population as Ayios Antonios, and states that there is nothing architecturally interesting about the ruin. While this site is undated, it is likely that this church was occupied sometime during the Middle Ages. An Archaeological survey of the site needs to be conducted to clarify the occupation date.



FIGURE 5.6 Ayios Gordianos ruins 35°18' N 33°10' E (Google Earth Pro 2018)

Krinia Sinaitiko Monastery (Kriniotissa/ Krineon, Theotokos) (11th century)

This monastery is a ruined structure that dates to the Byzantine Era (Jeffery 1918: 322). It is situated in a gorge, in which a pathway leads through the mountains from Lapithos to Larnacatis-Lapithou. Papacostas (1999: 103 [2]) states that the monastery dates to at least the 11th century as the monastery is mentioned in an inventory of properties belonging to the monastery of Theotokos. Archaeological evidence suggests that the site was occupied as early as the 7th century, but not definitively as a monastic property (Papacostas 1999: 104 [2]). Krinia was in possession of at least six properties in the region as detailed by the Papacostas map (Figure 4) below. Today little of the monastery can be seen from satellite imagery due to the forest surrounding it, but it is possible to see parts of the remains in a small clearing.

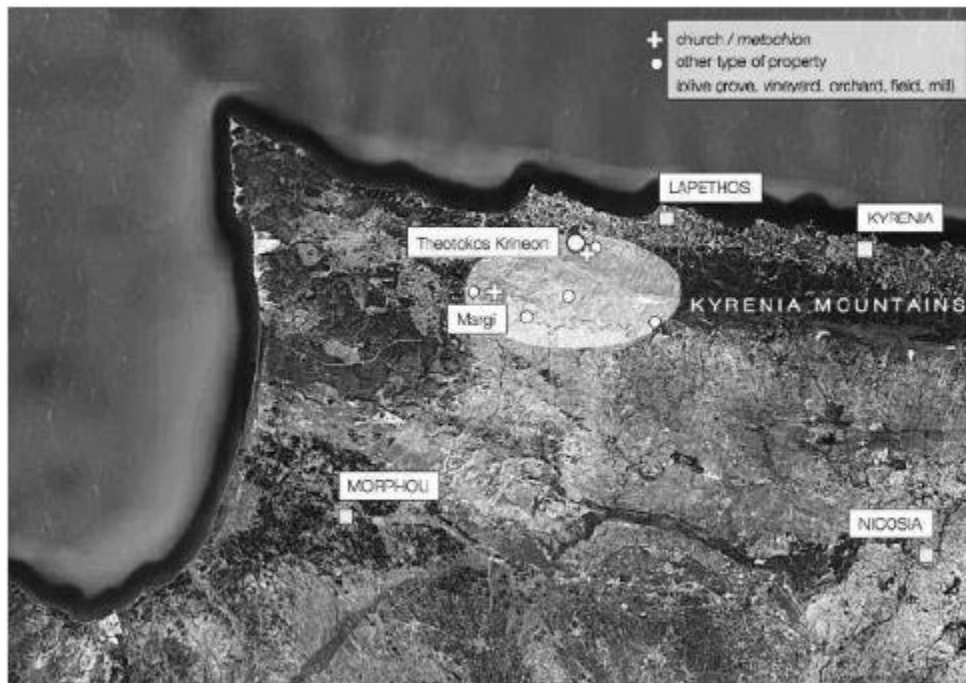


FIGURE 5.7 Properties of the monastery of Theotokos Krineon/Krinia (Papacostas 2015: 129)



FIGURE 5.8 Krinia Sinaïtiko Monastery 35°19' N 33°08' E (Google Earth Pro 2018)

Sina Monastery (Byzantine?)

The earliest known date associated with this monastery is the 18th century. This date stems from the architectural details noted by Jeffery (1918: 322). Jeffery alludes that the building is much older by noting that “a large number of small granite columns litter the site suggest the presence of an important building in former times” (Jeffery 1918: 322). A tourism website provides pictures of the site which includes the remains of iconography depicting the Byzantine Two-Headed Eagle (Watson-Northcyprus 2018). Satellite and video evidence shows that the monastery has been long abandoned. Jeffery notes that there was restoration and rebuilding efforts at the monastery in 1904, which almost destroyed any remains of the original structure (Jeffery 1918: 321). The position of the monastery being high in the hills and the appearance of thick walls with only one main point of entry would have made this place a difficult target for raiders seeking to plunder the monastery of its riches.



FIGURE 5.9 Sina Monastery 35°20' N 33°07' E (Google Earth Pro 2018)



FIGURE 5.10 Byzantine Two-Headed Eagle (Watson-Northcyprus 2018)



FIGURE 5.11 Sina Monastery (Watson-Northcyprus 2018)

Saint Olphlanos (Before 15th century)

This church, located in the village of Larnaka tis Lapithou, is dated to sometime in the Lusignan Period by Papacostas (1999: 114 [2]). There is no mention of the architectural structure of the site, but written documents from the *Chronicle of Machairas* suggest that this place was a hermitage used by saints rather than a monastery. If it is the church located next to the village of Larnaka tis Lapithou as depicted in the Kitchener map, there does not appear to be any remnant or remains of the structure, at least viewable from satellite imagery. The layout of the village has expanded since Kitchener's survey so it is difficult to identify which building, if any, shows the remains of the structure.



FIGURE 5.12 Area in which St. Olphlanos may have been 35°18' N 33°08 E (Google Earth Pro 2018)

Lapithos (Byzantine; abandoned 9th century and moved inland)

Lapithos was a prominent and prosperous town during the early Byzantine period on Cyprus. “Lapithos had been home to some conspicuously wealthy people, whose treasures of gold, silver, and jewelry have been found in the vicinity of the Archeiropoietos or on the Acropolis” (Metcalf 2009: 468). Lapithos was one of the coastal towns targeted during the Arabic raids in the 7th century, and the city was raided and destroyed by a great fire either in 649

or 653 (Metcalf 2009: 468). The city wall was rebuilt, but the city never recovered to its former full state (Metcalf 2009: 468). Lapithos suffered a number of raids until Cyprus was reconquered by the Byzantine emperor Kikiforos Phokas. Metcalf (2009: 492) does note that the town in name at least moved a few miles inland at some point in history, likely after the island was recovered by the Byzantine Empire. The Municipality of Lapithos notes “The Inhabitants of Lapithos returned to their city and rebuilt it, no longer near the coast, but at the foot of Pentadaktylos” (Municipality of Lapithos). The *Book of Curiosity*, an Arabic manuscript of Egyptian origins, dating from 1020-1050 alludes to the possibility that Lapithos was still a functioning port during that time period (Metcalf 2009: 491). It is unclear if Lapithos boasted a large garrison force during this time. Once the Venetians took control of the island, Lapithos maintained an army force of around three thousand regular troops (Municipality of Lapithos 2018). This is in part likely due to the fact that the Venetians focused their defensive capabilities on coastal fortifications and towns.

Ayios Evlambios Lambousa (Byzantine)

Ayios Evlambios is a unique church that Jeffery (1918: 321) describes as a rock-hewn chapel that resides in the center of a quarry. A treasure hoard was discovered at this church and the remains date between 630 and 727 (Watson-Northcyprus 2018). It is likely that these objects were buried beneath the church to protect them from Arabic raiders. Jeffery does not detail whether or not this site was abandoned, but notes that there are no traces of architectural ornaments or paintings (Jeffery 1918: 321). This structure was likely destroyed by the Arabic raids in the 7th century and was not rebuilt, but until further archaeological investigations are conducted it remains purely speculative as to the fate of Ayios Evlambios.



FIGURE 5.13 Ayios Evlambios 35°21' N 33°11' E (Google Earth Pro 2018)



FIGURE 5.14 Ayios Evlambios (Watson-Northcyprus 2018)

Ayios Evlalios (Byzantine; 16th century)

The current structure that remains today dates to around the 16th century; however, it is noted by Jeffery that there are remains of a much older Byzantine church (Jeffery 1918: 320-321). There are remains of a mosaic floor of the Byzantine type of “small cubes of marble in a guilloche pattern” (Jeffery 1918: 321). The remains of the Byzantine structure and the subsequent construction of a church in the 16th century suggest that this church was abandoned as the population moved inland after the Arabic raids.



FIGURE 5.15 Ayios Evlalios 35°21' N 33°11' E (Google Earth Pro 2018)



FIGURE 5.16 Mosaic Pattern outside the Church (Watson-Northcyprus 2018)

Lambousa (abandoned by the 10th century)

This area was once a prominent town of considerable size during the Byzantine Era and was the original location on the town of Lapithos. This location town was sacked by Arabic raiders in either 649 or 653, and much of the city was destroyed by fire (Metcalf 2009: 468). Metcalf (2009: 469) notes that the town was rebuilt, but to a much reduced size, as evident by two coins found in the site of Constans II and Constantine IV dating to 659-663 and 670-680 respectively. This site was likely abandoned after another wave of Arabic raids descended on Cyprus in the 10th century (Municipality of Lapithos 2018). Metcalf 2009: 492) notes that “the name of Lapithos moved a few miles inland at some point.” Once an important town before its destruction it became clear that Lambousa lost its status as a vital trade port by the 11th century (Metcalf 2009:494).

Larnakas (Tis Lapithou)

A village that lies to the northeast of Kampyli. This village resides on the southern slope of the Kyrenia Mountain range and was first attested in the 11th century (Papacostas 1999: Table 4). Specifically, the village was mentioned “according to the 11th century inventory of Krina” (Papacostas 1999: 145 [2]). Jeffery notes that in the area surrounding the village is a necropolis belonging to the Ptolemaic Period, suggesting that the site has been occupied for some time (Jeffery 1918: 319). Jeffery (1918: 319) also mentions a small oblong temple, but the inscriptions were destroyed sometime before their discovery.

Akhiropiethos Monastery (Acheiropoietos) (11th century)

Situated on the coastline north of the village of Karavas lies the Akhiropiethos monastery in which internal structural remains suggest that it dates to the 11th century (Jeffery 1918: 320, Papacostas 1999: 80 [2]). The current structure was built sometime in the 16th century, but in the interior, there is evidence that the building was built as early as the Middle Byzantine times (Papacostas 1999: 80 [2]). The monastery is not mentioned by written sources until it was noted by George Boustronios in 1473 as a pilgrimage shrine (Papacostas 1999: 80 [2]). Unfortunately, due to the current political situation in North Cyprus, the area is currently a restricted military area, and thus off-limits to the general public (Watson-Northcyprus 2018).



FIGURE 5.17 Akhiropiethos Monastery 35°21' N 33°11' E (Google Earth Pro 2018)



FIGURE 5.18 Akhiropiethos Monastery (Watson-Northcyprus 2018)

Karmi (at least 11th century)

Jeffery (1918) notes that the village name of Karmi suggests that it was founded by the Carmelite Order. The Carmelites originate from Syria, but due to the Arabic conquest, were pushed out of their homeland and some ended up migrating to Cyprus. There is a Carmelite church in Famagusta that dates to the 14th century, and it is likely that this village was founded around the same. It is possible that this village was founded around the same time as the Armenian and Maronite villages.

Palaeo Monastir (Trimithousa) (Byzantine)

Jeffery (1918: 318) describes this church as a small Byzantine structure with a central dome of rustic work. He notes that the church was restored by the time of his survey, which must have been done after 1882 because Kitchener's map describes it as a ruin. It is unclear if the structure still stands today, as it appears there has been a great deal of development in the area

since Jeffery's survey. It appears, at least in satellite imagery, that the church was destroyed to make room for housing.



FIGURE 5.19 Possible location of Palaeo Monastir 35°19' N 33°15' E (Google Earth Pro 2018)
Trimithi (15th century?)

Located about 3.5 km southwest of Kyrenia Trimithi is mentioned by Dandini in 1596 as a Maronite village (Jeffery 1918: 318). Kyrris does not include this village in his list of military villages, even though it appears that Trimithi is Maronite in origin. The founding date of the village is unknown, but Jeffery notes that there is a church that architecturally dates to the 16th century. He also notes that a Renaissance doorway remains in the outer wall, and that the “founders tomb niche of a still older date on the south side” (Jeffery 1918: 318). The church was rebuilt in an unspecified time, but as noted there are signs of the original structure. Watson-Northcyprus (2018) claims that the village dates to the Lusignan period.

Templos (12th century)

Templos is a small village situated to the southwest of Kyrenia. During Jeffery's survey and in Kitchener's map it is noted that the villages were Muslim. The village lies on what Jeffery refers to as a Templar Commandery, or an administrative district. An administrative building for

the Knights Templar was likely established here after the Templars purchased Cyprus from King Richard the Lionheart in 1191.

Glykyotissa (16th century)

This site consists of a church built on the shore with a small inlet in which an artificial port was constructed on the western end of the building (Jeffery 1918: 318). The entry to the artificial port is only about fifteen meters wide, which suggests only small boats could enter. Given its proximity to the port of Kyrenia, only 2.5 km away, this port was likely used to offload supplies and trade goods gathered in the city of Kyrenia. The church is surrounded by the ruins of an older monastery, but the age of the church is not given. The only concrete date attested to this church is an “obliterated gravestone which Mas Latrie deciphered as the memorial of a certain Caesar Kariotis, who died September 12, 1546” (Jeffery 1918: 318).



FIGURE 5.20 Glykyotissa with port 35°20' N 33°18' E (Google Earth Pro 2018)

Unknown (possible fortification structure)

This site is an unknown structure to the west of St. Hilarion in the Kyrenia mountain range. The dimensions of the main structure are 15 m X 14 m with a smaller attached structure

measuring 7.5 m X 4 m. 35 m due west of the building are the foundational remains of a rectangular building. The building faces in an east-west fashion with the eastern wall having a circular wall. The foundational remains measure 12 m X 4 m No archaeological work has been done to determine the time period of these structures. Jeffery's survey of the island does mention that a watchtower lies in the forest above the village of Elaea, which lies north of the mountain range and was likely used to signal between St. Hilarion Castle and Nicosia (Jeffery 1918: 319). This particular structure, while it does appear to be fortified, does not appear to be the watchtower structure due to its location in the mountains. The structure lies near on the southern slope of the mountain without a clear line of sight to the northern coast or St. Hilarion. The castles and watchtower did have the capability of using smoke signals to each other, so the possibility of this structure being the watchtower mentioned should not be ruled out. It is also possible that this structure was the living quarters for the men stationed at the watchtower. There appears to be no pathways in the vicinity of the structure that suggests a north/ south passageway through the mountains. There is a pathway to the west that leads down the northern slope of the mountains down into the coastal plains, which suggests that this may have been part of the defensive network constructed by the Byzantine Empire. People fleeing attacks could find refuge in this mountain structure, while the garrison moved down into the plains to confront attackers.



FIGURE 5.21 Satellite view of the structures 35°18 N 33°13' E (Google Earth Pro 2018)



FIGURE 5.22 Ruins of structure facing due north (Photo by Eray Salioglu 2017)



FIGURE 5.23 Ruins of Structure facing due East (photo by Eray Salioglu 2017)



FIGURE 5.24 Ruins of structure facing due South (Photo by Eray Salioglu 2017)

Unknown (possible watchtower)

This structure lies around 850 m northeast of the unknown fortification structure mentioned in the previous description. There is no archaeological information on this structure, and it is unclear on whether or not this is, in fact, a medieval structure. This building resides on the highest elevation (2780 m) on the northern section of what is detailed in Kitchener's map as Pyrokremnos. The position of the structure in relation to St. Hilarion Castle and the northern coast, having a clear line of sight to both, is the primary reason for the suspicion that this is, in fact, the watchtower mentioned by George Jeffery. The building consists of a square structure surrounded by an outer square wall. The dimensions of the building are 24 m x 23 m. The surrounding walls dimensions are 75 m x 67 m. There is a large discrepancy to the size of the structure when compared to other watchtowers in Cyprus. A Venetian watchtower east of the city of Perivolia in the district of Larnaka measures at 8 m x 7 m and the surrounding wall being 39 m x 31 m in length. Another medieval tower in the village of Katto Pyrgos in the Nicosia District dimensions are 5 m x 5 m, but is situated on a steep hill and therefore does not have a surrounding wall. The watchtower seems to be based on the space available on hills. Until

archaeological work is done in the area, unfortunately, this structure's purpose remains purely speculative.



FIGURE 5.25 Unknown Structure 35°18' N 33°14' E (Google Earth Pro 2018)



FIGURE 5.26 Pyrgos Watchtower 34°49' N 33°36' E (Google Earth Pro 2018)



FIGURE 5.27 Katto Pyrgos Watchtower 35°11' N 32°41' E (Google Earth Pro 2018) FIGURE 5.28 Katto Pyrgos Watchtower (photo by Nico Winkler)

St. Hilarion Castle (10th-11th century)

St Hilarion, arguably the most important fortification due to its strategic control of the only main passageway to the north coast from the south, is the first of the Byzantine mountain fortresses in this study. The first mention of the castle in writing is during the conquest of the island by Richard the Lionheart. While no archaeological excavations have taken place in the castle, there was a study done by James Petre (2010) that discusses in depth the full history of the fortifications of Cyprus and their architectural properties. The castle itself lies to the west of the pass that leads from Kyrenia to Nicosia. While there are some passageways through the Kyrenia Mountain Range, the pass guarded by St. Hilarion is the only one that wide and flat enough for large wagons to move through with ease. During the Lombard War, the Cypriots used St. Hilarion to block the advance of Genoese from the south in a bid to take Kyrenia.



FIGURE 5.29 St. Hilarion Castle (Whatson-Northcyprus 2018)

Kyrenia to Melandryna (approximately 159 sq kilometers)

The third area of study consists of villages and churches that are situated between the main city of Kyrenia and the Melandryna Monastery. Much like the previous study area, this land occupies a narrow strip of fertile land between the coastline and the Kyrenia Mountain Range. This region includes the largest gap between the mountains that leads from Kyrenia to Nicosia, a strategic location used by Byzantine and Crusader forces. The mountain range also curves in a southerly direction for part of this area before turning north again, forming a half moon shape range on the landscape. Many of the sites are within the vicinity of Kyrenia, or reside in the mountains.

In terms of road systems in this region, Bekker-Nielsen (2004: 156) notes that “intense cultivation of valuable farmland, tourist development along the beaches and road improvements have wrought great changes in the landscape around Kyrenia, making it virtually impossible to ascertain the course of the ancient road to the east of the city”. Despite this, he speculates that the main road continues to follow the coastline, never more than a few hundred meters from the shoreline. Two road systems branch south from the coastal road and traverse the mountain range.

The main one is the road that runs from Kyrenia to Nicosia, moving through the natural pass in the mountain range. The other road begins to travel south just to the east of Ayios Epiktitos and runs through the village of Klepini before turning east again. After about 3 km the road turns north again and moves through another natural pass that leads to the village of Kythraea.

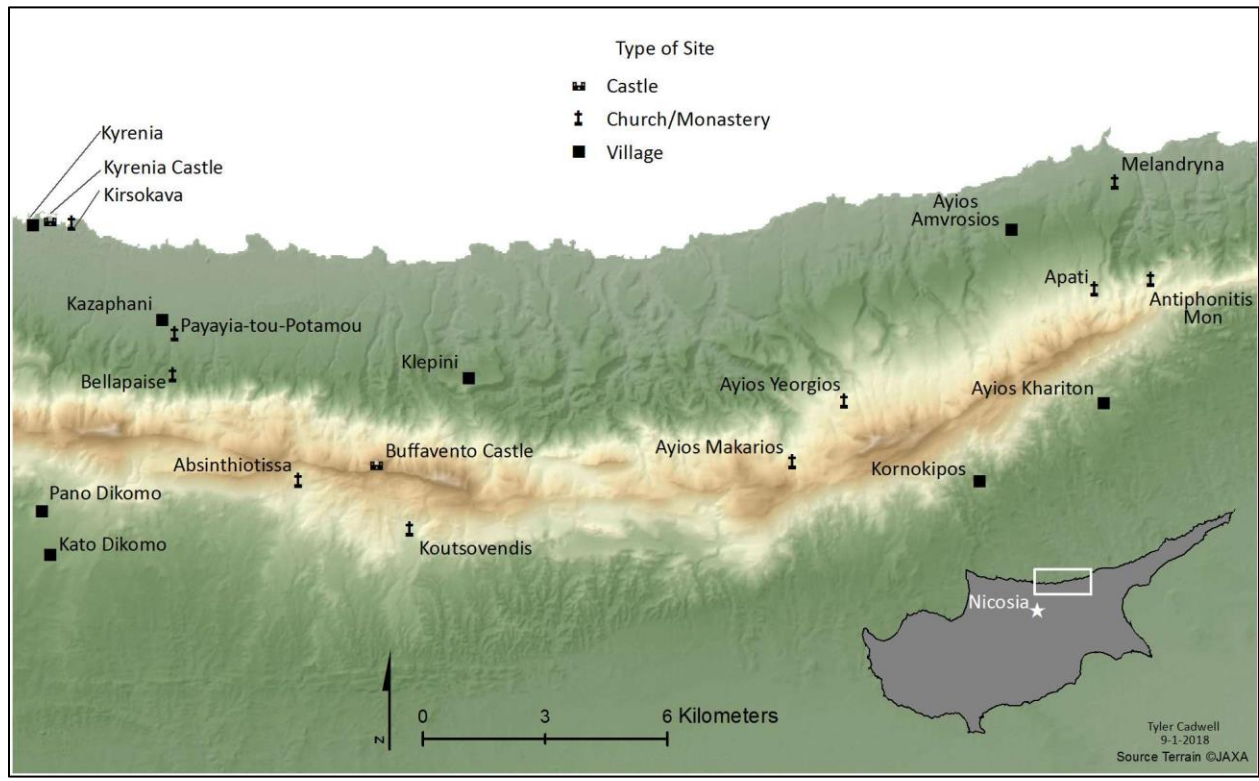


FIGURE 5.30 Medieval Sites from Kyrenia to Melandryna

Kyrenia (10th century B.C.)

Kyrenia is the most prominent and strategic town in the lands north of the Kyrenia Mountain Range due to its proximity to the main pass through the Range and the large natural port. A wall was constructed with a number of round towers to defend the city from land attacks when. On the Kitchener Map, it appears that the wall was at least in some part still intact during the survey of 1882. Kyrenia prospered throughout the Middle Ages as the primary port of trade along the northern coast of Cyprus. A great chain once stretched across the harbor to protect the city from

naval attack. Strategically, it appears Kyrenia was designed as a fortified port that could resupply and reinforce the island if an enemy army attacked the southern region of the island. This idea was put into practice when Issac Commodus took the Island from the Byzantines in 965. The Byzantines sent a force to Kyrenia to retake the island from Commodus, but were intercepted and defeated before they could land. Kyrenia also served as a staging ground to send supplies to Christian forces in the Armenian kingdom of Cilicia. Kyrenia became the rallying point of resistance by King James I, the representative of the monarch, to the Genoese attack on Cyprus from 1373 - 1374 (Jeffery 1918: 309). In 1977 William Dreghorn wrote “A Guide to the Antiques of Kyrenia” that discusses further the rich history of the city of Kyrenia and its castle. He also provided a number of detailed drawings of the city that show the city as it was in the 14th century.

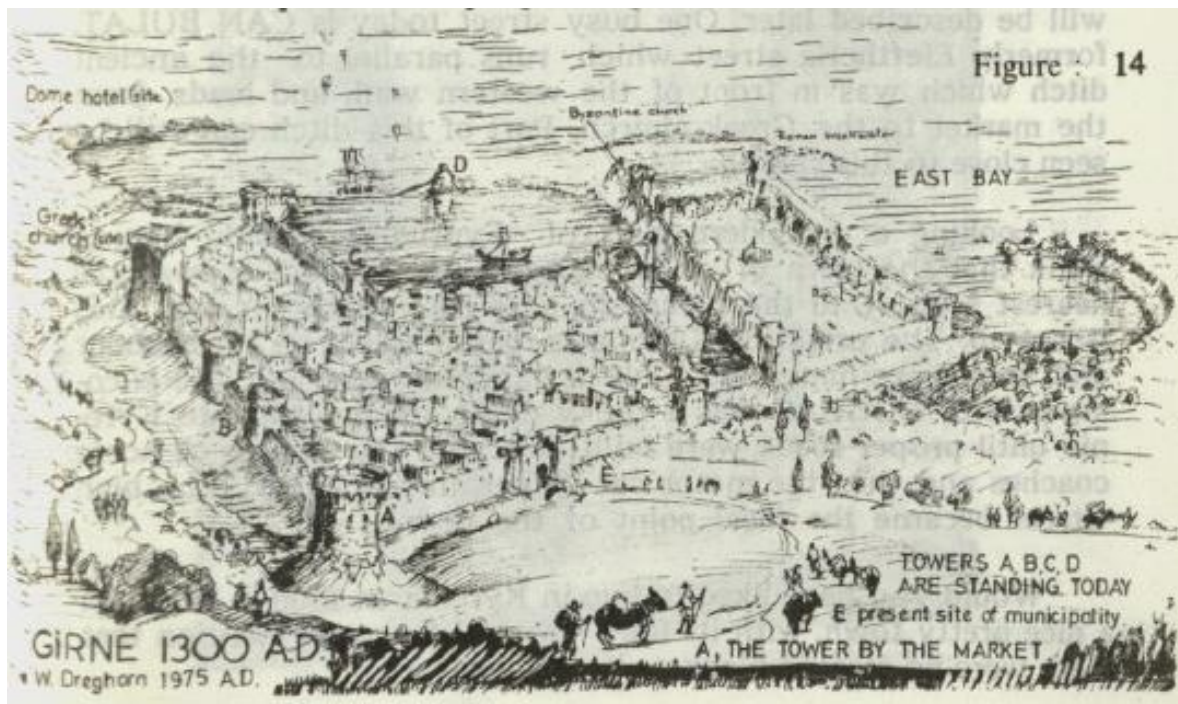


FIGURE 5.31 Kyrenia during the 14th Century (William Dreghorn)

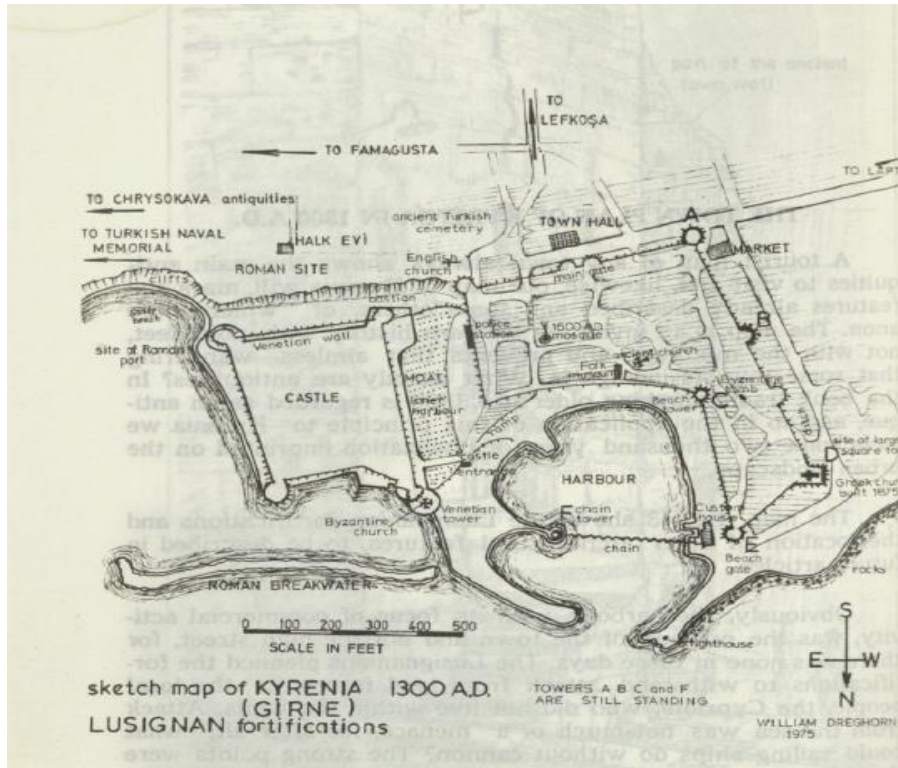


FIGURE 5.32 Map of Kyrenia (William Dreghorn)

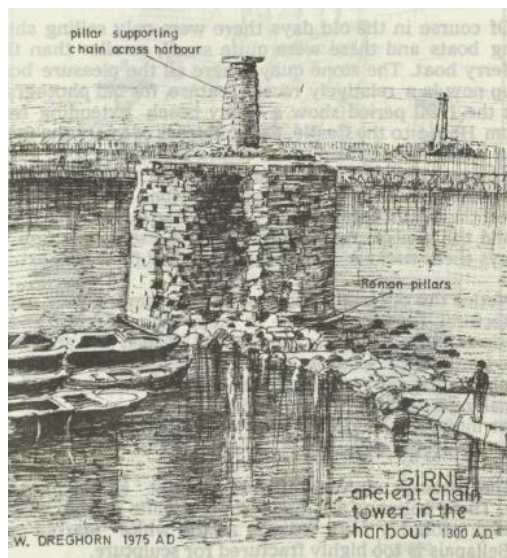


FIGURE 5.33 Great Chain Drawing (William Dreghorn)

Kyrenia Castle (4th Century?)

Kyrenia Castle is situated in the western part of Kyrenia, and is the only fortification that lies directly on the northern coast of Cyprus. The fortification dates back to the 4th century A.D.

during the Roman occupation (Dreghorn 1982: 3). The Byzantine Empire constructed their fort on top of the Roman structure sometime around 700 to protect the city from Arab raids (Whatson-Northcyprus 2018). The fortification was reconstructed in the Crusader style in the 12th century (Dreghorn 1982: 3). The Crusader Castle was reconstructed into a Venetian fortification in the 15th century, which still stands today (Dreghorn 1982: 3). The castle was attacked during the War of the Lombards and was garrisoned with fifty knights and one thousand soldiers (Jeffery 1918: 308). During the war with the Genoese, Cypriot forces held out in the lands north of the Kyrenia Mountain Range as the south was looted and occupied. However, after the Genoese broke through the range and besieged Kyrenia, the Cypriots were forced to surrender (Jeffery 1918: 309).

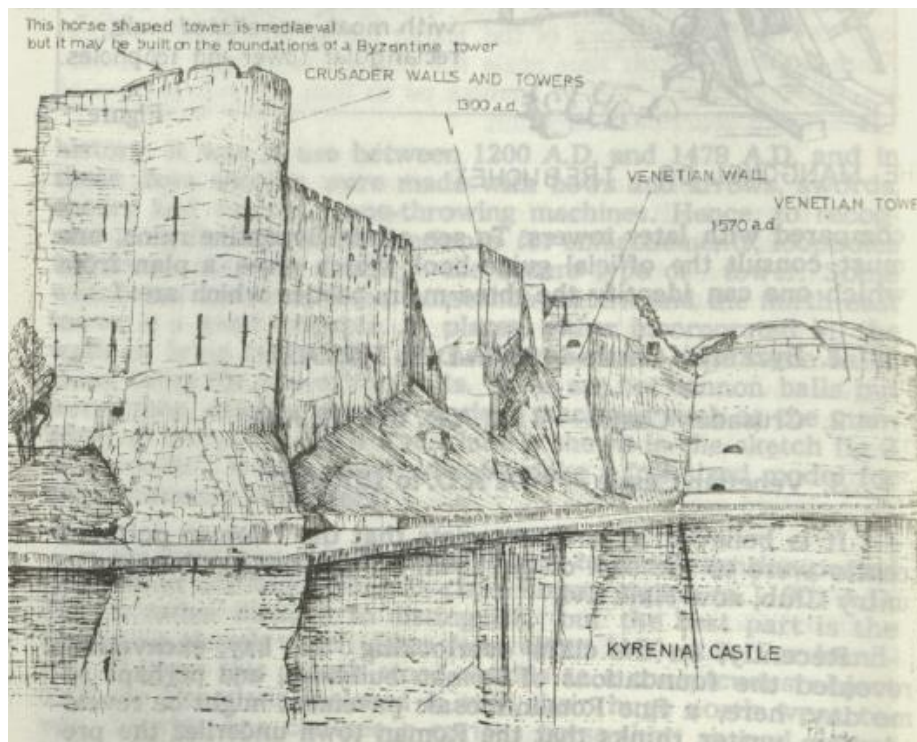


FIGURE 5.34 Kyrenia Castle (William Dreghorn)

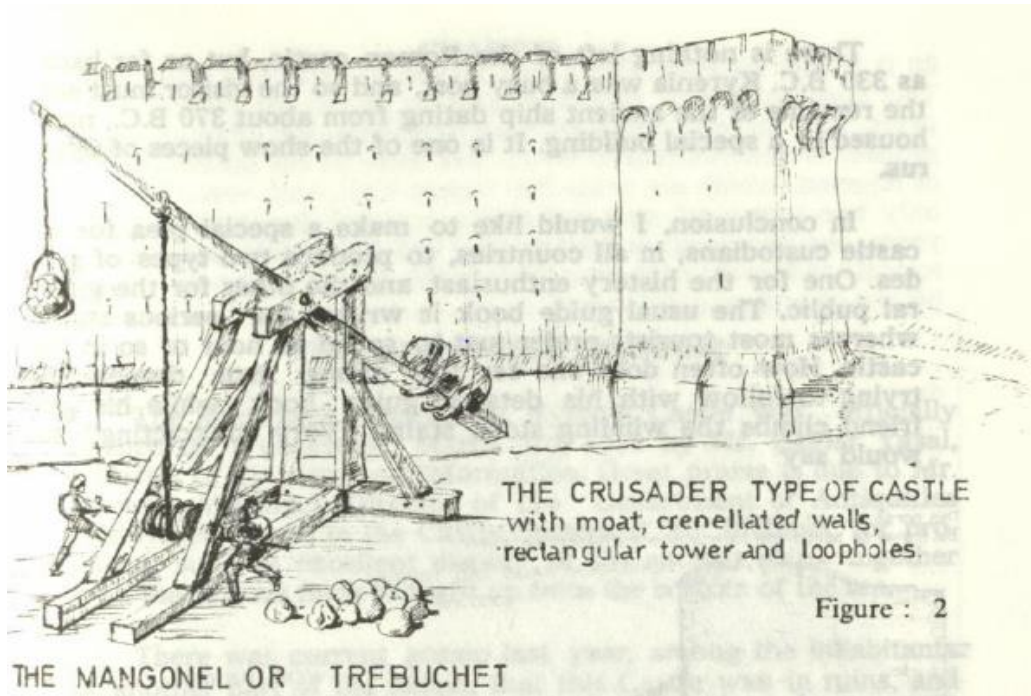


FIGURE 5.35 Kyrenia Castle (William Dreghorn)

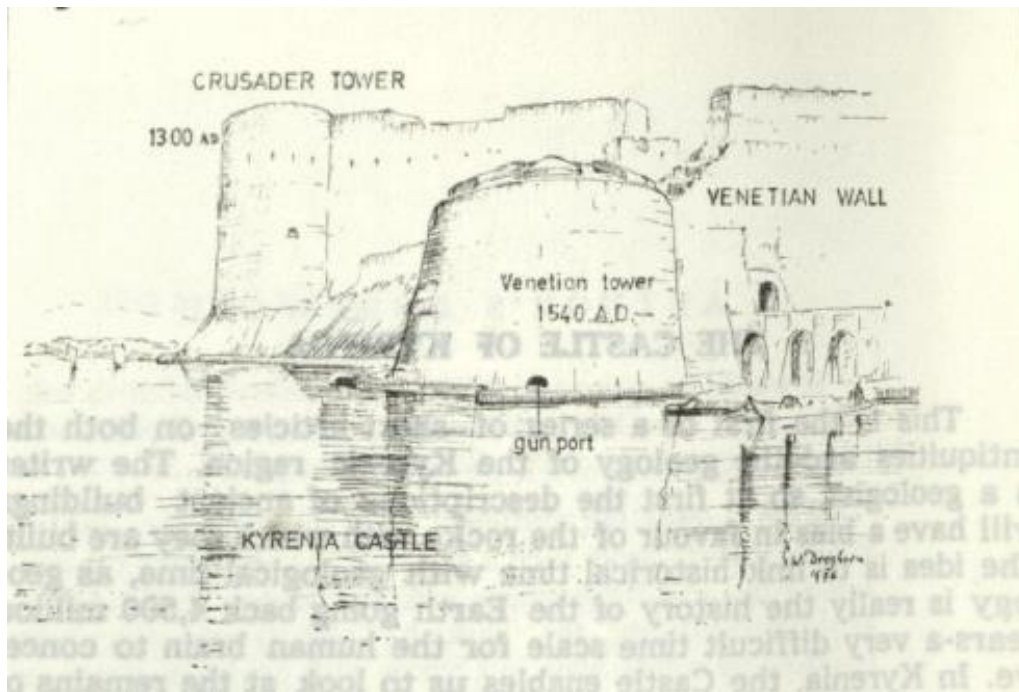


FIGURE 5.36 Kyrenia Castle (William Dreghorn)



FIGURE 5.37 Kyrenia Castle (Watson-Northcyprus 2018)



FIGURE 5.38 Kyrenia Castle Courtyard (Watson-Northcyprus 2018)

Kirsokava (Chrysokava) (10th century)

Lying between the old and new harbor of Kyrenia is the Kirsokava Quarry. This quarry is important for a variety of reasons. The castles that were constructed in the Kyrenia Mountain Range and Kyrenia castle used limestone from this quarry during construction (Watson-Northcyprus 2018). This area contains a Christian settlement that covers a large irregular area (Jeffery 1918: 322). The only way to get into the settlement is through a tunnel entrance located in the south side of the quarry, protecting it from assaults from the sea (Jeffery 1918: 322). Wall painting and stone carving remnants from the church that was built into the quarry suggest that the site dates to the 10th century (Watson-Northcyprus 2018). The site today is located in a military area, so accessibility to the site is extremely limited (Watson-Northcyprus 2018). However, in satellite imagery, it is possible to see the areas in which were quarried for limestone.



FIGURE 5.39 Kirsokava (Chrysokava) 35°20' N 33°19' E (Google Earth Pro 2018)

Kazaphani (14th century)

Kazaphani is a medieval town that is thought to date to at least the 14th century. This town is located just southeast of the main town of Kyrenia. There are two churches, Agios Epifanios and Panagia Potamitissa, which date to sometime between the 14th and 15th centuries (Yioutani-Iacovides 2003: 426). The Kitchener Map shows that the village consisted of twenty-four buildings, not including the churches. Today it appears that Kazaphani has seen a vast expansion, due to the influx of Turkish migrants to the island.

Payayia-tou-Potamou (Panagia Potamitissa) (15th century)

This small church lies on the eastern side of Kazaphani. Jeffery (1918: 323) makes a note of this small chapel as having a Venetian style gold and blue iconostasis, which places the date of the site in the 15th century. The iconostasis was restored “many years ago” according to Jeffery (1918: 323). The church itself does not appear on Kitchener’s map survey, and Jeffery makes no mention of the church exterior being preserved. According to Whatson-Northcyprus.com (2018), the church is hidden behind a wall, so it is entirely possible that the survey team missed the structure. It is unclear if the Panagia Potamitissa church mentioned by Yioutani-Iacovides in the Kazaphani village is the same church as Payayia-tou-Potamou. Both

are in the Byzantine style which suggests that they are the same structure (Watson-Northcyprus 2018; Yioutani-Iacovides 2003: 302).



FIGURE 5.40 Payayia-tou-Potamou (Watson-Northcyprus 2018)



FIGURE 5.41 Payayia-tou-Potamou 35°19' N 33°21' E (Google Earth Pro 2018)

Bellapaise (1206)

Situated to the southeast of Kyrenia is the Abby of Bellapaise. “The Premonstratensian Abbey was founded by Archbishop Thierry in A. D. 1206, and confirmed by Pope Gregory IX” (Jeffery 1918: 323). Jeffery notes that Bella Paise is one of the finest monuments in the Lusignan dynasty. During the war with the Genoese, the abbey was plundered of its riches, but not damaged (Watson-Northcyprus 2018). The abbey was a popular place to visit by royalty and saw many expansions during the Lusignan Period. “In 1912 and 1913, extensive repairs and clearing away of debris and earth took place under the supervision of the Curator of Ancient

Monuments” (Jeffery 1918: 333). Today Bellapaise is an important tourist destination in North Cyprus. The abbey has been the subject of many paintings as well throughout history.



FIGURE 5.42 Bellapaise 35°18' N 33°21' E (Google Earth Pro 2018)



FIGURE 5.43 Bellapaise (Watson-Northcyprus 2018)



FIGURE 5.44 Bellapaise (Watson-Northcyprus 2018)

Dikomo (1155)

Dikomo is a medieval village that lies on the southern slope of the Kyrenia Mountain Range on the main road that leads from Nicosia to Kyrenia. Yioutani-Iacovides (2004: Table 4 appendices) notes that Dikomo was first attested in 1156. Dikomo was also near the sight of a raid conducted by Raynald of Châtillon, in which the Cypriot forces were annihilated in 1156 (Metcalf 2009: 550). The village is also mentioned in “the Sweet Land of Cyprus” where the Genoese, unable to go through the pass defended by St. Hilarion, spent eight days at Dikomo (Ambroise 1941: 451). The Genoese resolved to convince a priest to show them an alternative pass through the range, which Dawkins details “it is pretty clear that this ‘other way’ or ‘foot-path’ from Dikomo to Kyrenia is the western pass which leads to Kyrenia by Bella Paese, passing between the peak of Trypa Vounou to the west, called also the Hill of the Old Woman” (Ambroise 1941: Notes 173). This pass only allows for the passage of troops, but it allowed the Genoese to surprise and route the Cypriot army guarding the main pass (Ambroise 1941:173 Notes). The Kitchener map shows that there are two villages, Pano Dikomo and Kato Dikomo, but for the purposes of this study, the two villages will be treated as one entity.

Buffavento Castle (10th century)

Buffavento Castle is a castle constructed sometime during the 10th century in response to Arabic raids on Cyprus (Watson-Northcyprus 2018). The castle lies on the southern slope of the mountains with several structures and towers lining the top of the mountain. There is no approach directly to the castle from the north due to the steepness of the mountains. About three kilometers to the east lies a pass that was likely guarded by Buffavento. While there is another pass to the west about seven kilometers away, it does not seem feasible that the western pass could be defended efficiently by Buffavento. Buffavento was also situated between the castles of

St. Hilarion and Kantara Castle; therefore, it is likely that this castle was used as a signaling post to communicate information through the network of fortifications. When the Venetians took administrative control of the island, Buffavento was dismantled to focus on coastal fortifications.



FIGURE 5.45 Buffavento Castle (Watson-Northcyprus 2018)



FIGURE 5.46 Castle Gatehouse (Watson-Northcyprus 2018)

Koutsovendis (Ayios Khrysostomos Monastery) (1090)

To the southwest in the shadow of Buffavento Castle lies the Ayios Khrysostomos Monastery. The monastery was “founded in 1090 according to its surviving liturgical typikon, and must have owned at least some vineyards” (Papacostas 2015: 126). Jeffery notes that the northern section is the original Byzantine church, while the south side had been reconstructed 1891. (Jeffery 1918: 272). Unfortunately, during the reconstruction of the monastery, a number of identifying features of the church were destroyed (Jeffery 1918: 274). “Numerous fragments

of decorative detail, capitals, etc. are scattered within the enclosure and amongst them are two broken pieces of a marble inscription in very ornate medieval lettering” (Jeffery 1918: 274).



FIGURE 5.47 Koutsovendis 35°16' N 33°25' E (Google Earth Pro 2018)

Panayia Absinthiotissa Monastery (11th century)

This large monastery is situated to the southwest of Buffavento Castle. The complex was originally built in the 11th century (Yioutani-Iacovides 2003: 426). “The church consisted of a central space of a hexagonal plan covered with a very large dome which has collapsed filling the interior with debris” (Jeffery 1918: 274). The complex appears to have been built upon and repaired several times, but as Jeffery notes it was done in a “very bungling and ineffectual way” (Jeffery 1918: 276). There is a tomb located in the complex of a woman that dates to the 15th century. Jeffery (1918: 276) notes that the floors of the monastery show signs of looting by treasure seekers. Whatson-Northcyprus.com (2018) also notes that the church has been vandalized and a number of frescos stolen since 1974.



FIGURE 5.48 Panayia Absinthiotissa Monastery 35°17' N 33°23' E (Google Earth Pro 2018)



FIGURE 5.49 Panayia Absinthiotissa Monastery (Watson-Northcyprus 2018)



FIGURE 5.50 Panayia Absinthiotissa Church (Watson-Northcyprus 2018)

Klepini

Klepini is a small medieval village that lies to the northeast of Buffavento Castle. Jeffery suggests that the “village may be the ‘Cleipiris’ mentioned by Dandini in 1596 as a Maronite village (Jeffery 1918: 335). If true, this would put the founding date of the village in the 10th to 12th centuries during the Maronite migration to the island. Jeffery also mentions a small ruined church near the village (Jeffery 1918: 335). There is a church located in the southern section of Klepini in the Kitchener Map, but it is unclear if it is the one Jeffery is referring to. Today Klepini has grown significantly since 1882, but it remains an isolated village outside the expansion of the area around Kyrenia.

Ayios Makarios (Sourp Magar Armenian Monastery (10th century))

Jeffery (1918: 335) noted that the Armenian monastery could be from the 15th century, but the condition of the structure is very poor so dating it remains difficult. Whatson-Northcyprus.com (2018) states that the monastery was first established around the 10th century as a Coptic monastery, and the Armenians took over the structure in the 15th century. The church built in 1814 is “a poor structure without any architectural character - merely a large square vaulted chamber with an apse” (Jeffery 1918: 334). The original church, which would have lied in the center of the complex, is in complete ruin, possibly due to an earthquake (Jeffery 1918: 334). Jeffery notes that in the “Hillside above the monastery is a cavern said to have been the residence of the patron Saint Makarios” (Jeffery 1918: 335). According to Whatson-Northcyprus (2018) “the monastery today is in ruins and has suffered at the hands of vandals.”



FIGURE 5.51 Ayios Makarios 35°17' N 33°31' E (Google Earth Pro 2018)



FIGURE 5.52 Ayios Makarios (Watson-Northcyprus 2018)



FIGURE 5.53 Ayios Makarios Courtyard (Watson-Northcyprus 2018)

Ayios Yeorgios/Melanisiko Monastery (Byzantine)

To the northwest of Ayios Makarios lies the remains of a monastery that is labeled on the Kitchener Map as Ayios Yeorgios. Jeffery noted that the remains are Byzantine in character, but

no architectural characteristics of the church that once stood inside the walls remain (Jeffery 1918: 335). The structure resides today beside a roadway that winds down the hilly topography of the area. It does not appear in Jeffery's notes or from satellite imagery that there has been any attempt of reconstructing this monastery. The church appears to still lie in ruins as Jeffery found it during his survey.



FIGURE 5.54 Ayios Yeorgios/Melanisiko Monastery 35°18' N 33°32' E (Google Earth Pro 2018)

Ayios Amvrosios (Ayia Ghrosh) (Byzantine)

This village is described by Jeffery as a modern village, but has signs of being from the Byzantine period (Jeffery 1918: 335). He notes that there are several places throughout the village where white stone tesserae floors, that are indicative of the Byzantine period, are still visible on the surface (Jeffery 1918: 335). It may be possible that this site was abandoned during the Byzantine Era due to Arabic raids, but without evidence, this is just an assumption.

Kornokipos (10th-12th centuries)

While the exact date of the founding of this village is unknown, Jeffery (1918: 242) notes that Kornokipos is mentioned by “Lusignano” or Guy of Lusignan as an Armenian village during his time as ruler of Cyprus in the late 12th century. Metcalf (2009: 538) notes that this is one of

the villages that Kyrris suspects of being an *akritai*. Geographically, Kornokipos is situated at one of the few passes through the Kyrenia Mountain Range. The Armenians were well known for their ability to fight in mountainous terrain (Ayvazyan 2012: 14-15). Therefore it would make sense to settle Armenian migrants in the mountain range to protect against incursions from the south and respond to raids from the northern coast. Based on satellite imagery, the original site of the village in the Kitchener Maps is still occupied, but it seems the main part of the village has shifted slightly south further down the mountain.



FIGURE 5.55 Kornokipos 35°17' N 33°34' E (Google Earth Pro 2018) FIGURE 5.56 Historic Kornokipos (Pro 2018Google Earth)

Ayios Khariton (10th-12th centuries)

Ayios Khariton is a small village that lies on the southern slope of the Kyrenia Mountain range. This is an Armenian village that Kyrris suspects of being an *akritai* (Metcalf 2009: 538). Jeffery only notes that this village is named “St. Carita of the old map” (Jeffery 1918: 242). Nothing else is known about this village. Today the village seems to still be a relatively small village.



FIGURE 5.57 Ayios Khariton 35°18' N 33°36' E (Google Earth Pro 2018)

Apati (12th century)

This church was once part of a monastic enclosure, but the site has since been plowed over and only the church remains intact (Jeffery 1918: 337-338). The church was still in use during the time of Jeffery's survey, although with the political situation in North Cyprus it is unclear if it is still in use today. Jeffery notes that the iconostasis was completely destroyed and that there are no painting or architectural features of interest inside the church. Jeffery estimates that the church could date from the 16th century. However, Yioutani-Iacovides (2003: 425) notes that the church was originally founded in the 12th century. Satellite imagery shows that the church remains intact and to the southwest of the church appears to be the remains of a foundation that may have been a part of the monastic enclosure.



FIGURE 5.58 Apati 35°19' N 33°36' E (Google Earth Pro 2018)

Melandryna Monastery (14th century)

Situated near the northern coast to the northwest of Kalorka is the Melandryna Monastery. Jeffery (1918: 335) notes that the church's construction is likely from the 15th century, although (whatsoncyprus.com 2018) details that it was built in the 14th century. The monastery was enlarged in the 16th century and the iconostasis was constructed in the 16th century in the Venetian style (Jeffery 1918: 336). The church was in poor condition when Jeffery conducted his survey (Jeffery 1918: 336). Today the monastery is in very poor condition; however, in January 2014 emergency repairs started on the site to keep the wall from collapsing inward from vegetation growth (Watson-Northcyprus 2018). A temporary roof was also placed above the church, but no further action has been taken to restore or document this historic monastery. Beyond the church, the complex itself appears to be quite large. There seems to be a large courtyard to the southwest of the church that measures about 163 X 177 m with a number of ruined structures on the western wall (Jeffery 1918:336). To the southeast of the church appears to be foundational ruins of another structure, but it is unclear if it was part of the monastery.



FIGURE 5.59 Melandryna Monastery 35°20' N 33°36' E (Google Earth Pro 2018) FIGURE 5.60 Melandryna Monastery ruins (Google Earth Pro 2018)



FIGURE 5.61 Melandryna Monastery (Watson-Northcyprus 2018)



FIGURE 5.62 Melandryna Monastery repairs (Watson-Northcyprus 2018)

Antiphonitis Monastery

The Antiphonitis Monastery is situated on the northern slopes of the Kyrenia Mountain Range. This structure lies behind a hill to the north, protecting it from being spotted by raiders. This monastery was originally a Byzantine church, founded in the 7th century, and saw an expansion period to the complex in the 14th or 15th century (Whanoncyprus 2018, Jeffery 1918: 275). The narthex, added during the Lusignan period, still exhibits signs of the original Byzantine barrel vault (Jeffery 1918: 275). According to Jeffery, a tomb in the 15th century style was found in the ruins, and the area surrounding the tomb was likely looted (Jeffery 1918: 276). A number of frescos and paintings within the church were stolen after the Turkish invasion of 1974, but four frescos were recovered in 1997 following a legal case in the Netherlands and were returned to Cyprus in 2004 (Whatson-Northcyprus 2018).



FIGURE 5.63 Antiphonitis Monastery 35°19' N 33°37' E (Google Earth Pro 2018)



FIGURE 5.64 Antiphonitis Monastery (Watson-Northcyprus 2018)

Melandryna to Karpass Peninsula (approximately 166 sq kilometers)

Melandryna to Karpass Peninsula encompasses roughly 166 square kilometers of land. While this study does not encompass the entirety of the peninsula, a portion of land north of the mountain range stretches into the peninsula. While the area between the coastline and the mountain range is consistently narrow across the region, there is a section of land that protrudes out into the sea. The most recent and comprehensive archaeological survey report was conducted in the area surrounding the village of Phlamoudi (Horowitz, 2008). A number of medieval sites were identified during this survey, but the extents of these sites are unknown. Additionally, George Jeffery identified a number of churches and settlements in this area.

The Phlamoudi survey, conducted by the Columbia University Expedition, in the summer of 1971, identified archaeological remains surrounding the Vounari Hill, a prominent Bronze age site near Phlamoudi (Killian 2008). While the aim of the project was centered on Bronze Age settlements, a number of Late Byzantine and Medieval sites were located and cataloged. The sites identified by the survey are the following:

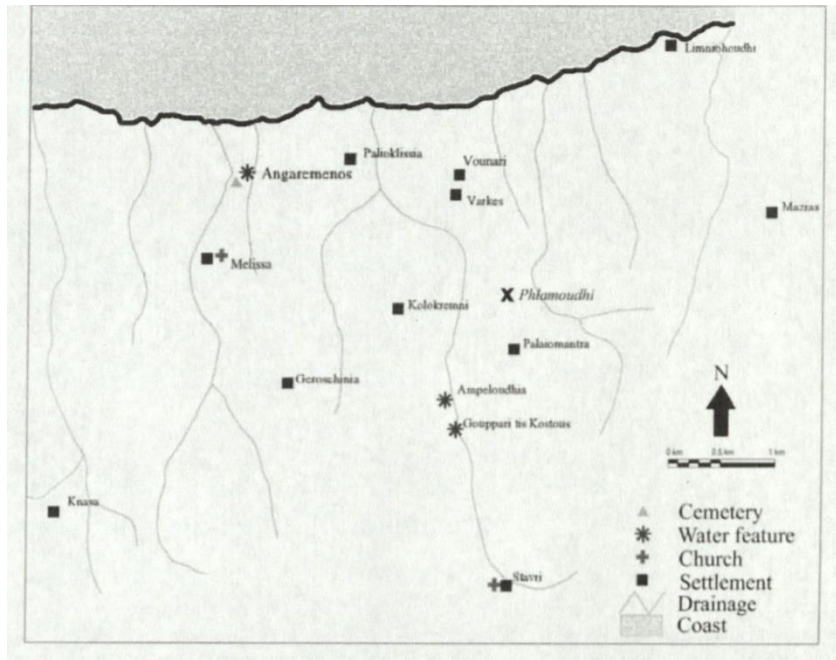


FIGURE 5.65 Medieval sites in the Phlamoudi region. Map by K. L. Killian combining survey data from Symeonoglou 1972 and Hadjisavvas 1991 (Killian2008:95)

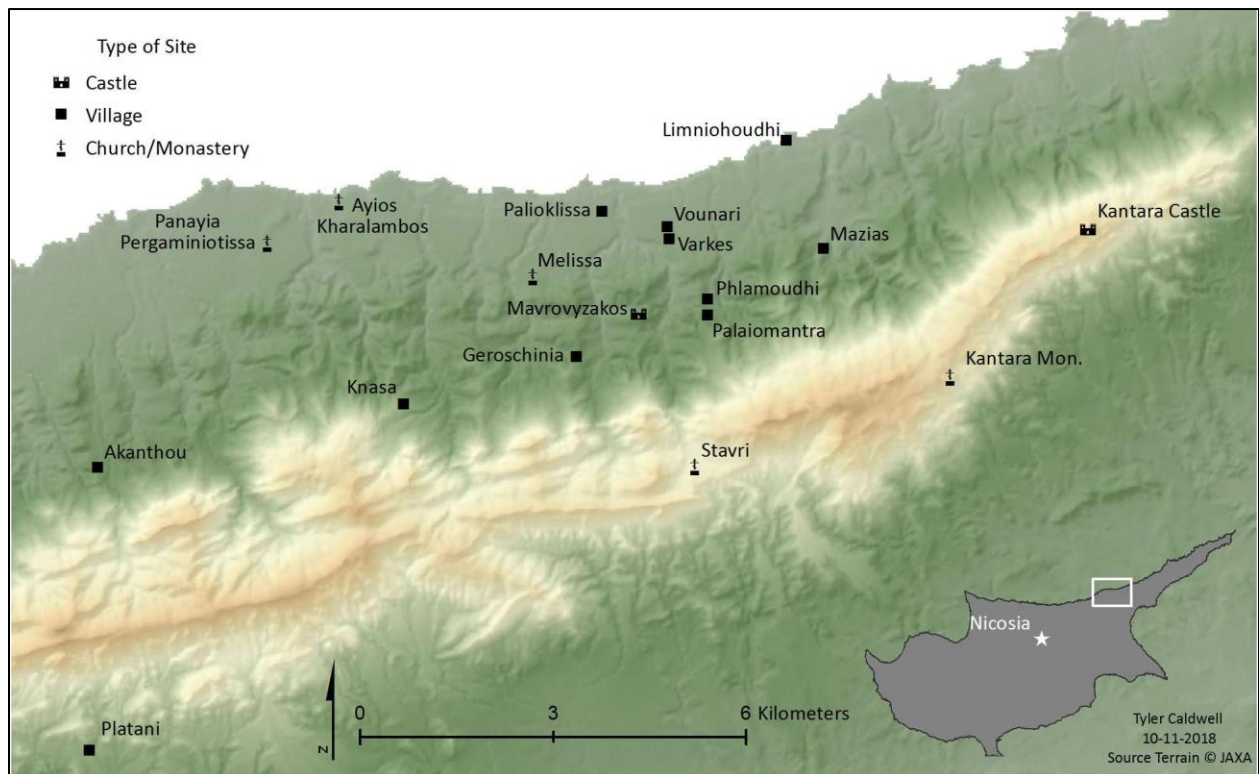


FIGURE 5.66 Melandryna to Karpass Peninsula

Paliokilissa

This site lies northwest of Vounari. According to the report, “remains of houses and pottery are visible over an area approximately 150 x 200 m” (Symeonoglou 1972: 193). While the site was not definitively defined, Symeonoglou (1972: 193) suspects that the pottery is from the middle Byzantine period.

Palaiomantra (Byzantine and later)

A site that is mentioned in the Hadjisavvas (1991: 116) survey as a small settlement occupied from the Byzantine period onward.

Knasa (Byzantine)

A site that is mentioned in the Hadjisavvas (1991: 116) survey as a Byzantine settlement.

Mazias

A site occupied during the Late Roman or Byzantine period. This site consists of an area of 150 x 250 m, but it is noted that the area during the survey was heavily overgrown so characteristic pottery was not collected (Symeonoglou 1972: 192).

Stavris

The area of the settlement consists of no more than 50 x 50 m, although they note that the pottery scatter includes a much wider area (Symeonoglou 1972: 193). This site is surrounded by two streams and rests on an isolated hill overlooking the sea. The area in which it is located appears to be of strategic economic and military value. Stavris is located in the only pass that connects Famagusta to the area of Phlamoudi; therefore, any group wishing to attack from the south, such as the Genoese during the War of the Lombards, needed to secure the settlement if they wished to attack Phlamoudi. The survey group did note that there is no evidence that this sanctuary was a fortress, but the possibility should not be excluded.

Mavrovykakos

Archaeologists did not visit this site location. Local guides that assisted in the survey of the region informed the group that there are remains on top of a hill to the northwest of Kolokremni. Symeonoglou (1972: 192) suggests that this could be an observation tower. If true, this tower was likely used to signal Kantara Castle that raiders were coming ashore. This signal would also alert the local population to move into the safety of the mountains. There are no signs of this structure in the Kitchener map, but it seems reasonable that a single ruined structure was not included in the survey map. Satellite imagery has yielded no visual evidence of the structure. This is due to the lack of resolution in Google Earth and the likely case that the structure is obscured by vegetation.

Vounari (Byzantine)

Vounari was a settlement that was occupied from the Bronze Age to the Byzantine period. Symeonoglou (1972: 193). According to Mara Horowitz, Vounari functioned as a sanctuary, rather than a settlement (Horowitz 2008: 28). During this time period, described in Horowitz article as phase nine, a fire destroyed the statuary (Horowitz 2008: 28). “A few examples of Roman sigillata ware and lamps as well as Byzantine sgraffito and later fragments testify to the presence of human activity in the area of Vounari” (Horowitz 2008: 31). The evidence for Byzantine occupations is the foundational remains of a building that is likely a church with terrazzo floors (Symeonoglou 1972: 193). Byzantine glazed ware was found on the surface of the site. Horowitz 2008: 7). A bronze coin issued during the reign of Manuel (1143-1180) was also found at the site (Smith 2005: 76). The size and scale of the Byzantine occupation have not been determined, but the evidence provided by Horowitz and Symeonoglou shows that there was some sort of activity during this time period.

Melissa (Byzantine-Medieval)

Melissa is located about 2.5 km to the northwest of the village of Phlamoudhi. Melissa occupies a large area estimated to be around 400 X 600 m in size (Symeonoglou 1972: 193). Archaeological excavations were done at the site, but the research goals centered around the Bronze Age activity on the site (Killian 2005: 87). However, there is pottery evidence that shows that there was some sort of activity at Melissa during the Byzantine period. Symeonoglou (1972: 193-194) notes that the site was occupied during the Lusignan period and may go as far back as the Byzantine period, but no archaeological excavations have taken place to determine the origins of the village. The site was constructed behind a large hill overlooking the sea to protect itself from raiders (Symeonoglou 1972: 193). Residents of the village of Phlamoudhi noted that they still remembered their ancestors moving from Melissa to their current village, leading Symeonoglou to suspect that Melissa was abandoned once the Ottoman Turks took over control of the Island in 1571 (Symeonoglou 1972: 193).

Limnionoudhi (Byzantine)

Not much is known about the site of Limnionoudhi (Symeonoglou 1972: 194). He notes that there are remains of the foundation of a possible Byzantine church. He also details that there are a number of natural salt pools that were likely used by the local population to collect salt (Symeonoglou 1971: 194).

Akanthou (7th to 10th centuries)

Akanthou is a village that is estimated to have been founded sometime between the 7th and 10th centuries (<http://www.yeniduzen.com>). The reason for the discrepancy in the timeline is due to the fact that the village was founded after villagers fled coastline settlements to the northwest of Akanthou during the Arabic raids from the 7th to 10th centuries (yeniduzen.com 2018). The

origins for the name of the village stems from a local thorny bush. According to local legend, “A very beautiful woman named Anthousa was saved from captivity to pirates by hiding behind one of these thorny bushes” (yeniduzen.com 2018). While this story may be a local legend, it shows that the village considered the threat of piracy during its founding. Like other villages in Cyprus, Akanthou is located a distance from the coastline, and it is situated behind a number of prominent hills, thus shielding it from being spotted by raiders.

Platani (10th century)

Situated on the southern slope of the Kyrenia Mountain Range is the village of Platani. This village lies to the east of one of the passes through the mountains. Jeffery (1918: 242) describes it as an uninteresting Muslim hamlet. Kyrris suspects that this village is one of the *akritai* designed to protect villages from raiders (Metcalf 2009: 538). In terms of geographic positioning, Platani seems well placed to respond to threats that might appear on the northern coast, and also able to prevent forces moving through the mountain range. This village could not withstand the might of a full force, but could likely prevent raiders from plundering the countryside.

Kantara Castle (10th-11th century)

Kantara castle is the easternmost fortification in the Kyrenia Mountain Range designed to defend the northern coast from raiders. The Byzantine Empire constructed the original fortification in the 10th century, and during the 14th century, the fortification was improved on. The castle stood occupied until the 16th century after the Venetians abandoned the castle in to focus their garrison on coastal strongholds. The current state of Kantara castle is the remains of the 14th century structure. The castle also defends a passageway through the Kyrenia Mountain Range that would check any advance made from Famagusta (Jeffery 1918: 245). Kantara Castle

was mentioned as one of the castles that were taken by Richard the Lionheart during his assault on the island. In 1914 the castle was reinforced to ensure the structural integrity remained (Jeffery 1918: 246). Kantara's position on the mountain range means the structure has a commanding view both north and south of the mountains. Any attack in the area would likely be visible from this location.



FIGURE 5.67 Kantara Castle (Watson-Northcyprus 2018)



FIGURE 5.68 Kantara Castle (Watson-Northcyprus 2018)



FIGURE 5.69 Kantara Castle (Whatson-Northcyprus 2018)

Kantara Monastery (13th century)

According to Jeffery, Kantara monastery was founded in 1230 by two emissaries from Mount Athos named John and Konon (Jeffery 1918: 244). “Here they collected around them a number of disciples, attracted to the spot by the fame of their austerity and good work” (Jeffery 1918: 244). This area was the center of the resistance movement against the Latin Church’s attempt to subjugate the island’s Orthodox population. Including John and Konon, a total of thirteen monks from the Kantara Monastery were martyred due to the civil unrest brought on by the Latin Church (Jeffery 1918: 244). The structure that stands today dates to sometime in the 18th century (Jeffery 1918: 244). Jeffery does mention that there is another ruined church on the pathway between Kantara Monastery and Kantara Castle, but does not describe any details of the church other than that it lies in ruins.



FIGURE 5.70 Kantara Monastery (Johnsanidopoulos.com)



FIGURE 5.71 Kantara Monastery 35°33' N 33°53' E (Google Earth Pro 2018)

Panayia Pergaminiotissa (11th century)

Panayia Pergaminiotissa dates to around the 11th century (WhatonCyprus). It appears that the site includes a number of foundational ruins surrounding the church, but this is speculation based on satellite imagery. There are a few iconographic paintings remaining in the church, and Jeffery (1918: 247) notes that many of the paintings were damaged by the restoration efforts during his time. It is unclear if it is possible to get inside the church due to its closure for repairs (Whatson-Northcyprus 2018). The church has since become a tourist attraction by the opening of “Miniature Cyprus” that displays sculptures of fifteen historical structures that dot the Cypriot landscape (WhatonCyprus). No archaeological excavations have taken place at this site, so it is

not known if the site was abandoned at any period. The proximity of the site to the coastline would have made the church an ideal target for raiders.



FIGURE 5.72 Panayia Pergaminotissa 35°24' N 33°46' E (Google Earth Pro 2018)



FIGURE 5.73 Panayia Pergaminotissa (Watson-Northcyprus 2018)



FIGURE 5.74 Panayia Pergaminotissa Frescos (Watson-Northcyprus 2018)

Ayios Kharalambos (Agios Charalampos) (Early Byzantine)

This site contains a church, dedicated to Ayios Kharalambos, and five other structures. Hadjisavvas's (1991: 116) survey mentions that the site is a small settlement that was occupied during the Early Byzantine period. Hadjisavvas (1991: 116) also states that the church was rebuilt in the early 20th century. Kitchener's map does not detail the area to be in ruins, but satellite imagery shows that the area has been abandoned for some time. This settlement was likely abandoned, like Akanthou, after raids conducted by Arabic forces between the 7th and 10th centuries.



FIGURE 5.75 Ayios Kharalambos 35°24' N 33° 47' E (Google Earth Pro 2018)

Chapter 6 : Results

For this study, the results of the marching speed analysis are based on the assumption that the raiders and defenders start marching at the same time. While this is not realistic to a real-life situation, it does provide a control point from which to add variables in future research. The results of this analysis, as with the site selection sections, are divided into the four study regions of which are the following: 1) Cape Kormakiti 2) Myrtou to Kyrenia 3) Kyrenia to Melandryna 4) Melandryna to Karpass Peninsula.

Test Area 1: Cape Kormakiti

Cape Kormakiti represents an area that did not have any fortifications protecting it. Instead, there are two villages, Karpasia and Kormakiti, which represent military villages designed to respond to petty raiders, but not necessarily take on an organized invasion. The first map (Figure 6.1) demonstrates the 3000 meter extent that this study concluded is the farthest inland that raiders could conduct a raid before running the risk of being overwhelmed by defending forces. Figure 6.2 shows the most likely paths raiders might take to assault various villages and churches. Table 6.1 gives the distances, elevation change and times associated with the stages of a raid. Figure 6.3 demonstrates the pathways defenders likely took to defend vulnerable villages and churches. Table 6.2 shows the distances, elevation changes, and times associated with the defending forces pathways.

Each village will be analyzed based off of these results and two fundamental questions will be answered. Does the village or church fall into the raiding zone based on Figure 1? Can raiders attack a village and escape to their ships before defenders are able to either intercept them at the village, or cut them off from their retreat to their ships?

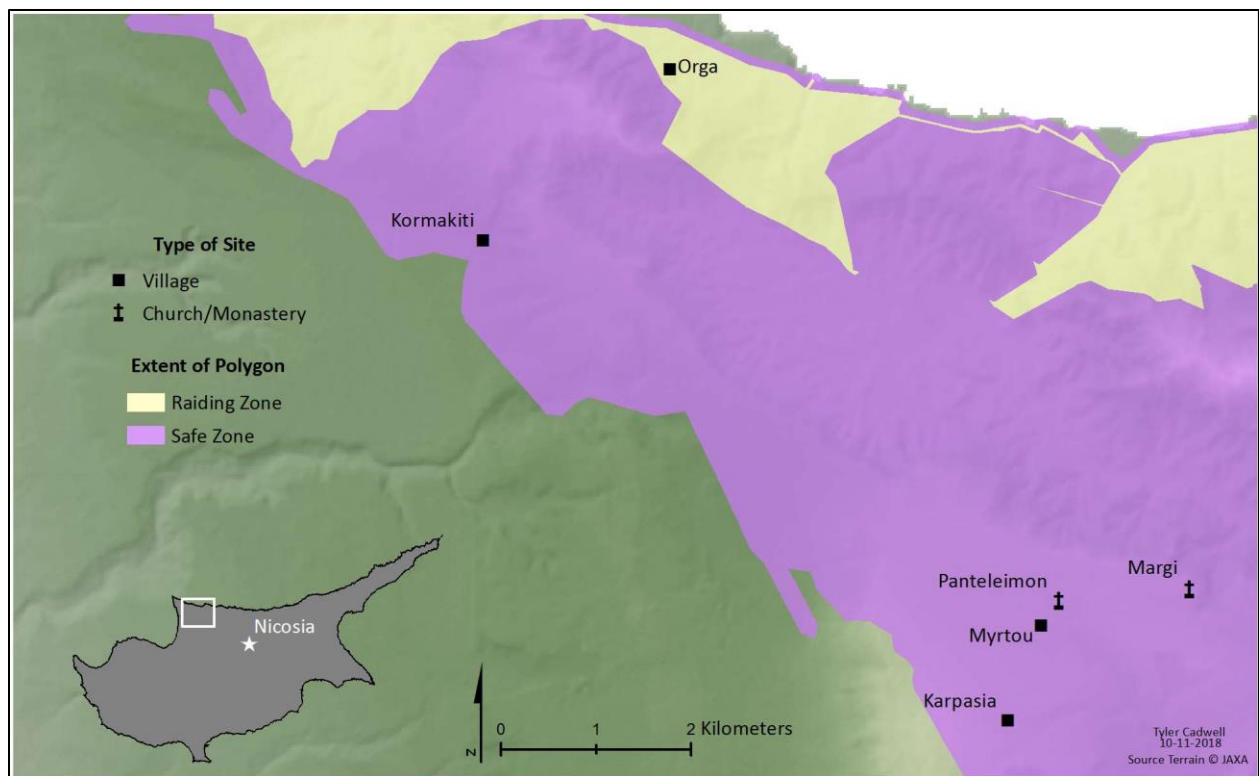


FIGURE 6.1 Raiding Zone of Cape Kormakiti

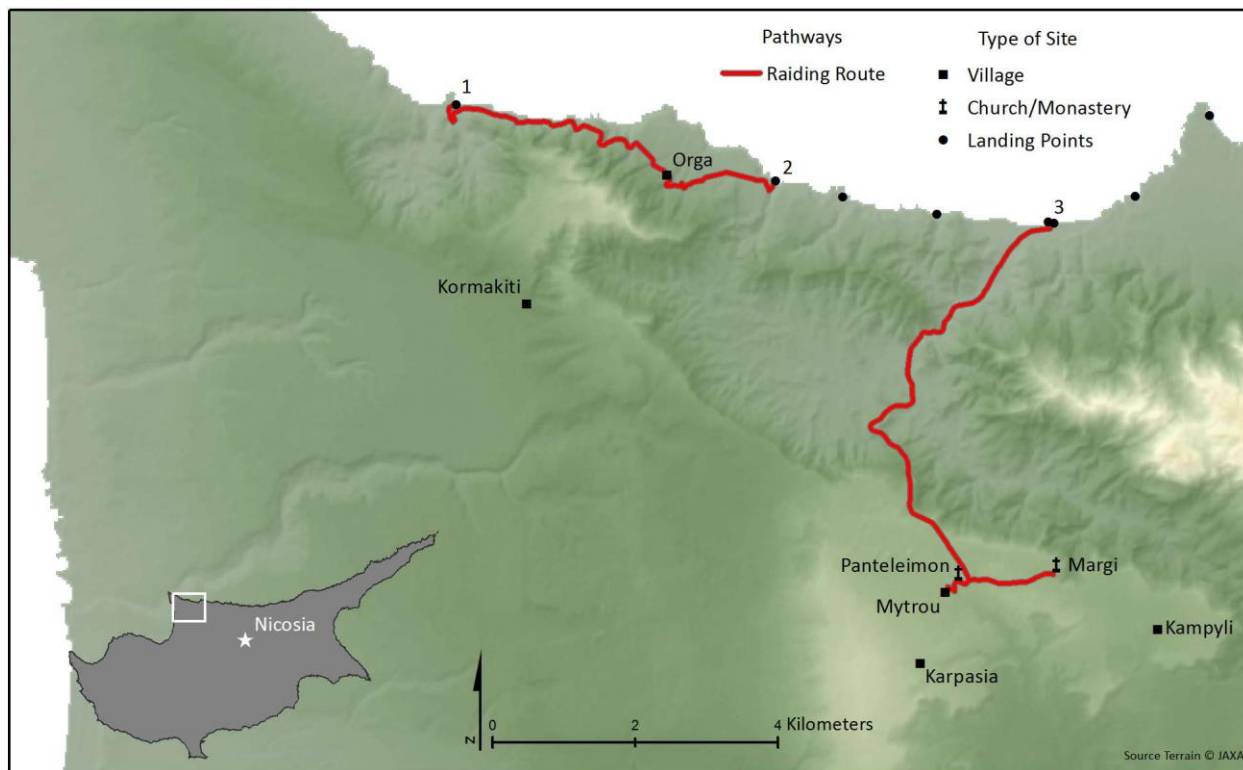


FIGURE 6.2 Cape Kormakiti Raider Pathways

Table 6.1 Cape Kormakiti Raid Routes

Raid Route	Total distance (km)	Elevation Gain (m)	Elevation Loss (m)	Time to Site (min)	Raiding Time (min)	Return Time (min)	Total Time (min)
LP1 to Orga	4.22	261	166	72	60	84	216
LP2 to Orga	2.03	131	32	42	60	48	150
LP3 to Panteleimon	7.39	311	43	120	60	126	306
LP3 to Myrtou	7.77	311	44	126	60	132	318
LP3 to Margi	8.82	324	59	138	60	156	354

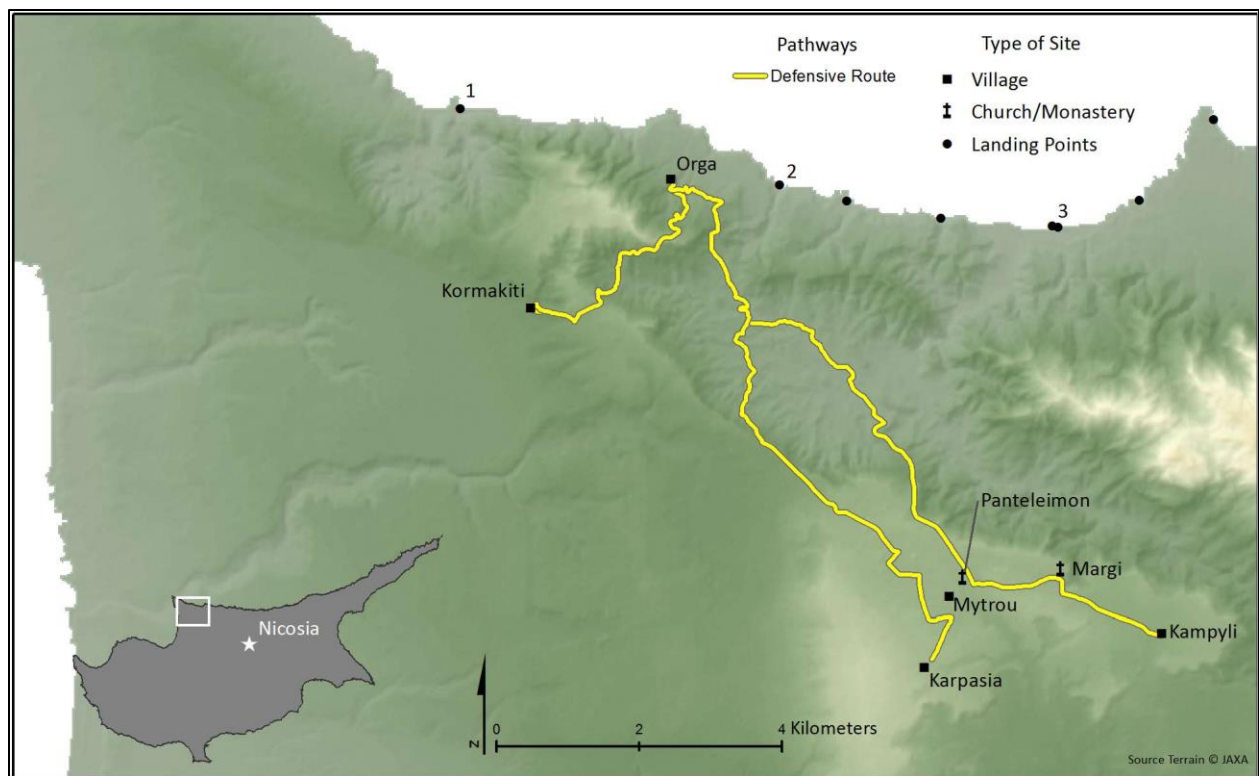


FIGURE 6.3 Cape Kormakiti Defensive Pathways

Table 6.2 Cape Kormakiti Defensive Routes

Defensive Route	Total distance to site (km)	Elevation gain (m)	Elevation Loss (m)	Total time to site (m)
Kormakiti to Orga	4.34	210	292	60
Karpasia to Orga	10.28	150	336	120
Kampyli to Orga	11.91	211	359	150
Karpasia to Myrtou	1.20	3	21	18
Kampyli to Margi	2.00	34	20	30
Kampyli to Panteleimon	3.28	46	30	48

Orga

Orga is the only site in the Cape Kormakiti section that falls into the raiding zone. Two landing points (1 and 2) were chosen for the starting point or raiders to attack the village. These points were chosen because they are the closest landing points to the targets in this area. From landing point 1 it would take raiders 72 minutes to reach the site and 42 minutes from landing point 2. The return trip to the ships would take 84 from landing point 1 and 48 from landing point 2. Combined with the time raiding the village the total time would be 216 from landing point one and 150 minutes from landing point 2.

The closest defensive village, Kormakiti, could send forces to the village to defend it in 60 minutes. Karpasia and Kamplyi are much farther away and would take 120 minutes and 150 respectively to reach Orga. The defenders from Kormakiti would reach the village before raiders from landing point 1 could even reach the village, and would arrive just after an assault on a village began from landing point 2.

Based on these results, while Orga does fall within the raiding zone, the positioning of defensive villages, especially Kormakiti, makes the prospects of a successful raid being conducted likely too risky to attempt.

Panteleimon

Panteleimon falls well outside the raiding zone in Figure 1. Landing point 3 was designated as the launching point for raiders to start moving in on the church. Based on the results it would take raiders 120 minutes to reach the church, and 126 minutes on the return trip. Combined with the raiding time the total becomes 306 minutes.

Kampyli's defending forces are only 48 minutes away from the church. This means that the defenders would reach the church 72 minutes before the raiders. Even if the raiders managed

to surprise the church, it would seem that the defenders would be able to get to the church in a reasonable amount of time for a counterattack.

Based on the results Panteleimon neither falls into the raiding zone, nor is capable of being assaulted by raiders, without extreme risk of being killed or captured

Myrtou

Myrtou does not fall within the area under threat by raiders. From landing point 3, it would take raiders 126 minutes to get to the village, and 132 minutes for the return trip. In total, the raid would take 318 minutes.

The defensive village of Karpasia is only .75 miles from Myrtou. The defenders are capable of reaching the village in 18 minutes. This makes the prospect of assaulting the village, even in a surprise attack, a very risky endeavor.

Based on the results Myrtou neither falls into the raiding zone, nor is capable of being attacked by raiding forces.

Margi

The site of Margi falls well outside of the raiding zone in Figure 1. From landing point 3 it would take raiders 138 minutes to reach the site, and 156 for the return trip. In total it would take 354 minutes to conduct the raid.

Kamplyi is only 1.24 miles from Margi. The defenders from the village could reach the church in 30 minutes. Raiding this village would be a very risky endeavor for unorganized raiders looking for an easy target.

Margi neither falls into the raiding zone, nor is capable of being assaulted by a raiding force.

Karpasia

Karpasia falls well outside of the raiding zone. Due to the fact that Karpasia is considered an *akritai* (defensive village), it would not be possible for raiders to attack a military village without risking being overwhelmed by the defenders. This village does, however, have a population that would not be part of the fighting force; therefore it will be added to the final results of sites that can or cannot be attacked by raiders at the end of this section.

Kormakiti

Due to the treatment of this site as an *akritai* village, raiding the village would be a risky endeavor for attackers. Like Karpasia, this village does have a population that would not be part of the fighting force. Therefore it will be added to the final results of sites that can or cannot be attacked by raiders at the end of this section.

Results

Based on the results of this study, only one out of the six sites in the Cape Kormakiti region falls within the feasible raiding area. Out of those six sites, the pathways test shows that none of the six sites are capable of being raided without defending forces being able to reach the attackers before they can escape to their ships. This does not mean that raids did not happen in the area, but the defending villages certainly acted as a strong deterrent for raiders.

Test Area 2: Myrtou to Kyrenia

Myrtou to Kyrenia represents an area that is defended by both fortifications and military villages (Figure 6.4). Asomatos and Kampyli represent the military villages in this area. St. Hilarion Castle, Kyrenia Castle, and the unknown fortification or watchtower make up the military strongholds in the area. Figure 4 demonstrated the extent of the raiding zone for this

area. Landing points 4-12 are used in this sector as the starting points for raiders. Figure 5 shows the likely routes that raiders took to conduct raids on the sites in this area. Figure 6 shows the routes defenders of these sites took to defend the area. Tables 4 and 5 show the times it would take to reach each site, and they will be compared to see if raiders could conduct a successful raid without risking being caught by the defenders.

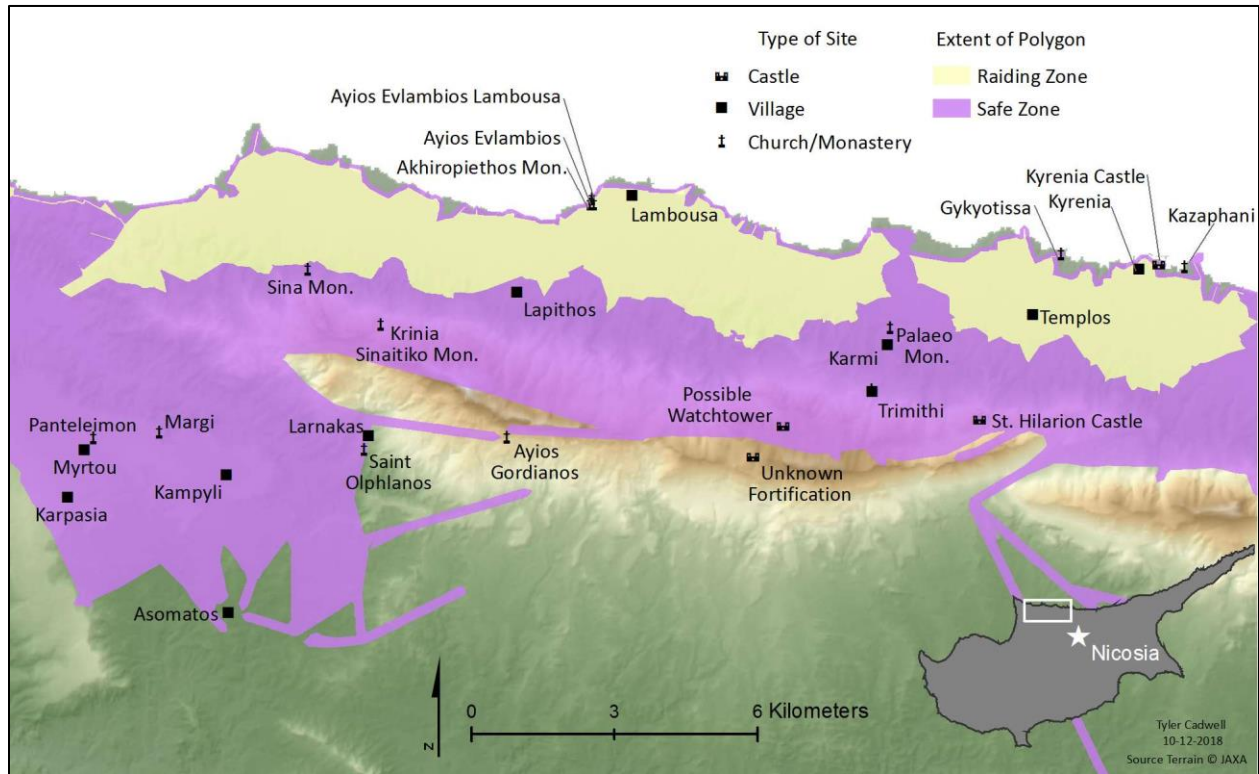


FIGURE 6.4 Raiding Zone of Myrtou to Kyrenia

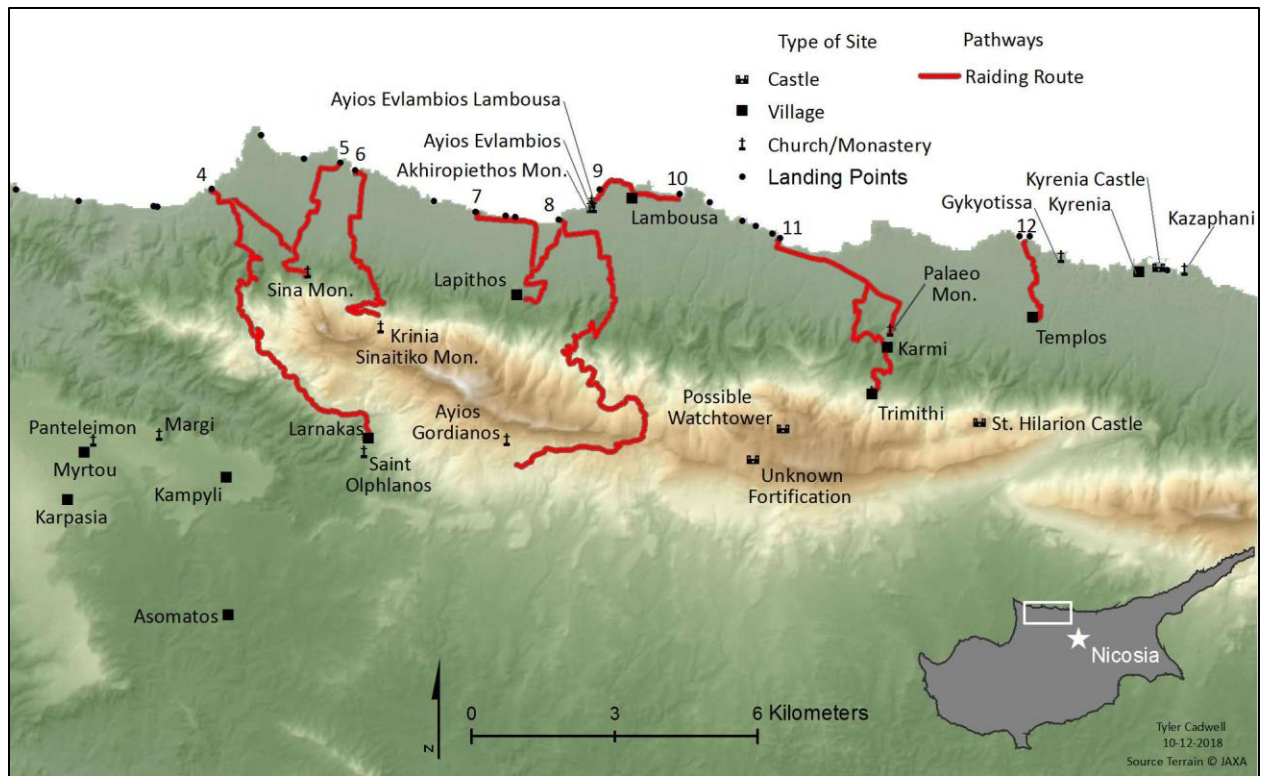


FIGURE 6.5 Myrtou to Kyrenia Raiding Paths

Table 6.3 Myrtou to Kyrenia Raiding Routes

Raid Route	Total distance to site (km)	Elevation Gain (m)	Elevation Loss (m)	Time to Site (min)	Raiding Time (min)	Return Time (min)	Total Time (min)
LP4 to Larnakas	9.24	539	256	156	60	174	390
LP4 to St. Olphanos	9.75	526	297	162	60	192	414
LP4 to Sina Mon.	3.41	219	12	66	60	54	180
LP5 to Sina Mon.	3.59	226	16	66	60	54	180
LP6 to Krinia Sinaitiko Mon.	5.91	666	104	126	60	114	300
LP7 to Lapithos	3.07	148	16	48	60	54	162
LP8 to Lapithos	3.12	151	16	48	60	54	162
LP8 to Ayios Gordianos	12.50	841	276	228	60	222	510

LP9 to Ayios Evlambios	0.48	16	8	6 min	60 min	6 min	72 min
LP9 to Akhiropiethis Mon.	0.48	16	8	6	60	6	72
LP9 to Ayios Evlambios Lambousa	0.48	16	8 m	6	60	6	72
LP9 to Lambousa	0.40	11	0.6	6	60	6	72
LP10 to Lambousa	1.34	15	12	18	60	18	96
LP11 to Palaeo Mon.	3.81	135	24	60	60	66	186
LP11 to Karmi	4.54	208	63	66	60	78	204
LP11 to Trimithi	6.07	382	73	108	60	102	270
LP12 to Templos	2.12	61	5	30	60	36	126
Gykyotissa	0	0	0	0	60	0	60
Kyrenia	0	0	0	0	60	0	60

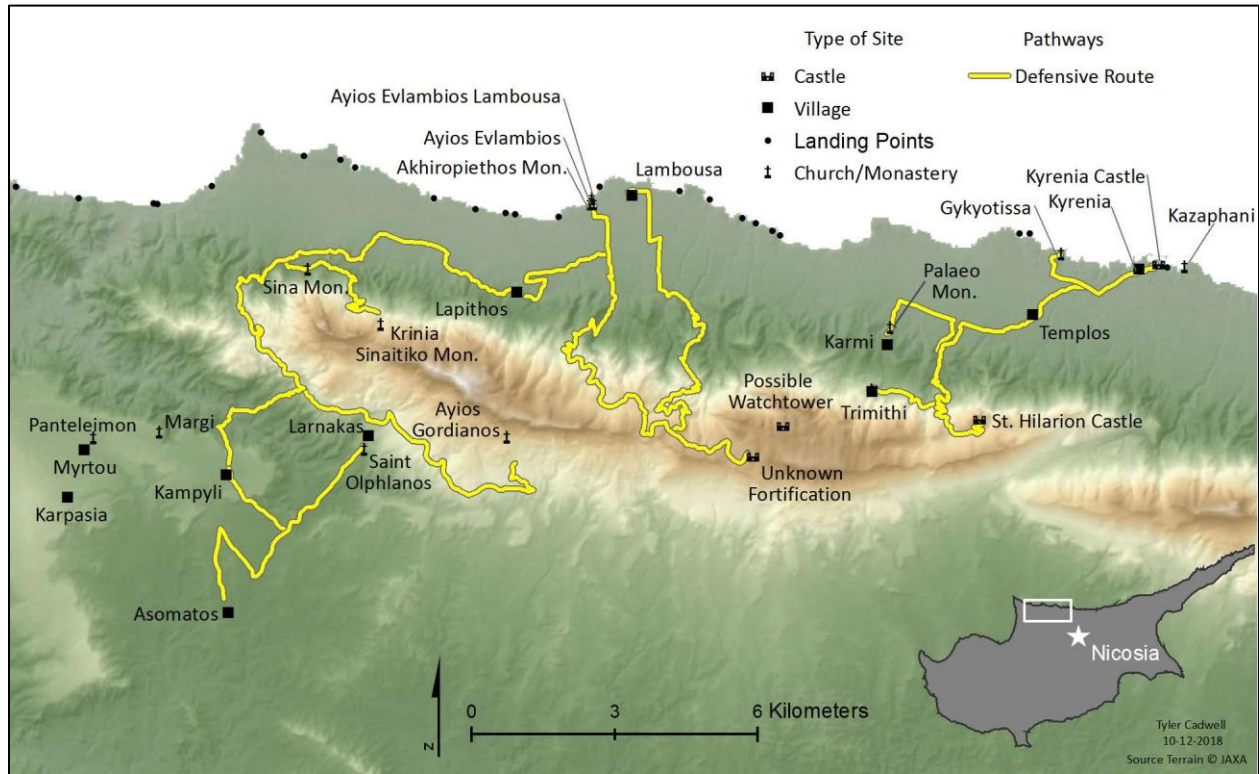


FIGURE 6.6 Myrtou to Kyrenia Defensive Paths

Table 6.4 Myrtou to Kyrenia Defensive Routes

Defensive Routes	Total distance to site (km)	Elevation gain (m)	Elevation Loss (m)	Total time to site (min)
Kamyli to Sina Mon.	9.06	444	482	132
Kamyli to Krinia Sinitiko Mon.	12.62	860	549	210
Kamyli to Larnakas	5.55	250	212	84
Kamyli to St. Olphlanos	6.12	247	261	90
Kamyli to Ayios Gordianos	12.59 k	634	321	198
Kamyli to Lapithos	14.48	542	657	204
Asomatos to Larkanas	7.16	143	68	96
Asomatos to St. Olphlanos	6.53	103	68	90

Unknown Fortification to Krinia Sinaitiko Mon	10.86	500	664	156
Unknown Fortification to Lapithos	13.29	261	862	150
Unknown Fortification to Ayios Evlambios Lambousa	11.94	147	880	120
Unknown Fortification to Ayios Evlambios	11.94	147	880	120
Unknown Fortification to Akhiropiethos Mon.	11.94	147	880	120
Unknown Fortification to Lambousa	11.96	217	947	126
St. Hilarion Castle to Trimithi	4.02	136	422	42
St. Hilarion Castle to Karmi	7.29	157	611	78
St. Hilarion Castle to Palaeo Mon.	7.29	157	611	78
St. Hilarion Castle to Templos	6.63	52	600	60
Kyrenia Castle to Templos	3.22	65	16	48
Kyrenia Castle to Palaeo Mon.	6.98	168	62	96
Kyrenia Castle to Karmi	7.11	193	62	102
Kyrenia Castle to Gykyotissa	3.14	33	35	48
Kyrenia Castle to Kyrenia	0	0	0	0

Kamplyi

Kamplyi falls well outside of the raiding zone. Due to the fact that Kamplyi is considered an *akritai*, it would not be likely for raiders to attack a military village without risking being overwhelmed by the defenders. This village does, however, have a population that would not be part of the fighting force, and so will be added to the final results of sites that can or cannot be attacked by raiders at the end of this section.

Asomatos

Asomatos falls well outside of the raiding zone. Asomatos is suspected of being an *akritai*. Therefore it would not be possible for raiders to attack a military village without risking being overwhelmed by the defenders. Defenders of the village would have families living there that were not part of the fighting force. Therefore it will be added to the final results of sites that can or cannot be attacked by raiders at the end of this section. Asomatos does appear, based on the result, to be too far away from the coast to effectively counter assaults made by raiders on the northern coast. The function of this village will be discussed in the conclusion in the next chapter.

Sina Monastery

Sina Monastery lies just outside of the raiding zone. Landing points 4 and 5 represent where raiders begin to move towards the monastery. From landing zone 4 it would take raiders 66 minutes to reach the site and 54 minutes to return. Combined with the raiding time it would take 180 minutes for the total raid. Based on the hiking time results from landing point 5, it would take the same amount of time as landing point 4 to reach, assault, and return from the site.

Defensive forces from Kamplyi would move to counter a raid on Sina Monastery. Based on the walking speed it would take the defenders 132 minutes to reach the monastery. This

means that raiders have enough time to reach the site and begin an assault. However, it appears that the defenders would arrive within minutes of the raiders beginning their return trip. The fact that the raiders begin to move down the same road that the defenders are moving up to the site means that they would likely be intercepted just outside of the monastery.

Sina Monastery does not fall inside of the raiding zone. Based on the marching speed analysis, while the raiders would be able to reach and assault the monastery, it appears that the defenders would intercept them just as they are leaving the site. Therefore, it can be argued that this site would not be an ideal target to raid.

Larnakas

Larnakas is situated on the southern side of Kyrenia Mountain Range and thus falls well outside of the raiding zone. Landing point 4 is the closest area from which raiders could move towards the site. From this point, it would take raiders 156 minutes to reach Larnakas, and 174 minutes for the return time. In total the entire raid would take 390 minutes.

Defenders from Kamplyi and Asomatos are the closest forces to intercept the raiders. From Kamplyi it would take defenders 84 minutes, and from Asomatos 96 minutes, to reach the site. This is more than enough time to reach the village before the raiders even arrive to conduct the attack.

Larnakas neither falls inside the raiding zone, nor is capable of being attacked without the risk of being intercepted by defending forces.

Saint Olphlanos

Saint Olphlanos is situated just south of Larnakas and therefore is outside of the raiding zone of the northern coast. Raiders from landing point 4 would take 162 minutes to reach the

church, and 192 minutes for the return trip. In total it would take 414 minutes for the entirety of the raid.

Defenders from Kamplyi and Asomatos would move to defend the church. The Kamplyi route moves north and then swings south on the only northern mountain route that leads to the church, taking 90 minutes. Asomatos defenders move down a southern route to the church, taking 90 minutes to reach the site. These routes show that the defenders would be at the site well before the raiders could reach it. Even if the raiders managed a surprise attack on the site, it seems that the defenders from Kamplyi would be easily able to cut off their escape route.

Saint Olphlanos neither falls into the raiding zone, nor is a viable target for raiders to attack.

Krinia Sinaïtiko Monastery

Krinia Sinaïtiko Monastery is located in the safe zone of the raiding map. Landing point 6 is the closest starting point from which raiders could conduct an attack. Based on the hiking calculator it would take raiders 126 minutes to reach the monastery, and 114 minutes to return to their ships. The total time for the attack would be 300 minutes.

Defenders from the unknown fortification and Kamplyi are the closest defending forces. Defenders from the unknown fortification, assuming that this site is medieval, would arrive at the monastery in 156 minutes, and from Kamplyi it would take 210 minutes. While the defenders from Kamplyi would not arrive in time to defend the monastery, the unknown fortification forces would arrive as the assault was underway. Defenders from the unknown fortification would be able to intercept the raiders before they could escape.

Krinia Sinaïtiko Monastery neither falls within the raiding zone, nor is capable of being raided without risking being intercepted by defending forces.

Ayios Gordianis

Ayios Gordianis lies on the southern slope of the Kyrenia Mountain Range, well outside of the raiding zone. Raiders start moving towards this church from landing point 8. The marching speed interpretation shows that raiders would take 228 minutes to reach the church, and 222 minutes for the return trip. The total raid time would be 510 minutes.

The unknown fortification in the mountain range, assuming it is a medieval structure, and the village of Kamplyi are the closest defensive structure to the church under threat. From the fortification, it would take defenders 84 minutes to reach the church. The defenders from Kamplyi would march for 198 minutes to reach the church. Defenders from the unknown fortification would reach the site 144 minutes before the attackers could reach the site, and from Kamplyi 30 minutes. This makes the prospects of successfully raiding this site slim for raiders.

Ayios Gordianis neither falls inside the raiding zone, nor is it a viable option to raid to assault and escape unscathed.

Lapithos

Lapithos is one of the locations from which the survivors from Lambousa moved to after the Arabic raids in the 7th to 10th centuries. Lapithos is located just outside of the raiding zone. Raiders begin their movement toward the site from landing points 7 and 8. From landing points 7 and 8 it would take 48 minutes to reach the site, and 54 minutes for the return trip. In total it would take raiders 162 minutes to conduct the raid.

The closest defensive force would be from the unknown fortification or watchtower. Assuming this is a medieval fortification, it would take the defense 150 minutes to reach the village of Lapithos. Based on this result it seems that the raiders would already be moving back to their ships. If the defenders moved towards the landing zones and then moved inland, they

would be able to cut off their escape. Defenders would reach the crossroad of the escape route of the raiders from landing point 7 and the old Roman road in 126 minutes. Raiders would be 18 minutes into their return trip and would not have enough time to escape before being cut off by the defenders.

Lapithos does not fall within the raiding zone. This settlement could be raided before the defending forces could arrive, but it is likely that attackers would be cut off from their escape route, making Lapithos too risky a target to attack.

Ayios Evlambios Lambousa

This Church lies right on the coast of northern Cyprus. Raiders from landing point 9 would only need 6 minutes to reach the site, and the same amount of time to get back to their ships. The total time would be only 72 minutes for the raid.

Defenders from the unknown watchtower would need 120 minutes to reach the church. Based on the results the raiders would be long gone before any defensive forces could come to their defense. This makes the church an ideal target for raiders.

Ayios Evlambios Lambousa is inside of the raiding zone and was capable of being raided with a low risk of being caught by defenders.

Ayios Evlambios

Ayios Evlambios is situated inside the raiding zone due to its proximity to the coast. Raiders from landing point which one would only need 72 minutes to conduct the raid.

Defenders from the unknown watchtower would need 120 minutes to reach the church in time to defend it. The amount of time to reach the church is too great for the defenders to be able to successfully intercept the raiders.

Ayios Evlambios falls inside of the raiding zone and is a site in which raiders would be capable of raiding and escaping from any potential defenders.

Akhiropiethos Monastery

Akhiropiethos Monastery is well inside the raiding zone due to the site being situated on the coast. Raiders from landing point 9 would only need 72 minutes to conduct a full raid on the monastery.

Defenders from the unknown fortification would need 120 minutes to reach the monastery. This is not enough time to defend the monastery from raiders. This makes the monastery an ideal target for raiders.

Akhiropiethos Monastery falls within the raiding zone and is capable of being raided without great risk to the attackers.

Lambousa

Lambousa, being a coastal settlement, falls inside the raiding zone. Raiders from landing point 9 would need only 6 minutes to reach the site, and six minutes for the return trip. In total 72 minutes would complete the raid from landing point 9. From landing point 10 it only takes 18 minutes to get there and 18 for the return trip, for a total of 96 minutes for the raid.

The defenders from the unknown fortification would need 126 minutes to reach the site. Based on the results, the defenders would arrive 30-54 minutes after the raiders returned to their ships. This provides a basis to the reasoning behind this settlement being moved further inland after its destruction in the raids of the 7th to 9th centuries.

Lambousa falls within the raiding zone and is a viable target for raiders to attack and escape before a relief force could intercept them.

Unknown Fortification or Watchtower

This site is a fortification and therefore would not be a target raiders would want to attack. This site will be discussed further in the conclusion chapter.

Trimithi

Trimithi is situated outside of the raiding zone. Raiders from landing point 11 would need 108 minutes to reach the village, and 102 minutes for the return trip. In total, the raid would take 270 minutes to conduct.

Defenders from the mountain fortification of St. Hilarion would need 42 minutes to descend from the mountains to reach Trimithi. Based on the results, the defenders would be at the village well before raiders could reach it. Additionally based on their positioning, defenders from St. Hilarion has a commanding view of the area, but this will be discussed in the conclusion chapter.

Trimithi neither falls within the raiding zone, nor is it a viable target for raiders to attack and successfully escape without being intercepted.

Karmi

Karmi is located outside of the raiding zone. Raiders from landing point 11 would take 66 minutes to reach the village and 78 minutes for the return trip. In total 204 minutes is needed to conduct the full raid.

Kyrenia Castle and St. Hilarion are the closest fortifications to Karmi. From Kyrenia castle, it would take defenders 102 minutes to reach the village. St. Hilarion defenders would need 78 minutes to reach Karmi. Based on these results, defenders would arrive at the site 12 minutes after the raiders reached the village, which is not enough time to attack the site and escape. The defenders from Kyrenia would arrive 36 minutes after the raiders attacked the site,

but again this is not enough time for attackers to successfully attack, loot, and escape from Karmi.

Karmi neither falls inside the raiding zone, nor is an ideal target for raiders to attack.

Palaeo Monastery

Palaeo lies just to the north of Karmi and is outside of the raiding zone. Raiders from landing point 11 would take 60 minutes to reach for an attack, and 66 minutes for the return trip. In total it would take raiders 186 minutes to conduct a raid.

The defenders from Kyrenia Castle and St. Hilarion are the closest defensive forces. Defenders from St. Hilarion would need 78 minutes to reach the monastery. Defenders from Kyrenia Castle would take 96 minutes to reach Palaeo. Based on the results, raiders would be able to reach the village, but would be intercepted by defenders from St. Hilarion 18 minutes into the attack. This is not enough time to successfully attack the monastery and retreat to the ship.

Palaeo monastery is neither in the raiding zone, nor is it a viable option to attack.

Templos

Templos does fall within the raiding zone. Raiders from landing point 12 would need 30 minutes to reach the site, and 36 minutes to return to their ships. In total 126 is needed to complete the raid.

Defenders from Kyrenia would need 48 minutes to reach the village and defend it. From St. Hilarion it would take defenders 60 minutes to reach the site. The defenders would arrive at the site 18-30 minutes after the raiders began their attack on the village. 18 minutes is not enough time to assault, loot, and escape back to their ships.

Templos does fall within the raiding zone, but its proximity to defensive fortifications makes assaulting the town risky for raiders.

St. Hilarion Castle

St. Hilarion Castle is the first major fortification structure in this study. It is important to note that people living in vulnerable villages and churches are not passive actors. If the area was under assault, it is likely that the population would retreat to the safety of this castle. Raiders, unorganized or organized, would be hard-pressed to besiege this castle.

Gykyotissa

Gykyotissa is situated right on the coast and is therefore inside the raiding zone. Although a galley could probably not fit into the small landing area next to Gykyotissa, they could send small boats full of attackers to land right on the site. Once on shore, the raiders would be instantly able to attack the site. Therefore, a total of 60 minutes would be needed to attack the church.

Defenders from Kyrenia Castle would need 48 minutes to reach the church. Based in the time of the raid it seems that raiders would get caught towards the end of the raid, but due to the fact that their boats are right next to the site, they could likely escape.

Based on the results Gykyotissa falls within the raiding zone. The defenders could intercept the raiders in time, but the fact that the attackers could likely escape quickly to their boats means that this site could potentially be raided.

Kyrenia

Kyrenia is the main town north of the Kyrenia Mountain Range. This town has the largest port on the northern coast of Cyprus. Therefore it falls into the raiding zone. However, Kyrenia castle was constructed to defend the port from attack. An organized fleet would be capable of blockading the port and even potentially making a forced landing on the town, but raiders would probably not be interested in assaulting such a well-defended target.

Results

Based on the raiding zone map, seven out of the nineteen sites fall within the area in which raiders could attack and escape. Kyrenia Castle and Kyrenia are treated as the same site, and the unknown watchtower/fortification are left out of the total sites that are under threat.

Out of those seven sites that fall under threat, five sites can be successfully raided before defenders would be able to intercept them, or cut them off from their escape. Lambousa, which was destroyed in the 7th century from Arabic raiders, is among the sites that are still under threat. Many of the survivors, noted in the site selection chapter, moved inland to safer settlements. Some sites, such as Lapithos, are safe because of the unknown fortification/ watchtower. While there is no definitive proof that this is a medieval structure, it was included in this study based on the available evidence.

Test Area 3 Kyrenia to Melandryna Monastery

Test area three consists of the sites between Kyrenia and Melandryna (Figure 6.7). The castles of Kyrenia and Buffavento are part of the defensive structures defending this area. The villages of Kornokipos and Ayios Khariton represent the military villages defending this area. Landing points 13-17 are the areas in which raiders in this study begin their marches inland to raid. Tables 5 represents the distances, elevation, and time needed for raiders to complete an attack on the sites in this area. Table 6 shows the distances, elevation, change, and time needed for the defense to reach each site to defend it.

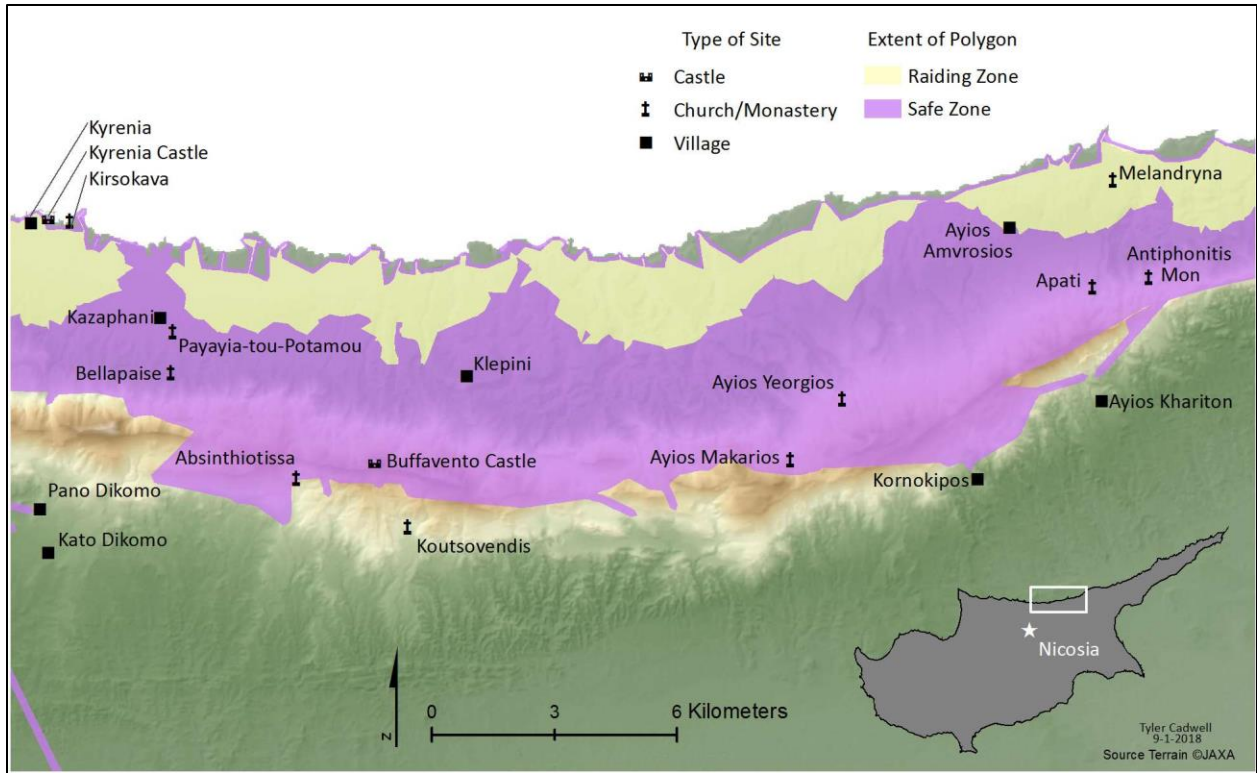


FIGURE 6.7 Kyrenia to Melandryna Monastery Raiding Zone

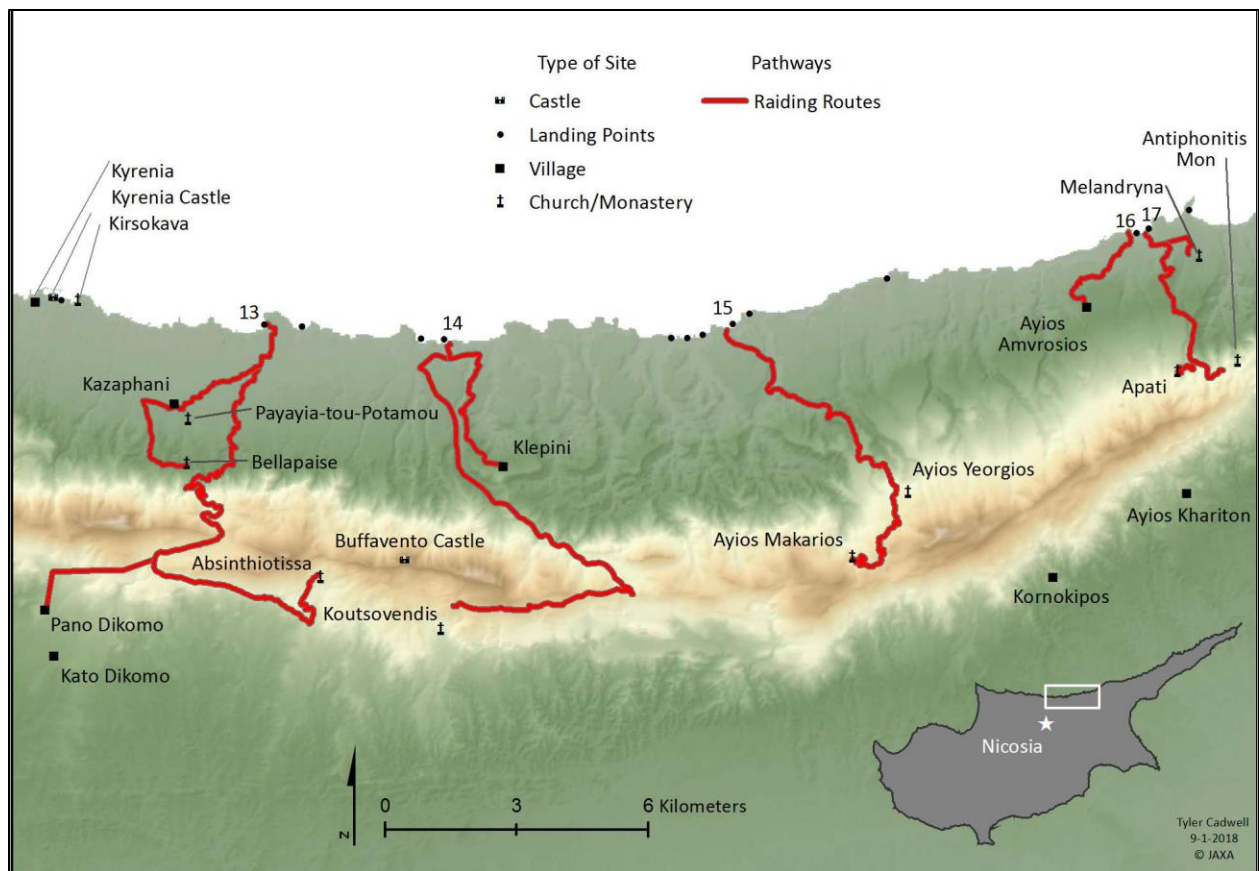


FIGURE 6.8 Kyrenia to Melandryna Monastery Raiding Pathways

Table 6.5 Kyrenia to Melandryna Monastery Raiding Pathways

Raid Route	Total distance to site (km)	Elevation Gain (m)	Elevation Loss (m)	Time to Site (min)	Raiding Time (min)	Return Time (min)	Total Time (min)
Kirsokava	0	0	0	0	60	0	60
LP13 to Kazaphani	3.54	73	6	48	60	60	168
LP13 to Payayia-tou-Potamou	3.54	73	6	48	60	60	168
LP13 to Bellapaise	6.74	237	33	108	60	120	288
LP13 to Absinthiotissa	15.34	875	386	258	60	282	600
LP13 to Pano/Kato Dikomo	13.68	725	438	216	60	264	540

LP14 to Klepini	4.47	243	28	78	60	72	210
LP14 to Koutsovendis	17.38	803	382	276	60	318	654
LP15 to Ayios Yeorgios	7.23	514	73	132	60	120	312
LP15 to Ayios Makarios	10.94	775	252	204	60	192	456
LP16 to Ayios Amvrosios	2.12	155	6	42	60	36	138
LP17 to Melandryna	1.82	91	4	30	60	30	120
LP17 to Apati	5.12	426	66	102	60	84	246
LP17 to Antiphonitis	6.32	492	138	120	60	108	288

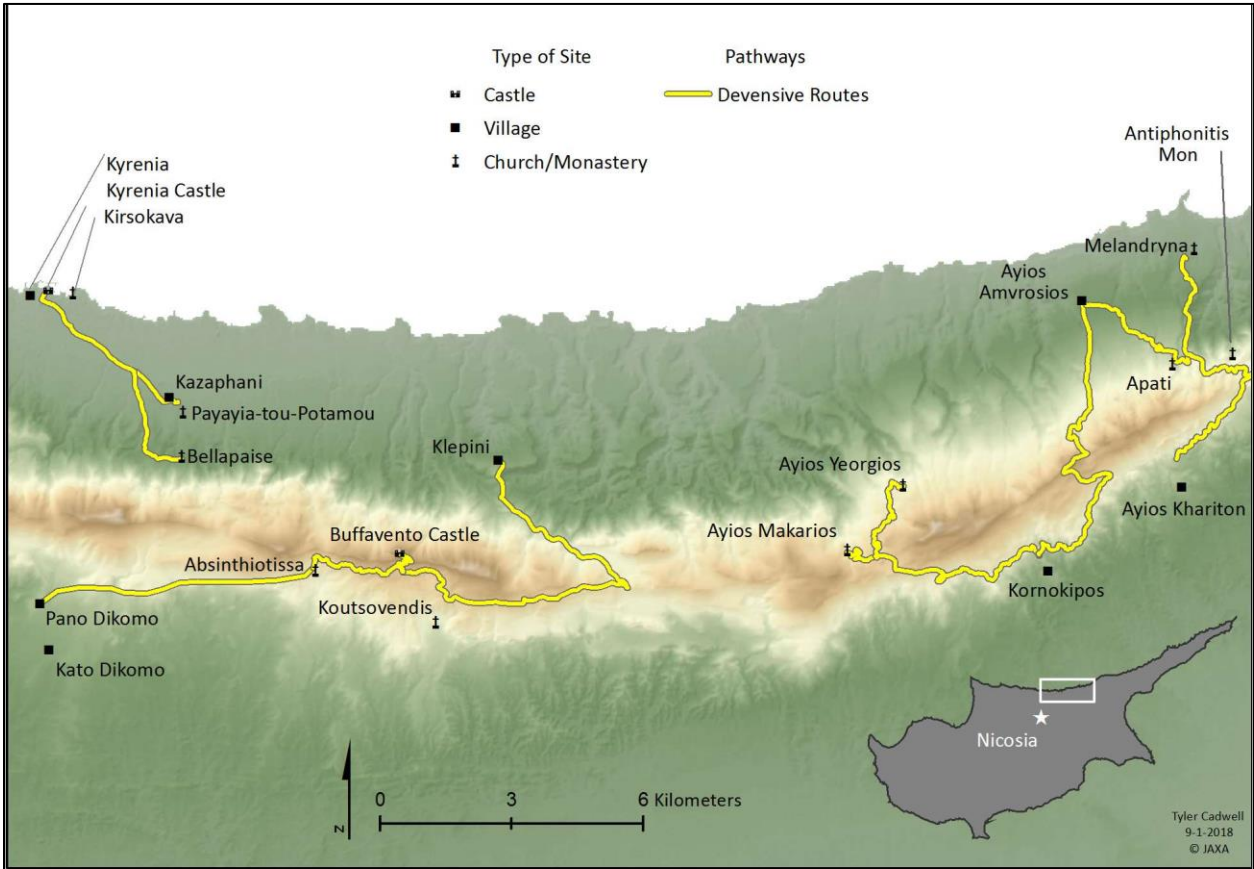


FIGURE 6.9 Kyrenia to Melandryna Defensive Paths

Table 6.6 Kyrenia to Melandryna Monastery Defensive Pathways

Defensive Routes	Total distance to site (km)	Elevation gain (m)	Elevation Loss (m)	Total time to site (min)
Kyrenia to Kirsokava	.72	13	22	18
Kyrenia to Kazaphani	4.23	74	16	60
Kyrenia to Payayia-tou-Potamou	4.44	81	15	60
Kyrenia to Bellapaise	5.81	224	32	96
Buffavento Castle to Pano/Kato Dikomo	10.67	208	801	108
Buffavento Castle to Absinthiotissa	3.89	84	467	30
Buffavento Castle to Koutsovendis	3.91	38	493	30
Buffavento Castle to Klepini	12.21	183	842	126
Kornokipos to Ayios Yeorgios	7.45	473	351	120
Kornokipos to Ayios Makarios	6.05	453	251	108
Kornokipos to Ayios Amvrosios	10.77	676	836	156
Ayios Khariton to Ayios Amvrosios	9.22	326	495	120
Ayios Khariton to Apati	5.91	322	288	90
Ayios Khariton to Antiphonitis Mon.	4.88	264	237	72
Ayios Khariton to Melandryna	7.84	272	508	96

Pano/Kato Dikomo

Pano/Kato Dikomo is well outside of the raiding zone. Raiders would need to traverse a narrow pass in the mountain range to reach this site. From landing point 13 it would take attackers 216 minutes to even reach the site, and 264 minutes to return to the landing points. Combined with the time needed for the raid itself a total of 540 minutes is needed for the full attack.

Defenders from Buffavento Castle would need 108 minutes to reach the village to defend it. This is so far in advance of the attackers reaching the site that the defenders would only need to reach the pass to deny the raiders a chance to reach the village, which is on the way to the site for the defenders. There is no logical way raiders attacking from the northern coast would take the risk of marching a little over 3.5 hours to reach Kato/Pano Dikomo to attack.

Pano/Kato Dikomo neither falls inside the raiding zone, nor is capable of being assaulted by raiders without extreme risk of being captured or killed.

Kirsokava

Kirsokava, situated on the coast, is well inside of the raiding zone. Raiders could in theory land close enough to the site that they could immediately assault the site upon landing. Therefore raiders would need 60 minutes to attack, loot, and escape from the site.

The problem with attacking this site is that it lies in the shadow of Kyrenia Castle. The defenders would probably be well aware of the attacking party before they even landed. Even if raiders managed a surprise attack on Kirsokava, the defenders could be there in 18 minutes. This is not enough time for the raiders to conduct an attack on this site.

Kirsokava does fall within the raiding zone, but its proximity to Kyrenia Castle likely makes the risk involved in attacking it too great for raiders.

Kazaphani

Kazaphani is situated outside of the raiding zone. Raiders from landing point 13 would need 48 minutes to reach the village, and 60 minutes to return to their ships. In total it would take raiders 168 minutes to conduct a raid on Kazaphani.

Defenders from Kyrenia Castle would need 60 minutes to reach Kazaphani. Based on the marching speed analysis/interpretation result the defenders would arrive 12 minutes into the attack into Kazaphani. Although raiders could reach this site before the defenders, they would be intercepted shortly after the attack on Kazaphani began. It is unlikely that raiders would not be able to attack and escape before defenders could intercept them.

Kazaphani neither falls within the raiding zone, nor is it a viable target for raiders to attack without risking being captured by defenders.

Payayia-tou-Potamou

Payayia-tou-Potamou is located outside of the raiding zone. Raiders from landing point 13 would need 48 minutes to reach the site, and 60 minutes to return to their ships. In total 168 minutes are required to conduct an attack on this church.

Marching from Kyrenia Castle, it would take defenders 60 minutes to reach Payayia-tou-Potamou. While raiders would be able to get to the church before defenders, they would be intercepted shortly into the attacking phase of the raid. Based on the marching speed analysis, the raiders would not have enough time to conduct an attack on this church before being intercepted by the defenders.

Payayia-tou-Potamou neither falls within the raiding zone, nor is capable of being raided without the risk of being intercepted by defenders from Kyrenia.

Bellapaise

Bellapaise is located on the northern edge of the mountain range, outside of the raiding zone. Raiders from landing point 13 would need 108 minutes to reach the site, and 120 minutes to return to their ships. In total, a raid on Bellapaise would take 288 minutes.

It would take 96 minutes for the defenders from Kyrenia Castle to reach Bellapaise to defend it. The defenders would arrive at the site 12 minutes before the raiders. The raiders and defenders both move along the same pathway towards Bellapaise, and thus the defenders could simply cut the raiders off before they even make it to the site.

Bellapaise neither falls into the raiding zone, nor is capable of being attacked by raiders before defenders could arrive.

Absinthiotissa

Absinthiotissa lies on the southern slope of the mountain, and therefore is well outside of the raiding zone. It would take raiders from landing point 13 a total of 258 minutes to reach this church, and 282 minutes to return to their ships. Combined with the raiding time it would take raiders 600 minutes to conduct the full attack.

Absinthiotissa is situated within the shadow of Buffavento Castle. It would take defenders from this castle 30 minutes to reach this site. Even if raiders were able to sneak up and assault Absinthiotissa, they could be quickly overwhelmed by defensive forces.

Absinthiotissa is neither in the raiding zone, nor is capable of being raided without a massive risk of being overwhelmed by defenders from Buffavento.

Buffavento Castle

Buffavento Castle has a commanding view of the area between Kyrenia and Melandryna Monastery. The population in this area would likely retreat to this fortification if the area was

under threat. Raiders, even a large group organized by a nation, would be hard pressed to be able to assault this castle. This castle will be discussed further in the conclusion section.

Koutsovendis

Koutsovendis lies on the southern side of the mountain range, well outside of the raiding zone. Raiders from landing point 14 would take 276 minutes to reach the church, and 318 minutes to return to their ships. Combined with the time needed to raid the church, it would take 654 minutes to conduct the entire raid. Raiders would need to traverse a pass through the mountain range to reach this church.

Defenders from Buffavento would only need 30 minutes to reach the site to defend it. Koutsovendis lies in the shadow of Buffavento, and even if the raiders were able to surprise attack the church, defenders would easily be able to intercept them before they could escape.

Koutsovendis neither falls within the raiding zone, nor is capable of being raided without risking being caught or killed by defenders from Buffavento.

Klepini

The village of Klepini is situated outside of the raiding zone. Raiders from landing point 14 would take 78 minutes to reach the village, and 72 minutes to return to their ships. Combined with the time needed to attack the village it would take raiders 210 for the entire raid.

Defenders from Buffavento Castle would take 126 minutes to reach the village of Klepini. The assault on the village would be well underway by the time the defenders arrived. However, the raiders would not have enough time to retreat to their ships with their ill-gotten gains without being intercepted by the defenders.

Based on the result Klepini does not fall into the raiding zone. It is possible that Klepini could be attacked, but based on this model the defenders would be able to intercept them before

they could make it back to their ships. Therefore, the risk involved in attacking this village is likely too great for raiders.

Ayios Makarios

Ayios Makarios is situated high in the mountain range, and well outside of the raiding zone. Raiders from landing point 15 would take 204 minutes just to reach the church, and 192 minutes to return to their ships. A total of 456 minutes is needed to conduct the raid when the assault itself is factored in.

Defenders from the village of Kornokipos would take 108 minutes to reach the church. The defenders would arrive well before the raiders could reach the church. This probably makes the risk of attacking the site too great for raiders.

Ayios Makarios neither falls within the raiding zone, nor is a site that is capable of being raided without considerable risk of the attackers being captured or killed.

Ayios Yeorgios

Ayios Yeorgios is situated in the northern part of the mountain range and falls well outside of the raiding zone. Raiders from landing zone 15 would take 204 minutes to reach the church, and 192 minutes to return to their ships. Combined with the time need to loot the site, a total of 456 minutes are needed for the entire raid.

Defenders from Kornokipos can reach the site in 120 minutes. The defenders would arrive at the church well before the raiders could even reach the site. Ayios Yeorgios is a too high risk a target for raiders to attack without being captured or killed.

Ayios Yeorgios neither falls inside of the raiding zone, nor is a target raiders could attack before defenders could intercept them.

Kornokipos

Due to the treatment of this site as an *akritai* village, raiding the village was not considered feasible. This village does, however, have a population that would not be part of the fighting force and therefore it will be added to the final results of sites that can or cannot be attacked by raiders at the end of this chapter.

Ayios Amvrosios

Ayios Amvrosios falls just inside of the raiding zone. Raiders from landing point 16 would take 42 minutes to reach the village, and 36 minutes to return to their ships. Combined with the assault time, 138 minutes is needed to conduct the raid.

The villages of Kornokipos and Ayios Khariton are the closest defensive forces to Ayios Amvrosios. From Kornokipos it would take defenders 156 minutes to reach the village, and 120 minutes from the village of Ayios Amvrosios. By the time the defenders reached the village the raiders would be well on their way back to their ships. Even if the defenders gave pursuit from the village, the raiders would likely be able to escape.

Ayios Amvrosios does fall within the raiding zone, and is a viable target for raiders to attack.

Apati

Apati is situated at the northern edge of the mountain range, and does not fall into the raiding zone. Raiders from landing point 17 would take 102 minutes to reach the church, and 84 minutes to return to their ships. Including the raid itself, the endeavor would take a total of 246 minutes.

Defenders from Ayios Khariton would be a logical choice to defend this church. It would take the defenders 90 minutes to reach the church. This is just enough time to get to Apati before raiders could reach it. This makes the prospect of raiding this church too risky to attempt by raiders.

Apati neither falls inside the raiding zone, nor is a viable target for raiders to attack without risking being intercepted by defenders.

Ayios Khariton

Due to the treatment of this site as an *akritai* village, raiding the village was not considered for raiding. Like other military villages, Ayios Khariton has a population that would not be part of the fighting force. As with others, it will be added to the final results of sites that can or cannot be attacked by raiders at the end of this section.

Antiphonitis

Antiphonitis Monastery is situated in the mountains and is outside of the raiding zone. Raiders from landing point 17 would take 120 minutes to reach the monastery, and 108 minutes to return to their ships. Combined with the raiding time, a total of 288 minutes would be needed to assault the monastery and escape.

Defenders from Ayios Khariton would take 72 minutes to reach the monastery to defend it. This is more than enough time to defend the site from attack properly. Raiders would be attacked before they even reached the monastery.

Antiphonitis neither falls within the raiding zone, nor is capable of being raided without a high risk of being caught by defending forces.

Melendryna Monastery

Melendryna Monastery is one of the few places in this section that does fall inside of the raiding zone. Raiders from landing point 17 would only need 30 minutes to reach the monastery,

and 30 minutes for the return trip. Combined with the assault itself the full attack would only take 120 minutes total.

Defenders from the village of Ayios Khariton would take 96 minutes to reach the village to defend it. By the time the defenders reached the village, the attackers would already be moving back to their ships. It is possible that the defenders, being less encumbered than the raiders, could catch up to the attackers and capture or destroy them.

Melandryna does fall inside the raiding zone, but the results show that the raiders could potentially be intercepted on their retreat to their ships. This site, therefore, might not be an ideal target to attack due to the risk of being captured by defenders while returning to the landing point.

Results

Based on the raiding zone map, three of the seventeen sites in the Kyrenia to Melandryna study area are in the raider's area of influence. Out of those three sites, only two are capable of being successfully raided before attackers would be intercepted or cut off from escape by defending forces.

Test Area 4: Melandryna Monastery to Karpass Peninsula

Test area 4, Melandryna to the Karpass Peninsula, represents the easternmost area for this study (Figure 6.10). Kantara Castle, the military village of Platani, and the suspected watchtower at Mavrovyzakos represent the defensive structures in this study region. For the purposes of this study, Mavrovyzakos will not have a garrison force responding to raiding events. Landing points 18-24 represent the areas in which raiders could land to assault the sites in this study area. Table 7 shows the distances, elevation change, and times associated with the stages of the raids. Table 8 details the distances, elevation change, and time needed for defenders to respond.

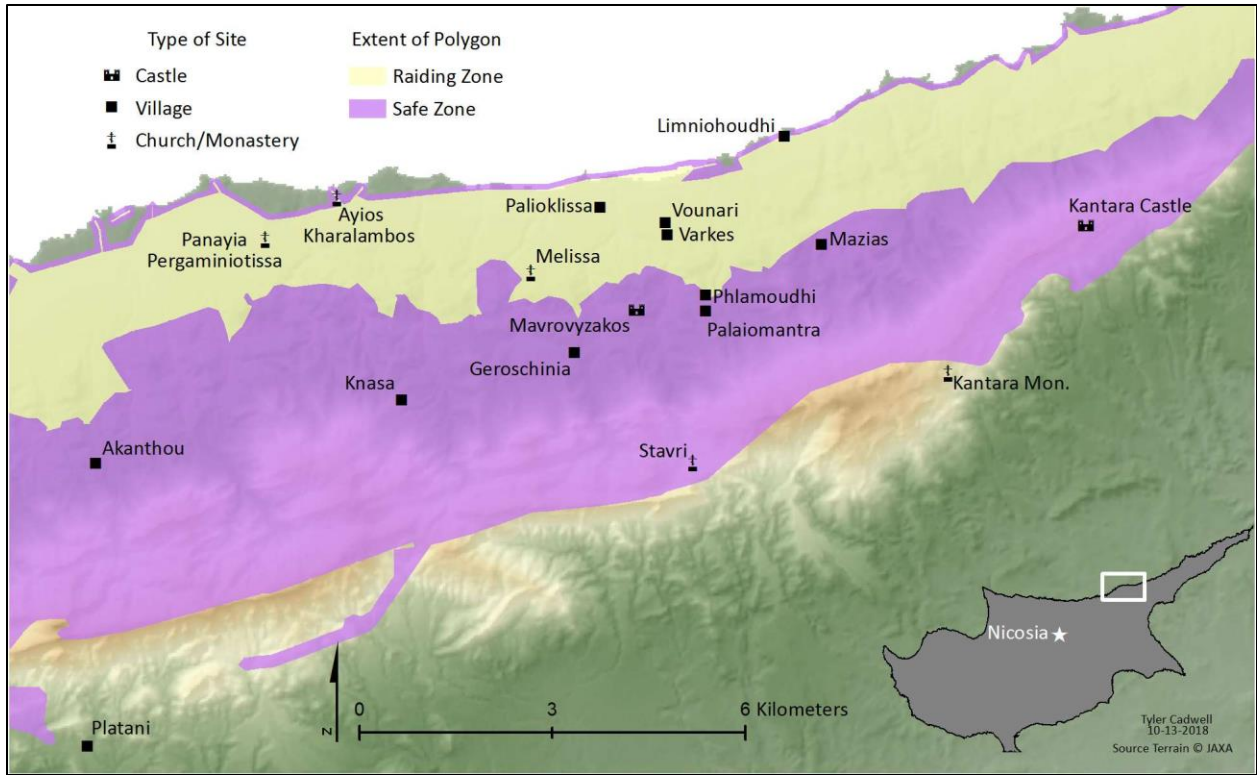


FIGURE 6.10 Melandryna Monastery to Karpass Peninsula Raiding Zone

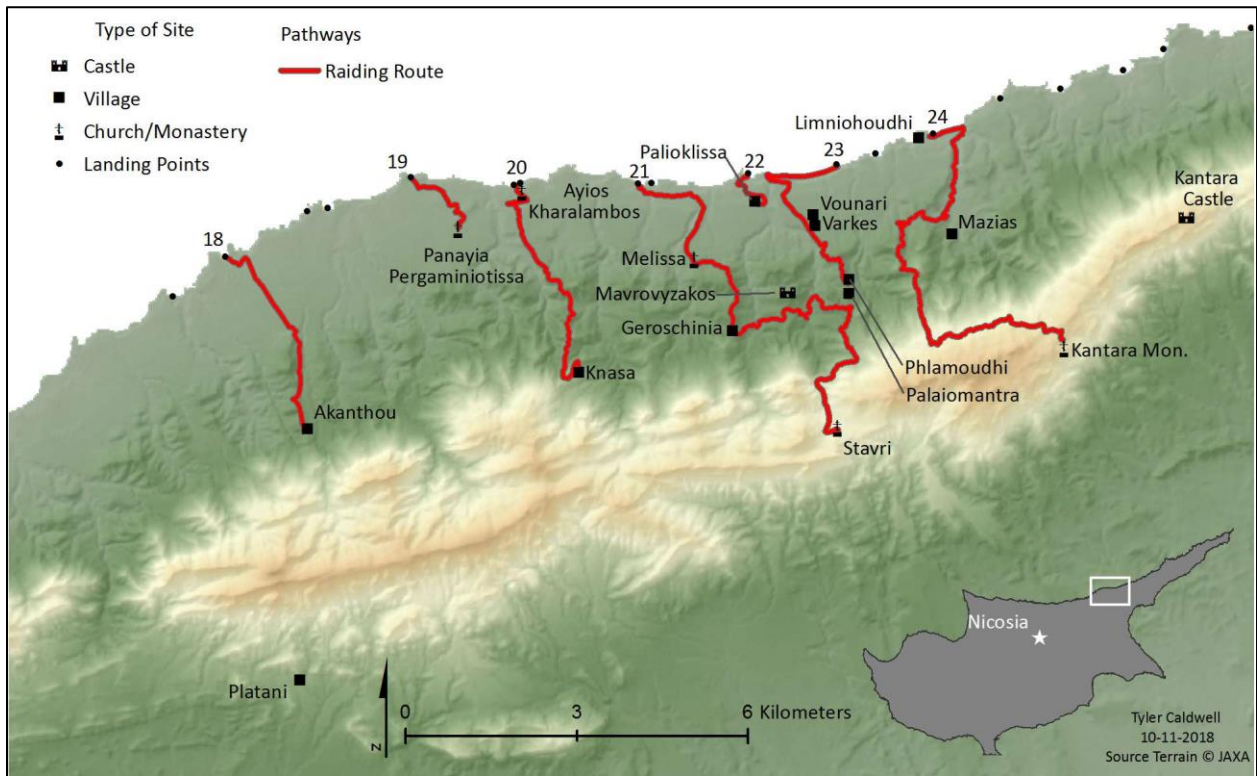


FIGURE 6.11 Melandryna to Karpass Peninsula Raiding Pathways

Table 6.7 Melandryna to Karpass Peninsula Raiding Pathways

Raid Route	Total distance to site (km)	Elevation Gain (m)	Elevation Loss (m)	Time to Site (min)	Raiding Time (min)	Return Time (min)	Total Time (min)
LP18 to Akanthou	3.80	205	7	66	60	60	186
LP19 to Panayia Pergaminiotissa	1.66	45	4	24	60	30	124
LP20 to Ayios Kharalambos	0.24	23	0	6	60	6	72
LP20 to Knasa	4.80	343	83	90	60	78	288
LP21 to Melissa	2.46	112	13	42	60	42	144
LP21 to Geroschinia	4.28	262	66	72	60	78	210
LP21 to Stavri	10.59	631	209	180	60	186	426
LP22 to Palioklissa	0.56	34	0.6	18	60	18	96
LP23 to Vounari	3.15	93	31	54	60	60	174
LP23 to Varkes	3.22	98	29	54	60	54	168
LP23 to Phlamoudhi	4.51	192	37	72	60	78	210
LP23 to Palaio mantra	4.96	218	37	84	60	90	234
LP24 to Limniohouthi	0	0	0	0	60	0	60
LP24 to Mazias	2.45	94	21	42	60	42	144
LP24 to Kantara Mon.	8.85	693	162	168	60	150	378

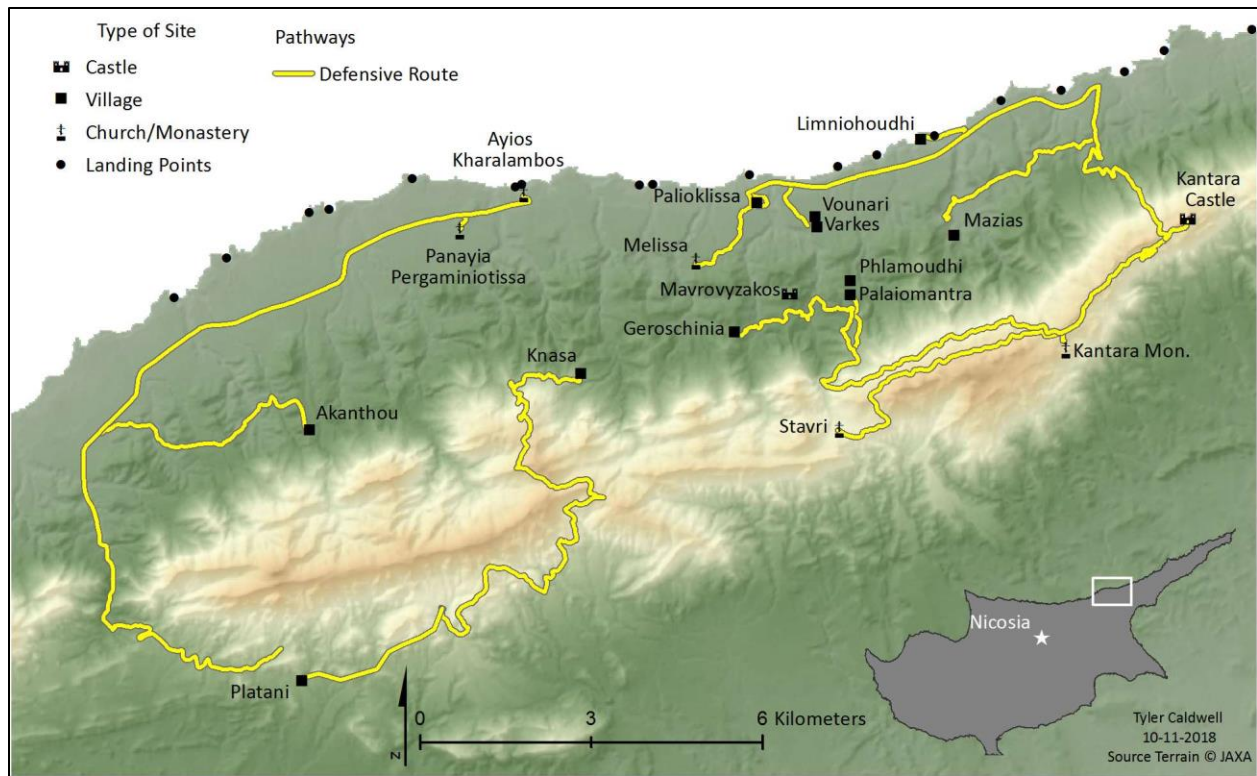


FIGURE 6.12 Melandryna to Karpass Peninsula Defensive Pathways

Table 6.8 Melandryna to Karpass Peninsula Defensive Pathways

Defensive Routes	Total distance to site (km)	Elevation gain (m)	Elevation Loss (m)	Total time to site (min)
Platani to Akanthou	13.04	340	405	180
Platani to Panayia Pergaminiotissa	16.25	173	387	204
Platani to Ayios Kharalambos	17.38	186	423	216
Platani to Knasa	13.16	578	567	186
Kantara Castle to Melissa	13.66	290	750	162
Kantara Castle to Palioklissa	11.94	211	741	132
Kantara Castle to Geroschinia	13.90	463	828	180
Kantara Castle to Vounari	12.39	248	727	144
Kantara Castle to Varkes	12.39	248	727	144

Kantara Castle to Phlamoudhi	11.41	341	731	144
Kantara Castle to Palaio mantra	10.98	362	722	138
Kantara Castle to Stavri	9.22	300	437	120
Kantara Castle to Limniohoudhi	8.80	154	712	90
Kantara Castle to Mazias	7.98	190	677	84
Kantara Castle to Kantara Mon.	3.96	156	191	60

Platani

Due to the treatment of this site as an *akritai* village, raiding the village was not considered. This village does have a population that would not be part of the fighting force; therefore it will be added to the final results of sites that can or cannot be attacked by raiders at the end of this section. Platani neither falls inside of the raiding zone, nor is capable of being raided without considerable risk to the attackers.

Akanthou

The village of Akanthou lies outside of the raiding zone. Raiders from landing point 18 would take 66 minutes to reach the site, and 60 minutes to return to their ships. Combined with the raiding time the total time needed for the attack would be 186 minutes.

Defenders from Platani would take 180 minutes to reach Akanthou. This is not enough time to reach the village before raiders could get away. The main reason for this delay is the hills the defenders need to traverse to get to the village in the most direct route. If the defenders instead followed the old Roman road towards landing point 18, and then turned south towards Akanthou, they could avoid these hills and put themselves between the raiders and their escape. The defenders would reach the intersection of the raider's route back to their ships and the old Roman road in

144 minutes. Raiders would not be halfway into their escape before the defenders could cut them off.

Akanthou does not fall within the raiding zone, and while raiders would be able to assault the village before the defenders could reach them, they probably would not be able to escape back to their ships.

Panayia Pergaminotissa

Panayia Pergaminotissa falls within the raider's zone of influence. Raiders from landing point 19 would only need 12 minutes to reach the site, and thirty to return with their loot. Combined with the attack itself, raiders would need 124 minutes to complete the raid.

Defenders from Platani would take 204 minutes to reach the church. By the time the defenders reached the church, the raiders would be long gone. Unless defenders were warned well in advance of an approaching force, they could not defend this church.

Panayia Pergaminotissa falls within the raiding zone, and is an ideal target for raiders to attack.

Ayios Kharalambos

Ayios Kharalambos' proximity to the coast means it falls well inside of the raiding zone. Raiders from landing point 20 would only need 6 minutes to reach the side, and six minutes to get back to the shore. The total attack would only take around 72 minutes.

Defenders from Platani would take 216 minutes to reach the site. Raiders would be long gone before the defenders could even make it to the church. Ayios Kharalambos would be an easy target for raiders to attack.

Ayios Kharalambos falls inside of the raiding zone, and is an ideal target for raiders to attack.

Knasa

The settlement of Knasa is situated in the hills just below the mountain range outside of the raiding zone. Raiders from landing point 20 would take 90 minutes to reach the site, and an additional 78 to return to their ships. Combined with the time needed to overwhelm and loot the settlement, it would take a total of 288 minutes to conduct the operation.

If defenders from Platani took the most direct route to Knasa, it would take 186 minutes to reach the settlement. By the time they reached the site, raiders would already be moving back to the landing zone with a 36 minute head start. However, if defenders instead moved towards the landing point to cut off their escape, it would take 216 minutes. This is more than enough time to reach the landing point before the raiders could escape, and they could start moving inland to intercept the raiders. Although they could not get to the settlement in time to protect it, it does appear that defenders could cut off the escape of raiders attacking the village, making the prospects of a successful raid slim for any attackers.

Knasa neither falls within the raiding zone, nor is an ideal target for raiders to attack and be able to escape with their lives.

Melissa

Melissa is located just inside of the raiding zone. Raiders from landing point 21 would take 42 minutes to reach this church, and need 42 minutes to return to their ships. Combined with the assault on the church, a total of 144 minutes is needed to conduct the raid and escape.

Defenders from Kantara Castle could move south towards the coast and then move down the old Roman road to try and intercept the attackers. Based on the marching speed results, it would take the defenders 166 minutes to reach the site. By the time the defenders reached the church, the raiders would already be back on their ships.

Melissa falls inside of the raiding zone and is a target that raiders could assault and escape with their ill-gotten gains.

Geroschinia

Geroschinia is situated outside of the raiding zone. Raiders from landing point 21 would take 72 minutes to reach the village, and need 78 minutes to escape to their ships. Combined with the assault on the settlement, it would take raiders 210 minutes to conduct the raid.

Defenders from Kantara Castle taking the most direct route to Geroschinia would take 180 minutes to reach the village. By the time they reached the village, raiders would be moving back to their ships with a 48 minute head start. However, if the defenders moved towards the coast to cut off their escape route, they would likely intercept the raiders somewhere between Melissa and landing point 21. It would take the defenders 162 minutes to reach Melissa, which is about the halfway point between the escape route. By the time the defenders reached Melissa, raiders would be moving back to their ships, but would not have reached Melissa yet. Therefore the defenders would be able to cut off the raiders from escaping.

Geroschinia does not fall into the raiding zone. Raiders would be able to raid the village, but would be cut off from their escape route, make the site an unappealing target for attack.

Palioklissa

The settlement of Palioklissa lies inside of the raiding zone. Raiders from landing point 22 would take only 18 minutes to reach the village, and need 18 minutes to return to their ships. In total, only 96 minutes are needed to conduct the full raid on this settlement.

Defenders from Kantara Castle would take 132 minutes to reach the site. This is not enough time to get to the settlement before the raiders had already attacked it and escaped to their ships. This would make Palioklissa an ideal target for raiders.

Palioklissa falls inside of the raiding zone and is a target the raiders could successfully assault and escape to their ships before defensive forces could arrive.

Mavrovyzakos

Mavrovyzakos is a site that is a suspected watchtower, and therefore will not be considered a site raiders would attack. This site would serve to warn the surrounding area of threats from the sea if it was indeed a watchtower. Mavrovyzakos will be discussed further in the conclusion chapter.

Starvi

Starvi is a church that is located at the summit of the mountain range, and therefore well outside of the raiding zone. Raiders from landing point 21 would take 180 minutes to reach the site, and 186 to escape to their ships. Combined with the time needed to loot the church, a total of 426 minutes is needed to conduct the full raid.

Defenders from Kantara Castle, moving across the mountain range to Starvi, would arrive at the church in 120 minutes. This is more than enough time before the raiders would even be able to reach the church.

Starvi neither falls within the raiding zone, nor is it possible to attack this site without risking being captured or killed by defending forces from Kantara Castle.

Vounari

Vounari is situated inside of the raiding zone. Raiders from landing point 23 would reach the site in 54 minutes, and take 60 minutes to return to their ships. In total, the raid would take 174 minutes.

Defenders from Kantara Castle could arrive at Vounari in 144 minutes. The defenders could move north towards the coast then turn west down the old Roman road. While they could

not reach the settlement in time to stop the raid, it appears that they would arrive at the crossroads between the road leading to Vounari and the old Roman road. The raiders and the defenders would arrive at the crossroads in 126 minutes. Based on these results it seems that the defenders would just be able to intercept the raiders before their escape.

Vounari does fall within the raiding zone, but raiders attacking the settlement run the risk of being intercepted.

Varkes

Varkes does fall within the raiding zone. Raiders from landing point 23 would take 54 minutes to reach the site, and need 60 minutes to return to their ships. Combined with the time needed to loot the settlement, the total time for the raid would be 168 minutes.

Defenders from Kantara Castle, moving north towards the shore then turning west down the old Roman road, would arrive at Varkes within 144 minutes. As with the result with Vounari, the defenders would not be able to stop the raiding of the village, but they would just be able to intercept the raiders at the crossroads of the road leading to Varkes and the old Roman road.

Varkes does fall within the raiding zone, but it appears that the defenders would just be able to intercept them before attackers made it back to their ships.

Phlamoundhi

Phlamoundhi lies on the border between the raiding and safe zone. Raiders from landing point 23 would take 72 minutes to reach the village, and need 78 minutes to escape to their ships. Combined with the time needed to attack the village, a total of 210 minutes is needed for the assault.

Defenders from Kantara Castle, taking the most direct route, would arrive at this settlement within 144 minutes. This is not enough time to reach the site before the raiders started moving

back to their ships. It is possible that they could catch up the raiders, but if the defenders took the northern route to place themselves between the raiders and their ships, they would arrive at Vounari in 144 minutes. The raiders would be 12 minutes into their return trip to landing point 23. The defenders would be able to cut them off before they escaped.

Phlamoundhi lies on the border of the safe and unsafe area, but raiders would not be able to attack the village and escape based on the marching speed interpretation.

Palaiomantra

Palaiomantra is situated just outside of the raiding zone. Raiders from landing point 23 would take 84 minutes to reach the site, and need 90 minutes to escape back to their ships. Combined with the assault on the settlement, a total of 234 minutes is needed to complete the raid.

Defenders from Kantara Castle, taking the most direct route, would arrive at this settlement within 138 minutes. The defenders would arrive at the settlement just as the raiders were finishing looting. They have just enough time to intercept them before they started their escape. If the defenders took the northern route to place themselves between the raiders and their ships they would arrive at Vounari in 144 minutes. The defenders would be able to cut off the escape route of the raiders before they could return to their ships. This would make raiding Palaiomantra a risky prospect due to the danger of being caught or killed.

Palaiomantra neither falls into the raiding zone, nor can it be raided without raiders risking being cut off from their escape.

Limniohoudhi

Limniohoudhi is located directly on the coast, and therefore falls well inside of the raiding zone. Raiders from landing point 24 could attack the settlement as soon as they landed. It would only take raiders 60 minutes to assault the settlement and escape to their ships.

Defenders from Kantara Castle would take 90 minutes to reach the settlement. By the time defenders reached Linniohoudhi, the raiders would be long gone. This makes this settlement an ideal target.

Linniohoudhi falls inside of the raiding zone, and is a target that raiders would be able to attack with little risk of being captured.

Mazias

The settlement of Mazias lies just beyond the raiding zone. Raiders from landing point 24 would take 42 minutes to reach the settlement, and need 42 minutes to escape back to their ships. Combined with the time needed to loot the settlement, a total of 144 minutes is needed to conduct the raid.

Defenders from Kantara Castle would arrive at the settlement to defend it in 84 minutes. While this is not enough time to intercept the raiders before the assault on the village began, the defenders would be able to attack the raiders as they looted the village. The fact that the defenders could intercept the raiders as they looted the village would make Mazias too high risk of a target for raiders to risk attacking.

Mazias neither falls within the raiding zone, nor is capable of being attacked without risk of being intercepted by defenders from Kantara Castle.

Kantara Monastery

Kantara Monastery is located at the summit of the mountain range and well outside of the raiding zone. Raiders from landing point 24 would take 168 minutes just to reach the monastery, and need 150 to return to their ships. Combined with the time needed to assault the monastery it would take raiders 378 minutes to complete the raid.

Defenders from Kantara Castle would arrive at the monastery within 60 minutes. This is more than enough time to defend the monastery from raiders moving in from the northern coast. They would arrive at the monastery before the raiders were even halfway to the site.

Kantara Monastery neither lies within the raiding zone, nor is capable of being raided without considerable risk of being captured or killed by defenders from Kantara Castle.

Kantara Castle

Kantara Castle is the easternmost site in this study, and provides defensive capabilities for this region. This fortification enjoys a commanding view of the settlements to the north. Petty raiders pose no threat to this castle. This castle will be discussed further in the future research section.

Results

Seventeen sites within the area were considered as raiding targets. Palioklissa was excluded in the results due to the potential for it being a watchtower. The Raiding zone maps show that seven out of the seventeen sites in this study area fall within the raiders' zone of influence.

Out of those seven sites that are under risk of being raided, a total of five could be successfully raided, and give raiders enough time to escape back to their ships before they could be caught. Several others, such as Knasa, Vounari, and Phlamoundhi, could be raided, but defenders would be able to cut them off from their escape route.

Cumulative Results

A total of 59 sites were considered targets for raiders in this study. Out of those sites, A total of 42 (71%) are inside the area considered safe from raiders. This does not mean that raids did not occur at these sites, but the risk involved would not make the assault a worthwhile endeavor for raiders.

Out of the six sites in the Cape Kormakiti area, only one fell within the raiding zone. In the study area, 83% of the sites are situated in the safe zone. In the Myrtou to Kyrenia study area, seven of the nineteen sites fall within the raiding zone. In this study area, 63% of the sites are located in the safe zone. Of the seventeen sites associated with the Kyrenia to Melandryna Monastery, three are under threat in the raiding zone. In the study area, 82% of the sites are located within the safe zone. Out of the seventeen sites in the Melandryna to Karpass Peninsula study area, eight fall within the area under threat by raiders. In the study area, 52% of the sites are located in the safe zone. A visualization of these results is shown in the chart below (Table 9).

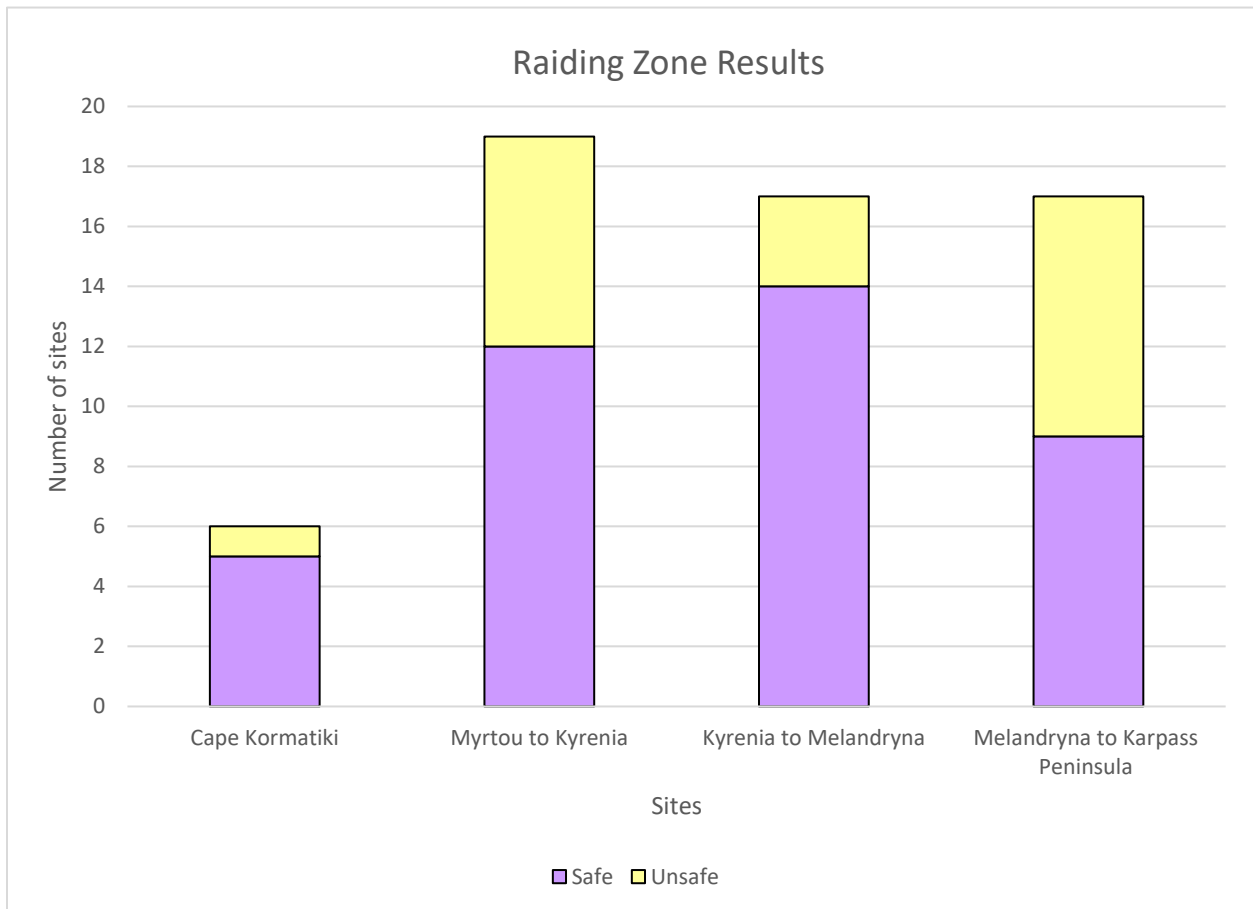


Table 6.9 Total Result of Raiding Zone Maps

The result of the areas in the raiding zone shifts once the factor of defensive fortifications and military villages is added to the equation. The marching function demonstrated the times needed for attacking and defending forces to reach sites. The results show that a number of sites in the raiding zone would be able to be defended before raiders could complete a raid.

Out of the six sites in the Cape Kormakiti study area, none of the sites could be raided without risking being intercepted by defenders. In this area, 100% of the locations are considered safe. Of the nineteen sites in the Myrtou to Kyrenia study, area five can be raided; 73% of the sites are considered safe from raiding. In the Kyrenia to Melandryna Monastery study area, two of the seventeen sites can be attacked by raiders. Of the sites in this area, 88% are considered safe from raiding. Out of the seventeen sites in the Melandryna to Karpass Peninsula region, five are capable of being raided before defenders could intercept them. Out of the sites in this area, 70% are considered safe from raiding. The results of the sites under threat based on the defense's ability to intercept or cut off raiders are in the table below (Table 6.10).

A total of 79% of the sites in this study are considered safe from raiding. Compared to the total results from the raiding zone map, there is a slight increase in the number of sites protected from raiders. The secondary test of looking at the time needed for raids helps add to the overall consensus of this study that the population lived away from the coast to avoid the threat posed by raiders.

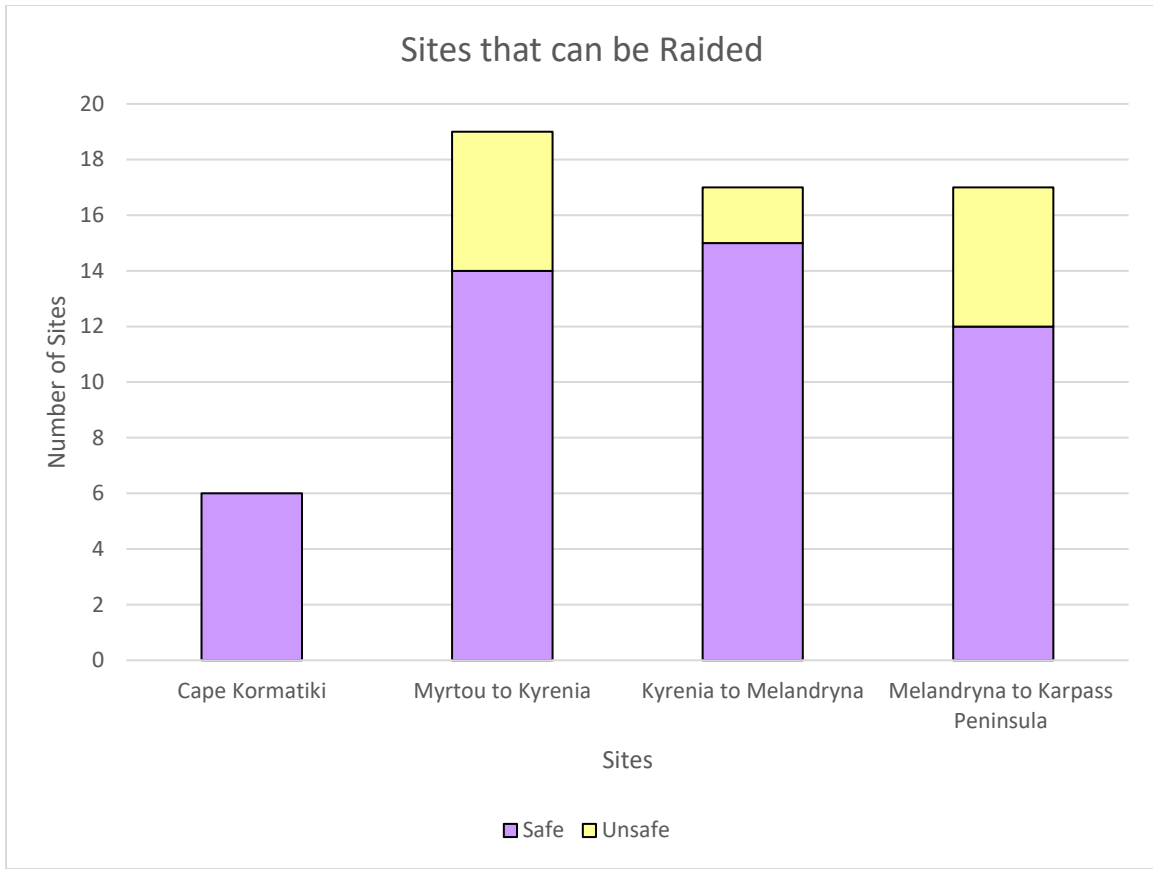


Table 6.10 Sites that can be raided

The results show that a majority of the sites in this study are considered safe from raiding. The defensive fortifications and military villages were capable of intercepting the majority of raiders before they could escape back to their ships. The next chapter discussed the conclusions that these results show, and the ways in which this study can be improved upon and evolve.

Chapter 7 : Conclusions

This study stems from a fundamental question surrounding the establishment of fortifications and *akritai* in Cyprus in the 10th to 12th centuries A. D. These villages founded in response to Arabic raids that devastated the island from the 7th to 10th centuries. Metcalf (2009: 528) details the theory that these villages reside in strategic locations along the mountain range to defend against raiders. “All of this makes sense, but one has to say that almost all of it suffers in the sense that this is conjectural, being based on very little in the way of dateable evidence” (Metcalf 2009: 539). This experiment sought to demonstrate whether or not these settlements, combined with fortifications in the area, were capable of defending the settlements from raiders landing along the northern coastline of Cyprus.

Akritai/Fortifications

The villages theorized to be military settlements by Kyriss (1970) in this study can defend a majority of the sites in this region. Three villages in the western region of the Kyrenia Mountain Range, Asomatos, Karpasia, and Kambyli, while able to defend a handful of sites in this study, seem to have a dual purpose. These three villages situated on the main route in the west that connects the area north of the mountain range to the rest of Cyprus. Based on this it can be argued that these three sites acted as a buffer to protect the southern side of Cyprus from incursions from the north, and vice versa. While these settlements could not necessarily field a large enough force to stop an invading army, it is possible that they could hold the pass long enough for reinforcements from Nicosia or Kyrenia to arrive.

Combined with the military fortifications, the *akritai* villages were capable of intercepting raiding forces landing on the northern coast of Cyprus. Out of the sites in the entire

study region, 79% are considered safe due to the defensive capabilities of nearby fortifications and *akritai*. While this is not definitive proof that these villages were *Akritai*, this study provides evidence that these villages were capable of defending the coastline from raiders.

Archaeological excavations of the proposed *akritai* could establish a clearer picture of the history of these sites. Due to the political situation in the northern region of Cyprus, excavations of these sites remains unlikely. This study demonstrated a way in which to analyze the nature of these sites without excavation.

The methodology for this study is an expansion on the work done by David Stewart (1997) that discusses the response of Bronze Age populations on Crete in times of raiding. Stewart theorized that raiders could not raid further than 3,000 m inland without risking being intercepted by defending forces. This study demonstrates that the trends shown in his results, that people moved inland during times of raiding, agrees with the results in this study. Additionally, the methods used in ArcMap demonstrate a new way in which to study the ideas presented by Stewart.

Future Research

This study provides a basic outline for the defensive and offensive capabilities of people in the northern region of Cyprus during the Middle Ages. There are ways in which this study could be used to understand the past better.

One of the main ways in which this study can expand on is by using the Viewshed Analysis tool on ArcMap. Archaeologist use Viewshed Analysis extensively to study line of site. Viewshed Analysis can be used in this area to demonstrate the extent of which Kyrenia, St. Hilarion, Buffavento, Kantara, and the Unknown Watchtower could see in the north and the

Mediterranean Sea. This tool could add additional insight into how the defense used the mountain fortresses as signaling outposts to warn the local population of impending attacks in the area. For example, if an enemy fleet was spotted moving west along the northern coast by the defenders of Kantara Castle, they could signal with smoke along the mountain range to Buffavento, St. Hilarion, Kyrenia, and the *akritai* that an attack was coming. The garrison at Kyrenia could then launch ships from the port to intercept raiders before they landed.

The method used to study raiding during the Middle Ages on Cyprus could also be applied to other periods and places in which raiding was prevalent to see if people abandoned the coast for safer inland settlements. Areas in England that were devastated by the Viking raids from the 8th to 11th centuries A. D. would make an interesting comparison study to see if people abandoned the coastline in favor of inland sites, as it appears that they did in Cyprus.

Physically going to Cyprus to test the hiking times associated with each pathway would serve to study the accuracy of times calculated in this study. One major problem with this is that it is likely that some pathways in this experiment run along private property. A full study of each pathway is likely not possible, but it would be interesting to test the pathways that are available. A variety of apps are available on mobile devices to track hiking speed and elevation change. Relive is a free to download application on a phone that can be used to track a hike, and could be used to test the hiking pathways in this study. It is also possible to make videos of the hikes in the app, and it could be beneficial to visualize the raiding and defensive movements in the same video to see when the interception happens.

Conclusion

Based on the methods used in this study, the defensive sites are capable of defending a majority of the Medieval villages, churches, and monasteries in the northern region of Cyprus. It is likely that the defensive sites were also used to defend the northern region of Cyprus from incursions from the southern part of the island. The fortifications and *akritai* seem to adequately guard the main passes through the Kyrenia Mountain Range, but more detailed studies are required.

Further surveys need to be done to better understand the Medieval landscape of the northern region of Cyprus. Due to the way in which this study was conducted in regards to the raiding zone maps, new sites are capable of being added without much effort. Until archaeological excavations resume in North Cyprus, experimental archaeological methods such as this study, can provide data to better understand the Medieval landscape. It is clear in this study that protection from raiding is a reason the population lived away from the coastline in the Crusader period.

References

Ambroise

1941 The Crusade of Richard the Lionheart. Merton Hubert, translators. Columbia University Press, Cincinnati, Ohio.

Armstrong, Pamela

2004 Trade in the east Mediterranean in the 8th century. The Archaeology of Local, Regional and International Exchange. Papers of the Thirty-eighth Spring Symposium of Byzantine Studies, St. Joh's College, University of Oxford.

Barber, Malcolm

2012 The Crusader States. Yale University Press, New Haven.

Bekker-Nielsen

2004 The Roads of Ancient Cyprus. Museum Tusculanum Press, Copenhagen, Denmark.

Bridge, Antony

1989 Richard the Lionheart. M. Evans & Company, INC, New York.

Boas, Adrian J.

2017 Crusader Archaeology: The Material Culture of the Latin East. Routledge, London, England.

Cadogan, Gerald

2004 Catling and the Genesis of the Cyprus Survey. British School at Athens Studies Vol 11 Archaeology Field Survey in Cyprus: Past History, Future Potential, pp. 17-22.

Castro, Maria, Luis Iglesias, Jose Sanchez, and Luis Ambrosio

2011 Sight Distance Analysis of Highways using GIS Tools. *Transportation Research Part C* 19: 997-1005.

Catling, H. W.

1966 Cyprus in the Neolithic and Chalcolithic Period. Cambridge University Press, London.

Catling, H. W.

1972 An Early Byzantine Pottery Factory at Dhiorios in Cyprus. British School of Archaeology in Jerusalem

Charalambos Paraskeva

2016 A Digital Elevation Model for Cyprus based on the ALOS 2 W3D30 Digital Surface Model.

https://figshare.com/articles/A_Digital_Elevation_Model_for_Cyprus_based_on_the_ALOS_2_W3D30_Digital_Surface_Model/3159991 Fileset posted on 07.04.2016, 01:57

Coureas, Nicholas

1995 Lusignan Cyprus and Lesser Armenia, 1195-1375. Cyprus Research Center

Cyprus Island

2018 <https://www.cyprusisland.net/cyprus-monasteries/agios-panteleimonas-monastery> (Last Accessed Nov 2018)

Davis, Thomas

2014 Cypriot Archaeology and the Great War. <http://asorblog.org/2014/06/10/cypriot-archaeology-and-the-great-war/>, accessed 9-27-2018

Dimopoulos Ioanna

2004 Trade of Byzantine red wares, end of the 11th–13th centuries: Byzantine Trade, 4th-12th Centuries The Archaeology of Local, Regional and International Exchange. Papers of the Thirty-eighth Spring Symposium of Byzantine Studies, St John's College, University of Oxford.

Douglas, William

1893 Mountaineering Club Journal Vol 2. Edinburgh.

Dreghorn, William

1982 A Guide to the Antiquities of Kyrenia. Cyprus Turkish Tourism Enterprises Co. Kyrenia, Cyprus.

Eagen, Brian

2014 Estimate Your Hiking Travel Time 21. <http://www.outdoorblueprint.com/read/estimate-your-hiking-travel-time/> (Last Accessed Aug 30, 2018)

Edbury, Peter

1991 The Kingdom of Cyprus and the Crusades, 1191-1374. Cambridge University Press, New York, New York.

Edbury, Peter

1998 The Conquest of Jerusalem and the Third Crusade. Ashgate Publishing Ltd. Brookfield, Vermont.

Edbury, Peter

2015 Ernoul, *Eracles* and the Beginnings of Frankish Rule in Cyprus, 1191-1232. A Place of Cultural Encounter. Waxmann Verlag GmbH. Munster, Germany.

Esri

2016 ArcGIS Desktop: Release 10.5 Redlands, CA: Environmental Systems Research Institute. <https://www.esri.com/en-us/home> (Accessed 2018)

Esri

2016 Network Dataset tool for ArcMap 10.5. Available at <http://desktop.arcgis.com/en/arcmap/latest/manage-data/network-datasets/what-is-a-network-dataset.htm> (Accessed 2018)

Esri

2016 New Route tool for ArcMap 10.5. Available at <http://desktop.arcgis.com/en/arcmap/latest/extensions/network-analyst/route.htm> (Accessed 2018)

Esri

2016 Service Area tool for ArcMap 10.5. Available at <http://desktop.arcgis.com/en/arcmap/latest/extensions/network-analyst/service-area.htm> (Accessed 2018)

Fedden, Robin. Thomas, John

1957 Crusader Castles. John Murray Publishing, London, England.

Gertwagen, Ruthy

2013 Is there a Typology of Pirate Crews and Ships across the Byzantine and Medieval Mediterranean (11th to 15th Century). Seeraub im Mittelmeerraum, Verlag Ferdinand Schöningh, Paderborn, Germany.

Gillingham, John

1999 Richard I. Yale University Press, New Haven.

Google Earth Pro

2018 Map Data Image © 2019 DigitalGlobe © 2018 Google (Accessed 2019)

Hadjisavvas, Sophocles

1991 Archaiologikē episkopēsē 20 katechomenōn sēmera chōriōn tēs eparchias Ammochōstou. Leukōsia: Kentro Meletōn Hieras Monēs Kykkou

Hadjisavvas, Sophocles

2004 Surveying after Catling: the work of the Department of Antiquities Survey Branch since 1960. British School at Athens Studies Vol 11 Archaeology Field Survey in Cyprus: Past History, Future Potential, pp. 37-41

Handyside, Philip

- 2015 The Old French William of Tyre. Brill, Leiden, Boston.
- Holbach, Maude
1912 In the Footsteps of Richard Coeur De Lion. Little Brown and Company, Boston.
- Horowitz, Mara T.
2008 "Phlamoudhi-Vounari: A Multi-Function Site in Cyprus," Settlement and Sanctuary: Views from the Columbia University Excavations at Phlamoudhi, Cyprus. Annual of the American Schools of Oriental Research 63. Boston, MA: ASOR.
- Hourani, Guita G.
2010 A Reading in the History of the Maronites of Cyprus From the Eighth Century to the Beginning of British Rule. Journal of Maronites studies, vol. II, No 3
- Iacovou, Maria
2000 Archaeological Field Survey in Cyprus: Past History, Future Potentials. British School at Athens, London.
- Jeffery, George
1983 A Description of the Historical Monuments of Cyprus. Zeno Booksellers & Publishers, London.
- Killian, Kyle L.
2008 "Hellenistic, Roman, and Medieval Phlamoudhi," 87-97 in J. S. Smith ed., *Views from Phlamoudhi, Cyprus*. Annual of the American Schools of Oriental Research 63. Boston: American Schools of Oriental Research.
- Langmuir, Eric
(2013) *Mountaineering and Leadership; A Handbook for Mountaineers and Hillwalking Leaders in the British Isles* (Fourth ed.). Mountain Training England; Mountain Training Scotland.
- Kyrris, Costas P.
1970 Military Colonies in Cyprus in the Byzantine Period: Their Character, Purpose and Extent. *Byzantinovica* 31: 157-81.
- Mallari, Francisco
1986 Muslim Raids in Bicol, 1580-1792. *Philippine Studies* 34 (3). Ateneo de Manila University: 257-286.
- Marshall, Christopher
1992 Warfare in the Latin east 1192-1291. Cambridge university press, London.
- Metcalf, D.M.
2009 Byzantine Cyprus 491-1191. Theopress LTD, Nicosia.

Municipality of Lapithos

2013 <http://www.lapithos.org.cy/default.aspx?articleID=2857> (Accessed 2018)

Murray, Alan

2006 The Crusades an Encyclopedia. ABC-CLIO Inc, Oxford, England.

Nagne, Ajay and Bharti W. Gawali

2013 Transportation Network Analysis by using Remote Sensing and GIS a Review.
International Journal of Engineering Research and Applications 3: 70-76

Naismith, W. W.

1892 "Excursions. Cruach Ardran, Stobinian, and Ben More". Scottish Mountaineering Club Journal. Scottish Mountaineering Club. 2 (3): 136

National Library of Scotland

2018 <https://maps.nls.uk/cyprus/> Edinburgh, Scotland (Accessed 2018)

Novare, Philip De

1936 The Wars of Fredrick II Against the Iberians in Syria and Cyprus, John Monte, Merton Hubert, translator. Columbia University Press, New York.

Nutsford, Danial, Femke Reitsma, Amber Pearson, Simon Kingham

2015 Personalizing the Viewshed: Visibility Analysis from the Human Perspective.
Applied Geography 62: 1-7.

Ostapchuk, Victor

2001 The Human Landscape of the Ottoman Black Sea in the Face of Cossack Naval Raids. *Oriente Moderno* 81 (1). Istituto Per l'Oriente C. A. Nallino: 23-95.

Papacostas, Tassos C.

1999 Byzantine Cyprus: The Testimony of Its Churches, 650-1200, Volume 1. University of Oxford, England.

Papacostas, Tassos C.

1999 Byzantine Cyprus: The Testimony of Its Churches, 650-1200, Volume 2. University of Oxford, England.

Papacostas, Tassos C.

2015 Monastic Estates in the Middle Byzantine Period: Evidence from Cyprus for Local and Overseas Landowners. *Medieval Cyprus: A Place of Cultural Encounter*. Waxmann Verlag GmbH. Munster, Germany.

Paraskeva Charalambos

- 2016 Chronology, topography and social change: a multi-linear perspective on the Chalcolithic to Bronze Age transition in Cyprus. University of Edinburgh
- Parker, K. Scott
 2015 Peter I de Lusignan, the Crusade of 1365, and the Oriental Christians of Cyprus and the Mamluk Sultanate. *Medieval Cyprus: A Place of Cultural Encounter*. Waxmann Verlag GmbH. Munster, Germany.
- Parthog, Gwynneth Der
 2006 *Medieval Cyprus a Guide to the Byzantine and Latin Monuments*. Moufflon Publications, Lefkosia, Cyprus.
- Phillips, Johnathan
 2014 *The Crusades 1095-1204*. Routledge Taylor & Francis Group, London, England.
- Pryor, John H.
 1988 *Geography, Technology, and War Studied in the Maritime History of the Mediterranean 649-1571*. Cambridge University Press, Cambridge, UK.
- Rautman, Marcus
 2005 In: *Les Villages dans l'Empire byzantin, IVe-XVe siècle* p. 453-464
- Republic of Cyprus Department of Antiquities
 2018 <http://www.mcw.gov.cy/mcw/DA/DA.nsf/All/13260B82483C0507C225727500534F3F?OpenDocument> 2005 - 2018 Republic of Cyprus, Ministry of Transport, Communications and Works (Accessed 2018)
- Roueché, Charlotte
 2001 *The Prehistory of the Cyprus Department of Antiquities*. *British School at Athens Studies* Vol. 8: 155-166.
- Solomidou-Ieronymidou, Marina
 2015 *Suger Mills and Sugar Production in Medieval Cyprus*. *Medieval Cyprus: A Place of Cultural Encounter*. Waxmann Verlag GmbH. Munster, Germany.
- Stewart, David
 1997 *Ravaging the Wine Dark Sea: Attacks on Crete by Sea Raiders during the Bronze Age*. Texas A&M University
- Symeonoglou, Sarantis. Catling, H. W.
 1972 *Archaeological Survey in the Area of Phlamoudhi, Cyprus*. Report of the Department of Antiquities, Cyprus: 187-198.

White, Devin A. and Barber, Sarah B.

2012 Geospatial Modeling of Pedestrian Transportation Networks: A Case Study from Pre-Columbian Oaxaca, Mexico. *Journal of Archaeological Science* 39: 2684-2696.

Wilkinson, Clennell

1933 *Coeur De Lion*. D. Appleton-Century Company, New York.

Whatson-Northcyprus

2018 <http://www.Whatson-Northcyprus.com/> (Accessed 2018)

Yeniduzen

2016 History of Akatu (Tatlısu) and its surroundings <http://www.yeniduzen.com/akatu-tatlisu-ile-cevresinin-tarihi-gecmisi-80384h.htm>
<http://www.yeniduzen.com/> (Accessed 2018)

Yioutani-Iacovides, Maria

2003 *Post Byzantine Church Architecture in Cyprus, 1191-1571*. University of Liverpool, England.