

**THE COMING OF THE ANATOLIANS:
MOBILITY, CONFLICT, AND PIRACY IN THE EARLY BRONZE AGE
AEGEAN**

A Thesis Presented for the
Master of Arts
Degree
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ABSTRACT

This thesis explores the possibility that piracy was practiced in the Aegean Sea region in the Early Bronze Age (c. 3000-2000 BCE), by utilizing archaeological evidence to examine the prevalence and nature of violence in this region in this period. Piracy was most likely an aspect of the great surge in mobility, wealth, and conflict that characterized the extension of the Anatolian Trade Network (ATN) from the eastern Aegean into the central and western Aegean around 2550/2500-2100 BCE. I will trace the movement and examine the impact of tangible materials such as Anatolian architecture, metals, ceramics, and ships, and their concomitant new technologies, while considering the intangible concepts, beliefs, and innovations they likely accompanied. These tangible materials and practices, and intangible ideas, travelling from western coastal Anatolia and its adjacent islands to the Cyclades, Sporades, and Greek mainland and nearby islands, permanently changed the trajectory of cultural, social, and political development in the Aegean. This thesis aims to demonstrate that this movement of material culture was accompanied by a movement of people coming from Anatolia, and that the wealth introduced along the ATN brought a sharp increase in violence in this period. The intensification of sea-based violence that occurred between 2550-2100 BCE in the Aegean likely included acts of piracy, which probably was always a part of the development of the Aegean sea region.

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CHAPTER ONE

THE “KASTRI/LEFKANDI I GROUP” PHENOMENON: TRADE, MOBILITY, CONFLICT, OR ALL OF THE ABOVE?

This study must begin with a discussion of the so-called “Kastri/Lefkandi I group,” which is a material assemblage characterized archaeologically by a number of uniquely western Anatolian¹ features that were introduced into the central Aegean islands and the east-central Greek mainland in the later part of the Early Bronze Age, during a period ranging from ca. 2550 to 2100 BCE. Debate regarding the significance of the introduction of Kastri/Lefkandi I material and its subsequent impact on the islands and the Greek mainland began in the 1970s and is ongoing. Theories vary substantially, with some scholars interpreting the material’s introduction as local adaptations to intensified trade with Anatolia (Davis 1992, 708, 717, 724-725, 754; Davis et al. 2001; Kouka 2013, 577) and others interpreting it as representing the movement of Anatolian peoples into the central and western Aegean, and the establishment of full-on Anatolian colonies (Stos-Gale et al., 1984, 23; Şahoğlu 2005, 352).

In this thesis, I will examine whether the introduction of this western Anatolian material into the Aegean was indeed the result of the movement of Anatolian peoples, and I will investigate more closely an often neglected aspect of this period, which are the many destructions and/or abandonments of settlements. I will argue that, rather than being merely the results of climate change, as has often been suggested, these destructions and abandonments are indicators

¹ Here and throughout this thesis, “Anatolian” refers simply to the various peoples who occupied the geographic region of Anatolia. While there are many shared elements in the material culture of the EBA occupants of Anatolia, especially those concentrated along the western coast, these cultural similarities should not be interpreted to imply a sense of ethnic or political cohesion, as many of the larger coastal settlements were likely independent from one another in this time, aside from trade connections. Similarly, “Aegean” also refers mainly to the occupants of the geographic region and does not imply ethnic cohesion.

of intensified conflict and acts of piracy related to the increase in connectivity and maritime trade and aided by changes in seafaring technology.

In order to address these questions, I will first consider whether piracy could have existed in the Early Bronze Age Aegean, what form it may have taken, and what criteria we can use to identify it (chapter 2). Then I will provide an overview of changes in settlement patterns, socio-political organization, architecture, connectivity, seafaring, and mobility at a wide variety of sites throughout the Aegean in the periods before, during, and after the Kastri/Lefkandi I group (Fig. 1.1; chapter 3). This evidence as well as the criteria of chapter 2 will then be used to investigate the possibility of intensified conflict and piracy (chapter 4).

But before embarking on this study, I will discuss scholars' past and current thinking regarding the chronology and significance of the Kastri/Lefkandi I material in the Early Bronze Age Aegean, which have been topics of intense debate for the last fifty years.

Relative and Absolute Chronology of the Early Bronze Age Aegean

The Aegean Bronze Age is divided into the Early, Middle, and Late periods (EBA, MBA, and LBA respectively). While there is scholarly debate regarding the exact beginning and end dates of the EBA, it is generally agreed upon to have been about one thousand years in length, roughly from 3200/3000–2000 B.C.E. (Kouka 2013, 570). Absolute dates of EBA phases vary somewhat depending upon which region of the Aegean is considered: the Cyclades, Crete, mainland Greece or the northern and eastern Aegean, including the adjacent western Anatolian coast. For the sake of this paper, I will mostly follow the recent absolute chronology proposed by O. Kouka and S. Menelaou, with slight alterations, for reasons explained below (Kouka and Menelaou 2018, 124).

The three most studied regions of the Aegean use their own chronological terminology in the Bronze Age: in mainland Greece one refers to the Helladic periods, on Crete to the Minoan

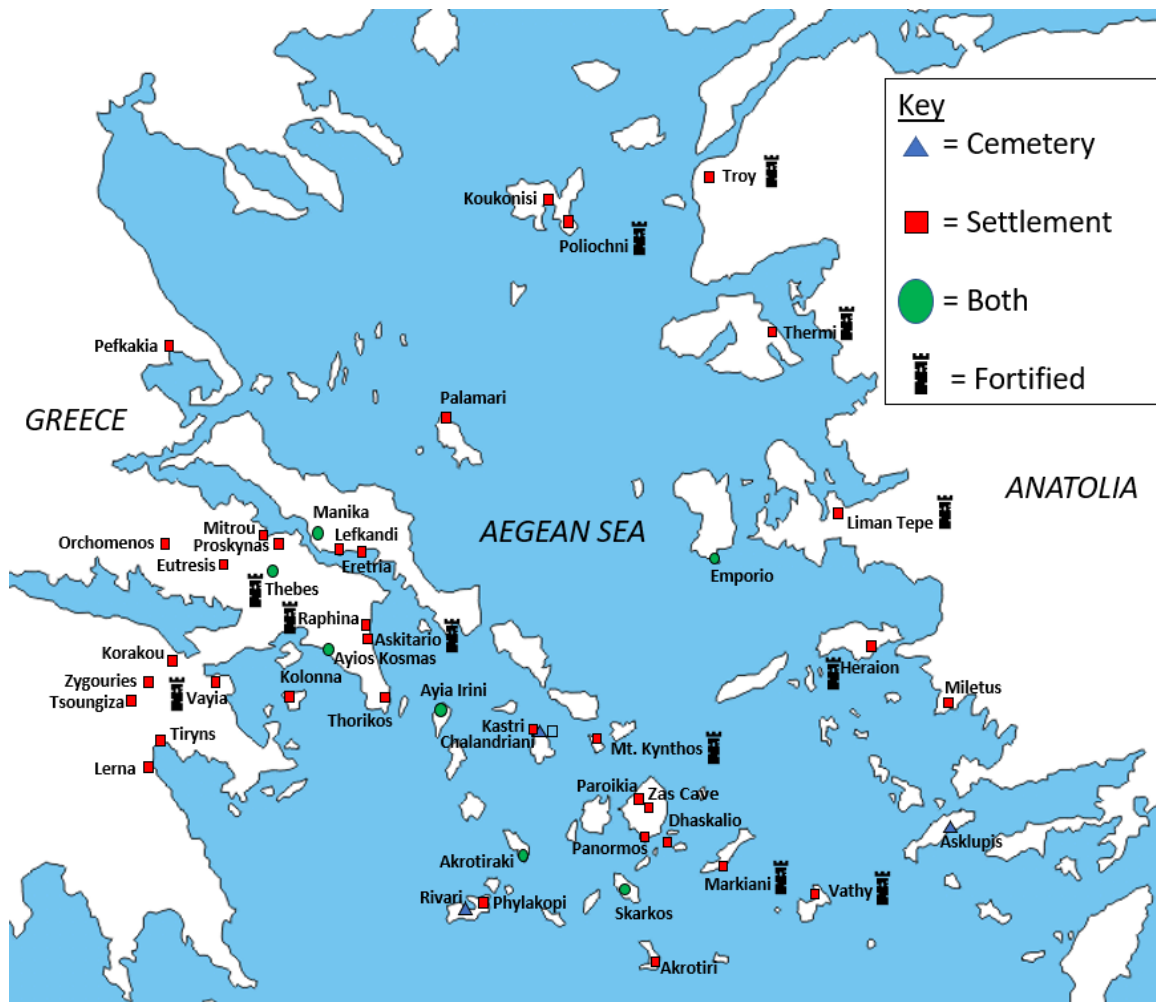


Figure 1.1 Map of all Aegean sites mentioned in the text.

periods, and in the Cyclades to the Cycladic periods. Elsewhere in the Aegean one simply refers to the Bronze Age periods. Excavations of EB Cycladic, or Early Cycladic (EC) sites in the 19th and early 20th century relied on a tripartite chronology consisting of EC I, II, and III phases, assumed to be roughly contemporary to the three Early Minoan (EM) phases established by Sir Arthur Evans at Crete and the three Early Helladic (EH) phases distinguished by Wace and Blegen on the Greek mainland (Renfrew 1972, 135; Shelmerdine 2008, 3). The relative chronology of these three EC phases was based primarily on excavations at Phylakopi on Melos and Ayia Irini on Kea, which then were the only two sites with stratigraphic sequences in the Cyclades (Renfrew 1972, 136).

As archaeological methods became more refined, the applicability of a tripartite system was challenged by C. Renfrew, a leading scholar of Cycladic prehistory (1972, 53, 135). Renfrew argued in 1972 that the scarce available evidence did not yet support a clear divide between the EC I, II, and III phases, nor could the stratified phases identified at Ayia Irini and Phylakopi be applied to all Cycladic islands (Renfrew 1972, 135). With the exception of these two sites, the majority of excavations at the time in the EBA Cyclades had single periods of occupation or represented grave sites, which were difficult to date (Renfrew 1972, 135-136). Renfrew wanted to devise a system which accurately represented this variety of sites. He proposed a relative dating system with three regional cultures—Grotta-Pelos, Keros-Syros, and Phylakopi I—which were named after the sites or islands where these material assemblages were most typically represented or concentrated (Table 1; Renfrew 1967, 2, 141-142; 1972, 135-141). The distinction between a chronological period and a culture was an important one, according to Renfrew (1972, 53). The flexibility to determine not just when each culture existed, but also to examine the horizon along which it was concentrated and how it interacted with others was essential given the paucity of the available stratified data at that time. Renfrew also defined several material assemblages that did not belong to any of the larger cultures but seemed to form regional variations that fit

Table 1. Proposed ceramic phases of the Early Bronze Age in the Aegean, and their absolute dates. “EB” stands for “Early Bronze Age,” and “EC” for “Early Cycladic,” i.e., the Early Bronze Age in the Cyclades. Roman numerals refer to the phases of specific regions in the Aegean, e.g., EB IIB refers to the northern and eastern Aegean, whereas Arabic numerals are used to refer to the chronological phases of the Aegean as a whole.

<i>Absolute Dates</i>	<i>Renfrew (1972)</i>	<i>Barber and MacGillivray (1980)</i>	<i>Rutter (1983)</i>	<i>Rutter (2011)</i>	<i>Kouka (2013)</i>	<i>Kouka and Menelaou (2018)</i>	<i>Yeagley (2022)</i>										
3200	EB I Grotta-Pelos (3200-2700 BCE)	EC I (3200/3000-2600 BCE)	EC I Grotta-Pelos (?-2900 BCE)	EC I Grotta-Pelos (ca. 3100/3000-2650 BCE)	EB I (3200/3000-2700/2650 BCE)	Late Chalcolithic	Late Chalcolithic										
3100						EB I (3000-2750 BCE)		EB 1 (3000-2750 BCE)									
3000																	
2900																	
2800																	
2700	EB II Keros-Syros (2700-2400/2300 BCE)	EC II (2600 BCE-?)	EC IIA Keros-Syros (2900-2450/2400 BCE)	EC IIA Keros-Syros (ca. 2650-2450/2400 BCE)	EB II (early) (2700/2650–2500 BCE)	EB II (early) (2750-2650 BCE)	EB 2a (2750-2550 BCE)										
2600								Late EB II (early) (2650-2550 BCE)									
2500					EB III Kastri in Keros-Syros (2400/2300-2100/2000 BCE)	EC IIIA (?-2200 BCE)	EC IIB Kastri/ Lefkandi I (2450/2400-2350/2300 BCE)	EC IIB Kastri/ Lefkandi I (ca. 2450/2400-2200/2150 BCE)	EB II (late) Kastri (2500–2300 BCE)	EB II (late) (2550-2200 BCE)	EB 2b (2550-2200 BCE)						
2400												EC III/GAP (ca. 2350/2300-2200/2150 BCE)					
2300	EB III Kastri in Keros-Syros (2400/2300-2100/2000 BCE)	EC IIIA (?-2200 BCE)	EC IIB Kastri/ Lefkandi I (2450/2400-2350/2300 BCE)	EC IIB Kastri/ Lefkandi I (ca. 2450/2400-2200/2150 BCE)			EB II (late) Kastri (2500–2300 BCE)	EB IIIA Kastri (2300-2200 BCE)									
2200					EC IIIB (2200-1800 BCE)	MC I Phylakopi I (2200/2150-1900 BCE)				EC III (ca. 2200/2150-2050/2000 BCE)	EB IIIB (2200-2000 BCE)	EB III (2200-2000 BCE)	EB 3a (2200-2100 BCE)				
2100														MC I Phylakopi I (ca. 2050/2000-1900/1850 BCE)	EB IIIB (2200-2000 BCE)	EB III (2200-2000 BCE)	EB 3b (2100-2000 BCE)
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chronologically within or between them. One of these material assemblages was the Kastri group, first identified at Kastri on the island of Syros, which he incorporated within the Keros-Syros phase because he found evidence for coexistence of the two assemblages. He also pointed out that the material assemblage of the Kastri group was closely related to that of the Lefkandi I group on mainland Greece (Renfrew 1972, 105, 172, 174).

Renfrew's proposed system was rejected by R.L.N Barber and J.A. MacGillivray, who preferred to continue using the tripartite system (Barber and MacGillivray 1980, 141). These scholars suggested that the Kastri group was not contemporary with the Keros-Syros culture of the EC II phase but must have postdated it as it was marked by the introduction of new Kastri pottery shapes and by a decrease in the number of occupied sites (Barber and MacGillivray 1980, 149-150). Additionally, there was a change from undefended settlements in the EC II Keros-Syros phase to fortified Kastri-type sites such as Kastri itself, Mt. Kynthos on Delos, and Panormos on Naxos, which all were located on hilltops near the sea. Barber and MacGillivray assigned the finds from Kastri to a newly created EC IIIA phase because its pottery was closely related to Period III at the stratified site of Ayia Irini (Table 1). The authors also noted that at Phylakopi itself, Kastri material was absent at levels with Phylakopi I pottery (Phylakopi I.ii-iii), which was assigned by them to EC IIIB, following the Phylakopi I.i level with EC II/Keros-Syros material (Barber and MacGillivray 1980, 151-152). Significantly, the appearance of EC IIIB material at Phylakopi coincided with the abandonment of Ayia Irini (Barber and MacGillivray 1980, 147), indicating to the authors that the Kastri group represented a disruption to regular settlement patterns on the islands. The authors also cited evidence from the Heraion on the island of Samos off the coast of western Anatolia to further support their EC IIIA-IIIB division. At the Heraion EC IIIA imports from the Cyclades were associated with periods II and III, with a clear divide between these and the EC IIIB imports associated with period IV (Barber and MacGillivray 1980, 152).

J. Rutter, while accepting the usefulness of both the tripartite system and Renfrew's cultural groups, disagreed with Barber and MacGillivray's relative dating of the Kastri group to EC IIIA. He argued that it must have been earlier given its undeniable links to the Lefkandi I assemblage on the Greek mainland, which was securely dated to the EH IIB phase, being stratified below the EH III Tiryns culture at Eutresis and Kolonna. Thus, Rutter proposed to subdivide the EC II phase, assigning the Keros-Syros culture to EC IIA and the Kastri group to EC IIB (Table 1). Moreover, Rutter dated the Phylakopi I phase not to EC III but to the MC I phase because of its material similarities to the MH I and MM IA phases on the Greek mainland and Crete, respectively. He presented evidence from Kolonna on the island of Aegina, where Phylakopi I shapes such as incised duck vases and conical pyxides did not appear until the beginning of the MH I phase, when they were found in high concentrations. Although Rutter proposed an earlier start date of the MH I phase than previous scholars had estimated, arguing on the basis of evidence from Kolonna that this phase began ca. 2200/2150 BCE, his proposed dating scheme still left a gap in the Cycladic record in the EC III phase, between the end of his Kastri/EC IIB phase and the beginning of the Phylakopi I/MC I phase. Rutter argued that this gap of about a hundred to a hundred-fifty years represented an absence of human occupation in the Cyclades, which coincided with a decline in mainland Greece in the EH III phase. As further evidence for a gap in occupation on the islands, he pointed out that EH III material was dispersed as far as Troy but was not found on the Cyclades (Rutter 1983, 69-71).

Rutter's interpretation was critiqued by MacGillivray, who dismissed the existence of an EC III gap and rejected the dating of the Kastri/Lefkandi I group to the EC IIB phase, arguing again that pottery shapes of the Kastri group were associated with the EC IIIA stratum at Ayia Irini (MacGillivray 1983, 82). MacGillivray's evidence for mainland connections with the islands, however, included just three vessels found at Mt. Kynthos on Delos, consisting of a tankard fragment with incised detail relating closely in decoration and shape to those found in a

secure EH III context at Korakou, and two examples of the shoulder-handled tankard shape that were closely tied stylistically to EH III pottery (MacGillivray 1983, 82). MacGillivray's evidence may have successfully pushed the existence of the Kastri/Lefkandi I group forward into the EC III phase, casting doubt on the early part of Rutter's alleged EC III gap, but he did not disprove the chronological position of Lefkandi I and Kastri material in the late EH/EC II phase. In response, P. Sotirakopoulou argued that the Kastri/Lefkandi I material was not confined to either the EC II or the EC III phase, as they were chronologically defined at the time. She suggested instead that Kastri ceramic shapes were present both at the end of the EC II phase, overlapping with the Keros-Syros culture, and at the beginning of the EC III phase at Kastri, at Ayia Irini, and on mainland sites such as Orchomenos and Thebes, where late EH II wares seemed to connect closely to EH III shapes (Sotirakopoulou 1993, 13-14, 17-18). Thus, she saw the Kastri group and its mainland equivalent, the Lefkandi I group, as occupying a transitional stage between the EC II and EC III phases (Sotirakopoulou 1993, 18-19).

The existence and length of Rutter's EC III gap has remained the subject of intense debate for about three decades, to such an extent that an entire collection of papers entitled, *Minding the Gap* was published in 2013, in a volume honoring Rutter's lifetime work. Within this group of papers, prominent prehistoric Aegean scholars presented their ideas of what, if anything, this gap represented. One of them, M.H. Wiener, argued in favor of the gap and posited that severe drought between ca. 2300-2000 BCE documented in Egypt could have extended to the Aegean and may have been a catalyst for increased movement and potential violence in the Aegean islands (Wiener 2013, 581-582, 588).

The most illuminating study in this volume was by O. Kouka, who cited new evidence that had been brought to light through excavations in the eastern Aegean islands and the western Anatolian littoral (Kouka 2013, 569-576). Kouka convincingly demonstrated that this new evidence had filled Rutter's perceived gap in the archaeological material, because settlements

such as Miletos and Liman Tepe on coastal mainland Anatolia and the Heraion on the nearby island of Samos showed continuous occupation throughout the proposed gap period, and they received Cycladic imports all through this time. At Liman Tepe, there was a notable decline in house building and other activities in the EB IIIB phase, which would have corresponded to the last part of Rutter's gap, but the settlement remained occupied. Additionally, Kouka introduced evidence supporting Rutter's EB IIB date of the Kastri/Lefkandi I group and Sotirakopoulou's extension of its date into the early part of the EB III phase, as she demonstrated that the materials assigned to Kastri and Lefkandi I elsewhere in the Aegean occurred in both the EB II late and the EB IIIA phases at Miletos, Liman Tepe, and the Heraion on Samos (Table 1; Kouka 2013, 576; Kouka and Menelaou 2018, 125). Additionally, Miletos and other eastern Aegean sites contained typical Phylakopi I shapes such as duck vases/askoi in levels contemporary to the EB IIIB phase, further supporting the chronological succession of these Cycladic material assemblages (Kouka 2013, 574-575). By successfully linking the Kastri/Lefkandi I group to stratified EB II late and EB IIIA material in the eastern Aegean, Kouka decisively determined that they can be assigned to the EC IIB and EC IIIA phases.

Kouka's work as well as that of other recent scholars, such as V. Şahoğlu, has demonstrated the importance for Aegean chronology of regions of the Aegean previously given little scholarly attention. Excavations at these eastern Aegean sites are largely ongoing, thus the proposed chronological system is frequently subject to adjustments, as new material is studied by Kouka, Şahoğlu, and others. The chronological system utilized in the present thesis is Kouka and Menelaou's system with slight alterations dividing the EB 3 period into two phases, defined by the transition from Heraion IV to V (2018, Tab. 1, 154). The system utilized is as follows (Table 1): EB 1 (3200-2750 BCE), EB 2a (2750-2550 BCE), EB 2b (2550-2200 BCE), EB 3a (2200-2100 BCE), EB 3b (2100-2000 BCE), and MB (2000-1700 BCE).

In the following, the significance of the Kastri/Lefkandi I phenomenon and the history of its scholarship will be discussed in greater detail.

The Kastri/Lefkandi I Phenomenon as Interpreted by Rutter (1979), Stos-Gale et al. (1984), Stos-Gale (2016), Mellink (1986), and Davis (1992, 2001)

Rutter was the first scholar to assert that the Lefkandi I and Kastri pottery assemblages were one and the same, and he decisively demonstrated that they were connected to the western Anatolian coast (Rutter 1979, 1). He identified a group of small and medium sized open ceramic shapes such as wheel-made shallow bowls and plates, one-handled tankards, two handled cups, *depa amphikypela*, and lentoid flasks as having appeared first at western and south-central Anatolian sites such as Troy II, the Heraion, and Tarsus, and then subsequently appearing at the Aegean sites of Ayia Irini, Kastri, Mt. Kynthos, Lefkandi and Manika (Rutter 1979, 4-6). Rutter argued that the evidence for Kastri/Lefkandi I pottery at these sites in the Cyclades and the east-central part of mainland Greece, respectively, represented a chain of ceramic migrations, not to be confused with population migrations, beginning in western Anatolia and travelling across the Aegean. He also noted the way that Lefkandi I ceramic shapes interacted with local Helladic shapes. Based on his studies at Ayia Irini, Lerna, and Lefkandi, he argued that the Lerna EH II (Korakou) pottery styles fused with Lefkandi I shapes to become the EH III Tiryns assemblage.

Rutter also demonstrated that the sudden introduction of Kastri/Lefkandi I pottery shapes represented a shift away from the use of Keros-Syros and Korakou eating and drinking sets, and towards the use of a new high-quality Anatolian set which came together with the adoption of a new pottery production technology involving the use of the potter's wheel. He interpreted the introduction of new eating and drinking vessels as evidence for some type of "major event" in those areas (Rutter 1979, 8). He cautiously brought up the possibility that this event could have involved human population movement from Anatolia and warned that only further examination of

other material features (architecture, settlement patterns, etc.) could determine whether this had been the case.

Following up on Rutter's study, Stos-Gale et al. argued that the Kastri/Lefkandi I assemblage indeed was introduced by Anatolian immigrants, based on the Anatolian origin of metal shapes such as the slotted-spear head and on their provenance analysis of the bronzes from Kastri, which showed close correspondences with finds from Troy. Whereas all other known EC II sites had arsenic bronzes low in tin, the majority of metal objects at Troy and Kastri were composed of tin-bronze with less than 3% arsenic (Stos-Gale et al. 1984, 23). Moreover, lead isotope analysis showed that the two settlements likely shared some copper sources, although the 1984 study was preliminary and the exact sources of the copper could not be determined (Stos-Gale et al. 1984, 23). Troy had copper derived from at least five different deposits, at least two of which were dispersed outside of the northwestern region of Anatolia. Three of these deposits were also likely the sources for copper ore at Kastri. The authors also compared lead isotope profiles of the objects from Kastri to those of two bronze objects from the adjacent cemetery of Chalandriani, which was used both before and during Kastri's short occupation. Those two metal objects, associated with Keros-Syros shapes, were arsenic bronzes that exhibited typically Cycladic low percentages of tin (less than 0.5%), much lower than those of the tin bronzes from Kastri (Stos-Gale et al., 1984, 31-32). The authors also noted significantly that the evidence for metalworking at Kastri only indicated the melting and casting of bronze materials, and not ore extraction, suggesting that the occupants processed scrap metal, and not raw ores, imported from elsewhere, with Troy being a plausible candidate (Stos-Gale et al., 1984, 31). Because of the evidence for tin bronze casting at Kastri, they concluded that the site represented a settlement of Anatolians, most likely from Troy or the Troad. In a more recent study, Stos-Gale incorporated additional evidence and refined her earlier theories. The author found that 11 of the 16 metal objects found at Kastri were tin-bronzes, composed of copper originating as far east as modern

Iran and Kazakhstan, but likely not from Anatolia (Stos-Gale 2016, 387). While the majority of these metals originated from further east than Anatolia, it is still likely they were distributed through Anatolia, and thus the theory posited by Stos-Gale et al. in 1984 was not refuted by this newer evidence.

The notion of Anatolian migration was further explored by M.J. Mellink, who argued that Kastri/Lefkandi I ceramic shapes, and specifically the one-handled tankard, the bell-shaped cup, and the lentoid pitcher, were associated not only with Troy or the Troad, but also with southern Anatolian settlements such as Tarsus and Karataş, and southwestern sites such as Aphrodisias (Mellink 1986, 146-147). More importantly, the one-handled hand-made Kastri tankards with horizontal ridges and the specific alignment of the handle to the neck corresponded to those of southwestern Anatolian tankards and not to Trojan wheel-finished tankards (Mellink 1986, 147-149). Significantly, the one-handled tankard and bell-shaped cup appeared suddenly at Tarsus in EB IIIA, after a violent destruction in the EB II phase. This destruction was followed by the introduction of new architecture and customs, which Mellink posited were brought by southwestern Anatolians travelling by sea along the southern Anatolian coast, raiding and (in the case of Tarsus) settling as they went. She suggested that these same groups made attacks on Troy and various northern Aegean islands, as well as expanding contacts or even settling throughout the Cycladic islands and into mainland Greece. Mellink painted a picture of powerful seafaring western Anatolian groups competing for access to the best coastal sites to loot. While she acknowledged that the archaeological evidence available was insufficient, her argument for the importance of the southwest Anatolian coastal region as a bridge between the Aegean and a trade network stretching from central Anatolia to Mesopotamia has been borne out by later excavations and research. Moreover, architectural evidence for increased fortifications in the EC IIB-EC IIIA periods, combined with evidence for short-lived occupation and destruction at many sites, certainly suggests increased violence at this time, as will be argued in the present thesis.

In his 1992 and 2001 reviews of the Cyclades in the Early Bronze Age, J. Davis rejected the idea of Anatolian migration into the Aegean because of the clear continuity he noted of Early Cycladic II (Keros-Syros) material culture in settlements with Kastri material, and the relatively low percentage (ca. 10%) of Anatolian ceramic shapes found at Ayia Irini and elsewhere (Davis 1992, 754; 2001, 74). He also pointed out that fortified settlements were not an innovation of the Kastri group, but had existed in the Cyclades beforehand, such as at EC I Markiani on Amorgos. Thus, in his view, the Kastri material cultural assemblage was simply the result of a “phase of increased interaction between the Cyclades and the southeast Aegean” (Davis 1992, 754).

The Kastri/Lefkandi I Phenomenon as Interpreted by Şahoğlu (2005, 2019), and Kouka (2013, 2016a, 2016b)

Further excavations and research in the succeeding decades have led to a better understanding of the Kastri/Lefkandi I phenomenon. Turkish scholar V. Şahoğlu in 2005 presented the groundbreaking idea of the Anatolian Trade Network (ATN), which he defined as an Early Bronze Age network of land and sea-based trade that connected Mesopotamia and Syria through Anatolia to the Aegean coast. Şahoğlu built on Mellink’s work and on that of T. Efe, who had already developed the notion of an inland Anatolia trade route connecting the southern region of Cilicia to the region of northwestern Anatolia that Efe would designate the ‘Great Caravan Route’ (Efe 2007, 47). Şahoğlu elaborated on these proposals by connecting the inland network to central and southern Anatolian sites on the western coast, such as Liman Tepe, from which trade goods would have been sent across the Aegean via boat. His criteria for identifying sites along this route included evidence for central authority frequently expressed through the establishment of an upper citadel and lower town; monumental fortification walls—especially those with bastions replicating the horse-shoe shape of the bastions at Liman Tepe; and the introduction of a distinct set of material culture including tin bronze, the potter’s wheel, and a specific ceramic

drinking and eating set similar to that of the Kastri/Lefkandi I group, comprising the depas, bell-shaped cup, shallow bowl, and one and two-handled cups, many of which were wheel-made. (Şahoğlu 2005).

These features were found first at Arslantepe in the late 4th millennium BCE, a settlement located in southeastern Anatolia directly north of modern Syria, where its prehistoric inhabitants would have enjoyed direct access to the rich culture and material wealth of Mesopotamia. From Arslantepe, the ATN stretched westward across Anatolia to Kültepe and Kestel and south to Tarsus, through Külliöba to Troy and through Ulucak and Aphrodisias to central-western Anatolian coastal sites such as Liman Tepe and Miletus, reaching the Aegean coast via the large river valleys (Şahoğlu 2005, 342-343 Fig.1). From there, the ATN expanded around 2500 BCE into the Aegean Sea region, which led to the dispersion of the ceramic drinking set, the potter's wheel, and tin bronze technology. In particular, the set of drinking and pouring vessels indicated to Şahoğlu a movement of cultural ideas and practices passed along likely by elite members within these Anatolian trading communities to the eastern Aegean coastal settlements and into the central and western Aegean. Thus, this drinking set's movement across the Aegean was interpreted by him to represent the transfer of intangible ideologies and sociopolitical beliefs related to a centralized authority, a particular vocabulary of power introduced to the Aegean regions from Anatolia. The widespread dispersal of these cultural practices into the Aegean, together with the new technologies of the potter's wheel and tin bronze production, identified first at southwestern Anatolian sites, demonstrated to Şahoğlu the unmistakable signs of human movement.

In Şahoğlu's view, coastal western Anatolian seafaring traders, who served an essential role by bridging the land and sea-based parts of the network, established colonies throughout the Cyclades and into mainland Greece beginning around 2550/2500 BCE, bringing with them these Anatolian ceramic sets, beliefs, and technologies, which are interpreted in the Aegean as the

Kastri/Lefkandi I group. These colonies included Kastri on Syros, Ayia Irini on Keos, Mt. Kynthos on Delos, and Panormos on Naxos as well as Lefkandi and Manika on Euboea, Kolonna on Aegina, and Thebes, Eutresis, and Orchomenos in Boeotia. Some of these settlements had fortifications with horse-shoe shaped bastions resembling those at Liman Tepe, further supporting his hypothesis. Şahoğlu believed that the sea-based extension of the ATN introduced a new scale of sociopolitical organization in the form of centralized authority to the Aegean. It began to decline after 2200 BCE and came to an end around 2100 BCE, as the result of competition between polities which were potentially exacerbated by climatic changes that began around 2200 BCE. While Şahoğlu did not go into detail about the types of conflict this competition bred, the essential feature of fortifications at sites along the route speaks volumes about the increasing threat of violence in this phase (Şahoğlu 2005).

In a later article, Şahoğlu (2019) considered some of the specifics of trading along the ATN, both by land and by sea, and the dangers it entailed. Both routes would have led through a myriad of independent polities and travelers would have needed to carry weapons for their protection. At Aegean harbors such as Troy, Liman Tepe, and Miletos, trade goods coming by land would have been handed over to other individuals with the skills necessary to transport them across the Aegean. The fact that sites such as Kastri were established around the start date of the Aegean extension of the ATN and ended before or around the time of the network's collapse supports their interpretation as Anatolian trade colonies. He further notes that the establishment of a trade colony at Kastri likely would have created tension with the local population in the nearby Keros-Syros settlement of Chalandriani, which has not yet been excavated. The presence of an elaborate fortification system at Kastri and many other potential colonies, and the fact that these sites were typically short-lived further illustrates the dangers involved with participation in the ATN. It is likely that the wealth that was transported along the network attracted hostile attacks.

In such a highly competitive setting, vulnerability was sure to be exploited and, given the sudden end of colonies such as Kastri, it seems that this is exactly what happened (Şahoğlu 2019).

In contrast to Şahoğlu, Kouka (2013) sees the Aegean extension of the ATN not as a movement of colonization but as a period of more intense trade between the inhabitants of the Aegean and coastal Anatolia. Evidence from Liman Tepe, the Heraion on Samos, and Miletos shows that in the late EB II period, i.e., the Kastri/Lefkandi I phase, cultural interaction with the western and central Aegean peaked. Kouka paints a picture of a culturally uniform eastern Aegean island/western Anatolian littoral that served as a link between the land and sea-based portions of the ATN and developed politically and economically from the network's expansion. This growth continued until changes in the economic and political sphere caused by the trade route's expansion forced it to contract, withdrawing its economic benefits from sites on the central Aegean islands and the western Aegean. As a result, many small coastal sites were abandoned, and surviving sites became increasingly nucleated (Kouka 2013).

Elsewhere Kouka suggests that the increased economic importance of sites such as Liman Tepe and the Heraion along the ATN caused population growth which led to a change in political organization and increased wealth (Kouka 2016a, 131; 2016b, 210). After the ATN contracted around 2100 BCE, many, though not all, of these fortified sites were abandoned in favor of simpler architecture and open communal settlements in the very last phase of the EBA (Kouka 2016b, 212). Similarly, in the western Aegean populations gathered increasingly into nucleated settlements on hills near coastal plains (Kouka 2016b, 213). While many sites involved in the ATN shared this or a similar fate, a few such as the Heraion continued to thrive, surviving increasingly dry conditions through the EB III and maintaining trade connections into the Middle Bronze Age (Kouka 2019a, 3-5).

Discussion

This brief overview has shown that the introduction of new technologies (the potter's wheel, tin bronze), and new objects, styles of fortification, and probably new ideas was accompanied by increased evidence for violence in the form of more fortifications and destructions or abandonments of settlements. While conflict and mobility are challenging subjects to address archaeologically, they should not be ignored. Within the field of Aegean archaeology there is a history of scholars attributing social and economic shifts in the Aegean to violent conquests without sufficient evidence, for example Caskey's proposed invasion of Lerna (Caskey 1960, 301). It is no surprise, then, that later archaeologists such as Renfrew reacted to these earlier interpretations by denouncing any explanations that involved colonialist ambitions or violent invasions (Rutter 1993, 113). But rejecting models of conflict and migration risks similar oversimplification. The strong reaction to earlier invasion theories inadvertently led to an equally problematic archaeological bias that disproportionately favored interpretations of change based only on peaceful interactions and local innovation. Thus, many archaeologists became resistant to recognizing any evidence of violence. More recent researchers are reaching an equilibrium of sorts in approaching systems of change in the Bronze Age Aegean by proposing more nuanced models considering mobility and conflict in addition to indigenous invention (e.g., Şahoğlu 2005; 2019; Angelopoulou 2017). To this attempt at equilibrium, I wish to add my own nuance by exploring the possibility of piracy in the Early Bronze Age Aegean.

In this thesis, I will explore whether the growing wealth of the Anatolian Trade Network and its seabound extension attracted those with the motivation to make a quick profit and the means—in the form of advanced seafaring capabilities—to do so. But before we examine the evidence, it is necessary to determine whether piracy may have existed in the Early Bronze Age Aegean, what form(s) it could have taken, and how we can identify it.

CHAPTER TWO

PIRACY AND THE ANATOLIAN TRADE NETWORK IN THE EARLY BRONZE AGE AEGEAN

What is piracy? Initially, it seems to be a relatively straightforward concept, typically defined in modern pop-culture by recent movie productions or exaggerated costumes. Often, the term invokes images of eye-patches and rum, long beards and parrots—comedic caricatures of threats faced by nearly every advanced civilization until the present. But the concept of piracy is markedly more complex than a child’s Halloween costume, and much older than its hay-day in the eighteenth century. In fact, the practice of piracy may predate its use as a term altogether (Hitchcock and Maeir 2014, 625).

Defining Piracy

To provide a complete definition of the term piracy for the purposes of the present study, a wide variety of aspects associated with the word, now and in the past, must be considered. Perhaps the most consistent element associated with piracy is that of maritime travel. Even in its modern context, piracy is often associated with seafaring. For example, the Merriam-Webster dictionary offers the definition as simply “an act of robbery on the high seas” and as “an act resembling such robbery” (Merriam-Webster 2003, 943). While piracy of this nature is still practiced today, the pirates we tend to think of are those of the sixteenth through early nineteenth centuries, who existed as a threat to larger state-level societies, taking advantage of the weaknesses and blind spots of these states (Linebaugh and Rediker 2000, 62-63; Hitchcock and Maeir 2014, 624-625). P. Linebaugh and M. Rediker (2000) described the sixteenth and seventeenth century pirates of the Atlantic Sea as “commoners, the vagabonds, the soldiers and sailors, the servants and the slaves....” who “came from far and wide and travelled further” to challenge the social order established by the ruling class, and to take advantage of the

amalgamation of resources and material wealth growing within those states (Linebaugh and Rediker 2000, 69). Their groups were composed of a wide variety of ethnic and economic backgrounds, all united in an interest in gaining resources and wealth (Linebaugh and Rediker 2000, 61-62). These groups prospered despite and sometimes because of the existence of state organized powers, which generated wealth and engaged in trade overseas of which the pirates could take advantage. Morality, as defined by the state powers, was largely not on the side of those pirates. These outlaws, flying their skull and crossbones flag as an act of defiance in the face of larger organized powers, are the pirates who have captured popular imagination today.

But piracy existed long before state-level societies ruled over large expanses of land and sea. And the negative connotations associated with it, which typically resulted from definitions of piracy provided by the state organizations upon which pirates preyed, have not always existed. Given the many forms that piracy can take in different kinds of societies, it is important to devise a broad definition of piracy that applies to any society--whether state-level or pre-state--and that can be used in the present study, which will deal with the Aegean in the late 3rd millennium BCE. I propose to expand on P. de Souza's definition of pirates as "armed robbers whose activities normally involve the use of ships" (de Souza 1999, 1-2), and define piracy as the act of raiding by ship and taking persons or goods from an individual or group without consent, typically but not exclusively through the threat or use of violence with the primary goal of gaining portable wealth. This definition encompasses those pirates with which we are familiar, but also includes pirates in areas and time periods popular culture has yet to explore. Although not as familiar to the broad public, earlier forms of piracy did exist in the prehistoric Aegean, and include activities described in some of western culture's oldest epics and texts. In the following we will explore the role that piracy may have played in these early societies.

Piracy and Heroic Societies

The earliest documented accounts in the Aegean to explicitly mention piracy are in the Homeric epics, the *Iliad* and *Odyssey*, thought to have been first written down as early as the eighth century BCE, with the events of the epics having taken place, if at all, some four hundred years earlier (Bennet 1997, 511-513). While current scholarly consensus dates the first written record of the epics towards the end of the eighth, the seventh, or even the sixth century BCE (Burgess 2001, 49-53; Janko 2012, 20; West 2012, 224), the events of the Trojan War, which are the subject of the *Iliad*, are nowadays, because of new studies at Troy, attributed to the end of the Mycenaean palatial period, ca. 1200-1180 BCE (Powell 2014, 22; cf. Pieniążek 2016, 517-519).

The *Iliad* and *Odyssey*'s accounts of piracy, while somewhat limited and difficult to ascertain, are valuable literary sources, as they depict a type of piracy in the Aegean that was markedly different from that practiced in later state-level societies. The epics, while describing events that supposedly took place in the early 12th century BCE, likely reflected more accurately the beliefs and practices commonly held in 8th-6th century BCE Greek society, contemporary to their first recording (de Souza 1999, 17). There were, however, likely also fragments of earlier beliefs and practices represented in these epics, which survived as the stories were passed down orally for generations before first being written down (Nagy 2004, 25). According to my own definition, which includes all acts of sea-based raiding and would be indistinguishable from acts of sea-based warfare within the society depicted in the Homeric epics (de Souza 1999, 21), piracy occurred numerous times throughout the *Odyssey* and *Iliad*. The piracy and raiding as described in the epics took place within a society in which the political power holders were unlikely to intervene unless these raids and ambushes directly posed a threat to them (Hitchcock and Maeir 2014, 625). Many types of thievery and violence were sanctioned within these epics, as the society represented in them was governed by a vastly different set of moral and societal codes. Instead of fully condemning acts of piracy or thievery, there are instances within the Homeric

epics in which high status is achieved through such acts (de Souza 1999, 17-18). While not depicted as wholly positive within the *Iliad* and *Odyssey*, the accounts do make it clear that sea-based thievery was viewed in an entirely different way by the Homeric audience compared to how it is seen in the modern Western world.

For my purposes in this thesis, I refer to “heroic” society as a society in which honor plays a central role in establishing prestige, social ranking or hierarchy, and in which a central element is maintenance, as prestige gained could easily be lost if not continuously reaffirmed. It should be noted, however, that the Homeric audience’s concept of the Greek hero in the *Iliad* and *Odyssey* was potentially quite different. This kind of society can also be found in other literary sources, such as in the early medieval northern European epic poem *Beowulf*, about which K. Hume asserts “The author does not seem to have counted successful foreign fighting as evil,” because “a king had to extract wealth from someone if he was to maintain order in his own realm. Without rings to give, he could not hope to keep his retainers loyal” (Hume 1975, 9). Although in an entirely separate region and era, the societal practices described within this epic share with heroic Greek society a concern with establishing hierarchy within a group, and continuously maintaining one’s rank by whatever means necessary, including raids. In such societal organization, there is little concern for those existing far outside of the group, who are viewed primarily in terms of the resources one can extract from them.

Such resources played a central role in Greek heroic society, as they were means by which an individual could acquire and maintain honor. The element of honor central to heroic society is known as τιμή in the Homeric Greek epics (Powell 2014, 26). Gaining honor, typically through acts of war and raiding, served to increase a man’s prestige, and elevate him above his peers to establish or reinforce an existing hierarchy. In the epics, these leaders in war also were leaders in daily life and were admired for their raiding and military prowess. Since raids and wars would often result in the acquisition of resources and material wealth, honor as depicted in

Homeric society could often be physically measured through a prize or γέρας (Powell 2014, 26). These prizes often took the form of material belongings and food resources (Powell 2014, 26). This explains the deep offense taken by Achilles when part of his spoils, the woman Briseis, was wrongfully taken from him by Agamemnon (de Souza 1999, 20; Adkins 1972, 3; *Il.* 1. 213-214). Thus, raiding and war were endemic to the society depicted in the Homeric epics, with piracy extending this concept to raiding and violence occurring by boat. The societal practices related to raiding and prestige depicted in the epics from ancient Greece and in early medieval northern Europe are similar in many aspects to various groups that were the subject of modern ethnographic studies. In these modern studies, various groups established pre-state societal organizations ranging across a broad spectrum from egalitarian segmentary societies to chiefdoms, as defined by E. Service and M. Fried, and later refined by Renfrew and Bahn (Renfrew and Bahn 1996, 166; Service 1971, 133; Fried 1967, 104-106). Understanding the society depicted in the Homeric epics as it relates to these categories of socio-political complexity allows us to better comprehend it within the ethnographically established real-life patterns of societal organization. Doing so gives us the tools to further explore the societal organization depicted in the Homeric epics, and to utilize archaeological evidence in order to investigate if fragments of societal practices as described in the epics may have survived through oral and later written record from the Aegean Bronze Age, perhaps as far back as the 3rd millennium BCE.

Scales of Socio-political Complexity of Heroic Societies and Ethnographic Comparanda

Segmentary societies, according to Renfrew, are relatively small-scale, usually consisting of 100 to 1000 people, who live in independent villages that share religious and burial practices and are associated with each other through kinship ties yet lack a sharply defined ranking system (Renfrew 1996, 167-168; Sahlins 1985, 46). Even within this broad category, hierarchies can

develop. Big Man society, a subclassification within segmentary society, is defined by the great respect accorded to individual men (or women) because of their ability to raid or otherwise acquire wealth and provide large feasts or other gifts to their local communities. These Big Men are given elevated status and influence in the community for as long as they command authority (Flannery and Marcus 2012, 95; Lederman 1990, 3). In Big Man societies, status typically is not inherited, and yet it has been noted that the sons of Big Men as a rule become Big Men themselves, benefiting from their father's influence in the community (Marcus and Flannery 2012, 102). In contrast, at the chiefdom level, leadership usually is hereditary. Chiefdoms are societies with social ranking or hierarchy, usually based on kinship, and ruled by a single chief (Renfrew 1996, 167-168; Sahlins 1985, 46). They tend to have a highly ranked warrior class. Heroic societies as defined in this thesis can exist at each of these levels of socio-political complexity, as the following ethnographic case studies show.

An example at the egalitarian segmentary scale is that of the Etoro group on the large island of New Guinea, which is one of several tribes discussed by K. Flannery and J. Marcus, based on research by R.C. Kelly (Flannery and Marcus 2012, 94-96; Kelly 1977). While the Etoro are generally egalitarian, meaning they lack hereditary rank and most elements of inequality, there are a few ways in which men can gain what they call "virtue"—a concept quite similar to Homeric *τιμή* ("honor")--which is the measurement by which they can establish themselves as figures with enhanced prestige (Flannery and Marcus 2012, 91, 94). A significant way of doing so is by leading raids on nearby groups (Flannery and Marcus 2012, 94-95). While the Etoro men of prestige never rise to official roles of leadership, their prestige serves to unofficially distinguish them from the other members of their group (Flannery and Marcus 2012, 94-95). The concern, even among the generally egalitarian Etoro, with obtaining and increasing prestige illustrates the significance of honor as one of very few social distinctions in this society. Whilst the Etoro's hierarchy of "virtue" never extends beyond the raid-conducting man of

prestige, other groups in the area with significantly larger populations, such as the Chimbu of New Guinea, further developed this hierarchy into a full-on Big Man society (Flannery and Marcus 2012, 96). Big Men, making up just the top five percent of the Chimbu population, have substantial influence over their groups, and gain this in the same way as the Etoro men of prestige do: by leading raids on neighboring tribes and holding large feasts/giving gifts to members of their communities (Flannery and Marcus 2012, 96-97). The element of gift giving present among the Chimbu is essential to maintaining Big Man status, dictating that prestige must be earned, or bought (Flannery and Marcus 2012, 96-97). Although somewhat more complex, Big Man society among the Chimbu shares with the Etoro an emphasis on wartime prowess and the ability to accumulate sharable wealth, in which the leaders of their societies are those most capable of gaining, retaining, and sharing wealth, and the glorified honor it brings. In both tribes, prestige gained from successful raids must be maintained if one's position is to be kept.

This emphasis on warfare and raiding remains of importance in heroic societies at the complex chiefdom level, such as those that existed between c. 1600 and the 20th century on the islands of Hawaii and Oahu (Cordy 1974, 186-187). R.H. Cordy, when describing the organization of these chiefdoms, specifies that “warfare was marked at contact [with European visitors] and consisted of both raids and wars for territory and political control” (Cordy 1974, 186), a view echoed by P.V. Kirch's more recent account (Kirch 2010, 69-72). As a complex chiefdom level society, it had large populations with distinct hierarchical levels and physical manifestations of social rank in the forms of differences in house sizes and burial goods between commoners and chiefs, and of tribute paid by commoners to chiefs as part of a redistributive economy (Cordy 1974, 186-187). T. Earle later argued that redistribution was more of an occasional occurrence than it was the basis of the economic system, but that the practice would most frequently consist of commoners contributing subsistence goods to elites, who would in turn hold occasional feasts to share portions of their acquired resources (Earle 2002, 92-93). Since

lineage was essential to social status in Hawaiian chiefdoms, their social hierarchies were substantially more rigid than that of the Etoro and Chimbu (Earle 2002, 73), and there was no constant need to maintain a leadership role. However, within the chiefly lineage, ambitious men sought to gain a higher position by fighting and raiding at the chief's side (Earle 2002, 73). Although the ability to elevate one's position along the hierarchy was limited to elites, the means through which to achieve that elevation remained consistent with Etoro and Chimbu practice: achieving heroic status through one's wartime and raiding capabilities.

These examples from New Guinea and Hawaii demonstrate that in heroic societies honor derived from prowess in raiding and war leads to gaining social prestige. Even though they represent different types of pre-state level societal organization, the three examples share an emphasis on a man's ability to gain honor through successful acts of raiding. None are restricted by a morality that would condemn acts of violence or thievery committed against outside groups, nor are they restricted by a legal code that would prohibit it. Since all represent pre-state level societies, the "explicit authority [of a ruler] to establish laws and to enforce them by the use of a standing army" that defines state-level society is not applicable to them (Renfrew 1996, 168). These examples have direct implications for our understanding of piracy and warfare in the prehistoric Aegean, and potentially of the society depicted in the Homeric epics (Scully 1990, 54-55, 106-107). For also the Aegean in the late 3rd millennium BCE—the focus of the present study—was home to pre-state level societies (see below). Moreover, later ancient Greek authors mention the existence of continuous violence and piracy in the distant past.

Piracy in the Prehistoric Aegean: Literary Evidence

The different role and status of piracy in pre-state level societies and later Greek state-level society was noted by the Athenian historian Thucydides, writing in the fifth century BCE (de Souza 1999, 27). Thucydides attributed the success of the mythical king Minos of Crete, who

he claimed was the first to establish his rule over much of the Aegean Sea, to his naval power (Thuc. 1. 4). One of his first acts as ruler, according to Thucydides as translated by C.F. Smith, was to “clear the sea, as far as he could” of piracy, which would otherwise negatively impact his revenue (Thuc. 1. 4).

Many modern scholars question the existence of a Bronze Age Minoan thalassocracy as described by Thucydides, and others debate whether, if it existed, it should be situated in the Minoan palatial period (c. 1900 - 1450 BCE) or the period of sole rule by Mycenaeanized Knossos (c. 1450-1375 BCE; Reynolds 2009, 326-327; Wiener 2013, 149-150). Nevertheless, it cannot be denied that the Minoan palatial period (c. 1900 - 1450 BCE) was one of great prosperity and intensive maritime trade, with thriving settlements being located at or close to the sea. Such maritime settlement pattern and prosperity arguably would not have been possible if piracy was a scourge. Thus, it is conceivable that Thucydides referred to the initial establishment of Minoan palatial societies, c. 1900 BCE.

Thucydides remarked that prior to the development of state-level society in the Aegean, “the occupation” of piracy was considered markedly different from what it became under state rule, and it was associated with “something even of glory” (Thuc. 1. 5. 1). Before state powers were established, the various regions of Greece, especially those with more fertile soil, were subjected to the constant threat of piracy and raiding (Thuc. 1. 2). Thus, it is conceivable that piracy was a frequent practice in the Aegean even before the establishment of Minoan palatial society c. 1900 BCE.

Similarly, the Homeric epics depicted piracy, utilizing my own definition as the act of raiding by ship, as a common activity practiced even by the heroes. Homeric accounts, however, do not characterize piracy as something entirely positive. Piracy in Homeric society simply followed a different set of social rules from those legally enforced by state powers. In order to demonstrate these differences in morality, we will explore instances of piracy in the *Iliad* and

Odyssey (as translated by B. Powell). As was previously stated, in the society depicted in Homer's epics the accumulation of wealth was very closely associated with the honor and status of an individual (Adkins 1972, 1). An example of piracy seen in a positive, heroic light is the passage in the *Odyssey* when Odysseus recounts to the Phaeacian king and his court that he had attacked the town of Ismarus along the coast of ancient Thrace (*Od.* 9). He and his men raided the town, killing the men and taking the wives, and Odysseus shared "their riches equally among" the men (*Od.* 9. 43). It is important to consider the setting in which Odysseus tells this story: he is a lone shipwreck survivor who has been received as a guest by the powerful Phaeacian king and his people. It would have been uncharacteristically unwise of clever Odysseus to offend his hosts while being in such a vulnerable position, yet he does not hesitate to include an account of his raid. This indicates just how widespread the practice of raiding was within Homeric society. To Odysseus and to the Phaeacians—and thus we can assume perhaps, to Homer's audience—conducting town-sacking or raids was not always considered to be morally wrong, and Odysseus clearly did not expect any form of punishment for his actions.

Another account in the *Odyssey*, however, provides us with a nuanced interpretation of the word pirate. This is Odysseus's encounter with the cyclops Polyphemus, whose cave Odysseus and his men explore in hopes of finding treasures or resources to take. When Polyphemus discovers the men in his cave, he is wary and asks them "Are you on business, or roaming round without a goal, like pirates, who risk their lives at sea to bring disaster to other people?" (*Od.* 9. 253-56). Here the connotation of pirates (ληστυῆρες) is negative. For Polyphemus, who makes his living as a shepherd, raiding is a negative deed and as punishment, or precaution, he decides the would-be pirates should instead become his dinner. Although the detailed description of the brutal deaths that follow casts Polyphemus in an unsympathetic light, the truth of the situation is that he is a shepherd concerned with the protection of his flock, whose suspicion ultimately is justified. In the interaction between Polyphemus and Odysseus, the

victims of the raiding acts are acknowledged, and piracy is an entirely negative and predatory concept. Acts of sea-based raids are frequent within the Homeric epics. Whether this represents the reality of the contemporary 8th-6th centuries BCE in Greek society, or whether it is a vestigial memory preserved within the epics from much earlier times is unclear. The frequent depictions of piracy in the epics may represent a reality shared by the time contemporary to and the time well before the epic's first recording.

The Homeric epics indicate a basic social framework for the Greek heroic society in which various types of piracy, raiding, and town-sacking were regularly practiced, but purely literary accounts cannot be interpreted as entirely factual. The historicity of Homer's epics is a matter of much debate (Powell 2014, 1-2), and despite Thucydides' great qualities as a historian, his authority regarding these very early periods is questionable (Cook 1955, 267; Reynolds 2009, 326). Nevertheless, the details of the morality that governed heroic society agree with later ethnographical and ethnohistorical studies and are probably relatively reliable. It is clear from the preceding discussion that whatever piracy existed in the Bronze Age Aegean can be presumed to have differed significantly from its practice in the sixteenth to nineteenth centuries CE. As Homeric epics and ethnographic comparanda suggest, piracy could have been considered an honorable activity within the context of heroic society, even if it was not inherently considered to be a morally good practice. It simply was a frequent part of everyday life, and it lacked the negative moral implications that it would develop within later, state-level societies. Acts of piracy in the early Aegean as defined in this thesis reinforced the prevalent form of small-scale social order defined by heroic honor and ability.

Given the prevalence of these violent, sea-based acts of piracy in the pre-state heroic society of Homer's epics and the fact that Thucydides dates the practice to before King Minos' supremacy over the Cyclades, it seems justifiable to explore whether piracy existed already in the Early Bronze Age (EBA) Aegean, prior to the establishment of Minoan palatial state-level

society. Piracy before King Minos, according to Thucydides, would have been essentially a free-for-all (Thuc. 1. 5). In such a world, wherever resources were available, and whenever one had the ability to take them, acts of piracy would occur.

Thucydides' account contains important details about the effects of piracy on settlement patterns and other archaeologically visible elements. This and other studies of early piracy make it possible for us to draw up criteria for identifying piracy in the archaeological record of the EBA Aegean.

Archaeological Criteria for Piracy

Since this study will be based on archaeological data, as no historical evidence is available for the EBA Aegean, the next step for us is to establish a set of criteria with which to explore whether practices of piracy, as defined in this thesis as “the act of raiding by ship and taking persons or goods from an individual or group without consent...”, can be identified in the archaeological record this far back in time, and more specifically in the latter half of the period (c. 2550-2100 BCE; Şahoğlu 2005, 339). De Souza argues that the existence and activities of pirates in prehistoric societies in the absence of written sources cannot be traced because pirates, in his opinion, left no material evidence (de Souza 1999, 2, 15). I would disagree with this statement, as it has been suggested elsewhere that archaeological evidence can lead to the identification of piracy (Hitchcock and Maeir 2014, 626-627).

In this thesis, the following criteria will be used:

1. *Settlement pattern*: Evidence for piracy likely exists among the settlements that were victims of their raids. H. Ormerod discusses a common tactic of Homeric and later historical pirates regarding coastal settlements, which consisted of raiding goods and capturing people in order to collect ransom or sell captives into slavery (Ormerod 1967, 31-35). Thucydides describes how pirates in early times, including the Bronze Age, frequently pillaged unprotected villages along

the coast (Thuc. 1. 5. 1). Given this, and accounts mentioned earlier from the *Odyssey*, these land raids were likely common in the real-life times upon which Homeric accounts were based (Ormerod 1967, 49) and may well have occurred earlier in Aegean prehistory. Thus, we could reasonably seek out periods of destruction or reductions in populations of coastal settlements as evidence for pirate raids (Ormerod 1967, 38). Thucydides in fact mentioned the effects of piracy on the location of settlements. He claimed that prior to Greek colonization many settled sites on the islands and the mainland were located at a significant distance from the coastline, to avoid pirate raids (Thuc. 1. 7). While pirate settlements/bases likely always were situated near to the coast to ensure easy access to the water, coastal sites that fell victim to pirate raids were unlikely to have been able to sustain themselves long-term without significant means of protection. Long-term settlement patterns and movement of groups away from the coast likely correlated closely with the frequency of pirate raids (Hitchcock and Maeir 2014, 627). An analysis of broad settlement patterns in the Aegean over the course of the EBA will help us to investigate the existence of pirate activity.

2. *Pirate bases on or near the coast*: L. Hitchcock and A. Maeir raise the point of pirate settlements during the time of the Sea Peoples at the end of the Bronze Age. These were short-lived sites on the coast that existed when piracy was at its height (Hitchcock and Maeir 2014, 630). Although admittedly the settlements Hitchcock and Maeir discuss existed much later than the EBA, the concept of a “pirate settlement” or even simply a “base” can reasonably be investigated for the EBA Aegean (Hitchcock and Maeir 2014, 630; de Souza 1999, 11; and Ormerod 1967, 18). The Sea Peoples settlements may have been short-lived because these were people already on the move (Anthony 1990). The same may or may not apply to potential Anatolian pirate bases in the EBA Aegean. Without the existence of larger powers from which to run, EBA pirate settlements may have been more permanent.

3. *Concentrations of exotic goods*: How then, would one go about identifying a pirate settlement?

The natural topography of the Aegean, with its myriad of islands and natural harbors, is especially well-suited for maritime travel as well as piracy. Ormerod argued that travel by sea along the Mediterranean was common in Antiquity, as mountainous and rocky terrain limited travel over land (Ormerod 1967, 15). The EBA was a period of much seafaring and maritime trade in the Aegean (Kouka 2016, 203). However, determining how to distinguish piracy from trade in the EBA Aegean presents a unique set of challenges. In the EBA, trade between mainland Greece, the islands (including Crete) and the coastal region of Anatolia formed a complex network of relationships and dependencies, which will be discussed in chapters 3 and 4. The same could be argued for acts of piracy. De Souza points out that both trade and piracy are motivated by an “accumulation of wealth” and are active in “the movement of goods and/or persons across long distances” (de Souza 1999, 22). Coastal settlements involved in maritime trade or piracy would likely share cultural commonalities, or at the very least contain similar types of exotic goods.

4. *Weapons/trauma*: The addition of large collections of weapons at a site would be particularly of note as an indicator of warfare or piracy. As Thucydides mentions that many men in these early times of prevalent piracy carried weapons as means for personal defense (Thuc. 1. 6), a significant quantity of weapons in graves suggests a culture of warfare, which in these pre-state societies likely would have included piracy. Evidence for trauma and violence discovered on the bodies buried in cemeteries dating to the EBA would further affirm a violent lifestyle indicative of piracy. If weapons and war trauma would be found in addition to the accumulation of valuable items, it would point more strongly to piracy.

5. *Settlements on non-arable land*: Ormerod, relying on accounts by Pliny and Strabo, argued that a lack of natural farmland in the Mediterranean led inhabitants in many areas to develop alternative means of acquiring sustenance as far back as the EBA, if not earlier (Ormerod 1967,

14-15; Broodbank 2000, 40). A common alternative means of obtaining sustenance, according to Thucydides and echoed by Ormerod, was piracy (Thuc. 1. 3. 5.; Ormerod 1967, 15), although trade could have played this role as well. Thus, coastal sites with concentrations of wealth, weapons, and war trauma, as mentioned above, become increasingly significant as potential pirate settlements if they are located in areas of limited agricultural potential.

6. *Trade routes/hidden spaces*: Furthermore, the likelihood of piracy increases if such sites are located along trade routes. Papageorgiou identifies specific seasonal and annual patterns of sea-surface circulation routes, winds and tides in the Aegean with which seafarers would have been familiar (Papageorgiou 2008, 9). Such circulation patterns would have made specific routes of travel preferable. Of course, sites located on trade routes may have been involved with trade as well, as both pirates and maritime traders would have had great familiarity with the tides of the sea and the rocky coasts of the Aegean (Ormerod 1967, 13-15). Only pirates, however, would have been concerned with features of the coast which would have allowed them to easily take advantage of other sea-travelers (Ormerod 1967, 13-15). This would have included locations near so-called “choke points” along trade routes. “Choke points,” are defined by Hitchcock and Maeir as “constricted maritime routes as defined by capes, straits, and islands” between which pirates could ambush travelers (Hitchcock and Maeir 2014, 627; Papageorgiou 2008, 9). Alcoves, caves, and other geographical barriers along such routes, which existed in abundance among the rocky coasts and islands of the Aegean, are also of note as places in which pirates could have retreated after ambushes (Georgiou 2012, 525; Ormerod 1967. 26-27). Sites that can be identified as having existed along these routes will be examined in detail as possible pirate settlements, especially when evidence in the form of hidden caves/alcoves and choke points exists (Hitchcock and Maeir 2014, 630).

7. *Ships*: As argued by Ormerod, pirate tactics often utilized the element of surprise; ambushing unsuspecting travelers who out of necessity would have needed to travel through pirate hunting

grounds as described above (Ormerod 1967, 26-27). The nature of pirate tactics would necessitate speed, which was likely achieved using smaller and more navigable ships (Georgiou 2012, 525; Ormerod 1967, 26). Those ships are likely to have had a large complement of oarsmen in order to be mobile even with bad wind or no wind (Broodbank 2000, 102). Evidence of such ships in artistic depictions, or routes along which they would be at an advantage, can be tied to acts of piracy.

8. *Fortified settlements*: Thucydides mentions that fortifications were built on many Cycladic islands, usually "in the more fertile parts of the islands at a distance from a town" as defenses against piracy (Thuc. 1. 7; Ormerod 1967, 41-42). Ormerod expands on this and mentions evidence for towers and forts throughout much of the ancient and post-ancient Greek world even into the 19th century (Ormerod 1967, 39). The construction of fortifications, which began in the Aegean in the Chalcolithic period, seems to closely correlate throughout time as means of defense against warfare and piracy (Rutter 2011, Lesson 4). Fortifications dating to the EBA can be associated with sites fearful of warfare or of pirate attacks. The occupants of these sites, even if they themselves might have engaged in acts of piracy, were likely still at risk of violent attacks and raids from other groups.

To summarize, I will use the following criteria in this study to investigate the possibility of piracy in the EBA Aegean. It must be stressed that a single criterion cannot be used to identify piracy, but rather that a case for piracy will be stronger as more criteria are positive.

1. Change in settlement pattern with large-scale drops in population or waves of destruction among nearby coastal site, and many sites moving inland
2. Evidence for violence in the form of fortifications and watchtowers; the movement of settlements to naturally defensible areas; evidence for weapons production in settlements; the inclusion of weapons in graves and trauma on human remains

3. Coastal sites that persist when others move inland may be pirate settlements. This likelihood is increased if these sites have hidden harbors or mooring places; they are fortified and located in naturally defensible areas; they are hidden from obvious view by geographical barriers; they have little or no arable land; they are situated along maritime trade routes, near “choke points;” and they have significant concentrations of exotic and/or valuable materials

All of the above criteria aim to identify archaeologically visible remains of piracy in the Early Bronze Age Aegean. In the following chapter, an overview will be provided of settlement histories, connectivity, mobility, and evidence for conflict in the Aegean before, during, and after the westward extension of the ATN. In chapter 4, the criteria for piracy will be applied to this evidence in order to evaluate the potential existence of piracy in these periods.

CHAPTER THREE

SURVEY OF SETTLEMENT PATTERNS, CONNECTIVITY, MOBILITY, AND CONFLICT IN THE AEGEAN, EB 2- MB

The Aegean extension of the ATN and the Kastri/Lefkandi I phenomenon in the EB 2b-EB 3a period originated from coastal western Anatolian settlements such as Troy and Liman Tepe and from eastern Aegean island sites with strong cultural ties to Anatolia, such as Poliochni on Lemnos, Thermi on Lesbos, and the Heraion on Samos. While Anatolian influence is apparent in the fortification architecture, metallurgy, and ceramic assemblages of a plethora of sites all through the central Aegean islands and the east-central Greek mainland, there are sites where this material is notably concentrated. In the central Aegean islands, such concentrations of Kastri material are found at the settlements of Markiani on the island of Amorgos, Panormos on Naxos, Kastri on Syros, Ayia Irini on Keos, and Palamari on Skyros. Lefkandi I material on the Greek mainland, and its adjacent islands is primarily concentrated around the Gulf of Euboea at places such as Lefkandi, Eretria, Manika, and Mitrou, but it is found also further inland at settlements such as Thebes and Orchomenos. The Kastri/Lefkandi I phenomenon substantially changed the trajectory of development in these regions in terms of settlement pattern and material culture.

In this chapter, settlement patterns in the Aegean and changes in material culture will be investigated diachronically in the course of the EB 2a-MB (2750-1700 BCE) phases, i.e., before, during, and after the Kastri/Lefkandi I phenomenon, in order to evaluate the possible role played by violence and piracy within the extension of the ATN and within the larger scope of the Aegean. In view of the discussion of piracy in pre-state societies in the previous chapter, I will discuss changes in settlement patterns as well as access to trade routes and sources of subsistence. Evidence for societal organization will be evaluated in order to situate findings within their proper socio-political context. Questions related to conflict and safety will be addressed by

examining fortification systems, strategic site placement, and evidence for destruction and violence. This will be followed by an in-depth examination of material evidence related to changes in connectivity and mobility. Connectivity will be viewed through the lens of the movement of goods and cultural traits and the directional transfer of technologies, specifically those related to metallurgical and ceramic production. Mobility will be examined in terms of the development of new ceramic and seafaring technologies and travel over large distances. The purpose of this review is to detect any changes in long-term settlement patterns and material culture during and after the Aegean extension of the ATN that might suggest that substantial disruptions occurred during this period which could be attributed to sea raids and piracy.

This review will chart trends in three different regions (the eastern, central, and western Aegean) and through three separate periods: the Early Bronze 2a phase (2750-2550 BCE), which immediately predated the Aegean extension of the ATN; EB 2b-3a period (2550-2100 BCE) during which this extension took place; and the EB 3b-MB period (2100-1700 BCE), which followed the collapse of the ATN, in order to explore the long-term impact of it on social, political, and economic developments in the Bronze Age Aegean.

The EB 2a Phase in the Aegean (2750-2550 BCE; Figs. 1.1 and 1.2)

Eastern Aegean in the EB 2a Phase

While settlement patterns in the central and western Aegean were still largely dispersed during the EB 2a phase, the eastern Aegean (i.e., the western Anatolian coastal settlements and related islands) already demonstrated extensive evidence for centralization and settlement hierarchy. Regional centers at Troy and Liman Tepe already exercised extensive influence over surrounding smaller settlements. Other regional centers likely existed in the southeastern Aegean at sites such as Miletus and Iasos, but these sites' Early Bronze Age levels have been insufficiently excavated. Thus, the present exploration of settlement patterns in the eastern

Aegean focuses on Troy and its culturally affiliated sites in the northeast Aegean islands, and Liman Tepe on the central western Anatolian coast, as well as the nearby site of the Heraion on the island of Samos.

These sites will be examined starting in a phase referred to by Renfrew as the age of the “international spirit” (Renfrew 1972, 451). The EB 2a and EB 2b-3a phases saw increased exchange and adaptation of technologies and practices through all of the Aegean, likely spread through direct contact between different regional groups. While Renfrew argued that this increase in trade was facilitated through largely peaceful contact, an in-depth examination of the material evidence suggests that the role played by violence should be reassessed (Figs. 3.1 and 3.2).

Troy IIa/Northeast Aegean (2700/2600 – 2550 BCE)

Troy, the surrounding region of the Troad, and the northeast Aegean sites of Poliochni on the island of Lemnos and Thermi on Lesbos were all culturally similar. At Troy IIa (c. 2600-2550 BCE), a chiefdom-level society was likely established, in which a ruling elite exercised a limited degree of control over the production and distribution of exotic goods and food storage (Bintliff 2016, 259-260; Renfrew 1972). This elite ruler, or group of competing elite families, likely lived on the fortified citadel (1 ha) and governed over a population of 1,000-2,000 people living in the largely unexcavated lower town of Troy, which had an estimated area of at least 9 hectares (Bintliff 2016, 259-260, Ünlüsoy 2016, 399; Jablonka 2016, 61, 70). In comparison to Troy, Poliochni (1.6 ha) and Thermi (1.5 ha) were small, organized towns with populations estimated to have ranged between 300-500 each (Cultraro 2009, 222; MacSweeney 2004, 57). At Troy, there is extensive evidence for social hierarchy, indicated by the complex fortification system and elaborate building program of the citadel, as both features would have demanded a high degree of planning and an authority capable of organizing a large amount of labor. In the Troy IIa phase, the citadel's fortification system was greatly expanded from the previous phase (Rutter 2011, Lesson 7). Of this extended stone and mudbrick fortification wall,

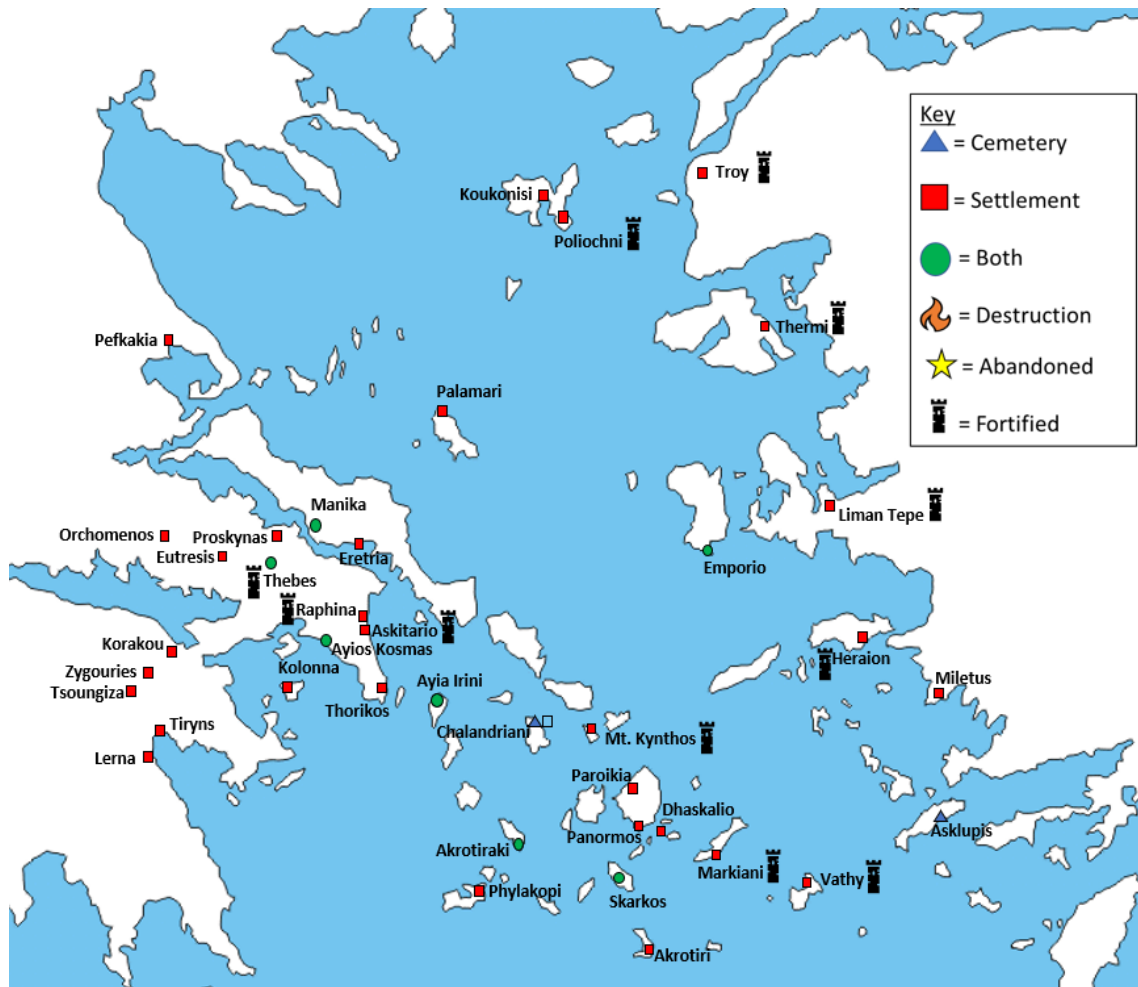


Figure 3.1. Map of Aegean sites occupied in the EB 2a phase (c. 2750-2550 BCE).

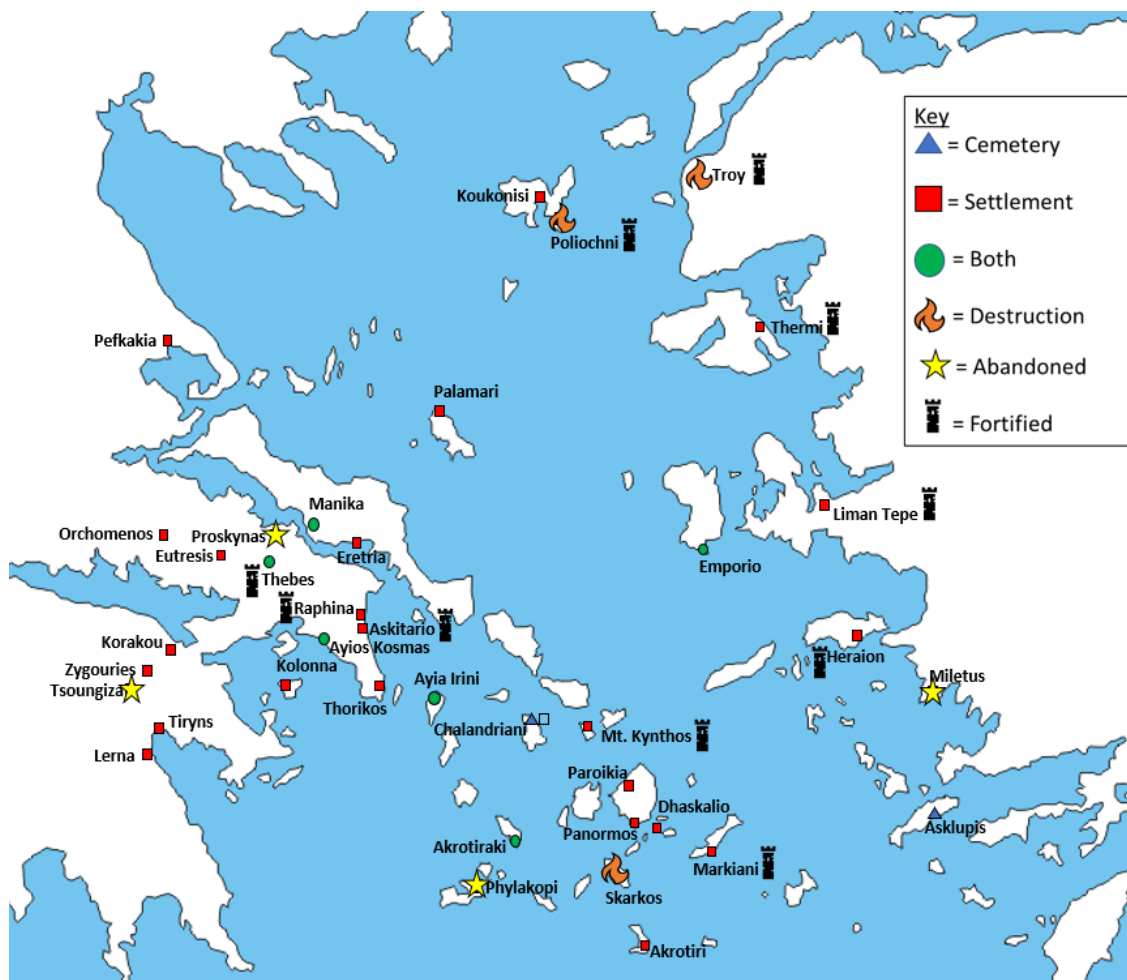


Figure 3.2. Map of Aegean sites occupied in the EB 2a phase (c. 2750-2550 BCE): abandonments/destructions by the end of the EB 3b phase.

only the stone socles remain at a height of at least three meters (Blegen et al. 1950, fig. 437). This wall boasts fortified gates and large rectangular bastions, projecting two or more meters outwards (Blegen et al. 1950, fig. 451). Additionally, the architectural layout within the citadel changed significantly in Troy IIa. Elements that already existed in Troy I, such as megaron-type buildings opening onto a courtyard, were rebuilt in Troy IIa to be larger and more centralized within the citadel space. The most sizable of these buildings, reaching 20 m in length, was entered from the courtyard and led through a smaller porch-like reception room into a larger central room that contained a circular hearth (Mellaart 1959, 137-138, fig. 3; Blegen et al. 1950, fig. 417; Rutter 2011, Lesson 7). While the open space outside of the megaron-like building in Troy I was limited to a small area between the building and the northwestern wall, in Troy IIa, the courtyard outside of the new megaron was much larger (c. 37.5m in length) and located at the heart of the citadel (Ünlüsoy 2016, 399; Mellaart 1959, 137-138; Blegen et al. 1950, fig. 417). The new emphasis on this enlarged courtyard and central megaron, which likely functioned as a space where the ruling elite would have hosted guests and facilitated communal feasting activities, suggests a consolidation of power that went hand in hand with the increasing standardization of communal practice.

At Poliochni and Thermi, there is little evidence to suggest that the level of social hierarchy reached was comparable to that of Troy. Nevertheless, their town layouts and fortification systems demonstrate some degree of centralized authority. At Thermi, in the Town IV phase (c. 2700- 2600/2500 BCE) and in the roughly contemporary Green phase at Poliochni, the fortification walls from the previous phases were greatly expanded (Bernabo-Brea 1964, 272; Cultraro 2004, 19; Rutter 2011, Lesson 7). Additionally, while there is no definitive evidence of a ruler's dwelling at either site in these levels, the carefully laid out settlement plans include rows of houses with shared walls forming blocks oriented along one or more streets (Cultraro 2009, 222; Lambrianides 1997, 78). The architectural layout is indicative of the presence of an authority

responsible for the advanced planning and execution required to actualize these plans (Cultraro 2009, 222; Lambrianides 1997, 78).

Troy IIa, and to a lesser extent Poliochni and Thermi, were regional trade centers with access to the central Anatolian and Mesopotamian trade routes that developed into the Anatolian Trade Network (ATN) via the valleys of the Scamander (Karamenderes) and Simoeis (Gediz) rivers, and with access to maritime trade via the Aegean Sea (Ünlüsoy 2016, 397; Şahoğlu 2005, 339). A trinket mold that combines Mesopotamian, Anatolian, and Aegean styles, believed to have come from Troy, is now more likely to have originated from the Izmir region (see below (Canby 1965, 51-52). Other valuable craft products, such as precious metal objects of gold made with filigree techniques, with close comparanda in the Levant and even in Ur in southern Mesopotamia, have been found within early Troy II levels and at Poliochni Green, and presumably had arrived there via the developing ATN (Ünlüsoy 2016, 400). High concentrations of tin bronze artifacts made with copper from both local and non-local sources were also found at Troy; their tin percentages are comparable to those found in metal items in central Anatolia, Syria, and Mesopotamia (Ünlüsoy 2016, 401), indicating again that they had been brought via the growing ATN. Moreover, scientific analyses have shown that the tin in metal objects found at Troy and Thermi might have originated from tin mines as far east as Iran, Uzbekistan, and Tajikistan (Pernicka et al. 2003, 170-172). Evidence for trade between Troy and the central and western Aegean includes obsidian imported from the Cycladic island of Melos and lustrous black-slipped Urfinis vessels associated with mainland Greece (Ünlüsoy 2016, 398). Poliochni and Thermi also traded frequently with the Cyclades, as is evidenced by Keros-Syros painted wares at Poliochni (Cultraro 2009, 233) and by the presence of herring-bone ceramic decorations as well as marble and emery bowls and figurines at Thermi (Lamb and Hutchinson 1930, 51; Lambrianides 1995, 73).

The choice of location of all three sites clearly prioritized direct access to sea-based trade. Troy's location on the western Anatolian coast at the mouths of the Scamander and Simoeis rivers made the site well-situated to serve as an important crossroad connecting land and sea with the Mesopotamian and central Anatolia connections to the east and the mouth of the Dardanelles strait to the north, opening onto the Aegean Sea to the west and the Black Sea to the northeast (Ünlüsoy 2016, 397). Poliochni and Thermi, each located on the eastern coasts of their respective islands, oriented towards Anatolia, must have benefited from access to the same maritime trade routes utilized by Troy (Cultraro 2009, 222; Lamb and Hutchinson 1930, 1-2).

Such direct access to the sea likely came with many risks as well as benefits. The presence of fortifications at all three sites, and especially the monumental fortification system at Troy, which also had the largest concentration of exotic wealth and precious metals, indicates that the threat of conflict and raiding was ever-present in this region. The inhabitants of the three sites chose coastal locations despite those threats, demonstrating that access to the maritime trade networks must have outweighed these risks. Phase IIa at Troy ended in a fiery destruction event at the citadel, which can be interpreted as confirmation of the dangers posed by the concentrated wealth at this site.

Liman Tepe V-2b and Heraion 1-I/Central-east Aegean (2750-2550 BCE)

Like Troy, Liman Tepe in EB 2a was a regional trade center with evidence for a ruling elite (Erkanal 2008, 183-184). The overall size of this ancient settlement is difficult to determine because most of it is unexcavated or lost, but the uncovered parts alone indicate that its citadel is at least 300 m in length, and there is evidence for an extensive lower town as well, of 6 or more ha in area (Erkanal 2008, 182; Kouka 2016b, 205). In Liman Tepe level V-3b, which began around 2700 BCE, the fortification wall surrounding the citadel in the previous phase was expanded and reinforced, and monumental horse-shoe shaped bastions were constructed (Şahoğlu 2008, 488). Although only small parts of the wall and a single bastion have been fully uncovered

thus far, the monumental size of these features demonstrates an advanced degree of planning and control over a large amount of labor that, according to the excavators, is consistent with a chiefdom-level of organization (Erkanal and Şahoğlu 2016, 157; Erkanal 2008, 181). The preserved monumental bastion, with a base width of 18.8 m, an external length of 12 m, and a preserved height of 5 m, is the largest presently known bastion in the entire Early Bronze Age Aegean including Troy (Erkanal 2008, 181). A smaller horse-shoe shaped bastion, located over 400 m from the first, is thought to have guarded an entrance into the settlement, indicating that the lower town was also fortified (Erkanal and Şahoğlu 2016, 157-159, 162-163, fig. 10). The layout of the citadel within the fortification system was reorganized around this time, in what Şahoğlu interprets to represent a transition from a primarily residential to administrative and communal ritual function (Erkanal and Şahoğlu 2016, 162; Şahoğlu 2008, 487). By the LMT V-2b level (around 2600/2550 BCE), the citadel included a central architectural complex of at least 15x20m, which has been interpreted by the excavator to have belonged to a central authority (Erkanal 2008, 183-184). The central complex consisted of two narrow rectangular storage rooms, a large open courtyard, and a multi-roomed building (Şahoğlu 2008, 488; Şahoğlu 2005, 347, fig. 3). The courtyard likely functioned as a place for the central authority to host a large group of people from the surrounding lower settlement, or even beyond, for ritual feasting and religious activities (Erkanal and Şahoğlu 2016, 162). Evidence for communal ritual feasting is provided by the contents of the storage rooms, which included many fine ware vessels (Erkanal and Şahoğlu 2016, 162). Within the courtyard, evidence for religious or cult activity was represented by a group of phalloi and a marble idol, and the northern building contained additional idols as well as a bell-shaped stamp seal indicative of administrative activity (Erkanal and Şahoğlu 2016, 162; Şahoğlu 2005, 350).

The site of the Heraion on the island of Samos, some 75 km southwest of Liman Tepe as the crow flies, is more completely preserved and is estimated to have been 3.5 hectares in area,

which would have made it the largest island settlement in the eastern Aegean at the time (Kouka 2013, 575). While this site hardly rivaled Liman Tepe in terms of size, the monumental nature of the fortification system and the evidence for town planning suggests the presence of a central authority. Like contemporary Liman Tepe, the Heraion in phase I (2650-2550 BCE) had a monumental fortification wall surrounding the entire site, expanded and strengthened from a wall of the previous phase (Kouka and Menelaou 2018, 121, 124). However, unlike Liman Tepe, the bastions protruding from this wall were square, like those of Troy (Kouka and Menelaou 2018, 121). This settlement had long-room houses of about 9x4 m in area, built over the foundations of the previous fortification wall, indicating clearly the need for additional domestic space (Kouka and Menelaou 2018, 125; Kouka 2013, 576). Additionally, the new site layout included a stone building called the *Grossbau* (5x4m), with walls as thick as 1.5m, indicating a potential second story. This structure likely functioned as a communal and ritual center (Kouka and Menelaou 2018, 125; Milošević 1961, 27, plan 5). At the beginning of phase II, c. 2550 BCE, a new settlement layout was established, which included rectangular and trapezoidal houses in a radiating plan, demonstrating an impressive degree of town-planning (Kouka and Menelaou 2018, 125; Kouka 2013, 576).

Both sites likely developed into regional centers in this period due to their trade contacts. Many valuable objects, both local and imported, were found at Liman Tepe, supporting Şahoğlu's assertion that this site represented a vital node along the developing ATN. The extent of the well-established and far-reaching trade contacts of Liman Tepe is suggested by a trinket mold purchased in the 1960s in a local market in the region of Izmir, to which Liman Tepe also belongs (Canby 1965, 51-52). The mold was used to produce various types of pendants, pins, and figurines that have been found in many regions spanning from Mesopotamia to the Cyclades (Canby 1965, 52). Canby hypothesized that the mold was owned by a traveling craftsman from Troy who catered to various markets because of stylistic similarities with finds from Troy, which

in the 1960s was the only well-known Early Bronze Age trade center in western Anatolia. However, now that we understand the importance of Liman Tepe, it can be suggested instead that the mold came from that settlement. Even though Canby's hypothesis of a traveling craftsman cannot be proven, the widespread trade connections demonstrated by this object are undeniable (Canby 1965, 52). This multiplicity of trade contacts is represented in the ceramic record at Liman Tepe, as both central Anatolian ceramic shapes and fabrics as well as Cycladic pottery, including EC IIA frying pans, and possibly mainland Greek Urfirnis sauceboats and other pottery have been identified at the site (Erkanal and Şahoğlu 2016, 161; Ünlüsoy 2016, 398). In addition, Melian obsidian has been found at Liman Tepe in the V-2 stratum (Ünlüsoy 2016, 398; Erkanal and Şahoğlu 2016, 161). At the Heraion, both local and imported ceramics, likely from Liman Tepe and the central Aegean islands, were found in the same contexts along with Melian obsidian, which indicates that the Heraion enjoyed comparable access to the trade routes utilized by Liman Tepe (Kouka 2019b, 245; Menelaou 2015, 30).

Liman Tepe's location on the Gulf of Izmir, situated at the base of the Urla Peninsula with access to the sea on either side, made it an ideal harbor site (Erkanal and Şahoğlu 2016, 157, 165; Erkanal 2008, 184). In addition, it was close to a fertile coastal plain that received regular rainfall, which allowed it to support a reasonably large population. The settlement's location played a key role in ensuring that it functioned as a focal point along the Anatolia Trade Network (ATN), as it was situated a short distance from the south of the Hermus (Gediz) river delta, which was one of the river-based routes through which the ATN reached the Aegean coast (Şahoğlu 2005, 339). Similarly, the Heraion is located right on the southern coast in the most arable region of the fertile island of Samos, divided by a short stretch of sea from the Maeander delta in Anatolia, granting the site access to the ATN via that river system (Kouka and Menelaou 2018, 136). This same river system and trade route reached the Anatolian coastal site of Miletos, which is located directly at the mouth of the Meander delta. Although the excavation of EBA levels at

Miletos has been limited, the results demonstrate that the settlement contained, in addition to Anatolian material from the ATN, a high concentration of Cycladic material, including Cycladic figurines (Kouka 2019b, 238). This concentration indicates that Miletus' coastal position granted its occupants access to both land and sea-based trade.

Much as at Troy, Poliochni, and Thermi to the north, direct access to sea routes proved to be more valuable to the inhabitants of Liman Tepe and the Heraion than the associated risks, as both sites are located on coasts with no natural defenses. Although Liman Tepe is removed from the open sea, set within the Gulf of Izmir in a location where incoming ships could be spotted upon entry into the Gulf, this would have given the inhabitants only a short amount of time to prepare for an attack from the sea (Erkanal 2008, 179-180). Instead of settling well inland to ensure protection from sea-based violence, massive amounts of labor were invested into long-lasting fortification systems which would have protected these sites from both land and sea-based attacks. The enormous fortification system surrounding the citadel at Liman Tepe, and the slightly less impressive fortification systems that likely surrounded the lower town of Liman Tepe and the entire settlement at the Heraion, were necessary measures of defense for occupants who were determined to remain in coastal locations. Unlike Troy in the IIa phase, there are no notable human-caused destructions or evidence for conflict at Liman Tepe V-2 or the Heraion in phase I. However, the substantial efforts expended in constructing monumental fortifications at both sites indicate that the threat of violence was ever-present.

Central Aegean in the EB 2a Phase

In contrast with the nucleated and hierarchical settlement pattern of continuous habitation in the eastern Aegean, the Cycladic islands in the central Aegean region in the EC IIA phase are primarily characterized by small, dispersed, and short-lived settlements, to judge by evidence from the well-explored islands—Keos, Syros, Naxos, Paros, Antiparos, Melos, and Amorgos

(Broodbank 2000, 52; 2008, 54-55, 58). Most of these sites did not exceed a single hectare in size and must have been farmsteads or hamlets consisting of no more than a few families. They were occupied for just a few generations, judging from the small quantities of tombs in nearby cemeteries (Broodbank 2008, 54-55). There are, however, a handful of larger (>1 ha) and more organized EC IIA sites that can be characterized as small towns (Broodbank 2008, 55; 2000, 86). Examples are Skarkos on Ios, Dhaskalio on an islet off Keros, and Ayia Irini on Keos, all of which hosted populations ranging from 50 to upwards of 300 inhabitants (Broodbank 2008, 55; 2000, 86). There is some evidence for settlement nucleation, such as in the northern region of Keos, where the site of Ayia Irini was one of very few settlements found and by far the largest (Davis 1992, 712). Ayia Irini, Skarkos, and Dhaskalio all exhibit a degree of settlement organization with houses sharing walls arranged along roads or pathways (Wilson 2013, 387; Marthari 2018, 171; Angelopoulou 2017, 138; Boyd 2013, 372). At Skarkos, drainage systems and potentially two-storied structures demonstrated an advanced degree of planning (Marthari 2018, 171). At Dhaskalio, the extensive terracing at the settlement and the fact that the majority of buildings were constructed with marble imported from the island of Naxos indicates that some form of communal organization existed to organize the necessary labor for these feats (Boyd 2013, 372; Broodbank 2008, 55-56; Angelopoulou 2017, 136-137). Although these three sites are unusually large and well organized compared to typical EC IIA settlements, there is no material evidence for administration or social differentiation in house sizes or contents (Bintliff 2016, 263; Broodbank 2008, 56). The only exception in the Cyclades is in the large cemetery at Chalandriani on Syros, where the existence of some richer graves suggests the presence of more prominent people in society (Bintliff 2016, 263). Outside of the Cyclades, the only known settlement in the EB 2a central Aegean is the small coastal site of Palamari on the island of Skyros in the Eastern Sporades. Not much of the EB 2a level has been excavated at the settlement, but the remains of five thick-walled D-shaped buildings, around 5x3.5 m in size, have been uncovered and

interpreted as possible granaries. If this interpretation is correct, it could indicate the existence of communal organization (Romanou 2015a, 6-7).

In the EB 2a phase, central Aegean islanders were capable seafarers. There is much evidence for Cycladic participation in maritime trade networks reaching the eastern Aegean and Crete as well as Euboea and mainland Greece, including the dispersion of Melian obsidian and EC IIA ceramic shapes such as the sauceboat through these areas (Kouka 2008, 276). What is more, Cycladic settlements have been identified at Ayios Kosmas in Attica and at the northern Cretan coastal sites of Ayia Photia and Poros near Knossos (Broodbank 2008, 63-64; Kostanti and Christopoulou 2019, 35; Wilson 2013, 425-426). These three settlements demonstrate not only the long-range maritime connections of the islanders but also their ability to migrate in groups by boat. It has been suggested that the dispersed settlement pattern and long-reaching trade connections of Cycladic inhabitants were motivated in part by the need to adapt to the limitations of the island environments with their relative scarcity of arable land (Davis 1992, 703). However, this reasoning would not apply to larger islands such as Andros, Keos, Syros, Paros, and Naxos, which had relatively large fertile areas and received at least moderate rainfall (Broodbank 2000, 70, 90). Since most of the settlements in these more fertile locations were also small, temporary, and dispersed, environmental limitations cannot have been the only factor in determining settlement size, location, or permanency. What is more, reducing the actions of humans to purely environmental explanations ignore the role of their agency (Dobres and Robb 2000, 8). Instead, it is suggested here that social factors such as islanders' long-standing preferences for living in smaller communities may have played an important role in determining the prevailing EC IIA settlement pattern.

In the EC IIA phase, the desire to access sea-based resources and, in the case of most settlements, the possible desire of families or small groups to live independently was balanced with safety concerns. The coastal locations of some Cycladic settlements such as Ayia Irini and

Dhaskalio, and of Palamari on Skyros in the Sporades, indicate the interest of the inhabitants in making a living from the sea including access to maritime trade routes. In the case of Dhaskalio, its proximity to the coastal pan-Cycladic sanctuary of Kavos also would have justified its location on the coast. Such locations would have made these settlements vulnerable to attack from the sea. Dhaskalio, for example, is settled on a tiny islet with no inland area to withdraw to. Its inhabitants may have found safety in the fact that it sits on a steeply sloping hill with a good vantage point of the surrounding sea (Angelopoulou 2017, 136-137). This, in combination with the narrow passages and densely packed domestic spaces of the settlement, would have served as its means of defense against sea-borne attacks and raids (Boyd 2013, 354). The danger of such attacks does not seem to have been sufficiently great enough to induce the inhabitants to fortify the settlement in the course of its long period (EC I – EC IIB) of occupation. One of the other relatively large, nucleated settlements, that of Ayia Irini on Keos, was also unfortified but was situated on a low coastal peninsula, tucked away within Vourkari Bay, which itself was separated from the open sea by the Ayios Nikolaos Gulf. Thus, its inhabitants balanced the desire for access to the sea with a justifiable fear of open waters.

The concern for safety is even more apparent at Skarkos, which is located on a low unfortified hill about 65 m above sea level, in a fertile plain about 1 km from the sea, near enough to the coast to see the comings and goings of sea vessels and to participate in trade, but far enough removed to give the inhabitants more time to prepare for an attack from the sea (Marthari 2018, 169). This settlement's impressive size, advanced level of planning, and access to fertile land suggest that it contained material and agricultural wealth that could have made it a target for sea-based raids. Many of the smaller, more typical Cycladic settlements were equally located at a short distance from the coast, probably for similar reasons. Not many were fortified in this phase, with a few exceptions. The settlements of Markiani on Amorgos, Panormos on Naxos, and Mt. Kynthos on Delos all clearly prioritized safety over access to the sea, because all are located on

hills or mountains that provided natural defense while affording excellent views of the water. Mt. Kynthos, located some 300 meters from the coast at an elevation of 110 m, and Markiani, over 1000 meters from the coast as the crow flies, located on a steep ridge at an elevation of about 265 m, are both fortified in this phase (Marangou 2006a, 6). The settlement on Mt. Kynthos was even designed to be accessible only via a single narrow passageway, and the occupants of Markiani were so concerned with defense that they added a small bastion to their wall (Angelopoulou 2017, 139, 141; Marangou et al. 2008, 99). In spite of the concerns for safety evident at EC IIA settlements, their small size, dispersed distribution, and frequent coastal or near coastal locations demonstrate that dangers from the sea at this time were not sufficiently frequent or large enough at the majority of sites to compel the inhabitants to change their settlement preference. The short-lived occupation of many of these sites is frequently attributed to crop failure or droughts (Broodbank 2000, 91), but given their concern for safety, it is possible that settlements were abandoned as the result of violent attacks, even if these were not accompanied by burned destructions (see chapter 4).

Whereas the larger sites of Dhaskalio and Ayia Irini, and the smaller sites of Panormos and Palamari survived into the following phase, one significant site did not: Skarkos on Ios was destroyed and abandoned before the end of the phase (Marthari 2018, 172). The evidence for destruction at this site is interpreted by the excavator to be the result of an earthquake (Marthari 2008, 71). However, the increasing concern with defense at the site that became more and more apparent as the EC IIA phase progressed, as various entrances into the settlement were sealed with stone walls, casts some doubt on this interpretation (Marthari 2018, 172). Even if the destruction at the site was caused by an earthquake, the fact that it was subsequently abandoned seems to indicate that life in the central Aegean, at this site and elsewhere, became increasingly dangerous as the EC IIA phase transitioned into the EC IIB phase.

Western Aegean in the EB 2a Phase

Known Early Bronze Age settlements on the Greek mainland are largely concentrated in the southern and eastern parts, in regions such as Attica, Boeotia, and the eastern Peloponnese, and on nearby islands such as Euboea and Aegina (Pullen 2008, 20). In the EH IIA phase, the settlement pattern on mainland Greece was quite varied, being composed primarily of small to medium maritime and inland settlements (Bintliff 2016, 262). There is a trend towards nucleation, as many smaller sites occupied in the EH I phase were abandoned in EH IIA in favor of fewer but larger sites nearby (Pullen 2008, 26). Several regions seem to have been dominated by one larger site (Pullen 2008, 27). Such central sites, ranging from 5-9 hectares, existed at Manika, Eutresis, and Thebes, with estimated populations of 500-600 or more (Bintliff 2016, 262-3). There are many medium sites, such as Kolonna (4 ha), which are also considered to be highly nucleated and influential in the EH IIA phase (Bintliff 2017, 159).

Evidence for social hierarchy was present in EH IIA mainland Greece. Certain sites, such as Tsoungiza, Kolonna, and Thebes, contain evidence for central authority in the form of fairly large buildings, some of which, such as House A at Tsoungiza, are considered to have been the predecessors to the Corridor Houses (see below). Others, such as the Fortified Building at Thebes and the *Haus am Felsrand* at Kolonna, are interpreted as early examples of the Corridor Houses that will be found at several settlements through parts of the southern and central areas of the Greek mainland and adjacent islands in the following EH IIB phase.

At the small site of Tsoungiza, House A (9.15 x 6.1 m) had walls of unusual thickness (1-1.1 m) and ceramic roof tiles, both of which are features seen also in later EH IIB two-storied Corridor Houses (Pullen 2008, 28-29). The Fortified Building at Thebes (c. 17 x 7m) is considered to be the earliest known example of a true Corridor House, because the structure clearly contained one corridor along its side leading to a second story (Shaw 2007, 138, 140, 142, figs. 1-3; Berger and Gauss 2016, 210; Pullen 2008, 28). At Kolonna, the *Haus am Felsrand*,

reconstructed as c. 14 x 7m, already had two corridors flanking a suite of rooms. Its construction recently was dated to late in the EH IIA phase, ca. 2550/2450 BCE (Berger and Gauss 2016, 210).² In addition to these first monumental structures, limited evidence for administration existed in the EH IIA phase in the form of seals and sealings. A lead seal from Tsoungiza, for example, indicates that seals were already used to represent higher status individuals or families as they were tools to control the movement of material goods in the EH IIA phase (Pullen 2008, 30; see below).

This phase sees a marked increase in contact and trade within the Greek mainland and between the mainland and the central Aegean islands (Renfrew 1972, 451-455; Kouka 2008, 276; Pullen 2008, 28). Ceramic shapes such as sauceboats, saucers, and the Cycladic duck vases are commonly treated with a black semi-lustrous slip known as *Urfinis* in many parts of southeastern Greece and the Cyclades (Caskey 1960, 291; Pullen 2008, 26). There is evidence for strong Cycladic trade connections at the inland site of Thebes in Boeotia, and in Attica, where a Cycladic settlement was established at Ayios Kosmas (see above; Kostanti and Christopoulou 2019, 35; Sapouna-Sakellarakis 1987, 250-251; Rutter 1993, 116-117). Cycladic influence also increased in this phase as sites such as Manika amassed a large concentration of Cycladic frying pans, marble figurines, and obsidian from Melos (Sapouna-Sakellarakis 1987, 248-249, 262). Excavators at Manika have even hypothesized that, due to its fertile hinterland, inhabitants of the site may have traded agricultural produce and timber in exchange for Cycladic materials (Sapouna-Sakellarakis 1987, 233).

Manika's location along the Euboean Gulf would certainly have granted this large settlement prime access to sea-based trade. The inhabitants of the nearby site of Eretria,

² Although the date range provided for the reoccupation of Kolonna II in the EH II period is on the cusp of my EB 2a/EB 2b division, I consider it here to be first reoccupied late in the EB 2a period due to its ceramic associations with Lerna phase IIIb (Gauss 2019a, 1112).

significantly, relocated from their previous EH I location 1 km inland to be directly at the coast in this phase, indicating again the lure of trading benefits that could be reaped from a coastal location along the Euboean Gulf (Charalambidou 2016, 530). Perhaps these sites were able to exist so close to the sea in this phase due in part to the geography of the gulf itself, which would have allowed inhabitants to see ships sailing up the gulf from far away, providing them precious time to prepare for any potential attacks. Certainly, the size and wealth of Manika would have made it a target for raids, so the fact that both it and Eretria remained unfortified suggests that the EH IIA phase was one of relative safety in this region. The fact that the sites of Ayios Kosmas, Raphina, and Askitarion in Attica and Kolonna on the island of Aegina are all located directly on the coast can be interpreted as further support for this hypothesis. There is some evidence, however, for defensive walls at this time. Both Askitarion and Raphina may have been fortified as early as the EH IIA phase and certainly in the EH IIB phase (Gale et al. 2008, 91; Rutter 1993, 764; Pullen 2008, 31). Elsewhere in Greece, the large Fortified Building at the settlement of Thebes, located far inland in Boeotia, was located next to a fortification wall likewise dated to the EH IIA phase (Aravantinos 1986, 58, 60-61, 63; Caskey 1960, 290-291, fig. 1; Shaw 2007).

The general trend of nucleation in this phase may have been motivated in part by a desire for safety, leading people to gather in larger sites, both inland and closer to the coast (Aravantinos 2004, 1256). The widespread lack of fortifications in the western Aegean, especially in comparison to the eastern Aegean, suggests that fear of sea-based attacks was not yet as prominent in the western Aegean as it was further east. While there is no clear evidence for destructions in this phase in the western Aegean, the sites of Proskynas and Tsoungiza were abandoned.

The EB 2b-3a Phase in the Aegean (2550-2100 BCE; Figs. 3.3 and 3.4)

In the EB 2b-3a phase, the ATN reached its fullest extent (Fig. 3.3). The fact that in this phase, Anatolian features, technologies, and elite social practices were found in the central and western Aegean is indicative of the growth of the ATN, which by its highpoint, ca. 2200 BCE, reached across much of the Aegean (Şahoğlu 2005, 339). These Anatolian imports and influxes are referred to as Kastri group material in the central Aegean and Lefkandi I group material in the western Aegean (see above, chapter 1). Soon after its acme, in the course of the EB 3a phase (2200-2100 BCE), the ATN experienced a slow decline until it contracted again to the Anatolian plateau ca. 2100 BCE (Fig. 3.4).

Eastern Aegean in the EB 2b-3a Phase

As the ATN began to extend from mainland Anatolia into the Aegean Sea at the beginning of the EB 2b phase, the sites of Troy, Poliochni, Thermi, Liman Tepe, Miletos, and the Heraion were perfectly situated to facilitate this expansion (Şahoğlu 2005, 339). The intensification of trade connections with the Anatolian plateau and the Near East meant that new goods, technologies, and social practices made their way to the large eastern Aegean maritime trade centers.

Troy, I Ib-III, Poliochni Red-Yellow, and Thermi V (2550-2100 BCE)

While the citadel of Troy IIa had been destroyed by fire around the end of the EB 2a phase, its immediate rebuilding in a similar way in Troy IIb indicates a degree of stability and continuity at the settlement. In the Troy IIc level, the settlement likely reached its EBA acme in terms of area and population size. At this time, multiple megara, the largest of which (Megaron IIa) reached the impressive length of 45m, were constructed in the citadel's center and they were separated from the rest of the citadel by an enclosure wall. The enclosure wall likely served a primarily social purpose, defining a restricted space that only a select few would be permitted to

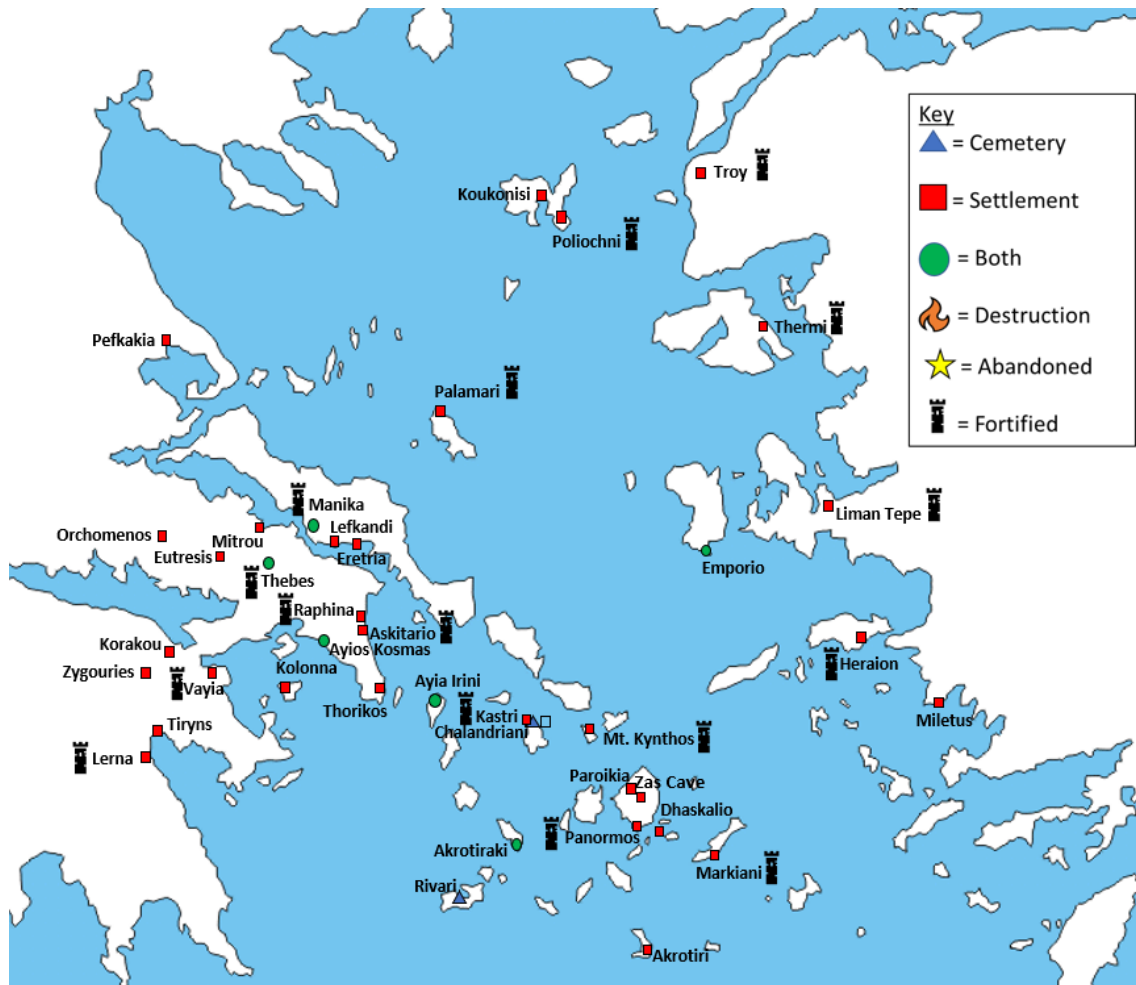


Figure 3.3. Map of Aegean sites occupied during the “Kastri/Lefkandi I period,” EB 2b-3a phase (c. 2550-2100 BCE).

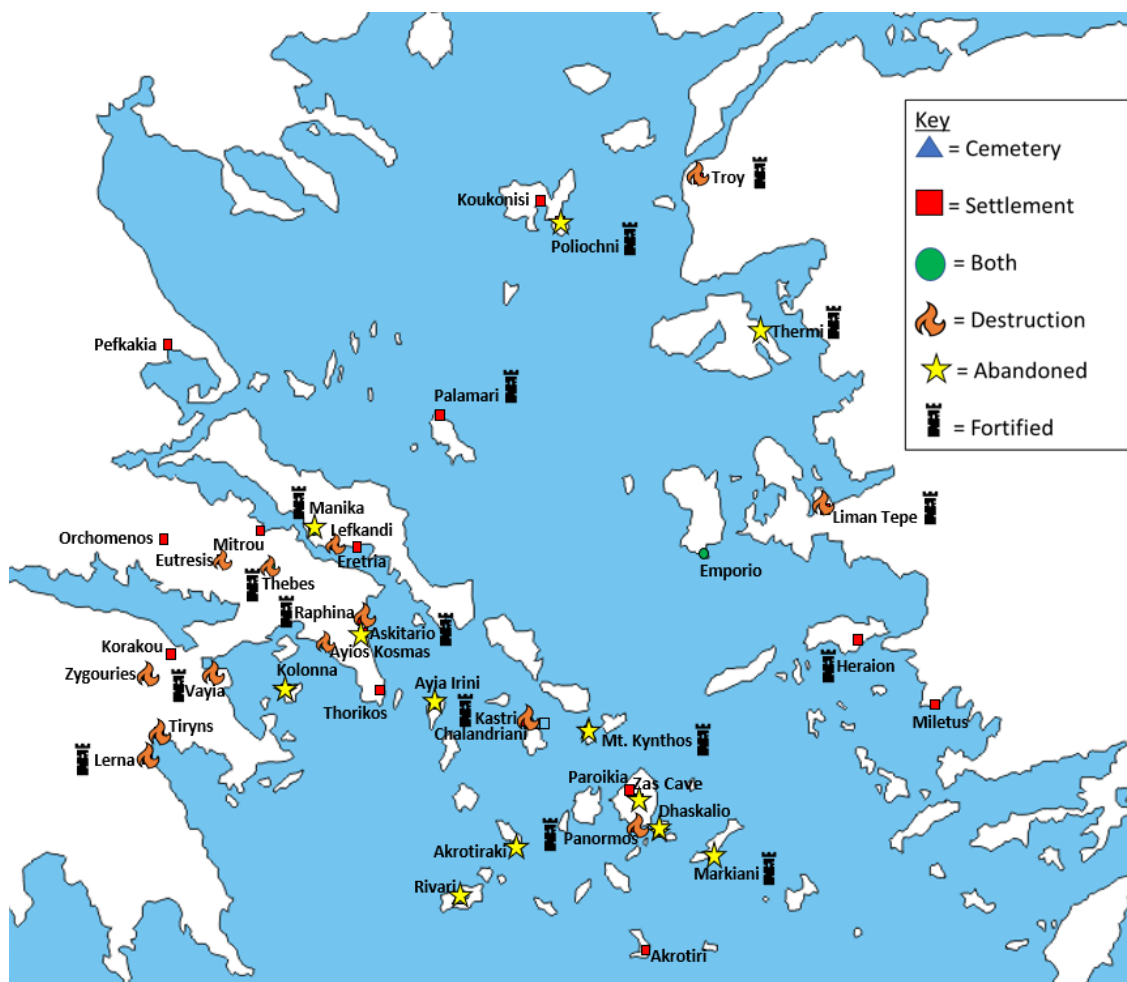


Figure 3.4. Map of Aegean sites occupied during the “Kastri/Lefkandi I period,” EB 2b-3a (c. 2550-2100 BCE): abandonments/destructions by the end of the EB 3a phase.

enter, thus strengthening the hierarchical structure of society (Ünlüsoy 2016, 399). The boundaries of the citadel were extended outwards and its monumental fortification system was strengthened throughout the Troy IIc-IIg phases (Blegen et al. 1950, fig 417). If the site did not already boast an area of 10 ha and a population of 1,000- 2,000 in previous phases, it certainly achieved both in this phase. Poliochni in its Red phase (c. 2500-2300/2200 BCE) beginning roughly contemporary to or slightly after Troy IIb-IIg, remained similar in size and level of organization to the previous Green phase (Erkanal and Şahoğlu 2016, 159, fig. 2; Cultraro 2009, 221, fig. 2). Thermi V (c. 2600-2200 BCE) also was generally similar to its previous phase in terms of its densely packed and well-organized blocks of houses, although the streets were widened in this phase and the houses were more uniform (Lamb and Hutchinson 1930, 12, fig. 3; Lambrianides 1995, 81, 85).

Beginning in Troy IIb there was a sharp increase in trade contacts with the Anatolian plateau, as seen in the appearance of a new ceramic drinking set, the introduction of the potter's wheel, and the increased use of tin-bronze (Ünlüsoy 2016, 400; Choleva 2020, 1; Pernicka et al. 2003, 163). The new drinking set was composed of the tankard, depas, wheel-made plate/shallow bowl, cut-away spouted jug, and bell cup shapes. On the Anatolian plateau, it often was found in association with large central building complexes associated with the settlements' elites. The depas in particular seemed to be a shape associated with high prestige (Şahoğlu 2019, 122-123). The appearance of this new drinking set all along the ATN represented the introduction of an entirely new social feasting practice and a new vocabulary of power for social elites. This coincided with the transfer of technology represented by the introduction of the potter's wheel from North Syria and Cilicia into the eastern Aegean (Şahoğlu 2005; Choleva 2020, 1). Along with these technologies and practices came an increase in the use of tin bronze, both imported and locally made, as well as a rise in imports such as lapis lazuli from Afghanistan, flasks from Syria likely filled with perfumed oils, and Syro-Mesopotamian textiles (Bachhuber 2009, 11).

Parts of the Anatolian elite drinking set have been found at Poliochni Red, including the one-handled tankard with a biconical body and large neck, but not yet the *depas* (Cultraro 2013, 105; Cultraro 2009, 235). In contrast, at Thermi IV-V, only the one-handled cup, often associated with the Anatolian drinking set has been found (Hutchinson and Lamb 1930, 25). At both settlements, wheel-finished pottery was absent (Choleva 2020, 16), which may reflect their differential access to the ATN. Both sites did see an increase in their consumption of tin-bronze objects in this phase, indicating increased contact with the Anatolian mainland (Pernicka et al. 2003, 163).

The increasing wealth and trade contacts apparent in this phase certainly came at a high cost, as two of the three major known settlements in the northeast Aegean suffered devastating destructions in the latter part of the EB 2b phase and in the EB 3a phase, and the third one saw a severe decline. Poliochni Red was destroyed by fire around 2300 BCE, and the subsequent Poliochni Yellow phase ca. 2200/2100 BCE. Troy IIg was destroyed around 2200 BCE, and Troy IIh (now referred to as early Troy III) sometime between 2200 and 2150 BCE.³ Thermi V declined and was abandoned around 2200 BCE or shortly thereafter, without evidence for destruction (Lamb and Hutchinson 1930, 28; Lambrianides 1995, 73); the site was not reoccupied later in the Bronze Age. At Poliochni Red and Yellow, as well as Troy IIh/early Troy III, destructions were followed by major changes in settlement layout, likely reflecting a radical change within each settlement's social organization.

At Poliochni, the destruction at the end of the Red phase was followed by a remarkable period of growth and expansion during the first part of the Yellow phase (ca. 2300-2200 BCE). The architectural layout of the settlement included several large megaron-like buildings,

³ While the calendar date is not specified by Sazcı and Sazcı (2016), Troy III is marked as beginning c. 2200 BCE and lasting until c. 2100 BCE by Erkanal and Şahoğlu (2016), thus this destruction is estimated by me to have taken place within the first half of the Troy III phase.

including Megaron 317, which was the only free-standing building and thought to have belonged to a leading household (Cultraro 2007, 57, 59, 64). It contained large pithoi as well as various Anatolian-type depata and shallow bowls (Bernabo-Brea 1976, Pls. CXCIa, CCVb), which were hand-made imitations of part of the Anatolian elite drinking set. Other components of this set (the bell-shaped two-handled cup, shallow bowl, jug, and tankard) were found within the nearest Insula VI (Bernabo-Brea 1976, Pls. CCIIIIf, CCIVh, CCVIIb, CCVIIIh). Poliochni Yellow fell into decline after an earthquake around 2200/2100 BCE, after which the drainage system was blocked and public buildings were converted into private ones (Cultraro 2007, 57, 64). Poliochni eventually may have been abandoned for a brief period at the end of the EB 3a phase, around 2100 BCE.

The massive fire destruction of Troy IIg's citadel ca. 2200 BCE happened at the transition from EB 2b to EB 3a. It was followed by a phase of reconstruction that used to be called Troy IIh, but now is more often referred to as the beginning of Troy III. At this time, new megaron buildings were constructed on top of the previous monumental structures of the citadel as well as in the lower town (Sazcı and Sazcı 2016, 75-76). These buildings were destroyed by fire some time in 2200-2100 BCE. On top of those ruins, new Troy III structures were set consisting of clusters of small rooms with shared walls (Ünlüsoy 2016, 401; Sazcı and Çalış Sazcı 2016, 75, 80, 87). This remarkably different and more modest architecture has led scholars to surmise that Troy III was less socially stratified than the previous phases of occupation (Ünlüsoy 2016, 401; Sazcı and Çalış Sazcı 2016, 75, 80, 87).

The destruction of Troy IIg around 2200 BCE and of the early phase of Troy III in 2200/2100 BCE as well as the destruction and abandonment of Poliochni Yellow sometime in the same period are especially significant when the responses of each settlement's inhabitants are examined. If these sites had been at peak wealth and influence, such destruction events, be they man-made or natural, would have been easy to recover from, and one could expect to find

substantial cultural and material continuity in the immediately following phase, as was seen for instance after the destructions of Troy IIa and Poliochni Red. The fact that this was not the case after the destructions of ca. 2200 BCE and ca. 2200/2100 BCE indicates that these were devastating events to the settlements' residents and left permanent effects. The destruction of Troy IIg coincided with the transition from EB 2b to EB 3a at 2200 BCE, which Şahoğlu identifies as the highpoint of the ATN, but also the beginning of its decline (Şahoğlu 2019, 126). The early Troy III and Poliochni Yellow destructions ca. 2200/2100 BCE occurred during the period of decline of the ATN in the EB 3a phase and were followed by much decreased settlements. In Şahoğlu's view, the destructions, declines or abandonments at all known eastern Aegean maritime trading centers were likely related to the decline of the ATN during that same period, in 2200-2100 BCE (Şahoğlu 2019, 126-127).

Liman Tepe V-2a – IV-2 and Heraion II-IV (2550-2100 BCE)

At Liman Tepe, the public buildings within the citadel and the fortification system underwent few changes in EB 2b-3a, which is indicative of relative continuity in terms of societal organization (Erkanal 2008, 183). In contrast, at the Heraion on Samos, the transition from phase I to phase II (ca. 2550 BE, or shortly before the beginning of the EB 2b phase) was marked by a devastating earthquake destruction (Kouka and Menelaou 2018, 124). In phase II, a long-room house and several new trapezoidal houses were constructed, along with two partially preserved large, free-standing buildings, Megaron II and the *Küchenbau*, which included evidence for food preparation, feasting, and storage (Kouka and Menelaou 2018, 128). The ceramic assemblage at the site included parts of the Anatolian elite drinking set: wheel-made plates and a beaked jug were found in the *Küchenbau*, and two-handled bell-shaped cups, one-handled cups, and one-handled tankards were recovered elsewhere (Kouka and Menelaou 2018, 128). In phase III, starting ca. 2300 BCE, the *Zyklopischer Bau*, a large (c.18 x 8 m) rectangular 3-roomed communal building was erected at a central location within the fortified site, and likely

functioned, according to the excavators, as the residence of a local chief and/or center for communal feasting activities (Kouka and Menelaou 2018, 134). While no significant finds were discovered in this building, depata were found elsewhere in the settlement in phase III (Kouka and Menelaou 2018, 130).

Although Liman Tepe did not undergo a radical architectural change in the transition from LMT V-2b to V-2a, the introduction of the potter's wheel and of the complete Anatolian elite drinking set in this phase indicates that this site rivaled Troy in terms of wealth and influence at the height of the ATN (Choleva 2020, 16). The drinking set shapes found at Heraion through phases II and III (listed above) indicate similar trade connections to that of Liman Tepe (Kouka and Menelaou 2018, 128, 135). As at Troy, tin bronze was found in increasing concentrations at both Liman Tepe and the Heraion, which is further evidence for the significance of these sites as nodes along the fully realized ATN, distributing all these materials westward towards the central Aegean and mainland Greek regions. The influence of these central-eastern Aegean maritime trading centers throughout the central and western Aegean is apparent in the architecture and finds at several notable sites (see below).

Liman Tepe fell into a period of decline in level V-1a (ca. 2250-2150 BCE), towards the end of the EB 2b phase or the beginning of EB 3a (Erkanal and Şahoğlu 2016, 157). Within this level, an extensive fire destruction took place at the central complex of the site, followed within the same phase by a change in layout. Although later activity on the site caused the destruction of much of this later LMT IV-2 layer, excavation has revealed that the central citadel was smaller in this phase (Erkanal and Şahoğlu 2016, 164). Pits dating to the later part of LMT IV-2 contained high quality ceramic sherds, a gold piece, and even turtle remains which might have been tied to ritual use (Erkanal and Şahoğlu 2016, 164), suggesting some continuity at the site even as evidence for social differentiation declined, as reflected by the reduced size of the citadel. The decline at Liman Tepe after the fire destruction in the EB 3a phase (within level IV-2) is thought

to reflect the beginning of the decline of the ATN, on which much of the site's wealth depended (Erkanal and Şahoğlu 2016, 164). At the Heraion, level IV, a period of increased imports and new building constructions showed much continuity from level III. It ended in a fire destruction, which the authors interpret as the result of an earthquake (Kouka and Menelaou 2018, 133-134). While this may have been the case, the relative contemporaneity of the destruction of level IV with the fire destruction at Liman Tepe, combined with the reorganization that occurred at both settlements in the following phases, indicates that another form of disturbance, perhaps in the form of human conflict, disrupted the otherwise continuous occupation at the Heraion.

Central Aegean in the EB 2b-3a Phase

The extension of the ATN into the central Aegean all through the EB 2b-3a phase was evidenced by increased imports as well as the introduction of new technologies and elite social practices from Anatolia, an assemblage that has been labeled the “Kastri” group after the first site at which it had been identified (see above, chapter 1). At the same time, there was a much greater concern for safety, as demonstrated by the increasing appearance of fortifications and the more frequent preferences for defensible settlement locations. A number of new settlements appeared in this period (Kastri on Syros, Zas Cave on Naxos, Rivari on Melos), two of which (Kastri and Zas Cave) were founded in defensible locations on high promontories or hills, and one of which (Kastri) was fortified. In addition, new fortifications were erected at previously unfortified sites (Panormos on Naxos, Palamari on Syros). In spite of these changes, there still is very little evidence for social differentiation at most settlements of the central Aegean.

The newly established site of Kastri, perched on a steep rocky hill on the east coast of Syros, with an exceptional view of the nearby islands of Tenos and Andros, was located in an easily defensible position, and it was fortified as well. The most impressive feature of the settlement was certainly the fortification, which included a ca. 70 m long wall with 5 horse-shoe shaped

bastions (ca. 4 x 4m) lining the hilltop site on its vulnerable side (Bossert 1967, 56 Plan 2). While organizing the construction of such a wall might have taken much effort and organization, the rooms within the fortification were all relatively similar in size, giving no clear indication for social distinction (Bossert 1967, 56, Plan 2). At Panormos, which is even smaller than Kastri, the fortification system constructed in the EB 2b-3a phase included at most five small horse-shoe shaped bastions, and the wall enclosed a space that can be interpreted as an agglomeration of small buildings or even a single large building with multiple rooms (Angelopoulou 2008, 151). At Markiani and Mt. Kynthos, the fortifications of these small compounds continued from before, but one, or potentially even two, horse-shoe shaped bastions were added at Markiani (Marangou 2006b, 81-86). Most of the walls of these Cycladic fortified sites were less than 1.5m wide, which was far less impressive than the fortifications of the eastern Aegean (Tartaron et al. 2006, 158). However, considering that most of these sites were well under a single ha in area, these fortifications represented a relatively significant investment of labor by the sites' occupants, all for the sake of increasing defenses (Marangou et al. 2008, 98; Angelopoulou 2008, 151; Angelopoulou 2017, 141). The increased desire for safety is perhaps most apparent at the site of Palamari on Skyros in the Eastern Sporades, which saw a dramatic change in settlement layout and the addition of a monumental fortification system with 8 horse-shoe shaped bastions and an external moat reaching a depth of 7 meters (Romanou 2015a, 3, 5, fig. 1). This was a massive investment of effort and labor, especially for a settlement of only about 1 ha in area (Gauss 2019b, 59). The fortifications of Palamari on Skyros were some of the most impressive in the central Aegean at this time. Even though only small parts of the settlement have been uncovered, they reveal clear signs of town planning, with rows of buildings that ran along paths, and a drainage system (Romanou 2015a, 5, fig. 1). In contrast to other Cycladic settlements in this phase, Ayia Irini, in phase III, beginning around 2550/2500 BCE, shows evidence for increased

social differentiation with the emergence of a corridor-like house (House D; Wilson 2013, fig. 2). This settlement remained unfortified.

As a result of the extension of the ATN into the central Aegean, the Anatolian elite drinking set as well as new technologies such as the potter's wheel and tin bronze made their first appearances in this region. This elite drinking set, presumably together with elite social practices, occurred at many central Aegean sites at this time, most notably at Ayia Irini, where the entire set was present, and at Palamari on Syros, where the set was almost complete and included the depas. Partial drinking sets have been found at Markiani, Dhaskalio, Panormos, Zas Cave, Mt. Kynthos, and Kastri. The presence of partial drinking sets at these sites suggests a continuing level of social differentiation with weakly marked leadership, even though it cannot be ruled out that these pottery shapes simply held value as exotica.

A recent in-depth technological analysis of pottery manufacturing practices has demonstrated that the introduction of the potter's wheel at this time involved the movement of Anatolian potters to the central and western Aegean (Choleva 2020). Choleva's argument is based on a careful assessment of the technological transfer of the potter's wheel, which appeared first in the eastern Aegean in the Troy IIb stratum (ca. 2550/2500 BCE) and was introduced slightly later during the EB 2b-3a phase at many sites in the central and western Aegean, occurring most prominently at Palamari and Lefkandi. This technological transfer undoubtedly was associated with the ATN, as wheel-finished ceramics were found only at sites with high concentrations of Kastri/Lefkandi I material (Choleva 2020, 9). What is more, the potter's wheel was utilized only in the creation of the Anatolian drinking set, even when other local vessel types were being created at the same sites. At Lefkandi and Palamari, such wheel-made vessels were largely composed of local materials, indicating they were locally produced and not imported from elsewhere. At other sites, such as Ayia Irini, where the Anatolian drinking set and other Anatolian material was concentrated, there was little evidence for use of the potter's wheel, and Anatolian

pottery was produced by handbuilding. Choleva concludes that Lefkandi and Palamari likely represent locations where Anatolian potters lived and potentially extended networks of apprenticeship into local communities (Choleva 2020, 1, 12). Moreover, the wheel-shaping practices at Lefkandi and to a lesser degree at Palamari were strikingly similar to practices found at Troy, indicating that the Anatolian potters came from Troy or the Troad (Choleva 2020, 30-34). In contrast, the use of the wheel at the Heraion, Liman Tepe, and Emporio on Chios was different (Choleva 2020, 28-29). Choleva's work supports Mellink's, Şahoğlu's, and Kouka's findings that the central and southern parts of the western Anatolian coast and its associated islands represented a culturally distinct group, separate from Troy and the Troad (Mellink 1986; Kouka 2013; Şahoğlu 2005; 2016; 2019). While the scale of the movement of Anatolian people into the Aegean cannot be ascertained, it is conceivable that Anatolian groups or communities established themselves not only at Lefkandi and Palamari but also elsewhere in the central and western Aegean at sites with high concentrations of Anatolian material.

It is possible that the potter's wheel and tin bronze metallurgy were not the only technological advancements introduced by Anatolians through the Aegean expansion of the ATN. According to A. Van de Moortel, it is likely that also new shipbuilding and seafaring technologies were introduced to the central and western Aegean from the eastern Aegean (Van de Moortel 2017). Whereas in the Neolithic, EB 1, and EB 2a phases, boat depictions showed flat-bottomed hulls, in the EB 2b phase, we see depictions of a new type of boat with a curved hull. This shift was significant because the new curved hull, which displayed a distinct asymmetrical curvature, likely indicates that these ships were constructed using an expanded logboat technique, which would have made them lighter, stronger, and more seaworthy than longboats derived from simple logboats. The depictions of these boats, found at Orchomenos in central Greece, Eretria and Lefkandi on Euboea, and Rivari on Melos, occur exclusively on ceramic vases of Anatolian shape or with Anatolian characteristics, indicating that these shipbuilding technologies were introduced

from the coastal western Anatolian region. Moreover, the boat images from Eretria, Lefkandi, and Rivari are the earliest in all of the Aegean to include masts, indicating these vessels had sails. The addition of sails to expanded logboat vessels would have lent these boats superiority at sea when compared to the heavier and slower Aegean longboats. The adoption of the sail also would also have allowed these ships to be manned by much smaller crews and carry more cargo. Thus, the use of these new superior vessels would have given Anatolian/east Aegean seafarers an edge over central and western Aegean sailors as they travelled across the Aegean, participating in the ATN by trading with and competing against one another and with local peoples.

As another marker of the expansion of the ATN into the central Aegean, the reliance of Cycladic islanders on southern Anatolian copper resources increased markedly in this period (Stos-Gale 2016, 384). Copper ores from southern Anatolia, which were represented in only 5% of all copper-based artifacts in the EC I-II phase, appeared in 24% of all copper-based artifacts in the EC IIB-IIIA phase, and this especially at Kastri (Stos-Gale 2016, 384-385). Four other copper objects from Kastri have potential origins on either the Cycladic islands of Seriphos, Kea, or Kythnos, or various sites dispersed through the central and southern Anatolian regions (Stos-Gale 2016, 387). In addition, tin bronze technology, clearly coming from Anatolia, was introduced for the first time in the central Aegean. At Kastri, 11 of the 16 metal tools and weapons analyzed were made of tin bronze. Six of these artifacts, when subjected to lead isotope analysis, produced lead isotope ratios consistent with sources much farther east than Anatolia, as far as modern Iran or even Uzbekistan (Stos-Gale 2016, 385). This finding attests to Kastri's connection to the ATN, as well as the eastern expansion of the ATN at this time, as such metal ores or finished products made their way from Iran/Uzbekistan through Anatolia into the Aegean islands.

That many of these central Aegean sites on the ATN were also fortified or situated in particularly defensible locations in this phase is a fact that cannot be overlooked. Remarkably, bastions at all fortified central Aegean sites in this phase were horse-shoe shaped, imitating at a

much smaller scale the shape of the monumental bastions of Liman Tepe rather than the square bastions of Troy or the Heraion. This suggests that in this respect, Liman Tepe exerted a stronger influence in the central Aegean than those other settlements.

The painstaking efforts made to prioritize defense at most sites in the central Aegean apparently were based on legitimate fears. The sites of Dhaskalio, Mt. Kynthos, and Ayia Irini were abandoned by the end of the EC IIB/IIIA phase (Broodbank 2008, 68), and there is evidence that Panormos and Kastri ended in violent destructions at the same time, after which they were abandoned (Angelopoulou 2008, 159; Angelopoulou 2017, 141). At Panormos, concentrations of sea pebbles, likely used as ammo for sling shots, were found strewn around the entrance into the site along with a bronze spearhead and extensive fire damage (Angelopoulou 2008, 159; 2017, 141). At Kastri, concentrations of sea pebbles were discovered within the towers and between the two levels of the fortification system and are again interpreted as probable sling shot (Angelopoulou 2017, 139). All this suggests that the destructions of these settlements were the results of human raids or attacks. At other settlements, attacks might have occurred that would not have been detectable in the material record, such as when raiders would have been immediately successful in capturing a settlement and did not see the need to destroy it. The lack of reliable funerary evidence or studies on human remains from this period in the central Aegean makes such destructions especially difficult to determine. Such settlements may also have suffered only abandonments, such as Ayia Irini. Thus, it is possible that more violence occurred in the EB 3a phase, between 2200 and 2100 BCE, that led to the abandonment of all known central Aegean settlements, with the notable exception of Palamari on Syros. These destructions and abandonments certainly did not happen all at once, but they form a distinctive pattern over a relatively short amount of time (Fig 3.4).

Western Aegean in the EB 2b-3a Phase

At the beginning of the EB 2b phase, the ATN extended into the western Aegean as well (c. 2550/2500 BCE), bringing with it remarkable concentrations of Anatolian imports, architecture, and technologies. These concentrations were most prevalent in the regions of Euboea, Boeotia, and Attica, and were less apparent in the Peloponnese. This Anatolian-style assemblage has been called the Lefkandi I group in the western Aegean (see above, chapter 1). The growth and eventual decline of the ATN that occurred throughout the central Aegean from EB 2b-3a is also reflected at most western Aegean sites.

Many larger sites in this phase were still unfortified, including Lithares (3.5 ha), Eutresis (8 ha), and Tiryns (5.9 ha), which at that time was a coastal settlement (Tartaron et al. 2006, 157-158). Other large sites were fortified, such as Lerna (2.5 ha), Thebes (20 ha), Manika (45 ha), and possibly Kolonna (Gauss 2019a, 1113). Many smaller sites were fortified as well, like Raphina and Askitarion in Attica (which may have been fortified already in EH IIA), and Karystos in Euboea (Tartaron et al. 2006, 157-158). The general trend in the period was towards increasing nucleation, as prominent sites from the previous phase continued to grow in size and population density, but this phase also saw the establishment of a variety of new, mostly coastal sites such as Lefkandi and perhaps Mitrou along the Euboean Gulf, and the reoccupation of Vayia on the Saronic Gulf after a period of abandonment (Tartaron et al. 2006, 145, 148, 153).

While there was already evidence for central authorities at some western Aegean sites in the EB 2a phase (Tsoungiza, Thebes, and Kolonna), the situation becomes much clearer in the EB 2b phase, when these and other settlements became full-blown administrative centers for their surrounding regions. The primary architectural evidence for the presence of central authority was the Corridor House type, which was found at major sites in southern and central Greece. Corridor Houses were monumental free-standing structures with a linear arrangement of rectangular and/or square rooms flanked on either long side by narrow corridors, which likely contained stairways to

a second story (Shaw 2007). Some Corridor Houses were accompanied by fortification systems in the EB 2b-3a phase, especially those in coastal locations; the fortification wall at Lerna is particularly striking for its horse-shoe shaped bastions, which were similar in shape to those found at Liman Tepe and at smaller central Aegean sites (Rutter 1993, 761; Pullen 2008, 31). Corridor Houses were located at Akovitika in Messenia, Lerna in the Argolid, Kolonna on Aegina, Thebes in Boeotia, and possibly at Zygouries, Perachora, Asea, the Argive Heraion, and Eutresis (Pullen 2008, 32). The best-preserved examples, however, are at Lerna and Kolonna. In Lerna phase IIIC, the partially excavated Building BG represented the earliest Corridor House at the site and was constructed together with a fortification system around the settlement (Wiencke 2010, 662; Pullen 2008, 25). In Lerna phase IIID, the House of the Tiles was built over Building BG; it was completely excavated, measuring 25x12m (Pullen 2008, 33). While the general layout of the Corridor Houses varied slightly from settlement to settlement, the overall similarities in features, such as the central circular hearths and terracotta baked roof tiles, indicates a shared vocabulary of power throughout much of south and central Greece (Pullen 2008, 33). These buildings likely served as central spaces within settlements for communal feasting activities, allowing local and regional elites to reinforce their status through sharing food and drink. Storage pithoi and cookware were found at the House of Tiles, and a large quantity of tableware, including saucers, was found within both the House of Tiles and the *Weisses Haus* at Kolonna (Peperaki 2010, 254). The means through which these elites acquired the foodstuffs for these feasts is not yet known, but other finds discovered within various Corridor Houses have been interpreted to suggest that food and other goods were provided by surrounding settlements within the region through a system of taxation (Pullen 2011, 188-189). For example, in Room XI within the House of Tiles a large concentration of clay sealings bearing over 70 different designs have been interpreted as representing the remains of such a taxation system (Pullen 2008, 34; 2011, 189). On the basis of this evidence, Pullen interprets Lerna as the regional center of a chiefdom

level society (Pullen 2008, 35). If Pullen's understanding is correct, the storage of sealings indicates that EH IIB elite groups like those at Lerna exerted a degree of control over the movement of certain goods coming from smaller surrounding sites, taxing these settlements, and keeping a record of their contributions (Pullen 2011, 188-189). Much like the Cyclades in this phase, the central-east Greek mainland experienced a surge of Anatolian ceramic shapes and influence in the EB 2b-3a phase, as materials and practices moved along the ATN (Pullen 2008, 25). The occupants of Lefkandi, for example, imported and created Anatolian ceramic shapes that included wheel-finished plates and bowls, in addition to bell-shaped cups, two-handled cups, and one-handled cups, and even beak-spouted jugs (Popham and Sackett 1968, 6-8). Shapes from the Anatolian drinking set were also found in this period at sites such as Manika, Eretria, and Mitrou on the Euboean Gulf, Kolonna on Aegina in the Saronic Gulf, Pefkakia on the Pagasitic Gulf in Thessaly, and Orchomenos and Thebes further inland in Boeotia (Rutter 2011, Lesson 8; Şahoğlu 2005, 353; Charalambidou et al. 2016, 530; Van de Moortel and Zahou 2009, 1132). At Kolonna, the Anatolian material included a nearly complete drinking set found in the main room of the *Weisses Haus*, the Corridor House that succeeded the earlier *Haus am Felsrand*, indicating that the Corridor House phenomenon was present at sites with concentrations of Anatolian goods (Walter and Felten 1981, 20; Berger and Gauss 2016, 213). That these vessels were found within the main room of Kolonna's Corridor House, near to storage pithoi that likely held perishable foodstuff, suggests that they were likely utilized in ritual feasting activities. This would imply that the elites at Kolonna accepted the same symbolic vocabulary of power practiced by the Anatolian elites along the ATN. Thus, Şahoğlu proposes that Kolonna served as an intermediary between the sites that enjoyed regular access to the ATN and the well-established local and regional centers concentrated in the Peloponnese, in which Anatolian influence was less obvious in the EB 2b-3a phase (Şahoğlu 2005, 353-354).

As mentioned above, the ATN brought new technologies from the eastern to the western Aegean, as it did to the islands of the central Aegean: the potter's wheel, tin bronze metallurgy, the sail, and possibly a new shipbuilding technology. As argued convincingly by Choleva (2020) the potter's wheel was brought by western Anatolian potters from Troy or the Troad who settled at Lefkandi and perhaps at other sites in the east-central Greek mainland as well. It is argued by Van de Moortel (2017) that also the sail and the potential new, superior shipbuilding technology were introduced by eastern Aegean seafarers.

As in the central Aegean, many destructions and abandonments took place through the duration of the EB 2b-3a phase in the western Aegean region. At Lerna the House of Tiles was destroyed by fire at the end of the EH IIB phase, around 2200 BCE. There is no evidence for fire destruction outside of the House of Tiles, but Wiencke suggests that elsewhere at the site such evidence for destruction would not be easy to recognize due to its close proximity in the soil to the ground-water level (Wiencke 2000, 213). The destruction of the House of Tiles in Lerna III was followed immediately by the construction of a large tumulus (c. 18.75 m diameter), carefully encircled by stones, indicating that the occupants of Lerna III still considered this area of the site to be significant even after the Corridor House was destroyed (Banks 2013, 2, 23). The evidence is more limited at Lefkandi I, but it appears that this site, too, ended in a fire destruction towards the end of the EH IIB-IIIA phase (Popham and Sackett 1968, 8). Evidence for fire destruction also is found at Eutresis, Thebes, Zygournies, Raphina, Ayios Kosmas, Tiryns, and potentially Vayia, and other sites such as Askitarion and Manika were likely abandoned. Even sites as large and influential as Kolonna were temporarily abandoned by the end of this phase. It is significant to note that this wave of destructions did not form a single narrow horizon, but instead occurred over a drawn-out period from EH IIB-EH III (c. 2200-2000 BCE; Forsén 1992, 251), in a similar manner to the destructions which occurred in this phase in the eastern Aegean.

The EB 3b- MB Phase in the Aegean (2100-1700 BCE; Figs. 3.5-3.7)

The demise of the sea-based extension of the ATN substantially altered settlement patterns and trade networks throughout the eastern, central, and western regions of the Aegean. The previous high degree of mobility and access to an enormous trade network enjoyed by the inhabitants of the Aegean was greatly reduced in the EB 3b phase, as large-scale maritime trade networks gave way to more localized regional trade. The large trade networks that arose later in the MBA were in many ways distinct from those established in the EBA, as EBA trade centers such as Troy in the eastern Aegean and Kolonna on Aegina reached new levels of prominence and influence and traded with increasingly wealthy and influential groups such as the Minoans on Crete.

Eastern Aegean in the EB 3b- MB Phase

Troy IV-VI and Poliochni Brown

In stratum IV at Troy, the architectural layout of the citadel was reoriented but was otherwise quite similar to that of the later Troy III phase, and its function remained primarily residential (Blum 2016, 89). The citadel was occupied by multiple smaller building units of similar sizes, each containing around four rooms. Finds of simple household implements used for food processing and preparation indicate that the citadel was now occupied by relatively ordinary households with little evidence for social differentiation or even communal feasting practices (Blum 2016, 89, 93). Troy IV ended in an extensive leveling of structures, presumably to make way for Troy V buildings. There is little evidence to indicate human conflict at this time (Blum 2016, 89). Troy V is dated to the MB 1 phase (c. 2000-1700 BCE). The architectural layout of the citadel was fundamentally changed in this phase, as it was now dominated by trapezoidal structures of around ten meters in length (Blum 2016, 90). This new layout lacked the monumentality, however, of earlier Troy II-III and later Troy VI (Blum 2016, 90). In Troy VI,

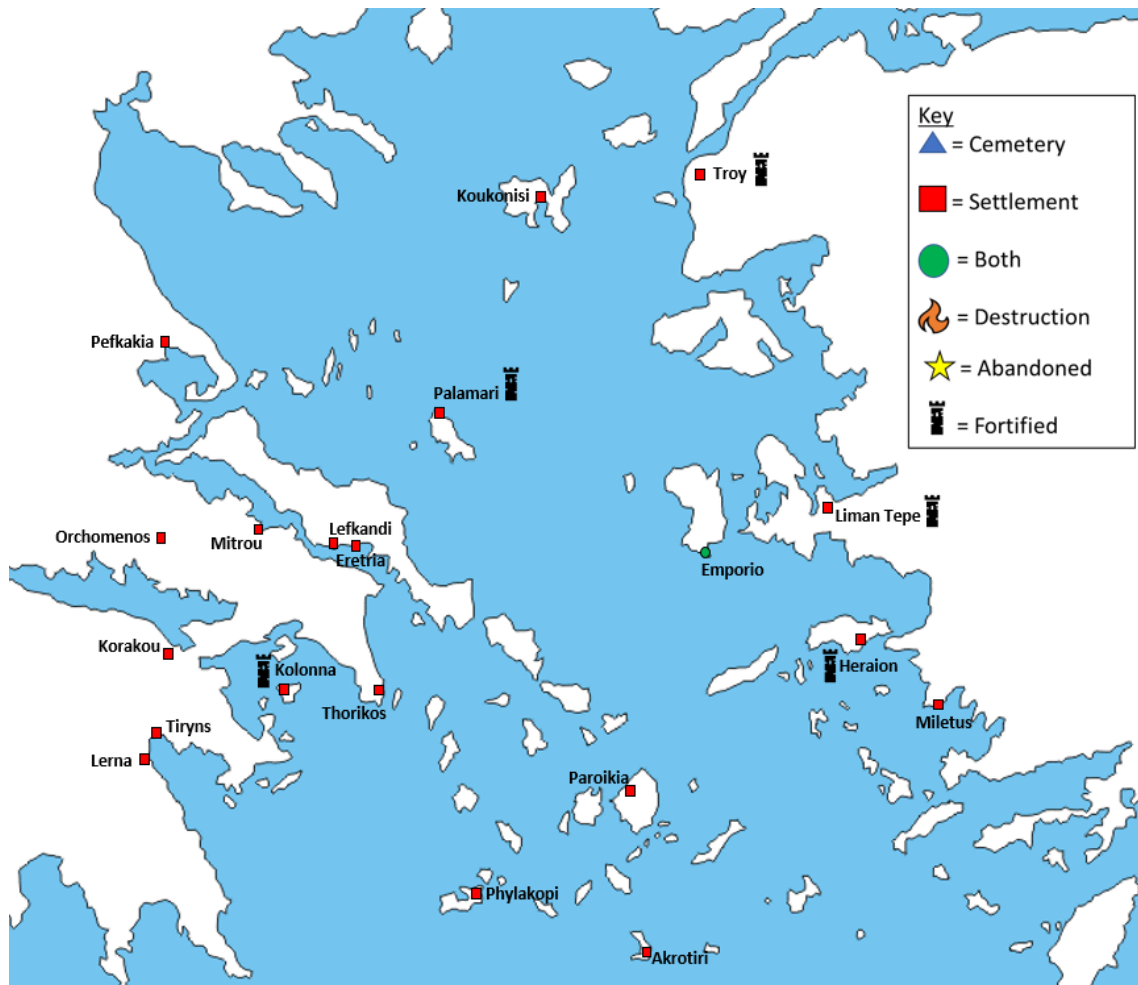


Figure 3.5. Map of Aegean sites occupied in the EB 3b phase (c. 2100-2000 BCE).

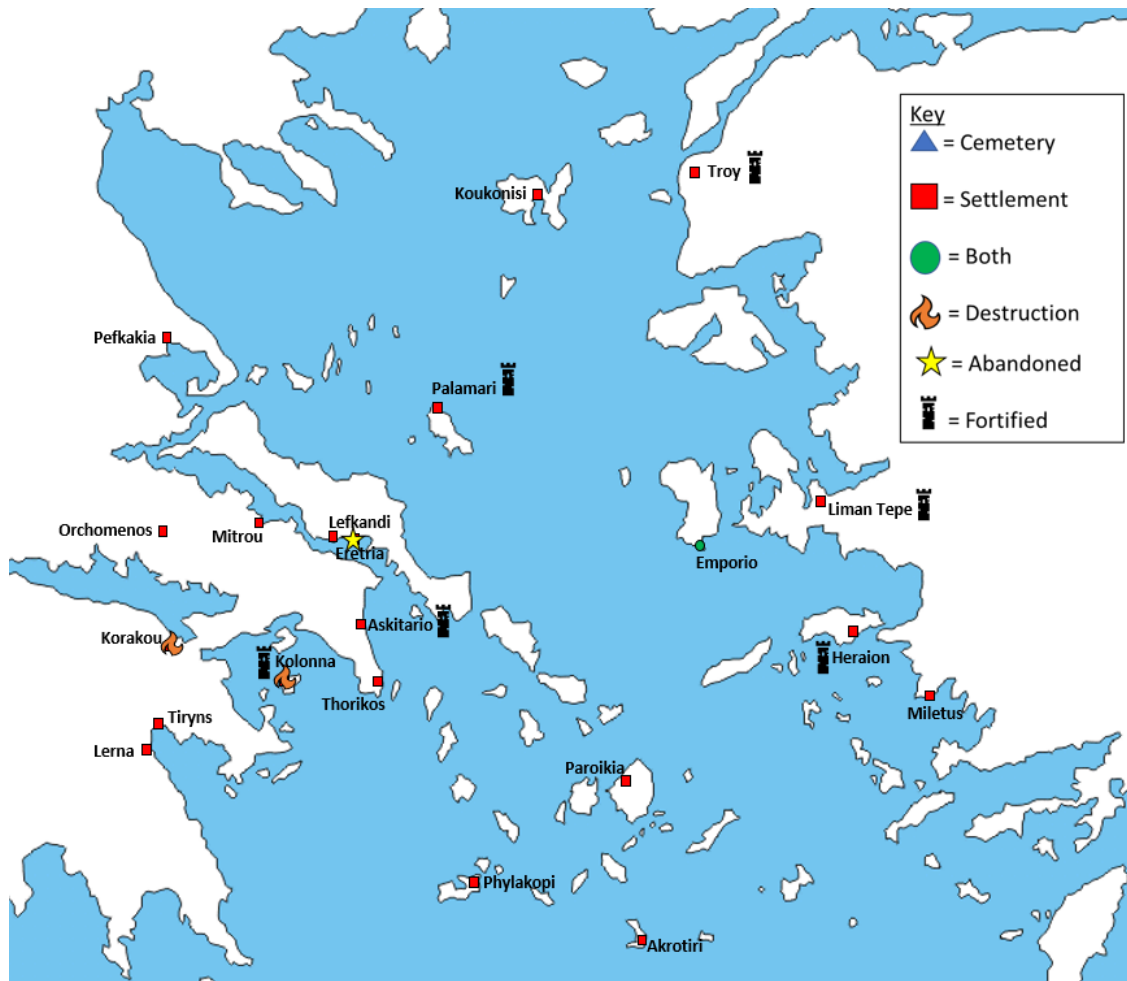


Figure 3.6. Map of Aegean sites occupied in the EB 3b phase (c. 2100-2000 BCE): abandonments/destructions by the end of the EB 3b phase.

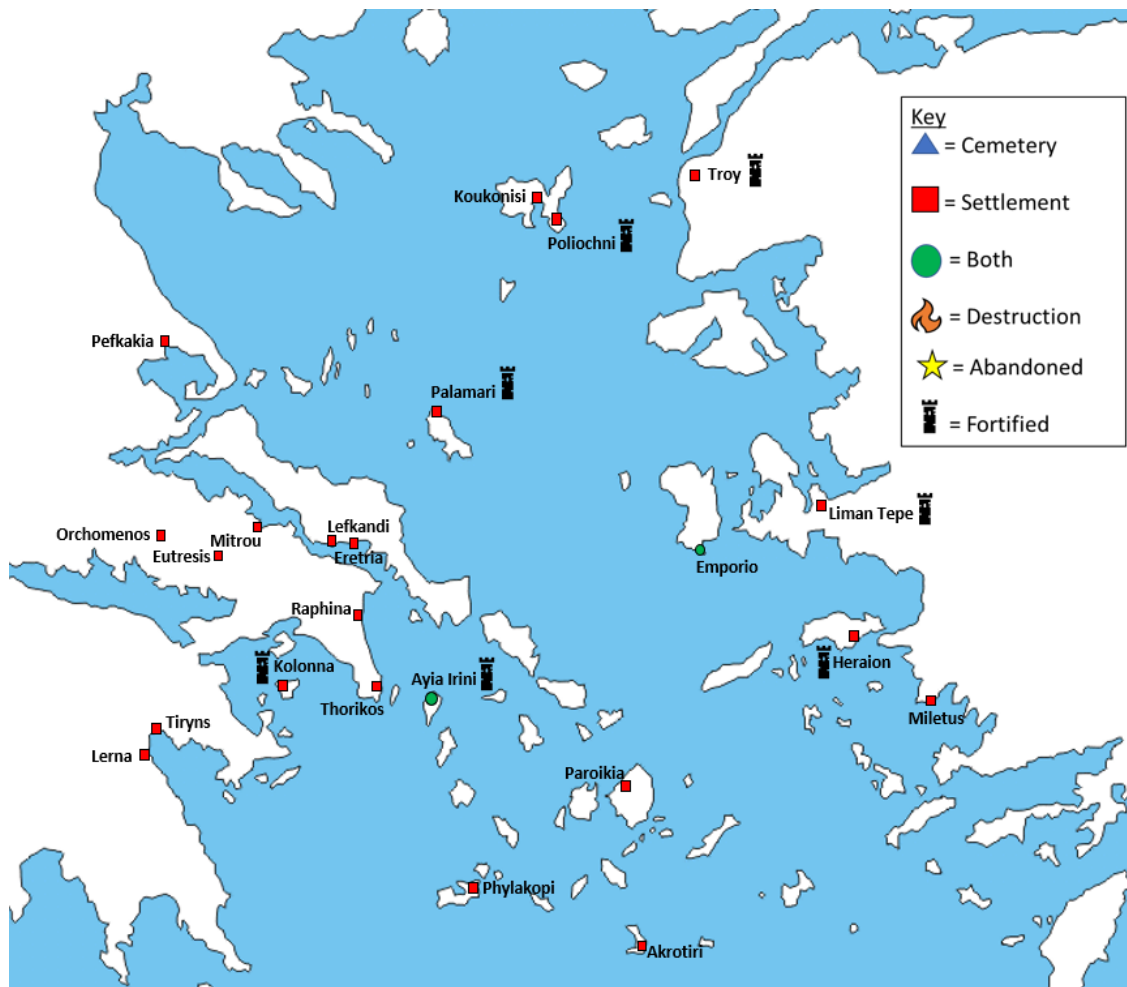


Figure 3.7. Map of Aegean sites occupied in the MB phase (c. 2000-1700 BCE).

dating from MB II-LB IIIA (c.1700-1300/1200 BCE), the wealth of Troy II was, for the first time, surpassed, and society was highly stratified (Kolb 2004, 578). While much of this layer on the citadel was later leveled to clear space for the historical Greek and Roman buildings, the remaining stone wall foundations at the citadel's perimeter belonged to monumental freestanding elite buildings (Blegen et al. 1953). The fortification wall surrounding the citadel was expanded considerably in Troy VI, demonstrating a massive investment of labor. The lower town, estimated to have reached 20 ha and a population of 5-10,000 at this time, was surrounded by a wooden fortification system and a 10 m wide ditch (Korfmann 1998, 369-371). In contrast to Troy, the Brown settlement at Poliochni, which was established ca. 2100 BCE after a potential gap in occupation, lasted into the MBA, and was greatly reduced from the previous phase, showing no clear evidence for social differentiation (Rutter 2011, Lesson 7; Cultraro 2004, 325). In this phase, the fortification system of the Yellow phase was still present and maintained until its eventual abandonment (Cultraro 2004, 325).

Troy's contacts with the central and western Aegean ended almost completely in phase IV, but its trade with other northwestern and central Anatolian settlements continued with little to no disruption (Blum 2016, 90, 93). Contact between Troy IV and Poliochni Brown is evidenced by the simultaneous appearance of various ceramic shapes at both settlements, including carinated and volute-handled bowls, beak-spouted jugs, and narrow-necked beaked jugs with incised and impressed decoration at the base of the neck (Blum 2016, 95). Continued contact with the Heraion on Samos is indicated by a plethora of shared ceramic shapes, including ring-based depas cups with curved profiles, double-handed jugs, and bowls with incurving rims (Blum 2016, 94-95). The extensive contact between these two settlements went back to the EH II phase, as is evidenced by the square shape of the bastions at both sites, unlike the horse-shoe shaped bastions at Liman Tepe. Troy IV had limited contacts with the Cyclades, as shown by the presence of duck vases or askoi typically associated with those islands (Kouka and Menelaou 2018, 133), and with

Minoan Crete, as is indicated by the presence of several Minoan Barbotine jugs that were either imports or local imitations (Kouka and Menelaou 2018, 133-134). Significantly, in spite of the geographical closeness of the Heraion and Liman Tepe, evidence for contact between Liman Tepe and Troy IV is lacking (Blum 2016, 94), which may be interpreted to indicate a degree of competition between Liman Tepe and the Heraion at this time. Trade connections between Troy and central Anatolia were fully restored in Troy V and especially in Troy VI, when an extensive trade network stretched from Troy to central Anatolia and even as far east as central Asia, from which Trojans obtained copper, silver, amber, tin, and horses (Korfmann 1998, 382). Contacts with the central Aegean were more limited. The grey wares common in the Troy VI phase are stylistically similar to the Grey Minyan wares found on mainland Greece in the MBA, but only one vessel shape overlaps between the two regions (Rutter 2011, Lesson 23). Matt-painted pottery likely imported from the Cyclades or Greece appears in Troy VI, but is rare (Rutter 2011, Lesson 23).

Liman Tepe IV-1 and the Heraion V

Liman Tepe and the Heraion likewise experienced major changes in the EB 3b and MB 1 phases after the maritime extension of the ATN had broken down. At Liman Tepe, this change was marked by an entirely new architectural layout in LMT IV-1 (EB 3b) and a change in ceramic styles that combined EB and MB features (Erkanal and Şahoğlu 2016, 164). The settlement in this phase is described by the excavators as a scattered collection of simple domestic structures, departing notably from the grand nature of the earlier settlement and revealing no evidence for centralized authority (Şahoğlu 2008, 491). At the Heraion, the fire destruction of phase IV was followed by a new building orientation and settlement layout in phase V, which consisted of two-roomed houses combined into blocks with shared walls, divided by streets (Kouka and Menelaou 2018, 133-134). Unlike at Liman Tepe, this new settlement layout is

interpreted by excavators to represent an increase in population, thus indicating that the settlement at the Heraion in phase V was flourishing (Kouka and Menelaou 2018, 133-133).

At Liman Tepe, there was limited evidence for trade with northwestern Anatolian settlements such as Troy in the EB 3b-MB phases (Blum 2016, 94-95). Contact between Liman Tepe and the western Aegean is evidenced by the presence of matt-painted pottery imports from Aegina, likely from Kolonna (Erkanal and Şahoğlu 2016, 164). In contrast to Liman Tepe, the Heraion maintained trade with Troy in the EB 3b phase, which may explain the relative continuity of prosperity seen at the Heraion V (Kouka and Menelaou 2018, 133). Like the Trojans, the Heraion's inhabitants still enjoyed a relative level of prosperity during and after the collapse of the ATN, while Liman Tepe declined much more. The ceramic assemblage of the Heraion in this phase included a combination of imports from sites such as Troy as well as local adaptations and hybrids (Kouka and Menelaou 2018, 133). The duck vases found at Troy were also present in phase V at the Heraion, indicating some limited contact with the Cyclades as well (Kouka and Menelaou 2018, 133). Additionally, a few Minoan jugs in Barbotine ware of either imported or locally imitated origin at the Heraion, as at Troy, signal the growing influence of Minoan Crete by the end of the EBA (Kouka and Menelaou 2018, 133).

Evidence for significant destruction was not present at either Liman Tepe or the Heraion in the EB 3b phase. Instead, these phases appeared to be transitional, as occupants of both sites attempted to reestablish their societal organization and rebuild trade networks after the violent destructions of the previous phases and the collapse of the ATN in the Aegean.

In the MBA, following the LMT IV-1 phase, the settlement of Liman Tepe once again developed a well-organized architectural layout, but this time with wattle-and-daub oval houses and a rectangular building with evidence for workshops (Erkanal and Şahoğlu 2016, 164; 2012, 227). There is no mention in sources published in English of the state of the fortification system in this phase, nor do the authors provide secure evidence for social hierarchy. At the Heraion, the

MBA settlement contained six sequential architectural layers and included a new fortification system built over the previous one (Kouka 2019a, 5). There is evidence for trade with Liman Tepe as well as Troy, Miletos, Iasos, and other coastal Anatolian sites, and also with the Cyclades and Crete, as evidenced by a large concentration of Cycladic and Minoan pottery (Kouka 2013, 576).

Central Aegean in the EB 3b- MB Phase

After the wave of destructions and abandonments at the end of the EB 3a phase, there was a striking drop in evidence for human occupation in the central Aegean in the last part of the EBA. The few sites attested in this phase, such as Phylakopi on Melos and Paroikia on Paros, were highly nucleated, in a notable departure from previous settlement patterns (Rutter 2011, Lesson 4). Paroikia was excavated by Rubensohn around 1900, and the site has not been reexamined since (Overbeck 1989, 2). However, J.C. Overbeck did reexamine the pottery recovered in the original excavation, and he agreed with Rubensohn's initial interpretation that the majority of the pottery found at Paroikia appeared to be contemporary to the final stage of Phylakopi I on Melos (Overbeck 1989, 2). The architecture of Paroikia is described as a collection of tightly packed well-built rooms, built into the bedrock but with evidence for repairs over time (Overbeck 1989, 2). As multiple ceramic vessels contemporary to the final Phylakopi I phase were found sitting on the floors of some of these rooms, this architecture can be securely dated to the EB 3b phase (Overbeck 1989, 2). Given the scarcity of published material from Paroikia, and the multiple inconsistencies and errors Overbeck notes from Rubensohn's original excavation publications, the discussion of the EB 3b phase in the central Aegean will focus on the contemporary settlement of Phylakopi on Melos.

The layout of Phylakopi, reoccupied in phase I (c. 2100/2000-1900/1850 BCE) after an abandonment in the EC IIB-EC IIIA period, was a striking departure from the agglomerative

architecture of the small Cycladic hilltop forts of the previous phase. It consisted of organized rectangular blocks of rooms, indicative of perhaps some form of authority responsible for their organization and construction (Rutter 2011, Lesson 4; Erkanal and Şahoğlu 2016, 159; Wilson 2013, 421). There is very little evidence at Phylakopi I for external trade or contact with the eastern Aegean. The duck vases found at the Heraion in stratum V and at Troy IV, if they were in fact imports and not local imitations, may have originated from Phylakopi, as it was one of very few central Aegean sites active in this phase (Kouka and Menelaou 2018, 133; Rutter 2011, Lesson 4). Additionally, Phylakopi I pottery is found in sizable quantities at Knossos on Crete, but no Cretan shapes or influence can be identified in Phylakopi at this time. Most external contacts of Phylakopi I were with the western Aegean, specifically with the settlements of Kolonna, Eleusis, Lerna, Argos, and Eutresis (Rutter 2011, Lesson 4).

Apart from the settlements at Phylakopi and Paroikia, as well as scattered evidence from Akrotiri on Thera, no evidence for occupation has yet been identified elsewhere in the EB 3b-MB 1 Cyclades. In the MB 2 phase, these sites expanded and Ayia Irini was resettled, now with a fortification system for the first time, consisting of a wall with square bastions (Barber 2010, 129; Wilson 2013, 387, fig. 1). Unlike the earlier inhabitants of the Cycladic islands, who in the EC I-III A phases demonstrated a resistance to nucleation, the high degree of nucleation in the EC IIIB-MBA settlement pattern of the Cyclades is particularly striking, and it certainly was successful, as these nucleated settlements continued through the end of the Bronze Age (Figs. 3.5-3.7). The potential significance of this change will be discussed in chapter 4.

At Palamari, in the EB 3b phase (Palamari III) the fortification system was further reinforced, and areas of storage rooms and workshops were built (Romanou 2015b, 8-9). The site was occupied continuously into the MB1 phase (Palamari IV), when at least two of the large bastions at the site were converted into residential spaces, before the site's gradual abandonment in the course of the MB 1 phase (Romanou 2015b, 3; 2015a, 7).

Western Aegean in the EB 3b- MB Phase

The social organization and trade connections of the western Aegean also departed notably from those of the previous phase. At the end of the EH IIB phase (c. 2200 BCE) all known monumental Corridor Houses had been destroyed and/or abandoned. In the subsequent EH III phase, societal organization was much simplified broadly across the mainland, and trade connections were much reduced. In contrast to the previous phase, evidence for a hierarchical settlement pattern or social hierarchy within settlements was lacking on the Greek mainland, and social distinctions became muted (Şahoğlu 2005, 344; Voutsaki 2010, 100-101). For example, the small settlement of Tsoungiza consisted of tightly packed houses, including House E which contained many pithoi and other tools related to food storage and preparation (Pullen 2008, 37). The contents of House E may be interpreted as indications of communal storage activities, perhaps having belonged to a local leader, but the evidence is meager (Pullen 2008, 37). At Lerna, phase IV marks a striking departure of architectural and material practices from the previous phase, suggesting that perhaps new occupants had moved in. Instead of a hierarchical settlement dominated by a Corridor House, Lerna's settlement now consisted of a number of relatively flimsy apsidal residential structures, all comparable in size. Terracotta rooftiles, which previously marked elite buildings, were no longer used, and there was overall very little evidence for social distinction in this phase, with a single exception. Just outside the circle of the tumulus constructed over the House of Tiles at the end of phase III, was an apsidal building, referred to as building W-1 or the so-called "Chieftain's House" (Banks 2013, 13, 28). Building W-1, while somewhat larger than the other structures of early Lerna IV, reached a maximum length of only 13 m, was much smaller than the House of Tiles (Banks 2013, 13, 28; Weiberg and Lindblom 2014, 396-397). Another striking change from previous practice is the fact that new houses were built on top of the ruins of older ones repeatedly through all of the eight architectural subphases of Lerna IV, possibly every generation or so, whereas previously houses were used for many

generations (Banks 2013, 10-11, 13-15). While there are a few consistencies between Lerna III and IV, these are dramatically outweighed by the many changes, in terms of architecture, ceramics, and likely even social organization. Thus, it has been suggested that the occupants of Lerna IV were entirely different people from the previous phase (Caskey 1960, 301; Banks 2013).

In the MH I-II period, changes slowly began to occur on the Greek mainland. The residential structures built in this period generally became more permanent. At Lerna and Korakou, separate structures seemingly built for the purpose of storage appeared in association with particular households within the settlements (Wiersma 2014, 244), indicating perhaps an unequal distribution of wealth and resources among the residents of the sites and the beginnings of social stratification. As time went on, residential structures increasingly became less uniform, and some became much larger than others (Wiersma 2014, 244-245). Elsewhere at sites such as Pefkakia, similar storage structures appear to have been shared among multiple households, or even among entire communities (Wiersma 2014, 244). It is difficult to distinguish between population growth from one phase of the MH to the next, but the increased evidence for new building activities, especially when it was concentrated at larger sites (>2 ha), suggests a steady population growth through all of the MH I-II phases (Wiersma 2014, 244). Finally, trade in this period began to pick back up both between Helladic regions and also between mainland Greece and other areas of the Aegean, especially as Minoan influence around the Aegean increased (Wiersma 2014, 245).

In sharp contrast to the decline in socio-political complexity and trade on the Greek mainland, the island settlement of Kolonna experienced a remarkable period of growth at the beginning of the EH III phase, perhaps after a brief abandonment. Gradually throughout Kolonna IV, a transitional phase between EH II and III beginning c. 2200 BCE and roughly contemporary to the establishment of Troy III and Heraion IV, structures from the previous EH IIB phase were demolished and replaced by new residential buildings (Berger and Gauss 2016,

215-217; Gauss 2019a, 1116-1117). This slow process of rebuilding culminated in phase V, in which a newly constructed large fortification wall encircled the settlement's center, enclosing some 60-70 houses (Berger and Gauss 2016, 217; Gauss 2019b, 61; Gauss 2020, 607). This fortification system, one of very few that had been constructed in the EB 3b phase, had horse-shoe shaped towers resembling those of Liman Tepe in this phase (Gauss 2019b, 61, 62, fig. 8; Berger and Gauss 2016, 217) and of Lerna and several Cycladic settlements in the previous phase. The rectangular houses within the fortification wall were arranged into blocks sharing party walls between them, a layout showing some similarities with those seen at Poliochni, Thermi, and at the Heraion in previous phases. All this suggests the presence of a central authority (Pullen 2008, 37; Gauss 2019b, 60). Kolonna V was completely destroyed in a fire and followed by internal additions to the fortification system in the following phase VI (Gauss 2019b, 61). In this phase, at the transition between the EH III phase and the MBA, apsidal structures were common (Gauss and Smetana 2010, 167). Additionally, a massive stone fortification wall with a mudbrick superstructure was built to reinforce the wall from the previous phase, and the wall was widened inward into the settlement, covering the remains of residential structures from phase V (Gauss 2019b, 61). The gate of the new internal wall was flanked on either side by large bastions, which now were given the same square shape as the bastions at Troy and the Heraion (Gauss 2019b, 61). The massive fortification in this phase, following the destruction of the previous phase, suggests that the increased emphasis on protection was a response to a violent event at Kolonna, and it certainly indicates that safety was a major concern in Kolonna VI. Kolonna's fortifications expanded through the remainder of the Middle Bronze Age and into the Late Bronze Age, indicating the continual necessity to adapt and respond to new increasing threats of violence. In strata VIII-X, dating to the later MH I phase through LH I, a monumental new building, called the Large Building Complex, was likely the residence of an elite. In its first phase, dating to Kolonna VIII, it had strong affinities with Minoan Crete in terms of its table ware

and cooking pottery (Lindblom et al. 2015, 229; Gauss 2019a, 1126-1127). In phase IX, corresponding to the MH II ceramic phase, a built chamber tomb was constructed near the easternmost fortification walls, containing a large sword and other weapons as well as a boar's tusk helmet, gold jewelry, and imported vases (Gauss and Smetana 2010, 169). This indicates that as early as the MH II phase, the social hierarchy at Lerna included an elite warrior class. At Kolonna IX, a fragment of a barrel jar depicts a warrior wearing a horned helmet, standing on what is likely the figurehead of a ship (Van de Moortel 2020, 324). Another fragment of a barrel jar shows an oared ship with spears (Rutter 1993, 780; Gauss 2019a, 1129, 1131, Figs. 27a-b). This pictorial evidence strongly suggests that naval warfare was practiced at Kolonna, no doubt to protect its maritime trade interests. As wealth was increasingly concentrated at Kolonna, the elite interest in protecting this wealth from outside threats likely coincided with the development of an elite warrior class. Clearly, Kolonna remained an important center of trade and power throughout the Bronze Age.

However, even at Kolonna the devastating effects of the EB 3a downturn in maritime trade were apparent, causing an extensive decline before the settlement could reach its height in the MBA. The widespread decline in the western Aegean in the EH III phase is reflected in its reduced access to trade goods, even at Kolonna. At Kolonna IV (beginning c. 2200 BCE), macroscopic and scientific analyses have shown that imports at the site were coming from the Peloponnese and central mainland Greece, but not from the Cyclades or Anatolia (Berger and Gauss 2016, 217). Eventually, towards the very end of the EH III phase and into the beginning of the MB age (Kolonna V-VI) trade extended to the Cycladic islands and Crete. There is even evidence to suggest there was contact between Kolonna and the Near East as early as Kolonna V, in the form of a metal hoard of jewelry made of gold, silver, and semi-precious materials likely originating in Mesopotamia (Reinholdt 2008; Berger and Gauss 2016, 209, 215). In the MB period, Kolonna built up a maritime trade network reaching from the northeast Peloponnese via

the Euboean Gulf to southeast Thessaly. Elsewhere in the western Aegean, a shift towards increasingly regional trade contacts led to the development of a unique set of ceramic styles and shapes that borrowed from local and Anatolian characteristics known in the previous phase. For example, at Lerna, where there was very little evidence for contact or interaction with Lefkandi I material culture in the phase of the ATN, a new ceramic repertoire developed in EB 3b, which borrowed shapes from the Anatolian drinking set such as the two-handled tankard and bell-shaped cup, and it adopted the use of the potter's wheel for the first time (Pullen 2008, 37; Weiberg and Lindblom 2014, 400). The Anatolian shapes and techniques were altered to conform more closely to locally established styles and regional preferences, in a fusion of the two ceramic traditions (Rutter 2008, 462). The incorporation of these Anatolian shapes and technologies at Lerna, Kolonna, Tiryns (Weiberg and Lindblom 2014, 402), and elsewhere suggests that Anatolian influence had a lasting effect on the development of Helladic culture, even if these shapes might not have carried the same symbolic weight they once had.

In the EB 3b and early MB phases there were generally fewer destructions, but this may be because the collapse of the Aegean extension of the ATN meant that transportable wealth was less readily available. The most significant destruction event that happened in phase EB 3b occurred at Kolonna V, one of the few sites which seemed to retain much of the wealth it had gained from the ATN. This destruction event can be interpreted as evidence for an enemy raid, an interpretation which is supported by the dramatic strengthening of the fortification system at Kolonna in the following phase. Eventually, the Aegean settlements transition into the Middle Bronze Age, in which a few settlements, such as those at Troy, Liman Tepe, and Kolonna, eventually recover economically and socially from previous declines. Other sites, such as Poliochni and Palamari, are unable to truly recover, and are abandoned early in the MBA.

Discussion

Throughout the Early Bronze Age and into the Middle Bronze Age, before, during, and after the Aegean expansion of the ATN, periods of greater and lesser contact fluctuated notably. It seems that interactions between the eastern, central, and western Aegean steadily built through the EB 1 and EB 2a phases, then increased exponentially as the expansion of the ATN made contacts between these regions reach new heights. The superiority of coastal western Anatolian settlements over the rest of the Aegean in terms of socio-political and economic developments as well as sheer size and mobilization of labor is clear, and the remarkable changes and innovations introduced along the ATN in the EBA are undeniable. The introduction of new Anatolian material caused an irreversible shift in the development of Aegean culture. The concentrations of tangible material at specific central and western Aegean sites, when examined together with the introduction of new technologies, as well as intangible practices and beliefs they undoubtedly accompanied, indicate that Anatolian people as well as objects and ideologies moved westward along the ATN. Choleva's recent study (2020) on the introduction of the potter's wheel in the Aegean is especially convincing in this respect. Likewise, the first occurrence of sailing technology and possibly a new principle of shipbuilding in the Aegean depicted on bowls with Anatolian characteristics strongly suggests that these new, superior seafaring technologies were used by western Anatolian/eastern Aegean seafarers traveling west. The Anatolian people travelling on these routes likely took up residence on the Aegean islands and Greek mainland, either founding their own small settlements, such as perhaps at Kastri, Panormos, Palamari, and Lefkandi, or living among the local people. They altered their surrounding built environments to replicate the conditions they were familiar with. Thus, we see Anatolian-type fortifications and concentrations of Anatolian materials in settlements established in previously unoccupied areas, but also incorporated into existing central and western Aegean settlements. The occupants of the Aegean had never been so connected before, nor so mobile.

But with this undeniable surge of wealth and innovation came increased competition between neighboring settlements and regions. There were traders and migrants moving around the Aegean in greater numbers, making wealth and resources more mobile and more accessible than they had ever been before. The heightened competition introduced to the Aegean by the ATN, coupled with the metallurgical and shipbuilding innovations, appears to have led to greater violence and piracy. The large expenditures of time and labor invested in fortifying many central and western Aegean settlements, in a way strikingly similar to eastern sites, and the subsequent horizon of destructions occurring in the final phase of the extended ATN through all regions of the Aegean, makes it clear that violence was endemic to this period (Fig. 3.4). What is more, the abandonments and declines which occurred at the majority of Aegean settlements in the EB 3 phase makes clear the magnitude and intensity of these waves of violence. The exact nature of this violence will be explored further in the following chapter.

CHAPTER FOUR

VIOLENCE AND PIRACY IN THE EARLY BRONZE AGE AEGEAN

The “Kastri/Lefkandi I phenomenon,” or the extension of the ATN into the Aegean during the EB 2b-3a period (ca. 2550-2100 BCE), undoubtedly represented a period of major societal, cultural, and economic changes in the EBA Aegean as the result of much greater connectivity between its inhabitants. New studies by Choleva (2020) and Van de Moortel (2017) provide strong arguments for movements of Anatolian people into the Aegean, bringing new Anatolian goods and technologies as well as more intangible information and ideas. These studies support Şahoğlu’s thesis that Anatolian people moved around the central and western Aegean at this time, interacting with and influencing local populations, and at times establishing their own colonies to further facilitate trade (Şahoğlu 2005; 2008; 2014; 2019; Şahoğlu and Erkanal 2016). The competing interpretation that these Anatolian characteristics in the Aegean simply were the result of intensified trade along the expanded ATN and did not involve mobility by western Anatolian/eastern Aegean groups relocation in the central and western Aegean (Kouka 2013; 2016; 2018; 2019) seems less likely. We now may ask what role was played by violence, and particularly by piracy, within the time span of this phenomenon, and how it impacted the trajectory of societal development in the Aegean.

With the exception of the Trojan connections of the Anatolian potters at Palamari and Lefkandi (Choleva 2020, 30-34), and the presumed links—directly or indirectly—with Liman Tepe of the horse-shoe shaped bastions at Markiani, Kastri, Panormos, Palamari, and Lerna, the paths of movement or nature of these Anatolian peoples’ habitations in the central and western Aegean is not well understood. Likewise, the particulars of their interactions with the central and western Aegean people cannot be ascertained, but it can be assumed that such encounters cannot be generalized as either wholly negative nor as completely positive. Various peoples interacted with one another within this period in ways that were varied and nuanced, both within regions

and between them. A close look at the changes in settlement location and means of defense throughout the EB 2a-MB phases (Figs. 1.1-4), makes it apparent that violence played a role in the interactions between peoples before, during, and after the period of the expanded ATN. It is clear, however, that there was a much greater increase in violence during the Aegean extension of the ATN in the EB 2b-EB 3a period than is often recognized; it played a substantial role in changing the trajectory of societal development and maritime networks in the final phase of the Early Bronze Age Aegean and into the Middle and Late Bronze Age.

In the following, I will focus on the evidence for violence in the Early Bronze Age Aegean and ask whether it could have been related to piracy, as defined in chapter 2 and using the criteria outlined in that chapter. For the purposes of this study, I have adopted in that chapter the definition of piracy as the act of raiding by ship and taking persons or goods from an individual or group without consent, typically but not exclusively through the threat or use of violence with the primary goal of gaining portable wealth.

Evidence for Violence

Several criteria for piracy—changes in settlement patterns, abandonments, and destructions; existence of fortifications and watch towers; weapons production and the inclusion of weapons in graves and trauma on human remains at coastal sites—can be summarized as evidence for violence. While concentrations of exotic goods are rarely found, it cannot be ruled out that pirates in the EBA would have mainly focused on seizing subsistence resources, and even human populations to be captured as slaves. In the near-absence of systematically excavated graves and the scarcity of evidence for weapons production in the EBA Aegean, indications of violence must primarily be sought in settlement patterns, fortifications, and evidence for destructions and abandonments.

Eastern Aegean sites such as Troy, Liman Tepe, Poliochni and the Heraion boasted fortification systems as far back as EB 1. In the EB 2a phase these fortification systems were further reinforced and expanded, and a wall was constructed for the first time at Thermi on Lesbos. All these sites were established in coastal locations, where they remained as permanent settlements that existed for centuries or, in some cases, even millennia. This indicates that the settlements of the eastern Aegean had become familiar early on with risks associated with the wealth they gained from sea-based trade, and they had developed defensive strategies that enabled them to survive. As the western and central Aegean were not yet as active in distant trade routes in the EB 1-2a period, it is likely that the dangers faced by coastal eastern Aegean sites, necessitating strong fortifications, were posed by coastal peoples from the same region and possibly also by trading partners outside of the Aegean, perhaps in the Black Sea or along the southern Anatolian coast.

In contrast to the eastern Aegean, all known central Aegean settlements remained unfortified until EB 2a, with the exceptions of the large Final Neolithic settlement of Strofilas on Andros and the miniscule settlement of Markiani on Amorgos, which had a fortification system potentially dating as early as EC I (Angelopoulou 2017, 132-134). The majority of central Aegean settlements prior to EB 2a were small and short-lived, and mostly occupied areas near the coast. These settlement trends continued into the EB 2a phase, but with the establishment of small, fortified settlements at Vathy on Astypalaia and Mt. Kynthos on Delos. Vathy had square-shaped towers or bastions (Vlachopoulos and Angelopoulou 2019, 202), whereas Mt. Kynthos had horse-shoe shaped bastions imitating those of Liman Tepe (Şahoğlu 2019, 124). It may be significant that these two sites along with Markiani, which was certainly fortified and had horse-shoe shaped bastions by this phase, were in relatively close proximity to the Heraion on Samos and to the coastal Anatolian settlements of Miletus and Liman Tepe (Figs. 1.1 and 1.2). This could mean that these fortifications were inspired by interactions with people of the southwest

Anatolian coastal region, but in the absence of material evidence, we do not know if the danger came from there or from other Cycladic groups. In the western Aegean, aside from a potential fortification wall at Perachora, north of Corinth (Rutter 2011, Lesson 3), settlements remained unfortified until the EB 2a phase, when Thebes was fortified, and possibly also Raphina and Askitarion in Attica, and trends towards settlement nucleation began. This nucleation likely began in part as a defensive strategy, as larger settlements would have been more capable of defending against enemy attacks and raids. Thus, in the EB 2a phase, we see the first steps away from the previous dispersed settlement pattern in the western Aegean, and towards a pattern in which defense was increasingly prioritized. In the EB 2a phase destruction events occurred at Troy and Poliochni in the eastern Aegean, and at Skarkos on Ios in the Cyclades. Troy and Poliochni quickly recovered and became even more prominent in the following phase, but the destruction at Skarkos was followed by a permanent abandonment of the site.

The fears of violence expressed in the EB 2a phase became much more apparent in the EB 2b-3a phases, as the ATN expanded into the Aegean. In the eastern Aegean, sites such as Troy, the Heraion, and Poliochni, reached a peak in this phase. All continued to expand and reinforce their elaborate fortifications systems. In the central Aegean, the new or newly fortified sites at Kastri, Panormos, and Palamari joined those fortified in the previous phase, all displaying the horse-shoe shaped bastions in the style of Liman Tepe's fortifications, but at a much smaller scale (Fig. 2.1). Kastri and Panormos were also located on easily defensible hilltops near to the sea and boasted wide-reaching views of surrounding islands. Thus, small, fortified settlements, or sites otherwise defensible due to being difficult to access from the coast, became the norm in the central Aegean. Concerns for safety were also increasingly expressed in the western Aegean, in which the trend towards nucleation continued as people gravitated toward increasingly wealthy regional centers, some ruled by elites residing in Corridor Houses. Settlements of varying sizes were newly fortified, such as those at Lerna, Vayia, and Manika (Fig. 2.1).

The wave of destructions that occurred across the Aegean in the EB 3a phase, as the ATN began its decline, and no doubt contributing to this decline, demonstrates that the plethora of newly built fortification walls and the strategic locations of many Aegean settlements were not simply for show (Fig. 3.4). This fear of raiding and attack was ultimately validated in the prolonged 200-year period of destructions and abandonments that stretched from around 2200 BCE to 2000 BCE. Destructions and abandonments, while not insignificant previously, were endemic in this period. They occurred in the northeastern Aegean at Troy, Poliochni, and Thermi, in the southeastern Aegean at Liman Tepe, throughout the Cyclades at Markiani, Dhaskalio, Panormos, Zas Cave, Mt. Kynthos, Akrotiri, Rivari, Kastri, and Ayia Irini, and in the western Aegean at Manika, Lefkandi, Korakou, Eutresis, Thebes, Raphina, Askitario, Ayios Kosmas, Kolonna, Zygournies, Lerna, and possibly Vayia (Fig. 3.4). They happened at larger and smaller sites alike and at coastal as well as inland locations.

With the exception of Thermi and Poliochni, most established eastern Aegean settlements survived, but they experienced severe decline and apparently a breakdown of social hierarchies. Only the Heraion on Samos continued to flourish. A potential explanation for this unusual prosperity at the Heraion will be posited below. In the central Aegean, the impact of the violence of the EB 2b-3a period was the starkest. All settlements were abandoned for good or for some time (Fig. 3.5), and when people returned, the long-established settlement pattern of dispersion practiced by groups in all previous periods of Cycladic occupation was given up. The new settlements of the EB 3b and MB period were large and nucleated, which would ensure that they were significantly less vulnerable to attack than those of previous periods (Figs. 3.5, 3.6, 3.7). This new nucleated settlement pattern in the Cyclades was successful, leading to stability and continuity of occupation, and it became the norm, persisting through the end of the Mycenaean palatial period, ca. 1200 BCE. In the western Aegean, the era of the Corridor Houses and its ruling elites came to an equally dramatic end in the late EB 2b and EB 3 phases, as a series

of destructions and abandonments reduced once wealthy and well-connected regional centers to smaller, simpler settlements with much smaller networks. This is perhaps best demonstrated at Lerna, where the most impressive example of a Corridor House, the House of Tiles, from the EB 2b phase was reduced to rubble and, in the following phase, its settlement consisted of much flimsier buildings with little evidence for social ranking. The only exception to this widespread picture of decline was Kolonna on the island of Aegina, which after a brief period of decline rebounded from the collapse of the Corridor House period and built up massive fortifications as well as a maritime trade network that stretched from the western Peloponnese to the eastern part of central Greece, to all appearances with the aid of a strong navy.

In the EB 3b-MB period, there is a dramatic shift also in trade networks in the Aegean. The surviving eastern Aegean settlements shifted focus and directed most trading attentions to inland Anatolia, where they continued to enjoy access to Anatolian extensions of Near Eastern and Mesopotamian trade routes. Their marked shift in direction away from the Aegean Sea leads me to hypothesize that these settlements feared dangers from the sea.

The wave of destructions and abandonments endemic to the EB 3a and 3b phases have frequently been attributed, at least in part, to a dramatic climatic event (Şahoğlu 2005, Wiener 2013). There is strong evidence that around 2200 BCE a period of extreme drought occurred in the eastern Mediterranean as well as in Egypt and in the Akkadian Empire of Mesopotamia, and this may have affected the decline of settlements in the eastern, central, and western Aegean (Broodbank 2008, 69). However, drought or natural disaster alone cannot explain the prolonged period of social and economic disruptions and conflicts experienced by the inhabitants of the eastern, central, and western Aegean. It also cannot explain the long-term changes in settlement patterns that continued well after rainfall returned to normal levels in the Middle Bronze Age. Aside from the risk that a purely climatic explanation brings of ignoring human agency, the

evidence elucidated in this paper suggests a more nuanced set of causes for this disruption than what any short or even long-term climatic change alone might bring about.

If drought was singularly to blame for the violent destructions and abandonments at the end of the EBA, it would be difficult to explain why people in the central and western Aegean responded by gathering into larger groups. In the central Aegean, an increasing scarcity of natural resources would have likely encouraged an even more dispersed settlement pattern, in which smaller groups would have been able to subsist on more limited resources. Larger, nucleated settlements would have been more difficult to feed in these circumstances. Thus, I believe that the permanent shift to a nucleated settlement pattern in the central Aegean, after millennia of living in dispersed settlements, was motivated in the first place by a need for defense. Groups who were moved primarily by fear of attacks and raids would have decided to live together in an effort to become less vulnerable, even at the expense of having more mouths to feed with the resources at hand. That such a settlement pattern persisted into the Mycenaean palatial period implies that, to some extent, the threat of violence extended beyond the Early Bronze Age and into the Middle and Late Bronze Age, which is corroborated by Thucydides' later account. Clearly, these dramatic and permanent shifts in settlement pattern and its concomitant changes in socio-political complexity and trade networks cannot be explained in terms of climate alone, and instead may in a large part be the result of violent attacks.

Can these violent attacks be characterized as piracy? This is certainly conceivable, but without written evidence it is difficult to distinguish between violence perpetrated by pirates and destructions caused in the context of officially sanctioned warfare. An investigation of the other criteria for piracy outlined in chapter 2 may throw more light on the issue.

Pirate Settlements?

The remaining criteria of chapter 2 pertain to the identification of pirate settlements. These are expected to be coastal sites, perhaps with little to no arable land nearby, which persist when other coastal sites are abandoned or move inland; they are preferably fortified and located in naturally defensible areas; they are hidden from obvious view but are located near harbors or mooring places for a ship or fleet and may be situated near “choke points” along maritime routes. These sites may have significant concentrations of exotic and/or valuable materials, presumably looted during raids. The in-depth examination of Early Bronze Age Aegean settlements before, during, and after the Kastri/Lefkandi I phenomenon (chapter 3), leads me to believe that these criteria are applicable to only a small number of those settlements. The best example of a potential pirate settlement, if any did in fact exist in the EBA, would be the site of Kastri on Syros. It was short-lived, existing only during the EB 2b phase, and it was located near to the coast but on a steep hill and protected by ravines as well as by fortifications with horse-shoe shaped bastions. The settlement contained a significant concentration of tin-bronze weapons as well as evidence for bronze casting and a mold for making a dagger. Certainly, such weapons would be useful to pirates on raids. The hill on which the site was constructed was rough and rocky, and the nearest arable land was located across the ravine. At the same time, the steep hill granted the site’s inhabitants’ strategic views of the nearby islands of Andros and Tenos, and even the southern tip of Euboea. The narrow gaps between Andros and Tenos would have forced sea vessels to funnel through them, emerging from between the islands in plain view of Kastri on Syros. Thus, their location would have given the inhabitants of Kastri a significant advantage in terms of defense and to conduct sea-based raids. The fact that the site was heavily fortified indicates that the inhabitants were certainly not safe from attack themselves, and the evidence for the eventual fire destruction of this site confirms this. It has been posited that the hilltop site of Kastri functioned as a defensive fort for the inhabitants of the nearby (unexcavated) settlement of

Chalandriani, located on a rise across the ravine, who would evacuate to the fort when threats inevitably occurred (Broodbank 2000, 214). While this interpretation would explain the emphasis on defense expressed in the fortification and location of Kastri, it certainly does not explain the substantial concentration of Anatolian material and architecture, including metal objects from as far away as Iran, Uzbekistan, and Tajikistan. The same might be said for other hilltop Cycladic forts in this phase, which also contained notable concentrations of Anatolian material.

Many of the other similar hilltop sites, such as the well-hidden Panormos on Naxos, the elevated Mt. Kynthos on Delos, and the small fort of Markiani on Amorgos, have been explained in similar terms of local attempts at defense. However, Anatolian material was found at these sites in some of the highest concentrations in all of the central Aegean. What is more, the Anatolian vases found at these sites frequently represented a partial or complete set of specific drinking vessels, which carried with them an intangible vocabulary of power. It is possible that the function of these vessel shapes varied as they were transported across the Aegean, and that they represented exotic prestige objects and little more to those at these sites. Given the context, however, of the Anatolian style fortification architecture at these sites, and the metals of eastern origins at Kastri, it seems more likely that the people who established these small forts were migrants from Anatolia.

None of these sites have significant quantities of exotic or valuable objects, but then, all have been destroyed or abandoned, and such goods may have been taken away. At Kastri, a silver diadem is firmly associated with the settlement, whereas wealthy grave goods found at the nearby cemetery of Chalandriani are exclusively associated with Keros-Syros material (Bossert 1967; Hekman 193, 2003). Concentrations of exotic or valuable goods are mostly found in larger regional trade centers such as Troy, or adjacent towns such as Poliochni or Thermi, but there it is impossible to tell whether they were obtained through trade, piracy, or regularized warfare. Even

in the case of Kastri, the available evidence is not enough to make any definitive conclusions concerning of the existence of piracy.

Instead, what becomes apparent as existing sites are assessed according to these criteria is the development over time of different defensive strategies, which become increasingly emphasized through the EBA across the Aegean. Such defensive strategies, including the fortification systems constructed at sites both large and small, the choice of many to live away from the coast or at a high point above it, and even the intentionally narrowed passages between buildings, seen at sites such as Dhaskalio and Mt. Kynthos in the Cyclades, all can be understood as responses to the increasing dangers faced as the sea-based extension of the ATN expanded and eventually collapsed. The changing settlement patterns after the period of the ATN, with trends especially in the central Aegean having increasingly favored nucleation, can also be seen as a response to these increasing dangers from the sea. It seemed that in this phase nobody was safe from the threat of violence.

If the present exploration of violence in the EBA Aegean has demonstrated anything, it has shown that violence might have been exacted on neighboring and more distant peoples alike in varied ways for diverse reasons. The EB 2b-3a phase of the expanded ATN certainly provided increased attractions and opportunities for this sea-borne violence. If we can accept that piracy, in a period where it could hardly be distinguished from warfare, was practiced between small-scale communities and not as acts of organized opposition to larger state-level organizations, then our evidence indicates that such violence was endemic among the various small-scale communities of the Bronze Age Aegean. This violence would have been exacerbated by the introduction of the eastern Aegean ships with their sails and superior designs in the central and western Aegean, as these vessels would have allowed Anatolian sailors to outrun and even outwit their central and western Aegean competitors with ease. Thus, it is likely that some acts of piracy were committed by the occupants of eastern Aegean sites, who would have made use of their superior vessels to

launch unexpected attacks on central and western Aegean settlements. However, the original inhabitants of these regions, with their larger seafaring crews and familiarity with the surrounding coasts and sea, were not entirely defenseless. It is even likely that central and western Aegean groups themselves engaged in piracy, and that they did so before the expansion of the ATN, and also during that time, lured by the new riches brought by the trade network.

The fact that the wealthy and well-fortified eastern Aegean settlements of Troy, Liman Tepe, Poliochni, and Thermi also were subject to destructions suggests that they may have been attacked not by small groups of pirates but by their wealthy competing neighbors in acts that may have been considered warfare. It is remarkable, for instance, that the Heraion on Samos had differently shaped bastions from Liman Tepe, despite the close proximity of the two sites, and that the Heraion did not suffer a setback in EB 3b, unlike Liman Tepe. Could it be that the inhabitants of the Heraion, with its square bastions closely resembling those of far-off Troy, were allied with Troy and competed against the inhabitants of Liman Tepe to such an extent that violence occurred between these sites?

In the eastern, central, and western Aegean, the destruction and devastation of the EBA 3 phase and the contraction of the ATN led to the development of new trade networks in the MBA. By the middle of the MBA period, Troy VI developed a new maritime and terrestrial trade network (Pieniązek 2016, 514-516). Liman Tepe also eventually recovered in the MBA, reconnecting once again with Aegean and Anatolian trade networks alike, although perhaps not to the same extent as during the ATN (Erkanal and Şahoğlu 2012, 227-228). In the western Aegean, Kolonna was the first to recover and develop its own maritime trade network. Further south, the Minoans on Crete, relatively minor participants in trade in the EBA, rose to increasing prominence in the MBA. The power and influence of Minoan culture spread throughout the southern Aegean, reaching as far north as the Izmir peninsula, and briefly north into Samothrace (Alberti 2012; Knappett 2018, 987). Eventually, Minoan Crete, probably under the leadership of

Knossos, became the dominant power in the Aegean Sea. As their power and wealth grew, it must have become increasingly important to the Minoans to safeguard their expanding sea-based trade from the threat that endemic piracy no doubt posed. Thus, for the first time in the Aegean a power existed which possessed both the means and motivation to suppress piracy at sea. And here we return to the Athenian historian Thucydides, who in the 5th century BCE celebrated the accomplishments of the mythical King Minos, leader of the Minoan thalassocracy, who successfully used his naval power to rid the Aegean of the plague of piracy (Thuc. 1.4). The reliability of Thucydides' account has already been discussed (chapter 2). Piracy, if we can rely on the account of Thucydides, would have been markedly different in the MBA and LBA, as rival state or nearly state-level powers would have been motivated to quell such acts to protect their trade interests. Thus, as early as the MBA, the line between acts of piracy and acts of war might have become distinguishable for the first time in the Aegean.

CHAPTER FIVE

CONCLUSIONS

Within the period of the Anatolian Trade Network's extension into the Aegean (c. 2550-2100 BCE), Anatolian materials, ideologies, and innovations were dispersed from the eastern Aegean through the central and western Aegean. This Anatolian material (also known as the "Kastri/Lefkandi I group"), while spread widely, was notably concentrated at a number of sites, including Markiani on Amorgos, Panormos on Naxos, Kastri on Syros, and Ayia Irini on Keos in the Cyclades; Palamari on the island of Skyros in the Eastern Sporades; Lefkandi, Manika, and Eretria on Euboea; Kolonna on Aegina; and Thebes, Orchomenos, Mitrou, and other sites in the central-east Greek mainland. The nature of the Anatolian material concentrated at these sites, including architectural features, ceramics, and metals, has been the subject of debate within the scholarly community for decades. Some interpret this material as merely the result of intensification of trade, while others see it as representing groups of Anatolian migrants who moved into the central and west Aegean and founded settlements there. The work of Choleva (2020) has demonstrated that Anatolian potters, perhaps in small groups, moved west and settled in at least a few of those sites, such as Palamari and Lefkandi. While definitive evidence is limited to just these two sites, it is likely that other Anatolians were moving throughout the Aegean, and permanently settling there, as well. Van de Moortel (2017) has argued that these seafarers from the western Anatolian coastal region also introduced the sail and possibly a superior new shipbuilding technology.

As the ATN brought wealth and power to the Aegean in quantities never seen before, the abundant opportunities for economic and political growth presumably led to conflict, as competition arose between those participating along the trade route. The topic of violence has been a historically divisive one to approach within the field of prehistoric Aegean archaeology, but discourse has now come to a place where researchers are willing to consider every nuance and

possibilities. While the existence of violence in the Early Bronze Age Aegean has been proven time and again by the many destructions and abandonments, never before has an approach examining the possibility of piracy through a set of criteria been attempted. That is what I hope to have achieved in this study. I found an undeniable pattern of increasing violence that accompanied the wealth and prestige brought into the Aegean along the ATN. The threat of violence had been present in the eastern Aegean as early as the EB 1 period, as the large coastal sites along western Anatolia boasted massive fortification systems already then. As Anatolian features spread into the Aegean in the EB 2b-3a phases along the ATN, dispersed by Anatolians in superior sailing vessels and no doubt with local participation, the wealth they brought attracted those who would desire to take it by force. And with the Anatolians' superior seafaring technologies, it is conceivable that at least some of them were led to piracy, before the technologies likely became more widely available throughout the Aegean. They may have founded pirate lairs at Kastri and Panormos and perhaps at other sites as well, hidden from the coast in hard-to-reach locations and with a wide and strategic view of the sea. Sites throughout the Aegean extension of the ATN adopted Anatolian fortification architecture. The violence endemic to the EB 2b-3b phase was particularly tailored to the sea-oriented environment of the Aegean and is likely to have consisted at least in part of pirate raids between the various small groups who occupied the central and western Aegean.

While violence has in the past been considered a difficult topic to demonstrate archaeologically, a close and careful examination of particular features and settlement patterns over time, using cross-cultural criteria, indicate that violence, in the form of piracy, was almost certainly present in the EBA Aegean.

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VITA

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